

UNITED NATIONS
ECONOMIC
AND
SOCIAL COUNCIL



50906 1
Distr.
LIMITED

E/CN.14/NAC/7
31 August 1962

Original : ENGLISH

ECONOMIC COMMISSION FOR AFRICA
Working Group on the Adaptation
of the UN System of National Accounts
for use in Africa
Addis-Ababa, 24-29 September, 1962

PROPOSALS FOR AN INTERMEDIATE SYSTEM
OF NATIONAL ACCOUNTS FOR USE IN AFRICAN COUNTRIES
by
Philippe Berthet

FOREWORD

This paper has been prepared by the author after detailed consultation with Mr. G.C. Billington, National Accounts Division, Organization of Economic Co-operation and Development and formerly Assistant Director, Central Statistical Office, Federation of Rhodesia and Nyasaland, 1958-1961, and Deputy Government Statistician, Office of Government Statistician, Ghana, 1955-1958; and with Mr. M. Courcier, Administrateur civil au Ministère des Finances, Paris, presently chargé d'études à la Société d'Etudes pour le Développement Economique et Social (SEDES), Paris.

Special mention must be made of the paper "a Minimum System of National Accounts for use in African Countries", presented by Mr. G.C. Billington to the International Association for Research in Income and Wealth in Addis Ababa in January 1961. Many of the principles for modifying the approach to national accounts in Africa outlined there have been adopted and developed more fully in the present paper. At the same time, the commodity flow approach, implicate in some of the tables of this minimum system, has been taken a stage further, making full use of the structure of the French system of national accounts and of its sequence of operations for completing the appropriate commodities uses and resources tables.

TABLE OF CONTENTS

	Paragraphs	Page
Chapter I - Terms of reference	1 to 10	1
Chapter II - Problems in Africa	11 to 25	5
Chapter III - Some principles behind the proposed modifications	26 to 37	14
Chapter IV - Proposals	38 to 51	24
Chapter V - The Compilation and Development of the System in brief	52 to 60	38

Appendix I - A proposed intermediate system of National Accounts for use in Africa	
Appendix II - A summary of proposals for the amendment or modification of certain concepts and definitions	
Appendix III - The cross-classification of industries and products	
Appendix IV - The end-use classification of products	
Appendix V - Suggested framework for the analysis of intermediate consumption	

CHAPTER I

TERMS OF REFERENCE

1. The object of this paper is to make practical proposals for the adaptation of the United Nations System of National Accounts (UN SNA) ^{1/} (i) to conditions prevailing in Africa and (ii) for use as a guide in building up the system of accounts from the statistical raw material available. It should serve as a basis for the discussion on this subject by a working group of experts which will be convened by the ECA Secretariat in 1962 in accordance with a recommendation of the Second Conference of African Statisticians.

2. This recommendation (para. 74 of the report ^{2/}) reads as follows :
 "The Conference approved the Secretariat's plan to convene a working group in 1962 to study ways of adapting the UN SNA to Africa's requirements. The plan was submitted by the Secretariat ^{3/} within the framework of the recommendation of the Working Group on the Uses of National Accounts in Africa for the revision of the UN national accounts questionnaire (para. 26 of the report ^{4/}). The working group will have to draw up a set of supporting tables sufficiently clear and detailed to be used as a work plan to guide African national accountants in building up the aggregates of the standardized accounts of the UN system from the statistical raw material available".

^{1/} A System of National Accounts and Supporting Tables, Studies in Methods Series F. No 2-Rev.1, United Nations, New York, 1960, hereafter referred as SNA.

^{2/} Report of the Second Conference of African Statisticians, Tunis 26 June-7 July 1961, United Nations, ECA, E/CN.14/113.

^{3/} Adaptation of the document "A System of National Accounts and supporting tables" for use in Africa - Document E/CN.14/STAT/L.21, submitted by the ECA Secretariat to the Second Conference of African Statisticians.

^{4/} Report of the Working Group on the Uses of National Accounts in Africa UN Economic Commission for Africa, Addis Ababa : 10-12 January 1961, E/CN.14/84

3. The original recommendation of the Working Group on the Uses of National Accounts in Africa was slightly more restrictive and stated that the "ECA Secretariat and the UN Statistical Office should make concrete suggestions to the next Conference of African Statisticians on the possibility of initiating a joint discussion with a view to drawing up a revised simplified version of the questionnaire for use (a) as a standard basis for reporting within Africa, and (b) as a standard basis for reporting to the United Nations for those countries not yet in a position to complete the questionnaire in its present form" (para. 26 of the report).

4. Following this recommendation the ECA Secretariat consulted the Director of the UN Statistical Office who suggested that since the UN national accounts questionnaire is based on the UN SNA, the focus of attention and work should be the SNA itself and its adaptation for use in Africa instead of the questionnaire. This suggestion was taken into account by the ECA Secretariat which submitted a revised proposal to this effect to the Second Conference of African Statisticians ^{1/}. As has been seen under paragraph 2 above, the Conference agreed to this new proposal and added that "the problem of drawing up a simplified questionnaire on national accounts, better adapted to the possibilities of African statistical departments and distributed by the United Nations need only be taken up in the light of decisions reached at the working group's meeting" (para. 74 of the report).

5. In the light of the mandate conveyed in the recommendation referred to above, paragraph 2, the ECA Secretariat has convened a working group of experts to be held in Addis Ababa from 24 to 29 September 1962. It will be responsible for making concrete suggestions on an intermediate system of national accounts which could be implemented in Africa during the next decade or two pending the full implementation of the SNA itself. The meeting will have before it the present working paper which contains suggestions for the modification of the SNA in terms of the views of experts having had practical experience in the application of the SNA in Africa. It is being circulated in advance for comments and criticisms which will be brought to

^{1/} Op. cit. E/CN.14/STAT/L.21

the attention of the working group. It should not be considered at this stage as necessarily reflecting the views of the ECA Secretariat or the UN Statistical Office.

6. The author has purposely omitted any reference to conceptual issues of fundamental importance about which there is already considerable controversy outside Africa such as the treatment of public debt and other consumer debt interest. He has restricted himself to those comments and proposals which have been made from time to time, and on which it is considered that a great deal of general agreement already exists among experts in African problems.

7. In this task he has sought the advice and experience of individual experts and in particular of Mr. G.C. Billington and of Mr. M. Courcier who have been consulted at each stage in the drafting of this paper. The views expressed in this paper, however, do not necessarily reflect those of the Organizations to which these two consultants belong.

8. For the preparation of this paper the author had before him :

- (i) the Report of the Working Group on the Treatment of non-monetary (subsistence) Transactions within the Framework of National Accounts ^{1/}.
- (ii) the Report of the Working Group on the Uses of National Accounts in Africa ^{2/}.
- (iii) the papers ^{3/} presented to the African Conference of the International Association for Research in Income and Wealth which was held in Addis Ababa from 4 to 10 January 1961, in particular, "A minimum System of National Accounts for African countries and some related problems" by G.C. Billington.

9. This paper has been designed to take account of the problems of national accounting as encountered by African countries and greater emphasis has been given to the need for a practical and workable system than to theoretical requirements. The proposals are considered, however, to be

^{1/} UNECA, Addis Ababa, 27 June - 2 July, 1960, E/CN.14/60.

^{2/} UNECA, Addis Ababa, 10-12 January 1961, E/CN.14/84

^{3/} For a list of these papers, see E/CN.14/84, Annex IV.

entirely consistent with the basic principles of the SNA and should be regarded simply as an intermediate step towards the eventual adoption of the UN system in full. The present form of the accounts and tables of the SNA and the relative importance presently attached to them cannot be regarded, however, as entirely suitable for under-developed countries anywhere, and it is hoped that the proposals contained in this paper, if acceptable to member countries in Africa, may ultimately have some influence on a later revision of the UN SNA.

10. National accounts experts working in Africa are therefore being asked to examine these proposals with great care and to do their utmost to comment on them in the light of their own experience and also in the light of the difficulties likely to be encountered by neighbouring countries with similar problems who have not yet succeeded in compiling an embryonic series of regular accounts.

CHAPTER II

PROBLEMS IN AFRICA

Planning, Budgeting and National Accounts

11. The primary concern of nearly every African country today is to raise living standards and a determined programme of economic development is regarded as the only practical way of achieving this objective. In the short run more and more attention has been devoted to the maintenance of some degree of domestic equilibrium consistent with continuing expansion, and control of domestic prices figures in the forefront of short term economic policy objectives. National budgeting as such is still in its infancy but this term does describe the nature of governmental objectives in the short run.

12. General economic planning and national budgeting presupposes a fairly detailed system of national accounting tables compiled with a reasonable degree of accuracy. Similarly, overall development planning requires almost the same amount of global detail and reliability. These requirements are more or less essential if the fullest utilization of resources is to be maintained and the maximum rate of growth achieved, if bottlenecks and balance of payments difficulties are to be avoided and some equality maintained between effective demand and supply. All the information required for these objectives, however, is just not available to the majority of countries. Economic development and planning, nevertheless, are not likely to await the availability of all the data implied by a complete system of national accounts. In the absence of this comprehensive information greater importance is likely to be given to project and sectoral planning and to other development objectives for which decisions may well be made on the basis of incremental or marginal changes rather than to the objective of a fully integrated development programme. This is likely to be the experience of the majority of African countries in the earlier stages of development planning.

13. Without examining here the full implications of the requirements of economic development and planning in Africa, it should be apparent at once that global aggregates of the national accounts can only constitute a first

approximation to what is needed and that more detailed studies on the lines of industrial analyses and sector accounts (including the non-monetary rural sector) are likely to be indispensable to the administrator and planner. The solution to the problem of devising a system of national accounts well adapted to Africa does not lie, therefore, in an oversimplified system but, on the contrary, in a system which could provide the maximum amount of useful information and relevant details, and which would be, at the same time, a practicable objective for countries suffering from a dearth of statistical resources. Such a system can only be devised after a detailed review of the conditions prevailing in Africa and the establishment of appropriate criteria by which to assess its probable effectiveness.

The Role of Government

14. In African countries the impetus for economic development outside one or two key sectors is almost entirely in the hands of government. Government plays a very much more important role in development in the under-developed economy than is normal in a developed private enterprise economy. Its activities extend in many directions, including the provision of basic environmental or community services, the development of government enterprises and public corporations, the financing of private enterprises and even direct participation in them, and the large scale provision of housing, education and health services, in addition to its normal administrative and regulatory functions. The role of government is of crucial importance for the whole development process and it is essential that full details of government activities should be given in the national accounts or supporting tables if the impact of the development plan on the rest of the economy is to be adequately assessed and the success of government policy evaluated. In terms of practical requirements this means that more detailed information is needed than in the case of developed economies about the nature and purpose of government expenditure and the extent of the activities of government enterprises and public corporations.

Product and Income Approaches

15. Countries actually compiling national accounts in Africa fall broadly into two categories, those relying mainly on the product approach and those relying mainly on the income approach. In one case the main object is to determine the gross product by summing the product of individual industries, derived by deducting from turnover total purchases of goods and services, whilst, in the other case, interest is directed towards factor income shares, whether in aggregate or classified by industry of origin. These two approaches are not entirely independent but the distinction is especially useful when considering priorities and statistical methods in countries where national accounting is in its infancy. In any event the industrial analysis of product and of income generated offers the obvious common factor for comparison between countries which adhere primarily to one or the other of these two approaches.

The Standardized System and the French System

16. The countries which may be regarded as following the product approach again fall into two categories according to the type of system of accounts in operation, namely those broadly corresponding to the UN SNA and those based on a system devised for use in France and further modified for use in former French dependent and associated territories. This latter system will be referred to as the French system in this paper. These two systems are probably of equal importance in Africa and this fact cannot be ignored in devising a standard system of accounts for use in Africa.

The Key Nature of the Commodity Approach

17. The basic characteristic of the product approach is the important part played by an analysis of commodity flows in building up the estimates, industry by industry. This approach is, in fact, frequently the only possible approach in less developed countries where statistical resources and available material are at a minimum. The income approach is more readily associated with a later stage of development both of the administration generally and of statistical services in particular. The usefulness

of the product, or commodity flows approach in the development of national accounts for the less developed countries with relatively poor statistics, and the central part played by this analysis in the French system, indicate that there may well be some features of this system which could be of special value to African countries in general.

Scarcity of Statistical Resources

18. It is paradoxical that under-developed countries are among those countries most in need of good accounts to assist in the optimum allocation of resources and their optimum utilization and, at the same time, among those which can devote only meagre resources to this type of work. Few countries in Africa are in a position to employ even one experienced statistician full time on national accounts work, and even fewer have the range of basic statistics necessary to compile a reasonably complete set of accounts with the degree of accuracy required for use in national budgeting or economic planning.

Criteria

19. In these circumstances, it is important that the system of national accounts recommended for use should provide precise and authoritative guidance on theoretical principles and their practical implications, facilitate the physical work of compilation by providing for the logical and progressive development from one table to the next, omitting the irrelevant, the inessential and the impracticable and, at the same time, provide the theoretical optimum framework within which to work. It must also deal specifically and adequately with any special problems. Less experienced countries, and less experienced statisticians acting independently, should not be left to work out solutions for themselves from first principles on such problems as the basis and method of valuation of non-monetary output, the form of functional classification to be used for government accounts or the items of the I.M.F. version of the balance of payments tables which are strictly relevant and meaningful for African countries.

20. The conditions prevailing in African countries which are relevant to the work of the national accountant have been highlighted in the foregoing paragraphs : The requirements of the development planner, the important

role played by the government in the development process and the need for annual economic budgets to control the implementation of the plans on the one hand and, on the other, the scarcity of resources, the lack of trained personnel and the existence in Africa of two main approaches to national accounting, are the main factors which must be taken into consideration when designing a system of national accounts specially adapted to the needs of Africa, and consideration of these factors leads one to postulate the following criteria :

- Simplicity and comprehensiveness

Simplicity of compilation requires that the set of selected accounts and tables should, within reasonable limits, include all those which appear as a necessary intermediate step when compiling any given aggregate within the system. This might lead to the inclusion of tables previously considered as more in the nature of working sheets.

- Practical objectives

Taking account of the scarcity of human and material resources allocated to statistics in Africa, the system should specify only the transactions or items which countries can reasonably be expected to estimate in the near future, balancing the cost and effort involved against the utility of these estimates.

- Immediate purposes and uses

The system should be devised so as to be of maximum use to those in charge of national budgeting and the formulation of the development policy of their countries. Therefore, the basic relationships necessary to understand the working mechanism of the economy should be explicitly shown and any temptation to resolve some difficult problems of estimation by operating at a highly aggregative level should be resisted.

- Importance of the government sector

The system should contain a detailed analysis of government transactions.

- Importance of the industrial analysis of the domestic product

The two approaches to industrial analysis viz. the product and income approaches should appear explicitly in the system. In particular, the

commodity flow analysis, on which estimates of the product of each industry are based, should be completed as fully as possible.

- Reconciliation of the different systems in use in Africa

The system should be devised so as to be of use as well to countries presently applying a system broadly corresponding to the UN SNA as to countries following the "French" system, a central feature of which is the commodity flow approach.

Limitation of the UN SNA

21. Turning now to the UN SNA it is not surprising to find that it has failed to meet all these criteria. Despite the claim that the needs of under-developed countries have been kept in mind, the standard form of reporting which it recommends is essentially based on the practice and experience of the statistically advanced countries of Western Europe and the United States. One of the reasons which dictated this choice was the need for international comparability. Although this need must be recognized, it does not come first on the list of priorities that African statistical offices have established. Their first need, as emphasized above, is to dispose of a system well adapted both to its intended uses in Africa and to the statistical resources available and which would be (relatively) easy and straightforward to compile and to operate. Anyone familiar with the conditions actually prevailing in African statistical offices will admit the enormous difficulties faced by the few available African specialists who try to adhere to the principles and format of the UN SNA. Not only do they find it impossible to estimate all the items appearing in the accounts and tables, and to complete the tables in their present form, but they do not find clear indications on the basic approach which should be adopted to arrive at the main aggregates.

22. It is easy to find examples of items contained in the revised UN SNA which most African countries would find impossible to estimate in their present stage of development, as well as for many years to come. Account 1, for instance, shows separately provisions for domestic fixed capital consumption, difficult to measure in advanced countries, even more difficult

in less developed territories. Account 2 gives the distribution of national income by factor shares after final appropriation of interest, dividends and profits, which few African countries can pretend to measure. Account 3 and the separate capital reconciliation accounts by sector require that, at least, the net borrowing/lending positions of each sector should be known, unless they are obtained as a residual, which in turn presupposes that gross capital formation is known by sector, in both cases, a most unlikely assumption. Again, throughout the revised SNA, current transfers are distinguished from capital transfers, a distinction of very limited meaning and equally difficult to apply. Other examples of similar items in the SNA which African countries cannot be expected to estimate in the early stages could easily be found, e.g. consumer debt interest, pension transactions, imputed financial services, etc...

23. The articulation of the SNA, which is based on classical accounting techniques, is relatively easy to grasp, but the system itself in its present form provides absolutely no assistance to the less experienced faced with the task of compilation. It is difficult to decide in each case, depending on the statistical material available, which basic approach should be adopted in order to arrive at the different aggregates. This is due to the fact that the SNA, in its presentation, was never intended to provide actual guidance for the computation of the various accounts. (This was to be left, at least in theory, to other UN publications, such as Methods of National Income Estimation, or textbooks ^{1/}). Nevertheless, by putting greater emphasis on the logical sequence to be followed when constructing the accounts, the task of African countries would be greatly facilitated. If this can be achieved through a certain disaggregation of the system and the introduction of additional tables, the implied modification to SNA would certainly appear to be justified. In particular the product approach, which is one of the most frequently used by African countries, should appear explicitly in the main

1/ The UN publication Methods of National Income Estimation is not sufficiently detailed in the description of methods and lacks critical assessment and, therefore, provides little or no guidance to the unexperienced accountant.

accounts instead of being limited, as at present, to one aggregate, total net domestic product at factor cost in account 1. To arrive at this aggregate a production account for the whole economy must be compiled showing the turnover and purchases of each industry and, by difference, the value added. This set of calculations is, in fact, implied in the SNA supporting table II, giving the industrial origin of gross domestic product at factor cost, which appears therefore to be as essential as account 1 and account 2 and ought to be treated similarly. There are also a number of practical problems concerning concepts and definitions which the national accountant working in Africa must solve before proceeding with his work and for the selection of which the UN SNA does not give sufficiently clear indications. The treatment of the accounts on a national or domestic basis, the definition of the boundary of production, the valuation of non-monetary transactions are examples of such problems.

24. Even if the SNA could be fully implemented by African countries in its present form, it would not meet the requirements of the countries in question. The main purposes of national accounts in Africa are to provide a basis for national budgeting, to assist in economic planning, including the preparation of long term development programmes, to measure the impact of this on the economy, to provide a good measure of economic growth and to provide some comprehensive measure of changes in levels of living. It has already been suggested that global aggregates can only constitute a first approximation to the type of information which is needed, and that detailed studies on the line of, for instance, sector accounts are also required. In the context of African problems, the SNA does not :

- (a) provide separate accounts for the corporate sector or for rural households;
- (b) provide for the presentation of industrial analysis in terms of the reconciliation of the product and income approaches;
- (c) provide an analysis by commodity, on which projections could be made for planning purposes;

- (d) distinguish the import content of the various components of intermediate demand and final expenditures, an essential element in the appraisal of the impact of policy decisions;
- (e) indicate separately estimates for trade margins which play an important role in the price formation mechanism and in establishing short-term equilibrium;
- (f) provide a comprehensive measure of living standards for all consumers including the so-called subsistence farmers;
- (g) provide adequate details on government transactions.

Conclusions

25 In view of :

- (a) the characteristic features of conditions in Africa viz. the high priority of development planning, the shortage of resources and the importance of the product approach, both from the national account point of view and the planning point of view;
- (b) the criterium postulated that the accounts should be devised specifically to meet those conditions and
- (c) the fact that, as it has just been seen, the UN SNA does not succeed in meeting them as effectively as it is thought necessary,

It is justified therefore to attempt to revise the UN SNA in order to improve its usefulness to Africa through a better adaptation to the prevailing conditions.

This need is a logical consequence of the spirit in which the SNA was designed, which was to provide a framework of accounts applicable to underdeveloped as well as to developed countries. Experience, however, has shown that in African countries more was needed, and that it could not be left to unexperienced and/or overburdened statisticians to decide entirely without guidance which approach to use, which concepts to retain or which tables to complete.

CHAPTER III

SOME PRINCIPLES BEHIND THE PROPOSED MODIFICATIONS

26. Despite what has been said in earlier chapters, there may still be doubts as to the wisdom of departing from established procedures or of recommending the extension of an already sophisticated system when one of the criteria recommended is simplicity of compilation and use. Before describing in detail the content of the system, which, it is suggested, would be better designed to meet the various criteria mentioned, it may be useful to give a brief summary of the main ideas which underly these proposals.

27. The proposals may be reviewed under the following heads :

- (i) retention of the standardized system as a reference within the framework of which an intermediate system should be developed;
- (ii) treatment of non-monetary transactions;
- (iii) import content;
- (iv) industrial origin analysis in terms of the product and income approaches;
- (v) an inventory of human resources;
- (vi) appropriation accounts;
- (vii) government transactions.

28. The Standardized System

The SNA is the obvious standard reference which should be used for these proposals since :

- (a) this framework, as will be seen, can be modified without great difficulty so as to meet the requirements of an intermediate system devised along the lines defined in the preceding chapter;
- (b) it may be expected to provide in the long run link for a fully integrated system of social accounts, including input/output studies, flows of funds analysis and balance sheets studies.

- (c) it should contribute towards an ever increasing degree of international comparability of the accounts of various countries, an objective which, although of secondary importance at the moment, is likely to become increasingly important for the future;
- (d) the classification of agents between enterprises, households, governments and the rest of the world, and the further classification of transactions for each group of agents between production account and an appropriation account and a capital account, which is the basis of the structure of the SNA is now widely accepted and is likewise a basic feature of the proposals to be outlined in this paper.

These obvious advantages of retaining the basic principles of the SNA cannot be lightly thrust aside and, in developing the present proposals, the need to maintain consistency with the SNA has remained as one of the primary considerations.

Non-monetary transactions

29. Non-monetary transactions are far more important in African economies than in developed economies and, at the same time, extremely difficult to evaluate. For these two reasons, and following the recommendations of a working group on the treatment of non-monetary transactions within the framework of national accounts ^{1/}, the principle was adopted of identifying separately the bulk of these transactions viz. the non-monetary transactions of the agricultural rural households, and of articulating them throughout the system. At the same time, a new definition of the boundary of production, more extensive than that of SNA, was adopted to cover, in addition to the own output of primary products, two categories of activities of particular importance in under-developed economies, viz. own account construction and land work by agricultural rural households, and agricultural rural household services on own primary output, such as processing, storage, transportation and distribution. The method of valuation suggested for the various outputs

^{1/} see Report of the Working Group on the Treatment of Non-monetary (subsistence) Transactions within the Framework of National Accounts - UNECA, Addis Ababa, 27 June - 2 July 1960, E/CN.14/60.

of the agricultural rural households is in accordance with the recommendations of the working group. The suggested procedure should permit the bulk of non-monetary activities to be traced through the various accounts of the system (production, appropriation and capital) and should draw attention to the exact role which they play in the economy, including the measure of the long-term variation in their relative importance. Following a recommendation of the working group ^{1/}, a special account has been added for agricultural rural households in which both the monetary and non-monetary transactions of this sector could be brought together. For practical reasons, however, and bearing in mind the general view of the working group ^{2/}, this account has been set up in a way which permits either the separation of pure non-monetary activities from other transactions between agricultural rural households or their entry as a single aggregate in the agricultural rural households account, this distinction being in most cases extremely difficult to make. The latter treatment has been adopted for the actual presentation of the system, and non-monetary activities of agricultural rural households are meant to cover, in addition to own account rural construction and land-work and own account household services, primary goods produced by agricultural rural households and either retained for own consumption or sold or bartered within these households.

Imports

30. The same principle of identifying separately items of particular economic significance has been applied to the treatment of imports : imports entering into the various components of final expenditures without further transformation have been distinguished from final expenditures on local products, this distinction corresponding (i) to the way in which these components are estimated in practice, (ii) to one of the main preoccupations of economic planners, viz. the study of the balance of payments problems

^{1/} see para. 37 of the Report

^{2/} see para. 29 to 33 and para. 35 to 37 of the Report.

which can be eased, inter alia, through an appropriate diversification of domestic output reducing the degree of dependence of the economy on imported goods and extending earning capacity abroad. The distinction between imports and local products is carried through three tables giving :

- (1) the account of uses and resources by commodity group;
- (2) the composition of private consumption;
- (3) the composition of fixed capital formation by type of asset.

Industrial origin of product

31. Before selecting an articulated set of accounts and tables, the level of aggregation at which the productive system should be analysed had to be decided. In the SNA the main accounts treat all enterprises together, and it is only in the supporting tables that an analysis by industry appears. In the present case, an analysis by industry was considered as absolutely essential and built into the main part of the system, in spite of the difficulties inherent to this type of work, for the following reasons : the development planning of African economies requires a detailed knowledge of the structure of output and, in particular, of the contribution of the various industries to the domestic product. The value added by an industry can be obtained either as the difference between turnover and purchases (product approach) or as the sum of income generated (income approach). The product approach applied to a set of industrial sectors constitutes the embryo of an input/output analysis, involving as it does the allocation of the purchases of each sector between the products of the other sectors. The income approach applied to a set of industrial sectors will show the labour input and the operating surplus corresponding to a given output, which will permit a comparison to be made of the return on initial capital expenditure for individual investment projects and assist in determining investment priorities according to various criteria. In either case, the return to be expected from the analysis by industry appears to justify the effort which it requires.

32. Having decided that the analysis of the domestic product by industrial origin should be an integral part of the system, it has been found logical to include in the set of the main accounts and tables all those which constitute

a necessary step towards the calculation of the value added by industry. Two possible approaches have just been mentioned, from the production side or from the income side. The production approach is based on the estimate of the turnover and purchases of each industry and this can best be done in terms of commodities. Hence the inclusion in the system of a table giving the account of uses and resources by groups of commodities, each group corresponding to the output of a given industry, and in which total resources (domestic production and imports) are balanced against the different uses (intermediate consumption, final consumption, investment and exports). A suggested list of groups of commodities, arranged so as to correspond to the output of the selected industries ^{1/}, has been included in Appendix III. This table will give the turnover of each industry together with the totals of goods for final expenditure and for intermediate consumption which it produces. In order to complete the production account of each industry, however, it is necessary, to pass from a distribution of intermediate goods and services by producing industry to a distribution by consuming industry. Stricto sensu, this can only be done through an input/output table showing the relations between industries. For most African countries the precise estimates of intermediate purchases represent a formidable task. In practice the total purchases of intermediate goods and services by each industry are at present, and are likely to be for some time, restricted to a series of rough and somewhat arbitrary estimates based on the nature of the goods and the characteristic requirements of a given industry, supplemented, where

^{1/} There is never, in fact, a one-to-one correspondence between a group of commodities and a given industry which, in addition to its main output, might produce secondary products which constitute the main product of another industry. This obstacle, however, can be overcome by working at a proper level of aggregation and defining industrial sectors on an establishment basis. In Africa, where industrial development has not yet reached a high degree of integration, this would lead to a satisfactory correspondence between a commodity classification and a classification by industrial activity, thus rendering possible the use of commodity balance sheets for the calculation of production account by industry. For further details, see Appendix III.

possible, by the results of sample enquiries and censuses of agriculture and industrial production. This work could, however, be greatly facilitated if it could be systematized, and it is to that effect that an appropriate table has been included in Appendix V, designed to provide a broad framework within which to work and to ensure at least internal consistency in the estimates. This table merely suggests a possible framework for completion and is not included in the basic set of tables and accounts. It has been relegated in an appendix as an indication of the line along which work on the product approach should proceed as more resources become available. For the time being, the needs of African countries will be satisfied if rough estimates within the framework of this input/output table lead to increasingly reliable evaluation of the total purchases of intermediate goods and services by each industry.

33. The income approach to the analysis of the domestic product by industrial origin, which consists in equating the value added by each industry to the sum of income generated in the form of wages and salaries and gross operating surpluses, is the basic approach followed by a number of countries disposing of sufficient data on wages and salaries and the fiscal returns of enterprises. It is therefore explicitly shown in the system. It is considered, however, that considerable advantages could be gained if the industrial analyses based on the commodity approach and the income approach respectively could be consolidated into one table, in order to encourage a dual approach to the compilation of estimates of the value added by an industry and to provide a basis for comparison of the industrial structure of countries adopting either one or the other approach as the sole basis for their estimates. This table draws attention to the contribution of each industry to domestic product in terms of product generated and of factor shares, and provides a link between estimates at market prices and at factor cost. The presentation of a common table for the two sets of results should facilitate their comparison, help to encourage increasing effort towards improvement in accuracy and provide an extremely useful summary of the economy. It would be wrong to argue that the scarcity of statistical resources in Africa would justify the exclusive use of one method only. To begin with, the poor quality of much statistical data

militates in favour of, at least, an alternative and independent approach to the main estimates to provide for their consistency and accuracy, and this table offers a good example of the way this can be done. But still more important, the two approaches correspond to the analysis of the productive system from two different angles, each one of great interest in itself. The two methods are in fact complementary and not competitive, one giving information on the degree of interdependence of the various sectors, the other on the relative contribution of labour, entrepreneurship and capital within each industry. The presentation adopted in the system is really meant to encourage countries having gone through one of the approaches to start investigating the other.

Inventory of human resources

34. The statistical analysis implied in the preceding table will certainly stretch to the limit, and sometimes exceed, the possibilities of African statistical services, but this objective should be regarded as a minimum. Every means of helping the statistician to improve estimates by providing safeguards to ensure that their order of magnitude is reasonable and that their coverage is complete must therefore be considered. One of the most useful tools in this respect is an analysis of the population by industry and employment status. Provided that the industrial breakdown corresponds to that of the preceding table, such an analysis provides an invaluable basis for ensuring that all elements of the working population have been covered by the estimates and for estimating directly certain income aggregates by applying per capita income estimates (for example, the agriculture output of rural households might be checked by multiplying an estimate of the output per household by the total number of households involved). This analysis may also be used to check the validity of aggregates obtained directly from available sources (for example, by comparing the total wage bill and the number of wage earners, or the total income of unincorporated enterprises with the number of these enterprises, etc...). A table giving the classification of the population by industry and employment status has, therefore, been included in the system, using the same industrial breakdown as in the table on the industrial origin of the domestic product.

Appropriation accounts

35. The next problem was to decide how far the system should go in the analysis of the income and expenditures of the various groups of economic agents. This analysis is done through appropriation accounts, which are certainly among the most difficult to establish from a statistical point of view. Their number for that reason had to be kept within reasonable limits. The actual choice has been based on the following considerations :

- (i) Appropriation accounts are the only means of arriving at a true estimate of savings by homogeneous category of agents, an analysis of the greatest importance to the economic planner who needs to study and plan the financing of investment and the maintenance of some degree of balanced development. This analysis must be at the same time exhaustive and sufficiently detailed to be of some significance (for instance, corporate savings must be distinguished from government or household savings, etc...);
- (ii) The re-distribution of income in the form of interest, dividends, profits and transfers being channeled through the appropriation accounts, there is a definite advantage from a purely statistical point of view of providing for a full articulation of these items in the sense of double-entry accounting, each payment appearing twice, in the account of the payer and that of the receiver. It implies that every economic agent can be classified under one of the appropriation accounts of the system. (This is not the case with the actual version of the SNA which does not contain an appropriation account for corporations).

The solution adopted in the system represents a compromise between the needs just mentioned and the statistical difficulties involved. The proposed set of accounts include an appropriation account for corporations, one for general government and one for households and private non-profit institutions combined, with a full articulation of transfers and interest, dividends and profits. The rural household account should also be added to this list, being in fact a consolidation of a production, an appropriation and capital account for rural households. It is fully realized that there will be some

years before countries can actually fill in all the items in these accounts, and, in fact, many African countries could at this stage entirely omit them without detriment to the rest of the work and to the usefulness of the final results within the fields appropriate. But there is also no doubt that, once sufficient material is available to initiate the analysis, the results to be expected from it will be worth the effort required.

Government transactions

36. Finally, and as was not sufficiently the case with SNA, due account has been taken of the important role played by the government sector in African economies by including in the system a detailed analysis of government transactions. The analysis has been pursued further than in the case of SNA on the ground that data on government transactions being among the most readily available, at least in theory, there was no reason for restricting the analysis or omitting a table of special value in Africa. The SNA appropriation account of government has been retained practically unchanged but the capital account has been expanded by including in it an analysis of the more important financial transactions of general government. This analysis constitutes an embryo of what might become later a full analysis of all financial transactions. Finally, the SNA table on the functional classification of government consumption expenditure has been modified according to the recommendation of the workshop on problems of budget reclassification and management in Africa and along the line of the UN manual ^{1/} to provide for a comprehensive economic and functional classification of both current and capital transactions of general government.

37. A last remark should be made concerning the logic behind the order in which the accounts and tables of the system are presented. An attempt has been made to follow what could be called a pragmatic order, i.e. an order corresponding to the actual sequence of operations. For example, the

^{1/} See : Report of the Workshop on Problems of Budget Reclassification and Management in Africa - UNECA, Addis Ababa, 4-15 September 1961, E/CN.14/117.

Manual for Economic and Functional Classification of Government Transactions, United Nations, New York, 1958, Sales No 58.XVI.2.

inventory account of human resources, which should precede all other calculations, appears as Table 1, whereas the two accounts summarizing the expenditure and income aggregates, a by-product, in fact, of the other accounts, appear at the end of the list. It must be realized, however, that this order of presentation does not necessarily reflect the order of operations which may in fact be carried out simultaneously. Tables and accounts classified as supplementary are those which, although considered as extremely useful, and for that reason included in the system, either are not fully articulated with the main tables (for example the capital account of general government) or represent a further analysis of an item appearing already in the main tables (for example, the composition of private consumption expenditures).

CHAPTER IV

PROPOSALS

38. The proposed intermediate system, as shown in Appendix I, consist of ten main and five supplementary accounts or tables. Of these the following constitute a net addition to the SNA :

Table 1 Inventory account of human resources

Table 2 Account of uses and resources by commodity group

Table 4 Appropriation account of corporations

Supplementary Table S-1 Agricultural rural households account

Supplementary Table S-3 Combined economic and functional classification
of general government current and capital expenditure

The others are notified or expanded versions of accounts and tables already contained in the SNA. The SNA capital reconciliation account of households and private non-profit institutions, part of Account 4, is the only one of the standard accounts and tables of the SNA to have been entirely omitted in the proposed intermediate system.

39. The criteria which have governed the choice of the tables for the intermediate system are those already mentioned in the preceding chapters ^{1/}, viz. (1) simplicity of compilation, 2) feasibility, 3) needs of the planner for a general assessment of the structure and growth of the economy. For example, the inclusion of tables such as Table 1 - Inventory account of human resources, Table 2 - Account of uses and resources by commodity group, and Supplementary Table S-1 - Agricultural rural households account, follows from the need to include all tables which appear as a necessary intermediate step in the compilation of the entire set of accounts (criterion 1), whereas the third criterion explains the importance attached in the system to the analysis of the industrial origin of the domestic product embodied in Table 3.

^{1/} See in particular Chapter II, paragraph 20.

40. In accordance with the proposals listed in Appendix II, certain accounting concepts and definitions used in the SNA have been amended or modified as follows in the proposed system : 1) The accounts have been articulated on a domestic basis, the adjustment to a national basis being made only globally for the total national income in Table 10. 2) The boundary of production has been extended to cover, in addition to all goods and services exchanged for money, all primary production whether exchanged or not, together with own account capital formation and household services in the form of processing, storage, transportation and distribution of own primary output by agricultural rural households. 3) All entries relating to provisions for capital consumption have been omitted from the system. 4) The distribution of national income by factor share has been shown in Table 10 before final appropriation of interest, dividends and corporate transfer payments. 5) Following the SNA treatment, public debt interest paid to residents is not regarded as making a net contribution to national income. This amounts either to treating interest payments as a positive factor income in the hands of the recipients, cancelled by a negative factor income when paid by the paying agent (the actual SNA treatment), or to treating such interest payments as a transfer. In either case, as Table 10 shows income shares before final appropriation of interest, dividends and profits, there is no need to introduce any entries on account of public debt interest paid to residents in this table and this solution has been adopted here. In the relevant appropriation accounts, on the other hand, where entries on account of public debt interest must be introduced, they appear in terms of payments and not in terms of negative income. In the case of public debt interest paid abroad, the consistent treatment as a payment for a factor service would affect the size of the domestic product differently from the transfer treatment, whereas the size of the national income would remain the same.^{1/} 6) In view of the limited information available at present in Africa on consumer debt interest, it has not been separately identified in the proposed intermediate system. 7) All transfers have been treated as current transfers,

^{1/} For the correct entries in Table 10 on public debt interest payments to abroad, according to the treatment chosen, see paragraph 51.

as the distinction between current and capital transfers does not seem capable of precise definition and it is the usual practice in Africa for governments and enterprises to treat all such payments as charges against current revenue.

41. Other proposals for the amendment and modification of certain concepts and definitions are made in Appendix II. They concern the treatment of undistributed profits of subsidiaries, the imputed value of financial services of banks, pension funds and export duties. If accepted, however, these proposals would only modify the content of the appropriate entries in the tables without actually modifying the articulation of the system. Their specific mention at this stage is not necessary, therefore, for the understanding of the following description of the system and its articulation.

42. Table 1 - Inventory Account of Human Resources. This table has been added to the SNA because it constitutes an indispensable basis for the estimation and checking of much accounting data. (Quite apart from the technical value of the inventory of resources, a preliminary study of the distribution of the population is as much an essential part of an economic survey of an under-developed economy as the study of changes in any of the more conventional tables of national income and expenditure. This fact cannot be over-stressed). Reverting to the technical value of this table, however, there exists in many African countries quite reasonable statistics for certain specified socio-economic groups of the population, either as a result of special enquiries, fiscal returns, or general administrative provisions. These statistics can frequently be utilized in compilation of national income estimates and, in fact, it is probable that nothing like full use has been made of such sources of information in the past. It is, however, important that the activities of residual elements of the various groups of the population which are not so covered should not be overlooked and the inventory of human resources provides an essential framework within which to work and to verify the coverage of the estimates. It may well be that the only method available for compiling estimates for certain residual groups of the population is to relate the value of a minimum subsistence income per

capita or other factor per capita to the number of the population dependent on the working population in that group. This should certainly be done rather than omit what may be a substantial residual element of the total GNP. To this end, table 1 would be of direct assistance, for example, in estimating or checking the wage bill by industry, the income of unincorporated enterprises and more generally, the information contained in tables 2 and 3. Similarly, an estimate of the total agricultural rural population and the distribution of the total population by age groups and working status should provide an indispensable part of the statistical data required for compilation of adequate estimates of agricultural rural household activities. (Supplementary Table S-1). The completion of table 1 may give rise to some difficult problems in defining wage earners, unpaid family workers, unemployed persons, and dependents of working age. These problems should in any event have received some considerable thought in connection with recent censuses at least, and a solution of some kind or another should have been obtained already. In any event, whatever estimates may have been used in compiling the national accounts or in compiling a framework by which to check coverage and completeness, these should be made available as part of the system of accounts in the same way as any of the more conventional tables.

43. Table 2 - Account of Uses and Resources by Commodity Group. This table, which is a central feature of the intermediate system, provides a logical framework within which to balance the various uses and resources of each commodity or group of commodities, both in terms of quantity (when relevant) and value. Such a commodity analysis is particularly useful in the case of under-developed economies : 1) It constitutes the only possible approach to national accounting for countries at an early stage of statistical development and without fiscal statistics from which to derive income data. It is a quick and logical way of obtaining, through a reconciliation of the product and expenditure approaches, an overall picture of the economy, including the main aggregates of production, consumption and capital formation. 2) Even in the case of statistically more advanced countries possessing the statistics necessary for following a separate income approach, the commodity analysis of Table 2 will lead to an estimate, through the product approach, of the industrial origin of the domestic product which can then be checked,

as shown in Table 3, against the estimates arrived at from the income approach. 3) Finally these accounts of uses and resources by commodity, used in conjunction with inventories of available human and material resources, can be of great help to the planner in establishing production targets.

The successive steps leading to the completion of Table 2 can be described roughly as follows. The columns for exports and imports are the first to be filled, using foreign trade statistics; then the last two columns for local products at producer prices are completed using all available sources of data. This is followed by a first attempt at allocating the commodities between their various uses (intermediate and final consumption, capital formation, stock changes), using all the information available, particularly that concerning the nature of the commodities which in many cases gives sufficient indication for reasonably accurate determination of the final destination of a given product ^{1/}. Direct information is usually available on the composition of government expenditures on goods and services (column d) and on fixed capital formation (columns e and f). The separate estimates of intermediate consumption, private consumption and stock changes raise many more problems. The allocation of products to intermediate consumption is made partly on the basis of an end-use classification and partly by using the input/output framework suggested in Appendix V ^{2/}. Although this framework is mainly intended to show the link between column (a) of Table 2 and column (b) of Table 3, it will also facilitate the compilation of the data contained in the former column by showing explicitly the intermediate consumption of products by certain industries. The allocation of products to private consumption will be based

^{1/} See Appendix IV, The End-use Classification of Products, which gives an example of a correspondence between SITC sub-groups and an end-use classification of products.

^{2/} See Appendix V, Suggested Framework for the Analysis of Intermediate Consumption.

partly on direct measurement by means of households sampling enquiries and partly on the very nature of the goods (end-use classification). But at present, only very few countries can expect to be in a position to measure private consumption directly, and in the majority of cases, therefore, it will appear as the residual of total resources after deduction of all other uses. This residual will also include an element of stock changes, in so far as these changes have not been separately estimated, the most likely case with most commodities. This first allocation of the commodities between their various uses once completed, it is then possible to estimate according to the final destination of the goods the amount of trade margins which should be added either to imports cif or to local products at producer prices to obtain an estimate of the total resources valued at the prices at which they are actually purchased. By a process of successive approximations, the table is finally adjusted so as to balance the uses and resources of each commodity or group of commodities, while maintaining the consistency with the estimates of the totals of the various columns which might have been arrived at independently.

A series of concluding remarks :

(a) For simplicity of presentation, Table 2, as shown, distinguishes only between the products of 29 industries. But actually the work described above may have to be carried out at a much lower level of aggregation, in many cases at the level of individual products. Appendix III on the cross-classification of industries and products gives a first idea of the amount of detail required for each industry.

(b) The distinction between imports and local products, introduced in the uses side of the table, is doubly justified by the facts that it corresponds in many cases to the way in which statistics are obtained and that it is extremely useful to the planner to know the import content of the various expenditure items.

(c) The approach which this table suggests might at first sight appear difficult to follow. Experience will show that the method is, in fact, less arduous than it seems, and in addition represents the only possible approach in countries at a very early stage of statistical development.

It can even be asserted without too great a risk of error, that most accountants working in Africa have actually been following this approach more or less closely without, however, pursuing it in the systematic manner of Table 2.

(d) For most commodities, the balance of uses and resources can be established both in physical terms and in value terms. Completed in physical terms, Table 2 bears a striking resemblance to the material balance sheets used in Eastern European countries for planning and to the food balance sheets published by FAO.

(e) Because of the way the table is constructed, Distribution does not appear as an industry on line 20, but as trade margins under the columns relating to local production. For practical reasons, the trade margins include also transport charges which would have to be deducted and added to industry 21, Transport, Storage and Communication, if a true estimate of the value of both distribution and transport services were to be obtained.

(f) As explained in footnotes 3/ and 6/ to the table, wages and salaries of government employees providing services under industries 24, 25, 26 and 28 have been entered in column (d), government consumption, and column (p), local products, so as to arrive at a total for government consumption which is consistent with the traditional aggregate of national accounting.

44. Table 3 -- Production and Value Added Accounts by Industry. This table is an expanded version of Supporting Table II of the UN SNA and shows explicitly the nature of the approach adopted to derive the value added by industry. The analysis of the domestic product by industrial origin is considered as absolutely essential and is, therefore, built into the main part of the present system, instead of being treated as a supplementary table as in the UN SNA. This analysis can be conducted in two ways : (i) Following the product approach, an estimate is obtained of the turnover and intermediate purchases of each industry. This appears on the left-hand side of the table, which gives the "production accounts" by industry; (ii) Following the income approach, an estimate is obtained of the employee income and gross operating profits of each industry. This is the object of the right-hand side of the table, which shows the "value added account" by industry.

Countries at an early stage of statistical development may only be able to apply the first method, the second one requiring data on wages and profits usually found only in statistically more advanced countries. As already said in paragraph 33, the design of Table 3 is really meant to encourage a dual approach to estimates of the value added by an industry, which would lead to an improvement in accuracy and throw light on different aspects of the economy, viz. on the structure of the production processes and on the income distribution respectively. The production accounts, which correspond to a commodity analysis of domestic output, can be directly or indirectly derived from the data contained in Table 2. Column (a), Turnover, is equal to the sum of columns (c) and (p) of Table 2 giving the value of local products at producer prices. Column (b), Purchases, can be indirectly derived from column (a) of Table 2 through an analysis of intermediate consumption along the lines suggested in Appendix V ^{1/}. The compilation of the value added accounts requires the estimate of the wage bill of each industry and of their gross operating profits. For corporations these estimates will be derived principally from their fiscal returns. The difficulty should be far greater in the case of unincorporated enterprises and, as said above, this is the reason why the income approach can be followed only by countries at a more advanced stage of statistical development.

A few additional points: (a) The income approach may have to be based on information collected on an enterprise basis in many countries. This would require an adjustment to an establishment basis. The product approach may also have to be based on information collected on a basis somewhat narrower than the establishment and, similarly, this would require an adjustment to an establishment basis. For further discussion, see Appendix III. (b) In Table 2, General Government is treated as a consumer of goods and services, whereas in Table 3 it is treated as a producer of services under industries 24, 25, 26 and 28. The treatment adopted in Tables 2 and 3 for wages and salaries of government employees was devised

^{1/} See Appendix V, Suggested Framework for the Analysis of Intermediate Consumption.

so as to adhere to the classical definition of the aggregates of government consumption and product by industry. (c) For industry 20, Distribution, turnover is equal to the sum of the trade margins appearing in columns (m) and (n) of Table 2, from which intermediate purchases of distributive trades have to be deducted to arrive at the value added by the industry.

45. Table 4 - Appropriation Account of Corporations. This table is a not addition to the SNA, justified by the fact that it forms a logical part of a fully articulated system of appropriation accounts, and that its calculation, although difficult, is implicit in any attempt to complete the existing SNA tables. It is already or will be in a not too distant future within the reach of many African countries. The sources of information would be income tax returns, special enquiries concerning enterprises in the form of 1) censuses of agriculture, industrial production and distribution and services, 2) special returns calling for information on business profits and losses and appropriation accounts. If required, separate accounts could be compiled for public and private corporations.

Two remarks : (i) The full articulation of the three appropriation accounts included in the system (Tables 4, 5 and 6) requires that the relations between agents be known, which is a rather formidable task. As a first stage, the transactions between agents do not need to be explicitly shown, but only aggregative figures by nature of operation. (b) Interest payments by enterprises are treated in the present system as charges against current production and, therefore, would appear only on the debit side of the production accounts.

46. Table 5 - Appropriation Account of Households and Private Non-Profit Institutions.

Supplementary Table S-1 - Agricultural Rural Households Account.

Supplementary Table S-4 - Composition of Private Consumption Expenditure.

These tables are closely interrelated, certain items appearing in all three of them.

Table 5 is an expanded version of the current part of SNA account 4 with a separate identification of the transactions of agricultural rural

households. Private consumption expenditure is taken directly from Table 2 and compensation of employees and income of unincorporated enterprises from Table 3. Interest ^{1/}, dividends and transfers, which are the most difficult items to estimate on the basis of various sources such as financial and banking statistics, government budget, etc..., must be known in order to obtain savings as a residual, an item of the greatest economic significance.

Supplementary Table S-1, Agricultural Rural Households Account, is a net addition to the present edition of the SNA, recommended by a group of experts ^{2/}, which contains the bulk of the imputations required for estimating the value of subsistence activities within the economy. The account has been set up so as to provide as full an articulation as possible with the rest of the system. This articulation is described in detail in a footnote to the table together with the system of valuation of the various items contained in the account. It is realized that the estimate of many of these items will present enormous difficulties and priority should be given to the estimate of items 1 to 4 and 10 to 15. While it is acknowledged that a measure of the increasing monetization of the rural economy could be obtained by distinguishing item 11(1) from item 11(2), it is extremely doubtful whether any valid annual estimates could be made of these two items in Africa ^{3/}. Similarly the distinction between item 11 and item 12 will depend on the availability of a reasonable series of producer prices and retail market prices. It is, however, important that the valuation attributed to item 11(1) should be the nearest approximation to the price received by the farmer. If details of these prices are not available, then items 11 and 12 will need to be grouped.

Supplementary Table S-4. Composition of Private Consumption Expenditure including Consumption from own Production of Agricultural Rural Households, is an expanded version of SNA Table VIII, showing the components of private

^{1/} Consumer debt interest is not separately identified in this account. See para. 40

^{2/} See Report of the Working Group on the Treatment of Non-monetary (subsistence) Transactions within the Framework of National Accounts. Addis Ababa, 27 June - 2 July 1960, E/CN.14/60, Paragraphs 29 to 34

^{3/} See op.cit. paragraphs 29, 35 to 37, and Appendix II, paragraph 7.

consumption which are of interest to the planner. The elements contained in this table are directly derived from the information contained in Table 2 and Supplementary Table S-1, once a correspondence has been established between the functional classification of Table S-4 and the classification by commodities of Table 2. ^{1/}

47. Table 6 - Appropriation Account of General Government

Supplementary Table S-2 - Capital and Financing Account of General Government

Supplementary Table S-3 - Combined Economic and Functional Classification of General Government Current and Capital Expenditure

The great role played by government transactions in the economies of African countries and the availability of the required information justify the importance given to their analysis in these three tables.

Table 6 - Appropriation Account of General Government, corresponds to the current part of SNA account 5.

Supplementary Table S-2, Capital and Financing Account of General Government, is an expanded version of the capital reconciliation account of general government as it appears in the SNA. It includes an analysis of the financial transactions of general government which constitutes an embryo of what should become later a full analysis of all financial transactions.

Supplementary Table S-3, which combines an economic and functional classification of all government transactions, has no counterpart in the SNA which provides only for a functional classification of government consumption expenditure in Table X-B. This classification is considered to be too limited and has been replaced by the classification presented in the UN Manual for Economic and Functional Classification of Government Transactions and further amended by the Workshop on Problems of Budget Reclassification and Management in Africa, held in Addis Ababa in September 1961. ^{2/}

^{1/} For an example of such a correspondence, see Les Comptes de la Nation Volume I, Les Comptes, Service des Etudes Economiques et Financières, Ministère des Finances, Paris 1960, pp.266 and 267, Consommation des Ménages, Décomposition par Produit et par Fonction, Année 1956.

^{2/} See footnote to para. 36.

A further point is that this table classifies capital as well as current expenditure of general government, in accordance with the principles outlined in the UN Manual. The source of information will normally be an alternative classification of government transactions as recorded in the official finances and accounts.

48. Table 7 - Consolidated Capital Account

Supplementary Table S-5 - Composition of Gross Domestic Fixed Capital Formation

Apart from the case of general government, no sectorial analysis of capital transactions is provided for in the proposed system, as it would imply a knowledge of financial transactions which most African countries do not possess. Instead a consolidated capital account for the whole economy, although difficult to estimate, appears to be within the possibilities of the most statistically advanced among them.

Table 7 - is a simplified version of SNA account 3. No provision is made for the separate identification of depreciation. The net borrowing/lending position of each sector is not given and the deficit (or surplus) of the nation on current account is broken down between two components of great interest to the policy maker, viz. changes in foreign exchanges reserves and net borrowing (or lending to) the rest of the world. On the credit side, savings would be taken from the various appropriation accounts, and on the debit side, gross domestic capital formation from Table 2. Ideally a separate estimate of each of the two sides of the account should be aimed at for checking purposes, but in many cases one of the items will be obtained as a residual, and this is most likely to be the saving of households.

Supplementary Table S-5 is an expanded version of SNA Table VI.

Part A, analysis by type of asset and by origin, reproduces data contained in Table 2. Actually the two tables should be completed simultaneously when proceeding to the commodity analysis of the domestic product. The analysis of stock changes is excluded as being unrealistic at this stage in Africa. Part B, fixed capital formation by type of purchaser, is based on the analysis of public expenditure and balance sheets of corporations. Investment by private enterprises will usually be obtained as a residual. The analysis of capital

formation by industrial use in Part C is likely to be beyond the actual means of most countries, but has been included here because of the value of such an analysis for development planning.

49. Table 8 - Rest of the World Account. This account is a modified and expanded version of SNA account 6. The various components of non-factor services are specified. Factor income payments from and to the rest of the world are analysed in detail to permit a full articulation with the various appropriation accounts ^{1/}. All transfers are treated as current transfers. The surplus (or deficit) of the nation on current account is analysed to distinguish the individual groups of transactions of particular significance in assessing the impact of this surplus. Finally, this account is established on a domestic basis in the sense that resident producers are considered as belonging to the country and non-resident producers to the rest of the world, irrespective of their geographical location.

50. Table 9 - Expenditure on Gross Domestic Product. This account is similar to SNA account 1 except for the omission of depreciation and separate identification of the activities of agricultural rural households. Every item appearing in this account is taken directly from one of the tables or accounts already listed, which is the reason for relegating it to the end of the enumeration of the accounting system.

51. Table 10 - National Income by Factor Share. This account, also a by-product of accounts and tables already listed, is a modified version of SNA account 2. No allowance is made for depreciation. Income shares are given before final appropriation of interest and dividends. The income of agricultural rural households is separately identified. The incomes of other enterprises are grouped together to facilitate the task of countries which cannot distinguish between the incomes of the different types of enterprises. As seen in paragraph 40, the entry of government debt interest paid abroad will depend on the treatment chosen: if it is considered as a payment for a factor service, it is included under item 10-6 (and 10-8),

^{1/} As explained to paragraph 40, depending on the treatment chosen, public debt interest paid to and received from abroad will appear under factor payments or under transfers.

and should therefore be included under item 10-7 as part of government consumption expenditure, and under a new item on the debit side called "government debt interest paid abroad". If it is considered as a current transfer, no entry with respect to it should be made in Table 10. In both cases the size of the national income would remain the same, but the size of the domestic product would be affected accordingly.

CHAPTER V

THE COMPILATION AND DEVELOPMENT OF THE SYSTEM IN BRIEF

52. It could be argued that the proposed intermediate system just described does not contribute to a simplification of the task confronting the national accountant working in Africa on the ground that it contains, in fact, more accounts and tables than the UNSNA. However, it is clear that the simplicity and feasibility of an accounting system is not dependent on the number of accounts and tables which it contains. As already stated in this note, the disaggregation of the system facilitates a closer adherence to and, therefore, a fuller utilization of the statistical data available, and provides clearer indications of the logical sequence of the computations involved. The principal aim, in devising the system, has been to include all accounts and tables which constitute necessary steps in the compilation of an articulated system of accounts adapted to the statistical resources of African countries. As a result, new tables have been added to the SNA, of which Table 1, Inventory Account of Human Resources and Table 2, Account of Uses and Resources by Commodity Group, are the most important examples. But even these two tables do not represent a real innovation in the sense that it can be safely asserted that they have in fact always been compiled in the past in some form or other, by experienced accountants. The only difference now is that, by making them an integral part of the system, the work of the less experienced statisticians should be greatly facilitated as a result of more specific guidance.

53. The adaptation of the proposed system to the level of statistical development in Africa has led to certain simplifications in relation to the SNA. Whereas some of these simplifications concern the amendment or modification of concepts and definitions in accordance with the proposals listed in Appendix II, the most important bear on the structure of the system itself and the reliance, in the early stages of development, on the commodity approach. The analysis of capital transactions by sector,

which is a feature of the SNA, has been omitted ^{1/} in the present system, and the analysis of national income by factor share is conducted before the final appropriations of interest and dividends. The amount of detail shown should, nevertheless, be sufficient to satisfy the requirements of African planners for the next decade or two. Meanwhile, statistical resources will be developed, leading eventually to the full adoption of the UN SNA into which the proposed system can easily be expanded. It is, moreover, likely, or to be expected, that by that time the SNA itself will have been modified and expanded to cover a wider field of economic data ^{2/}.

54. Although simpler than the SNA, the proposed system, when developed in full, still operates at a fairly elaborate level which might discourage the efforts of countries initiating work in this field. This applies, in particular, to the set of appropriation accounts, the compilation of which might be beyond the meagre statistical resources of many countries. The answer to this problem lies in an appropriate selection of those tables and accounts of the system which are adapted to the nature and volume of the statistical information available, and it is therefore important to examine how this selection can best be made. The following paragraphs distinguish two main stages of statistical development, and examine the best methods of operating the system in each case.

^{1/} With the exception of the capital account of general government for which the necessary information is already available in some African countries, and could be made available in the others.

^{2/} Input/output and flow-of-funds analysis are two examples of directions in which national accounting is being expanded.

SUGGESTED PROGRAMME OF PRIORITIES

<p><u>Stage I</u></p> <p>For all countries, including those initiating work on national accounts</p>	<p><u>Stage II</u></p> <p>For all countries. This stage has the same priority as Stage I and might even precede it</p>	<p><u>Stage III</u></p> <p>For statistically more advanced countries</p>	<p><u>Stage IV</u></p> <p>For statistically, fairly advanced countries</p>
<p><u>Table 1</u></p> <p>Inventory account of human resources</p> <p><u>Table 2</u></p> <p>Account of uses and resources by commodity</p> <p><u>Table 8</u> abbreviated</p> <p>Rest of the world account. Items 8-1(1), 8-1(2), 8-2(1), 8-4(1), 8-4(2), 8-5(1).</p> <p><u>Table 9</u></p> <p>Expenditure on G.D.P.</p> <p><u>Table S-1</u> abbreviated.</p> <p>Agricultural rural households account (items 1 to 4 and 10 to 15)</p> <p><u>Table S-5 A.</u></p> <p>Fixed capital formation by type of asset</p>	<p><u>Table 6</u></p> <p>Appropriation account of general government.</p> <p><u>Table S-2</u></p> <p>Capital account of general government</p> <p><u>Table S-3</u></p> <p>Economic and functional classification of government transactions.</p>	<p><u>Table 3</u> abbreviated</p> <p>Production accounts by industry (product approach)</p> <p><u>Table S-4</u></p> <p>Composition of private consumption expenditure</p>	<p><u>Table 3</u>-remaining-</p> <p>Value added accounts by industry (income approach)</p> <p><u>Table 4</u></p> <p>Appropriation accounts of corporations</p> <p><u>Table 5</u></p> <p>Appropriation account of households</p> <p><u>Table 7</u></p> <p>Consolidated capital account</p> <p><u>Table 8</u>-remaining-</p> <p>Rest of the world account</p> <p><u>Table 10</u></p> <p>National income by factor share</p> <p><u>Table S-1</u> - remaining -</p> <p>Agricultural rural households account</p> <p><u>Table S-5.B</u></p> <p>Fixed capital formation by type of purchaser</p> <p><u>Table S-5.C</u></p> <p>Fixed capital formation by industrial use.</p>

FREQUENCY OF COMPILATION

ES = Countries at a rather Early Stage of statistical development
AS = Countries at a fairly Advanced Stage of statistical development
BM years = Benchmark years (usually reference periods for the plans)

Stage I	Stage II	Stage III	Stage IV applicable only to AS
<u>Table I</u> ES) BM years : AS) All items	<u>Table 6,</u> <u>Table S-2,</u> <u>Table S-3</u> ES) Yearly for AS) all items	<u>Table 3 : Product approach</u> ES - Yearly for main industries (excl. subsistence out- put and handi- craft) BM years : All industries AS - Yearly for most industries (excl. subsist. output) BM years : All industries	<u>Table 3: Product & income approaches</u> Yearly for main industries BM years : All industries
<u>Table 2</u> ES - Yearly for main commo- dities (exp. & cash crops main manu- factures, etc. BM years: All commodities AS - Yearly for most commodit. (excl. subsist. output) BM years: All commodities		<u>Table S-4</u> ES - Yearly for main items (incl. all im- ports) BM years : All items AS - Yearly for most items BM years : All items	<u>Table 4</u> <u>Table 5</u> Yearly for all items, excl. sector breakdown BM year: All items
<u>Table 8</u> ES - Yearly for main items BM years: All items AS - Yearly for all items (incl. some rough estimates)			<u>Table 7</u> <u>Table 8</u> Yearly for all items <u>Table 10</u> Yearly for all items before final appropriation of interests and dividends BM years : All items after final appropriation.
<u>Table 9</u> ES - Yearly for all items (incl. rough estimates)			<u>Table S-1</u> Yearly for most items BM years : All

55. The first case is that of countries with little in the way of statistical resources, who are still initiating work in the field of national accounts, even though they may have prepared a rough set of estimates for one or two years. In these countries the main effort would be directed towards organizing the annual compilation of selected series. The statistical material available would probably include data on population, the output of the main commodities, foreign trade, the fiscal returns of modern enterprises (mainly corporations), the receipts and expenditures of central and local governments, plus some financial and price statistics and some information on employment and wages. The basic philosophy behind the proposed system is that, even for a country at this very early stage of statistical development, a set of national accounts, if it is to be of real use, must include an analysis of the domestic product by industry. The set of accounts and tables which such a country should endeavour to compile can be grouped into three stages : Stage 1 corresponds to the minimum set of accounts and tables, and should be given the first order of priority. It includes : Table 1, Inventory account of human resources, which constitutes an indispensable basis for estimating or checking various series.- Table 2, Account of uses and resources by commodity groups, which constitutes the backbone of the analysis, and from which an analysis of the domestic product by industrial origin can be later derived - Table 8, Rest of the World account, limiting in a first stage, the analysis on the external transactions of the most important items, viz. items 8-1(1) and 8-4(1), exports and imports of merchandises, items 8-1(2) and 8-4(2), exports and imports of transport services, items 8-2(1) and 8-5(1), interest, dividends and profits received from and paid to abroad. Depending on the circumstances of the countries, items (3) and (4) on passenger fares and travel expenditure may or may not be important and should be treated accordingly. Net figures might be much easier to obtain at an early stage through exchange control, post loans and money order remittances, etc... Thus it might be convenient to net out items 8-1(5)(a) and 8-5(2) and items 8-4(5)(a) and 8-2(2). Items 8-1(5)(b) and 8-4(5)(b) are usually insignificant, and items 8-3 and 8-6, transfers, can also be ignored in a first stage. The compilation of these three essential tables 1, 2 and 8 should be accompanied by that of the preceding supplementary tables.

which actually deal with the same estimates : Supplementary Table S-1 limited to items 1 to 4 and 10 to 15 on the output and expenditure of agricultural rural households - Supplementary Table S-5, part A, composition of gross domestic fixed capital formation by type of asset and by origin, which corresponds to the flow-of-commodities approach to the measurement of capital formation already followed in Table 2. Finally, Table 9, Expenditure on gross domestic product, will be obtained as a by-product of Table 2. Stage II, which also applies to all countries, should in fact be given the same priority as Stage I and might even precede it. It covers the analysis of government transactions. In view of the importance of the government sector in the economy of under-developed countries and of the availability of the necessary information, all countries should endeavour to compile fully Table 6, Appropriation account of general government, Supplementary Table S-2, Capital and financing account of general government, and Supplementary Table S-3, Combined economic and functional classification of general government current and capital expenditure. These tables can be of considerable value in their own rights, long before the remaining tables can be compiled with a sufficient degree of accuracy to justify confident conclusions being drawn from them. Finally, Stage III should be attempted by all countries, but only after having reached a sufficient level of statistical proficiency i.e. after having completed Stage I and II. It covers essentially the analysis of the industrial origin of the domestic product through the output approach, as embodied in the left hand side of Table 3. The value added by industry can be derived from the data in Table 2 following the analysis of intermediate consumption along the lines of Appendix V. Countries at this early stage of statistical development should not attempt to trace the final appropriation of factor income, analyse income transfers, estimate directly the amount of saving, or reconcile the income and product approaches to the analysis of the domestic product by industrial origin.

56. In the second case, that of countries at a fairly advanced stage of statistical development, an attempt should be made to implement the system in full and to complete Stage IV. The reconciliation of the product and income approaches to the analysis of the domestic product by industrial origin would

then be carried out within the framework of Table 3 and the three appropriation accounts, for households, corporations and general government respectively, would be articulated with each other and with the rest of the world account. Here, however, a situation could arise in which countries would find it impossible to trace the transactions from agent to agent within the appropriation accounts ^{1/}. In this case, the analysis could be limited to aggregate figures for each type of transaction (interest and dividends payments, transfers) without further breakdown. From these appropriation accounts the saving of each sector will be derived as a residual, which will enable the countries to balance saving and investment as done in Table 7, Consolidated capital account. No attempt, however, should be made at this stage to compile separate capital accounts for each sector. Finally, Table 10, which shows national income by factor share before final appropriation of interest and dividends, will be obtained as a by-product of the income approach embodied in Table 3. Only countries having actually completed the three appropriation accounts could show the distribution of the national income after final appropriation of interest and dividends as done in SNA Table IV. Finally, countries at a fairly advanced stage of statistical development should be in a position to complete the remaining part of Table 8, Rest of the world account, including an analysis of transfers and capital transactions, the remaining part of Table S-1, Agricultural rural households account, i.e. items 5 to 9, 16 and 17, and parts B and C of Table S-5, gross domestic fixed capital formation by type of purchaser and by industrial use.

57. The tables and accounts to be compiled in the four stages examined in the previous paragraphs are closely interrelated and a certain number of analytical tasks, more or less independent of each other, can be distinguished,

1/ This constitutes one of the main differences between the UN SNA and the French system of national accounting. In the French system, no attempt is made to show directly the transactions between agents. Instead, each operation effected between the economic agents passes through one or another of three separate "operation accounts", whether for product, for transfers or for changes in assets and liabilities, which play the role of "screen accounts". See "Systems of National Accounts in Africa", by P. Ady and M. Courcier, Organization for European Economic Co-operation, Paris 1960. In particular chapter two, The French System of Accounting in Use in Africa.

corresponding to a necessary intermediate stage in the processing of the basic statistical material required for the completion of the tables themselves. If the manpower resources prove to be sufficient, these tasks can be carried out simultaneously. They consist of :

1. Inventory of human resources which should include, as a minimum, an estimate of the labour force and of the number of unincorporated enterprises by main industry (e.g. for each of the nine divisions of I.S.I.C.), and an estimate of the total number of agricultural rural households.
2. Analysis of agricultural output, distinguishing the various export crops and cash crops, and including, if possible, an estimate of the subsistence output of agricultural rural households.
3. Analysis by commodity of other production series relating to mining, manufacturing, building, energy, transport and services.
4. Analysis of foreign trade statistics including an end-use classification of imports (see Appendix IV).
5. Price studies, including an analysis of producer and retail prices leading to an estimate of the trade margins by commodity according to final destination (see paragraph 43).
6. A series of per capita estimates based for instance on income tax returns, wage statistics, income and expenditure surveys, calorific requirements, etc... which, combined with population estimates, will assist in estimating or checking a certain number of aggregates such as the output of agricultural rural households, the total wage bill, the income of unincorporated enterprises, food consumption expenditure, etc...
7. Analysis of government accounts, including central and local authorities, carried as far as the economic and functional classification of general government expenditure.
8. Estimate of the balance of payments, covering if possible both current and capital transactions.

9. If available, analysis of the various consuses of agriculture, industry and distribution.
10. Analysis of company accounts
11. Analysis of financial statistics.

The compilation of Table 2, which represents an essential step in the development of the system, requires the completion of tasks 1 to 6 and part of 7. The data thus obtained are also those needed for the completion of the debit side of Table 7, part of Supplementary Table S-1 and S-5 and Supplementary Table S-4. The production accounts by industry in Table 3 will be derived from Table 2 through an analysis of intermediate consumption as indicated in Appendix V. This latter analysis, however, will be greatly facilitated by the analysis under 9 of consus data, if available. The analysis of government accounts under 7 will lead to the completion of Table 6 and Supplementary Tables S-2 and S-3. Table 8, Rest of the world account comes under 8. The compilation of the appropriation accounts for corporations and households will require, in addition, the carrying out of the analysis under 10 and 11, which are also needed for the compilation of the credit side of Table 7, and of items 5 to 9, 16 and 17 of Supplementary Table S-1.

These few indications of the way in which the processing of basic statistical material should be organized should be of some assistance to the national accountant working in Africa, but are, however, too sketchy to replace a manual of methodology which is very much needed ^{1/}.

58. A difficult question to answer is the frequency at which the accounts and tables of the system should be compiled. The development planner, taken as the main user of the accounts, would favour the compilation of annual series as the only means of controlling the implementation of the plan and of deriving dynamic coefficients which can be fed back into the development programme to adjust the various targets. Such a request, if it is to be well founded, implies that the quality of the estimates is sufficiently

^{1/} The preparation of such a manual was outside the scope of this paper.

good to justify the drawing of significant conclusions from the year-to-year comparison of the various series. A decision on the frequency of compilation of the accounts should, therefore, be based on the level of statistical development reached in each case. The proposed system, it is true, has been designed to fit all stages of statistical proficiency, and even countries with very little basic material can attempt to complete the commodity analysis of Table 2 from which the main aggregates can be derived. But there would be very little purpose in attempting to complete this table each year on the basis of the same rough estimates, except perhaps as a reminder of the necessity to improve the statistical apparatus. The yearly changes in the various uses and resources of a commodity, inferred from the annual computation of Table 2, can be significant only if the annual estimates of these uses and resources are themselves significant, which implies a direct statistical measurement, except perhaps in the case of the item which is obtained as a residual ^{1/}. Most African countries are not at present in a position to measure directly annual production or private consumption. It will take a sustained effort on the part of their statistical offices, including the initiation or the development of field survey operations by a permanent field survey organization ^{2/}, to reach a stage where the annual implementation of the full system will produce meaningful time series. Meanwhile, the compilation of accounts and tables on annual basis should be limited to those for which reasonably good data are available ^{3/}. If extended to other accounts

^{1/} The residual item will often be the sum of household consumption and stock changes.

^{2/} For some preliminary conclusions relating to the utilization of household surveys for estimating domestic output and consumption, see Report of the Working Group of Consultants on Households Surveys, UNECA, Addis Ababa, December 1961, E/CN.14/130.

^{3/} In the case of countries at an early stage of statistical development the compilation of annual series could be limited to the following accounts and tables: Table 2 limited to the commodities for which good yearly estimates are available (e.g. export and cash crops by opposition to subsistence output)- Table 3 limited to the production accounts of selected industries (e.g. mining, certain manufacturing industries, electricity) - Table 6 and Supplementary Tables S-2 and S-3 which correspond to a thorough analysis of general government transactions for which annual data are available - Part of Table 8, Rest of the world account - Part A of Supplementary Table S-5, Composition of gross domestic fixed capital formation by type of asset and by origin. If annual estimates are produced for other series, they are likely to be less reliable and should be given as such. See table of page 41.

it should be with the intention of checking the efficiency of the statistical apparatus and promoting its further development, and not of encouraging the analyst to draw dangerous conclusions from wild estimates ^{1/}.

59. It has been shown that the development of the system depends on the statistical resources available, but it does not follow that the programme of statistical development of a country should be geared solely to the needs of the national accountant. National accounts constitute, it is true, an indispensable basis for the preparation, implementation and control of a development plan, but there are many other additional data which the planner requires for his work, in particular for building the comprehensive dynamic model necessary to the establishment of long-term projections and to the selection of appropriate targets. The accounts can provide a series of static pictures of the economy for different years, but fall short of an adequate explanation of all the dynamic forces behind the observed changes. To obtain this, the economic and social planners would need to extend their investigations to other fields which fall outside the scope of national accounting proper. As examples of such studies, one can quote the factors influencing demand, including elasticity coefficients, marketing research, etc.... the propensity to save of the various socio-professional categories according to their levels of income, the marginal ratios between capital and output by industry, the degree of utilization of the capital invested, the elasticity of manpower supply, the economics of education, etc...etc... In other words, an adequate strategy of statistical development must not take account only of the needs of the national accountant, but also of the requirements of all those who play a part in shaping the economic and social policy of the nation. Here also the need is strongly felt for a comprehensive study linking the strategy of statistical development with the strategy of economic and social planning.

^{1/} It should be noted here that the lower the level of aggregation of the system, the easier it is to single out the series for which good estimates are available. Aggregating estimates of uneven quality amounts to a loss of information.

CONCLUSION

60. The main objectives pursued in devising this intermediate system of national accounts for use in African countries have been the following :

1. To facilitate the task of the national accountants working with limited resources. To this effect, more guidance is provided on the possible approaches open to African countries, and on the appropriate sequence of computation of the various accounts and tables. Some of the classical concepts and definitions of the SNA have been modified and adapted to conditions prevailing in countries at an early stage of statistical development. Finally, the articulation of the system itself has been simplified, while retaining the same categories of economic agents as the SNA. At the same time, the emphasis is placed on a low, rather than a high, level of aggregation of economic flows as being better adapted to the treatment of statistical series of uneven quality.
2. To reach a compromise between the theoretical requirements of the development planner and the efforts and resources which underdeveloped countries can reasonably be expected to devote to the implementation of the system. But, even in the case of countries with only meagre statistical resources, the analysis of the domestic product by industrial origin is considered as absolutely essential and is, therefore, built into the main tables. This accounts for the importance attached to the study of the uses and resources of the various commodities, which is the only possible approach open to these countries.
3. To devise a system of use to African countries at present following the broad lines of the UN SNA as well as to those following the "French" system, and which at a later stage could be expanded into the fuller framework of the SNA taken as a world standard. This explains why the proposed system does not contain any really "original" feature, and is considered as an "intermediate" stage leading to the eventual adoption of the broader SNA ^{1/}.

^{1/} It is true that the UN SNA itself should be considered as an intermediate system in view of the impending extension of the field of national accounting.

4. To fill the needs, during the next decade or two, both of African countries which have already reached a reasonable stage of statistical development and of those just initiating work in this field. Hence, a rather sophisticated system when developed in full, but which can also be implemented in successive stages, depending on the statistical data available.

Although the methodological explanations have been kept to a minimum ^{1/}, the present paper should contain sufficient indications of the structure of the proposed system, and the way it could be implemented, to allow for a critical appraisal of the success achieved in the pursuance of these objectives. Such an appraisal, however, if given its full significance, should be conducted within the framework of a general strategy for statistical developments ^{2/}.

^{1/} As already said, this should be the object of a special manual on methodology.

^{2/} Provided that such a general strategy could be properly defined. This ought to be the subject of a separate study.

APPENDIX I

A PROPOSED INTERMEDIATE SYSTEM OF NATIONAL ACCOUNTS FOR
USE IN AFRICA

Table 1.	Inventory account of human resources.
Table 2.	Account of uses and resources by commodity group.
Table 3.	Production and value added accounts by industry.
Table 4.	Appropriation account of corporations.
Table 5.	Appropriation account of households and private non-profit institutions.
Table 6.	Appropriation account of general government.
Table 7.	Consolidated capital account.
Table 8.	Rest of the world account.
Table 9.	Expenditure on gross domestic product.
Table 10.	National income by factor share before provision for consumption of fixed capital

Supplementary Tables

Table S.1.	Agricultural rural households account.
Table S.2.	Capital and financing account of general government.
Table S.3.	Combined economic and functional classification of general government current and capital expenditure.
Table S.4.	Composition of private consumption expenditure.
Table S.5.	Composition of gross domestic fixed capital formation.

INVENTORY ACCOUNT OF HUMAN RESOURCES 1/
B - De facto and de jure population
In '000'sA - Classification of de facto population by industry and employment status,
excluding African agricultural rural households.

2000

I.S.I.C. 2/ Division or group	INDUSTRY	Self-employed										Unpaid Family Workers	Wage Earnings				TOTAL
		Employers					Own Acct.										
		A	MA	P	M	F	A	MA	P	M	F	A	MA	P	M	F	
0	<u>Agriculture, Forestry Hunting and Fishing 3/</u>																
01	Agriculture																
02	Forestry																
03	Hunting																
04	Fishing																
1	<u>Mining and Quarrying</u>																
11	Coal mining																
12	Metal mining																
13	Crude petroleum and natural gas																
14	Stone quarrying																
19	Other mining and quarrying																
2-3	<u>Manufacturing</u>																
20-21-22	Food, Beverage, Tobacco manufacturing industries																
23-24-29	Textile, Clothing and Leather industries																
25-26-27-28	Wood, Paper and Printing industries																
30-31-32	Chemical industries																
33	Building materials & Glass industries																
35-36-37-38	Metal manufacturing industries																
39	Miscellaneous manufactur- ing industries																
4	Building and Construction																
51-52	Electricity, Gas, Water																
61	Distribution																
71-72-73	Transport, Storage and Communication																
62-63-64	Banking, Insurance and Real Estate																
810	Public Administration and Defense																
821	Education Services																
	A. Private sector																
	B. Public sector																
822	Medical and other Health Services																
	A. Private sector																
	B. Public sector																
851	Domestic Services																
Rest of 8	Other Services																
	A. Private sector																
	B. Public sector																
Total Active Population																	
Unemployed and Dependents of Working Age																	
Total Population of Working Age																	
Old Age and Children Under Working Age																	
Total Population																	

FOOTNOTES

- 1/ A - Africans M - Males
NA - Non-Africans F - Females
- 2/ International Standard Industrial Classification of All Economic Activities,
Statistical Papers Series M No. 4, Rev. 1, UN, New York, 1958
- 3/ Other than African Rural Households
- 4/ As required

TABLE 2

ACCOUNT OF USES AND RESOURCES BY COMMODITY GROUP 1/

-3-

Appendix I

I.S.I.C. Division or group	Products 2/ of the following industries	Final expenditures										Total Uses and Resources		Resources					
		Consumption				Fixed capital formation				Stock changes		Exports F.O.B.	Imports C.I.F.	Local Production					
		Households		Gov't 2/		Own account construction & landwork by rural agricul- tural house- holds 4/		Other		Goods produc- ed & retained by agricul- tural rural households 4/				Trade margins on imports		Trade margins on local products including transport			
		Goods produc- ed & consumed by agricul- tural rural households 4/	Other											Import duties including transport	Other duties including transport	Local products at producer prices of agricul- tural house- holds	Other local pro- ducts		
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p		
		I	LP	I	LP	I	LP	I	LP	I	LP			I	LP				
0	Agriculture, Forestry Hunting & Fishing																		
01	Agriculture																		
02	Forestry																		
03	Hunting																		
04	Fishing																		
1	Mining & Quarrying																		
11	Coal mining																		
12	Metal mining																		
13	Crude petroleum & natural gas																		
14	Stone quarrying																		
19	Other mining & quarrying																		
2-3	Manufacturing																		
20-21-22	Food, Beverages, Tobacco manufacturing indus- tries																		
23-24-29	Textile, Clothing & Leather industries																		
25-26-27-28	Wood, Paper & printing industries																		
30-31-32	Chemical industries																		
33	Building materials																		
34	Glass industries																		
35	Rubber, Metal industries																		
35-36-37-38	Metal manufacturing industries																		
39	Miscellaneous manufactur- ing industries																		
4	Building & Construction																		
51-52	Electricity, Gas & Water																		
71-72-73	Transport, Storage & Communication 2/																		
62-63-64*	Banking, Insurance & Real Estate																		
-	Ownership of buildings																		
810	Public administration & defense (wages & salaries) 5/																		
821	Education Services A. Private sector B. Wages & salaries of gov't 5/																		
822	Medical & other health services A. Private sector B. Wages & salaries of gov't 5/																		
851	Domestic Services																		
Rest of 8	Other Services A. Private Sector B. Wages & salaries of Gov't 5/																		
-	Agricultural Rural Household Services																		

NOTES

1/ I = Imports, LP = Local Products

2/ For a detailed list of the products comprising the output of the various industries see Appendix III.

3/ General government covers public administration and defense, government agencies as education and health and other government agencies performing activities of an administrative and regulatory nature other than those of government enterprises. It excludes government enterprises and public corporations. The expenditure of general government as a final consumer consists of expenditure on goods and services provided by other industries plus the wages and salaries of its own labour force. Expenditure on goods and services is entered against the product of the appropriate industry, while expenditure on wages and salaries has to be included in this column as a separate item under expenditure on the product of itself with a corresponding entry on the revenue side. Both the product and the expenditure aggregates of general government in respect of wages and salaries may be entered separately for a) public administration and defense, b) education services, c) medical and other health services, d) other government services.

4/ Goods produced by agricultural rural households for own use or for sale or barter within the sector

5/ Imports include transport charges paid to foreign carriers and insurers for local transports. Exports include transport charges paid by non-residents to domestic carriers and insurers.

6/ The final expenditure of general government shown in column d represents final expenditure of general government, including expenditure in respect of education, medical and health services and other government services of an administrative and regulatory nature, on the product of other industries. The entries against these services industries in Table 2 therefore would be restricted normally to the intermediate and final demand for the product of private enterprises in the economy. As seen under 2/ above it would be useful, however, to include also the expenditure on the general government wages and salaries, with respect to a) public administration and defense, b) education services, c) medical and other health services, d) other government services.

* Part

FOOTNOTES

- 1/ I = Imports, LP = Local Products
- 2/ For a detailed list of the products comprising the output of the various industries see Appendix III.
- 3/ General government covers public administration and defense, government services, education and health and other government agencies performing administrative and regulatory functions other than those of government enterprises and public corporations. The expenditure of general government as a final consumer consists of expenditures on goods and services provided by other industries plus the wages and salaries of its own labour. Expenditure on goods and services is entered against the product of the appropriate industry, whilst expenditure on wages and salaries has to be included in the column as a separate item of expenditure on the product of itself with a corresponding entry on the resources side. Both the product and the expenditure aggregates of general government in respect of wages and salaries may be entered separately for a) public administration and defence, b) education services, c) medical and other health services, d) other government services.
- 4/ Goods produced by agricultural rural households for own use or for sale or barter within the sector
- 5/ Imports include transport charges paid to foreign carriers and insurers for local transports. Exports include transport charges paid by non-residents to domestic carriers and insurers.
- 6/ The final expenditure of general government shown in column d represents final expenditure of general government, including expenditure in respect of education, medical and health services and other government services of an administrative and regulatory nature, on the product of other industries. The entries against these services industries in Table 2 therefore would be restricted normally to the intermediate and final demand for the product of private enterprises in these sectors. As seen under 3/ above it would be useful, however, to include also the appropriate element of general government wages and salaries, with respect to a) public administration and defence, b) education services, c) medical and other health services, d) other government services.

* Part

TABLE 1
PRODUCTION AND VALUE ADDED ACCOUNTS BY INDUSTRY

I.S.I.C. Division or Group	INDUSTRY 1/ <u>Agriculture, Forestry, Hunting & Fishing</u>	Gross Domestic Product at Market Prices		Indirect Taxes less Subsidies	Gross Domestic Product at Factor Cost								
		Turnover 2/	Purchases 3/		Employee Income		Total	Gross Operating Profits		Public	Private		
					Public	Private		Unincorporated Enterprises	Corporations				
		a	b	c	d	e	f	g	h	i	j	k	l
0	<u>Agriculture, Forestry, Hunting & Fishing</u>												
01	Agriculture												
02	A. Rural Households												
03	B. Other enterprises												
04	Forestry												
05	A. Rural Households												
06	B. Other enterprises												
07	Hunting												
08	A. Rural Households												
09	B. Other enterprises												
10	Fishing												
11	A. Rural Households												
12	B. Other enterprises												
13	<u>Mining & Quarrying</u>												
14	Coal mining												
15	Metal mining												
16	Other mining & quarrying												
17	Other mining & quarrying												
2-3	<u>Manufacturing</u>												
20-21-22	Food, Beverages, Tobacco												
23-24-25	Textile, Clothing & Leather												
26-27-28	Wood, Paper & Printing												
29-30-31-32	Chemical Industries												
33	Building Materials & Glass												
34	Basic Metal Industries												
35-36-37-38	Metal manufacturing												
39	Miscellaneous manufacturing												
4	<u>Building & Construction</u>												
40-41-42	A. Agricultural Rural House-												
43-44-45	holds												
46-47-48	B. Other Enterprises												
49-50	Electricity, Gas, Water												
51-52	Distribution												
53-54	Transport, Storage & Communi-												
55-56-57	cation												
58-59-60	Banking, Insurance & Real												
61-62-63	Estate												
64-65-66	Ownership of Dwellings												
67-68-69	Public Administration & Defense												
70-71-72	(wages & salaries) 5/												
73-74-75	Education Services												
76-77-78	A. Private sector												
79-80-81	B. Wages & salaries of												
82-83-84	government 2/												
85-86-87	Medical & other Health Services												
88-89-90	A. Private sector												
91-92-93	B. Wages & salaries of												
94-95-96	government 2/												
97-98-99	Domestic Service												
100-101-102	Other Services												
103-104-105	A. Private sector												
106-107-108	B. Wages & salaries of												
109-110-111	government 2/												
112-113-114	Agricultural Rural Household												
115-116-117	Services												
TOTAL													

FOOTNOTES

1/ The industrial breakdown given here is the same as in Table 2. It is based on the I.S.I.C. and can be extended as circumstances require. The unit of classification is the establishment as in the I.S.I.C..

2/ More accurately, the selling value of current production during the period. Equal to the sum of data in columns o and p of Table 2 for the corresponding industry.

3/ i.e. market value of purchases of goods and services used during the period. For a calculation of the current inputs of each industry based on the output of intermediate products by producing industries as given in column a of Table 2, see Appendix V.

4/ i.e. government enterprises.

5/ Wages and salaries of general government should be entered under columns a, c and f. See footnotes 3 and 6 to table 2.

* Part

FOOTNOTES

- 1/ The industrial breakdown given here is the same as in Table 2. It is based on the I.S.I.C. and can be extended as circumstances require. The unit of classification is the establishment as in the I.S.I.C.
- 2/ More accurately, the selling value of current production during the period. Equal to the sum of data in columns o and p of Table 2 for the corresponding industry.
- 3/ i.e. market value of purchases of goods and services used during the period. For a calculation of the current inputs of each industry based on the output of intermediate products by producing industries as given in column a of Table 2, see Appendix 1.
- 4/ i.e. government enterprises.
- 5/ Wages and salaries of general government should be entered under columns a, c and f. See Footnotes 3 and 6 to table 2.

* Part

-7-

T A B L E 4

Appropriation Account of Corporations ^{1/}

4.1. Direct Taxes	4.5. Gross operating profits
4.2. Dividends paid	4.6. Interest and dividends received
(1) to households	(1) from households and
(2) to general government	unincorporated enter-
(3) to rest of the world	prises
	(2) from general government
	(3) from rest of the world
4.3. Other transfers ^{2/}	4.7. Transfers ^{2/}
(1) to households	(1) from general government
(2) to general government	
(3) to rest of the world	
4.4. Saving before provision for consumption of fixed capital	
Disposal of income	Income of corporations

^{1/} Public and private corporations combined.^{2/} Memorandum item "net transfers for investment" if necessary information is available.

-9-

T A B L E 5

Appropriation Account of Households
and Private Non-Profit Institutions ^{1/}
(SNA Account 4)

<u>Current Account</u>	
5.1. Consumption expenditure	5.6. Compensation of employees
(1) Consumption from own pre- duction of agricultural rural households	5.7. Income from unincorporated enterprises
(2) Other consumption	(1) agricultural rural households
5.2. Interest paid to:	(2) other households and private non-profit institutions
(1) Households	5.8. Interest, dividends and rent
(2) corporations	(1) from households and unincorporated enter- prises
(3) general government	(2) from corporations
(4) rest of the world	(3) from general government
5.3. Direct taxes	(4) from rest of the world
5.4. Other transfers ^{2/}	5.9. Transfers ^{2/}
(1) to general government	(1) from corporations
(2) to rest of the world	(2) from general government
5.5. Saving	(3) from rest of the world
(1) of agricultural rural households	
(2) other households and private non-profit institutions	
Disposal of income	Income of households and private non-profit institutions

^{1/} It is desirable that in compiling this table the long term objective of distinguishing household transactions from those of private non-profit institutions should be kept in mind.

^{2/} Memorandum item "net transfers for investment" if necessary information is available.

T A B L E 6

Appropriation Account of General Government ^{1/}
(SNA Account 5)

<p>6.1. Consumption expenditure</p> <p>(1) wages and salaries ^{2/}</p> <p>(2) purchases of other goods and services</p> <p>6.2. Interest on public debt</p> <p>6.3. Subsidies</p> <p>6.4. Transfers to: ^{3/}</p> <p>(1) households</p> <p>(2) corporations</p> <p>(3) rest of the world</p> <p>6.5. Saving</p>	<p>6.6. Income from property and entrepreneurship</p> <p>(1) profits from government enterprises</p> <p>(2) rents (actual and imputed)</p> <p>(3) interest and dividends from:</p> <p>(a) households and unincorporated enterprises</p> <p>(b) corporations</p> <p>(c) rest of the world</p> <p>6.7. Indirect taxes</p> <p>6.8. Direct taxes</p> <p>(1) on households</p> <p>(2) on corporations</p> <p>6.9. Other transfers from: ^{3/}</p> <p>(1) households</p> <p>(2) corporations</p> <p>(3) rest of the world</p>
Disposal of current revenue	Current revenue

^{1/} General government covers public administration and defence, government agencies as education and health and other government agencies performing activities of an administrative and regulatory nature other than those of government enterprises. It excludes government enterprises and public corporations.

^{2/} Excluding wages and salaries of government enterprises, wages and salaries subsequently capitalized, and wages and salaries of professional persons, for example, engineers, architects, surveyors, and other government employees which are paid for out of revenue votes, but which are incurred in respect of capital works.

^{3/} Memorandum item "net transfers for investment" if necessary information is available.

-13-

T A B L E 7

Consolidated Capital Account

(SNA Account 3)

7.1. Own account capital formation of agricultural rural households	7.4. Saving of households ^{1/} (1) agricultural rural households (2) other households and private non-profit institutions
7.2. Other gross domestic fixed capital formation	7.5. Saving of public and private corporations ^{1/}
7.3. Increase in stocks (1) of primary goods produced and retained by agricultural rural households (2) of other goods	7.6. Saving of general government ^{1/}
	7.7. Deficit of the nation on current account ^{1/} (1) net decrease in reserves and other external balances (2) other net borrowing from the rest of the world
Gross domestic capital formation	Finance of gross domestic capital formation

^{1/} If necessary information is available, memorandum item "net transfers for investment a) from corporations b) from households c) from general government", the total being equal to "net transfers for investment to the rest of the world".

T A B L E 8

Rest of the World Account

(SNA Account 6)

<p>8.1. Exports of goods and non-factor services</p> <ul style="list-style-type: none"> (1) Exports of merchandise FOB plus or minus adjustments for valuation, coverage & timing equals exports FOB (2) Transportation n.e.s. (3) Passenger fares <ul style="list-style-type: none"> (a) private (b) business (4) Travel expenditure <ul style="list-style-type: none"> (a) private (b) business (5) Other non-factor services <ul style="list-style-type: none"> (a) personal consumption by non-residents within the geographical territory (b) other <p>8.2. Factor Services</p> <ul style="list-style-type: none"> (1) Interest, dividends and profits received by <ul style="list-style-type: none"> (a) households (b) general government (c) corporations (2) wages and salaries of residents paid by non-resident producers <p>8.3. Transfers from the rest of the world to <u>1/</u></p> <ul style="list-style-type: none"> (1) Households (2) general government 	<p>8.4. Imports of goods and non-factor services</p> <ul style="list-style-type: none"> (1) imports of merchandise CIF less freight & insurance, plus or minus adjustments for valuation, coverage & timing equals imports FOB (2) Transportation n.e.s. (3) passenger fares <ul style="list-style-type: none"> (a) private (b) business (4) Travel expenditure <ul style="list-style-type: none"> (a) private (b) business (5) Other non-factor services <ul style="list-style-type: none"> (a) personal consumption by residents abroad (b) other <p>8.5. Factor services</p> <ul style="list-style-type: none"> (1) Interests, dividends and profits paid by <ul style="list-style-type: none"> (a) households (b) general government (c) corporations (2) Wages and salaries of non-residents paid by resident producers. <p>8.6. Transfers to the rest of the world from <u>1/</u></p> <ul style="list-style-type: none"> (1) households (2) general government (3) corporations <p>8.7. Surplus of the nation on current account</p>
<p>Current receipts from abroad</p>	<p>Disposal of current receipts</p>
<p>8.8. Surplus of the nation on current account</p>	<p>8.9. Net increase in reserves and external balances</p> <p>8.10. Other net lending and errors and omissions</p> <ul style="list-style-type: none"> (1) net increase in other assets abroad (2) net decrease in liabilities to the rest of the world (3) errors and omissions

1/ Memorandum item "net transfers for investment" if necessary information is available.

-17-

T A B L E

Expenditure on Gross Domestic Product

(SNA Account 1)

9.1. Gross domestic product at factor cost	9.4. Private consumption expenditure
9.2. Indirect taxes	(1) consumption from own production of agricultural rural households
9.3. <u>Less</u> : subsidies	(2) other private consumption
	9.5. General government consumption expenditure
	9.6. Own account capital formation of agricultural rural households
	9.7. Other gross domestic fixed capital formation
	9.8. Increase in stocks
	(1) of primary goods produced and retained by agricultural rural households
	(2) of other goods
	9.9. Exports of goods and non-factor services
	9.10. <u>Less</u> : Imports of goods and non-factor services
Gross domestic product at market prices	Expenditure on gross domestic product

T A B L E 10

National Income by Factor Share before Provision
for Consumption of Fixed Capital ^{1/}
(SNA Account 2)

10.1. Compensation of employees	10.7. Gross domestic product at factor cost
10.2. Income from agricultural rural households	10.8. Less : Net factor income paid to the rest of the world
10.3. Income from other enterprises	
(1) unincorporated enterprises other than agricultural rural households	
(2) corporations (public and private)	
(3) government enterprises	
10.4. Households income from property (actual and imputed rent only)	
10.5. General government income from property (actual and imputed rent only)	
10.6. <u>Less</u> : Net factor income paid to the rest of the world	
National income, before provision for consumption of fixed capital	Gross national product at factor cost

^{1/} Before final appropriation of interest, dividends and profits.

SUPPLEMENTARY TABLE S-1 .

Agricultural Rural Households Account 1/

<p>1. Consumption expenditure</p> <p>(1) on goods produced and consumed by the rural households sector (including purchases and barter within the sector)</p> <p>(2) on goods and services purchased from other sectors <u>2/</u></p> <p>2. Fixed capital formation</p> <p>(1) own account rural construction and landwork</p> <p>(2) goods and services purchased from other sectors <u>2/</u></p> <p>3. Increase in stocks of primary goods produced and retained by agricultural rural households</p> <p>4. Intermediate goods and services purchased <u>2/</u> for production from other sectors <u>2/</u></p> <p>5. Factor income paid (wages, rent, interest, dividends)</p> <p>6. Indirect taxes paid to the government</p> <p>7. Direct taxes and transfers to government</p> <p>8. Transfers to other sectors n.e.s.</p> <p>9. Hoarding and/or net lending to other sectors <u>2/</u></p>	<p>10. Primary commodities sold to other sectors</p> <p>11. Primary commodities retained for consumption within the agricultural rural households sector</p> <p>(1) for own consumption</p> <p>(2) sold or bartered</p> <p>12. Agricultural rural households services</p> <p>13. Other goods and services <u>sold</u> either within or outside the sector</p> <p>14. Own account rural construction and landwork</p> <p>15. Increase in stocks of primary goods produced and retained by agricultural rural households</p> <p>16. Factor income received (wages, rent, interest, dividends)</p> <p>17. Transfers from other sectors n.e.s.</p>
Total disbursements	Total Receipts

Footnote 1/

To facilitate the implementation of this account which has been recommended by the working group on the treatment of non-monetary transactions, some explanations may be required concerning the definition of the sector, the method of valuation of the various items and their articulation with the other accounts in the system :

(continuation next page)

SUPPLEMENTARY TABLE E-1 (cont'd)

Footnote 1/ (cont'd)

Definition of the Agricultural Rural Households Sector

The agricultural rural household sector comprises agricultural rural households, as opposed to large scale enterprises, engaged in farming forestry or fishing, located in rural areas (that is areas outside the limits of towns and cities of a size and nature to be determined by reference to local conditions). It does not include rural households whose principal activities are non-primary.

Valuation of the Various Items in the Account

1. (1) Covers the same goods as under 11 (1) and 11 (2) but valued at retail prices.
1. (2) Valued at transaction value
2. (1) Valued at cost
2. (2) Valued at transaction value
3. Valued at producer (ex-farm) prices
4. Valued at transaction value
- 10)
- 11 (1)) Valued at producer (ex-farm) prices
- 11 (2))
- 12 Rural household services equated to a) the difference between sales revenues to the sector and valuation at producer prices in respect to item 10, b) the difference between valuation at retail prices and at producer prices for item 11 (1) and (2)
13. Valued at transaction value.
14. Equals 2 (1)
15. Equals 3

(continuation next page)

SUPPLEMENTARY TABLE S-1 (cont'd)

Footnote 1/ (cont'd)

Articulation with the other Accounts

Items in Table S-1

Corresponding Items in other Tables

1(1)	5.1(1). Also column (b) in Table 2
1(2)	Part of 5.1(2). Also part of column (c) in Table 2
2(1)	7.1. Also column (e) in Table 2
2(2)	Part of 7.2. Also part of column (f) in Table 2
3	7.3(1). Also column (g) in Table 2
4	Part of column (a) in Table 2
5	Part of 5.2 and 5.6
6	Part of 6.7
7	Part of 6.8(1) and 6.9(1)
8	Part of 5.4
9	Part of 5.5(1)
10)	
11 (
12)	
13 (Column (0) of Table 2. Also part of 5.7(1)
14)	
15 (
16	Part of 5.6 and 5.8
17	Part of 5.9

(continuation next page)

Appendix I

SUPPLEMENTARY TABLE S-1 (cont'd)

Footnote 1/ (cont'd)

<u>Items in other Tables</u>				<u>Corresponding items in Table S-1</u>
3.1) Agriculture	} Agr. Rural Households	} Column	(a) Turnover	10+11+15
3.2) Forestry			(b) Purchases	Part of 4
3.3) Fishing			(d) Indirect taxes	6
3.4) Hunting			(g) Employee income	Part of 5
			(j) Gross operating profits	(a)-(b)-(d)-(g)
3.18 Building and Construction)	} Agr. Rural Households	} Column	(a) Turnover	14
			(b) Purchases	Part of 4
			(g) Employee income	Part of 5
			(j) Gross operating profits	(a)-(b)-(g)
3.29 Agricultural rural Households Services	} Column	} (a)	Turnover	12
			(j) Gross operating profits	12
7.4(1) Saving of agricultural Rural Households				2+3+9
10.2 Income from agricultural & Rural Households				10+11+12+13 +14+15-4-6
5.7(1)				-part of 5 (wages)

Footnote 2/ :

It may be difficult to identify separately items 1(2), 2(2), 4 and 9, the sum of which is equal to all cash purchases from other sectors and hoarding and/or net lending to other sectors.

SUPPLEMENTARY TABLE S-2

Capital and Financing Account of General Government ^{1/}

1. Gross domestic fixed capital formation (1) land (2) residential buildings (3) other buildings (4) other construction & works (5) Vehicles, plant, machinery and equipment	7. Saving on current account
2. Investment in government enterprises ^{2/}	8. External borrowings (1) long term (2) short term
3. Direct investments abroad ^{3/}	9. Internal borrowings (1) long term (2) short term
4. Loans to other sectors (1) public corporations (2) other enterprises (3) households (4) rest of the world	10. Loan repayments by other sectors
5. Loan repayments to other sectors (1) external debt (2) internal debt	11. Other capital receipts
6. Change in reserves (1) external balances (2) internal balances	
Disbursements	Receipts

^{1/} This account, which is one of the two accounts providing for the analysis and classification of all government transactions, distinguishes inter alia the various financial transactions of general government.

^{2/} This item covers only (actual or imputed) capital transactions between general government and government enterprises and excludes the capital transaction of government enterprises with other sectors.

^{3/} The purchase or construction of property abroad should be regarded as an investment abroad and not as gross domestic fixed capital formation.

SUPPLEMENTARY TABLE S-3
COMBINED ECONOMIC AND FUNCTIONAL CLASSIFICATION OF
GENERAL GOVERNMENT CURRENT AND CAPITAL EXPENDITURE

ECONOMIC CLASSIFICATION 1/
--

FOOTNOTES

- 1/ Classification based on the various expenditure items of the appropriation and capital accounts of general government.
- 2/ Classification based on the Report of the Workshop on Problems of Budget Reclassification and Management in Africa, UNECA Addis Ababa, 4-15 September 1961, E/CN.14/117.

SUPPLEMENTARY TABLE S-4

COMPOSITION OF PRIVATE CONSUMPTION EXPENDITURE INCLUDING

CONSUMPTION FROM OWN PRODUCTION OF AGRICULTURAL RURAL HOUSEHOLDS ^{1/}

	Consumption from own production of agricultural rural households ^{2/}	PRIVATE CONSUMPTION EXPENDITURE				TOTAL PRIVATE CONSUMPTION
		Retained imports c.i.f.	Distribution margins on retained imports	Local products at producer prices	Distribution margins on local products	Total
	a	b	c	d	e	f
1. Food						
2. Beverages						
3. Tobacco						
4. Clothing and other personal effects						
5. Rent, rates and water charges						
6. Fuel and light						
7. Furniture, furnishings and household equipment						
8. Household operation						
9. Personal care and health expenses						
10. Transportation and communication						
11. Recreation and entertainment						
12. Miscellaneous services						
13. Less value of gifts in kind sent abroad (net)						
Private consumption expenditure in the domestic market						
14. Expenditure abroad of residents						
15. Less expenditure in the country of non-residents						
Consumption expenditure of households and private non-profit institutions						

FOOTNOTES

^{1/} For a further breakdown of private consumption expenditures see Table VIII of the UN SNA.

^{2/} All primary commodities produced by agricultural rural households, either consumed by themselves or purchased and bartered within the sector and valued at retail prices.

SUPPLEMENTARY TABLE S-5
COMPOSITION OF GROSS DOMESTIC FIXED CAPITAL FORMATION

	Retained imports c.i.f.	Distribution margins and installation costs on retained imports	Other Domestic Production		TOTAL
			Local products at producer prices	Distribution margins and installation costs on local products	
A. By Type of Asset and by Origin 1. Land 2. Building and works (1) residential buildings (2) non-residential buildings (3) other construction and works 3. Vehicles, plant, machinery and equipment (1) transport equipment (a) railway transport (b) road passenger vehicles (c) road commercial vehicles (d) other transport equipment (2) machinery and other equipment (a) agricultural machinery and equipment (b) mining and road construction machinery (c) industrial machinery and equipment (d) telegraph, telephone and radio equipment (e) electrical machinery and equipment (f) other Gross domestic fixed capital formation:					
B. By Type of Purchaser 1. Private enterprises 2. Public corporations 3. Government enterprises 4. General government Gross domestic fixed capital formation:					
C. By Industrial Use 1. Agriculture, forestry, fishing 2. Mining and quarrying 3. Manufacturing 4. Building and construction 5. Electricity, gas, water 6. Transport, storage and communication 7. Distribution 8. Ownership of dwellings 9. Public administration and defense 10. Education services 11. Medical and other health services 12. Other service industries Gross domestic fixed capital formation:					

APPENDIX II

A SUMMARY OF PROPOSALS FOR THE AMENDMENT AND MODIFICATION OF CERTAIN CONCEPTS AND DEFINITIONS

1. Experience in the use of UN System of National Accounts in Africa has indicated the need to reformulate the text of SNA, at least for use in African countries, so as to give greater precision to some conceptual problems, to amend certain definitions, and to take note of certain qualifications to its general recommendations. The proposals^{1/} to this effect are described as briefly as possible below.

2. The boundary of production

In African economies the importance of non-monetary transactions is far greater than in developed economies, and any restrictive definition of the boundary of production tending to exclude a significant part of those transactions from the value of output would tend to understate the volume of productive activity and the needs of the population relying on these activities, would tend to give a distorted picture of the economy and would introduce an upward bias in the measure of economic growth, bias due to the rapid shift away from subsistence to monetary activities, which accompanies economic development in Africa. The validity of welfare comparisons, especially between different regions of the same country, would also be impaired. The working group on the treatment of non-monetary transactions within the framework of national accounts, which was held in Addis Ababa in June 1960, examined this problem and came to the following conclusions^{2/}: Among subsistence activities, which may form part of the production of the following groups :

^{1/} In view of impending discussions on balance of payments and other related statistics, these proposals have been limited to those problems directly concerned with the national accounts, reference to related problems arising in the fields of balance of payments and the analysis of government accounts being restricted to the immediate problem of the national accountant.

^{2/} See Report of the Working Group on the Treatment of Non-monetary Transactions within the Framework of National Accounts - UNECA, Addis Ababa, 27 June - 2 July 1960, E/CN.14/60 - paragraphs 4 to 10.

- 1) agriculture, forestry and fishing products;
- 2) building, construction and land works by households;
- 3) processing, storage, transportation and distribution of own primary output;
- 4) home processing of goods purchased;
- 5) other services,

the case for imputation was stronger for groups 1 and 2 than for the other groups. In the case of group 3, however, the working group thought that a value should be imputed to household services performed in the form of processing, storage, transportation and distribution of primary goods produced for own consumption. This value should be equal to the difference between the value of production for own consumption at ex-farm prices and the value at retail prices. The new definition proposed by the working group read as follows : "The production boundary might be defined generally to include goods and services which are exchanged for money and goods and services produced within the household, whether for exchange (barter) or for own consumption, which are analogous with those normally produced by enterprises and which, in the money economy, could only be obtained in exchange for money" (para. 9 of the report). It is recommended that no attempt should be made to impute a value to the activities covered by groups 4 and 5 above, but, if any such imputation is made, it should be clearly defined and separately identified. The consequence of extending the coverage of production beyond group 1 is a departure from the definition of the boundary of production described in paragraphs 29 and 30 of the UN SNA and according to which "there is omitted from production the net amount of all non-primary production performed by producers outside their own trades and consumed by themselves". There would be consequential amendments or exceptions to the principles or conventions ~~enunciated~~ in the following paragraphs of the SNA :

paragraph 30, definition of production^{1/}; paragraph 54, market valuation^{2/}; paragraph 82 (i), definition of rural households^{3/};

1/ This paragraph should be modified as follows : "In the case of primary producers that is those engaged in agriculture, forestry, hunting, fishing, mining and quarrying, (i) all primary production whether exchanged or not, (ii) own account capital formation by agricultural rural households, (iii) households services in the form of processing, storage, transportation and distribution of own primary output by agricultural rural households and (iv) all other goods and services produced and exchanged are included in the total of production..... As a result of these rules there is omitted from production the net amount of all non-primary production performed by producers outside their own trades and consumed by themselves, except for the inclusion of own account capital formation and household services performed on their own primary output by agricultural rural households..."

2/ This paragraph should be modified as follows : ".... in the case of non-monetary transactions, that is barter and production for own use, the prices to be applied, are those at which the producer sells, or if he does not sell, those at which producers of similar products sell in the same or neighbouring localities. In the case, however, of primary goods produced for own consumption by agricultural rural households, a value should be imputed to services performed in the form of processing, storage, transportation and distribution of these primary goods. This value should be equal to the difference between the value of production for own consumption at ex-farm prices and the value at retail prices. It should appear under a separate item "agricultural rural household services" in the analysis of the domestic product by industrial origin, and be included in the valuation of consumption from own production of agricultural rural households in the analysis of the domestic product by expenditure item..."

3/ A new paragraph should be added after 82(1)(b) which would read : "All agricultural rural households in their capacity as producers of households services performed in the form of processing, storage, transportation and distribution of own primary goods produced for their own consumption".

A new paragraph should equally be added after paragraph 83 reading as follows : "For certain purposes, it is convenient to make a distinction in unincorporated private enterprises between agricultural rural households and other unincorporated enterprises. Agricultural rural households are defined as follows : Rural households, as opposed to large scale enterprises, engaged in farming, forestry, or fishing, located in rural areas (that is areas outside the limits of towns and cities of a size and nature to be determined by reference to local conditions). They do not include rural households whose principal activities are non-primary".

and paragraph 201, industrial classification^{1/}.

3. Provision for consumption of fixed capital

In advanced countries available statistics normally provide a fairly satisfactory basis for compiling the national accounts. The same cannot be said for estimates of capital consumption. Records from company accounts and tax returns are for the most part utterly useless in estimating capital consumption. If this is true for advanced economies, and it is doubtful if anyone would refute this, it is even more so for under-developed economies, with statistical and physical problems of capital consumption which are in many ways more complicated. There is a growing tendency for more advanced countries to base their estimates of capital consumption on estimates of the total stock of different types of fixed assets and their expected economic lifetime. This approach is consistent with that adopted in normal business practices, and it is considered that this is the only basis which should be recommended for adoption in Africa. Estimates of the stock of fixed assets are not likely to be available for some considerable time in Africa, and until such time as work in this field becomes a practical reality, it is recommended that countries should not be encouraged to dissipate scarce resources on a fruitless and unremunerative exercise, which offers virtually no possibility of producing useful results. It is, therefore, strongly recommended that all entries relating to provisions for capital consumption should be omitted from the system of accounts for use in Africa.

^{1/} This paragraph should be modified as follows : "The industrial classification of the gross domestic product adopted in the table on the production and value added accounts by industry corresponds in most respects to that shown in the I.S.I.C. In two respects, however, it has been found desirable to deviate from the ISIC namely (i) as regards the real estate industry, as is explained below, and (ii) as regards the agricultural rural households service industry which appears as a separate entry in the classification....".

4. Geographical, domestic and national concepts

The main aggregates and accounts can be calculated in terms of geographical, domestic or national income, product or expenditure. The size of the adjustment necessary to pass from one concept to another is very often quite significant, and it is, therefore, important from the point of view of international comparability to know which concept has been used. The UN SNA is based primarily on the national concept, except in those accounts and tables which are designed to yield domestic aggregates such as Accounts 1 and 3.

5. The three concepts can be defined together, and their interrelationship clarified in the form of a table based on the following classification :

- 1) A classification according to the geographical location of the transactor : either within or outside the geographical boundaries;
- 2) A classification according to producers and productive agents. A given corporation for instance is a producer, the output of which is attributable to various productive agents (wage and salary earners, etc.).
- 3) A classification according to residence (of the producer or economic agent), which is an economic concept. A resident of a country may be any individual, enterprise or institution (such as government agencies and non-profit institutions) carrying out its main economic activity in the country, or under direct control of the government of the country in the case of government agencies (embassies, military forces stationed abroad, etc.).

Using the following symbols :

P for producer,

R for resident,

NR for non-resident,

I for geographically located inside the country,

O for geographically located outside the country,

any product (or output) can be classified according to the nature of the producer responsible for it, and according to the nature of the suppliers of the factors of production to which the product is attributable, as in the following scheme :

S C H E M E

Product - classified according to the nature of the producer	1	Located inside the territory		Located outside the territory	
		A	B	C	D
		PRI	PNRI	PRO	PNRO
Product attributable to factors of production supplied by :	2	RI	RI	RI	RI
	3	NRI	NRI	NRI	NRI
	4	RO	RO	RO	RO
	5	NRO	NRO	NRO	NRO

- The geographical (or territorial) product is the product of all producers (resident or non-resident) located within the geographical territory, i.e. the product of PRI + PNRI.
- The domestic (or internal) product is the product of all producers (inside or outside the territory) normally resident in the country, i.e. the product of PRI + PRO.
- The national product is the product attributable to factors of production supplied by residents of the country, i.e. the product attributable to all RI (line 2) and all RO (line 4) of the above scheme.

To pass from one concept to another a series of adjustments is necessary. For example, the geographical product, i.e. the product of all producers located within the geographical territory (PRI + PNRI) plus the product of resident producers located abroad (PRO) less the product of non-resident producers located within the geographical territory (PNRI) equals the domestic product, i.e. the product of all resident producers (PRI + PRO).

Or again the domestic product aggregate, i.e. the product of all resident producers (PRI + PRO) plus the product of non-resident producers attributable to factors of production supplied by residents (B2 + B4 + D2 + D4) less the product of resident producers attributable to factors of production supplied by non-residents (A3 + A5 + C3 + C5) equals national product, i.e. the product attributable to factors of production supplied by residents (the sum of all RI and RO appearing in the table)^{1/}.

6. The strict adherence to the national concept implies not only the calculation of total net factor income received from abroad (i.e. the factor income of residents embodied in the product of non-residents less the factor income of non-residents embodied in the product of residents), but also the allocation of this net factor income by sector (households, government, corporations), so as to provide a full articulation of the accounts on a national basis. The difficulties involved in allocating factor income receipts and payments by sector are formidable, and it will be many years before African countries can adhere consistently to national concepts^{2/}. Another reason against the adoption of the national concept throughout the accounts is that a realistic appraisal of the degree of industrialisation of an economy

^{1/} Similar definitions could be given of the three concepts viewed this time from the income or expenditure sides instead of the product side.

^{2/} Working from the expenditure approach, similar difficulties will be encountered in compiling, for instance, private consumption expenditure on a national basis (i.e. including the consumption of residents abroad and excluding the consumption of non-residents within the territory), or making the appropriate adjustments to the various items making up the balance of payments.

must be based on an allocation of the domestic product by industrial origin and not of the national product. More generally, development planning and studies on the allocation of resources are based on an analysis of the activity of producers (either located within the territory or normally resident) rather than on an analysis of the product attributable to factors of production supplied by residents.

7. The choice between the geographical and domestic concept is more a matter of convenience. Working from the product approach countries might find it easier to work on a geographical basis, analysing the turnover and purchases of all producers located within the geographical territory. Countries operating from the income approach may find the domestic concept easier to operate, domestic income being equal to all factor income paid by resident producers either to residents or to non-residents, within or outside the geographical territory. Having chosen either of these two concepts, they can be carried through the articulation of the accounts without further adjustments, another advantage compared to the national concept. The final choice between the geographical or the domestic concept may well depend on progress in compiling the balance of payments. Most countries will find the requirements of the Balance of Payments Manual of the International Monetary Fund^{1/} too rigorous and too formidable in its present form, and will prefer to concern themselves with the nature and size of imports, exports and the visible trade balance, which are likely to be the only external transactions within the immediate sphere of influence of government action. Until considerable progress has been made in compiling and improving estimates of the balance of payments, it is unlikely that countries will even adhere to a rigorous definition of the domestic product. It is, however, recommended that countries should be encouraged to compile their estimates on a domestic basis in the first instance.

^{1/} See Balance of Payments Manual, Third Edition, International Monetary Fund, Washington D.C., July 1961.

8. Undistributed profits of subsidiaries

It is considered that the recommendation made in paragraph 50 of the SNA that "the profits of subsidiaries in which the parent holds 100 % of near 100 % of the share capital, whether distributed or undistributed, should be credited to the parent concern" is unrealistic, especially in the African context, owing to theoretical and statistical difficulties involved in implementing this recommendation designed for use in Africa, at least until such time as studies take place relating movements of capital and changes in assets and liabilities.

9. Interest, dividends and corporate transfer payments

These payments represent factor incomes, i.e. remuneration for factor services provided by capital and used in the production of goods and services. The account 2 and supporting Table IV of the UN SNA, giving the distribution of the national income by factor share, provide for these payments to be shown separately. In other words, they are computed after the final appropriation of interest, dividends and corporate transfer payments. These payments are seldom readily available from normal sources of information in under-developed countries. Even where the total amounts involved can be obtained, there remains the further problem of allocating receipts and payments by sector, which presupposes the availability of a detailed analysis of the ownership of financial assets. This analysis is not a practical possibility for the time being in most African countries, and it is suggested that the distribution of national income by factor shares should be shown before the final appropriation of interest, dividends and corporate transfer payments, the whole of the profits of enterprises appearing as factor income, before receipt or payment of interest and dividends. Many countries in Africa relying mainly on a product approach are also unable to distinguish between the income of corporate and unincorporated enterprises, whether public or private. In these countries, the only course open to them is to show a single total, "Income of enterprises", instead of the separate items "income from

unincorporated enterprises, gross saving of corporations and general government income from entrepreneurship". To meet these limitations, namely the absence of a breakdown of interest, dividends and corporate transfer payments, and the absence of a breakdown of income from enterprise, the only solution possible is to rearrange the table on income shares (Table 10) as follows :

1. Compensation of employees.
2. Income from agricultural rural households.
3. Income from other enterprises.
 - (1) unincorporated enterprises other than agricultural rural households
 - (2) corporations (public and private)
 - (3) government enterprises.
4. Households income from property (actual and imputed rent only).
5. General government income from property (actual and imputed rent only).
6. Less : net factor income paid to the rest of the world.

10. Consumer debt interest

It follows from what has been said above about the limitations on the amount of information available on interest transactions that the majority of countries will be unable to compile any estimates of consumer debt interest. This ought, therefore, to be explicitly excluded from the proposed intermediate system for use in Africa. See also paragraph 12 below on Public Debt Interest.

11. Imputed value of financial services of banks

The same comment applies as for Consumer Debt Interest.

12. Public Debt Interest

The present recommendations of the SNA require that public debt (and private consumer debt) interest payments should be regarded as a positive factor income in the hands of the recipients cancelled by a negative factor income when paid by the paying agent. This principle is

not consistently applied (for example in respect of consumer debt interest in the households account), and it is in any event regarded as no more satisfactory than the earlier recommendations that such interest should be treated like a transfer. It is, in fact, not clear how the proposal for this treatment came to be adopted, in the face of its failure to gain general acceptance by the various meetings leading up to the revision of SNA. In either case, it is considered that it complicates the understanding and use of the accounts by introducing into the national income tables unnecessary entries which, in terms of the treatment recommended, either should not be there, or are to be cancelled by a corresponding contra item. It has been recommended earlier that in the system for use in Africa, income shares should be shown in the national income table classified by factor of production and not in the form in which it is received, and that no appropriation of interest, dividends and profits should be shown. As public debt interest is not regarded in the SNA as making a net contribution to national income, there is no need to introduce any entries on this account into the table. It is, therefore, recommended that no entry should be made for public debt interest in the national income table, and that the entry in the appropriations accounts should be in terms of payments and not in terms of negative income.

13. Treatment of Pension Funds

The SNA proposes that, (i) pension funds set up for employees of either enterprises or government should be included as part of the households and private non-profit institutions sector, para. 87,

(ii) the compensation of employees should include employers' social security contributions and pension fund contributions made on behalf of employees, who are normal residents, para. 228, and 231,

(iii) wages and salaries paid by government should include social security and pension fund contributions in respect of government employees (or, in lieu, the pensions actually paid), para. 143.

These recommendations appear to be straightforward, but are very difficult to implement rigorously and consistently, owing to the large degree of imputation required. The inclusion of a detailed explanation in the SNA of the treatment of pension funds, and the transactions related to them, is overdue and some guidance should be given also on the extent to which these transaction should be imputed in the absence of any actual recorded or unrecorded transactions.

It is not proposed to remedy this deficiency here, but merely to suggest that in African countries, where social security schemes and private pension schemes are still in their infancy, any extended imputation on the basis of, for example, pension scales in use by government or in use in other countries, should be avoided until these schemes become much more representative of the general practice in each individual African economy. In the majority of African countries, no information is available on private pension funds, and it could only be obtained by special enquiries of very low priority. Even if this deficiency could be remedied in the course of five-ten years, there would still be the problem of imputing transactions for non-contributory schemes.

The suggestion in para. 143 of SNA, that pensions actually paid should be substituted for actual or imputed pensions premiums where these are not known, is highly unrealistic in countries in which both the racial composition, age composition, number employed and wage and salary scale of the relevant labour force are subject to rapid change, and this is certainly true for many countries in Africa.

It is, therefore, recommended that African countries should be advised :

- (i) to adhere to the recommendations of SNA, referred to above, in respect of known actual transactions,
- (ii) to ignore all contractual pension payments as being capital transfers within the household sector,

- (iii) to treat all non-contractual pension payments as transfers,
- (iv) to avoid any imputations until such time as details become available in respect of schemes which are truly representative of general practice in the appropriate sectors of the economy.

14. Export duties

The usual distinction between direct and indirect taxes is based on the fact that indirect taxes influence relative market prices and have the effect of raising them above the factor costs of productions, whereas direct taxes influence only the distribution of factor incomes. The African exports on which duties are levied are for the most part commodities, the price of which is determined on the world market independently of the decisions taken by any individual exporting country. Given the world market price, an export duty has the same effect as an income tax by transferring part of the net proceeds from producers to government. It seems therefore logical to treat export duties as an income tax in the accounts. Although this problem has been discussed for many years, a specific recommendation to this effect is still lacking. It is suggested here that it should be adopted in the system for commodities subject to price determination in the world market.

15. Classification of transfers

The revised version of the SNA distinguishes systematically between current and capital transfers in all the relevant accounts, whereas the original version of SNA treated, for instance, all international transfers for convenience as capital transfers. The distinction between current and capital transfers does not seem capable of precise definition. In addition, it seems to conflict with the practice of governments, enterprises and individuals in Africa which treat all transfer payments as charges against current revenue. For these reasons, it is suggested that all transfers should be treated as current transfers.

16. Investment in government enterprises

In the SNA, the capital reconciliation account of general government contains an item "Finance of gross capital formation in non-corporate public sector" which covers both direct fixed capital formation by general government and investment in government enterprises. In view of the special importance of the public sector in African economies, and the resulting need for as detailed an analysis as possible of the various transactions of this sector, combined with the fact that government enterprises are more akin to private entrepreneurship than to general government, it is suggested that a separate item "investment in government enterprises" should be identified in the capital account of general government (Supplementary Table S.2). It should be noted that this item does not necessarily correspond to the total purchase of fixed asset and increase in stocks of government enterprises.

17. Modification and extension of SNA functional classification of government transactions.

The SNA table X on the composition by purpose of government expenditure was limited to consumption expenditure. It has been extended to both current and capital transactions of general government in the corresponding table of the revised system (Supplementary Table S.3). In addition, the functional classification has been modified along the lines of the Report of the African Budget Workshop^{1/}, so as inter alia to reclassify the somewhat omnibus item "other government services". Finally, the proposed table is laid down in the form of a combined economic and functional classification of government transactions.

^{1/} See Report of the Workshop on Problems of Budget Reclassification and Management in Africa, UNECA, Addis Ababa, 4-15 September 1961 - E/CN.14/117

APPENDIX III

THE CROSS-CLASSIFICATION OF INDUSTRIES AND PRODUCTS

1. One of the most important features of the proposed intermediate system is the inclusion in the main set of tables of two new accounts : an account of uses and resources by commodity group (Table 2), and a production-and-value-added account by industry (Table 3). These two tables are closely interrelated as the production account part of Table 3 can be derived directly (turnover by industry) or indirectly (intermediate purchases by industry) from Table 2. The classifications used in the two tables are based, however, on two different concepts : the classification in Table 2 is a classification by commodity or group of commodities, whereas the classification in Table 3 is a classification by industry. The choice of an industry classification for Table 3 is imposed by the nature of the information given in the right hand side of the table, which shows the distribution of value added by factor shares. This information, which is derived from available data on establishments and/or enterprises, leads directly to a classification by industry. For the connexion between Table 2 and Table 3 to appear explicitly, it is therefore necessary to reconcile the classification by industry with that by commodity.

2. A commodity analysis constitutes the most obvious approach to an analysis of the content of the domestic product of African countries. A great part of the total output is produced by the traditional sector to which the concept of enterprise or establishment hardly applies. The only statistics available on the production of this sector are given in terms of commodities, not in terms of employee income or operating profits. Such a commodity analysis is the object of Table 2. It is only to the modern sector of the economy that the concept of enterprise or establishment really applies. Statistics available for this ~~sector~~ cover both its production in terms of commodities and the income derived from this production in terms of factor shares. And it is for this sector of the economy that it is interesting to reconcile the product and income approaches to the study of the industrial origin of the domestic product. Such a reconciliation is the object of Table 3.

3. The need for two different industrial classifications defined respectively in terms of commodities (Table 2) and of enterprises or establishments (Table 3) is not due solely to the existence of an important traditional sector in every African country. Even in the case of developed economies the two classifications are being used, each for a different purpose. The French system affords further illustration of this point. In the French system of national accounts ^{1/}, two industrial classifications are used, a classification by "branch" and a classification by "sector".

A "branch" groups together production units (either enterprises or establishments or parts of establishments) producing the same category of goods and services. The criterion of classification is the nature of the commodity produced, those units being grouped together that produce goods and services belonging to the same division, group or sub-group of a given nomenclature for the classification of goods and services (the SITC, for instance).

A "sector" groups together enterprises exercising the same kind of main economic activity. The activities of a given enterprise can be manifold, but, usually, there is a group of commodities that dominates the composition of its output, and it is this group of commodities that determines the allocation of the enterprise to a particular sector.

^{1/}. See Les Comptes de la Nation, Volume II, Les Méthodes, Service des Etudes Economiques et Financières, Ministère des Finances, Paris, 1960.

See in particular Annexe A, Le tableau d'échanges interindustriels de l'année 1955, et Lexique, Branches, p. 126, Secteurs, p. 156.

Classification by branch offers the following advantages : because of the bi-univocal character of the correspondence between commodities and branches, projections of the total putput of a given commodity are easier to make, all the outputs of a commodity being regrouped within the same branch. But the main advantage follows from the greater homegeniety of the product-mix of a given branch, which causes the ratios between output and intermediate purchases (the so-called "technical coefficients" of input/output analysis), or between output and the amount of fixed capital required, to be much more stable. Generally, the change over time in the value of these coefficients will be the consequence of a change in the technical processes applied rather than of a change in the composition of the product-mix of the branch. For these reasons, classification by branch is used in the production account, giving the turnover and intermediate purchases of each branch, and in the input/output tables, where the intermediate purchases of a branch are further allocated between the various branches of origin. These accounts and tables are primarily intended for the analysis of the production processes and of the technical relationships involved. Classification by branch has the disadvantage, however, of splitting enterprises or establishments into smaller production units with a more homogeneous output. The enterprise, which is a legal, economic and financial entity, is the centre of policy decision on investment, financial transactions, prices, wages, etc..., and should therefore be kept as one unit for the study and appraisal of these policies. This is the object of a classification by sector, which uses the enterprise as the basic unit of classification, and groups the accounts of enterprises in a manner essential to the analysis of their policy decisions.

4. The difference between branches and sectors arises because an enterprise with a diversified output can fall into different categories of the nomenclature of goods and services that is used for the classification by branch. Such diversified output may result 1) from the existence of by-products arising from the technical process in use (for instance cast-iron and gas), 2) from the existence of secondary products which, as such, have proved to be technically feasible and economically profitable (for instance the manufacture of aircraft and refrigerators by the same

enterprise), 3) from vertical and/or horizontal integration, for economic rather than technical considerations, of activities in the enterprise (tree-felling combined with saw-milling is an example of vertical integration, and a holding, combining the manufacture of watches and of electronic equipment, an example of horizontal integration). In all three cases, the diversified output is practically always produced by large firms such as are encountered in modern economies, and there is a positive correlation between the number of such firms in a country and the country's level of economic development. The number of cases where differences between branches and sectors are observed depends also on the level of aggregation at which the two classifications operate: the higher the level of aggregation, the smaller the number of such differences.

5. Returning now to Tables 2 and 3 of the proposed intermediate system - and using the French terminology of branch and sector - it appears clearly that Table 2 calls for a commodity classification, i.e., a classification by branch, whereas the right hand side of Table 3 on income by factor shares calls for an enterprise classification, i.e., a classification by sector. The left hand side of Table 3 on turnover and purchases could in principle use either of the two classifications but, as explained in Chapter III, the layout of Tables 2 and 3 has been devised so as to allow 1) the derivation of the left hand side of Table 3 from commodity Table 2, and 2) the reconciliation of the product and income approaches to the study of the industrial origin of the domestic product (left and right hand sides of Table 3). This requires that a single classification be used throughout the two tables. The possibility of devising such a classification depends on the possibility of reducing to an acceptable minimum the number of cases in which differences between branches and sectors arise. As explained above, this number varies with the level of economic development of the country, and with the level of aggregation at which the classification operates. In the case of the under-developed economies of African countries, it is reasonable to expect the number of large enterprises with diversified outputs - the cause of differences between branches and sectors - to be relatively small. The cases of horizontal integration which are known to exist in Africa can

be dealt with by choosing the establishment instead of the enterprise as the basic unit of classification by sector, the output of an establishment being in most cases less diversified than that of the enterprise to which it belongs. This procedure, which is the one recommended for the I.S.I.C. ^{1/}, has been adopted here, in spite of the difficulties that may arise from lack of statistical information on operating profits at the establishment level, when the value added from the income side is computed. Finally, the level of aggregation adopted for Tables 2 and 3 is sufficiently high for the number of cases of differences between branches and sectors to be kept within acceptable limits.

6. The single classification - which might be called a classification by industry - thus suggested for Tables 2 and 3 is defined in terms of the I.S.I.C., by now a world standard. The commodity content of these industries - which must be defined for the completion of Table 2 - has been given in terms of the S.I.T.C. Revised ^{2/}, another world standard. The correspondence between industries and products is the one established by the Statistical Office of the European Communities and published in the second edition of C.S.T. ^{3/}. However, the correspondence given below is in general between major groups (2 digits) of the I.S.I.C. and groups (3 digits) of the S.I.T.C., Revised, whereas in the EEC publication the correspondence is between groups (3 digits) of the I.S.I.C. and sub-groups (4 digits) of the S.I.T.C., Revised. This modification had to be introduced for the sake of simplification, as otherwise the correspondence would have required an excessive number of pages.

1/ International Standard Industrial Classification of all Economic Activities, Statistical papers series M No 4, Rev.1, United Nations, New York, 1958 pp. 2 to 4.

2/ Standard International Trade Classification, Revised, Statistical Papers series M No 34, United Nations, New York, 1961.

3/ Classification Statistique et Tarifaire pour le Commerce International, (C.S.T.), 2^{ème} édition, Office Statistique des Communautés européennes, Bruxelles, 1961.

Besides, it must be borne in mind that this appendix constitutes only an illustration of how a correspondence between industries and products can be established, and it is not suggested at this stage that all African countries should adopt this common nomenclature.

In practice, countries will need to establish their own correspondence based on their own nomenclatures for industries and commodities.

7. A last remark, concerning Table 2, should be added. An account of uses and resources by commodity group cannot be compiled by working directly at a high level of aggregation. In practice, the work must be carried out at the level of more narrowly defined groups of commodities, or even of individual commodities. The classification by groups of commodities in terms of the SITC, Revised, given below corresponds more closely to the level of aggregation at which it might be appropriate to operate.

GROSS CLASSIFICATION OF INDUSTRIES AND PRODUCTS

<u>I.S.I.C.</u> <u>Division</u> <u>or</u> <u>Group</u>	<u>Classification by Industry</u> defined in terms of the I.S.I.C. ^{1/}	<u>SITC, Rev.</u> <u>Division</u> <u>or</u> <u>Group</u>	<u>Classification by Groups</u> <u>of Commodities</u> defined in terms of the S.I.T.C., Revised. ^{2/}
0	<u>Agriculture, Forestry,</u>		
	<u>Hunting, Fishing</u>		
01	Agriculture		
011	Agriculture and livestock production		
		00	Live animals
		025	Eggs
		041	Wheat, unmilled
		042 ^x	Rice in the husk
		043	Barley unmilled
		044	Maize unmilled
		045	Other cereals unmilled
		051	Fruit, fresh and nuts
		054 ^x	Vegetable, Roots, Tubers fresh or dried
		061 ^x	Natural honey

^x Part

- 1/ International Standard Industrial Classification of All Economic Activities, statistical papers series M No. 4, Rev. 1 United Nations, New York, 1958.
- 2/ Standard International Trade Classification, Revised, Statistical Papers series M No. 34, United Nations, New York, 1961.

<u>I.S.I.C.</u> <u>Division</u> <u>or</u> <u>Group</u>	<u>Classification by Industry</u>	<u>SITC, Rev.</u> <u>Division</u> <u>or</u> <u>Group</u>	<u>Classification by Groups</u> <u>of Commodities</u>
011	Agriculture and livestock production (cont'd)	071 ^x	Coffee, green or roasted
		072 ^x	Cocoa beans, Tan or roasted
		074	Tea and maté
		075	Spices
		081 ^x	Hay and fodder, green or dry
		121	Tobacco, unmanufactured
		21	Hides, skins and fur skins, undressed
		221 ^x	Oil-seeds, oil nuts and oil kernels
		231 ^x	Crude natural rubber
		26 ^x	Raw natural textile fibres
		29 ^x	Crude animal and vegetable materials, n.e.s.
012	Agricultural services	-	Agricultural services on a fee or contract basis such as harvesting, veterinary services, spraying, rental of farm machinery etc.....
02	Forestry and logging	241	Fuel wood and charcoal
		242	Wood in the rough or roughly squared
03	Hunting, trapping and game propagation	01 ^x	Meat and meat preparations
		941	Animals, n.e.s. (including zoo animals)
04	Fishing	031 ^x	Fish, fresh and simply preserved

<u>Classification by Industry</u>		<u>Classification by Groups of Commodities</u>	
<u>I.S.I.C.</u>		<u>SITC. Rev.</u>	
<u>Division</u>		<u>Division</u>	
<u>or</u>		<u>or</u>	
<u>Group</u>		<u>Group</u>	
1	<u>Mining and Quarrying</u>		
11	Coal mining	321 ^x	Coal (anthracite, bituminous)
12	Metal mining	281	Iron ore and concentrates
		283)	Ores and concentrates of non-ferrous metals
		285)	
		286)	
13	Crude petroleum and natural gas	331	Petroleum, crude and partly refined
		341 ^x	Gas, natural
14	Stone quarrying, clay and sand pits	273	Stone, sand and gravel
19	Other non-metallic mining and quarrying	271	Fertilizers, crude
		274	Sulphur and unroasted iron pyrites
		275	Natural abrasives
		276	Other crude minerals
2-3	<u>Manufacturing</u>		
20	Food manufacturing industries	01 ^x	Meat and meat preparations
		022	Milk and cream
		023	Butter
		024	Cheese and curd
		031 ^x	Fish, salted, dried or smoked
		032	Fish, in airtight containers and fish preparations
		042 ^x	Rice, glazed or polished
		046	Meal and flour of wheat or Meslin
		047	Meal and flour of other cereals
		048	Cereal preparations
		052	Dried fruit
		053	Fruit preserved, and fruit preparations

<u>I.S.I.C.</u> <u>Division</u> <u>or</u> <u>Group</u>	<u>Classification by Industry</u>	<u>SITC.Rev.</u> <u>Division</u> <u>or</u> <u>Group</u>	<u>Classification by Groups</u> <u>of Commodities</u>
20	Food manufacturing industries (cont'd)	054 ^x	Vegetables, frozen
		055	Vegetables, roots and tuber, preserved or prepared
		061 ^x	Sugar
		062	Sugar confectionery
		071 ^x	Coffee extracts
		072 ^x	Cocoa powder and butter
		073	Chocolate
		081 ^x	Feeding-stuff for animals
		09	Miscellaneous food preparations
21	Beverage industries	111	Non-alcoholic beverages
		112	Alcoholic beverages
22	Tobacco manufacturers	122	Tobacco manufactures
23	Manufacture of textiles	26 ^x	Textile fibres (not raw and not manufactured into yarn, thread of fabrics)
		65	Textile yarn, fabrics, made-up articles and related products
		excl.656	
24	Manufacture of footwear, other wearing apparel and made-up textile goods	656	Made-up articles wholly or chiefly of textile materials
		84 ^x	Clothing excluding rubber goods
		85	Footwear
25	Manufacture of wood and cork, except manufacture of furniture	243	Wood shaped or simply worked
		244	Cork, raw and waste
		63	Wood and cork manufactures (excluding furniture)
		899 ^x	Basketwork and other articles of plaiting materials, brooms, brushes, feather dusters and sieves
26	Manufacture of furniture and fixture	82	Furniture

<u>Classification by Industry</u>		<u>Classification by Groups of Commodities</u>	
<u>I.S.I.C.</u>		<u>SITC.Rev.</u>	
<u>Division</u>		<u>Division</u>	
<u>or</u>		<u>or</u>	
<u>Group</u>		<u>Group</u>	
27	Manufacture of paper and paper products	251 ^x	Pulp
		64	Paper, paperboard and manufactures thereof
28	Printing, publishing and allied industries	892	Printed matter
29	Manufacture of leather and fur products, except footwear and other wearing apparel	61 ^x	Leather, leather manufactures and dressed fur skins
		83	Travel goods, handbags and similar articles
30	Manufacture of rubber products	62	Rubber manufactures
		84 ^x	Apparel and clothing accessories of rubber
31	Manufacture of chemicals and chemical products	266	Synthetic and regenerated (artificial) fibres
		41	Animal oils and fats
		42	Fixed vegetable oils and fats
		43	Animal and vegetable oils and fats processed and waxes of animal or vegetable origin
		51	Chemical elements and compounds
		53	Dyeing, tanning and colouring materials
		54	Medicinal and pharmaceutical products
		55	Essential oils and perfume materials, toilet, polishing and cleansing preparations
		56	Fertilizers, manufactured
		57	Explosive and pyrotechnic products
		58	Plastic materials, regenerated cellulose and artificial resins
		59	Chemical materials and products n.e.s.
32	Manufacture of products of petroleum and coal	32 ^x	Coke and briquettes

<u>Classification by Industry</u>		<u>Classification by Groups of Commodities</u>	
<u>I.S.I.C.</u>		<u>SITC.Rev.</u>	
<u>Division</u>		<u>Division</u>	
<u>or</u>		<u>or</u>	
<u>Group</u>		<u>Group</u>	
32	(cont'd)	332	Petroleum products
		52	Mineral tar and crude chemicals from coal, petroleum and natural gas
33	Manufacture of non-metallic mineral products except products of petroleum and coal	661	Lime, cement and fabricated building materials, except glass and clay materials
		662	Clay construction materials and refractory construction materials
		663	Mineral manufactures, n.e.s.
		664 ^x	Glass excluding optical glass and elements thereof
		665	Glassware
		666	Pottery
		812 ^x	Sinks, wash basins, bidets, baths and other sanitary and plumbing fixtures of ceramic materials
34	Basic Metal Industries	67	Iron and steel
		68	Non-ferrous metals
35	Manufacture of metal products, except machinery and transport equipment	69	Manufactures of metal, n.e.s.
		812 ^x	Central heating apparatus and parts thereof. Sinks, wash basins, bidets, baths and other sanitary and plumbing fixtures of iron and steel
		894 ^x	Non-military arms
		895 ^x	Office and stationery supplies of base metal
		951	Firearms of war and ammunition therefor
36	Manufacture of machinery, except electrical machinery	71	Machinery, other than electric
		861 ^x	Meters and counters, non-electric
37	Manufacture of electrical machinery, apparatus, appliances and supplies	72	Electric machinery, apparatus and appliances
		812 ^x	Lighting fixtures and fittings, lamps and lanterns and parts thereof

1900-1901
1911-1912
1913-1914

<u>Classification by Industry</u>		<u>Classification by Groups of Commodities</u>	
<u>I.S.I.C.</u>	<u>Division</u>	<u>SITC.Rev.</u>	<u>Division</u>
<u>or</u>	<u>Group</u>	<u>or</u>	<u>Group</u>
37	(cont'd)	891 ^x	Phonographs, tape recorders and other sound recorders and reproducers.
38	Manufacture of transport	73	Transport equipment
39	Miscellaneous manufacturing industries	894 ^x	Baby and invalid carriages
		86 ^x	Professional, scientific and controlling instruments, photographic and optical goods, watches and clocks
		891 ^x	Musical instruments and parts and accessories therefor
		893	Articles of artificial plastic materials n.e.s.
		894 ^x	Toys, games and sporting goods
		895 ^x	Office and stationery supplies not of base metal, n.e.s.
		897	Jewellery and goldsmiths' and silversmiths' wares
		899 ^x	Manufactured articles n.e.s.
		961	Coin other than gold coin, not being legal tender
4	<u>Construction</u>	-	Buildings, highways, streets, sewers, railroads, piers, tunnels, dams, irrigation, pipelines, airports, water wells, telephone lines etc...
5	<u>Electricity, gas, water and sanitary services</u>		
51	Electricity, gas and steam	341 ^x	Gas, manufactured
		35	Electric energy
		-	Also distribution of electric energy and manufactured and natural gas to domestic and industrial consumers. Production and distribution of steam.

<u>Classification by Industry</u>		<u>Classification by Groups of Commodities</u>	
<u>I.S.I.C.</u>		<u>SITC.Rev.</u>	
<u>Division</u>		<u>Division</u>	
<u>or</u>		<u>or</u>	
<u>Group</u>		<u>Group</u>	
52	Water and sanitary services	-	Water supply excluding operation of irrigation systems - garbage and sewage disposal - operation of drainage systems.
6	<u>Commerce</u>		
61	Distribution:wholesale and retail trade	-	<u>Wholesale trade</u> : Trade margins i.e. value added by the re-sale of goods to business units and to institutions and governments- Importers and exporters etc...
			<u>Retail trade</u> : Trade margins i.e. value added by the re-sale of goods for personal or household consumption or utilization (excl. sale of food and drinks for consumption on the premises)
62	Banks and other financial institutions	-	Actual and imputed service charges for checking, bookkeeping and financial advice including commissions by banks and other financial institutions such as credit agencies and companies, co-operative credit societies, investment companies security exchanges etc.....
63	Insurance	-	Imputed service charges equated to the difference between insurance premiums received by and insurance benefits paid out by insurance carriers of all kinds (life, fire, marine, accident, health, title, financial obligations, casualty, fidelity and surety; insurance agents and brokers; consultants)
64 ^x	Real Estate	-	Margins added by house and estate agents, rent collecting agents, land and estate companies etc... excluding rental income proper.

<u>Classification by Industry</u>		<u>Classification by Groups of Commodities</u>	
<u>I.S.I.C.</u>		<u>SITC.Rev.</u>	
<u>Division</u>		<u>Division</u>	
<u>or</u>		<u>or</u>	
<u>Group</u>		<u>Group</u>	
-	Ownership of dwellings	-	Rental income from the use of dwellings owned by individual landlords (including rented as well as owner-occupied dwellings) and of corporate and non-corporate enterprises principally engaged in hiring out premises to other trans-actors
7	<u>Transport, Storage and Communication</u>		
71	Transport	-	Services connected with railway, tramway and omnibus, road passenger and freight, water and ocean and air transport; services incidental to transport (such as packing and crating) and other transport n.e.s. (such as transportation by pipeline).
72	Storage and warehousing	-	Services connected with the operation of storage facilities such as warehouses, cold storage, safe deposits etc.....
73	Communication	-	Communication services rendered to the public whether by post, wire or radio (excluding radio and TV broadcasting studios)
8	<u>Services</u>		
810	Public administration and defence	-	Services connected with general administrative and regulatory activities of central and local governments including armed forces, police and regular administrative departments and government offices. (equated to wages and salaries of government employees in Table 2 and 3)

<u>I.S.I.C.</u> <u>Division</u> <u>or</u> <u>Group</u>	<u>Classification by Industry</u>	<u>SITC.Rev.</u> <u>Division</u> <u>or</u> <u>Group</u>	<u>Classification by Groups</u> <u>of Commodities</u>
821	Education services	-	Services rendered by government- al and private education institutions of all types. (For governmental institutions equated to wages and salaries of government employees in Table 2 and 3.)
822	Medical and other health services	-	Medical, surgical, dental and other health services. (For governmental institutions equated to wages and salaries of government employees in Table 2 and 3.)
851	Domestic Service	-	Services rendered by employees of private households working on the premises in occupations usually considered as domestic service.
82 excl. 821 and 822	<u>Other services</u> Community services	-	Services provided by research and scientific institutes, religious organizations, welfare institutions, trade associations and professional and labour organizations, libraries, museums and botanical and zoo- logical gardens etc.....
83	Business services	-	Legal services - Accounting, auditing and bookkeeping services - Engineering and technical services - Business services n.e.s. (such as agencies for advertising, employment agencies, news agencies etc.....)
84	Recreation services	-	Motion picture production, distribution and projection; theatres, sport and other recreation services

<u>I.S.I.C.</u> <u>Division</u> <u>or</u> <u>Group</u>	<u>Classification by Industry</u>	<u>SITC. Rev.</u> <u>Division</u> <u>or</u> <u>Group</u>	<u>Classification by Groups</u> <u>of Commodities</u>
85 excl. 851	Personal services	-	Services generally involving the care of the person or his apparel (such as services rendered by restaurants, hotels, laundries, beauty shops etc....) excluding domestic service
-	Agricultural rural household services	-	Value added by agricultural rural households to own produce consumed by themselves (equated to the difference between consumption of own produce valued at market prices and at producer prices.)

APPENDIX IV

THE END-USE CLASSIFICATION OF PRODUCTS

1. Table 2 of the proposed intermediate system, which is a commodity balance sheet, requires the allocation of each commodity or group of commodities to the various possible uses, distinguishing between intermediate consumption and the various categories of final expenditure. This allocation is carried out separately for imports and for local products because of the existence of a separate source of information on imports, viz. foreign trade statistics, and of the importance to the analyst of an end-use classification of the import bill.
2. When completing Table 2, commodities can be classified into two categories: those for which the allocation between the various uses specified in the table results directly from the nature of the commodity itself (a machine tool, for instance, contributes necessarily to capital formation), and those for which the allocation can be decided only on the basis of other information (textile fabrics, for instance, can be purchased by the clothing industry or directly by the households). In either case, an end-use classification of commodities, based on the nature of the goods, would be of great assistance for the completion of Table 2.
3. Such a classification would be particularly useful when applied to imports, as, in addition to facilitating the completion of Table 2, it would provide information on the structure of imports, which is needed for a correct appraisal of the foreign trade policy pursued. It would show, for instance, the respective shares of capital goods and consumer goods in imports, the type of intermediate (producer) goods imported, etc... Many African countries, in fact, already classify their imports according to end-uses, and examples of the type of classification used are given below.

4. Depending on the country, four criteria of classification by end-use are being used, either separately or jointly :

1. according to the degree of processing of the commodities;
2. according to the sector of utilization;
3. according to the type of utilization (intermediate goods, capital goods and consumer goods).
4. according to the durability of the goods.

The classification for Tunisia is primarily a classification according to the degree of processing and secondarily by sector of utilization.

The classifications used in the Federation of Rhodesia and Nyasaland and in Ghana are combined classifications based to a varying degree on the four criteria mentioned above.

Each of these four classifications is of general interest to the analyst, and of particular interest for the completion of Table 2 and supplementary Tables S-4 and S-5 of the proposed intermediate system. There would be a definite advantage in a standardization of the nomenclatures, but any proposal to that effect should be preceded by a series of studies and consultations at the regional level. The problem was touched upon during the seminar on external trade statistics organized by the ECA at the end of 1961^{1/}, and a note, which is reproduced below for information, was presented by the representative of the Statistical Office of the European Communities on the system of classification adopted in Brussels.

5. Any further discussion on the subject, aiming at a standardized end-use classification, should take into consideration, among other things, the following aspects of the problem : 1) the need to devise a classification adaptable to most, if not all, national trade nomenclatures. This should not be too difficult as the two main trade classifications at present in use in Africa, viz. the SITC and the BTN, are now fully reconcilable following the latest revision of the SITC.

^{1/} Report of the Seminar on External Trade Statistics, Economic Commission for Africa, Addis Ababa, 29 November - 7 December 1961, E/CN.14/120

- 2) The need to devise a classification lending itself to easy treatment both by punched cards installations and through manual processing.
- 3) The need for a detailed allocation of capital goods between individual industries.
- 4) The best way to solve the problem raised by the commodities which cannot be allocated to any specific end-use, being partly intermediate goods and partly a component of final expenditure.

Some examples of End-use classification of imports

I. TUNISIA^{1/}

A. Food for human consumption

1. Material and live animals chiefly for production of human food.

B. Raw materials and semi-finished products

2. Raw materials and semi-finished products chiefly for production of energy.
3. Other materials of animal or vegetal origin.
4. Other mineral materials.
5. Other semi-finished products.

C. Finished products

6. Chiefly for agricultural equipment.
7. Chiefly for the equipment of industry and other collective activities.
8. Chiefly for consumption.

II. GHANA^{2/}

A. Non-durable consumers' goods

1. Foods drink and tobacco.
2. Textiles and cloth.
3. Others.

B. Durable consumers' goods

1. Private vehicles and accessories.
2. Others.

^{1/} See Bulletin Mensuel de Statistique, Service des Statistiques, Secretariat d'Etat au Plan et aux Finances, République tunisienne.

^{2/} See Economic Survey 1960, Central Bureau of Statistics, Accra, 1961

II. GHANA ((cont'd)

C. Raw and semi-finished materials

1. Materials for food, drink and tobacco.
2. Materials for agriculture.
3. Materials for mining and manufacturing.
4. Materials for construction.

D. Capital equipment

E. Fuel and lubricants

III. FEDERATION OF RHODESIA AND NYASALAND^{1/}

1. Non-durable producers goods

- 1.01 Materials for production of human food
- 1.02 Materials for production of beverages and tobacco
- 1.03 Materials for agricultural production
- 1.04 Materials for industry and commerce
- 1.05 Animal and vegetable oil and fats

2. Durable producers goods

- 2.01 Materials for building and construction
- 2.02 Materials for industry and commerce

3. Durable producers capital equipment

- 3.01 Agriculture
- 3.02 Mining and road construction
- 3.03 Industry
- 3.04 Railway transport
- 3.05 Road transport
- 3.06 Other transport
- 3.07 Posts and communications
- 3.08 Electricity services
- 3.09 Other

III. FEDERATION OF RHODESIA AND NYASALAND

4. Non-durable consumer goods

4.01 Food : bread and cereals

4.02 " : meat

4.03 " : fish

4.04 " : milk, cheese, eggs

4.05 " : oils and fats

4.06 " : fruits and vegetables

4.07 " : sugar, preserves and confectionery

4.08 " : coffee, tea, cocoa, etc.

4.09 " : other

4.10 Beverages

4.11 Tobacco

4.12 Clothing

4.13 Footwear

4.14 Other personal effects

4.15 Furnishings

4.16 Household goods

4.17 Toilet articles and preparations

4.18 Medical and pharmaceutical goods

4.19 Books, newspapers, stationery

4.20 Others

4.21 For public authorities

5. Durable consumer goods

5.01 Household equipment (furnitures)

5.02 Cars, trailers, motor cycles, cycles, tyres and parts

5.03 Toilet equipment

5.04 Medical and pharmaceutical equipment

5.05 Other equipment.

6. Energy

6.00 Fuel, electric energy and lubricants.

Note : Fourth Digit of code indicates the stage of production.

Classification of external trade by end-use as recommended by
the statistical office of the European communities (SOEC)
in Brussels

This classification is reproduced below for information, as it constitutes one example, among others, of an elaborate end-use classification which could be considered when discussing the problem of a standard classification for use in Africa.

A. Note on the Groupings of Commodities by Economic categories

prepared by the Representative of the SOEC at the Seminar on External Trade Statistics - Addis Ababa, December 1961.

1. Use of statistics by products

The use of foreign trade statistics by products can be divided into two types :

- (a) Some uses may be described as "specific", e.g. study of the international market for a particular product, studies of tariff or quota protection systems, fiscal studies, consumption balance sheets, etc.

These specific uses constitute the main purpose of the data published in accordance with a country's basic nomenclature, and largely determine the degree of detail required in that nomenclature. From that point of view, it is of little moment in which order the basic headings are classified or how they are codified. The main point is that the headings should be clearly defined and that any one of them should be readily findable from a simple classification scheme. For these uses, the associated SITC Revised - BTN system is very satisfactory; and all that has to be done, if need be, is to set up the new sub-divisions required in either of the two nomenclatures to obtain the necessary detail.

- (b) The other uses come under overall economic analysis at the national or international level. Examples here are observation of the general economic trends, certain forecast models, input-output tables, etc...

These uses entail the calculation of aggregates determined from the basic headings in the nomenclature, here designated by the general term "commodity categories".

Problems in this connexion confronting the statistical service that compiles the data are : the selection and definition of appropriate categories, and the most efficient method of obtaining all the information at the lowest cost.

2. Selection of appropriate economic regroupings

Theoretically, the selection of appropriate regroupings should depend on the precise use to which they will be put, since only the nature of that use can determine with absolute clarity the definition of the aggregates to be calculated. This is sometimes the case in practice, e.g. when the aim is to set up an input-output table. The fact that such tables are not yet internationally standardized in structure entails a special reclassification of basic data each time.

Most overall uses are, however, not known beforehand, or there are too many of them for special solutions to be possible. It is very fortunate that certain economic techniques have become sufficiently universal to make possible a prior selection of widely usable categories, though it must be stressed that such a prior selection will not always save the statisticians from making special re-classifications afterwards.

Commodities are often classified as follows :

- (a) by production sectors,
- (b) by utilization sectors ,
- (c) by degrees of processing,
- (d) by types of utilization or economic function.

3. Definition of above economic regroupings

The definitions chosen will be the easier to apply the more detailed the basic nomenclature is, since precise specifications normally enable a heading to be assigned to a category. It is therefore worth while to make the utmost use of the detail available, though not ignoring the possible extra labour involved.

Where a heading in the basic nomenclature is assignable to more than one production or utilization sector, etc., a stricter solution would consist in establishing percentage breakdowns from related information. But, as the establishment of such percentages and the resultant calculations are pretty arduous, they will not be considered here. It is, therefore, understood that in what follows one heading of the basic commodity nomenclature will always be assigned exclusively to a single heading under one of the economic groupings.

(a) Classification by sector of production

In the groupings made by the Statistical Office of the European Communities (SOEC), the production sectors were defined by the 3-digit groups of the International Standard Industrial Classification by Branches of Economic Activity (ISIC). The volume entitled "Statistical and Tariff Classification for International Trade (CST)", 2nd edition, gives against each 4-digit heading of the CST^{1/} the ISIC code number representing the production sector to be so assigned. The sector responsible for the last processing of the commodity before import or export was taken as the production sector, it being agreed that packing or blending is not processing. The SOEC considers the relationship thus established to be satisfactory in the great majority of cases, while nevertheless proposing to improve it subsequently by defining it on the basis of the CST 5-digit headings.

^{1/} The CST differs from the SITC Revised only in a few extra subdivisions at the item level.

(b) Classification by sector of utilization

Sectors of utilization, like production sectors, might be defined on the basis of the ISIC. But in many cases serious difficulties are encountered in precisely determining the sector that will use the commodity; hence, in the absence of a percentage breakdown, the number of sectors of utilization has been reduced to a bare minimum : agriculture, other collective activities (industry, transport trade and services) and domestic economy (households consumption). Even with those few sectors, the assignment of the commodities is at times rather arbitrary, and all that can be said is that it represents the main direct user of the commodity.

It is, however, probable that, with such wide categories there is enough compensation of error for the totals to be significant. One exception was made for energy products, which were left out of this classification as it proved impossible to assign them satisfactorily.

(c) Classification according to the degree of processing

Under this heading three degrees of processing were distinguished : raw materials, i.e. products merely harvested or extracted, together with waste; commodities processed only to a small degree i.e. those that have undergone a few processing operations and will generally undergo others subsequently; other commodities.

While the definition of raw materials raises no difficulties of assignment, that of commodities processed only to a small degree is subject to a certain vagueness which may be eliminated by the application of normal judgment.

(d) Classification by types of utilization or economic function

From among the possible types of use of commodities in the economy the SOEC has selected the following :

- Energy products;
- Food products;
- Raw materials (other than energy or food products), including artificial and synthetic materials used as substitutes for natural raw materials;
- Semi-finished products or industrial products processed only to a small degree and intended for further processing;
- Capital goods distinguishing between transport and fixed equipment. As regards commodities used direct by households, the only ones regarded as "fixed equipment" are machinery and apparatus;
- Finished products for processing or consumption in industry or households.

Assignment by types of use is usually not very difficult, given the definitions adopted. But it should be noted that one type of use sometimes selected in economic analysis has not been considered, i.e. durables, the definition of which was found too vague.

4. Grouping technique

The categories referred to were defined by lists of commodities. The lists included in each economic category are not independent of each other but overlap. Accordingly, it is not possible to obtain all the groupings by a single tabulation from the code of the basic commodity nomenclature, however well conceived that code. It would, on the other hand, be an arduous task to regroup and reclassify each time all the basic commodity headings to obtain each economic grouping. The best practical solution is to determine the parts common to the various lists, these constituting aggregates that have been called "grouping nuclei" and have the advantage of being few in number. Once the data corresponding to these nuclei are processed, it is very easy to reclassify and regroup them mechanically, working from a small number of recapitulative cards. It is even possible to insert the code identifying the nuclei in a single punch-card column, using a two-hole alphabetic

code system. With a suitable choice of code letters, totals by economic grouping can be obtained through a single tabulation on the lower or upper holes.

The code system used by the SOEC is reproduced below together with the composition of the grouping nuclei. It should be noted that the method is applicable to only a small number of economic groupings, which explains why groupings by production sector are dealt with separately.

In summary, whenever commodities have to be regrouped by economic categories that overlap, it is technically advantageous to delimit the common parts in the form of grouping nuclei, so as to reduce the number of reclassification operations.

B. Code for cross-classification by economic categories^{1/}

Cross-classification of data by such categories as sectors of production, sectors of utilization, types of economic utilization or degree of processing are frequently required in economic work. These regroupings, interrelated as they are, cannot be obtained directly and simultaneously from the simple subtotals obtained under the CST code, a fact which prompted SOEC to regroup the CST items into 22 intermediate nuclei which in turn can easily be reclassified according to various criteria even if the latter are interrelated. By using the 626 items available, it becomes possible to avoid a large proportion of the arbitrary choices which would be involved by regroupings based on too wide categories.

The content of these nuclei, each identified by a letter, as well as the classifications which they permit, are made clear by the following table in which the sums of the columns show the sectors of main utilization while groups of lines indicate types of economic utilization (categories in thick type). It is of course possible to effect any intermediate groupings which may be desired. Classification by degree of processing may be obtained as follows :

^{1/} Translated from : Classification statistique et tarifaire pour le commerce international (CST), 2ème édition, Office statistique des Communautés européennes, Bruxelles, 1961.

Raw materials : lines 1, 3 and 5

Primarily processed commodities : lines 6 and 7, nucleus K

Commodities more fully processed : lines 2, 8, 9 and 10,
nuclei B and T.

The composition of each nucleus by CST items will be found
in the following pages. Classification by sectors of production
can be established separately by using the ISIC code.

Type of utilization	Sectors of main utilization			Goods not classified by sector of utilization
	Agriculture	Industry and other economic activities	Domestic economy	
ENERGY				
1. Raw materials	-	-	-	O
2. Processed products	-	-	-	I
FOOD				
3. Raw materials	A	J	S	-
4. Processed products	B	K	T	-
RAW MATERIALS				
5. Raw materials, natural	D	M	V	-
6. Artificial and synthetic materials	-	L	-	-
7. SEMI-FINISHED PRODUCTS	-	Q	-	-
EQUIPMENT GOODS				
8. Transport and traction	E	N	W ₁ /	-
9. Fixed equipment	F	P	X ₁ /	-
10. FINISHED PRODUCTS FOR CONSUMPTION OR PROCESSING	H	R	Z	-

1/ Machines and apparatus only.

COMPOSITION OF THE GROUPING NUCLEI BY CST ITEMS

A. RAW FOOD MAINLY FOR AGRICULTURE

- 044.0 Maize (corn), unmilled
- 045.2 Oats, unmilled
- 045.9 Cereals, unmilled, n.e.s.
- 081.1 Hay and fodder, green or dry
- 081.2 Bran, pollard, sharps and other by-products from the working of cereal grains and leguminous vegetables
- 081.3 Oil-seed cake and meal and other vegetable oil residues
- 292.5 Seeds, fruit and spores for planting

B. FOOD PRODUCTS MAINLY FOR AGRICULTURE

- 081.4 Meat meal (including tankage) and fish meal, unfit for human consumption
- 081.9 Food wastes and prepared animal feed, n.e.s.

D. NATURAL RAW MATERIALS FOR AGRICULTURE

- 271.1 Natural fertilizers of animal or vegetable origin, not chemically treated
- 271.2 Natural sodium nitrate
- 271.3 Natural phosphates, whether or not ground
- 271.4 Natural potassic salts, crude
- 292.6 Bulbs, tubers and rhizomes of flowering or of foliage plants; cuttings, slips, live trees and other plants

E. TRANSPORT EQUIPMENT AND TRACTORS MAINLY FOR AGRICULTURE

- 712.5 Tractors, other than road tractors for tractor-trailer combinations.

F. FIXED EQUIPMENT GOODS MAINLY FOR AGRICULTURE

- 612.2 Saddlery and other harness-makers' goods of all materials
- 632.2 Cooperage products (excluding staves falling within heading)
- 695.1 Other tools for use in the hand or in machines
- 712.1 Agriculture machinery and appliances for preparing and cultivating the soil
- 712.2 Agricultural machinery and appliances for harvesting threshing and sorting
- 712.3 Milking machines, cream separators and other dairy-farm equipment
- 712.9 Agricultural machinery and appliances, n.e.s.

H. FINISHED PRODUCTS, OTHER THAN FOOD, MAINLY FOR CONSUMPTION OR PROCESSING IN AGRICULTURE

- 561.1 Nitrogenous fertilizers and nitrogenous fertilizer materials (other than natural) n.e.s.
- 561.2 Phosphatic fertilizers and phosphatic fertilizer materials (other than natural) (including super-phosphates and basic dephosphorization slag)
- 561.3 Potassic fertilizers and potassic fertilizer materials (other than crude natural potassic salts)
- 561.9 Fertilizers, n.e.s.
- 599.2 Insecticides, fungicides, disinfectants (including sheep and cattle dressing) and similar preparations

I. PROCESSED ENERGY PRODUCTS

- 241.2 Fuel wood and wood waste (including sawdust)
- 321.5 Briquettes of coal
- 321.6 Lignite briquettes and lignite
- 321.7 Peat briquettes and peat (including peat litter)
- 321.8 Coke and semi-coke of coal, of lignite or of peat
- 332.1 Motor spirit (gasolene and other light oils for similar uses, including natural gasolene)
- 332.2 Lamp oil and white spirit (kerosene, illuminating oil, jet fuel)
- 332.3 Distillate fuels
- 332.4 Residual fuel oils
- 332.5 Lubricating oils and greases (including mixtures with animal and vegetable lubricants)
- 341.2 Gas, manufactured
- 351.0 Electric energy

J. RAW FOOD MAINLY FOR INDUSTRY AND OTHER NON AGRICULTURAL ACTIVITIES

- 001.1 Bovine cattle (including buffaloes)
- 001.2 Sheep, lambs and goats
- 001.3 Swine
- 001.4 Poultry, live
- 001.5 Horses, asses, mules and hinnies
- 001.9 Live animals (chiefly for food),
- 041.0 Wheat (including spelt) and meslin, unmilled
- 042.1 Rice in the husk or husked, but not further prepared
- 043.0 Barley, unmilled
- 045.1 Rye, unmilled
- 054.8 Vegetable products, roots and tubers, chiefly for human food, n.e.s., fresh or dried
- 071.1 Coffee, green or roasted, and coffee substitutes containing coffee
- 072.1 Cocoa beans, raw or roasted
- 121.0 Tobacco, unmanufactured (including scrap tobacco and tobacco stems)
- 221.1 Groundnuts (peanuts), green, whether or not shelled (excluding flour and meal) (report quantities on a shelled basis)
- 221.4 Soya beans (excluding flour and meal)
- 221.6 Cotton seed (excluding flour and meal)
- 276.3 Salt (including salt put up for retail sale, salt liquors and sea water)

K. FOOD PRODUCTS MAINLY FOR INDUSTRY AND OTHER NON AGRICULTURAL ACTIVITIES

- 025.2 Eggs, unshelled
- 046.0 Meal and flour of wheat or of meslin
- 047.0 Meal and flour of cereals, except meal and flour of wheat or of meslin
- 048.2 Malt (including malt flour)
- 053.6 Fruit, temporarily preserved
- 054.6 Vegetables, frozen or in temporary preservative
- 061.1 Raw sugar, beet and can (not including syrups)
- 061.5 Molasses
- 061.9 Sugars and syrups, n.e.s. (including artificial honey and caramel)
- 072.2 Cocoa powder, unsweetened
- 072.3 Cocoa butter and cocoa paste

L. ARTIFICIAL AND SYNTHETIC RAW MATERIALS MAINLY FOR INDUSTRY AND OTHER NON AGRICULTURAL ACTIVITIES

- 231.2 Synthetic rubber and rubber substitutes
- 231.3 Reclaimed rubber
- 266.2 Synthetic fibres suitable for spinning
- 266.3 Regenerated fibres suitable for spinning
- 266.4 Waste of synthetic or regenerated fibres, not carded or combed
- 532.3 Synthetic tanning materials
- 581.1 Products of condensation, polycondensation and polyaddition
- 581.2 Products of polymerization and copolymerization
- 581.3 Regenerated cellulose, chemical derivatives of cellulose and vulcanized fibre
- 581.9 Other artificial resins and plastic materials

M. NATURAL RAW MATERIALS MAINLY FOR INDUSTRY AND OTHER NON AGRICULTURAL ACTIVITIES

- 211.1 Bovine and equine hides other than calf skins and kip skins
- 211.2 Calf skins and kip skins
- 211.4 Goat skins and kid skins
- 211.6 Sheep and lamb skins, with the wool on
- 211.7 Sheep and lamb skins, without the wool
- 211.8 Waste and used leather
- 211.9 Hides and skins
- 212.0 Fur skins, undressed
- 221.2 Copra
- 221.3 Palm nuts and kernels
- 221.5 Linseed
- 221.7 Castor oil seed
- 221.8 Oil-seeds, oil nuts and oil kernels, n.e.s.
- 231.1 Natural rubber and similar natural gums

- 231.4 Waste and scrap of unhardened rubber
- 242.1 Pulpwood (including broadleaved)
- 242.2 Sawlogs and veneer logs - conifer
- 242.3 Sawlogs and veneer logs - non-conifer
- 242.4 Pitprops (mine timber)
- 242.9 Poles, piling, posts and other wood in the rough
- 244.0 Cork, raw and waste
- 251.1 Paper waste and old paper
- 261.1 Silk worm cocoons suitable for reeling
- 261.2 Unreelable cocoons and cocoon wastes, frisons, silk thread waste and silk noils
- 262.1 Sheep's and lambs' wool, greasy or fleece-washed
- 262.3 Fine animal hair, other than wool, not carded or combed
- 262.5 Horsehair and other coarse hair, not carded or combed
- 262.9 Waste of wool and of other animal hair
- 263.1 Raw cotton, other than linters
- 263.2 Cotton linters
- 263.3 Cotton waste, not carded or combed
- 264.0 Jute (including jute cuttings and waste)
- 265.1 Flax and flax tow and waste
- 265.2 True hemp and true hemp tow and waste
- 265.3 Ramie and ramie noils and waste
- 265.4 Sisal and other fibres of the agave family and their waste
- 265.5 Manila fibre and Manila tow and waste
- 265.8 Vegetable textile fibres, n.e.s., and waste of such fibres
- 267.0 Waste materials from textile fabrics
- 273.1 Building and monumental (dimension) stone, not further worked than roughly split, roughly squared or squared by sawing
- 273.2 Gypsum, plasters, limestone fullux and calcareous stone used for the manufacture of lime or cement
- 273.3 Sand (excluding metal-bearing sand)
- 273.4 Gravel and crushed stone (including tarred macadam)
- 274.1 Sulphur, other than sublimed, precipitated or colloidal sulphur
- 274.2 Iron pyrites, unroasted
- 275.1 Industrial diamonds
- 275.2 Natural abrasives
- 276.1 Natural asphalt and natural bitumen
- 276.2 Clay and other refractory minerals
- 276.4 Asbestos, crude, washed or ground
- 276.5 Quartz, mica, feldspar, fluorspar, cryolite and chiolite
- 276.6 Slag, dross, scalings and similar waste, n.e.s.
- 276.9 Minerals, crude, n.e.s.
- 281.3 Iron ore and concentrates (except roasted iron pyrites)
- 282.0 Iron and steel scrap
- 283.1 Ores and concentrates of copper (including copper matte)
- 283.2 Ores and concentrates of nickel (including nickel matte)
- 283.3 Bauxite and concentrates of aluminium
- 283.4 Ores and concentrates of lead

- 283.5 Ores and concentrates of lead
- 283.6 Ores and concentrates of tin
- 283.7 Ores and concentrates of manganese
- 283.9 Ores and concentrates of non-ferrous base metals, n.e.s.
- 284.0 Non-ferrous metal scrap
- 285.0 Silver and platinum ores
- 286.0 Ores and concentrates of uranium and thorium
- 291.1 Bones, ivory, hoofs, claws and similar products
- 291.9 Materials of animal origin
- 292.1 Plants and parts of plants of types primarily used in dyeing and tanning, whether or not ground
- 292.2 Natural gums, resins, balsam and lacs
- 292.3 Vegetable materials of types primarily used for plaiting
- 292.4 Plants, seeds, flowers and part of plant, n.e.s. of types primarily used in perfumery, in pharmacy or for insecticidal or fungicidal purposes
- 292.9 Materials of vegetable origin, n.e.s.
- 532.1 Dyeing extracts (vegetable or animal)
- 667.1 Pearls, not set or strung
- 667.2 Diamonds (other than industrial diamonds), not set or strung
- 667.3 Other precious and semi-precious stones, not set or strung
- 735.8 Ships, boats and other vessels for breaking up

N. TRANSPORT EQUIPMENT MAINLY FOR INDUSTRY AND OTHER NON AGRICULTURAL ACTIVITIES

- 731.1 Railway locomotives, steam, and tenders therefor
- 731.2 Railway locomotives, electric, other than self-generating
- 731.3 Railway locomotives, other than steam or electric
- 731.4 Mechanically-propelled railway and tramway cars, passenger, freight or maintenance
- 731.5 Railway and tramway passenger cars (coaches) not mechanically propelled
- 731.6 Railway and tramway freight and maintenance cars, not mechanically propelled
- 731.7 Parts of railway locomotives and rolling-stock, n.e.s.
- 732.2 Buses (including trolleybuses), whether or not assembled
- 732.3 Lorries and trucks (including ambulances, etc.) whether or not assembled
- 732.4 Special purpose lorries, trucks and vans, whether or not assembled
- 732.5 Road tractors for tractor-trailer combinations
- 733.3 Trailers and other vehicles, not motorized, and their parts
- 734.1 Aircraft, heavier-than-air
- 734.9 Airships, balloons and part of aircraft, airships and balloons
- 735.3 Ships and boats, other than warships
- 735.9 Ships and boats, n.e.s.

O. RAW ENERGY PRODUCTS

- 241.1 Fuel wood and wood waste (including sawdust)
- 321.4 Coal (anthracite, bituminous)
- 331.0 Petroleum, crude and partly refined for further refining
- 341.1 Gas, natural

P. FIXED EQUIPMENT GOODS MAINLY FOR INDUSTRY AND OTHER NON-AGRICULTURAL ACTIVITIES

- 243.1 Railway sleepers (ties)
- 612.1 Machine leather belting and other articles of leather for use in machinery
- 629.4 Transmission, conveyor or elevator belts and belting of rubber
- 655.9 Special products of textile materials and of related materials
- 676.1 Rails of iron or steel
- 676.2 Sleepers and other railway track material of iron or steel
- 678.4 High pressure hydro-electric conduits of steel
- 678.5 Tube and pipe fittings of iron or steel
- 691.1 Finished structural parts and structures of iron or steel
- 691.2 Finished structural parts and structures of aluminium
- 691.3 Finished structural parts of zinc
- 692.1 Tanks, vats and reservoirs for storage or manufacturing use
- 692.2 Casks, drums, boxes, cans and similar commercial containers
- 692.3 Compressed gas cylinders
- 695.2 Other tools for use in the hand or in machines
- 698.2 Safes, strong-rooms, strong room fittings and strong boxes of base metal
- 698.4 Anchors, grapnels and parts thereof of iron or steel
- 711.1 Steam generating boilers
- 711.2 Boiler house plan
- 711.3 Steam engines
- 711.6 Gas turbines, other than for aircraft
- 711.7 Nuclear reactors
- 711.8 Engines, n.e.s.
- 714.1 Typewriters and cheque-writing machines
- 714.2 Calculating machines, accounting machines and similar machines incorporating a calculating device (including electronic computers)
- 714.3 Statistical machines, e.g. calculating from punched cards or tape
- 714.9 Office machines, n.e.s.
- 715.1 Machine-tools for working metals
- 715.2 Metalworking machinery, other than machine-tools
- 717.1 Textile machinery
- 717.2 Machinery (excluding sewing machines) for preparing, tanning or working hides, skins or leather
- 717.3 Sewing machines
- 718.1 Paper mill and pulp mill machinery, paper cutting machinery and other machinery for the manufacture of paper articles
- 718.2 Printing and bookbinding machinery
- 718.3 Food-processing machines (excluding domestic)
- 718.4 Construction and mining machinery

- 719.1 Heating and cooling equipment
- 719.2 Pumps and centrifuges
- 719.3 Mechanical handling equipment
- 719.5 Powered-tools, n.e.s.
- 719.6 Other non-electrical machines
- 719.7 Ball, roller or needle-roller bearings
- 719.8 Machinery and mechanical appliances, n.e.s.
- 719.9 Parts and accessories of machinery, n.e.s.
- 722.1 Electric power machinery
- 722.2 Electrical apparatus of making and breaking or for protecting circuits (switchgear, etc.)
- 723.1 Insulated wire and cable
- 723.2 Electrical insulating equipment
- 724.9 Telecommunications equipment, n.e.s.
- 726.1 Electro-medical apparatus
- 726.2 X-ray apparatus
- 729.1 Batteries and accumulators
- 729.5 Electrical measuring and controlling instruments and apparatus
- 729.6 Electro-mechanical hand tools
- 729.7 Electron and proton accelerators
- 729.9 Electrical machinery and apparatus, n.e.s.
- 861.3 Binoculars, microscopes, and other optical instruments
- 861.5 Cinematographic cameras, projectors, sound recorders and sound reproducers
- 861.6 Photographic and cinematographic apparatus and equipment, n.e.s.
- 861.7 Medical instruments, n.e.s.
- 861.8 Meters and counters, non-electric
- 861.9 Measuring, controlling and scientific instruments, n.e.s.
- 864.2 Clocks, clock movements and parts
- 718.5 Mineral crushing, sorting and moulding machinery; glass-working machinery

**Q. SEMI-FINISHED PRODUCTS, OTHER THAN FOOD, MAINLY FOR INDUSTRY
AND OTHER NON AGRICULTURAL ACTIVITIES**

- 221.9 Flour and meal of oil-seeds, oil nuts and oil kernels, non-defatted (excluding mustard flour)
- 243.2 Lumber, sawn, planed, grooved, tongued, etc., conifer
- 243.3 Lumber, sawn, planed, grooved, tongued, etc., non-conifer
- 251.2 Mechanical wood pulp
- 251.5 Pulp other than wood pulp
- 251.6 Chemical wood pulp, dissolving grades
- 251.7 Sulphate wood pulp
- 251.8 Sulphite wood pulp
- 251.9 Semi-chemical wood pulp
- 261.3 Raw silk (not thrown)
- 262.2 Sheep's and lambs' wool, degreased, whether or not bleached or dyed
- 262.6 Wool shoddy

- 262.8 Wool tops
- 262.7 Wool or other animal hair, carded or combed (excluding tops)
- 263.4 Cotton, carded or combed
- 281.4 Roasted iron pyrites
- 332.6 Mineral jelly and waxes (including petrolatum)
- 332.9 Pitch, resin, petroleum asphalt, coke of petroleum and other by-products of coal, lignite, petroleum and oil shale (including mixtures with asphalt), n.e.s.
- 411.1 Oils of fish and marine mammals
- 411.3 Animal oils, fats and greases (excluding lard)
- 422.1 Linseed oil
- 422.2 Palm oil
- 422.3 Coconut (copra) oil
- n422.4 Palm kernel oil
- 422.5 Castor oil
- 422.9 Fixed vegetable oils, n.e.s.
- 431.1 Oils, animal or vegetable, boiled, oxidized, dehydrated, sulphurized, blown or polymerized
- 431.2 Hydrogenated oils and fats
- 431.3 Acid oils, fatty acids and solid residues from the treatment of fatty substances
- 431.4 Waxes of animal or vegetable origin
- 512.1 Hydrocarbons and their halogenated, sulfonated, nitrated or nitrosated derivatives
- 512.2 Alcohols, phenols, phenol-alcohols, glycerine
- 512.3 Ethers, epoxides, acetals
- 512.4 Aldehyde-, ketone- and quinone-function compounds
- 512.5 Acids and their halogenated, sulphonated, nitrated or nitrosated derivatives
- 512.6 Inorganic esters, their salts and derivatives
- 512.7 Nitrogen-function compounds
- 512.8 Organo-inorganic and heterocyclic compounds
- 512.9 Other organic chemicals
- 513.1 Oxygen, nitrogen, hydrogen, rare gases
- 513.2 Chemical elements n.e.s.
- 513.3 Inorganic acids and oxygen compounds of non-metals or metalloids
- 513.4 Halogen and sulphur compounds of non-metals or of metalloids
- 513.5 Metallic oxides, of kinds principally used in paints
- 513.6 Other inorganic bases and metallic oxides
- 514.1 Metallic salts and peroxy salts of inorganic acids
- 514.2 Other metallic salts and peroxy salts of inorganic acids
- 514.3 Other metallic salts and peroxy salts of inorganic acids
- 514.9 Inorganic chemical products, n.e.s.
- 521.1 Mineral tar
- 521.3 Ammoniacal gas liquors and spent oxide produced in coal gas purification
- 521.4 Oils and other products of the distillation of coal tar
- 531.0 Synthetic organic dyestuffs, natural indigo and colour lakes
- 532.4 Tanning extracts of vegetable origin
- 532.5 Tannic acids (tannins) and derivatives
- 533.1 Colouring materials, n.e.s.

- 551.1 Essential oils and resinoids
- 551.2 Synthetic perfume and flavour materials and concentrates, and enfleurage greases and mixtures of alcohol and essential oils
- 599.5 Starches, inulin, gluten; albuminoidal substances; glues
- 599.6 Wood and resin-based chemical products
- 599.7 Organic chemical products, n.e.s.
- 599.9 Chemical products and preparations, n.e.s.
- 611.2 Reconstituted and artificial leather containing leather or leather fibre
- 611.3 Calf leather
- 611.4 Leather of other bovine cattle and equine leather
- 611.9 Leather, n.e.s.
- 613.0 Fur skins, tanned or dressed (including dyed)
- 621.0 Materials of rubber (e.g. pastes, plates, sheets, rods, threads, tubes of rubber)
- 631.1 Veneer sheets
- 631.2 Plywood (including veneered panels)
- 631.4 "Improved" or reconstituted wood
- 631.8 Wood simply shaped or worked, n.e.s.
- 651.1 Thrown silk and other silk yarn and thread (including schappe and bourette)
- 651.2 Yarn of wool and animal hair
- 651.3 Cotton yarn and thread, grey (unbleached), not mercerized or put up for retail sale
- 651.4 Cotton yarn and thread, bleached, dyed, mercerized, etc.
- 651.5 Yarn and thread of flax, ramie and true hemp
- 651.6 Yarn and thread of synthetic fibres
- 651.7 Yarn and thread or regenerated (artificial) fibres
- 651.8 Yarn of glass fibre
- 651.9 Yarn of textile fibres, n.e.s. (including paper yarn)
- 661.1 Lime
- 661.2 Cement
- 664.1 Glass (other than optical and enamel glass) in the mass, glass rods and tubes, waste glass
- 664.2 Optical glass and elements thereof, not optically worked, and blanks for corrective spectacle lenses
- 664.3 Drawn or blown glass (including flashed glass), unworked, in rectangles
- 664.4 Cast, rolled, drawn or blown glass (including flashed or wired glass) in rectangles, surface ground or polished, but not further worked
- 664.5 Cast or rolled glass (including flashed or wired glass), unworked, in rectangles
- 664.6 Bricks, tiles and other construction materials of pressed or moulded glass
- 664.7 Safety glass, toughened or laminated
- 664.9 Glass, n.e.s.
- 671.1 Spiegeleisen
- 671.2 Pig iron (including cast iron)
- 671.3 Iron and steel powders, shot and sponge
- 671.4 Ferro-manganese
- 671.5 Other ferro-alloys

- 672.1 Puddled bars and pilings, blocks, lumps and similar forms of iron or steel
- 672.3 Ingots of iron or steel
- 672.5 Blooms, billets, slabs, sheet bars and roughly forged pieces of iron or steel
- 672.7 Iron or steel coils for re-rolling
- 672.9 Blanks for tubes and pipes
- 673.1 Wire rod of iron or steel
- 673.2 Bars and rods (excluding wire rod) of iron or steel; hollow mining drill steel
- 673.4 Angles, shapes and sections (excluding rails), 80mm. or more, and sheet piling of iron or steel
- 673.5 Angles, shapes and section, less than 80mm., of iron or steel
- 674.1 Universals and heavy plates and sheets, more than 4.75mm. in thickness, of iron or steel (other than tinned plates and sheets)
- 674.2 Medium plates and sheets, 3mm. to 4.75mm. in thickness, of iron or steel (other than tinned plates and sheets)
- 674.3 Plates and sheets, less than 3mm. in thickness, of iron or steel, uncoated
- 674.7 Tinned plates and sheets
- 674.8 Plates and sheets, less than 3mm. in thickness, of iron or steel, coated (excluding tinned plates or sheets)
- 675.0 Hoop and strip of iron or steel
- 677.0 Iron and steel wire (excluding wire rod)
- 678.1 Tubes and pipes of cast iron
- 678.2 Tubes and pipes of iron (other than of cast iron) or steel, seamless (excluding clinched)
- 678.3 Tubes and pipes of iron (other than of cast iron) or steel, welded, clinched, etc.
- 679.1 Iron castings in the rough state
- 679.2 Steel castings in the rough state
- 679.3 Iron and steel forgings (including drop forgings) in the rough state
- 681.1 Silver, unworked or partly worked
- 681.2 Platinum and other metals of the platinum group, unworked or partly worked
- 682.1 Copper and alloys, whether or not refined, unwrought
- 682.2 Copper and alloys of copper, worked
- 683.1 Nickel and nickel alloys, unwrought
- 683.2 Nickel and nickel alloys, worked
- 684.1 Aluminium and aluminium alloys, unwrought
- 684.2 Aluminium and aluminium alloys, worked
- 685.1 Lead and lead alloys, unwrought
- 685.2 Lead and lead alloys, worked
- 686.1 Zinc and zinc alloys, unwrought
- 686.2 Zinc and zinc alloys, worked
- 687.1 Tin and tin alloys, unwrought
- 687.2 Tin and tin alloys, worked
- 688.0 Uranium and thorium and their alloys
- 689.3 Magnesium and beryllium
- 689.4 Tungsten, molybdenum and tantalum
- 689.5 Base metals, n.e.s.

R. FINISHED PRODUCTS, OTHER THAN FOOD, MAINLY FOR CONSUMPTION OR PROCESSING IN INDUSTRY AND OTHER NON AGRICULTURAL ACTIVITIES

- 515.1 Radioactive chemical elements and isotopes and their compounds and mixtures
- 515.2 Stable isotopes and their compounds
- 515.3 Compounds and mixtures, n.e.s. of thorium, of uranium, of rare earth metals, of yttrium or of scandium
- 533.2 Printing inks
- 533.3 Prepared paints, enamels, lacquers, varnishes, artists' colours, siccatives (paint driers) and mastics
- 541.1 Vitamins and provitamins
- 541.3 Penicillin, streptomycin, tyrocidine and other antibiotics
- 541.4 Opium alkaloids, cocaine, caffeine, quinine and other vegetable alkaloids, their salts and other derivatives
- 541.5 Hormones
- 541.6 Glycosides; glands and their extracts; sera, vaccines
- 612.3 Uppers, legs and other prepared part of footwear of all materials except of metal or of asbestos
- 629.1 Rubber tyres and tubes for vehicles and aircraft
- 629.9 Other articles of rubber, n.e.s.
- 632.1 Boxes, cases, crates, complete, whether or not assembled
- 632.4 Builders' woodwork and prefabricated buildings of wood
- 632.8 Manufactured articles of wood, n.e.s.
- 633.0 Cork manufactures
- 641.1 Newsprint paper
- 641.2 Other printing and writing paper(machine-made), in rolls or sheets
- 641.3 Kraft paper and kraft paperboard
- 641.4 Cigarette paper in bulk, rolls or sheets
- 641.5 Machine-made paper and paperboard, simply finished, in rolls or sheets, n.e.s.
- 641.6 Fibreboard and other building boards of wood pulp or of vegetable fibres
- 641.7 Hand-made papers
- 641.9 Paper and paperboard in rolls or sheets, n.e.s.
- 642.1 Paper bags, paperboard boxes and other containers of paper or paperboard
- 642.3 Exercise books, registers, albums, diaries, memorandum blocks and other stationery of paper or paperboard
- 642.9 Articles of paper pulp, paper or paperboard, n.e.s. (including paper and paperboard cut to size)
- 652.1 Cotton fabrics, woven, grey (unbleached), not mercerized
- 652.2 Cotton fabrics, woven, other than grey (bleached, dyed, mercerized, printed or otherwise finished)
- 653.1 Silk fabrics, woven
- 653.2 Woollen fabrics, woven (including fabrics of fine hair)
- 653.3 Linen, ramie and true hemp fabrics, woven
- 653.4 Jute fabrics woven
- 653.5 Fabrics, woven, of synthetic fibres

- 653.6 Fabrics, woven, of regenerated (artificial) fibres
- 653.7 Knitted or crocheted fabrics, not elastic nor rubberized
- 653.8 Fabrics, woven, of glass fibre
- 653.9 Fabrics, woven, n.e.s. (including fabrics made of coarse hair and of paper yarn)
- 654.0 Tulle, lace, embroidery, ribbons, trimmings and other small wares
- 655.1 Felts and felt articles, n.e.s.
- 655.4 Coated or impregnated textile fabrics and products, n.e.s.
- 655.5 Elastic fabrics and trimmings of elastic (excluding knitted or crocheted goods)
- 655.6 Cordage, cables, ropes, twines and manufactures thereof (fishing nets, ropemakers' wares)
- 655.7 Hat bodies
- 655.8 Wadding, wicks and textile fabrics for use in machinery or plant
- 656.1 Bags and sacks of textile materials
- 656.2 Tarpaulins, tents, awnings, sails, other made-up canvas goods
- 657.4 Linoleum and similar floor coverings
- 661.3 Building and monumental (dimension) stone, worked
- 661.8 Building materials of asbestos-cement and fibre-cement and of unfired non-metallic minerals, n.e.s.
- 662.3 Refractory bricks and other refractory construction materials
- 662.4 Non-refractory ceramic bricks, tiles, pipes and similar products
- 663.1 Grinding and polishing wheels and stones
- 663.2 Abrasive cloths and papers and similar articles
- 663.4 Worked mica (including agglomerated mica splittings) and articles thereof
- 663.5 Mineral insulating materials, n.e.s.
- 663.6 Manufactures of mineral materials, n.e.s., other than ceramic
- 663.7 Refractory products other than refractory construction materials
- 663.8 Manufactures of asbestos; friction materials
- 663.9 Articles of ceramic materials, n.e.s.
- 665.1 Carboys, bottles, jars, flasks and similar containers, stoppers and other closures of glass
- 665.8 Articles made of glass, n.e.s.
- 667.4 Synthetic or reconstructed precious or semi-precious stones, not set or strung
- 693.1 Wire cables, ropes, plaited bands, slings and similar articles, not insulated
- 693.2 Wire of iron or steel, of types used for fencing
- 693.3 Gauze, netting, grill, fencing, etc. of wire
- 693.4 Expanded metal
- 694.1 Nails, tacks, staples, spikes, etc.
- 694.2 Nuts, bolts, screws, rivets, washers, etc.
- 698.1 Locksmiths' wares
- 698.3 Chain and parts thereof of iron or steel
- 698.5 Pins and needles of iron or steel and base metal fittings of a kind commonly used for articles of apparel, travel goods, etc.
- 698.6 Springs and leaves for springs of iron, steel or copper
- 698.8 Miscellaneous articles of base metal
- 698.9 Articles of base metals, n.e.s.

- 711.4 Aircraft engines (including jet propulsion engines)
- 711.5 Internal combustion engines, other than for aircraft
- 729.2 Electric lamps
- 729.3 Thermionic, etc. valves and tubes, photocells, transistors, etc.
- 729.4 Automotive electrical equipment
- 732.6 Chassis with engines mounted of a kind used for vehicles of heading 732.1
- 732.7 Other chassis with engines mounted
- 732.8 Bodies, chassis, frames and other parts of motor vehicles other than motorcycles (not including rubber tyres, engines, chassis with engines mounted, electrical parts)
- 812.1 Central heating apparatus (central heating boilers (excluding steam-generating boilers), radiators, etc.) and parts thereof
- 812.2 Sinks, wash basins, bidets, baths and other sanitary and plumbing fixtures and fittings of ceramic materials
- 812.3 Sinks, wash basins, bidets, baths and other sanitary and plumbing fixtures and fittings of iron or steel (whether or not enamelled)
- 861.1 Optical elements
- 862.3 Chemical products and flashlight materials of a kind used in photography, put up in measured portions or for retail sale
- 862.4 Photographic film, plates and paper, whether or not exposed, and developed film other than developed cinematographic film
- 863.0 Cinematographic film, developed
- 895.1 Office and stationery supplies of base metal
- 895.2 Pens, pencils and fountain pens
- 895.9 Other office and stationery supplies

S. RAW FOOD MAINLY FOR HOUSEHOLD CONSUMPTION

- 022.3 Milk and cream, fresh (including buttermilk, skimmed milk, sour milk, sour cream and whey)
- 025.1 Eggs in shell, fresh or preserved
- 031.1 Fish, fresh, chilled or frozen
- 031.3 Crustacea and molluscs, fresh, chilled, frozen, salted or dried
- 051.1 Oranges, tangerines or mandarines and clementines
- 051.2 Other citrus fruit
- 051.3 Bananas (including plantains), fresh
- 051.4 Apples, fresh
- 051.5 Grapes, fresh
- 051.7 Edible nuts, fresh or dried (including coconuts) other than nuts chiefly used for the extracting of oil
- 051.9 Fresh fruit, n.e.s.
- 054.1 Potatoes, fresh (not including sweet potatoes)
- 054.2 Beans, peas, lentils and other leguminous vegetables, dried (including split)
- 054.4 Tomatoes, fresh
- 054.5 Other fresh vegetables
- 061.6 Natural honey
- 074.1 Tea
- 074.2 Maté
- 075.1 Pepper and pimento, whether or not ground
- 075.2 Spices, except pepper and pimento, whether or not ground

T. FOOD PRODUCTS MAINLY FOR HOUSEHOLD CONSUMPTION

- 011.1 Meat of bovine animals, fresh, chilled or frozen
- 011.2 Meat of sheep and goats, fresh, chilled or frozen
- 011.3 Meat of swine, fresh, chilled or frozen
- 011.4 Poultry, killed or dressed (including poultry offals other than liver), fresh, chilled or frozen
- 011.5 Meat of horses, asses, mules and hinnies, fresh, chilled or frozen
- 011.6 Edible offals of the animals falling in headings 001.1, 001.2, 001.3 and 001.5, fresh, chilled or frozen
- 011.8 Other fresh, chilled or frozen meat and edible offals
- 012.1 Bacon, ham and other dried, salted or smoked pig meat
- 012.9 Meat and edible offals, n.e.s., dried, salted or smoked
- 013.3 Meat extracts and meat juices
- 013.4 Sausages, whether or not in airtight containers
- 013.8 Other prepared or preserved meat, whether or not in airtight containers
- 022.1 Milk and cream (including buttermilk, skimmed milk and whey), evaporated or condensed (in liquid or semi-solid form)
- 022.2 Milk and cream (including buttermilk, skimmed milk and whey), dry (in solid form such as blocks or powder)
- 023.0 Butter
- 024.0 Cheese and curd
- 031.2 Fish, salted, dried or smoked, but not further prepared
- 032.0 Fish, in airtight containers, n.e.s. and fish preparations, whether or not in airtight containers (including crustacea and molluscs)
- 042.2 Rice, glazed or polished, but not otherwise worked (including broken rice)
- 048.1 Cereal grains, flaked, pearled or prepared in a manner not elsewhere specified ("prepared breakfast food")
- 048.3 Macaroni, spaghetti, noodles, vermicelli and similar products
- 048.4 Bakery products, e.g., bread, biscuits, cakes
- 048.8 Preparations of cereals, flour and starch for food, n.e.s.
- 052.0 Dried fruit (including artificially dehydrated)
- 053.2 Fruit, fruit peel, parts of plants, preserved by sugar (drained, glacé or crystallized)
- 053.3 Jams, marmalades, fruit jellies, fruit purées and pastes
- 053.5 Fruit juices and vegetable juices, unfermented, whether or not frozen
- 053.9 Fruit and nuts, prepared or preserved, n.e.s. (including fruit in airtight containers)
- 055.1 Vegetables, dehydrated (excluding leguminous vegetables)
- 055.4 Flour and flakes of potatoes, fruit and vegetables (including sago, tapioca)
- 055.5 Vegetables preserved or prepared, n.e.s., whether or not in airtight containers

- 061.2 Refined sugar and other products of refining beet and cane sugar (not including syrups)
- 062.0 Sugar confectionery and other sugar preparations (except chocolate confectionery)
- 071.3 Coffee extracts, essences, concentrates and similar preparations of coffee
- 073.0 Chocolate and other food preparations containing cocoa or chocolate, n.e.s.
- 091.3 Lard and other rendered pig fat; rendered poultry fat
- 091.4 Margarine, imitation lard and other prepared edible fats, n.e.s.
- 099.0 Food preparations, n.e.s.
- 111.0 Non-alcoholic beverages, n.e.s.
- 112.1 Wine of fresh grapes (including grape must)
- 112.2 Cider and fermented beverages, n.e.s.
- 112.3 Beer (including ale, stout, porter)
- 112.4 Distilled alcoholic beverages
- 122.1 Cigars and cheroots
- 122.2 Cigarettes
- 122.3 Tobacco, manufactured (including smoking and chewing tobacco, snuff)
- 421.2 Soya bean oil
- 421.3 Cotton seed oil
- 421.4 Groundnut (peanut) oil
- 421.5 Olive oil
- 421.6 Sunflower seed oil
- 421.7 Rape, colza and mustard oils

V. RAW NATURAL PRODUCTS, OTHER THAN FOOD, MAINLY FOR HOUSEHOLD CONSUMPTION

- 292.7 Cut flowers and foliage

W. TRANSPORT EQUIPMENT MAINLY FOR DOMESTIC USE

- 732.1 Passenger motor cars (other than buses or special vehicles), whether or not assembled
- 732.9 Motorcycles, motorized cycles and their parts
- 733.1 Bicycles and other cycles, not motorized, and their parts
- 733.4 Invalid carriages, fitted with means of mechanical propulsion

X. MACHINERY AND APPARATUS MAINLY FOR DOMESTIC USE

- 697.1 Domestic stoves, boilers, cookers, ovens, space heaters, n.e.s.
- 697.2 Domestic utensils of base metals
- 697.9 Other household equipment of base metals
- 719.4 Domestic appliances, non-electrical
- 724.1 Television broadcast receivers, whether or not combined with gramophone or radio
- 724.2 Radio broadcast receivers, whether or not combined with gramophone
- 725.0 Domestic electrical equipment

- 861.4 Photographic cameras (other than cinematographic) and flashlight apparatus
- 864.1 Watches, watch movements and cases
- 891.1 Phonographs (gramophones), tape recorders and other sound recorders and reproducers
- 891.4 Pianos and other string musical instruments
- 891.8 Musical instruments, n.e.s.
- 891.9 Parts and accessories of musical instruments (other than strings)
- 899.6 Orthopaedic appliances, hearing aids, artificial parts of the body and fracture appliances

Z. FINISHED PRODUCTS, OTHER THAN FOOD, MAINLY FOR DOMESTIC USE

- 541.7 Medicaments
- 541.9 Pharmaceutical goods
- 553.0 Perfumery and cosmetics, dentifrices and other toilet preparations (except soaps)
- 554.1 Soaps
- 554.2 Surface-acting agents and washing preparations
- 554.3 Polishes, pastes, powder and similar preparations for polishing and preserving leather, wood, metal, glass and other materials
- 571.4 Hunting and sporting ammunition
- 612.9 Manufactures of leather, n.e.s.
- 629.3 Hygienic and pharmaceutical articles of unhardened rubber
- 632.7 Manufactures of wood for domestic or decorative use (excluding furniture)
- 642.2 Other printing and writing paper(machine-made), in rolls or sheets
- 656.6 Blankets, travelling rugs and coverlets
- 656.9 Made-up articles of textile materials, n.e.s.
- 657.5 Carpets, carpeting and rugs, knotted
- 657.6 Other carpets, carpeting and rugs
- 657.7 Tapestries
- 657.8 Mats, matting, screens, envelopes for bottles, etc. of vegetable plaiting materials
- 664.8 Sheet or plate glass, coated with metal on one surface (i.e., glass mirrors)
- 665.2 Glass tableware and other articles of glass household, hotel and restaurant use
- 666.4 Porcelain or china household ware
- 666.5 Household ware of other ceramic materials
- 666.6 Ornaments and furnishing goods of porcelain, china or other ceramic materials, n.e.s.
- 696.0 Cutlery
- 812.4 Lighting fixtures and fittings, lamps and lanterns and parts thereof (not including electrical parts)
- 821.0 Furniture
- 831.0 Travel goods, handbags and similar articles

- 841.1 Clothing of textile fabric, not knitted or crocheted
- 841.2 Clothing accessories of textile fabric, not knitted or crocheted
- 841.3 Apparel and clothing accessories of leather
- 841.4 Clothing and accessories, knitted or crocheted
- 841.5 Headgear
- 841.6 Apparel and clothing accessories (including gloves) of rubber
- 842.0 Fur clothing (not including headgear) and other articles made of furskins; artificial fur and articles thereof
- 851.0 Footwear
- 861.2 Spectacles and spectacle frames
- 891.2 Phonograph (gramophone) records, recorded tapes, other recorded media and prepared media for sound recording
- 892.1 Books and pamphlets (including maps and globes), printed
- 892.2 Newspapers and periodicals
- 892.3 Music, printed or in manuscript, whether or not bound
- 892.4 Picture postcards, picture greeting cards and transfers (decalcomanias), printed
- 892.9 Printed matter, n.e.s.
- 893.0 Articles of artificial plastic materials, n.e.s.
- 894.1 Baby and invalid carriages (not motorized nor otherwise mechanically propelled)
- 894.2 Children's toys, indoor games, etc.
- 894.3 Non-military arms
- 894.4 Other sporting goods
- 896.0 Works of art, collectors' pieces and antiques
- 897.1 Jewellery of gold, silver and platinum group metals and goldsmiths' or silversmiths' wares including set goods (except watchcases)
- 897.2 Imitation jewellery (jewellery not of precious or semi-precious material)
- 899.1 Articles and manufactures of carving or moulding material
- 899.2 Basketwork and other articles of plaiting materials, n.e.s. brooms, brushes, feather dusters and sieves
- 899.3 Candles, matches, combustible products, smokers' requisites
- 899.4 Umbrellas, parasols, walking sticks and similar articles
- 899.5 Small-wares and toilet articles, n.e.s.
- 899.9 Other manufactured articles, n.e.s.
- 571.1 Propellant powders and other prepared explosive
- 571.2 fuses, primers and detonators
- 571.3 Pyrotechnical articles
- 735.1 Warships of all kinds
- 894.5 Fair-ground amusements, etc.
- 911.0 Postal packages not classified according to kind
- 931.0 Special transactions not classified according to kind
- 941.0 Animals, n.e.s. (including zoo animals, dogs and cats)
- 951.0 Firearms of war and ammunition thereof
- 961.0 Coin (other than gold coin), not being legal tender
- X00.1 Gold ores
- X00.2 Partly worked gold
- X00.3 Rolled gold
- X00.4 Gold coins
- X00.5 Waste and sweeping of gold
- X10.0 Current note and coin (other than gold)

10/24/2011 11:00 AM

APPENDIX V

Suggested Framework for the Analysis of
Intermediate Consumption

1. It is frequently claimed by those interested in seeing the National Accounts developed for African countries (but who very seldom have the work of compiling these accounts) that input-output statistics are over-ambitious and completely unnecessary for the purposes of developing even an elementary system of national accounts. This is very much an over-simplification. In actual fact any country that sets out to compile national accounts on the basis of commodity flows, must in some form or other complete the allocation of products and margins in the way illustrated in table 2 or in columns a, b and c of table 3. In each case it is necessary at some stage to undertake an industrial analysis of both the output and the input of commodities, or groups of commodities, and for this purpose some form of input/output matrix of intermediate consumption is unavoidable. For example, whilst it is relatively easy to compile details of turnover and purchases by producing industry, it is quite another matter to allocate purchases to the consuming industry. This is the problem which all countries who endeavour to complete table 3 will have to solve. It appears to have been the practice in many cases for those working on national accounts to do this on an ad hoc basis outside the framework of a conventional matrix table. There is in fact no serious reason why this should not be as successful as the course recommended below although it is maintained that the ad hoc alternative methods adopted are by no means as foolproof or as simple to follow as the method outlined below.
2. In the table attached to this Appendix is shown an elementary input/output table restricted to intermediate consumption. The starting point to this table is the completion of the right-hand column "Total intermediate consumption by producing industry". This column is completed by entering into it against the appropriate industry group that part of the total output of the industry which has been allocated to intermediate consumption in column a of table 2. Each row represents the output of

the industries enumerated at the left-hand side of the table and each column represents that part of the output of the producing industry which is consumed in the purchasing industry listed in the column headings at the top of the table.

3. Before going any further it might be as well to refer to one or two problems of a technical nature. The first of these problems concerns the treatment of imports. For some purposes it is useful to have an analysis of industries' purchases of commodities according to the domestic producing industry and in this case it would be normal to exclude imports from the matrix and treat them as a separate industry at the bottom of the table below the total of intermediate consumption of local products. Imports would of course still be analysed according to purchasing industry. Alternatively, imports could be allocated to the industry corresponding to the industry of origin of similar domestic products or in the case of "non-competitive" imports to the industry of origin in the country of origin. The second problem covers the method of valuation, that is at producer price or at purchase price. In the first case the value allocated to a given industry is the producer price ex works, excluding subsequent distributive margins and transport costs which are allocated to the appropriate distributive industry. In the second case the margins and transport costs are allocated to the producing industry and are included in the selling value of that industry and in the purchase price of the consuming industry. The third remaining problem covers the choice of factor cost or market prices as the basis of valuation. In one case indirect taxes incorporated in production are excluded from the values recorded in the matrix and in the other case they are included.

4. It is not proposed to examine the pros and cons of each alternative here. The choice will largely depend on the ultimate problems to be examined and the availability of material. Nevertheless it is probable that the simplest approach to this table and the one designed solely to facilitate the completion of column (b) of table 3 would be at

purchase prices (market prices) with imports included with other domestic products. What follows, however, does not depend on a preference for either one or the other method of allocating imports and of valuation.

5. After entering in the right-hand column of the table "Analysis of Intermediate Consumption"^{1/} the products destined for intermediate consumption analysed by the producing industry and shown in column (a) of table 2, valued at purchase price, which therefore includes a share of distributive margins and transport costs, the next problem is to allocate the total for this column according to the consuming industry. All that is required to complete column (b) of table 3 is the row of figures at the bottom of the analysis of intermediate consumption, in other words, total input or purchases of the consuming industries shown in columns 1-28 respectively, and equal to the total of the entries in the right-hand column. Those countries of Africa which have in the past completed table 3 have entered this row of figures by trial and error and by various methods mainly of a subjective nature, decisions being made on the basis of the nature of the output of a particular industry and its main destination. It is considered that it would be simpler to make this allocation by using all the methods hitherto used but working within the framework of the input-output table attached to this appendix.

^{1/} For the purposes of this table intermediate consumption covers both imports and local products at the prices paid by purchasing industries.

Domestic service (27) and Agricultural rural households services (29) have been omitted from the industrial classification as irrelevant to this table.

Ownership of dwellings (23), contributing only to final demand has been omitted from the list of intermediate goods producing industries. This appears only as purchaser of intermediate products. The same treatment has been adopted for Distribution (20), but for a different reason; no attempt is made to isolate in the table the share of distribution in the inputs of the various industries. Inputs being recorded at purchase prices include automatically whatever trade margins are paid by the purchasing industries.

A great deal of subjective judgement will still be necessary and many of the entries will be made on the basis of trial and error, but the framework of the table will assist the statistician to ensure that no particular group of products/services is omitted from the table and that the residual output of a particular industry is dealt with in some fashion or other, and that the final results are mutually consistent and as complete as possible.

6. Students of table 3, columns a, b and c, of those countries who have utilised this approach in the past, have frequently been conscious of the possibility of considerable overstatement of the gross product as a result of unconscious and unavoidable omission of certain products and services from column b. A more logical and comprehensive approach should be possible if the statistician works within the framework of this proposed input/output matrix.

7. The main utility of an input/output table is to show the value of the technical coefficients relating intermediate consumption to the final bill of goods. In the case of underdeveloped economies these coefficients are likely to be unstable as the economies are progressively modernized, and it is therefore unnecessary for the planner to estimate the actual value of these coefficients more frequently than every five years or so. It is, on the contrary, of great interest, every time a new technical process is being introduced, to feed the relevant coefficients into such a table in order to study the marginal repercussions of this innovation on intermediate demand, which constitutes one of the most important set of variables in any projection model. There is, however, nothing to prevent countries completing the table for a base year and then, on the basis of indicators, completing or estimating the total purchases of each industry for intermediate consumption on an annual basis.

8. In most cases, however, African countries will not be able to complete such a table accurately owing to the lack of the necessary statistical information. It has, nevertheless, been included in this appendix to the system because, as has already been stated it provides a useful - indeed almost indispensable - framework within which to link column (a) of table 2 and column (b) of table 3. In fact, even for an accurate estimate of column (a) of table 2 it is necessary to proceed within the framework of an input/output table; it is not sufficient to examine the nature of a commodity to determine whether it is a part of intermediate demand or of final expenditure (see Appendix IV). In many cases, a final decision can be reached only after one knows what the destination of the good actually is, i.e., after it has been assigned to one of the cells of the table. It appears, therefore, that such an input/output framework should be used simultaneously for the completion of tables 2 and 3. The first step should be the gathering of all relevant information, both on the nature of the commodities (using and end-use classification) and on the intermediate demand by industry. This latter information can take the form either of demand for individual products estimated on the basis of the technical processes applied, or of the value of total intermediate consumption by industry estimated on the basis of various statistical sources such as agricultural and industrial censuses, accounts of modern enterprises, etc. Then all this information should be integrated into a proper accounting framework, viz. the input/output table. As a result, certain commodities will be directly assigned to certain cells. For others, representing only a part of intermediate purchases, no precise allocation will be possible, only rough estimates using rules-of-thumb methods and all the internal checks provided by the framework. It must be remembered here that all that is required for the completion of tables 2 and 3 is the best possible estimate of the totals appearing in the marginal line and marginal column of the input/output table. There is no need at this stage for valid estimates of the technical coefficients themselves. And it can be safely assumed that the systematic use of the logical framework provided

by such an input/output table would facilitate and improve the calculation of these marginal totals, the only alternative being to proceed in an unsystematic, and therefore, less efficient manner.

9. It follows from the number of estimates - some of them very rough - which will have to be made before filling in the input/output table that no confidence can be placed in the value of many of the resulting technical coefficients and that therefore such a table should not be published. It should instead be treated as a mere worksheet, a given framework of indisputable assistance in estimating the total purchases of intermediate goods by individual industry. Such a framework would also be of use to a planner who was trying to assess the effects of a technical innovation on the rest of the economy. Only countries disposing of sufficient resources for undertaking the enquiries necessary for a valid estimation of the technical coefficients should aim at publishing input-output tables. It may very well be that in the case of underdeveloped economies the task may prove less formidable than expected, owing to the relative simplicity of the technical relationship involved. Even so, the use of input-output coefficients to a planner is a matter of some uncertainty, owing to the expected instability of these coefficients in rapidly changing economies. But both in the case of statistically advanced countries and of countries just starting to collect statistical information, there can be no question as to the usefulness of an input-output table considered as a framework for checking the consistency of heterogeneous statistical data and for providing a first idea of the complexity of the inter-industrial relationships involved.