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NATIONAL ACCOUNTS AND BALANCES: SYSTEM OF NATIONAL ACCOUNTS (SNA)

Future directions for work on the System of National Accounts (SNA)

Report of the Secretary-General

SUMMARY

The present report summarizes the work on reviewing the System of National Accounts that has been under way in the Statistical Office since 1975 and suggests future directions for work on national accounts. It incorporates the views of an Expert Group convened in April 1980, as well as those of an interregional seminar held in December 1975 and several regional meetings. The report discusses the role of the national accounts as a framework for the statistical system and the problems of co-ordination entailed; enumerates problems of updating, clarification and extension of SNA that have become apparent in the course of the review; and makes proposals for future work. Points for discussion by the Commission are included (para. 83).

* E/CN.3/535.

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INTRODUCTION

1. Over the half-century since extensive work on the compilation of national income data began, the uses to which such data have been put have become more and more varied, and their scope and content have responded to the changing demands. Initially, statistics of national income and its distribution were viewed as measures of the well-being of the population. In the depression of the 1930s, interest focused primarily on the processes of income generation and their relation to output, prices and employment in the market economy. After the Second World War, the emergence of longer-run development planning in both the developed countries and the developing world led to a shift in emphasis to the national accounts as a framework for studying production and a recognition of the importance of production activities taking place outside the market sector. In recent years, there has been a renewal of the original concern with the measurement of well-being, and additional data have been sought that reflect the welfare of the population and its distribution more adequately than the traditional national accounting aggregates. At the same time, however, world-wide inflation combined with declining growth rates have re-emphasized the importance of market behaviour, and new problems have led to new developments such as inflation accounting and new proposals for the treatment of subsoil assets and other aspects of capital. In all of these developments, the international statistical community has played a vital part.

2. During the interval between the adoption of the System of National Accounts (SNA) in 1952 and the beginning of work on its major revision in about 1963, there were a number of developments that influenced the direction of the revision. A great deal of work had been done in the industrialized countries on the expansion of the national accounts into such areas as input-output, flow of funds and national wealth, and the advantages of integration of all of these forms of accounting into a single framework came to be recognized by both producers and users of the statistics. There was a new concern with the statistical requirements for planning in developing countries, and it was suggested that those countries needed primarily data relating to production rather than the data on income and expenditure emphasized in the original SNA. A desire to facilitate comparisons with the System of Balances of the National Economy (MPS) also entered into consideration.

3. The 1968 version of SNA ^{1/} based on these principles was a highly developed formulation capable of a rather wide range of adaptation and amenable to the inclusion of almost unlimited amounts of detailed data. It integrated interindustry transactions and financial flows, and extensions of the accounts - foreshadowed in 1968 and later implemented - added input-output tables, balance sheets and reconciliation accounts, statistics on tangible capital assets, price and quantity statistics and income distribution statistics.

4. When the Statistical Commission discussed the revised SNA in the late 1960s, the need for keeping it under continual review was emphasized (see, for example,

^{1/} A System of National Accounts (United Nations publication, Sales No. E.69.XVII.3).

Commission resolution 1 (XV), para. 9). Active work on the review began at the Interregional Seminar on the Revised System of National Accounts, held at Caracas in December 1975, and it has benefited greatly from opportunities for discussion provided by participation in regional meetings in Africa in 1975 and 1979, in Europe in 1978 and 1980 and in Western Asia in 1978. 2/ A preliminary report on the results of the review was presented to the Commission at its twentieth session (E/CN.3/507 and Corr.1), and the Commission concluded that the time was opportune to convene an expert group to consider the status of work on SNA, both in national statistical offices and on the international level and to discuss the directions that future work on SNA might take in the United Nations Statistical Office. 3/ An Expert Group Meeting on Future Directions for Work on the United Nations System of National Accounts was convened in April 1980, and the present report takes account of the views of the Expert Group. The report of the Group and the discussion papers presented will be available to members of the Commission during the session. 4/

5. In reviewing SNA at its twentieth session, the Commission did not consider that the time had come for basic changes in its structure. The Commission was concerned that the usefulness of the System for the purposes it now served well should not be disturbed. At the same time, it asked for a study of the need for clarification, updating and modification. In such a study, it is necessary to look beyond the immediate future. If SNA is to continue to develop and grow in a way that will anticipate emerging policy needs, the path of that development must be carefully examined in order to try to identify where the System will need expansion and where future priorities will lie.

6. The purpose of the present report is, therefore, twofold. In the first place, it is a stocktaking, intended to identify the areas where expansion of detail and coverage would be helpful and the areas where clarification or modification may be needed; and to note problem areas, where the fit between the SNA model and the real world is inadequate. In the second place, the report will be concerned with planning, both for the years immediately ahead and for the longer term. The Expert Group in its report considered that both aspects were of equal importance and that it was essential for resources to be devoted to further extension and development of the System. The Group considered that "so many important topics are included in this category that it is unlikely that they will receive the attention they deserve unless additional resources are provided". 5/

2/ The reports of these meetings will be available to members of the Commission during the session.

3/ See Official Records of the Economic and Social Council, 1979, Supplement No. 3 (E/1979/23), paras. 37-44.

4/ "Future directions for work on the United Nations System of National Accounts" (E/CN.3/AC.9/1/Rev.1); "Report on external transactions of the United Nations System of National Accounts; part B, proposed changes" (E/CN.3/AC.9/2); "Report of the Expert Group Meeting on Future Directions for Work on the United Nations System of National Accounts" (E/CN.3/AC.9/5).

5/ "Report of the Expert Group Meeting on Future Directions for Work on the United Nations System of National Accounts" (E/CN.3/AC.9/5), para. 52.

7. The report is divided into three major sections. The first is concerned with the role of the national accounts as a framework for the statistical system and what this implies in terms of co-ordination both among fields of statistics and among statistics-producing agencies. The second considers specific problems of updating, clarification and extension of SNA that have arisen in the course of the review. The third outlines proposals for future work.

I. THE NATIONAL ACCOUNTS AS A FRAMEWORK FOR THE STATISTICAL SYSTEM

A. The need for a framework and the role of the national accounts

8. At the time the present SNA was under development, one of its important functions was seen to be that of improving, elaborating and extending systems of basic statistics.

"Since it integrates and links the definition and classifications of all flows and stocks into a coherent structure, the new SNA furnishes an excellent means for planning the gathering and compiling of the co-ordinated bodies of basic data required for purposes of economic and social analysis." 6/

In line with this intent, international recommendations concerning industrial and agricultural statistics, income distribution statistics and price and quantity statistics have been elaborated within the SNA framework. The importance of this role of the national accounts as an organizing device has been underscored repeatedly in the interval since then. The report of the Caracas Seminar, for instance, noted that

"... there was a clear consensus on the usefulness of the national accounting framework as an organizing principle ... For many problems, data that is outside the national accounting system is needed. For data of this sort, the national accounts can still serve as a framework, providing compatible definitions, classifications, and linkages." 7/

The Expert Group that met in April 1980

"expressed general satisfaction with the basic structure of the revised SNA, and stressed its importance as a point of reference for the integration of basic statistics, in both developing and developed countries. For this reason, several participants emphasized the need to establish the primacy of SNA and its classifications and definitions as the basic international statistical recommendation, with which all other partial data collection systems to which it is relevant should be co-ordinated." 8/

9. Increasingly, the importance of the national accounts as a frame for social as well as economic data is also coming to be recognized. The Expert Group, again, noted

"that progress in development of the framework for social and demographic statistics had been slower than initially hoped, and that one of the most promising approaches now appeared to be starting from the national accounts." 9/

6/ A System of National Accounts (United Nations publication, Sales No. E.69.XVII.3), preface, p. iii.

7/ "Report of the Interregional Seminar on the Revised System of National Accounts, Caracas, Venezuela, 8 to 19 December 1975) (DP/UN/INT-72-104), paras. 217-218.

8/ E/CN.3/AC.9/5, para. 4.

9/ Ibid., para. 36.

Some participants noted that the national accounts should be conceived of as a frame not only for macro-data but for micro-data as well. The ultimate objective should be an over-all statistical system embracing economic, social and demographic and environment statistics; for the time being, the Group suggested that working outward from the national accounts was an appropriate strategy, since the national accounts were in a much more advanced state of development. The question of the relation of the national accounts to social and demographic statistics is also discussed in the report on macro-data and micro-data structures (E/CN.3/552), where it is noted that the kinds of organizing principles and reporting or reference units that are relevant for social analysis are the same as those identified as sectors in the national accounts.

10. In order to make such interrelationships possible, some adjustments and accommodations may be needed in the national accounts. Some initial steps towards the needed kinds of accommodations were recognized in the work on the distribution of income reported in the Provisional Guidelines on Statistics of the Distribution of Income, Consumption and Accumulation of Households.^{10/} For the most part, the adjustments are needed not only for integration of social and economic data but also to improve the usefulness of the accounts for purely economic analysis. The present report continues that discussion.

11. If the national accounts are to serve successfully in this integrating role, it is necessary that explicit attention be devoted to co-ordination among the various fields of statistics and among the organizations working in those fields. The section below will, therefore, briefly report on progress that has been made in selected areas and will seek to identify where problems remain.

B. The progress of co-ordination

12. The 1968 revision of SNA represented a very great advance in the co-ordination of, in particular, economic statistics, bringing into one system such formerly unintegrated elements as input-output, flow of funds, balance sheets and income distribution. Since 1968, the implications of the framework sketched out in SNA have been worked out in considerably more detail in subsequent publications, and another group of studies has explored the relation between national accounts and social, demographic and environment statistics. Nevertheless, much still remains to be done. To some extent, the integration so far developed is purely formal, and a great deal of additional work on methods of implementation is needed to give it real content. There is now much more country experience available on which to base the work than was the case in 1968. Also, much work has been done in the interval, both by the United Nations Statistical Office and by other international organizations, on the development of related systems of statistics, and these efforts have not always been entirely co-ordinated.

13. In considering problems of co-ordination, one general comment is appropriate; it concerns the need for flexibility if progress is to be made. If the SNA concepts

^{10/} United Nations publication, Sales No. E.77.XVII.11.

and classifications are to serve as standards for all uses, it becomes the responsibility of SNA to ensure that such concepts and classifications adequately meet the needs of all users. Failure to do so will encourage users to develop and use alternative classifications and definitions. The Expert Group, in considering this question, expressed the view that

"... there was a prima facie case in favour of changes that would increase consistency among the international statistical systems." 11/

It was emphasized that the proliferation of standards caused difficulties for both users and producers of statistics and that the co-ordination function at the international level should be a particular concern of the Statistical Office and should have a high priority. Such efforts can only succeed, however, where a willingness exists to adapt SNA, as well as the related systems of statistics.

1. Requirements by field

(a) Public sector statistics

14. Statistics relating to the public sector have long been an object of independent interest, quite apart from their role as a part of the national accounts. On the one hand, there is a policy interest in a concept of the public sector that is broader than the general government sector of SNA and would also include public enterprises. On the other hand, there is also an independent interest among financial analysts in a much narrower concept of government finance, reflected at the international level in the International Monetary Fund's Government Finance Statistics. The United Nations Statistical Office has attempted to respond to these interests by preparing a manual on public sector statistics as a part of the forthcoming Handbook of National Accounting. Work has been under way for several years on an effort to bring the public sector statistics of the Statistical Office and the IMF government finance statistics as close together as possible and to identify precisely what the differences between them are. At the same time, an effort has been made to make data on the broader public sector available on an internationally comparable basis, through the introduction of appropriate breakdowns into some of the tables in the National Accounts Questionnaire used for international reporting. The Expert Group endorsed this approach, noting that the wider concept of the public sector was important for planning purposes, making it possible to assess such questions as the calls upon the private sector for financing and the allocation of investment.

15. The Expert Group was unanimous in its desire for a single set of guidelines. The Group recognized that different users had different needs and that one set of guidelines need not mean a single set of data. But it considered that the differing needs should be set out much more concretely and that there should be a presumption against differences unless a pressing need for them could be demonstrated.

11/ E/CN.3/AC.9/5, para. 5.

(b) The foreign sector and the balance of payments

16. In most countries, balance-of-payments statistics antedate the national accounts and, for the most part, their development has followed an independent path. As is true for the IMF government finance statistics, different groups of users are involved, and the focus of their interest is different. Nevertheless, the body of transactions being examined is the same one, and the desirability of more than a purely formal reconciliation at the aggregate level has long been recognized. The efforts currently under way in the Statistical Office and IMF towards bringing about a closer co-ordination are described in "Relationship of the revised System of National Accounts (SNA) to the International Monetary Fund's Balance of Payments Manual" (E/CN.3/542).

(c) Monetary statistics

17. The 1968 revision of SNA made a considerable advance in the integration of money-flows statistics with the national accounting framework through the inclusion of capital finance accounts, and this development was subsequently carried further in the Provisional International Guidelines on the National and Sectoral Balance-Sheet and Reconciliation Accounts of the System of National Accounts. ^{12/} Problems of integration still remain, however. Like the government finance statistics and the balance of payments, monetary statistics in most countries long antedate the national accounts, and they are widely used independently of the national accounts. Both the Statistical Office and IMF are currently engaged in the preparation of manuals discussing sources of data and methodology in this area, the Office from a national accounting point of view and IMF from a more traditional monetary statistics point of view. Before the drafts are completed, an effort will be made to ensure that they are completely harmonized. In this area, unlike the two preceding ones (see paras. 14-16 above), the work in both organizations is at a sufficiently preliminary stage so that co-ordination in advance of finalization should be a reasonable objective. The Expert Group welcomed the prospect of such co-ordination and endorsed the need for increased communication between national accountants and financial statisticians, at both the national and international levels.

(d) Income distribution statistics

18. With the increased concern for assessing the distributional impact of social and economic policy, the demand for income distribution statistics and related measures of levels of living has risen rapidly. A number of international organizations have been actively engaged in work on this topic. The International Labour Office has collected and published data on income distribution for a number of years. The World Bank has sponsored a number of country studies, together with comprehensive surveys in the regions of the Economic Commission for Latin America (ECLA) and the Economic and Social Commission for Asia and the Pacific (ESCAP), and is now contemplating a further more intensive effort aimed at both methodological development and statistical implementation. The Organisation for Economic

^{12/} United Nations publication, Sales No. E.77.XVII.10.

Co-operation and Development (OECD), as a part of its social indicators programme, has developed methodological recommendations and proposals for statistical compilation. The United Nations Statistical Office's work in this area since publication of the Provisional Guidelines on Statistics of the Distribution of Income, Consumption and Accumulation of Households has been limited, by the availability of resources, to a survey of country practices, which is in press, and a preliminary study of concepts and classifications, which has just been initiated. Resources permitting, further work might include (a) an expanded methodological study, (b) preparation of a part of the forthcoming Handbook of National Accounting and (c) initiation of a programme of data collection.

2. Co-ordination with other organizations

19. The discussion above has noted some of the co-ordination efforts now in progress within the United Nations system. Outside the system, close co-operation has in some cases also been achieved. The notable example is OECD, where a joint United Nations Statistical Office/OECD national accounts questionnaire has been employed for a number of years and data tapes are regularly exchanged. It is to be hoped that in the future, the co-ordination can embrace a sharing of the work on technical studies; this is especially important in an era of resource stringency.

20. Efforts to co-ordinate with the Council for Mutual Economic Assistance (CMEA) have taken place largely within the forum of the Conference of European Statisticians (CES), where much progress has been made over the last 15 to 20 years. Mention might be made, especially, of the comparative study of French and Hungarian statistics now being conducted by the statistical offices of those two countries, under CES auspices.

21. Another organization outside the United Nations system is the Statistical Office of the European Communities (EUROSTAT). In at least one area, close working relations between the United Nations Statistical Office and EUROSTAT have been established, namely in the joint Working Party on World-Level Classifications that has been working actively since 1977 on the revision of the International Standard Industrial Classification (ISIC) and its co-ordination with the industrial classifications of the European Community and CMEA. In terms of the national accounts more narrowly construed, however, the picture is less favourable. The Community's European System of Accounts (ESA) was developed approximately contemporaneously with SNA and, in most respects, the two systems are quite similar. But there are differences. A revised version of ESA was issued in 1979. Unfortunately, the United Nations Statistical Office was unable, because of the limitation of resources, to participate in the discussions leading up to that revision, although invited to do so. An effort has been made in the present report to take account of ESA wherever possible. In the future, it is important that a greater effort in this direction be made, perhaps employing the good offices of OECD for this purpose.

II. PROBLEMS OF UPDATING, CLARIFICATION AND EXTENSION OF THE SYSTEM OF NATIONAL ACCOUNTS

22. Before proceeding to the substantive discussion arising from the review of SNA, it may be useful to indicate what the scope of that review was intended to be. In the discussion that follows, SNA is viewed as the theoretical and conceptual framework that has been constructed to embrace the work done at the international level on any aspect of national accounts. It is important to distinguish this view of SNA from two other views. In the first place, SNA, unlike the European Community's ESA, or IMF's balance-of-payments or government finance statistics, is not a set of data to be reported regularly to international agencies. The national accounts questionnaire, which is used for international reporting, is a relatively small selection out of the System as a whole. In the second place, SNA is not a recommendation to countries on national priorities in data collection. The United Nations Statistical Office cannot decide for countries what their own needs and resources are. However, SNA offers standard international guidelines, including definitions, classifications and ways of presentation in account and tabular form, which countries are urged to make use of to the extent that they are considered helpful. The System should offer a place for any related data a country may consider it useful to collect. It should thus be open-ended, not only in the sense of finding a place for new kinds of information but also in the sense of accommodating as much detail and as many alternative classifications as are considered by any users to be desirable. The Expert Group supported the need for such an open-ended, flexible system that would accommodate whatever information was considered useful.

23. The present section will discuss the points upon which the review has suggested a need for further work. The treatment here is necessarily brief and suggestive only; the documents that will be available to members of the Commission during the session contain more detailed discussions and further references. Five types of questions will be considered here. The first subsection groups together questions relating to the determination of the production boundary. The second relates to the scope and composition of value added. The third deals with sectoring, and the fourth with problems arising from inflation. The final section relates to questions of the form of presentation in accounts and tables.

A. The production boundary

24. Most of the uncertainties in identifying the production boundary involve, in one way or another, questions of imputation. The national accounts have always included some imputations for non-market activity. For most developed countries, they are of relatively minor significance in present estimates of the gross domestic product (GDP). For developing countries, however, they may be much more important. For both developed and developing countries, furthermore, there are demands for new kinds of imputations beyond those presently included in the gross domestic product.

25. There is, on the one hand, pressure to open up the boundaries of what is defined as output to include goods and services not now considered and, on the other

hand, to count as costs many things that now escape consideration, from the depletion of natural resources to the costs of commuting and pollution damage. At the same time, there is a strong resistance to losing sight of the transactions-oriented base, not only because its data are likely to be relatively much firmer but also because market transactions are often the vehicle for government actions. The new kinds of distributional and welfare-oriented problems that began to face policy makers in the 1970s and those of scarce resources and rising prices they will be facing in the 1980s have pointed up the need for clearer distinctions between what is measured in the market and what is not and for a more intensive and explicit consideration of the scope and content of the non-marketed portion of output and income and the measurement problems entailed. Ways must be found to meet these new needs without interfering either with the continuity of the data or with their traditional uses.

26. Participants at the Caracas seminar attached particular importance to this question and "expressed a preference for clearly distinguishing the monetary and the non-monetary portions of the accounts". ^{13/} It was generally concluded that the SNA treatment was not sufficiently specific and that the criteria for inclusion of non-monetary activities needed to be reviewed. Participants in the Expert Group expressed the view that "the distinction between transactions in which there are two economic agents involved and those where there is only a single agent is fundamental". ^{14/} It was agreed that further clarification is needed, and it was suggested that the concept of imputations and related and complementary concepts would be an appropriate topic for a technical study. The Group emphasized that "any additional categories of non-market activity should be accounted for in such a way as to preserve the present concept of GDP". ^{15/}

1. Subsistence output and other household activity

27. Production for own consumption of food and other commodities is widespread in countries at an early stage of economic development but becomes relatively less important as production becomes more specialized. The failure to account adequately for such activities will mean that the national accounts give a distorted picture of a country's economic development. SNA makes provision for the inclusion in output of subsistence activities that are similar in nature to activities that would be included if they took place in the market. The discussion paper prepared for the Expert Group and its annex A consider some specific problems of measuring subsistence output and make some proposals. The Expert Group voiced no objections to the modifications of the treatment of subsistence output proposed in the discussion paper. Provision of a list of activities to be included was considered desirable, but the need for a much more intensive study of actual country methodology than is now available was stressed, particularly from the point of view of developing countries.

^{13/} "Report of the Interregional Seminar on the Revised System of National Accounts ...", para. 44.

^{14/} E/CN.3/AC.9/5, para. 6.

^{15/} Ibid., para. 6.

28. Apart from the activities classed as subsistence in SNA, there are in all countries a number of other kinds of activities taking place within the household that involve production. The distinction between what is considered to be subsistence output and what is not is essentially an arbitrary one. It reflects mainly the traditional limits of marketed output in developed countries. In 1968, these limits were not questioned, but in the intervening years, they have attracted significant attention. The Expert Group noted that activities taking place within the household that are not now counted in the gross domestic product are important not only in a production context but also in measuring consumption and income. It was considered that this is an appropriate area for experimentation and that several alternatives might be explored. The need to establish limits to what should be included in this category was discussed, and several criteria were proposed. No consensus on the several suggested methods of valuing household activity was reached. Most participants favoured further exploration of the topic with a view to preparation of a technical study.

2. The environment and natural resources

29. A second category of information now falling outside the SNA production boundary - and one in which there has been rapidly growing interest - is that of environmental assets and natural resources. SNA takes the traditional view, which has also been that of most countries, namely that such assets enter the purview of the national accounts only when and if market transactions relating to them take place. This is a perfectly valid view for some uses. But in a wider sense, this treatment leaves out of the picture elements that may have an important bearing not only upon such considerations as the well-being of the population but upon the trade-off between present and future income and output and other aspects of the operation of the market economy. It has become apparent that environmental assets such as clean air and water are not really free goods, even if they are not susceptible to private ownership (or, in some cases, even public ownership), and that natural resources, traditionally treated like a gift of nature and inexhaustible, are in fact quite exhaustible and far from free.

(a) Environmental assets

30. Clean air and water and use of public lands are the quintessential environmental assets. Manufacturing plants that use river water for cooling or for waste disposal, cities that discharge sewage into the nearest body of water, farmers who overgraze public range lands or strip the land of trees for fuel, automobile drivers and electricity-generating plants that burn fuels high in pollutants: all are obtaining services from the environment for which they do not pay. But the society in general is increasingly concerned with the degradation of such environmental assets, and Governments are increasingly imposing regulations designed to protect them. Those who use the air, water and land derive a benefit from doing so; sometimes, as a consequence of government regulations, they also incur costs, either for environmental protection or pollution control. There is no guarantee, however, that the benefits will equal the costs.

31. Various proposals have been made for measuring the benefits of the use of environmental assets. Further study and experimentation are required before

agreement can be reached, but the topic is important and such studies should be undertaken. The United Nations Statistical Office, with the support of the United Nations Environment Programme, currently has under development a programme of work on environment statistics, which is reported to the Commission in document E/CN.3/553. The initial emphasis of the programme is upon physical measures, which are essential prerequisites. A continuing programme should include exploration of ways and means of relating such physical measures to the value measures of the national accounts.

(b) Natural resources

32. Additional problems arise when attention is shifted to environmental assets and natural resources that are not essentially public goods. This class includes subsoil assets like petroleum and mineral ores, of course, but it is not limited to them. Agricultural land, stands of timber and, in some institutional and climatic settings, water rights all pose very similar problems.

33. SNA now includes a partial accounting for such assets and their use. Their capital value in principle enters into the national and sectoral balance sheets, valued, in so far as possible, at current market value as reflected in recent sales of similar assets. Where there are no recent sales, however, valuation becomes much more difficult and arbitrary. The costs of development of such assets enter the accounts in several ways. For resources that are in principle renewable, like agricultural land, orchards, plantations and tree farms, development costs are included in gross capital formation. For non-renewable resources like subsoil assets, however, a distinction is made between costs of exploration and costs of development. Only the costs of developing proven reserves are to be capitalized.

34. A number of questions have been raised about this treatment. One deals with the scope of what is included in capitalizable development costs. Exploration and development, it is suggested, are no longer separate activities, but rather one continuous process; new finds are no longer a gift of nature attributable largely to chance but rather the result of systematic development requiring large expenditures, all of which should be capitalized. This view recognizes that a certain percentage of exploratory work will not produce usable results, but this is considered to be a predictable cost, similar in a way to accidental damage to fixed capital.

35. A second question concerns depletion. It is argued that many resources are not inexhaustible (as the present treatment implicitly assumes), but rather that using them depletes a finite resource and that such depletion should be counted as a current cost. The resource base is, of course, not static, and depletion may be offset by new finds. It is, therefore, suggested that the net change in reserves - new finds less depletion - should appear in the production accounts as a part of current output. But the problem is not quite this simple. "Reserves" are very difficult to define and even more difficult to value. It is generally agreed that what should enter into the balance sheet is "proven" reserves. The definition of proven reserves stipulates that they must be economically exploitable at current costs and prices. In a world of increasing scarcity and rising relative prices

of all subsoil assets, what is economically exploitable is not fixed. Increases in the quantity of proven reserves are just as likely to come from an increase in relative prices as from new finds.

36. In this respect, natural resources are no different from any other capital asset. As relative prices change, their value will change. Capital gains and losses have important economic effects, which their present treatment in the national accounts may not adequately display. Some consumers - and, by extension, some countries - are able to live primarily upon an "income" consisting of capital gains, whereas others may suffer capital losses which have an immediate, current impact. There have been a variety of approaches to the problem of relating these effects more realistically to the traditional national accounts. No solution to these problems is proposed here; rather, the intent is to stress the importance of further work on these topics and the need to design the accounts in a way that will accommodate them when (and if) it is considered desirable to do so.

37. The Expert Group expressed general support for a calculation of the change in the value of proven reserves that would include allowances for both new finds and depletion, as well as the effects of price changes. It was considered, however, that this should properly be reflected in the balance-sheet and reconciliation accounts and not in the current flow accounts. The conceptual difficulties of this measurement were emphasized; it was pointed out that it was really an attempt to estimate the replacement value of what was, in fact, irreplaceable. With respect to the appropriate treatment of exploration costs connected with the discovery of natural resources, differing views emerged, but a majority favoured retaining the present treatment. In support of this position, it was noted that exploration costs were intrinsically no different from other research costs and, if the one were capitalized, the other ought to be as well.

38. The Expert Group gave considerable attention to the special problems of oil economies. Most participants concluded that there are certain types of single-product export economies (of which oil is today the most pressing example) which have problems that are not well handled by the SNA model and that work on the applicability of the national accounts to key sectors such as oil would be an important activity for the Statistical Office. What was needed first was an examination of what the problems are and how they can be resolved.

3. Illegal activities

39. The present SNA does not include any explicit reference to the treatment of illegal activities. Such activities are attracting increased attention from national accountants in both developed and developing countries, and there is concern that omission of these transactions may affect measurement of the rate of growth and conclusions relating to the distribution of income. It was the majority view of the Expert Group that SNA should include such activities within its production boundary. It was noted, however, that by the very nature of such transactions, it would be very difficult to obtain comprehensive estimates for them. It was considered that what was included within the production boundary should not hinge upon the legality or illegality of the activity in question, and a number of participants saw little merit in showing illegal activities separately.

B. The scope and composition of value added

40. Moving from the production boundary - gross output - to the measurement of value added - gross product - raises a number of additional kinds of questions. In the first place, capital transactions must be identified and segregated. Within the limits of current transactions, intermediate consumption must be segregated from final consumption. Additional questions arise in connexion with the incomes generated and their distribution. It is not possible in the present report to go much beyond an enumeration of the types of problems that need consideration. A somewhat fuller discussion can be found in the documents that will be available to members of the Commission during the session.

1. The identification and definition of capital transactions

41. To some extent, problems of identifying capital transactions and displaying their relationships with current transactions arise because of the sequential development of the various parts of SNA. The elaboration of guidelines on balance sheets, reconciliation accounts and statistics of tangible assets and also on the distribution of income, brought up points that had not been considered earlier. Also, since the flow accounts were developed before much thought had been given to the stock accounts, an attempt was made to make the flow accounts as inclusive in coverage as possible. Some transactions with dubious qualifications to be considered current, therefore, were included. Other questions have arisen because of changing institutional arrangements and changing policy concerns. The text below will note new elements that have been proposed for inclusion in capital formation and elements now in capital formation that it has been proposed to eliminate. In addition, the documents that will be available to members of the Commission during the session enumerate a number of specific issues upon which clarification is needed.

42. The SNA concept of capital formation is the conventional national accounting one, which, in fact, is very close to the concept in the System of Balances of the National Economy (MPS). It includes only tangible assets - material goods. But it is increasingly recognized that it is not only expenditures on steel and concrete that have an impact upon future output. In particular, two areas are often singled out: investments in human capital - education and health - and investments in research and development. There is as yet little consensus on the proper methods of valuing stocks of such intangible capital, but it is an area where further study would be warranted.

43. The SNA concept of capital formation is also limited in another way. It includes only income-producing (or potentially income-producing) assets. Thus, it excludes consumer durables, although the same items are classed as capital formation when institutional arrangements are such that their services are provided to households by a business enterprise. Two principal examples are automobiles, increasingly provided to higher-level employees as a fringe benefit, and household appliances, often included with the capital value of the house when already installed at the time of purchase but written off as current consumption when purchased later.

44. In the case of government expenditures on infrastructure capital assets like roads, SNA treats the initial expenditure as capital formation but does not depreciate the assets, on the assumption that with proper maintenance they will have infinite life. Here also, it may be questioned whether this model any longer fits the real world very well.

45. Conversely, SNA now includes in capital formation a group of items about which questions have been raised. In most of the cases, SNA calls for distinctions that countries have generally found it difficult or impossible to make and analytically not useful. Among these are non-financial, non-tangible assets like patents, copyrights and leases; land, where it is often not possible or desirable to distinguish the value of built-upon land from the value of the building standing on it; and livestock, where SNA requires the separation of livestock raised for slaughter from those raised for breeding stock, milk, wool etc., a distinction many developing countries find neither feasible nor meaningful.

46. A question of considerably greater complexity concerns the treatment of pensions and life insurance annuities and the assets and liabilities represented by pension fund and life insurance reserves. SNA considers both pensions and annuities to be earned (or purchased) when the pension contribution or premium payment is made, and both are attributed to the households that will be the eventual beneficiaries. Households' equity in life insurance and pension funds is shown as a household asset and a liability of financial institutions, and changes in the equity are shown in the household capital finance account. Receipts of pension benefits and life insurance annuities, however, are considered to represent only a change in the form of household assets and not a current income flow. Thus, what appears in the current accounts of households is the change in their net equity in these funds, not their actual cash receipts.

47. A number of participants in the Expert Group expressed support of a treatment of pensions and life insurance annuities which would show benefits received in household income but leave the change in reserves with the insurance companies. In support of this view, it was noted that in many countries, there is a substantial difference between the amounts of contributions and the eventual amounts of benefits received by households, owing to the long time-lag and changes in circumstances and institutional arrangements in the interval. Others, however, favoured the present treatment, considering that the arguments for change were not sufficiently strong to warrant making it and that the accumulation of rights does have value to the person in whose name they are accumulated. It was pointed out that the present treatment was originally adopted in order to preserve the analogy with private saving, but that this, of course, led to a conflict with the treatment of public pension and benefit treatments. It was noted that the treatment in the European System of Accounts was designed to show both aspects of the transactions, and the Expert Group agreed that an approach that shows pension benefits as well as the change in reserves would be desirable. It was recognized that the income distribution guidelines do contain this supplementary information, but it was considered that it should also be brought into the main flow accounts.

2. The separation of intermediate and final consumption

48. Like the identification of capital transactions, the separation of intermediate from final output and consumption has been a difficult problem for national accountants all through the years. It is not the intent here to reopen the major controversies in this area but rather to note some marginal questions that are still troublesome. For the most part, they arise because of changing institutional arrangements and policy concerns.

49. A case in point is expenditures for pollution control and abatement. Is pollution control a final output or an intermediate cost? SNA treats it like any other cost of production and considers it to be intermediate. It is sometimes proposed, however, that this is final output; just because the society succeeds in shifting the cost to the producer does not alter its character as output, as it surely would be considered to be if the same tasks were performed by a public authority. The Expert Group agreed that it was important to show pollution control expenditures separately, but views differed as to their appropriate treatment in the accounts. Several saw difficulties in attributing any final consumption expenditures to enterprises, but others did not. It was recognized that there is a difficult boundary problem and that there are other business expenditures that pose similar problems, notably some elements of fringe benefits such as recreational and medical facilities. It was considered, however, that these could be solved by the application of common sense, and some support was expressed for such a broadening of final consumption. A question was raised as to whether, as in the case of television and newspapers paid for by advertising, it could not be considered that the value of the pollution abatement activity was included in the price of the product: the view was expressed, however, that in both cases the assumption was incorrect, and several participants supported the separate inclusion of both. It was suggested that all of these questions might appropriately be considered in a general study of imputations.

50. With respect to employee fringe benefits, it may be noted that considering those fringe benefits that are difficult to allocate to individual employees as consumption expenditure of enterprises would move the SNA accounts closer to the practice followed in MPS, where a final-use category entitled "outlays on recreational, cultural etc. facilities for employees by enterprises" is recognized. As is done in MPS also, it may be considered desirable to impute to households a "total consumption of the population", which would include all of the elements of final consumption accruing to the benefit of households, regardless of how they were financed: household consumption expenditures, most of the consumption expenditures of private non-profit institutions serving households, most of enterprise consumption expenditures and much of general government consumption. Such a concept is included in the guidelines on income distribution, and it is used in the International Comparison Project. A report on this topic (E/CN.3/512 and Corr.1 and 2) was considered by the Statistical Commission at its twentieth session; in that report, an attempt was made to standardize the various existing definitions.

3. Factor income and its redistribution

51. SNA makes a sharp distinction between payments of factor income (compensation of employees and operating surplus) shown in the production account and payments of property income (interest, dividends and net land rent) shown as redistributions in the income and outlay account.

52. With respect to rent, SNA considers only net land rent to be property income. Rents of buildings, equipment etc. are considered to be payments for the purchase of services, and they enter into the production accounts of both the purchaser (as intermediate consumption) and the seller (as sales). Net rents of buildings and equipment thus enter into the determination of operating surplus, like receipts from any other kind of productive activity. In the case of land, however, rents are treated differently. The net rental receipts, after deduction of associated costs like maintenance expenses and real estate taxes, do not enter operating surplus but are shown as a separate source of income in the income and outlay account. Net land rentals paid are not part of the cost of production (even of farmers operating on rented land) but rather a redistribution of income. Countries, for the most part, do not make these distinctions, citing both statistical and conceptual difficulties. The statistical problem of separating land rent from rent of the building occupying it is particularly acute, but questions have been raised about the conceptual propriety of treating even agricultural land rent differently from other costs.

53. These last questions are also raised about interest. Because the interest received by financial institutions is not considered to be a payment for any service rendered, it is necessary for SNA to impute a banking service charge so that these institutions will have positive output. This treatment contrasts with that of building and equipment rentals, where it is recognized that a service is being sold.

54. The treatment of financial intermediaries in the national accounts has always presented problems. The 1968 version of SNA, in the interest of ease of compilation, adopted various simplifying assumptions. Bank service charges for which no explicit payment is made are imputed to domestic producers as a group. This results in an adjustment item that cannot be attributed to any specific transactors. A number of countries, however, have retained the treatment of the 1952 version of SNA, where banking services imputed were allocated to specific users. Where the activities of the financial intermediaries in question are small relative to the gross domestic product, simplifications at the macro level may not appear to matter. But where financial intermediation is an important share of total activity, and especially where countries have significant international financial activity, it would be preferable to show explicitly the actual money flows involved, separately from the imputations. Such an explicit treatment would also facilitate reconciliation of national accounts data with balance-of-payments data.

55. Also in connexion with financial intermediaries, the treatment of casualty insurance in SNA has presented problems. SNA divides the gross premium paid for casualty insurance into a service charge, recorded as a cost of production in the

production account, and a net premium, regarded as the pure payment for risk and recorded in the income and outlay account. The effect of this treatment is a figure for operating surplus which the individual purchaser of insurance would not recognize. With respect to casualty insurance claims, all such claims paid out by insurance companies are considered to be current income of the recipients (in contrast to the treatment of life insurance and pensions). One subset of casualty insurance claims is concerned with income replacement, but another replaces not current income but a capital loss. The income-replacement kinds of insurance claims are very much like pensions, and it has been argued that they should be treated in the same way. The capital-replacement claims, however, might better be entered in the balance sheet as an offset to the capital loss. In practice, countries have in general not followed the SNA recommendations with respect to casualty insurance, either in terms of the treatment of benefits or that of claims. Whether this reflects statistical difficulties or conceptual problems is not clear, but it would seem that this is an area where a study of what countries actually do would be useful.

4. Indirect taxes

56. There are a number of aspects of indirect taxation about which questions have been raised. Quantitatively, the most important concerns the value-added tax. In 1968, when SNA was revised, the value-added tax was not in widespread use and was not, therefore, specifically discussed. With the adoption of the value-added tax by the member countries of the European Community, however, an explicit treatment has become essential. The argument in favour of adopting the ESA treatment of showing only the net value-added tax is, of course, a powerful one, since the European Community remains the principal user of this form of taxation. The argument against adopting the net treatment of ESA is that it is considered by some to be less comparable to the treatment of indirect taxes in countries employing other types of taxation. It is not wholly clear, however, that this is the case; the value-added tax is not like other forms of indirect taxes, and no way of treating it will make it exactly comparable. In these circumstances, compatibility with ESA would seem to be an overriding consideration.

57. Other questions with respect to indirect taxes relate primarily to the practical difficulties of making some of the distinctions called for in SNA. This is true, for instance, of the separation of compulsory fees paid by households from the same payments made by enterprises, where they are considered to be indirect taxes. It is also true of the very complex SNA rules relating to the treatment of profits and losses of government enterprises, some parts of which are in certain circumstances considered to be indirect taxes. These rules are generally ignored. Whether for statistical or conceptual reasons, countries do not make the required distinctions. Some reconsideration of the definitions would, therefore, seem to be needed.

C. Sectoring

58. SNA, in principle, defines its sectors as groups of similar transactors and its accounts as records of similar types of transactions. This principle is a fundamental one. What it means is that it should conceptually be possible to

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derive the sector accounts by combining and consolidating the accounts of the individual transactor units of which the sector is composed. It follows that each transaction should be viewed in the macro-accounts as it would be viewed by the transactors involved in it in their own micro-accounts. For the most part, this principle causes no difficulty; the sectors and accounts are defined so that the micro-unit transactions aggregate to the macro-sector accounts in a straight-forward way. But there are a few instances where problems have arisen.

1. Dual sectoring in the System of National Accounts

59. The accounts proposed in chapter VIII of SNA employ a dual sectoring system. The production accounts, considered to be summations of establishments, are grouped into kind-of-activity sectors. The income and outlay and capital finance accounts, however, are defined as summations of enterprises and other decision-making units and are grouped into institutional sectors. The connexion between the two sets of accounts occurs through the transfer of operating surplus in the aggregate from the production account to the income and outlay account. Thus, there is no provision either for an institutional breakdown of the costs of production (such as wages) or for an industrial breakdown of the disposition of operating surplus. This treatment is designed to reflect the locus of the decision-making process. However, while it is difficult to attribute some kinds of financial transactions to establishments, there is no conceptual problem in consolidating production activities for enterprises. The desirability of providing production accounts for enterprises (and thus complete institutional sector accounts) was recognized when EUROSTAT drew up the European System of Accounts. Providing similar production accounts for institutional sectors in SNA seems to meet with wide favour and little opposition.

60. Providing complete accounts for kind-of-activity sectors, on the other hand, does present conceptual problems, since the argument that decisions on the distribution of operating surplus and other financial transactions are made at the enterprise level is a valid one. Nevertheless, SNA recognizes that in some circumstances, policy-makers need income and outlay and financial information for individual industries, and in chapter IX of SNA the concept of "key sectors" is introduced. The classification to key kind-of-activity sectors is made on an enterprise basis, since this is likely to be the only feasible procedure. At the levels of aggregation shown in the macro-national accounts, it is unlikely that the unit of account employed will make a statistically significant difference in the resulting accounts. This is, however, a question that can be empirically tested, by compiling production accounts on both bases. Some countries have gone beyond the notion of key kind-of-activity sectors only and regularly compile at least some parts of the income and financial accounts for all kinds-of-activity sectors. Such information is useful, for instance, in studying relative profitability, the burden of direct taxation, methods of financing and balance-sheet position, all of which are likely to show large variations among industries.

2. General government subsectors

61. The subsectors of general government provided for in SNA are (a) central government, (b) state and local government and (c) social security funds. There is

considerable interest, in countries with a federal structure of government, in separating the two levels of government that are included in the state and local subsector. This would seem to present no difficulties of a conceptual nature, although the data may be difficult to obtain. It is important, however, to emphasize that such further subsectoring is appropriate only in countries where state or provincial governments do have substantial autonomy and are not simply administrative.

62. A similar point may be made with regard to social security funds. SNA does give some criteria for determining when a social security subsector should be identified separately. The principal one is that the assets and liabilities of the scheme should be distinguished from and recorded separately from those of general government. In practice, however, this has not proved to be a criterion that is easy to follow, especially as conditions have changed over the years since 1968. The International Monetary Fund, in its Government Finance Statistics, has abolished this subsector on the ground that institutional arrangements and financial realities have changed greatly since 1968, when the present System was adopted, and that most social security systems no longer have the necessary financial autonomy. It would, therefore, seem useful to reconsider this question.

63. A final question relative to the subsectors of general government relates to the monetary authority. In some countries, some monetary functions are performed by organs of the central government rather than the central bank, and IMF separates these functions and sets them up as a separate monetary authority subsector so that analysts can gather together all of the monetary functions performed either by the general government or the central bank. There would seem to be very good reasons not to remove these monetary functions from the general government altogether in SNA, but showing them separately may be a suitable compromise that will facilitate reconciliation of the national accounts data with the IMF Government Finance Statistics.

3. Subsectors of the household sector

64. One of the areas where SNA envisaged future work was in subsectoring the household sector by socio-economic groups. This is an obvious line of development for uses of the national accounts involving welfare considerations, measurement of living standards and the integration of all segments of the population into the national economic life. In addition to its uses in this context, such subsectoring would also be useful in fiscal and monetary analyses of the impact of various policy measures upon different population subgroups.

65. While the World Bank teams engaged in constructing social accounting matrices have often made very effective use of administrative data sources, the subsectoring of the household sector will be greatly facilitated as household survey data become more widely available. The household sample survey has come to occupy a much more important place in the statistical tool-kit of developing as well as developed countries, and such surveys greatly expand the realm of what it is possible to collect data for. As the National Household Survey Capability Programme begins to bear fruit in the next few years, the number of countries able to make effective use of it will increase significantly. Explicit consideration,

therefore, needs to be given to what kind of information it would really be useful to collect.

66. SNA proposes that the subsectors considered should be farm, non-farm entrepreneurial, non-farm wage-earner and other (the last consisting mainly of pensioners and those living on property income), and that households be assigned to subsectors on the basis of the occupational status of the person designated "head of household". A more appropriate basis of classification might be the most important source of household income, taking all household members into account; this criterion would more accurately reflect both changing social views and changing labour force participation practices, and it would respond to recent directives relating to the elimination of sex-based stereotypes. Questions have been raised regarding the world-wide applicability of any single socio-economic classification, but it does seem likely that the subsectoring proposed in SNA would be of interest in many countries. A further breakdown of farm into "operators" and "other" may also be widely useful.

4. Unincorporated enterprises and quasi-corporations

67. In an attempt to accommodate widely differing institutional arrangements in different countries, the 1968 version of SNA introduced a new kind of enterprise concept, midway between corporation and unincorporated enterprise, called quasi-corporation. This new concept was intended to recognize that there are some enterprises which, without being formally incorporated, behave in most respects like corporations. In practice, the rules for identifying quasi-corporations have not proved to be easy to apply, and countries have adopted practices that vary widely. In an attempt to introduce uniformity, EUROSTAT in the 1979 version of ESA introduced a size criterion for identifying quasi-corporations. The Expert Group generally considered that the concept of quasi-corporation filled a real need, although some participants expressed a preference for a pure corporate sector. It was noted that the real purpose of the concept was to remove the big firms from the household sector, where they clearly did not belong. The Group did not attach great importance to international comparability in the application of this concept and considered that the rigid application of a size criterion such as in ESA on a world-wide basis would not be helpful. The view was expressed that the chief need in this area was for further information on data sources, with special reference to their applicability in developing countries.

68. To some extent, the questions at issue here are related to those addressed in chapter IX of SNA, where a classification of production into traditional and modern forms is proposed. Various attempts have been made to implement this proposal, and they were surveyed by the OECD Development Centre in a study seminar held in 1978. The seminar concluded that the dichotomy between traditional and modern modes of production is not an operational one. It was proposed that, at least for the present, criteria capable of objective specification would be more helpful to analysts. Among those suggested were number of paid employees, value of assets and quantity of electric power used.

D. Problems arising from inflation

69. Widespread double-digit inflation in recent years has focused attention on a number of problems that have not been dealt with thoroughly enough in SNA. The question of the appropriate treatment of capital gains was alluded to in paragraphs 35-36 above in connexion with the discussion of subsoil assets. In a period of rising prices, capital gains may constitute a significant part of the cash flow of some segments of the population. Some researchers have tried to devise "total incomes" measures that would incorporate such sources of spendable funds. This is one aspect of the broader question of the relationship between the current and capital accounts in the face of price instability. The SNA treatment in the guidelines on balance-sheet and reconciliation accounts reflects the emphasis of a period when rising prices had not yet become a primary policy concern, and the impact of price changes on capital values may not be displayed adequately there. The questions at issue have been pointed out in the recent work of the business accounting profession in several countries on current-cost accounting and other forms of indexation and in the decisions of regulatory agencies in several countries to require reporting on new bases.

70. The Expert Group discussed at some length whether something can be learned for national accounting from the new developments. It said: "The question at issue is the measurement of income and saving and their distribution among sectors under inflationary conditions: the effect of changes in real values of monetary assets and liabilities and their impact upon distributable profits. What is the meaning of a nominal interest flow, when no account is taken of the change in capital value? ... the immediate interest in some countries has arisen out of a proposal to index some capital values. The treatment of the monetary correction in countries where such indexation is employed was discussed, and the question was raised whether the correction should be treated as amortization or interest. It was noted that it does make a difference if the monetary correction is applied to the capital sum, rather than the interest flow. It was emphasized that the main point was that the nature of the very substantial flows of nominal interest was very different in periods of high and low inflation, and that therefore what is called income and saving may reflect something very different from what we think they mean. In other parts of the national accounts we go to considerable lengths to adjust the flows for inflation, and it may be questioned whether the way we deal with inflationary effects on real assets may be so different from the way we deal with their effect on financial assets and liabilities as to involve a fundamental contradiction." ^{16/} The Expert Group supported a study of the implications of current-cost accounting for the national accounts, and some participants considered the problem was sufficiently important to warrant the diversion of resources from other uses.

71. In discussing the impact of inflation, the Expert Group considered that a study of the separation of relative price changes from general price changes would be useful. Terms-of-trade measurement is a special case of this problem; measures of the gross domestic product may differ significantly, depending upon whether terms-of-trade changes are included or not. It was noted that, although the Guidelines on

^{16/} Ibid., para. 25.

Principles of a System of Price and Quantity Statistics 17/ recommend exclusion of terms-of-trade effects, the International Comparison Project includes them. In discussions of this topic during the 1960s, it had sometimes been concluded that the effects were relatively small and that import and export price indexes were of such poor quality that the effort to measure terms-of-trade effects might not be worth while. This situation has now changed; the problem is much more important, and the quality of the statistics is somewhat improved. A new attempt to measure the effects might, therefore, be useful. In the longer run, it was proposed that an attempt should be made to incorporate a separation of relative and general price changes into the general framework of the accounts.

E. Questions of presentation

1. The level of aggregation

72. The national accounts are used for many different purposes, which call for different levels of aggregation. Some of the debate on this topic has arisen because proponents of different views had different uses in mind. The Expert Group reflected these differing views, some participants stressing the need for a simple, easily understood presentation intermediate between the highly aggregated accounts for the nation as a whole and the very detailed and complex underlying accounts, while others thought that the complexity was essential if the system was to serve for basic data development. It was noted that a simple form of presentation could be derived by aggregation of the more complex system and that such a simpler presentation might well be preferable for publication. It was also noted that there is some tradeoff between complexity and timeliness.

73. The conclusion that emerges, from the point of view of national statistical offices, is that what is needed is an information system in which it is possible to move easily from one level of aggregation to another, from the basic micro-data sources through analytic accounts at various levels to the most summary publications. This requires the establishment of clear and straightforward principles of consolidation. SNA now calls for, essentially, three levels of consolidation: the summary class I accounts, the detailed class II-VII accounts and the supporting and supplementary tables. The rules for consolidation from one level to the next are often complex and sometimes not clearly specified. Nor is the relation of the accounts and tables to the underlying basic data always straightforward. There is, furthermore, a rather large gap between the class I accounts and the rest of the System, and most countries for their own purposes make use of accounts at an intermediate level of consolidation.

74. As noted above, the complexity of the system arises in part from departure, on the aggregate level, from the principle of straightforward consolidation of the accounts of the individual transactors and transactions. The same departures are often the source of incompatibilities with related statistical systems. A

17/ United Nations publication, Sales No. E.77.XVII.9.

re-examination of the principles of consolidation with a view to simplification and streamlining would, therefore, be helpful.

75. In terms of international reporting, it is, of course, necessary to work at a fairly high level of aggregation. Nevertheless, the data collected and reported internationally should be comprehensive in coverage, coherent in structure and related in obvious ways to the much more detailed information in national data bases. The international data base should provide the kind of information that is needed by users interested in international comparisons, and it should make provision for countries at early as well as advanced stages of statistical development. It is this spirit that has guided the development of the newly revised national accounts questionnaire.

2. The treatment of imputations

76. The Expert Group stressed the need for a comprehensive study of the treatment of imputations in the national accounts. The Caracas seminar attached very great importance to the handling of non-monetary activity. Many of the proposals for extension of the accounts lie in this area, and it is the locus of many of the more difficult conceptual problems in the existing accounts. A comprehensive study would undoubtedly be fruitful.

77. Some conclusions have emerged from the discussions to date. In the first place, it is always desirable to show explicitly whatever imputations are made. For owner-occupied housing (quantitatively, the largest imputation in many developed countries), for instance, the accounts should show not only the gross imputed rental, separately from monetary rentals, but also the actual monetary costs of home ownership and the net imputed rental income to home owners.

78. Secondly, the accounts should be arranged so that non-monetary activities can be clearly distinguished from monetary activities. The Expert Group stressed this point in connexion with the addition of new kinds of information not now included in the accounts but, as was emphasized at Caracas, the question is also relevant to the subsistence and other non-monetary activities now included in the gross domestic product.

III. PROPOSALS FOR FUTURE WORK

79. The general outlines of a future work programme emerge naturally from the present review. Two main components may be distinguished, one dealing with the internal work programme of the United Nations Statistical Office itself and the second with the co-ordination of the activities of the international statistical community as a whole. In the future, co-ordination will be of increasing importance, and it should receive more attention than it has had in the past. For this to be possible, the resources devoted to this aspect of the work will have to be expanded. Explicit consideration needs, therefore, to be given to the determination of priorities.

80. With regard to the work programme of the Statistical Office, the Expert Group considered that, while the Office should continue its work on the clarification of concepts, definitions and classifications where problems have arisen in the interpretation and application of SNA, it was equally important that resources should be devoted to work on the further extension and development of the system. The Group felt that so many important topics are included in this category that it is unlikely that they will receive the attention they deserve unless additional resources are provided.

81. Working out the implications of the proposals made, at various meetings, for the detailed format of the accounts and tables shown in chapter VIII of SNA is a first step. As was noted by the Working Party on National Accounts and Balances of the Conference of European Statisticians in 1978, this in no way implies an alteration of the basic structure of SNA, but would be designed to reflect country experience and to accommodate needs that have arisen since 1968. The format of the accounts presented in 1968 was offered as an example of one possible implementation of SNA, but it was recognized at that time that it was primarily a guide to the data series to be compiled and was to be modified as experience with the system was acquired and as needed to fulfil the particular requirements of users. After review, such alternative presentations of the accounts and tables could be issued as a supplementary report.

82. With respect to the technical studies proposed, a vehicle has already been established. A publication with the over-all title Handbook of National Accounting will include all of the technical studies in national accounting undertaken by the United Nations Statistical Office. Several of the manuals mentioned above are scheduled to appear as parts of the Handbook. The Handbook will also conveniently accommodate the additional technical studies on particular aspects of national accounts suggested above.

IV. POINTS FOR DISCUSSION

83. The Commission may wish to consider the following questions:

(a) To what extent does it agree with the conclusions of the Expert Group Meeting on Future Directions for Work on the United Nations System of National Accounts with regard to appropriate directions for future work?

(b) What are its views on the relative importance of co-ordination, clarification and updating of SNA, and exploration of new topics?

(c) What is the appropriate timing for implementation of the proposals made, and what is the appropriate vehicle (paras. 79-82)?

(d) What steps should be pursued to promote the sharing of the work on technical development with such organizations as OECD and EUROSTAT?
