Economic Commission
for Africa

International Research and
Training Institute for the
Advancement of Women

United Nations
Statistical Office

Revised
January 1991
Original: English

HANDBOOK ON COMPILATION OF STATISTICS ON WOMEN IN THE INFORMAL SECTOR IN INDUSTRY, TRADE, AND SERVICES IN AFRICA

Santo Domingo and
New York

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PREFACE

This Handbook is one of the main outputs of the statistics component of the project "Improving African Women's Role in the Informal Sector - Production and Management". This project has been developed and funded by the United Nations Development Programme (UNDP) in the framework of the Women-in-Development (WID) package of UNDP's fourth-regional programming cycle for sub-Saharan Africa. The project is a co-operative effort of various United Nations agencies comprising ECA, which is the executing agency, the Organisation of African Unity (OAU), the International Labour Office (ILO), the International Research and Training Institute for the Advancement of Women (INSTRAW), the Statistical Office of the United Nations Secretariat and the United Nations Development Fund for Women (UNIFEM), and four countries, Burkina Faso, Congo, the Gambia and Zambia. The project aims to make more effective the participation of African women in development by improving the productivity of their informal sector activities. It has immediate objectives for intervention in four areas, policy, statistics, training and credits in the four project countries.

The statistics component of the project is being implemented jointly by INSTRAW and the U.N. Statistical Office, and is designed to achieve the immediate objective of establishing techniques for the compilation and analysis of statistics on women's contribution to, and conditions of production in, the informal sector in Africa to assist policy makers.

The present Handbook has been prepared on the basis of case studies of available statistics in the four project countries, undertaken in 1988/1989. The results of these studies are being distributed in a separate working paper and are used as illustrative material in the Handbook. The Handbook was circulated in draft for review and comment to national statistical services, women's machineries, other concerned policy bodies at the national level and international organizations interested in the development of statistics on women and the informal sector. It was reviewed in depth at two regional seminars in Africa on Methods of Collecting and Analysing Statistics on Women in the Informal Sector and their contribution to National Product, in Siavonga, Zambia 23-27 July 1990 and Ouagadougou, Burkina Faso, 8-12 October, 1990. In the course of this review process the Handbook was further developed to reflect experience and possibilities in all of the African countries in this field.

The Handbook was prepared by Ms Lourdes Urdaneta de Ferrán as consultant to INSTRAW and the Statistical Office and revised by a second consultant, K.T. de Graft-Johnson. Comments and other information on the use of this Handbook in African countries are welcome. They should be sent to the Director, INSTRAW Liaison Office, Room S-3094, United Nations, New York 10017, and the Director of the Statistical Office, United Nations, New York 10017.

INTRODUCTION

1. The lack of adequate statistics on the economy of most African countries is well known. Compared to aggregate economic indicators however, the unavailability of most of the statistics required to measure the contribution of women to the economy is more serious and is perceived as one of the limitations to efforts to integrate women in the development process. Overcoming this limitation is indeed one of the main challenges, not only of women's organizations, but also of researchers and statisticians whose interest is to generate accurate and reliable statistics on population subgroups, in all aspects and sectors of development. For planners and policy makers, such information is needed for the formulation, review and objective assessment of alternatives for development policies and programmes African countries.

2. Quantitative information on women's participation and contribution to the national development, especially through their activities in the informal sector, is insufficiently covered in the statistical compilation and analysis regularly undertaken by national statistical systems. The problem of under enumeration of women's economic activity can be attributed to several factors, among which are biased measures, concepts and classifications, the inadequate coverage in statistics of the informal sector in general and the emphasis hitherto placed on macro-level rather than sectoral planning, which tends to restrict the availability of sex-disaggregated data.

3. The need to address the lack of information on the value of women's work is clearly expressed in the Nairobi Forward-looking Strategies for the Advancement of Women, which calls for the remunerated and unremunerated contributions of women to development to be recognized, and appropriate efforts made "to measure and reflect these contributions in national accounts and economic statistics and in (gross national product) GNP" (para. 120). The present Handbook is in part a response to this mandate and in part a response to the now well-recognized importance of the informal sector in many African countries.

4. The Handbook focuses on the quantification of women's remunerated and unremunerated work in the informal sector, covering activities in industry, trade and services. Agriculture, hunting, forestry and fishing are not discussed as they are outside the scope of the present project.

5. Since complete information necessary for precise valuation of women's participation and production in the informal sector is virtually non-existent in most African countries, the methods discussed in the Handbook are based on more widely available data from population and housing censuses and national surveys, supplemented with data from administrative sources.

6. The use of these conventional sources of data for the compilation and analysis of statistics on women in the informal sector presents some limitations and also some advantages. On the one hand, the estimates

obtained are greatly influenced by biases in the existing concepts and methods for enumerating the economic activities of women. On the other hand, this exercise leads to identification of gaps and shortcomings in the available data. The Handbook should therefore serve the dual purposes of acquainting users with the basic methods for assigning economic value to women's work in the informal sector, and of evaluating inadequacies in the data for measuring the full contribution of women to the economy.

Organization of the Handbook

7. The layout of the Handbook is as follows. Chapter I discusses the objectives and uses of statistics on the contribution of women to the informal sector; Chapter II presents basic statistical concepts, definitions and classifications and Chapter III introduces the methods for compiling the data and estimating the contribution of women to development in the informal sector production. Chapter IV discusses the data required for assessing the contribution of women to the informal sector. Chapter V presents potential statistical sources and how to use them. It reviews demographic and labour statistics, industrial, trade and services statistics and statistics on households. In view of the scarcity of statistics in the relevant areas, special consideration is given to the problem of incomplete information and how to overcome it.

8. Following the review of sources and methods given in the two preceding chapters, Chapter VI takes up the formal presentation of the results and estimates, that is, it presents examples of accounts and tables covering the participation of women in development and the labour force and their participation in income and output. This is done consistent with international statistical recommendations where applicable. In addition to these estimates, which are within the present recommendations of the International Labour Organization and the United Nations System of National Accounts, the draft Handbook proposes measurements of women's activity related to the function of homemaking. In connection with this it presents the concept of expanded national product.

9. Chapter VII further works out with concrete numerical examples the transformation of the basic data from different sources. Because the availability of sources and data in different places will vary, the numerical examples are assembled in several groups representing different scenarios of availability. These scenarios range from a situation with a reasonably satisfactory amount of useable information to situations where the scarcity of data is such that only very rough estimates can be attempted.

10. Chapter VIII discusses further work that should be done in countries so that the objectives of the Handbook can be achieved.

11. The final part, the Annexes first summarize the main structure of the revised International Standard Industrial Classification and the International Standard Classification of Occupations and the References list books and papers that have been used in writing this Handbook and other sources that can be consulted for a deeper understanding of the subject. These cover a wide variety of methods and findings, which are not necessarily widely accepted.

I. OBJECTIVES AND USES OF STATISTICS ON THE INFORMAL SECTOR AND OF THE HANDBOOK

12. This Handbook has been prepared as a practical guide on how to produce and use statistics on women's contribution to development in the non-agricultural informal sector. It is part of the effort of "making women's labour statistically visible", and shows how to compile and present such information for the informal sector in industry, trade and services.

13. It is meant for the use of researchers interested in analyzing the relative position of women working in the informal sector, including analysts and statisticians working in research institutions, universities, women's organization and statistical offices.

14. The Handbook is also meant to sensitize the producers of statistics to the need for statistical information on women's contribution to the informal sector and to GDP. All African statistical offices and relevant central banks produce data on GDP which are not disaggregated by the contribution by gender. As the demand for such data increases, producers of statistics will have to accept the challenge to produce such data. At the same time, the Handbook will encourage such producers to improve statistics in the areas covered in it.

15. Potential users of the Handbook who may not be statisticians will also be informed of the possibilities that exist on how to obtain and use statistical information to measure the contribution of women (as well as men) to development in the informal sector.

16. As the subject is of a technical nature, that is, estimation of women's contribution to development, using the Handbook requires familiarity with statistical data, though it does not call for any advanced, specialized knowledge in statistics. For some readers the Handbook might seem too elementary, with its step-by-step explanations of different classifications and sources; others not used to handling data from censuses and labour force surveys may need to study the technical material at greater length. For users it offers a close look at what kind of data and indicators they can ask for.

17. The uses of the measurements taken up in the Handbook are many and serve the interests of women as well as those of the whole community.

This is true of the data on women's participation in the labour force as well as of their contribution to the national product. The importance of the former has been recognized for some time and figures on it are more abundant. Interest in expressing women's economic activities in terms of national accounting is more recent, but it is no less important.

18. In fact, most government decisions concerning economic and social policy are linked in one way or another to employment, income and production. When a decision is needed, the existing situation usually is evaluated in the light of labour statistics and national accounting figures and the expected results are expressed in the same terms. Equally, private enterprises or whole industries, when they plead for or against certain government decisions, will usually argue in terms of employment and those enterprises' or industries' contribution to the national product. The situation is no different when it comes to defending the position of women, hence, the importance of employment data and of national accounts for women.

19. But again, as stated above, the usefulness of such data is not limited to women and women's organizations. Labour unions and management will find the data useful in wage negotiations and the labour market analyst will appreciate the insights it provides into job search and job quitting behaviour, the size and nature of the elasticities between labour supply and demand, fluctuations in the labour market and the phenomenon of segmented labour markets. In this connection, it is widely assumed that the informal sector reacts to changes in labour legislation and other provisions affecting the cost of labour to the enterprise in ways quite different from enterprises in the formal sector.

20. Data on the pattern of changes in the absolute and relative participation of women in the labour force and the informal sector and on their role as a shock absorber in the ups and downs of business cycles will contribute to a deeper understanding of what happens during the different phases of the cycle.

21. For the market researcher, changes in the status of women are an early indicator of impending changes in consumption and spending patterns of the population.

22. The Handbook should also be useful for those organizations who intend to create statistics aimed at highlighting the economic contribution of women. This information is now very scarce but it can be produced without tremendous efforts just by using the available statistics in many cases. From the results and problems faced in the process of compiling these statistics, producers and even users of these statistics will be able to ask for improvements in the present methods of data collection, as well as detailed classifications more adapted to women's situation and conditions of work. In this way future studies on the subject of women's economic participation will be more realistic.

23. The task envisaged is essentially to find adequate basic statistics and through appropriate techniques derive from them those aggregates that quantify the facts to be shown.

24. Most statistical offices are well aware of the importance of statistics on women and the strong demand for them. However, it may not always be apparent that such statistics serve not only the interests of women but are essential for the improvement of overall reliability of statistics and national accounts, as they focus on what has been a blind spot in economic statistics.

II. CONCEPTS, DEFINITIONS AND CLASSIFICATIONS

A. Conceptual Issues

25. Statistical systems are based on sets of concepts, definitions, classifications and rules which, even though they evolve slowly through time in response to new requirements, must be followed by those who wish to take advantage of them to analyze a given situation in statistical terms. The purpose of this Handbook is to describe the different ways of compiling statistical aggregates that best show the contribution of women to development in the informal sector and the sources and methods that can be used to do so.

26. It is not the intention to address all relevant conceptual issues in this Handbook. Discussion will focus briefly on four key terms: informal sector, development contribution and gross domestic product. The purpose of the discussion is to highlight some of the problems concerning the concepts and definitions which have implications for their interpretation and measurement.

1. Informal Sector

27. The term "informal sector" was first used by Keith Hart in connection with informal income opportunities in Ghana (16). The term was made popular by the International Labour Office in its Kenya study (19).

28. The informal sector is very important in Africa because it contributes substantially to gross domestic product (GDP). For example, the non-agricultural sector in Burkina Faso contributes about 30 per cent of the GDP. As a result many African governments see the sector as having the potential to absorb the large numbers of unemployed men and women in their countries.

29. The concept of the informal sector has been discussed for many years and many diverse definitions have been proposed. Most of the definitions offered are based on the idea of the dualistic nature of the urban economy in developing countries and have been labelled in terms such as

organized versus unorganized and traditional versus modern sectors (20,21). These definitions reflect different approaches in the social sciences and their weakness for measuring women's participation is that they cannot be adequately quantified. Moreover, the difficulty in applying them in measurement is not from scarcity of data, which exists independently of the kind of classification, but due to their highly subjective nature.

30. As implied above there is no universally accepted definition of the informal sector in Africa. Various definitions have therefore been used within the region. Sometimes within the same country more than one definition exists. Some of the country definitions are as follows:

The Gambia: (The Informal Sector) comprises all establishments employing less than 5 persons, does not have an organized accounting system, with no demarcation between personal and business expenditure.(8)

Congo:

(i) Composed of all activities in agriculture, industry commerce, service which are not currently covered by statistics and "National Accounts".(8)

(ii) Consisting of all small-scale production units outside petites et moyennes enterprises (PME). PME are enterprises registered with the Chamber of Commerce, having banking accounts and book keeping and employing 5 to 99 salaried workers covered by the social security scheme, Caisse National de Securite Social, SNSS.(8)

Other African countries have used various criteria, including one or more of the following, to define the informal sector.

(i) Ownership and Unit Size (number of paid employees): all publicly and joint public and private enterprises are excluded from the informal sector. In addition, a size limitation of not more than, say, 5 paid employees has been imposed.

(ii) Operating Characteristics: there is usually a limited division of labour or specialization among workers of the productive unit. The unit is also more labour than capital intensive.

(iii) Quality of Labour Force: a high standard of education and training is not required for its labour force which comprises own-account workers, unpaid family workers, apprentices and a very limited number of paid employees.

(iv) Registration: informal sector units are usually unregistered and unlicensed. Registration has therefore been used in some countries to distinguish formal from informal sector production units. Such units are also not regularly captured in conventional statistical surveys as belonging to a separate category.

(v) Accounting Records: the unavailability of accounting records has also been used to define the informal sector. In some French-speaking African countries, the informal sector units are those that do not use an accounting plan (detailed or simplified). Such plans are not generally used in English-speaking countries.

Other criteria such as absorptive capacity, turn-over and capital investment have also been used.

31. Generally, however, the term informal is not inherent to any person, not even to any economic activity in particular. The concept of informality is related to the way the productive unit is organized. Consequently, a member of a household working without pay in the enterprise of another member of the same household - where the establishment employs a number of salaried workers, belongs to the formal sector, if the productive unit in which he works belongs to that sector.

32. All countries should clearly state the definitions that they have adopted for their surveys or studies and whenever possible specify the limitations of the definition.

34. In some countries, professionals, even if they do not employ salaried employees, are usually considered as outside of the informal sector. Thus countries like Nigeria exclude physicians, lawyers and accountants, even if they are otherwise covered by the definition.

2. Development

34. Development can be defined as the process of bringing to a more advanced or improved or effective state. In the context of the Handbook, development includes the enlargement of the well-being of those women working in the informal sector as well as the share of the total national well-being which those workers provide.

35. The recent Human Development Report 1990 published by the United Nations Development Programme (49) defined human development as a process of enlarging people's choices. It "brings together the production and distribution of commodities and the expansion and use of human capabilities". As thus defined, development is much more than the production of goods and services even though that component makes an

important contribution to it. It is more than economic or socio-economic development.

3. Contribution

36. Contribution suggests giving or furnishing something to a common supply or pool. Thus "contribution to development" suggests that there are participants or partners. The term could therefore imply giving to national product, participating in national income or gross domestic product (GDP) or participating in the labour force or other activities that lead to development. Participation in GDP could imply taking part in the input or the output or the use of the output. Thus the interpretation of the term has implications for the choice of the measurement method.

4. Gross domestic product (GDP)

37. GDP is defined as the total value of output of goods and services for final use produced by a nation's economy by residents for a specified period (usually a year or parts thereof, say three months). It can also be defined as the value of the gross outputs of resident producers, including the distributive trades and transport, less the values of their intermediate consumption plus import duties. It is also equal to the sum of the compensation of employees, consumption of fixed capital, operating surplus, indirect taxes plus import duties. The value can be producers' or purchasers' values or at factor cost. Any user of national accounts data should ascertain the value that has been used before starting any analysis of the information.

5. Other concepts in national accounting

38. In this Handbook the terminology and some basic concepts of national accounts are used. National accounting is based on principles similar to those used in business accounting with some basic differences, especially its scope and its sources of data. While business accounting aims at measuring production, profits and net worth of the business enterprise, national accounts are intended to measure, among other phenomena, production, income and wealth for the nation as a whole or for a sector within it. For concepts and definitions in national accounting, the present Handbook refers to the United Nations System of National Accounts (SNA). The United Nations System of National Accounts recommends the rules to be followed in measuring economic aggregates such as production, income, consumption, savings, capital formation and wealth. The basic publications of the system present a general outline of the accounting system and discuss the concepts and definitions (29,42). They do not go into problems of how aggregates should be calculated in practice; this is left to handbooks on specific questions, such as accounting for production and government accounts (33) and the present one. The basic SNA publication does, however, contain a special Chapter on national accounting in developing countries in view of the fact that

the economic and political questions to be solved in these countries as well as their economic structure and their statistical possibilities differ from those of the developed countries.

Some of the other national accounts, concepts and definitions used in this Handbook are given below:

GROSS OUTPUT OF INDUSTRIES:

The value of all goods and services produced during a period of account, including work-in-progress and products for use on own-account.

IMMEDIATE CONSUMPTION OF INDUSTRIES:

Non-durable goods and services used up in production, including repair and maintenance of capital stock, research, development and prospecting, indirect outlays on financing capital formation, such as flotation costs for loans, and transfer costs involved in purchases and sales of land, intangible assets and financial claims. (Intermediate consumption is sometimes called inputs.)

VALUE ADDED OF INDUSTRIES:

Gross output of industries less the intermediate inputs into industries.

WAGES AND SALARIES:

All payments which employees receive in respect of their work, whether in cash or in kind.

OPERATING SURPLUS:

Gross output less the sum of intermediate consumption, compensation of employees, consumption of fixed capital and indirect taxes reduced by subsidies.

CONSUMPTION OF FIXED CAPITAL:

The value, at current replacement cost, of the reproducible assets used up during a period of account as a result of normal wear and tear, foreseen obsolescence and the normal rate of accidental damage.

INTEREST:

Actual and imputed income payable or receivable in respect of bank and other deposits, bills bonds and other loans.

RENT:

Net rents for the use of land for agricultural and other purposes are included in income from property; rents for buildings, machinery, equipment, etc. are treated as payments, for a commodity-type service.

CURRENT TRANSFERS:

Transfers of income between transactors. Transfers are made from the current income of the payer to the current income of the recipient for such purposes as consumption expenditure.

FINAL CONSUMPTION EXPENDITURES OF HOUSEHOLDS:

The outlays of resident households on new durable and non-durable goods and services less their net sales there of second-hand goods, scraps and wastes.

DIRECT TAXES ON INCOME:

Levies by public authorities at regular intervals (except social security contributions) on income from employment, property, capital gains or any other source.

INDIRECT TAXES:

Taxes assessed on producers in respect of the production, sale, purchase or use of goods and services, which they charge to the expense of production.

SUBSIDIES:

All grants on current account made by government to private industries.

HOUSEHOLDS:

Private and institutional households are distinguished. Private households may consist of a single individual who makes his own housekeeping arrangements or a group of individuals who live together and pool at least some of their income in order to provide themselves with housing, food and other essentials of living (housekeeping concept).

EXPANDED DOMESTIC PRODUCT:

This concept is not contemplated in the SNA Blue Book. In the present context it is defined as the gross domestic product plus the estimated value of housekeeping activities.

B. Classifications

39. In this Handbook, the only classifications used are those prepared by the appropriate U.N. agencies or offices and approved by the relevant legislative bodies. These standard international classifications are often adapted and made more relevant to conditions in African countries by national statistical services. For international comparisons, however, it is essential for users to make sure that the classifications used are consistent and compatible.

40. A number of classifications are referred to in this Handbook but only the Revised International Standard Industrial Classification of all Economic Activities (ISIC, Rev.3) and the Revised International Standard of Occupations (ISCO - 88) are discussed here. Reference should be made to relevant U.N. publications which are listed in the Annexes for information about other classifications.

1. The Revised Standard Industrial Classifications of all Economic Activities (ISIC), Rev 3.

41. The Handbook focuses on women's work in the informal sector, covering activities in industry, trade and services. Based on ISIC, Rev 3, the following activities are included:

____ Industry:	Mining and Quarrying; Manufacturing; Electricity, Gas and Water Supply; Construction.
____ Trade:	Wholesale and Retail Trade; Repair of Motor Vehicles; Bicycles and Personal and Household goods; Hotels and Restaurants.
____ Services:	Transport, Storage and Communication; Financial Intermediation; Real Estate, Renting and Business Activities; Public Administration and Defence, Compulsory Social security;*/ Health and Social Work; Other community, Social and Personal Service activities; Private Households with Employed Persons; Extraterritorial Organizations and Bodies;*/

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*/ Not likely to contain units in the informal sector.

The detailed ISIC classification is given in Annex I. Note that the activities described here relate to the major product or service of the establishment or productive unit and not the actual work done by individuals working there.

2. Revised International Standard Classification of Occupations (ISCO-88).

42. ISCO - 88 is useful *inter alia* for analytical purposes, especially in the fields of labour market and social structure research. It is also useful in the formulation of public policies. No informal sector activities are likely to be found within these categories but they are listed here for completeness. ISCO can also be used to distribute women working in the informal sector into various occupational categories to study them in more detail. The major groups of the classification are:

1. Legislators, senior officials and managers;
2. Professionals;
3. Technicians and associate professionals;
4. Clerks;
5. Service workers and shop and market sales workers;
6. Skilled agricultural and fishery workers;
7. Craft and related workers;
8. Plant and machine operators and assemblers;
9. Elementary Occupations;
0. Armed forces.

3. Other classifications

43. Other classifications that will be referred to in this Handbook include those dealing with economic activity, status in employment, literacy and education. The last two are contained in the International Standard Classification of Education (ISCED).

III. THE MEASUREMENT OF THE CONTRIBUTION TO DEVELOPMENT BY WOMEN WORKING IN THE INFORMAL SECTOR, IN INDUSTRY, TRADE, AND SERVICES

A. General approach

44. Women's contribution to development can be measured by assessing the role they play in raising or lowering certain indicators of development. It can also be measured either as participation in the labour force or as participation in the outcome of work, that is, in the product and income (of the nation, region or sector).

45. The last two types of quantification are different in nature. The first consists of measuring the presence of women in the production process. This is a one-dimensional quantification: it represents a head count or the count of time spent on work. The units of measurement are persons or hours worked. The other type of quantification is more complex. It aims at measuring value added in production, which must be expressed in monetary units. For the informal sector, where wages or salaries are of secondary importance the objective is to show the net income of women working in that sector, mostly own-account workers, either by collecting information directly on their income or gathering information on their outputs and deducting the inputs. Again, if no direct information on the value of outputs and inputs can be brought to light, the value must be calculated from figures of quantities and their corresponding market prices.

46. Participation in the labour force is essentially the number of women engaged in economic activities, or still better, the number of hours of work furnished by women in such activities. Moreover, the task is not to produce one global figure showing participation in a general way, but to provide details referring to where and how, which are necessary for analytical as well as for policy purposes. This is true for the national economy in its entirety, as well as the informal sector.

47. Participation in the labour force can be expressed either by the number of women in the labour force or by the percentage which they represent in the total number of economically active persons, both women and men. These data can be refined, if corresponding information is available, by showing them in terms of time worked.

48. Women's participation in income and product (and possibly expenditures) must be expressed in value terms. In national accounting the total value of each of these three aggregates for the nation as a whole is equal by definition. They represent three different views of global economic activity, as illustrated in the following diagram:

I	II	III
National income	National product	National expenditure
Salaries Operating surplus redistributed as rents, profits and interest	Product of agriculture Product of mining Product of manufacture Product of trade and services	Expenditures for current consumption Investment

49. The first column of the diagram shows the primary distribution of national income in salaries and operating surplus, which is redistributed among profits, rents and interest. In the informal sector in most cases there are no salaries and the totality of income is in the form of operating surplus. Notwithstanding the fact that it is due mainly to her

(or his) physical and mental efforts, her (or his) income is considered operating surplus, because the own-account worker is the entrepreneur of her (or his) enterprise. Due to this characteristic, in the chapters that follow no distinction is made between the "own-account worker" and "own-account productive unit". This is done exclusively for ease of exposition.

50. The expression "mixed income" is sometimes applied to those cases where the income represents in part a remuneration for work (work done by the owner of the enterprise in the process of production in addition to her/his role as an entrepreneur) and in part corresponds to operating surplus. This is a characteristic situation in the informal sector.

51. Women's share in income is the amount of income received by women, expressed as a fraction of total income received by both sexes. No problem arises as long as these measurements and comparisons are confined to the informal sector. But if the objective is to visualize the income received by women in the informal sector as part of total income received by women in the informal as well as the formal sector or even try to compare it with total national income for both sexes, there is a serious obstacle. It is impossible, at the present stage of statistical information, to determine what part of the operating surplus in the formal sector and in general what part of the income from property in that sector goes to women. Therefore, comparisons of that type will be incomplete.

52. As already mentioned, development is much more than work or the production of goods and services. That is why it is also important to look at other development indicators such as the human development index and educational attainment.

53. The measurement process should not only apply to women in the informal sector. For the analysis to be meaningful it should also apply to other groups such as total population (both sexes), employed population (both sexes, female, male), the economically-active population (both sexes, female, male) and the informal sector (both sexes, female, male).

54. Reference should be made here to the fact that in selecting any methodology of measurement, a distinction should always be drawn between what is desirable and what is possible. Lack of relevant statistics and difficulties in obtaining new data may dictate a more modest approach. This is what has been done in this Handbook which has taken account of the current availability of statistical data in Africa.

B. Development indicators

55. The UNDP Human Development Report, 1990 (49) introduces the concept of the human development index. Its three components are expectation of

life, literacy and purchasing-power adjusted real GDP per capita. The reasons for the choice of the three components of the index are fully explained in the Report. Expectation of life is a proxy for health and nutritional status, literacy is highly correlated with education while purchasing-power adjusted GDP per capita reflects the "command over resources needed for a decent living."

The examples of the resulting indicators for selected African countries are:

	Life expectancy at birth (1987)	Adult literacy rate (1985)	Real GDP per capita (PPP $) (1987)	Human Development Index
Burkina Faso	48	14	500	0.150
Benin	47	27	665	0.224
Malawi	48	42	476	0.250
Ethiopia	42	66	454	0.282
Nigeria	51	43	668	0.322
Togo	54	41	670	0.337
Zambia	54	76	717	0.481

56. The calculation of the Human Development Index (HDI) is done by examining values for all of each of the indicators used in computing the index. A deprivation measure is first calculated. For life expectancy, the target is the highest average life expectancy attained by any country. In the UNDP Report, this is 78 years. The literacy target is 100 per cent. The income target is "the logarithm of the average poverty line of the income of the richer countries, expressed in purchasing-power adjusted international dollars." A minimum value is also determined in respect of each of the three variables. For example, the life expectancy deprivation country A is given by

$$\frac{\text{Max. life expectancy of all countries} - \text{country A's life expectancy}}{\text{Max. life expectancy of all countries} - \text{Minimum life expectancy of all countries}}$$

Readers are referred to the mathematical formulation of the HDI, which is given in the UNDP Report mentioned above.

57. It is possible to use the same principles to calculate the HDI by gender. The UNDP Report shows the results of these calculations which are reproduced for the seven countries for which the HDIs were given earlier.

H D I

	Both sexes	Female	Male
Burkina Faso	0.150	0.146	0.159
Benin	0.224	0.205	0.247
Malawi	0.250	0.219	0.286
Ethiopia	0.282	0.296	0.275
Nigeria	0.322	0.295	0.354
Togo	0.337	0.306	0.372
Zambia	0.481	0.450	0.517

58. With the exception of Ethiopia, all HDIs for males are higher than those for females. Although women have usually a higher expectation of life at birth, it is well-known that in both literacy and income, female rates are significantly lower than those for male. However, to measure the contribution of women to development generally,

$$\frac{\text{Female HDI}}{\text{Male HDI}}$$ will adequately measure the female - male gap.

59. The difficulties arise when this method is applied to the informal sector generally and to the informal sector in industry, trade and services in particular. All African countries do not publish data on life expectancy, or purchasing-power - adjusted GDP per capita or even literacy rates for the informal sectors. Even if they did, the problems of obtaining comparable data from other regions of the world to compute the targets for the three variables would be enormous. One way is to use the targets for the general population but this poses conceptual problems.

60. A better way is to treat the three indicators separately and calculate the ratio of women's to men's rates as a measure of the female-male gap or the share of women's contribution to development in that sector.

61. Thus for life expectancy and literacy the rates can be calculated from census or survey data separately for male and female. For GDP, the approach is more complex and will be discussed later in this chapter.

62. Access to education has an effect on the quality of the output of the informal sector. Therefore, another indicator that is useful to measure development in that sector is the quality of its work force as defined by the highest level of educational attainment. Three measures could be used:

- Completed Primary School (first level);
- Completed Secondary School (second level);
- Completed a tertiary educational institution.

63. The ratio of women to men in each category would provide an indication of possible relative contributions of females and males to the informal sector.

C. Participation in the labour force

64. As previously implied, the participation of each person in the production of goods and services is an important indicator of that person's contribution to development. Five such measures will be considered in this sector. Each measure will be considered in terms of the general population and then extended to the informal sector in industry, trade and services. Participation can be mentioned in terms of either current activity (i.e., labour force) or usual activity.

65. The first measure is the labour force participation rate (l.f.p.r.) sometimes referred to as the crude activity rate which is measured by

$$\frac{\text{Total labour force}}{\text{Total population}}$$

To measure women's contribution, two additional measures can be calculated:

$$W = \frac{\text{Total female labour force}}{\text{Total population}}$$

A similar calculation can be done for men (M).
Then $\frac{W}{M}$ will give the ratio of women's contribution to the labour force to men's.

66. The same calculations can be done for the informal sector as a whole and for the informal sector in industry, trade and services, provided the unemployed can be classified by sector. From these calculations, it will be possible to measure the contribution of the informal sector to development, measured in terms of the labour force.

67. Similar calculations can be done for the refined activity rate which is measured by:

$$\frac{\text{Economically-activity population aged n to n + x}}{\text{Total population aged n to n + x}}$$

where n and n + x are the minimum and maximum ages at which data on economically - active population is collected. Some analysts prefer the refined activity rate because as in Africa it is not weighed down by a very large child population.

68. The next measure is the proportion of employed population in the labour force in the case of current activity and economically-active population in the case of usual activity. Again this rate on proportion can be disaggregated into employed in formal and informal sectors. The latter can further be broken down into those in industry, trade and services and those elsewhere. A measure of the contribution of the sector to development can thus be derived.

69. The fourth approach is to use time worked. If data on total time worked by persons reported as working in a census or survey is available, then again, successively, the ratio of total time worked by women to that of men in the total population, in the informal sector and in the informal sector in industry, trade and services can be computed provided all other relevant information is available. Time worked is usually calculated in terms of person - half-days, person-days and persons-hours, depending on how the questions have been asked and the answers recorded.

70. Finally, the income of the economically - active population can also be used to assess the contribution of men and women to the informal sector. The United Nations Supplementary Principles and Recommendations for Population and Housing Censuses (44) par 76 states: "In the light of the conceptual underpinning for the new international standards concerning the economically active population ..., income should be defined as (a) monthly income in cash or in kind from the work performed by each active person and (b) the total annual income in cash and/or in kind of households regardless of source." The approach which is being discussed here is only possible when (a) above has been applied in collecting the data. The actual calculation is similar to the calculations above except that total income of each category is calculated and the various ratios worked out.

71. With respect to the use of income data, a word of caution is necessary. Data on income collected in Africa have generally been unsatisfactory and even for surveys on household income, consumption and expenditure, users of the data have usually been forced by the poor quality of the income data to use expenditure as proxy for income. Also, it is well known that women in certain countries are underpaid compared to men. Thus, women's income will not adequately measure their contribution to development in the informal sector.

D. National accounts

72. This section is concerned with measurement, within the framework of national accounts, of the contribution to development made by women working in the informal sector. This type of measurement is a more complex and demanding task with respect to the handling of concepts and the search for adequate data.

73. Inevitably this objective requires familiarity with the terminology and some basic concepts of national accounts. As previously mentioned, national accounting is based on principles similar to those used in business accounting with some basic differences, especially its scope and its sources of data.

74. There are two main systems of national accounting, the United Nations System of National Accounts (SNA) and the Material Product System (MPS) designed for centrally-planned economies. The present Handbook refers to SNA published in 1968 which is currently under revision. This system lays down the rules to be followed in measuring economic aggregates like production, income, consumption, savings, capital formation and wealth. The basic reference is A System of National Accounts (29), which presents a general outline of the accounting system and discusses the concepts and definitions. It does not go into problems of how those concepts should be calculated in practice; this is left to a series of handbooks on specific questions, such as accounting for production (33) and government accounts. It does however contain a special Chapter on national accounting in developing countries in view of the fact that the economic and political questions to be solved in these countries as well as their economic structure and their statistical possibilities differ from those of the developed countries.

75. In order to be able to handle figures from national accounts and to combine them so that they highlight special facts, such as the role played by women, familiarity with the concepts and definitions used in the system is required. These concepts and definitions are presented in (29) and that publication should be consulted. The most important ones are given in Chapter II.

76. The System of National Accounts contains different sets of accounts. There are production accounts (exact title: Production, Consumption Expenditure and Capital Formation Accounts) and income accounts (exact title: Income and Outlay and Capital Finance Accounts). The main concern here is with the production accounts. The income and outlay accounts will be referred to only briefly.

77. As to capital accounts they are mentioned only in passing as an area where the participation of women is of great interest, but where estimates of this type remain outside the scope of this Handbook.

78. Production accounts, as the name indicates, present figures on the different aspects related to production. Production can be measured as output, that is the value of all goods and services produced during a certain period of time, usually one year. But in order to avoid double counting those goods which have been produced but are then used to produce other goods, national accounting introduces the concept of value added, by subtracting from the value of the output the value of the goods used in producing them. Thus, if value added in all activities is summed up over the whole nation, what is called the national product is arrived at: the value of all goods and services produced in the country without double counting. The value added in an enterprise or industry is the product created by that enterprise or industry. An informal productive unit, although small, is also an enterprise.

79. Before reviewing sources, the first step is to examine how to go about estimating production and that part of production that represents the participation of women in the informal sector. One could imagine different ways to measure production. Even which activities should be considered production and which not is open to questioning. For the reasons explained previously, the norms and rules set down in SNA are followed here, but the implications of such rules on the measurement of female activities are pointed out clearly and, where necessary, additional (not alternative) types of measurement are suggested.

80. SNA does not take into consideration all the activities which in common language sometimes are referred to as production. It is concerned only with those activities which it defines as "economic". Only these activities, measured according to certain rules, are added up into a total, called the "gross domestic product" or GDP, which is the most commonly known and widely used national accounting aggregate.

81. These rules will now be examined. The United Nations handbook on accounting for production (33) formulates them as follows:

> The first question that must be answered is what constitutes an economic activity, since this determines what falls within the scope of the national accounting system. There is no difficulty in defining as economic those activities that result in the production of goods and services for sale on the market. There is also general agreement that government activities.....and activities ..... carried out by private non-profit organizations should be counted as economic, even though their output is not sold on the market. Borderline problems do, however arise in connection with some other kinds of non-market activities. The coverage of non-market production in GDP is being appraised as a part of the SNA review, and there may be some changes when the revision is completed. For the present, however, except for services of Government and private non-profit institutions, SNA does not include goods and services that are not marketed in GDP unless identical or very similar goods and services are also sold in the market. GDP includes, for example, the construction of buildings by households and enterprises for their own use, and the production of crops and livestock for consumption on the farm. There are usually close market parallels for those activities. However, SNA does not include unpaid services rendered by housewives and other household members.

82. This theoretical definition must now be expressed in numerical values. The task of estimating the actual amounts can be approached by different ways. Here again the handbook on production can be of help. It goes on to say:

> Once the boundary of economic activity has been established, GDP may be derived in three ways (or combinations of them). The first approach looks at the way output is produced. It measures the contribution to output made by each producer, by deducting from the total value of its output, the value of the goods and services it has purchased from other producers and used up

in producing its own output. What is left is the value added by the producer in question, what is used up in production is intermediate consumption. With some minor adjustments, the total value added by all producers equals GDP. This method of compilation is commonly known as the production approach to GDP. The second approach considers the cost incurred by the producer within his own operation: the income paid out to employees, indirect taxes, consumption of fixed capital, and the operating surplus, this also adds up to value added. This method is often called the income approach, but may more exactly be referred to as the cost approach. The third method, known as the expenditure approach, looks at the final uses of the country's output for private consumption, government consumption, capital formation and net exports, in other words, it shows what becomes of the output once it has been produced.

83. This description is essentially the same as the income-product-expenditure table in Chapter I above. However, that table is a much simplified presentation. Actually the production account in SNA looks like this:

Industries - Account, Production account

Intermediate consumption	Characteristic products of industrial activity
Compensation of employees	
Operating surplus	
Consumption of fixed capital	Other products
Indirect taxes	
Less subsidies	
GROSS OUTPUT	GROSS OUTPUT

84. SNA proposes to establish accounts like the one illustrated above for different activities, following the classification of economic activities set down in ISIC. Such accounts as well as the approaches explained above refer to calculations for the nation as a whole. What must be determined is whether they can be applied in measurements, not for the nation as a whole, but for a group within that nation, in the present case the group consisting of women in the informal sector.

85. In the case of the production approach, the task consists in detecting which goods and services were produced, their prices and the cost of what was used up in production. Such information is not impossible to obtain. All countries which have data on the main national accounting aggregates, possess them. The crux of the matter is to disaggregate them by sex. With respect to production of big, formal enterprises, it is practically impossible to obtain this information classified by sex. However, for informal enterprises, there is, definitely, a possibility, which will be explored here.

86. When the second approach, called income or cost approach, is taken the possibilities improve substantially. An examination of the entries of the production account shown above shows that out of the four components of value added, namely income paid to employees, indirect taxes, consumption of fixed capital and the operating surplus, the concern here is mostly with the last, operating surplus, that is, value added of resident producers minus the indirect taxes paid reduced by subsidies the consumption of fixed capital (depreciation), and the

payments to employees. In these circumstances, two things must be done: to establish the sex of the person in charge of the informal enterprise to which the operating surplus accrues and, if feasible, take account of the contribution, within that unit of men and of women working as unpaid family workers.

87. Thus far the concern here has been with the production account. It might be asked if information contained in income and outlay accounts of the system could not also be used. SNA establishes income and outlay accounts for institutional sectors, that is enterprises, government and households. It is these last that could be of help. The income and outlay account for households as it appears in a System of National Accounts, looks like this:

Income and outlay and capital finance accounts Households, including private unincorporated non-financial enterprises

Account, income, and outlay account

Final consumption expenditure	Compensation of employees
Property income	Operating surplus
Consumer debt interest	Withdrawals from entrepreneurial income of quasi - corporate enterprises
Other interest	Property income
Rent	Interest
Net casualty insurance premiums	Dividends
Direct taxes	Rent
On income	Casualty insurance claims
Not elsewhere classified	Social Security benefits
Compulsory fees, fines and penalties	Social assistance grants
Social Security contributions	Unfunded employee welfare benefits
Current transfers to private non-profit institutions	Current transfers nec from
Unfunded employee welfare contributions imputed	Residents
Current transfers nec to:	The rest of the world
Residents	
The rest of the world	
Savings	
DISBURSEMENTS	RECEIPTS

88. This is the format which will usually appear in national accounts publications which present accounts on income and outlay. And these could be useful were it not for the fact that presently such accounts, in addition to the household sector proper, include all private unincorporated non-financial enterprises. The figures they show correspond, therefore, to a mixture of heterogeneous transactors.

89. The situation will be very different if and when the presently contemplated sub-division of households into various categories,

including one category representing households where the main contributor to the income of the household is part of the informal sector, becomes a reality.

90. The third of the three approaches presented above is the expenditures approach, and it looks at the uses that have been made of all the goods and services produced, that is consumption, accumulation and exports. For the nation as a whole, these final uses are of course equal to what had been produced. But here again, this is not necessarily true for a segment of the total population. If one considers the most important of final uses, consumption: consumption of a certain group might be greater or smaller than its income; certain groups might save or not, some might receive or make transfers, and the use of free facilities or goods provided by government or private non-profit organizations will differ among groups.

91. Even if data on consumption cannot be used to calculate production, they are an important indicator of the level of living. If this aspect is to be considered, one must move from the production accounts and turn to the income and outlay accounts of SNA.

92. To sum up, even though on the national level, in broad terms, total product equals total income and total uses, these equalities cannot be used directly in the measurement of women's participation and, depending on the particular situation of statistics of each country, detailed information must be found for the present purpose. In what follows, those parts and entries in the national accounts and the sources and statistical series on employment that are used for this purpose are described.

93. National accounts are published most frequently by the statistical authorities of the country. In some countries they originate in the Central Bank or the Planning Ministry or Office. Where different sets of accounts are published by different authorities, the user faces a dilemma, as s(he) is faced with the obligation to choose the one or the other. As figures from the national accounts must be combined with those coming from other statistical documents, the compatibility of the national accounts figures with those from other sources will be the decisive element in the choice.

94. In some instances information obtained directly from what has been published (or is otherwise available) on the national accounts can be combined with demographic statistics on economic activities of the population. National accounts at present do not show tables on the informal sector (this might change once the revision of SNA has been finalized); but one can find separate figures on own-account workers in the worksheets. As own-account workers represent an important part of the informal sector, these figures are used here as a starting point for estimating. They show the product of informal units in different kinds of economic activity but for both sexes together. In order to separate out the part corresponding to women, it is necessary to find in statistics on employed population the figures on own-account workers in different economic activities. They usually are divided by sex and the

percentage of women in each group of own-account workers can be determined; this percentage is then applied to the figure on the gross domestic product originating in the informal sector of each activity. Thus the amount of product created by female and by male own-account workers in different economic activities is obtained.

95. This is a first approximation of women's contribution to the informal sector product, which now can be refined. "Own-account worker" is the designation given to the person (man or woman) in charge of this type of productive unit, whose product became a part of the total gross domestic product and more precisely of the informal sector of the gross domestic product. But the product of this activity was not created by this person alone; there might have been unpaid family workers helping her or him. These unpaid family workers could be men or women. To refine the first estimation, the sex of these unpaid family workers in informal productive units should be taken into account.[1] Of course, no adjustment would be necessary if all and only female family workers were working for female "own account workers", but this evidently is not true. Daughters may be helping their fathers and sons their mothers. As there are no statistics which cross-classify the sex of the unpaid family worker with that of the own-account worker she or he is working for, the contribution of these family helpers must be estimated in an indirect way.

96. Only the total number of women and of men who are unpaid family workers is known. Their income is not known, because they are not paid any income (even though they do participate in the use of income to which they have physically contributed). All that can be done is to impute an income, that is, to assign them an approximate income more or less in accordance with what similar work would receive if it were done for a salary. This can be done more or less approximately depending on the availability of breakdowns in the statistics of unpaid family workers by industries. In some cases regional breakdowns can also be helpful. Thus an assumed value added by these persons separately for female and for male family workers is arrived at. But still how many of them work for male and how many for female own-account workers is not known.

97. There is, however, something else that can be done. Using figures mentioned above, the per worker income can be calculated (total product of all own-account workers in a certain economic activity divided by the total number of own-account workers).

98. Not infrequently certain own-account activities are customarily carried out by women, while other are reserved for men. In these cases all family workers in that specific activity might be considered either female or male. In those activities where there is no such known division of labour by sex, and if no other indication is available, one can

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[1] The distribution of the "unpaid family workers" between those who work in an informal unit and those in the formal sector is rarely known, Some surveys do include a question on their behalf, but in most cases the distribution must be estimated on *ad hoc* inquiries.

distribute the still unclassified women family workers among the remaining activities in proportion to the total number of family workers in each activity.

99. The number of female and of male family workers by activities and the approximate salary per person they would receive if they were working in the formal sector are now known. By multiplication the total assumed salary corresponding to women and corresponding to men in separately male and in female own-account worker units is arrived at. From the estimate made above on the operating surplus of the female-headed own-account units, the amount of assumed salaries earned by male family workers is deducted and the amount of assumed salaries earned by women family workers working in male-headed own-account worker units is added. Adding up the results obtained in different activities gives a total for the product created by women in the informal sector of the economy more refined than the first approximation.

100. This has been a very detailed treatment of the data available. If such detail as distribution of the labour force by status in employment and kind of economic activity is not available, or the national accounts do not show the product created by the informal sector in different kinds of economic activity, the same procedure as described above will have to be applied to the total informal sector as a whole.

101. Some countries publish figures on the informal sector including in it small-scale enterprises employing a limited number of salaried employees.

102. When national accounting data are available for more than one year one will try to produce figures accounting for female participation for all the years for which this is feasible. However, because of lack of resources or other reasons, the situation may be such that only one such estimate can be prepared and one has to decide which of the years available should be chosen to base the estimate upon. There are two kinds of considerations to envisage in such a case; the quality of the statistical material and the timeliness and significance of the finished estimate for policy purposes. For example: which of the years available presents more details of the type needed for the estimate? For what year are more data available from other sources?

103. On the other hand, have there been since that date changes that would invalidate completely or partially the results arrived at? Should that year be chosen as representative of circumstances which are still present today or is it desirable to demonstrate the evolution that has been taking place since then? This last question implies of course another: do other estimates of the kind being prepared here already exist, or are there plans to carry them out in the future?

104. The answers that can be given to these questions depend on the uses to which the results will be put. And more specifically whether they will be used to analyze a given situation, or to show a trend or even to demonstrate the changes taking place in the course of a business cycle. In the first case, efforts should be concentrated on producing the

maximum amount of figures for one single year; in the second case data must be shown for at least two years and preferably more than two years separated from each other by intervals long enough to justify the assumption of a trend. In the last case the amount of data and the intervals to which they correspond must be such that the changes taking place in the course of a cycle can be clearly perceived.

105. The last named data, those which require more frequent presentation, can be of a much less detailed nature and serve to extrapolate the figures from the more exhaustive estimates which serve as benchmark estimates.[2]

106. Here an additional problem related to the use of economic data representing values arises. Values are expressed in monetary units and these, as far as their significance as a measuring rod of economic aggregates goes, can be rather unstable in time. Between two dates, somebody's income might have increased in monetary terms, but not necessarily in "real" terms, that is in the amount of goods and services that she or he can buy with that income. And it is the latter that is of interest in examining the participation of women in economic activities and their contribution to development.

107. From the practical point of view, there are two sides to this problem. Out of the documents and sources examined, which should be used? Those with figures at current prices or those in constant prices? No doubt, where price differences between years have not been significant, there is no great difference between using either one, but most frequently changes in prices will have been considerable. In that case data in constant prices are preferable.

108. Special care must be exercised when combining data from different sources that both should be expressed in the same terms. For data in constant prices this implies that they should represent the same reference year. (Whenever data are expressed in constant terms, this is shown in the title of the table as "At constant prices of the year X". This year of reference must be the same in the sets of data that are being combined.)

109. In case the reference year is not the same, the two sources can still be used, but in order to obtain the same reference year in both, one of them must be adjusted (deflated) by an adequate price index. Most textbooks on economic statistics explain in detail how this can be done.

110. Deflating the product created by women and total national product by the same price index implies that prices in both aggregates have changed in the same way. But this is not true necessarily. In most cases there is no other choice than to use the same price deflator for both magnitudes, but it is worth mentioning that, were a price index available that reflects more precisely the movement of prices of products

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[2] On extrapolation of benchmark data see (33).

originating in the informal sector, this deflator should be used with preference over the more inclusive one that is being used to deflate total domestic product or important parts of it. This would show the terms of trade effects between the informal sector and the rest of the economy. In most cases such a specialized price index will not be available, for products in the areas of interest covered by this Handbook.

111. When a time series has to be prepared, it might be necessary to use for different years of the series data taken from different sources. The figures are of course different, as they are figures for different years, but one must ask oneself whether the differences for consecutive years reflect only the changes that have taken place in reality, or whether at least part of the difference is the result of some change in the procedures used to collect and adjust statistical data. One should be aware of such a possibility and, if figures for the same year can be had from both sources, even if it is not the year needed, this will permit estimating that part of the difference that is due to changes in procedures.

112. It is essential that aggregates for the informal sector should be prepared sub-divided by kind of economic activity. Some words must be said now about the sub-division by regions. First of all such a decision will depend on the availability of information. If information does exist by regions, the pros and cons of regional sub-divisions should be examined in the light of requirements. Do strong regional differences with reference to women in the informal exist? Are these differences important enough to justify the additional costs and efforts that a regional sub-division will cause?

113. Finally, in connection with the aggregates representing women's contribution in the informal sector some considerations are in place concerning the concept of the expanded national product. GDP (gross domestic product) or GNP (gross national product) are the most frequently used economic aggregates that appear in reports of governments, international bodies and the press. As explained above, they do not include the activities of the housewife and other members of the household for the satisfaction of the needs of household members. A parallel aggregate called "expanded national product" does precisely that: it adds the estimated value of housework to the traditional national or domestic product. Where this estimate has been done, the value of the new aggregate is between 20 and 40 per cent higher than that of the traditional product. Moreover, the participation of women in this product is substantially more significant. This by itself is important: it brings the estimate nearer to real life situation. But in addition to showing the real participation of women in the satisfaction of national needs, it creates new possibilities for projections and planning, shows the growth rates of the economy in a more realistic fashion and (by way of harmonization of production and employment statistics) throws light on labour force potentials. As can be seen expanded national product is an extension of the gross national product, which includes both the formal and the informal sector and cannot be treated from the point of view of the informal sector only. Moreover, it is not the purpose of this

Handbook to show how housekeeping activities can be estimated in terms parallel to those used in the estimation of these same activities when market oriented. There are several publications on this subject listed in "References", at the end of the present report.

IV DATA REQUIREMENTS

A. Overview

114. The preceding Chapter discussed possible methods of measuring the contribution of women to development in the informal sector in industry, trade and services. The next Chapter focuses on the various sources of data that will be required to make such measurements possible. In this chapter, the different types of data required will be highlighted. There will be further elaboration on some aspects of this in the Chapter V especially in the section, dealing with cross-tabulations. Although the required data will be discussed under the main headings in this chapter namely development indicators, participation in the labour force (or economically-active population) and national accounts, some of the items will be required in more than one area.

115. Some of the data are of course directly available form tabulations or published tables (e.g. age distribution) but others are derived information (e.g. expectation of life at birth). Thus, the basic data derived has also to be listed. As far as possible, all data should be disaggregated by sex and by formal and informal sectors.

1. Development Indicators

116. The data required include the following:

- Life expectancy at birth
- Adult literacy
- Real GDP per capita
- Females as percentage of males in:
  - Primary school enrolment
  - Secondary school enrolment
- Adult females as percentage of adult males in:
  - No schooling
  - Some primary schooling (not completed)
  - Completed primary school
  - Some secondary schooling (not completed)
  - Completed secondary school
  - Some tertiary level education
  - Completed tertiary level education

117. The above data are self-explanatory and will usually be available in tabulated form. Life expectancy will also usually be available for both sexes. Special calculations will be required to disaggregate this by sex. The researcher will need the assistance of a demographer to do this.

118. The above data are required for all adults, usually (or currently) active population and for those involved in informal sector activities, with separate tabulations for those in industry, trade and services.

2. Participation in labour force

119. The following types of data which are reproduced from Supplementary Principles and Recommendations for Population and Housing Census (44). The tabulations deal mainly with activity status, industry, occupation, status in employment and income.

Population... years of age and over by usual (or current) activity status, age and sex;

Usually (or currently) active population by main occupation, age and sex;

Usually (or currently) active population by main industry, age and sex;

Usually (or currently) active population by main status in employment, age and sex;

Usually (or currently) active population by main status in employment, main industry and sex;

Usually (or currently) active population by main status in employment, main occupation and sex;

Usually (or currently) active population by main industry, main occupation and sex;

Usually (or currently) active population by main industry, educational attainment, age and sex;

Usually active population by sex, main status in employment and number of weeks worked in all occupations during the last year;

Currently active population by sex, main status in employment and number of hours worked in all occupations during the last week;

Usually (or currently) active female population by main status in employment, marital status and age;

Usually active population by monthly or annual income, occupation and sex;

Population not usually active by functional categories, age and sex;

Usually (or currently) active heads or other reference members of households... years of age and over by main status in employment, main industry and sex.

120. In addition, the following data are required:

- Employed persons in the informal sector by main status in employment, main industry and sex;

- Employed population in the informal sector by main occupation, educational attainment and sex (with separate tabulations for industry, trade and services).

121. The above are the basic tables required for describing and interpreting female participation in the labour force (or usually active population). Additional tables will be discussed in the next chapter.

3. National Accounts

122. The set of tables required to facilitate the contribution of women to the production of goods and services are given in the SNA (29). The following tables extracted from that publication give an indication of the type of data required.

__ Gross domestic product and factor incomes by kind of economic activity.
__ Supply and disposition of commodities.
__ Gross output and input of industries.
__ Composition of final consumption expenditure of households.

The above tables are at current prices.

The following tables are generally at constant prices:

__ Constant - price value and price indexes of the gross domestic product by type of expenditure.

__ Gross domestic product at constant prices, by kind of economic activity.

__ Employment by kind of economic activity, status in employment and by sex.

__ Supply and disposition of commodities at constant prices.

__ Gross output and input of industries in constant prices.

__ Composition of final consumption expenditure of households at constant prices.

123. In addition to the above, data on employment by kind of economic activity, in formal and informal sectors, and by sex are required. Additional supplementary tables are discussed in the next chapter.

V. STATISTICAL SOURCES

124. Once the data requirements for studying the informal sector have been determined, the next step is to find out how and where to find the necessary information. In other words it is necessary to determine what statistics on that particular subject do exist. To find a ready-made catalogue of existing statistics would of course facilitate the task, but such a catalogue, such as the "List of principal statistical series available" of the United Kingdom, will be found only in the statistically more advanced countries. So the task will be to contact statistical offices and through personal visits find out what is available. There is no reason to be discouraged if the first reaction is that "on that subject there is nothing available". In fact some information is surely available and sometimes even more than expected, once the question is posed adequately. It is true, however, that there exist great differences in what is available in different places on different types of statistics and more often than not the volume of data on women is a good indicator of the degree of development of a statistical institution.

125. Occasionally one may discover that there exists a database related to the subject. The expression database is being used to refer to a collection of data on a particular subject which are stored in a way that allows easy access and retrieval of information. The figures contained in a database usually are numbers referring to specific details, like the number of women with given levels of educational attainment, or working in government, or in specific industries, the number of female-headed households, etc., with indications of coverage (nationwide or for a given region) and the date for which they were obtained. From such particular data global estimates on the informal sector can be constructed. Where such a database on women's issues already exists, much of the work has already been done, provided, the database is organized in a way that shows and explains each of its series in sufficient detail to permit a decision as to the compatibility of different series and figures among different fields of statistics. Where no such specialized compilation of data exists, the information will have to be assembled.

126. This chapter discusses the sources of statistical data needed to measure women's contribution to development, in particular to the labour force and to income and product of the informal sector.

127. Because the objective is to examine the situation of women in the light of the over-all situation, that is that of both sexes and that prevailing in the informal sector compared with those in other sectors, it will be convenient, in addition to the results prepared according to the Handbook, to select those statistics and aggregates that can be of use in these comparisons.

128. Women's participation in the labour force can be measured mainly by three types of statistics:

- Demographic and labour statistics;
- Industrial, trade and service statistics; and
- Statistics on households.

The main providers for these statistics are statistical offices but other institutions such as ministries, planning offices and universities are potential producers which should not be disregarded.

129. In addition to the three types of statistics mentioned above, time-use studies provide information on an aspect of paramount importance, not covered at all or covered insufficiently by other types of statistics. The time spent in an activity is an important element: the same number of workers can contribute more or less to an activity depending on the number of hours they put in. This question has been raised in studies on the contribution of women. The significance of time-use studies is not only that they improve the accuracy of measurements, but in fact they add a new dimension to such measurements. Time-use surveys are the key element in estimates of housekeeping activities.

130. Before reviewing the sources it is convenient to say something about relative advantages and disadvantages of each one. The explanations for each of the sources will show their respective advantages and disadvantages as building blocks for aggregates depicting the participation of women in development. Censuses have the advantage of global coverage: they are needed to show statistics on small areas and to blow up detailed information originating in samples. Whether the details obtained from samples can or cannot be blown up to national dimensions will depend on how representative they are, that is, how well the sample has been designed.

131. When it comes to household and establishment surveys, each has its own advantages and disadvantages, which the United Nations Handbook on Household Surveys presents as follows (32):

> In comparing data from household surveys with data from establishment surveys a number of considerations should be taken into account. While household surveys basically measure the activity status of individuals, establishment surveys count the number of occupied jobs as listed in the payrolls. Hence, in establishment surveys persons with a job but temporarily absent without pay are excluded, while multiple-job holders are counted more than once. Household surveys cover in principle the entire population of interest, including the economically inactive, with establishment surveys generally restricted to employees, who form only a segment of the economically active population. The missing segments include the unemployed, family workers in household enterprises and farms, the self-employed and, in general, all non-wage and salary earners.Moreover, establishment surveys are usually limited to establishments larger than a certain minimum size. The fact that the economically inactive can be reached through household surveys gives those surveys a unique advantage for the measurement of the potential labour force... In establishment surveys... the items of information are, in general limited to those available in the records and payroll lists.
>
> On the other hand, establishment surveys can provide more accurate employment data in the organized sector of the economy than household surveys... Moreover, because in establishment surveys the results are based on records and payroll lists, they are subject to lower degrees of measurement errors than the results of household surveys based on interviews and subject to various kinds of response error.

132. If all establishment surveys were limited to medium and big enterprises only, their usefulness for the present purpose would be

almost nil, though they still could be useful to find average levels of remuneration in different activities which, if nothing else is available, could serve as indicators of the income of own-account workers. In addition, it must be said that more recently some of these surveys do include small-size and even own-account units in specific industries.

133. While some sources may have certain advantages over others, these differences must be taken into account when combining them. For example: It is generally accepted that surveys, because they can examine given situations in more depth, produce more accurate figures in certain areas than censuses. This is true, but the very fact that they are more precise must be taken into consideration when the two sources are being combined. Experience has shown that supplementary questions on employment in the same survey questionnaire often result in classifying a person in a different way than would be the case if these additional questions would not have been addressed to the person. Many persons, especially women, who by the first question would be classified as not economically active, turn out to be active on the grounds of their answers to the supplementary questions. There is, consequently, a difference between the numbers of economically active persons given in statistics with only one question on this subject (as in most censuses) and those given in surveys which had the opportunity of examining the same subject in more detail using additional questions. If such two sources are being used concurrently, this difference must be taken into consideration by estimating, to take the example given above, in how many cases supplementary questions made the status of a person change from the category of "not economically active" to "economically active". An examination of the survey files (filled-in formats of the survey) can be used for this purpose. Some statistical offices might arrange for a systematic examination of this question, which will demonstrate the effectiveness of supplementary questions used in the questionnaire.

A. Demographic and labour statistics

1. Main sources

134. As to sources, it is usual to distinguish between censuses, surveys, and administrative records. Even though they might focus on the same general subject, the angle at which they view it is different. For the purpose of the Handbook, if corresponding data can be obtained from more than one source they should be used in combination. The most important for this purpose are:

- Population and housing censuses;
- Demographic and social surveys;
- Employment and unemployment reports;
- Income, consumption and expenditure surveys;
- Labour force surveys; and
- Records of social security and other administrative files.

Employment and unemployment reports are not well developed at present in most African Countries to be the source of useful information on population and labour characteristics

a) *Population and housing censuses*

135. Population censuses are usually taken together with housing censuses and among their essential features are individual enumeration (which permits cross-classifications of different characteristics) and universality within a territory. Because of the huge volume of work which they represent, censuses cannot collect too many details. They are usually planned to be carried out once in ten years, though in some countries the intervals are not regular. In order to fill the void between consecutive censuses, and remedy to some extent the paucity of detail, intercensal sample inquiries are used, not only to update the census, but also to produce data on details which the census did not supply. With regard to the first, one can readily use the data prepared by the statistical authorities; in the second case, certain checks are in place. The census provides bench-mark data to evaluate the reasonableness of the over-all survey results, however, combining the two sets of data is justified only in those cases where the same or at least compatible definitions and concepts were used in both. This is also true of information from reports on a specific question or locality and data from administrative sources that might be used in connection with censuses. It is therefore essential to examine the compatibility before blowing them up to the national scale. Admittedly, this is not easy when there do not exist additional materials for comparisons which would facilitate a decision; and very rough approximations will be - at least at the start - the only possibility.

136. Census results are usually published, but frequently with a considerable time lag. Main results and summaries for the nation as a whole are usually published first, followed by publications with more details. But even before publication, data can be obtained in some preliminary form, as far as they have been tabulated. Again, not all the data collected are being tabulated and it is worthwhile to inquire about this with the statistical authorities.

137. The publication of census results is a costly business and costs increase the greater the number of tables. Budgets of statistical authorities are always short and topics which are considered of less interest are omitted from publications, even when data have been collected that could throw light on them. In most cases the question is not whether to omit a certain classification altogether, but what kinds of cross-classifications should be presented. This is a matter of crucial importance not only in the case of censuses but also surveys and all other kinds of statistical products. Its importance lies in the fact that most of the information needed for present purposes is revealed through cross-classifications; in this case, detailed cross-classifications by sex, status in employment and other economic and social characteristics.

138. Censuses are the most comprehensive of all statistical products and are the frame for most statistical data collection. Sample surveys are

usually calculated on the basis of census results and blown up using census weights and figures. Special caution must be exercised in the use of data from sample surveys on aspects which the original design of the sample was not intended to cover in detail. In case of doubt it is advisable to consult the producer.

139. Population censuses show many different characteristics of the population, but it is especially the socio-economic characteristics of the population and the way they are presented in these censuses as well as in the other sources that is of primary concern here. The most important are:

- Activity status
- Kind of economic activity
- Status in employment
- Occupation
- Education and school enrolment
- Time worked
- Wages and salaries

These topics will be taken up in section 2 below followed by discussion of their cross-classification.

b) *Demographic and social surveys*

140. In order to bring census results up to date and fill in the details missed by censuses, demographic and social surveys are carried out based on samples in order to overcome the long delays that usually affect census results. Most of these surveys are based on households and we will take them up in the part corresponding to statistics on households.

c) *Labour force surveys*

141. Because of their importance for the type of measurement we are dealing with, Labour Force Surveys must be mentioned separately. Labour force surveys are probably the most frequent type of household sample surveys. They are used to bring up to date the census results, which usually are outdated, and to provide details on topics which the population census does not contain. They are one of the most important sources on current problems of employment, unemployment and underemployment, and, in combination with censuses, the basic source for estimating women's participation in the labour force. Censuses are, however, not the only other source with which data from these surveys should be combined and compared, another source are the data from establishment surveys.

d) *Employment and unemployment reports*

142. In addition to household surveys on the labour force a few countries produce reports and surveys on employment and unemployment. These may be periodic reports or reports prepared and issued in response to special circumstances in the labour market. They summarize the employment/unemployment situation at a certain moment, either for the

country as a whole or for a specific region or industry. Most frequently they use the same definitions and reference frames as censuses; in such cases their data can be incorporated without further elaboration into the worksheets proposed in the present Handbook on the general structure of employment. Where this is not the case it will be necessary to examine the existing difference and, as far as possible, convert the data to the system used in the main body of statistics. Usually such reports present data separately by sex. However, these reports are centred mostly on salaried employees and omit frequently those in the informal sector. Reports like these may originate in ministries of labour, manpower research units, employment bureaus, labour exchanges or national statistical services.

e) *Income, consumption and expenditure surveys*

143. Although the primary purpose of an income, consumption and expenditure survey is to obtain data on household budgets, information is usually collected on socio-economic characteristics of household members. Such information include age, sex, relationship to head of household, activity status, occupation, industry and status in employment. The additional information collected is used generally for identification purposes and sometimes also for determining the socio-economic status of the household. They are however not fully exploited as a source of demographic and social data. The data can be compared with the results of censuses and labour force surveys.

f) *Social Security records and other sources*

144. Statistics or administrative records of social security may represent a valuable source provided they cover activities in the informal sector, which usually they do not. At best they cover only part of these, either because own-account workers are excluded from social security by law, or because even though authorized by law, the interested persons prefer not to subscribe to Social Security. On the other hand, in some countries social security may be limited in its geographical coverage, for example the capital city or some industrial cities. Almost always disaggregation by sex is available. The availability of data must be investigated in each case.

145. In addition to the sources mentioned above which represent either official statistics or administrative records, there are studies and research projects by universities, welfare institutions, foundations and associations (sometimes financed by international organizations), which are of relevance for the subject of this Handbook. As a rule all such projects should be consulted and, as far as results have been published, these should be examined with care. These studies use either already existing data (and might have unearthed often new or previously unused sources) or collect basic data themselves. Such data collected for a special purpose are frequently very pertinent and designed to fill gaps in existing information. They usually will be samples, often very small samples, and their results should not be accepted without a careful examination of their representativity and validity.

146. Studies of international organizations may be of two types: some of a general character intended to throw light on a broad aspect of general concern and others focusing on a project to be undertaken by, or financed by, an international organization. To the first group belongs the Living Standards Measurement Study and household surveys aimed at monitoring the social impact of adjustment policies organized by the World Bank and which cover in part the subject matter of the Handbook, although not much emphasis is given to sex. The second group consists of the preliminary and feasibility studies for development and other projects, which sometimes contain information that can be used for the present purpose. The degree to which women participate in the activities affected by the project is a significant parameter of such studies and also, though less frequently, an estimation of the repercussions such projects will have on the economic activity of women.

147. Many ministries produce statistics referring to their specific activities which are either published in special bulletins or kept for internal use. In some instances these statistics are being reproduced in the statistical publications of the central statistical organization, but frequently they are not. Ministries which often maintain statistics of this type are those of Labour, Industry, Education, Justice, Interior, Family, Youth and Social Affairs. Most ministries will have some statistics accessible to the enquirer. Another important institution for the present purpose is the Planning Office (or Ministry); in addition to the elaboration of already existing basic data, planning offices often collect their own data.

148. Statistics prepared by specialized ministries often go further than those of official publications. In as far as these statistics cover special fields (or special regions) they must be examined to determine whether they can be fitted into the general statistical framework used by the researcher. In most cases adjustments and adaptations will be necessary. The central problem is to find out how far that particular sample is representative of the universe of the estimates sought, and of course, whether they show data by sex. In case this last aspect is missing, but the data are otherwise valuable for the research, one should try to introduce the distribution by sex, taken from other sources.

2. Social and economic characteristics enumerated in surveys and censuses

149. The main topics taken up by censuses and surveys which are relevant for the measurement of women's participation will now be considered. These, as has been said above, are: activity status, status in employment, occupation, industry, time worked, income and sometimes also sector of employment. Sector of employment refers to whether an activity is carried out in the private or public sector. As no informal productive units exist in the public sector, this classification is not discussed here. The other items can be considered as economic characteristics. There are, in addition, other characteristics which, even though not economic by themselves, are relevant in estimating women's participation; the most important among them is educational attainment. (See tables 3, 4, 23-27).

150. One important requirement for the analysis proposed in the Handbook is decisive: it is the cross-classification of all these characteristics with sex as well as with status in employment. Without it the task of estimating women's contribution could not be accomplished.

151. How much geographical detail is necessary, or to put it in terms of the person trying to use censuses and surveys for the measurement of women's participation, what detail is appropriate if geographical breakdowns are available? This will depend on how acute the differences are between different provinces or regions. Working with a multitude of small areas will enormously increase the cost but if there exists a demand for it and regional differences are substantial this would justify the extra work. In any case distinction between urban and rural regions is essential.

a) *Activity status*

152. Tables on activity status show the number of men and women economically active and not economically active. The definition of economically active population given by ILO and followed by almost all national statistical offices is this:[3]

> The economically active population comprises all persons of either sex who furnish the supply of labour for the production of economic goods and services as defined by the United Nations System of National Accounts and Balances during a specified time reference period. According to these systems, the production of economic goods and services includes all production and processing of primary products whether for the market, for barter or for own consumption, the production of all other goods and services for the market and in the case of households which produce such goods and services for the market, the corresponding production for own use.

153. This definition is based on a resolution of the Thirteenth Conference of Labour Statisticians in 1982 and differs from that in use in censuses taken in the 1980 round of censuses. It is highly recommended therefore to investigate the type of definition that has been used in the census that is being examined. It is the recommended definition for the 1990 round of censuses.

154. As a corollary, the population not economically active includes all persons who are not "economically active" as defined above. There is however an aspect that must be taken into account when working with these figures. For the measurement of the economically active population age limits are usually set, while the population not economically active comprises all persons irrespective of age.

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[3] The definitions and classifications given in this handbook follow the norms and standards recommended by international organizations for the use by national statistical authorities. Usually national norms follow these recommendations and where they deviate from them -- which is mostly due to special conditions existing in a country -- explanations are provided as to existing differences and how these can be overcome to revert to the international definitions.

155. This is important for the present purpose. Because whenever the lower age limit has been fixed in a way that there is a substantial number of persons below that limit who are working, the corresponding statistics will underestimate the real number of persons economically active. Those who will be overlooked in this way, most frequently will be girls working as helpers in own-account activities. If there exist trustworthy studies on the situation of own-account workers and their family helpers and they show figures on the age and sex of unpaid family workers, these figures can be used to adjust census data.

156. The economically active population can be viewed in two different ways: the usually active population and the currently active population. Or, in the words of the ILO definition: the usually active population is measured in relation to a long reference period such as a year, and the currently active population, or equivalently, the labour force, is measured in relation to a short reference period such as one week or one day. National statistical offices usually use one or the other of the two measurements and they have different possible repercussions for the present analysis.

157. If the short reference period is used, women who work intermittently are liable in these statistics to be left out, at best from the employed population and at worst from the economically active population altogether. This is corroborated by the observed fact that statistics on the employment of women frequently show that the number of not economically active women increases in periods of cyclical down-swings, when one could reasonably expect on the contrary an increase of economically active -- even though unemployed -- women.

158. On the other hand, "the usually active population" is less indicative as it refers to only one -- that which the respondent conceives and remembers to be the main -- of the possibly numerous activities that s(he) might have performed during a certain number of weeks or days during the preceding twelve months or the preceding calendar year.

159. Nothing can be done to change or reform such figures once the census has been carried out. In this, the circumstances are similar to other traditional provisions in census and survey taking, that, without having the appearance of bias, do affect in a negative way the measurement of women's activities. It is useful to keep in mind such effects and, if considered important, to point them out when estimates based on them are published or reviewed.

160. The economically active population consists of those who are employed and the unemployed. Employment is sub-divided into "paid employment" and "self-employment". As self-employment is of special interest for the present analysis, it will be examined in more detail. A person in self-employment can be "at work" or "with an enterprise but not at work". Persons are considered "at work" who "during the reference period performed some work for profit or family gain in cash or in kind." Note the distinction between "profit" and "family gain". A woman working on own account would be considered as working for profit, whereas members

of her family helping her in her task without pay would be working for family gain. Both will be included in the numbers on employed population. (It will be seen later that when it comes to estimate incomes, the unpaid family workers do not receive any, precisely because they are unpaid and their contribution to family gain is included in the profit realized by the own-account worker.)

161. Persons "with an enterprise but not at work" are "those with an enterprise, which may be a business enterprise, a farm or a service undertaking, who were temporarily not at work during the reference period for any specific reason." This is a clause to be remembered, because in cases where such a business enterprise activity coexists with other activities, such as housekeeping, those persons, usually women, with an enterprise but temporarily not at work might easily be taken as economically inactive.

162. One might wonder how to interpret the notion "some work" in the definition given above for persons classified as at work. In fact, this has been the subject of changes since the last round of population censuses. Presently the rule set down by ILO is: "For operational purposes the notion of "some work" may be interpreted as work for at least one hour." This is a broad interpretation and must be taken into consideration very carefully when applying it to the informal sector. There is also a special provision concerning unpaid family workers. It reads as follows:

> Unpaid family workers at work should be considered as in self-employment irrespective of the number of hours worked during the reference period. Countries which prefer for special reasons to set a minimum time criterion for the inclusion of unpaid family workers among the employed, should identify and separately classify those who worked less than the prescribed time.

163. The self-employment group as established by ILO comprises own-account workers, unpaid family workers, employers and members of producer's co-operatives. This makes it less homogeneous and so they should be separated into different sub-groups. Fortunately, almost all statistical authorities present separate figures for these categories, in view of the economic and social importance given to them. But it requires special enquiries to obtain data for small enterprises, that is, the characteristics of employers and employees in enterprises having less than a specified number of employees. At present only a few labour force surveys have considered questions on this matter and census questionnaires include only what has been recommended by the international classifications.

164. There is still the question of economic activities performed by persons who are engaged mainly in kinds of activities which by ILO standards are not considered economic, such as students and especially homemakers. These latter will be considered in one of the following chapters. Here what should be done if both types of activity are performed by the same person is considered. In these cases preference is given to the former. The paragraph from the ILO resolution on which this classification is based states:

> Students, homemakers and others mostly engaged in non-economic activities during the reference period, who at the same time were in paid employment or self-employment as defined... above,

should be considered as employed on the same basis as other categories of employed persons and be identified separately where possible.

165. Finally, the ILO resolution presents the case of activities for own and household consumption. This would seem to depart from the general definition of what is and is not "economic". This is how it reads:

> Persons engaged in the production of economic goods and services for own and household consumption should be considered as in self-employment if such production comprises an important contribution to the total consumption of the household.

166. However, it should be noted that statistics on economically active population must match those on economic production and up to the present the definition of production in the national accounts has not been extended to include the production of economic goods and services for own or household consumption whether they are or are not an important contribution to total household consumption (with the exception of such households which also produce such goods and services for the market).

167. However, that expanded concept is important and fits well into the concept of "expanded product" which it is expected will be taken up in the new version of the System of National Accounts. The concept of expanded national product and its significance for the measurement of women's contribution to the national product will be discussed later.

168. Women in the armed forces are considered part of the economically active population, but remain outside of the informal sector.

169. Persons who receive income without being economically active, such as those who receive income from property or royalties or pensions from former activities, and those receiving public or private support are classified as not economically active.

170. When examining data on the labour force, attention must be paid to the age limits within which the count has been made. Usually a minimum age is stipulated and it differs from country to country. In as much as girls start working at lower ages than boys, under-reporting in their case is more severe. A similar phenomenon presents itself at the other extreme of the age distribution. If there are more women than men in the upper age groups, as is sometimes the case, and assuming that there is no difference in the percentage of men and women who continue working even though past that limit, the upper age limit established in labour force statistics is bound to affect women more than men.

171. The activity status that has been examined up to now is the crucial element in deciding what women are part of the economically active population, that is, part of the national labour force. The characteristics that will be discussed now serve to determine their position within the labour force. If overall employment of women is considered without discriminating between the formal and the informal sector, their distribution by occupations and by industries shows a remarkable concentration in certain occupations and industries. The question is whether this is also true when the informal sector is being examined separately. (See tables 1, 5, 6.)

b) *Classification by kind of economic activity (industry)*

172. It is not sufficient to establish the participation of women in a global form, their participation in different kinds of economic activity must also be shown. The system used internationally to classify economic activities, as mentioned in Chapter II is the International Standard Industrial Classification of all economic activities. The most recently revised version is ISIC, Rev 3. Most countries are however still using the previous version ISIC Rev.2 but a change-over to the new version is now taking place and the changes in classification that have been introduced must be taken into account when comparing figures for different periods. The structure of ISIC, Rev 3 is shown in Annex I.

173. The main criterion of ISIC for grouping units in one category is the similarity of output and input, and it does not take into account the way production is carried out, which is the distinguishing criterion between formal and informal productive units. The number of people engaged in a given activity as shown by ISIC will comprise without distinction employers, own-account workers, employees and unpaid family workers. Therefore, in order to obtain the number of persons engaged in an activity in the informal sector a cross-classification of kinds of activity by the classification of status in employment is needed. (See table 10.)

174. Classification is not the only important issue in connection with the use of industrial statistics. Even though the concern here is not to prepare such statistics but to use them, information about the scope and coverage of the census or enquiry and the statistical units employed in the collection and tabulation of the information is needed. International recommendations define the industrial sector as "including all establishments within the territorial boundaries of the country engaged primarily in mining, manufacturing and the production and distribution of electricity, gas and water (divisions 10 - 37, 40, 41 and 45).

c) *Status in employment*

175. The categories of status in employment usually found in censuses and labour force surveys are six: employer, own-account worker, employee, unpaid family worker, members of producers' cooperatives and persons not classifiable by status. (See table 9.) These are indicated in the International Classification of Status in Employment (ICSE).

176. Employer is a person who operates her or his own productive unit or engages independently in a profession or trade and hires one or more employees.

177. Own-account worker is a person who operates her or his own economic enterprise or engages independently in a profession or trade and hires no regular salaried employees.

178. Employee is a person who works for a private or public employer and receives remuneration in wages, salary, commission, tips, piece-rates or pay in kind.

179. Unpaid family worker is a person who usually works without pay in an economic enterprise operated by a related person living in the same household. Sometimes, where it is customary for young persons to work without pay in an economic enterprise operated by related persons who do not live in the same household, the requirement of "living in the same household" is dropped. "Unpaid" in this connection should be understood to mean without an agreed amount to be paid for work done.

180. Member of producers' co-operative is a person who is an active member of such organization. When this category is excluded from the classification used in a country, there should be an indication of the headings under which the various units have been classified.

181. Persons not classifiable by status may be persons whose status is unknown or has been inadequately described.

182. Doubts may arise concerning how certain borderline cases have been treated in the material one is analyzing. Consultation with those in charge will clarify the situation in most cases. However, when the statistics under examination date several years back, this might not be possible. The most frequent cases where there might exist uncertainties are presented below.

183. Apprentices who receive pay in kind, meals and/or sleeping quarters should have been classified as employees. If not paid at all, those in economic enterprises of a related person could be considered as unpaid family workers, and those in a different situation have probably been classified as undetermined, unless of course a special category has been created for them.

184. Professionals such as doctors, lawyers etc. are not included in the informal sector. Those who employ salaried assistants, secretaries, or as is increasingly the case, work on a co-operative basis, would, in accordance with the definitions just given, not be classified as own-account workers. But those who work alone could have been enumerated in that category. In order to subtract them out one should consult those tables which cross-classify status in employment with educational attainment. By excluding all those with higher education one might subtract out some who, although with higher education are nevertheless typical components of the own-account category (an engineer working as an own-account painter or a sociologist selling postcards in the street), but the damage done in this way to the exactness of the estimates is probably less than if all professionals on the academic level were included.

185. Outworkers are workers who perform their work outside the site of a factory, mainly in their own home and deliver the product to the enterprise or factory that has ordered that product and furnished them with the necessary materials and tools. Doubts may arise whether such workers should be considered salaried employees or own-account workers. This question is being considered in the current revision of SNA.

186. Agriculture presents as far as status in employment is concerned a situation somewhat different from that prevailing in industry and services. As statistics in agriculture are not considered here, it will be sufficient to mention that the classification by status of employment in agriculture has been adapted to the peculiar conditions in that activity. Where subsistence agriculture represents a substantial part of total agricultural production, it has been set down as a special category at the same level as own-account workers.

187. Departures from the definitions recommended internationally in order to accommodate special national conditions will not infrequently be met, and additional effort and ingenuity will be needed to fit them into the standard classification.

188. Misclassifications are unavoidable. There probably is a certain number of own-account workers put into the category of "persons not classifiable by status". But unless there is some kind of evidence that this has really occurred, it is preferable not to tamper with these figures.

d) *Occupation*

189. Statistics on the occupations of women in the informal sector are valuable by themselves as a blueprint for women's occupational structure and they serve as an alternative for estimating women's earnings.

190. The occupational classification as given in Annex II is different from classification by kind of economic activity (Annex I); in fact very different occupations can correspond to the same economic activity, for example a charwoman and a designer can be working in the same productive unit and both would be classified by ISIC in the same kind of economic activity.[4] The classification by occupations is also different from that of status in employment. In the example above, if both work for a salary, both would be classified by ICSE in the same group, as salaried employees. It is only the classification by occupations, ISCO, that would classify them separately. (See tables 8 and 11.)

191. The main divisions of the 1988 International Standard Classification of Occupations are given in Chapter II.

192. This is the highest level of classification in the system and it presents a high degree of aggregation. To visualize the specific

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[4] Note however that this problem is more acute in the formal sector where persons with very different occupations may work in the same enterprise or establishment, usually as salaried workers or employees. In the informal sector, occupation and kind of economic activity tend to be much closer to each other. It may happen, of course, that one of the unpaid family workers within the family unit performs a special occupation, for example accounting, but since s(he) is not being paid, this will not alter the earnings situation of this particular productive unit.

situations of women in the informal sector a more detailed classification is required, as is presented in the lower levels of ISCO - 88.

193. The importance of a data on the number of women in different occupations is evident and these statistics will most frequently be easily available. They usually will be presented in form appropriate for the present purpose (although not always on the detailed level which would be desirable) and no special handling or transformation of these data will be necessary.

194. But as a stepping stone for the estimate of women's earnings the question is more complex. Whenever direct information on their incomes is not available one will have to resort to estimates based on the number of women in different occupations and industries and average earnings in the different occupations and industries. (See the example in chapter III.) The more detailed this type of information, the nearer the estimate will come to the actual situation.

195. This type of measurement is not only an alternative procedure in case no other is feasible, it is also a must when it comes to checking figures obtained by other procedures. As has been said repeatedly, comparing results obtained by different procedures and sources is the most efficient way to improve the estimates.

196. Figures obtained by different procedures and sources will quite frequently show considerable discrepancies. What can be done in such cases? There can be no strict guidelines on this question, but in general one should try to determine which of the two sources can be considered more reliable, more detailed and nearer to the concepts and definitions appropriate for analytical purposes.

e) *Literacy, school attendance and educational attainment*

197. The classification used for educational attainment and school enrolment is based on the International Standard Classification of Education of UNESCO (ISCED). Educational attainment is an important indicator of skills. School enrolment in turn shows on one hand the present efforts to acquire such skills and on the other what the distribution of skills will be in the future.

198. ISCED presents a very detailed classification, but for present purpose there are two different concepts to be considered: literacy and educational attainment

199. The definition of illiteracy established by the United Nations Educational Scientific and Cultural Organization states that

> ... a person is illiterate who cannot, with understanding, both read and write a short simple statement on his or her everyday life. Hence, a person capable of reading and writing only figures and his or her own name should be considered illiterate, as should a person who can read but not write and one who can read and write only a ritual phrase which has been memorized. The language or languages in which a person can read and write is not a factor in determining literacy.(41)

200. There is a difference between literacy on one hand and school attendance and educational attainment on the other. There are persons in Africa and elsewhere who have never been to school but are literate. On the other hand, there are persons who have been to school but are illiterate. For education, the following classes appear to be adequate;

- No (regular) schooling;
- Some primary schooling (not completed);
- Completed primary;
- Some secondary (not completed);
- Completed secondary;
- Tertiary level institution (some or completed).

f) *Time worked*

201. This is an important characteristic by itself as available data tend to show that in certain categories of employment, hours worked by women differ considerably from those worked by men.[5]
In some activities they appear to be shorter while in others they are considerably longer. This apparently is the case, more than anywhere else, in the informal sector.

202. In addition to increased precision in the measurement of women's efforts, data on time worked allow to give a more solid foundation to the estimates of their earnings. In conclusion, every possible effort should be made to obtain information on time worked by women in different activities.

203. Instructions for censuses and surveys include usually detailed indications on how time worked should be measured. As always, these instructions should be consulted and studied with care. The questions to be answered in connection with the measurement of time worked by an own-account worker refer to time spent awaiting customers, commuting, whether time should be compiled for the main job only or for different jobs together, etc. As far as recommendations go, the answers to above questions are all affirmative. (See tables 13-17).

g) *Wages and salaries*

204. Earnings in an informal sector which comprises small enterprises as well as own-account workers, are mostly in the form of what is called "operating surplus", as employees constitute a minority within this sector. It would seem therefore that there is limited use for statistics on wages and salaries for the present purpose. Nevertheless, this information can serve as a yardstick for an approximate evaluation of the earnings of an own-account worker, if no direct information is available.

205. When using figures on wages and salaries from a survey one must find out what these figures represent. Usually they are related to all employees. Some statistics present hourly wages in different occupations

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[5] For an example, see chapter on Sri Lanka in (23).

excluding all other payments. Censuses and especially surveys, on the other hand, give figures on total payments, whether in cash or in kind, including bonuses, cost-of-living allowances and wages paid during vacations and sick-leave. They also include frequently taxes, social security contributions, group insurance premiums and the like, payable by the employee but deducted by the employer. These last types of payment are in fact part of the income of an employee, but they do not show up in her take-home pay, so that sometimes the interested person does not think of them as part of her income. This fact no doubt plays an important role when the income from salaried employment is to be used as a base to estimate that of an own-account worker, where such withholdings are either non-existent or play a minor role.

206. A *priori* there is no generally valid answer to the question whether the earnings of an own-account worker can be expected to be on the average equal to, or higher or lower than those of a salaried worker. Possibly the comparison is more feasible in the case of employees of small enterprises, but it is more difficult when considering the earnings of employers in these enterprises. There are many different situations, and subjective as well as objective factors play a role. Some women may have chosen these activities because they prefer them to others, while in most cases they simply had no other choice because all other outlets were closed for them.

207. On the other hand, statistics on wages and salaries and earnings in own-account productive units in the same kind of activity are examined, as far such data are available, they show different situations in different activities and different countries. In one instance it has even been observed that while male own-account workers earn more than their salaried counterparts, the inverse relationship prevails for women.

208. In using statistics on wages and salaries to estimate earnings in own-account productive units one should, therefore, assemble from the Chambers of Commerce, trade associations, bureaux and associations of small and medium enterprises, welfare institutions etc., as much information as one can get on the specific local circumstances: whether they pay any taxes, the number of unpaid family workers, the type of techniques used, and if possible, make inquiries as to the economic standing of own-account workers in the respective activity. A seamstress with several members of her family working with her will normally obtain a higher income than a woman working in a tailor shop for a salary, while a woman selling fruit from a market stall may earn less than an employee in a grocery.

h) *Cross-classifications*

209. A statistical publication might present a great number of tables on different classifications but the really important matter is whether it contains the right kinds of cross-classifications. Of the aspects reviewed above the most valuable cross-classifications for the present purpose are the following:

- Kind of economic activity and status in employment;
- Kind of economic activity and occupation;
- Kind of economic activity, status, and time worked;
- Occupation and status in employment;
- Occupation, status and time worked;
- Kind of economic activity, status, and wages and salaries (or earnings);
- Occupation, status, and wages and salaries (or earnings).

(See tables 18-20 and 25.)

210. Not all of these cross-classifications will appear in tables already published. The possibilities for obtaining additional cross-classifications will depend on how the basic data had been collected, on the time and resources and last but not least, on the powers of persuasion of the analysts. (See tables 10-12, 21 and 22.)

B. Industrial, trade, and services statistics

1. Main sources

211. Statistics on industry, trade and services can be found in censuses, surveys, special reports and also through administrative records of public and even private institutions. For various reasons, data on industrial activity are more frequent than those on trade and services.

212. Frequently data available represent only those enterprises and establishments that employ a certain number of workers and exclude those with a number of employees below that figure. Where this is the case the figures on employment in different activities are of no use for the purpose as they represent employment in the formal sector only. However, the growth of the informal sector and increased interest in it has persuaded most statistical authorities to incorporate, in one way or another, the informal production units in their regular statistical programmes, either by including them in their periodic censuses or by implementing surveys centred on these units.

213. Moreover, even if a census or a survey records only establishments employing salaried employees over the number set as a boundary for the informal sector, and the corresponding figures on persons employed cannot be used in the present procedures for preparing estimates on the informal sector, it will usually contain other types of information which may be used for these estimates. If, for example, information on the average earnings of own-account workers in some economic activity is unavailable, data on average earnings of a salaried employee in that same activity taken from the census may serve as a useful reference.

214. It will be useful to remember what has been said about the importance of submitting data from surveys to a thorough analysis as to the exact definitions applied in their design, collection of data and tabulations. The reason for this is that in the present procedure data from different sources are combined, and it is crucial to examine at each

step whether figures from different sources are compatible with each other. Sometimes the description given will be sufficient, in other cases one will have to look at the questionnaire and the instructions to enumerators.

a) *Industrial censuses and surveys*

215. Generally, an industrial census is conceived as a comprehensive inquiry conducted at infrequent intervals, usually of 5 or 10 years, while inquiries conducted at more frequent intervals are known as surveys. Surveys are usually much more restricted as to the subject matter and depend to a higher degree than do censuses on sampling procedures. The samples used in surveys may be independent or they may be selected from complete census enumerations; in the last case it will be much easier to use data of both inquiries in conjunction. However, even then it is important to ensure that common items are defined the same way.

216. Although censuses are conceived as comprehensive inquiries this does not mean necessarily that their coverage is complete. Frequently they omit certain types of establishments, either because information on those establishments is readily available through other sources (as can be the case for big government enterprises) or because of budgetary limitations. Categories omitted from enumeration may be small establishments, establishments operated on household premises, establishments with no salaried employees or those below a specific size or volume of business.

217. The dividing line between what is considered a big or a small establishment is not clear cut. Sometimes only the larger establishments are covered in censuses and the smaller ones left out to be covered by a separate survey.

218. Frequently the cut-off point, that is the level at which establishments are excluded from enumeration, is the number of salaried employees; the exact number below which establishments are not covered is not uniform. It varies usually depending on the economic and industrial structure of the country and even from inquiry to inquiry in the same country. Cut-off points used in the past have been 3, 5, 10 and sometimes even 20 salaried employees.

219. Moreover, the dividing line is not necessarily uniform for all activities. Inquiries have sometimes used different cut-off points for activities with higher or lower labour intensity.

220. The borderline between censuses and surveys is also somewhat blurred as in many cases an exhaustive enumeration is carried out for the bigger establishments and enterprises and simultaneously a partial enumeration, based on sampling procedures, for the smaller ones.

221. If the census or survey includes own-account workers, data corresponding to this group will usually appear separately from the other groups. Some surveys have used within the classification of persons engaged the category of "working proprietors", which comprises persons

with two different types of status: employers who may employ a certain number of workers, but who actively participate in the enterprise they own, and own-account workers without any salaried personnel. Sometimes they are presented as "establishments with no salaried employees".

222. If this is the case a great deal of the work required for the present analysis has already been done. Assuming that the census or survey really covers the whole universe of own-account workers, most of the data needed will thus be ready: that is distribution of own-account workers by kind of economic activity and their earnings. The question is whether there is also a distribution of own-account workers by sex and if this distribution is carried through all the tables. If it is, these figures can be used directly. Adding the figures on female own-account workers to those on female unpaid family workers gives the participation of women in the employment of the own-account informal sector. The figures on earnings, on the other hand, refer to women own-account workers only. This is so because unpaid family workers, although they contribute by their work to these earnings (or, in other words, contribute to the value added of the own-account productive unit in which they work) do not receive any payment for it. For this reason, total earnings (equal to total value added) of own-account productive units are related to the number of own-account workers and not to the sum of own-account workers and unpaid family members. (See the example given in Chapter VII.) A similar procedure should be applied for paid employees if the enquiry also covers small enterprises.

223. If the estimate of earnings by an own-account enterprise is based on value added data taken from an industrial census, it must be born in mind that value added in the census concept does not correspond to the value added concept as used in the national accounts, because the industrial census does not take into account payments and receipts for non-industrial services. These are frequently reported separately in the census tables. Whenever possible, the value added figures in the census concept should be adjusted (deducting from the given value added figure the payments and adding in the receipts for non-industrial services).

224. However, the above assumptions are rather optimistic. In most cases, one element or the other of the above will be missing and will have to be reconstructed using some outside source. The most frequently observed gaps will be the following:

225. All the above data are present, but there is no distinction by sex: the total number of persons engaged in different activities in the informal sector is known, but not how many are women. What other information on the economic activity of women does exist? The most recent population census should be consulted. The distribution of the economically active population by king of economic activity is given separately for the two sexes. But that comprises all persons in salaried employment as well as own-account workers. The last category can be found in the table on status in employment. Does a table exist that cross-classifies kind of economic activity and status in employment? If such a table can be found, the numbers of women in the different industrial activities of the own-account informal sector will be available.

226. Can these data be introduced into a survey that presents earnings data for the own-account informal sector but lacks a disaggregation by sex? The dates of the population census from which the employment data were taken and of the survey should be compared. Are they sufficiently close to one another so that it is justified to assume that they portray the same situation? If not, is there any indication that changes have taken place since the last census in the number of women in the different own-account activities? Can these changes be quantified in order to introduce corrections to the outdated census figures? Are there any specialized studies on women working on own-account, even if they cover some specific activities? Regardless of the fact that they cover only part of the informal sector, such partial corrections will enhance greatly the accuracy of the ensuing estimates, as female own-account workers tend to concentrate in a few activities which most probably are those for which specialized studies have been made.

227. Alternatively, one can look for household surveys which could furnish information on women in own-account activities or even in the whole informal sector (see section c below).

228. In this situation up to now, data for the informal sector are available but disaggregation by sex is missing. In other cases, not only information regarding distribution by sex may be lacking, but the rest of the information given does not cover all, but only one segment of the productive units. This can be so because it covers only certain activities -- which from some standpoint had been considered of special importance -- or it has been implemented only in certain regions or, finally, it embraces all activities but has been designed in a way to cover not all but only a certain number of units in each activity. In the first case all possible sources must be considered in order to find out whether and what other activities, which encompass informal productive units, do exist. These sources might be the classification by status in population censuses, publications which concern themselves mainly with other problems but give some space to own-account activities, or finally, administrative records, especially those of municipalities. If data are available only for certain regions similar procedures may be applied but centred on the missing regions. In the last case, the question to be answered concerns the way in which the units included in the survey have been chosen. If the choice has been based on some sampling techniques and it is accepted that the sample is representative of the universe, the survey figures can be blown up in order to arrive at totals representing the universe, that is the nation. The type of sampling used will indicate how the process of blowing up should be carried out. On the other hand, if the units recorded have not been chosen systematically and no other information is available to substitute or complement the data, it must be accepted that the estimate will represent a crude approximation, an unavoidable expedient in the circumstances given and hopefully a step on the way to more reliable statistics.

b) *Censuses and surveys of trade and services*

229. Censuses and surveys of trade and services enumerate economic activities which comprise the majority of working women and more so of women working on own-account.

230. Originally they were part of industrial censuses, but today most countries conduct these inquiries separately. Notwithstanding, there exist, from the point of view of the user, many similarities between them and much of what has been said above on the characteristics, usability and shortcomings of industrial censuses and surveys is also applicable to trade and services inquiries.

231. The activities falling within the scope of trade and services are shown in Annex I under the divisions 50, 51, 52, 55, 60, 61, 63, 65, 70, 71, 72, 74, 85, 90, 92 and 93.

232. Although it is not the task of the present analysis to produce reports on inquiries on trade and services, different types of data with figures originating in such censuses and surveys will have to be combined. In order to be able to do just that, a knowledge of the definition and contents of each division and group within the classification is necessary, especially in those groups which are broad in scope and harbour a significant number of own-account enterprises owned by women. The most important of such groups are those of wholesale and retail trade.

233. From the definitions given for them in ISIC the following summaries can be extracted: wholesale trade is the resale (sale without transformation) of new and used goods, or acting as agent in buying merchandise for or selling merchandise to persons or companies. The principal types of businesses included are merchant wholesalers, merchandise and commodity brokers, commission merchants and agents. Also included are scrap metal, waste and junk dealers and yards; and retail trade is the resale of new and used goods to the general public, for personal or household consumption or utilization, by shops, department stores, stalls, mailorder houses, gasoline filling stations, retail motor vehicle dealers, hawkers and peddlers, etc. Most retailers take title to the goods they sell but some act as agents for a principal and sell either on consignment or commission basis.

c) *Retail stores surveys*

234. In some countries there exist more-frequent-than-annual surveys on retail stores based on a stratified sample of stores usually subdivided by kind of economic activity and size and presenting data on main characteristics and volume of sales. Whenever such surveys exist and there is the possibility to separate those operated on a small scale and owned by women, they can be consulted or data on changes in the short run that cannot be obtained from other sources.

d) *Surveys of artisans and handicraft activities*

235. Surveys on artisans and handicraft activities provide useful information on a type of economic activity poorly represented in more general inquiries. They usually include social and economic aspects in great detail. As to sex, there are two possibilities: either this distinction is included in the design of the inquiry or, if this is not the case, one can deduce the sex from the type of activity. As an example of such a survey, which shows data separately for women and men, a survey that was designed some years ago for the First Five-Year Plan of Burkina Faso is shown.

236. It presents tables separately for volume of production, its value and time worked. The layout of the tables is as follows:

Volume of production

Type of activity	Number of artisans	Name of product	Units	Production per capita	Total production
(1)	(2)	(3)	(4)	(5)	(6)
		Female artisans			
-------	--------	-------	------	-------	-------
-------	--------	-------	------	-------	-------
		Male artisans			
-------	--------	-------	------	-------	-------
-------	--------	-------	------	-------	-------

Value of production

Name of product	Quantity produced	Market price per unit	Total market value
(1)	(2)	(3)	(4)
---------	-------	------	------
---------	-------	------	------

*

Time worked

Artisans (number) (1)	Number of months worked (2)	Average number of days worked per month (3)	Number of days worked during year (4)
		Women	
------	--------	-------	-------
------	--------	-------	-------
		Men	
------	--------	-------	-------
------	--------	-------	-------

237. Although part (b) of the table does not present a differentiation by sex, it can be established easily as columns 1 and 2 of this table correspond to columns 3 and 6 of part (a).

238. The instructions present a list of economic activities to be included, such as spinners, weavers, blacksmiths, potters, cobblers, clothes cleaners, producers of doughnuts, soumala, karité butter and others and remind the enumerator not to forget modern artisans such as those who construct wells, those who repair bicycles and the like.

e) *Market stalls surveys and records*

239. The difficulty to penetrate statistically the complex activities in the informal sector and the role played in those activities by women has led to the creation of new types of inquiry designed especially for that purpose. One of these is the survey which focuses on women selling from market stalls in popular markets. It is designed so that it can be carried out with a minimum of resources and be foolproof at the same time. What follows is based on the market stall survey as was proposed for The Gambia in 1988. Because of its simplicity it can be easily replicated elsewhere or without difficulties be adapted to specific local conditions.

240. The sample is not a systematic but a random sample. The enumerator (tax collector) can proceed as he always does, the only change is that every time he delivers a ticket, he fills in the questionnaire form answering the questions on sex, fee paid, type of merchandise or service. When he arrives at person number 20, that is, when he arrives at the bottom of the page, he asks the person who is paying the tax (and this person only, independently of how many are present in the stall) the additional questions. The first additional question is whether he(she)

is the owner of the business (that is, of the stall, canteen or of whatever he(she) is offering in the market); or a family member of the owner; or an employee; or a partner in the business (if more than one partner is present, the one who paid the fee is the one who should be registered in the questionnaire); or a member of a co-operative. The remaining questions are self explanatory, the enumerator only has to check yes or no.

241. The tax collector does not need to change in any way his usual itinerary. The fact that the filling of the questionnaire accompanies the delivery of the ticket assures that there will not be neither gaps nor duplications, even if more than one tax collector is working in the same market, as nobody will pay for more than one ticket. This implies that the order in which the stalls will be visited by the tax collectors is of no importance at all; the numbers on the questionnaire reflect merely the order in which the tickets have been delivered and not the location of the different stalls.

242. The questionnaire and accompanying instructions are shown below.

Sex	Fee Basis	Amount	Description of merchandise or service
1 Man__ Woman__	Monthly	_____	_____
	Daily	_____	_____
2 Man__ Woman__	Monthly	_____	_____
	Daily	_____	_____
3 Man__ Woman__	Monthly	_____	_____
	Daily	_____	_____
4 Man__ Woman__	Monthly	_____	_____
	Daily	_____	_____
5 Man__ Woman__	Monthly	_____	_____
	Daily	_____	_____
6 Man__ Woman__	Monthly	_____	_____
	Daily	_____	_____
7 Man__ Woman__	Monthly	_____	_____
	Daily	_____	_____
8 Man__ Woman__	Monthly	_____	_____
	Daily	_____	_____
9 Man__ Woman__	Monthly	_____	_____
	Daily	_____	_____
10 Man__ Woman__	Monthly	_____	_____
	Daily	_____	_____
11 Man__ Woman__	Monthly	_____	_____
	Daily	_____	_____
12 Man__ Woman__	Monthly	_____	_____
	Daily	_____	_____
13 Man__ Woman__	Monthly	_____	_____
	Daily	_____	_____
14 Man__ Woman__	Monthly	_____	_____
	Daily	_____	_____
15 Man__ Woman__	Monthly	_____	_____
	Daily	_____	_____
16 Man__ Woman__	Monthly	_____	_____
	Daily	_____	_____
17 Man__ Woman__	Monthly	_____	_____
	Daily	_____	_____
18 Man__ Woman__	Monthly	_____	_____
	Daily	_____	_____
19 Man__ Woman__	Monthly	_____	_____
	Daily	_____	_____
20 Man__ Woman__	Monthly	_____	_____
	Daily	_____	_____

In relation with this business, are you?

Owner__ Family member__ Employee__ Partner__ Member of co-operative__Other__

Did you buy the merchandise you are selling from others? YES__ NO__

Is this merchandise produced by you or your family? YES__ NO__

Do you work here alone? YES__ NO__ If no, give N°. of family helpers __
N°. of apprentices __
N°. of employees __
N°. of partners __

INSTRUCTIONS TO FILL IN THE QUESTIONNAIRE

The questionnaires will serve the purpose of counting the number of women and their proportion within the total number of vendors in the markets.

The enumerators may be the tax collectors under the direction of the Market Master. Each one of them can fill the questionnaires when collecting the tax fee; this procedure ensures that all vendors will be counted only once and that all will be included, as the tax collector gives a ticket to each one.

Each questionnaire registers 20 interviews and the last trader interviewed in each form will be asked the additional questions at the bottom of the page.

The sex of the person who is paying the tax should be shown by a check in the corresponding column.

The question on Fee basis and Amount, in the next column, refers to the period covered by it; the trader may pay it either monthly or daily; the answer will show the amount paid and shall be registered on the corresponding line of the questionnaire. In case the trader pays both, the corresponding amounts will be registered in each line.

The description of the merchandise or service has two lines in the questionnaire, to allow for clarity in the answer, to include items such as the following: 1) fresh fruit, 2) vegetables, 3) grains, 4) spices, 5) palm oil, 6) fresh fish, 7) dried or smoked fish, 8) meat, 9) other food items (sugar, salt, tinned food, tea, coffee, milk, bread, biscuits and sweets, cooked meals, bottled drinks); 10) household goods (pots, pans, basins, cutlery, plates, soap, matches, candles, baskets, rags); 11) toiletries (toothpaste, shaving cream, razor blades, perfume, cosmetics, products for personal care); 12) textiles; 13) clothes (new and second-hand); 14) dress accessories (ties, belts, hats, handkerchiefs, caps); 15) footwear; 16) watches, glasses and jewelry; 17) hardware (nails, nuts, bolts, wire, tools, locks, electric wire and goods, spare parts, motors, paint, building supplies, ropes, fishing supplies); 18) electrical appliances and repairs, including cassette tapes; 19) wood (timber, firewood); 20) tourist goods (tie and dye fabrics, clothes, wood carvings, leather goods, trinkets, postcards, curios); 21) miscellaneous (picture frames, books, magazines, tires, junk); 22) tailors and tailors supplies; 23) workshops (carpenters, furniture makers, blacksmith, mattress makers, boat repair shops; 24) financial services (money changers, money keepers); 25) scribes; 26) restaurants and canteens. The items inside the parentheses are examples to give an idea of what is included in each one of the 26 categories, which will preferably be presented as a list to facilitate the reading; but the enumerator is not expected to follow them strictly, as they serve simply as reminders; what is needed is a clear description of the merchandise or services traded, starting with the main items. In case the vending unit sells various items and the two lines are not sufficient, the enumerator can continue on the back of the form, and must indicate the number of the corresponding interview as it appears in the first column on the front side of the page.

243. This research should be carried out in one day for each market.

244. A word of caution on the above procedure. The use of tax collectors to obtain information from market women/men in Africa will usually introduce biases in the data collected. However, in this case, some of the answers are easily verifiable by the tax collector. The choice of the twentieth (i.e. last) person on each questionnaire for the administering of the additional questions could also render the sample

non-random since the choice of that person can be manipulated by the tax collector.

f) *Special surveys of the Informal Sector*

245. In some African countries, special surveys on the informal sector are sometimes carried out. In many cases, they form part of surveys on household economic activities. Thus non-household informal activities are excluded. Information is usually collected on:

- Number of household members engaged;
- Number of non-household employees;
- The value of fixed assets and stocks;
- Regular business expenses;
- Capital expenditures;
- Current expenditures;
- Income.

246. In surveys which are not based on households, the establishment has been used as the unit of inquiry - Some of these surveys have been conducted by the ILO. Others have been carried out by national research or statistical organizations. These surveys have for example, for the manufacturing sectors enquired into number of days or hours worked per worker, the amount paid for the main raw materials purchased and the units of manufactured products during a specified reference period. Questions have also been asked on the characteristics of the entrepreneur and on the quantity of goods and services produced in a month.

g) *Records of Chambers of Commerce and trade associations*

247. Chambers of Commerce and Trade Associations maintain card files of their associates or members and these files can be of great help. The scope of information that can be secured from them will vary in accordance with the details included in the files. There will always be the name and address of the enterprise (very useful in case they need to be contacted for additional information). They will also show the kind of activity (although usually very broadly formulated, so that one either must guess the precise type of activity or find it out through additional inquiries). Data on number of employees and volume of transactions will be found less frequently. It must be kept in mind that these are private, not public sources and might be considered of a delicate nature, so that special authorizations will be needed to get access to them. The advantages of these sources lie in the fact that often they will be more up-to-date than other sources, while the disadvantages are the difficulties to select out of the total the small enterprises (which might be badly covered) and those owned by women.

248. Chambers of Commerce are not usually the source of informal sector information in Africa. However, trade associations like Market Women's Association have invaluable information. The problem is whether they will disclose their information to outsiders. Researches will have to employ all their powers of persuasion to enable them to obtain the information

h) *Bureaux for medium and small business enterprises*

249. Records of bureaux for small and medium enterprises are another potential source of valuable information from institutions created to be of assistance to small and medium enterprises. In order to comply with their task, they collect from the applicants many data precisely of the nature that are of interest for the present purpose. Not all their applicants fall into the category of informal sector, but a certain number do and on these the information available will usually be very detailed and of a kind that cannot be easily collected elsewhere. Probably the individual documents have not been tabulated, which is an advantage as in the course of tabulating, details of significance for the present analysis, would have been omitted. The examination of individual records will, however, require special authorization.

250. There is probably no country where there do not exist departments or bureaux that concern themselves with small and medium enterprises. Most of them are public institutions, but in some cases there are also private ones. Their archives can be a source of information. Their weakness is the degree of coverage, which can sometimes be quite satisfactory, especially in those circumstances where some advantages can be expected from being listed in the roster. On the other hand they usually present a very incomplete picture of the enterprise including sex of owner, number of people working, type of economic activity and financial data.

i) *Central business accounts bureaux*

251. In some countries enterprises have to submit copies of their accounts, established in accordance with officially laid down standards, to a national institution in charge of centralizing the business accounts of the nation. In such circumstances it is worthwhile to find out whether that information can be used for the present analysis. While most of the efforts of such bureaux will be directed to collecting accounts and balances of big enterprises, they also receive some information on small-scale and own-account enterprises. Even if such records do not cover the whole universe, they might be very useful as a point of reference for making estimates of sales, costs and value added in small units. When such information is used for blowing up to national totals, one should be aware of the possibility that the data of the enterprises thus obtained might be different from those which have not reported to these authorities.

j) *Special reports on specific trades and services*

252. Almost always one will find some special reports on specific trades or services, usually prepared with a view to planning decisions to bring assistance to such activities. The statistical part of such reports will vary in importance but frequently may contain detailed data on the activity in question. Whether they present any disaggregation by sex or not will depend on the importance of female participation in each activity; where it is considerable one can expect to find men's activities shown separately from those of women.

k) *Municipal records on hawkers and peddlers*

253. More often than not, metropolitan and municipal authorities have some kinds of records on persons performing these activities. In most cases there will be no data on the volume of their transactions, but such records can be used to estimate the number of persons engaged in itinerant trade and how many women there are among them.

2. Main characteristics enumerated

254. The sources reviewed above cover many different aspects of their relative subjects. Not all are of interest for the present purpose. In the following paragraphs those which are important for the present objective are mentioned.

255. In the first place there are those classifications which have already been mentioned in connection with demographic and labour statistics, such as ISIC, ISCO and ICSE and the data on hours worked and income.

256. The category of income however will, in industrial, trade and services statistics and the other sources that have been presented in connection with them, usually be much broader than in demographic and labour statistics, where it refers mainly to wages and salaries. In the case of the former one can expect data on production, sales, inventories, prices, labour and other costs and gross and net income of the enterprise.

257. If these data were to be related directly to national accounting aggregates, it should be taken into account that these latter are not necessarily the sum total of individual figures. For present purposes, however, the figures from these sources will be used indirectly in order to construct the specific aggregates desired.

258. The process that transforms the basic data of the sources mentioned above into the aggregates wanted can be described as follows. What is needed is the value added. The basic procedure to arrive at value added with the data given is to determine first the value of total output, as the sum of the value of sales, plus or minus changes in inventories. Whenever possible one should also examine whether part of the production of the period had been consumed within the producing unit. If this is known, its value should be added in for calculating the output.

259. The second step is to determine the cost of production. This will include the cost of the materials used up in the reference period, including auxiliary materials, electricity and any services bought and used in production.[6] Normally, in the case of own-account units, one

[6] The collection of data on the cost of purchased business services presents difficulties and many countries omit them in their census enumerations. On that subject see (18).

would not expect to find any amount of salaries paid out, although exceptionally there might appear a sum paid out to occasional non-regular salaried workers. While it would be considered as a cost of production from the point of view of the enterprise, the amount should not be subtracted from output.

260. The present task is to arrive at value added starting from the information found in the tables of the above-mentioned sources. This final step is described in the Recommendations for the 1983 World Programme of Industrial Statistics: "Respondents do not report value added but rather the items required for the calculation of value added. Value added in the census concept is defined as the value of output, less the cost of materials and industrial services used." The difference between the census concept of value added and that of the national accounts are the non-industrial services and the consumption of fixed capital or depreciation charges.

261. In this way, by deducting costs as defined above from the output as described above, value added is obtained, provided, of course, this specific set of industrial statistics shows a distribution by size classes where one of the classes refers to establishments without regular salaried workers. What kinds of tables one may expect to find can be illustrated by the list recommended in the publication already mentioned (those that can be used here are extracted):

Principal indicators of industrial activity, classified by industrial activity and establishment size class

- Establishments by employment size class
- Employment and earnings, classified by industry
- Value of stocks at the beginning and end of the year
- Cost of materials and industrial services used
- Cost of fuels purchased
- Cost of non-industrial services
- Value of output in producer's prices
- Receipts for non-industrial services
- Value added and its composition.

262. If the table on employment and earnings shown above is sex specific, the source will prove of great help; if not, it will be necessary to introduce in the tables figures referring to sex taken from other sources.

C. Statistics on households: main sources

1. Population censuses and surveys

263. Information on households will be found in population censuses and surveys, which are mainly centred on demographic characteristics, but still will show some economic information. As has been said previously

such data provide an invaluable basis for constructing a frame for sample surveys.

264. The content of population censuses and surveys has already been examined in search of information on the labour force and data that can help to calculate the income of women in the labour force. But these censuses and surveys contain also other kinds of information which concern households and persons who by present international standards are considered outside the labour force. At the beginning of this chapter it was indicated that in addition to estimates on the employment and income creation by women in accordance with present official international standards. It is essential to show what can be done to measure that kind of work done by women which by present standards is labelled as uneconomic or non-productive.

265. The activities of women outside of the official production boundary refer to her role as homemaker. Her role in procreation remains outside the scope of the present Handbook.

266. Censuses and surveys will show the number and composition of households in the country. Even if they do not show much more then that, such figures are essential in order to blow up figures from more specialized inquiries, such as time-use studies and household sample surveys.

2. *Household sample surveys*

267. While censuses provide the over-all figures on the number of household in the country, household sample surveys are the tool to investigate detailed economic, social and cultural characteristics of the population and its various segments. This is especially true for women's activities. Household sample surveys use a wide menu of subjects, among which the Handbook of Household Surveys mentions the following: demographic characteristics; income, consumption and expenditure; employment and work; food consumption and nutrition; agriculture; health; education and literacy and culture.

268. But household surveys are of course not limited to these topics only. They can take up any other topic that can be handled by means of sample surveys of households and for which there exists justified demand. The above mentioned Handbook points out that among those fields that have assumed major importance in household surveys is the role of women in development. The design of such surveys necessarily has to be worked out by the interested users. It is to be hoped that the theme of participation of women in development will soon be added to the list of subjects recommended for specialized household sample surveys.

269. In the total population, persons living in households are distinguished from persons not living in households. Most household sample surveys cover only the first group, but this is of no consequence for the present purpose, since women in convents, prisons or other institutional households would not be considered as part of the informal sector.

270. With respect to presently available surveys, the first three mentioned above are of special interest, especially those concerning employment and work. This will be discussed more in depth, but it will prove quite useful to look at any other survey of this type that might be available in order to examine in how far it can contribute to improve the information needed.

271. Demographic surveys vary in the detail and complexity of information presented. Most frequently one can find data on general demographic characteristics and some data on relevant socio-economic characteristics. These latter may include literacy, education, status, economic activities and income.

272. Income, consumption and expenditure surveys are possibly the most traditional of household surveys. In the past they were used mainly to furnish weights for consumer price indices, but have come since to serve many other purposes. However, they have not always adapted themselves to the new requirements and, for example, do not present always separate information by sex.

273. Neither does the definition of income used in household sample surveys on income, consumption and expenditures coincide completely with that used in the national accounts. Items of income which do not appear in such surveys but do figure in the national accounts must be added in when using income figures from household surveys for estimating participation in national accounts aggregates. One such item is employer's contribution in respect of their employees paid to social security. Such amounts would not be used in the present estimates directly (as there are no such payments in the informal sector) but must be taken into account whenever salaries are used as reference for average incomes of persons working in the informal sector.

274. Data from these surveys can also be used to compare figures on income with those on expenditure for a gross check on tentative results.

275. The great flexibility of household surveys facilitates the inclusion of questions adapted to specific circumstances. This is of special significance in areas where women perform activities of importance for the household, but which do not exist or are of secondary importance in more urbanized areas. Such activities though they occupy long hours of work among women, are easily lost sight of unless questions are formulated in great detail. For those who wish to use them in building up more general aggregates, as is the present case, a knowledge of local circumstances is necessary as estimates too must be made in considerable detail. The following example shows some of the questions included in a questionnaire addressed to women in the framework of a survey, already referred to above, for the First Five-Year Plan of Burkina Faso:

Questions concerning gathering activities

a) How many times per week have you gathered:

karité? _____
nere? _____
firewood? _____
other? (name it) _____

b) Indicate the quantity of each product you gather each time.

c) Indicate at what distance you gather each product.

d) How much time does each gathering take?

Questions concerning the household budget

How much of the following products did you buy last year:

millet,	__	soap	__	pepper	__	samara	__
sorghum	__	vegetables	__	cotton	__	canaris a dolo	__
karité nuts	__	soumbala	__	textiles	__	other canaris	__
karité butter	__	salt	__	kerchiefs	__	tobacco	__

How much of each product has been consumed?

How much time do you spend each day to prepare meals for the family?

How often do you go to the market?

How many times a day do you go to fetch water?

276. The preceding paragraphs show the wide range of topics that can be covered in household sample surveys. In addition household sample surveys have been carried out on questions focusing on health, culture, ethnic groups, minority populations, the poor, and so on. The specific characteristics they present for the subject they investigate can sometimes contribute to a better understanding of women in the informal sector.

3. Labour force surveys

277. This section examines the kind of household sample survey that will most frequently be the major source of information on the present subject, namely labour force surveys. Fortunately labour force surveys have been carried out in many African countries and in a few countries there exists a whole series of such surveys so that estimates can be prepared for several years and the changes between different years can be observed.

278. Usually the final tables which are the results of such surveys will be used. Therefore examples of tables as they usually are published will

be shown here. Unfortunately there are many different kinds of presentations and coverage in the final tables. In order to understand unambiguously the meaning of the data presented in these tables it is often necessary to consult the questionnaires from which the tables originate. This shows also what information and especially what kinds of cross-classifications, although available in the questionnaires, have nevertheless not been tabulated.

279. These are the tables most frequently published:

- Population by age, sex and regions;
- Population (usually 5 years and over) by level of education;
- Economically active population by sex and regions;
- Economically active population by employed and unemployed and sex;
- Employed population by employment status and sex;
- Employed population by sex and level of educational attainment;
- Employed population by occupational groups and sex;
- Unemployed population by age group and sex;
- Unemployed population by level of educational attainment and sex;
- Income receivers' income;
- Incomes by source of income.

280. Even if they do not appear in the tables, questions are usually included in the questionnaire which permit the separation of those who were engaged in homework duties, to distinguish between regular and casual paid employees and between main occupation and secondary occupation, to give the number of days actually worked and to separate own-account workers from unpaid family workers. To obtain these characteristics from labour force surveys may be the essential condition in those cases where no other source to fill in the gaps can be found. This refers not only to information collected in the questionnaires, which is missing in the tables published but also to cross-classifications of published characteristics. Familiarity with the questionnaire is therefore essential. Some countries are now including questions concerning small enterprises. A number of employees is set as a limit. This may be the only way to collect data for the whole informal sector as, until now, it is not considered in the standard recommendations.

D. Time-use statistics

281. In reviewing population and industrial statistics the importance of figures on time worked has already been referred to. There the information obtained came from statistics on enterprises. Time-use studies are different in their coverage as well as the technique they employ.

282. These are studies or surveys mainly based on households which concern themselves with the allocation of time of the members of a household. In the last 25 years a number of such studies have been undertaken in developed and developing economies but very few of these

have been carried out in Africa. Their use in estimates of the work of women in the informal sector has been described in these words:

> Time budgets or time use studies provide a unique source of information on the participation of women in the informal sector. They cover productive activities both outside and inside the household, they can capture activities of short duration which are characteristic of women's various activities in the informal and domestic sectors, and whether one is performing productive activities is not decided on the basis of one or two questions about primary or secondary activity but emerges from a detailed activity listing, thus overcoming the cultural perception that women are engaged only in housework and that all other tasks are of minimal importance...
>
> Two main interrelated sets of concerns have been investigated in these studies. One concerns the utilization of human resources in the household, particularly of women and children, and the second, improvement in the measurement of employment, unemployment and underemployment." (33)

283. For the present purpose, such studies, where available should be used to complement statistics on employment given in terms of persons, substituting number of persons by hours worked.

284. In addition this information should be used for estimating and valuing housekeeping activities in the framework of expanded national product.

VI. DATA PRESENTATION

285. The preceding chapters have examined sources of basic data and techniques used to transform them into aggregates that show the participation of women in the informal sector in terms of development indicators, employment and value added. This chapter shows how the results obtained can be presented, that is, what tables should be prepared. Some of the tables may already exist but possibly not exactly in the format desired. Other tables can be prepared by the statistical authorities upon request and those shown in this chapter might be very useful to show what exactly is needed. In this connection the adherence to established standards is very important. It is certainly of interest to present the results in a form familiar to all users of statistics, i.e., to use established norms and standards as far as possible; but where they are insufficient to show the phenomena it is desired to illustrate, new types of presentation should be employed.

286. Because the objective is to examine the situation of women in the light of the over-all situation, that is that of both sexes, and that prevailing in the informal sector compared with that in other sectors, it will be convenient, in addition to the results obtained with the procedures presented earlier, to select those statistics and aggregates that can be of use in these comparisons.

287. Such a selection can be broad or narrow, depending on the type of analysis contemplated even when the analysis is centred solely on economic topics, the fact that economic situations are influenced by a variety of non-economic factors must be considered.

288. The tables presented in the following pages represent a selection of the type mentioned above. It will not always be feasible to present all of them; much will depend on the availability of basic data, or, more often, on the cross-classifications that can be obtained.

289. What basic data can be obtained ready-made and what has to be tailored to present needs by the compilers will vary in accordance with the statistical situation in each country. The most frequent situation is that data "exist", but that they are buried in the original questionnaires and have not been tabulated. Some of the tables presented in this chapter might have already been produced by the statistical authorities and can simply be reproduced. Other tables will depend on the capability to obtain cross-classifications of existing data that have not been tabulated in that form. In that case, these tables should be helpful in showing the statistical authorities what exactly is needed from them. And still others will require much work in order to arrive at the figures needed.

290. Because of these circumstances, the tables given in the following pages evolve from a simple presentation with one or two variables to more complex presentation including more variables in the same table. In this way there is a certain repetition, the same phenomenon being presented first in its most fundamental aspects only, and in subsequent tables showing its additional dimensions. How far to go in this will depend again on availability of cross-classifications in each situation.

291. There is however still another feature of this procedure. Independently of the possibility to present all possible phenomena in the same table, it might be necessary to keep each table as simple as possible for the sake of the readers. This should be the overriding principle: while for the purpose of scientific analysis all necessary information should be accumulated, the type of presentation should be adapted to the understanding of the readers to whom the publication is addressed.

292. Even for detailed analysis collapsing of certain classes might be useful. For example, when considering the importance of informal productive units within manufacturing activities, it might be advisable to include in the comparison manufacturing enterprises only, or enterprises in manufacturing, trade and services, omitting agriculture from the comparison.

293. In case agriculture is included in comparisons, it is suggested to separate subsistence agriculture from the rest.

294. Many statistical documents present data separately for rural and urban regions. There are no strict lines of delimitation between these two classes and the concepts used vary from country to country. They can only be taken as approximate indicators.

295. The classification schemes shown in the tables refer to the International Standard Industrial Classification (ISIC, Rev 3), the revised International Standard Classification of Occupations (ISCO-88), the International Classification of Status in Employment (ICSE) and the International Standard Classification of Education (ISCED). Only the major divisions or tabulation categories are shown, mainly due to the space available. In presenting the tables it is recommended to show more detailed classifications in those divisions which are of special interest from the point of view of employment of women in the informal sector in the specific conditions of each country. For example, hotels and restaurants in countries where tourism is an important activity and where there are boarding houses or other own-account units headed by women.

296. The main concepts and classifications used in these tables have been reviewed in chapters II and IV; those not reviewed are discussed in the notes to the tables at the end of this chapter.

297. While those classifications that are of special interest should be presented in more detail, those which are shown only for the purpose of comparison could be collapsed (merged) into one single category, possibly named "other". This should be done in those cases where the composition of the "other" category is not of interest.

298. In determining what kinds of statistics should be produced in order to measure the role of women in the informal sector, one must look at the problems which arise and the questions that are being asked. This implies that in addition to figures which show the presence of women in that sector, as much statistical data as is feasible must be collected on the circumstances that might explain the situation, show existing trends and facilitate planning and policy decisions. Therefore it will be necessary to extend the coverage to both sexes and even, where necessary, beyond the informal sector.

299. In the first place statistics are needed on population by age and sex, education and activity status, and on households. These are covered in tables 1-5. The age distribution is further examined in connection with the informal sector. Table 6 presents the participation in the labour force of different age groups as own-account workers and unpaid family workers.

300. Several tables also show percentage distributions. They indicate the degree of concentration and specialization.

301. Secondly there are tables showing three characteristics of the labour force by sex: kind of economic activity, occupation and status in employment, first in simple tables and then in cross-classifications. These are tables 7-12. They answer questions about the relation between employment of women and men.

302. In order to be more precise concerning the degree of participation in the labour force, data on time worked are essential. Such statistics can be organized by kind of economic activity or by occupation or by status in employment, but cross-classifications enhance enormously the usefulness of such data. Statistics on time worked are collected in tables 13-17.

303. The next step is to look at earnings of the different participants in production, preferably classified in the same way as statistics on time worked. This appears in tables 18-22.

304. The role of education is examined next. Again it is analyzed in connection with kind of economic activity, occupation and status in employment, as shown in tables 23-26. Table 25 is useful in addressing the question whether there is "underemployment" in the case of the informal sector. In addition the educational level of the unemployed population is examined in table 27.

305. In order to get an idea on the dynamics of the informal sector in terms of growth or decline, one has to examine employment figures through time and compare these movements with what happens in the rest of the economy. This is done in tables 28-29.

306. If units occupying a small number of employees are included in the enquiry, the size of such units measured by the number of persons employed must be ascertained. This aspect is covered in table 30, which shows the number of productive units of differing sizes and the total number of workers in each size group.

307. Tables 31 and 32 are intended to depict differences by gender between literates and illiterates in their distribution among ISIC tabulation categories and ISCO major groups.

308. At the end comes the examination of production. This is best done by estimating value added (gross domestic product or GDP) created by different productive units, classified by kind of economic activity. (This procedure is a simplification. It overlooks the fact that "female" productive units or economic enterprises or operating units, as explained in the text, might have male unpaid family workers and "male" productive units, female unpaid family workers. It implies that these two differences cancel themselves out.) Then, GDP created in formal and informal productive units is compared. In this comparison there is no sub-division by sex as no such data exist for the formal sector. The comparison is carried out in table 33.

309. After total GDP for each kind of activity comes GDP (value added) per person employed, dividing these GDP figures by the corresponding employment. This is done by sex for the informal sector (table 34) and without classification by sex for the formal sector (table 36). Then the per capita figures in both sectors can be compared.

310. Many questions have been posed concerning the stability of informal productive units and especially those in the hands of women. To answer them it is necessary to produce statistics on the age of informal productive units at a given time. This is done in table 37 which shows the age of such units classified by kind of economic activity and the sex of heads of the productive units.

311. It is commonly assumed that value added per worker is highly correlated with capital per worker. As capital varies considerably between formal and informal productive units (and between productive units in the hands of women and of men), data that shed light on these aspects are crucial in appraising the status of women in the informal sector. Table 36 takes up this relation in the following way: The statistical units are the productive units in the informal sector, classified by kind of economic activity and sex of head. They show the capital/labour ratio in four classes. The capital/labour ratio in each kind of economic activity and each sex is calculated as the value of the

fixed capital used in production (tools, shelter, furniture, machinery, equipment, vehicle, etc.) divided by the number of persons employed in production. As can be seen this table requires information that in most cases will be available only through ad hoc inquiries. Nevertheless, in this or similar ways it has been prepared in several countries.

312. Some words about the terminology used in the tables are appropriate. Sometimes the reader will find different terms used in the formats that appear in the pages that follow, referring to what is basically the same concept. This is due not so much to avoid repetition of the same word but so as to use as far as possible expressions that are used in real life situations. On the other hand, however, terminology is needed that allows clear delimitations and does not leave any doubt where one phenomenon ends and the other begins, otherwise it would be impossible to measure them with any degree of reliability. For example, there are the words "GDP" (as in table 34) or "value added" or "earnings" (as in table 25) or "income".

313. The relation between product and income on the national scale is treated in Chapter II, where total national income, total national product and total national expenditure are compared. It can be seen there that the values of product and of income are the same and that total income is divided between the part (salaries) that salaried employees receive and the remainder, which is called operating surplus and is redistributed later as rent, interest and profit. These incomes are also called earnings.

314. It is said that the operating surplus of an informal unit includes also the income from the "labour" of the employer, own-account worker and unpaid family worker and, because of that, proposals have been made to create a specific category of income under the term "mixed income".

315. In the tables not dealing with GDP, the new ISIC and ISCO have been used whenever appropriate. However for Tables 33 - 36, the previous classifications have been retained. This has been done because the revision of the SNA has not yet been completed and most African countries will continue to produce the accounts using the previous classifications. Thus at least for a transitional period demographic, social and labour force data in some countries will be produced using the 1988 classifications while for GDP data the 1968 version will be retained. For such countries, it is necessary to prepare a conversion table linking the new classifications to the previous one to help analysts to use data based on either classification.

316. For ISIC - 68, the major divisions of kind of activity are;

- Agriculture, hunting, forestry and fishing;
- Mining and Quarrying;
- Manufacturing;
- Electricity, gas and water;

- Construction;
- Wholesale and Retail trade and restaurants and hotels;
- Transport, Storage and Communication;
- Financing, Insurance, Real estate and business services;
- Community, Social, and personal services.

For ISCO - 68, the major occupational groups:

- Professional, technical and related workers;
- Administrative and managerial workers;
- Clerical and related workers;
- Sales Workers;
- Service Workers;
- Agriculture, animal husbandry and forestry workers, fishermen and hunters;
- Production and related workers, transport equipment operators and labourers;
- Workers not classified elsewhere.

317. In the last part of this chapter some additional technical notes are given concerning the different tables. The list of tables and table formats now follow.

LIST OF TABLES

LIST OF TABLES (continued)

LIST OF TABLES (continued)

Table 1. Population by sex and age
Year ____

A. Number

Age*	F	M	F/M ratio
0 - 14			
15 - 24			
25 - 44			
45 - 59			
60 +			
Total			

B. Percentage

Age group	Both sexes	F	M
0 - 14			
15 - 24			
25 - 44			
45 - 59			
60 +			
Total	100.0	100.0	100.0

* See (34), p. 30, for an explanation of this classification.

Table 2. Households by size and sex of head

Size	Sex of head		
	F+M	F	M
		One parent	Other
1			
2			
3			
4			
5			
6			
7			
8			
9			
10 or more			

Table 3. Population 15 years and over by sex, educational attainment and age
Year ____

A. Number

Level attained	Age			
	15 - 24	25 - 44	45 - 59	60 +
No schooling				
F				
M				
F/M				
Entered Primary				
F				
M				
F/M				
Completed primary				
F				
M				
F/M				
Entered secondary				
F				
M				
F/M				
Completed secondary				
F				
M				
F/M				
Entered or completed tertiary level Institution				
F				
M				
F/M				

B. Percentage distribution by level attained

Level attained*	Both sexes	F	M
No schooling			
Entered primary			
Completed primary			
Entered secondary			
Completed secondary			
Entered or Completed Tertiary level Institution			
TOTAL	100.0	100.0	100.0

* Highest level attained

Table 4. School enrolment
Year ____

A. Number

	F	M	F/M
First level			
Second level			
Higher levels			
TOTAL			

B. Percentage distribution by level

	Females	Males	Total
First level			
Second level			
Higher levels			
TOTAL	100.0	100.0	100.0

Table 5. Economically active and not economically active population by sex and age
Year ____

A. Number

Age	Economically active				Not economically active			
	Total	F	M	F/M	Total	F	M	F/M
15 - 19								
20 - 24								
25 - 44								
45 - 59								
60 +								
TOTAL								

B. Percentage

Age	Economically active			Not economically active		
	Total	F	M	Total	F	M
15 - 19						
20 - 24						
25 - 44						
45 - 59						
60 +						
TOTAL	100	100	100	100	100	100

Table 6. Own-account workers and unpaid family workers by sex and age
Year ____

A. Number

Age	Own-account workers			Unpaid family workers		
	Total	F	M	Total	F	M
15 - 19						
20 - 24						
25 - 44						
45 - 59						
60 +						
TOTAL						

B. Percentage

Age	Own-account workers			Unpaid family workers		
	Total	F	M	Total	F	M
15 - 19						
20 - 24						
25 - 44						
45 - 59						
60 +						
TOTAL	100	100	100	100	100	100

Table 7. Economically active population by sex and kind of economic activity
Year ____

A. Number

Kind of economic activity	TOTAL	F	M	F/M
Agriculture, Hunting, and Forestry				
Fishing				
Mining and Quarrying				
Manufacturing				
Electricity, Gas and Water supply				
Construction				
Wholesale and Retail Trade; Repair of Motor Vehicles, Motorcycles and Personal and Household Goods				
Hotels and Restaurants				
Transport, storage and communication				
Financial Intermediation				
Real Estate, Renting and Business Activities services				
Public Administration and Defence; Compulsory Social Security				
Education				
Health and Social Work				
Other community, social and personal service activities				
Private households with employed persons				
Extraterritorial organizations and bodies				
SUB-TOTAL				
Housekeeping*				
TOTAL				

B. Percentage distribution by kind of economic activity

Kind of economic activity	TOTAL	F	M
Agriculture, Hunting, and Forestry			
Fishing			
Mining and Quarrying			
Manufacturing			
Electricity, Gas and Water supply			
Construction			
Wholesale and Retail Trade; Repair of Motor Vehicles, Motorcycles and Personal and Household Goods			
Hotels and Restaurants			
Transport, storage and communication			
Financial Intermediation			
Real Estate, Renting and Business Activities services			
Public Administration and Defence; Compulsory Social Security			
Education			
Health and Social Work			
Other community, social and personal service activities			
Private households with employed persons			
Extraterritorial organizations and bodies			
SUB-TOTAL			
Housekeeping*			
TOTAL	100.0	100.0	100.0

* See Notes at the end of the chapter.

Table 8. Economically active population by sex and occupation
Year ____

A. Number

Occupational group	F	M	F/M
Legislators, senior officials and managers			
Professionals			
Technicians and associate professionals			
Clerks			
Service Workers and Shop and market sales workers			
Skilled agricultural and fishery workers			
Craft and related workers			
Plant and machine operators and assemblers			
Elementary occupations			
Armed Forces.			
TOTAL			

B. Percentage distribution by occupational group

Occupational group	F	M	Total
Legislators, senior officials and managers			
Professionals			
Technicians and associate professionals			
Clerks			
Service Workers and Shop and market sales workers			
Skilled agricultural and fishery workers			
Craft and related workers			
Plant and machine operators and assemblers			
Elementary occupations			
Armed Forces.			
TOTAL	100.0	100.0	100.0

Table 9. Employed population by sex and status in employment
Year ____

A. Number

Status in employment	TOTAL	F	M	F/M
Employer				
Small enterprises				
Other enterprises				
Employee				
Small enterprises				
Other enterprises				
Own-account worker				
Unpaid family worker				
Member of producers' co-operative				
TOTAL				

B. Percentage distribution by status in employment

Status in employment	TOTAL	F	M
Employer			
Small enterprises			
Other enterprises			
Employee			
Small enterprises			
Other enterprises			
Own-account worker			
Unpaid family worker			
Member of producers' co-operative			
TOTAL	100.0	100.0	100.0

Table 10. Employed population by sex, kind of economic activity and status in employment
Year ____

A. Number

Kind of economic activity and sex	Employer Small	Employer Other	Employee Small	Employee Other	Own-account worker	Unpaid family worker	Member of producers' co-operative
Agriculture, Hunting, and Forestry							
F							
M							
Fishing							
F							
M							
Mining and Quarrying							
F							
M							
Manufacturing							
F							
M							
Electricity, Gas and Water supply							
F							
M							
Construction							
F							
M							
Wholesale and Retail Trade; Repair of Motor Vehicles, Motorcycles and Personal and Household Goods							
F							
M							
Hotels and Restaurants							
F							
M							
Transport, storage and communication							
F							
M							
Financial Intermediation							
F							
M							
Real Estate, Renting and Business Activities services							
F							
M							
Public Administration and Defence; Compulsory Social Security							
F							
M							
Education							
F							
M							
Health and Social Work							
F							
M							
Other community, social and personal service activities							
F							
M							
Private households with employed persons							
F							
M							
Extraterritorial organizations and bodies							
F							
M							
TOTAL F							
M							

Table 10 (cont.)

B. Percentage distribution by kind of economic activity

Kind of economic activity and sex	Employer Small		Employer Other		Employee Small		Employee Other		Own-account worker		Unpaid family worker		Member of prod. co-op.	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M
Agriculture, Hunting, and Forestry														
Mining and Quarrying														
Manufacturing														
Electricity, Gas and Water supply														
Construction														
Wholesale and Retail Trade; Repair of Motor Vehicles, Motorcycles and Personal and Household Goods														
Hotels and Restaurants														
Transport, storage and communication														
Financial Intermediation														
Real Estate, Renting and Business Activities services														
Public Administration and Defence; Compulsory Social Security														
Education														
Health and Social Work														
Other community, social and personal service activities														
Private households with employed persons														
Extraterritorial organizations and bodies														
TOTAL	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table 11. Economically active population by sex, kind of economic activity and occupational group
Year ____

Occupation and sex	Tabulation categories of ISIC
	TOTAL A B C D .....Q
Legislators, senior officials and managers	
F	
M	
Professionals	
F	
M	
Technicians and associate professionals	
F	
M	
Clerks	
F	
M	
Service Workers and Shop and market sales workers	
F	
M	
Skilled agricultural and fishery workers	
F	
M	
Craft and related workers	
F	
M	
Plant and machine operators and assemblers	
F	
M	
Elementary occupations	
F	
M	
Armed Forces.	
F	
M	
TOTAL	
F	
M	

Table 12. Employed population by sex, occupational group and status in employment
Year ____

A. Number

Kind of economic activity and sex	Employer Small		Employer Other		Employee Small		Employee Other		Own-account worker		Unpaid family worker		Member of prod. co-op.	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M
Legislators, senior officials and managers														
Professionals														
Technicians and associate professionals														
Clerks														
Service Workers and Shop and market sales workers														
Skilled agricultural and fishery workers														
Craft and related workers														
Plant and machine operators and assemblers														
Elementary occupations														
Armed Forces.														
TOTAL														

B. Percentage distribution by kind of economic activity

Kind of economic activity and sex	Employer Small		Employer Other		Employee Small		Employee Other		Own-account worker		Unpaid family worker		Member of prod. co-op.	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M
Legislators, senior officials and managers														
Professionals														
Technicians and associate professionals														
Clerks														
Service Workers and Shop and market sales workers														
Skilled agricultural and fishery workers														
Craft and related workers														
Plant and machine operators and assemblers														
Elementary occupations														
Armed Forces.														
TOTAL	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table 13. Employed population by sex, kind of economic activity and time worked
Year ____

Kind of economic activity and sex	TOTAL	Hours worked per week* < 6	6-14	15-21	22-29	30-40	41+
Agriculture, Hunting, and Forestry							
F							
M							
Mining and Quarrying							
F							
M							
Manufacturing							
F							
M							
Electricity, Gas and Water supply							
F							
M							
Construction							
F							
M							
Wholesale and Retail Trade; Repair of Motor Vehicles, Motorcycles and Personal and Household Goods							
F							
M							
Hotels and Restaurants							
F							
M							
Transport, storage and communication							
F							
M							
Financial Intermediation							
F							
M							
Real Estate, Renting and Business Activities services							
F							
M							
Public Administration and Defence; Compulsory Social Security							
F							
M							
Education							
F							
M							
Health and Social Work							
F							
M							
Other community, social and personal service activities							
F							
M							
Private households with employed persons							
F							
M							
Extraterritorial organizations and bodies							
F							
M							
TOTAL							
F							
M							

Table 14. Employed population by sex, occupation and time worked
Year ____

Occupation and sex	TOTAL	Hours worked per week*					
		< 6	6-14	15-21	22-29	30-40	41+
Legislators, senior officials and managers							
F							
M							
Professionals							
F							
M							
Technicians and associate professionals							
F							
M							
Clerks							
F							
M							
Service Workers and Shop and market sales workers							
F							
M							
Skilled agricultural and fishery workers							
F							
M							
Craft and related workers							
F							
M							
Plant and machine operators and assemblers							
F							
M							
Elementary occupations							
F							
M							
Armed Forces.							
F							
M							
TOTAL							
F							
M							

* The categories of hours worked should correspond to the specific circumstances of each country. This is especially true for agriculture, where only a rough estimation is possible.

Table 15. Employed population by sex, status in employment and time worked
Year _____

Status in employment and sex	TOTAL	Hours worked per week* < 6	6-14	15-21	22-29	30-40	41+
Employer							
Small enterprises							
F							
M							
Other enterprises							
F							
M							
Employee							
Small enterprises							
F							
M							
Other enterprises							
F							
M							
Own-account worker							
F							
M							
Unpaid family worker							
F							
M							
Member of producers' co-operatives							
F							
M							
TOTAL							
F							
M							

* The categories of hours worked should correspond to the specific circumstances of each country. This is especially true for agriculture, where only a rough estimation is possible.

Table 16. Employed population by sex, kind of economic activity, status in employment and time worked
Year ____

Kind of economic activity, status and sex	TOTAL	Hours worked per week* < 6	6-14	15-21	22-29	30-40	41+
ISIC Tabulation category A							
Employer							
Small enterprises							
F							
M							
Other enterprises							
F							
M							
Employee							
Small enterprises							
F							
M							
Other enterprises							
F							
M							
Own-account worker							
F							
M							
Unpaid fam. worker							
F							
M							
Member of co-operative							
F							
M							
ISIC Tabulation category B							
Employer							
Small enterprises							
F							
M							
Other enterprises							
F							
M							
Employee							
Small enterprises							
F							
M							
Other enterprises							
F							
M							
Own-account worker							
F							
M							
Unpaid fam. worker							
F							
M							
Member of co-operative							
F							
M							

Table 16 (continued)

Kind of economic activity, status and sex	TOTAL	Hours worked per week* < 6	6-14	15-21	22-29	30-40	41+
Repeat for ISIC Tabulation categories	C, D, E, F, G, H, I, J, K, L, M, N, O, P, and Q.						
ISIC TOTAL							
Employer							
Small enterprises							
F							
M							
Other enterprises							
F							
M							
Employee							
Small enterprises							
F							
M							
Other enterprises							
F							
M							
Own-account worker							
F							
M							
Unpaid fam. worker							
F							
M							
Member of co-operative							
F							
M							

* The categories of hours worked should correspond to the specific circumstances of each country. This is especially true for agriculture, where only a rough estimation is possible.

Table 17. Employed population by sex, occupational group, status in employment and time worked
Year ____

Occupation, status and sex	TOTAL	Hours worked per week* < 6	6-14	15-21	22-29	30-40	41+
ISCO Major Group 1							
Employer							
Small enterprises							
F							
M							
Other enterprises							
F							
M							
Employee							
Small enterprises							
F							
M							
Other enterprises							
F							
M							
Own-account worker							
F							
M							
Unpaid fam. worker							
F							
M							
Member of co-operative							
F							
M							
ISCO Major Group 2							
Employer							
Small enterprises							
F							
M							
Other enterprises							
F							
M							
Employee							
Small enterprises							
F							
M							
Other enterprises							
F							
M							
Own-account worker							
F							
M							
Unpaid fam. worker							
F							
M							
Member of cooper.							
F							
M							
Repeat for ISCO Major Groups 3, 4, 5, 6, 7, 8, 9 and 0.							

* The categories of hours worked should correspond to the specific circumstances of each country. This is especially true for agriculture, where only a rough estimation is possible.

Table 18. Employed population by sex, kind of economic activity and earnings
Year ____

Kind of economic activity	EARNING GROUPS*				
	Group 1	Group 2	Group 3	Group 4	Group 5
	F M	F M	F M	F M	F M
Agriculture, Hunting, and Forestry					
Mining and Quarrying					
Manufacturing					
Electricity, Gas and Water supply					
Construction					
Wholesale and Retail Trade; Repair of Motor Vehicles, Motorcycles and Personal and Household Goods					
Hotels and Restaurants					
Transport, storage and communication					
Financial Intermediation					
Real Estate, Renting and Business Activities services					
Public Administration and Defence; Compulsory Social Security					
Education					
Health and Social Work					
Other community, social and personal service activities					
Private households with employed persons					
Extraterritorial organizations and bodies					
TOTAL					

* Earnings groups might be defined according to national characteristics. They may be related to specific amounts or to a variable such as the minimum salary.

Table 19. Employed population by sex, occupational group and earnings
Year ____

Occupation	EARNING GROUPS*				
	Group 1	Group 2	Group 3	Group 4	Group 5
	F M	F M	F M	F M	F M
Legislators, senior officials and managers					
Professionals					
Technicians and associate professionals					
Clerks					
Service Workers and Shop and market sales workers					
Skilled agricultural and fishery workers					
Craft and related workers					
Plant and machine operators and assemblers					
Elementary occupations					
Armed Forces.					
TOTAL					

* Earnings groups might be defined according national to characteristics. They may correspond to specific amounts or be related to a variable such as the minimum salary.

Table 20. Employed population by sex, status in employment and earnings
Year ____

Status in employment	EARNING GROUPS*				
	Group 1	Group 2	Group 3	Group 4	Group 5
	F M	F M	F M	F M	F M
Employer					
Small enterprises					
Other enterprises					
Employee					
Small enterprises					
Other enterprises					
Own-account worker					
Member of producers' co-operative					
TOTAL					

* Earnings groups might be defined according to national characteristics. They may correspond to specific amounts or be related to a variable such as the minimum salary.

Table 21. Employed population by sex, kind of economic activity, status in employment and earnings
Year ____

Kind of economic activity and status in employment	EARNING GROUPS*				
	Group 1	Group 2	Group 3	Group 4	Group 5
	F M	F M	F M	F M	F M
ISIC Tabulation Category A					
Employer					
Small enterprises					
Other enterprises					
Employee					
Small enterprises					
Other enterprises					
Own-account worker					
Member of co-operative					
ISIC Tabulation Category B					
Employer					
Small enterprises					
Other enterprises					
Employee					
Small enterprises					
Other enterprises					
Own-account worker					
Member of co-operative					
Repeat for all remaining ISIC Tabulation Categories.					
ISIC TOTAL					
Employer					
Small enterprises					
Other enterprises					
Employee					
Small enterprises					
Other enterprises					
Own-account worker					
Member of cooper.					

* Earnings groups might be defined according to national characteristics. They may correspond to specific amounts or be related to a variable such as the minimum salary.

Table 22. Employed population by sex, occupation, status in employment and earnings
Year ____

Occupation and status in employment	EARNING GROUPS*				
	Group 1	Group 2	Group 3	Group 4	Group 5
	F M	F M	F M	F M	F M
ISCO Major Group 1					
Employer					
Small enterprises					
Other enterprises					
Employee					
Small enterprises					
Other enterprises					
Own-account worker					
Member of producer'co-operative					
ISCO Major Group 2					
Employer					
Small enterprises					
Other enterprises					
Employee					
Small enterprises					
Other enterprises					
Own-account worker					
Member of producers'co-operative					
.....					
.....					
ISCO Major Group 0					
Employer					
Small enterprises					
Other enterprises					
Employee					
Small enterprises					
Other enterprises					
Own-account worker					
Member of producers'co-operative					
ISCO TOTAL					
Employer					
Small enterprises					
Other enterprises					
Employee					
Small enterprises					
Other enterprises					
Own-account worker					
Member of producers'cooperative					

* Earnings groups might be defined according to national characteristics. They may correspond to specific amounts or be related to a variable such as the minimum salary.

Table 23. **Economically active population by sex, kind of economic activity and educational attainment**
Year ____

Kind of economic activity and sex	No schooling	Educational attainment First level	Second level	Post secondary
Agriculture, Hunting, and Forestry				
F				
M				
Mining and Quarrying				
F				
M				
Manufacturing				
F				
M				
Electricity, Gas and Water supply				
F				
M				
Construction				
F				
M				
Wholesale and Retail Trade; Repair of Motor Vehicles, Motorcycles and Personal and Household Goods				
F				
M				
Hotels and Restaurants				
F				
M				
Transport, storage and communication				
F				
M				
Financial Intermediation				
F				
M				
Real Estate, Renting and Business Activities services				
F				
M				
Public Administration and Defence; Compulsory Social Security				
F				
M				
Education				
F				
M				
Health and Social Work				
F				
M				
Other community, social and personal service activities				
F				
M				
Private households with employed persons				
F				
M				
Extraterritorial organizations and bodies				
F				
M				
TOTAL				
F				
M				

Table 24. Economically active population by sex, occupation and educational attainment
Year ____

Occupation and sex	Educational attainment: No schooling	First level	Second level	Post secondary
Legislators, senior officials and managers				
F				
M				
Professionals				
F				
M				
Technicians and associate professionals				
F				
M				
Clerks				
F				
M				
Service Workers and Shop and market sales workers				
F				
M				
Skilled agricultural and fishery workers				
F				
M				
Craft and related workers				
F				
M				
Plant and machine operators and assemblers				
F				
M				
Elementary occupations				
F				
M				
Armed Forces.				
F				
M				
TOTAL				
F				
M				

Table 25. Employed population by sex, status in employment, educational attainment and earnings
Year ____

Educational attainment and status	EARNING GROUPS*									
	Group 1		Group 2		Group 3		Group 4		Group 5	
	F	M	F	M	F	M	F	M	F	M
No schooling										
Employer										
Small enterprises										
Other enterprises										
Employee										
Small enterprises										
Other enterprises										
Own-account worker										
Member of producers' co-operative										
First level completed										
Employer										
Small enterprises										
Other enterprises										
Employee										
Small enterprises										
Other enterprises										
Own-account worker										
Member of producers' co-operative										
Second level completed										
Employer										
Small enterprises										
Other enterprises										
Employee										
Small enterprises										
Other enterprises										
Own-account worker										
Member of producers' co-operative										
Third level completed										
Employer										
Small enterprises										
Other enterprises										
Employee										
Small enterprises										
Other enterprises										
Own-account worker										
Member of producers' co-operative										
TOTAL										
Employer										
Small enterprises										
Other enterprises										
Employee										
Small enterprises										
Other enterprises										
Own-account worker										
Member of producers' co-operative										

* Earnings groups might be defined according national characteristics. They may correspond to specific amounts or be related to a variable such as the minimum salary.

Table 26. Employed population by sex, kind of economic activity, status in employment and educational attainment
Year ____

Kind of economic activity and status in employment	Educational attainment: No schooling		First level		Second level		Post secondary	
	F	M	F	M	F	M	F	M
ISIC Tabulation Category A								
Employer								
Small enterprises								
Other enterprises								
Employee								
Small enterprises								
Other enterprises								
Own-account worker								
Unpaid family worker								
Member of producers'co-operative								
ISIC Tabulation Category B								
Employer								
Small enterprises								
Other enterprises								
Employee								
Small enterprises								
Other enterprises								
Own-account worker								
Unpaid family worker								
Member of producers' co-operative								
.....								
.....								
.....								
ISIC Tabulation category P								
Employer								
Small enterprises								
Other enterprises								
Employee								
Small enterprises								
Other enterprises								
Own-account worker								
Unpaid family worker								
Member of producers'co-operative								
ISIC Tabulation Category Q								
Employer								
Small enterprises								
Other enterprises								
Employee								
Small enterprises								
Other enterprises								
Own-account worker								
Unpaid family worker								
Member of producers'co-operative								

Table 27. Unemployed population by sex and educational attainment
Year ____

A. Number

Level attained	F	M	F/M
No schooling			
Total			
First job			
First level completed			
Total			
First job			
Second level completed			
Total			
First job			
Third level Completed			
Total			
First job			

B. Percentage distribution by educational attainment - Year ____

Level attained	F		M		F/M	
	Total	First job	Total	First job	Total	First job
No schooling						
First level completed						
Second level completed						
Third level completed						
TOTAL	100	100	100	100	100	100

Table 28. Employment trend in informal sector by sex and status in employment

Years	Own-account workers			Unpaid fam. workers			Employers/employees			
	F	M	T	F	M	T	F	M	F	M

Table 29. Total employment and employment in informal sector by sex

	Total employment								Informal Sector				
									as % of (TE)			as % F empl	
Years	F	M	T	F/T	F	M	T	F/T	F	M	T	F/TFE	

Table 30. Informal productive units by number of persons working and kind of economic activity
Years ____

Kind of economic activity	NUMBER OF PERSONS EMPLOYED				
	Own-account worker alone	2	3	4	5+
Agriculture, Hunting, and Forestry					
Mining and Quarrying					
Manufacturing					
Electricity, Gas and Water supply					
Construction					
Wholesale and Retail Trade; Repair of Motor Vehicles, Motorcycles and Personal and Household Goods					
Hotels and Restaurants					
Transport, storage and communication					
Financial Intermediation					
Real Estate, Renting and Business Activities services					
Public Administration and Defence; Compulsory Social Security					
Education					
Health and Social Work					
Other community, social and personal service activities					
Private households with employed persons					
Extraterritorial organizations and bodies					
TOTAL					

Table 31. **Employed and Unemployed Population by kind of economic activity, literacy and sex**

Kind of economic activity	Employed				Unemployed			
	Literates		Illiterates		Literates		Illiterates	
	F	M	F	M	F	M	F	M
Agriculture, Hunting, and Forestry								
Mining and Quarrying								
Manufacturing								
Electricity, Gas and Water supply								
Construction								
Wholesale and Retail Trade; Repair of Motor Vehicles, Motorcycles and Personal and Household Goods								
Hotels and Restaurants								
Transport, storage and communication								
Financial Intermediation								
Real Estate, Renting and Business Activities services								
Public Administration and Defence; Compulsory Social Security								
Education								
Health and Social Work								
Other community, social and personal service activities								
Private households with employed persons								
Extraterritorial organizations and bodies								
TOTAL								

Table 32. Employed and Unemployed Population by Occupation, Literacy and Sex

Major economic Division	Employed				Unemployed			
	Literates		Illiterates		Literates		Illiterates	
	F	M	F	M	F	M	F	M
Legislators, senior officials and managers								
Professionals								
Technicians and associate professionals								
Clerks								
Service Workers and Shop and market sales workers								
Skilled agricultural and fishery workers								
Craft and related workers								
Plant and machine operators and assemblers								
Elementary occupations								
Armed Forces.								
TOTAL								

Table 33. Gross domestic product (GDP) by kind of economic activity in formal and informal sectors
Year ____

Kind of economic activity	Total	Formal	Informal	% informal
Mining and quarrying				
Manufacturing				
Electricity, gas and water				
Construction				
Wholesale and retail trade, restaurants and hotels				
Transport, storage and communication				
Financing, insurance, real estate and business services				
Community, social and personal services				
Activities not adequately defined				
SUB-TOTAL				
Agriculture, hunting, forestry and fishing				
TOTAL				

Table 34. GDP and employment in informal sector by sex and kind of economic activity
Year ____

Kind of economic activity	GDP			Per employed		Employment			Person
	T	F	M	F	M	F	M	F/M	
Mining and quarrying									
Manufacturing									
Electricity, gas and water									
Construction									
Wholesale and retail trade, restaurants and hotels									
Transport, storage and communication									
Financing, insurance, real estate and business services									
Community, social and personal services									
Activities not adequately defined									
TOTAL									

Table 35. GDP and employment in informal sector by occupational group and sex
Year ____

Occupational group	GDP			Per employed		Employment			Person
	T	F	M	F	M	F	M	F/M	
Professional, technical and related workers									
Administrative and managerial workers									
Clerical and related workers									
Sales workers									
Production and related workers, transport equipment operators									
Service workers									
Workers not classified elsewhere									
Not stated									
TOTAL									

Table 36. GDP, employment and GDP per employed person by kind of economic activity
Year ____

Kind of economic activity	GDP	Employment	GDP per employed person
Agriculture, hunting, forestry and fishing			
Mining and quarrying			
Manufacturing			
Electricity, gas and water			
Construction			
Wholesale and retail trade, restaurants and hotels			
Transport, storage and communication			
Financing, insurance, real estate and business services			
Community, social and personal services			
Activities not adequately defined			
T O T A L			

Table 37. Age distribution of informal productive units by sex of head and kind of economic activity
Year ____

Sex of head and kind of economic activity	AGE DISTRIBUTION OF PRODUCTIVE UNIT				
	<1 year	1 year	2 years	3-4 years	5 years +
Agriculture, Hunting, and Forestry					
Mining and Quarrying					
Manufacturing					
Electricity, Gas and Water supply					
Construction					
Wholesale and Retail Trade; Repair of Motor Vehicles, Motorcycles and Personal and Household Goods					
Hotels and Restaurants					
Transport, storage and communication					
Financial Intermediation					
Real Estate, Renting and Business Activities services					
Public Administration and Defence; Compulsory Social Security					
Education					
Health and Social Work					
Other community, social and personal service activities					
Private households with employed persons					
Extraterritorial organizations and bodies					
TOTAL					

Table 38. Distribution of informal productive units by sex of head, kind of economic activity and capital per worker
Year ____

Kind of economic activity and sex of head	CAPITAL PER WORKER			
	Group 1	Group 2	Group 3	Group 4
Agriculture, Hunting, and Forestry				
Mining and Quarrying				
Manufacturing				
Electricity, Gas and Water supply				
Construction				
Wholesale and Retail Trade; Repair of Motor Vehicles, Motorcycles and Personal and Household Goods				
Hotels and Restaurants				
Transport, storage and communication				
Financial Intermediation				
Real Estate, Renting and Business Activities services				
Public Administration and Defence; Compulsory Social Security				
Education				
Health and Social Work				
Other community, social and personal service activities				
Private households with employed persons				
Extraterritorial organizations and bodies				
TOTAL				

Notes to the tables

Table 1

The delimitation of age groups may be designed so as to suit specific (legal or other) circumstances of countries but the limits of the ranges should be comparable with the international classification.

The F/M ratio will usually fluctuate closely around 1, but departures from that value are significant for the user.

Table 2

As in other tables, the sources of data should be clearly indicated because different sources will frequently be used in the table. In case the sources are different for different columns, this should be indicated in footnotes.

One-parent households headed by women might not be a frequent phenomenon in some countries, but they are often found, especially in urban environments.

Table 3

Education at the tertiary level as defined in ISCED includes the type that leads to an award not equivalent to a first University degree as well as the type that leads to a first university degree or its equivalent or higher qualifications.

Table 5

This is one of the most frequently used tables for showing participation rates of women in all types of status (employers, employees, own-account workers, etc.) in accordance with international definitions. The age categories should be modified if necessary to suit local requirements. For example, in countries where the retirement age is 55, the age group 45 - 59 could be split into 45-54 and 55-59.

Table 6

The female age distribution in the informal sector (as also in the formal sector) is an important element in many types of analysis of women's contribution to development.

Table 7

Shows the distribution of women of all status by activities. The concentration in certain activities should become visible. Because of limitation of space, only the main tabulation categories are used in

the illustrative table. A more detailed classification should be used whenever possible to pinpoint the areas of concentration of women's activities. ISIC, Rev 3 categories have been used in this table, but where only data based on ISIC, Rev 2 are available, the corresponding divisions should be used.

In order to show changes taking place in time, this table should be prepared for as many years as data are available.

Housekeeping includes chores, such as cooking, cleaning, caring for other members of the household, engaged in by a member of the same household. Paid domestic services are not included here but in the class "Community, social and personal services". The question may arise whether those who engage in more than one activity, for example a woman that works for income and at the same time attends her house and her family should be classified here or in the ISIC division corresponding to her income creating activity. The same principle must be applied here as in other cases of multiple employment, that is, she should be classified in that class that is considered her main employment. However, if data on time use were known, housekeeping can be recorded as a secondary activity.

Table 8

Similar to those for table 7.

Table 9

The sex ratio (last column of the table), is the most expressive indicator of the relative position of women in employment. To show trends in their position, use table 28.

Tables 10, 11 and 12

Show the interrelation of status in employment, kind of activity and occupation of women.

Tables 13, 14, 15, 16 and 17

Same as the aforementioned but indicating time worked. Do women work more or less hours than men? Does this depend on kind of economic activity, occupation or status? Note that the table covers time worked for activities and occupations listed in ISIC and ISCO; time spent housekeeping is not included.

Tables 23 to 27

Indicate the relation between educational attainment and participation in economic activities, occupational group and status.

Table 27

Tries to answer the question whether there is a connection between women's unemployment and their educational level.

Table 28

Gives a representation of the changes that have occurred in the employment of women in the informal sector. These figures should be analysed in connection with total employment of both sexes and total employment of women. A reasonable time series of data should be used.

Table 29

Should answer questions on the size of informal productive units. Even if they do not employ salaried workers, the number of unpaid family workers can vary considerably depending on the type of activity. There might also exist considerable differences by regions.

Table 30

Provides information on the size of informal sector productive units and should complement table 29.

Tables 31 and 32

As in tables 23-27, these tables show the relationship between literacy and economic activity and occupational group.

Tables 33, 34 and 35

Bring together GDP and employment in the informal sector. The last column shows GDP by persons employed for women and men.

Table 36

For comparison this table shows GDP and employment for all sectors.

Table 37

This table should contribute to the discussion of the stability of informal productive units. It shows the age of informal productive units.

Table 38

This table shows the capital/labour ratio of informal productive units.

VII. ILLUSTRATIVE EXAMPLES

318. The preceding chapters reviewed the materials and procedures to be used to arrive at significant statistical aggregates and the way to present them. This chapter will illustrate the techniques with numerical examples. The examples will cover not only some of the tables presented in the preceding chapter but also some of the procedures for estimating women's contribution to development in all sectors as well as in the informal sector in different situations of statistical availability.

319. As techniques vary in response to differences in sources, and in order to keep close to real circumstances that might prevail in different parts of Africa, the examples refer to several different scenarios. The differences between them are due to the availability of data and this determines what tables can be prepared and by what procedures.

Examples of tables

320. A few examples of some of the 38 tables outlined in the preceding chapter are given below to illustrate the changes that are sometimes made necessary by the type of data available. The first example Table 7.1 illustrates Table 1 of chapter VI. The available table combines the age group 60 + with the not stated and also merges the groups 45 - 54 and 55 - 59.

321. Table 7.2 shows the economically-active and economically inactive populations of Gambia. It illustrates Table 5 of the previous chapter. Because 55 is the usual pensionable age for that country, there is no further disagregation of the age data after age 55.

322. In the next example Table 7.3 which corresponds to Table 6 of chapter VI of this Handbook, the age-groups are different. Here again, the data reflect national needs and priorities and are thus more useful for analysing the situation in the country.

323. The last of the illustrative tables, Table 7.4 differs from Table 13 of chapter VI in respect of both the categories of the hours worked per week and the suggested classification of economic activity. The table reflects categories which were deemed useful by the national statistical service who sought the advice of other users of the data. Thus unless an analyst has very good reasons for a retabulation using other categories of hours worked it is recommended that he/she retains the classification for her/his analysis. The problem with the classification of kind of activity used in this table is likely to be encountered in many countries. The ISIC - 68 version has, as already mentioned, been replaced by ISIC,Rev 3 but all the existing tables are based mostly on the former. The analyst has two choices: to base his research/study on the ISIC - 68 or to seek the assistance of the national statistical service to prepare a conversion table (if one has not already been prepared) to make it possible to group the data into the ISIC, Rev 3 categories.

Table 7.1. Population by sex and age group

A. Number

Age groups	Both sexes	F	M	F/M
0- 9 years	617839	304892	312947	0.97
10-14	244782	123049	121733	1.01
15-24	377710	196052	181657	1.08
25-44	387573	201839	185734	1.09
45-59	172320	93450	78870	1.18
60+ and not stated)	109024	60863	48161	1.26
Total	1909248	980146	929102	1.05

B. Percentage Distribution by age group

Age groups	Both sexes	F	M
0- 9 years	32.36	31.11	33.68
10-14	12.82	12.55	13.10
15-24	19.78	20.00	19.55
25-44	20.30	20.59	19.99
45-59	9.03	9.53	8.49
60+	5.71	6.21	5.18
Total	100.00	100.00	100.00

NOTE: The figures correspond to resident population

SOURCE: Recensement general de la population et de l'habitat de 1984, Congo.

Table 7.2 Economically active and not economically active populations by sex and age group

	Economically active				Not economically active			
Age groups	Both sexes	F	M	F/M	Both sexes	F	M	F/M
< 14	27320	14780	12540	1.18	43122	19170	23952	0.80
15-24	80702	42252	38450	1.10	38348	21516	16832	1.28
25-44	141159	64654	76505	0.85	24887	22065	2822	7.82
45-54	34625	13731	20894	0.66	4651	4115	536	7.68
55+	39433	14516	24917	0.58	8622	6765	1857	3.64
Not stated	2379	829	1550	0.53	729	523	206	2.54
TOTAL	325618	150762	174856	0.86	120359	74154	46205	1.60

SOURCE: Gambia Population and Housing Census, 1983

Table 7.3 Own-account workers and unpaid family workers, by sex and age group

A. Number

Age groups	Own-account workers Both sexes	F	M	Unpaid family workers Both sexes	F	M
10-14 years	10212	4368	5844	631836	299968	331868
15-24	121006	33590	87416	925408	489297	436111
25-44	539438	75012	464426	758923	644947	113976
45-54	237854	34107	203747	188852	179302	9550
55+	306840	49169	257671	149975	141085	8890
Not stated	1443	507	936	3007	2697	310
TOTAL	1216793	196753	1020040	2658001	1757296	900705

B. Percentage distribution by age group

Age groups	Own-account workers Both sexes	F	M	Unpaid family workers Both sexes	F	M
10-14 years	0.84	2.22	0.57	23.77	17.07	36.85
15-24	9.94	17.07	8.57	34.82	27.84	48.42
25-44	44.33	38.12	45.53	28.55	36.70	12.65
45-54	19.55	17.33	19.97	7.11	10.20	1.06
55+	25.22	24.99	25.26	5.64	8.03	0.99
Not stated	0.12	0.26	0.09	0.11	0.15	0.03
Total	100.00	100.00	100.00	100.00	100.00	100.00

C. Percentage distribution by sex

Age groups	Own-account workers Both sexes	F	M	Unpaid family workers Both sexes	F	M
10-14 years	100.00	42.77	57.23	100.00	47.48	52.52
15-24	100.00	27.76	72.24	100.00	52.87	47.13
25-44	100.00	13.91	86.09	100.00	84.98	15.02
45-54	100.00	14.34	85.66	100.00	94.94	5.06
55+	100.00	16.02	83.98	100.00	94.07	5.93
Not stated	100.00	35.14	64.86	100.00	89.69	10.31
Total	100.00	16.17	83.83	100.00	66.11	33.89

SOURCE: Recensement general de la population de 1985, Burkina Faso.

Table 7.4 **Employed population by sex, kind of economic activity and number of hours worked per week, 1986**

Kind of activity	TOTAL	Hours of work per week < 8	8-14	15-34	35-39	40-47	48-56	57+	Not stated
Agric.,hunt.,fishing	208400	8300	16200	43600	17700	40300	48500	28700	5100
F	42500	3500	5800	12800	3700	6600	5900	3300	900
M	165900	4800	10400	30800	14000	33700	42600	25400	4200
Subsistence farming	1309100	98200	189000	621200	119700	91800	89800	30900	68500
F	728700	61100	113800	365200	62700	38600	38600	12000	36700
M	580400	37100	75200	256000	57000	53200	51200	18900	31800
Mining	55000	600	200	900	200	14200	32900	5500	500
F	1800	0	0	0	100	1100	600	0	0
M	53200	600	200	900	100	13100	32300	5500	500
Manufacturing	133600	5200	9200	31300	5800	40000	23600	12800	5700
F	39000	3200	5900	15000	2200	6500	2500	1500	2200
M	94600	2000	3300	16300	3600	33500	21100	11300	3500
Electricity,gas,wate	9700	400	0	400	400	5000	2600	700	200
F	1200	300	0	200	0	400	100	100	100
M	8500	100	0	200	400	4600	2500	600	100
Construction	57600	2500	4100	11400	2100	20200	10200	6200	900
F	2800	700	800	1100	0	100	100	0	0
M	54800	1800	3300	10300	2100	20100	10100	6200	900
Trade,rests.,hotels	310000	18000	24000	67600	17300	50000	55700	62800	14600
F	176500	13200	17200	42400	9400	21100	28600	33600	11000
M	133500	4800	6800	25200	7900	28900	27100	29200	3600
Transport,comms.	41000	400	700	1700	1200	15200	12200	8200	1400
F	2400	0	0	100	400	1300	400	100	100
M	38600	400	700	1600	800	13900	11800	8100	1300
Business services	21400	100	100	800	1300	11200	3100	4700	100
F	4300	0	0	400	300	3200	300	100	0
M	17100	100	100	400	1000	8000	2800	4600	100
Comm.services	208400	5900	5700	26500	11900	85200	39300	22500	11400
F	59300	1800	2200	12000	5100	17600	10500	4600	100
M	149100	4100	3500	14500	6800	67600	28800	17900	5900
Not stated	10100	100	900	2500	700	1300	1400	1700	1500
F	3400	100	100	1400	200	200	300	900	200
M	6700	0	800	1100	500	1100	1100	800	1300
TOTAL	2364300	139700	250100	807900	178300	374400	319300	184700	109900
F	1061900	83900	145800	450600	84100	96700	87900	56200	56700
M	1302400	55800	104300	357300	94200	277700	231400	128500	53200

SOURCE: Zambia Labour Force Survey 1986

Development Indicators

324. Examples of development indicators for which data can readily be available are employed and employed persons by sex and educational attainment and labour force participation rates. Table 7.5 is an example of the first type of table. Unfortunately, the corresponding table for the employed in the informal sector is not available. If it were then the ratios of persons who completed secondary school in the informal sector to the corresponding category in the formal sector computed by sex would provide an indirect indication of the relative contributions of the two sectors and of either sex to the economy.

Table 7.5 Employed and unemployed persons by sex and educational attainment.

A. Number

Educational attainment	Employed			Unemployed		
	Both sexes	F	M	Both sexes	F	M
No diploma	396151	213840	182311	8151	919	7232
CEPE	71420	17921	53499	2742	223	2519
Brevets	36449	10861	25588	988	179	809
BAC	11696	2326	9370	177	55	122
Licenses	3535	638	2897	55	22	33
Doctorats	1577	195	1382	23	2	21
Dipl. Prof.	10007	2277	7730	81	35	46
Other	4882	662	4220	122	52	60
Not stated	14508	6333	8175	380	67	313
Total	550225	255053	295172	12709	1554	11155

B. Percentage distribution by educational attainment

Educational attainment	Employed			Unemployed		
	Both sexes	F	M	Both sexes	F	M
No diploma	72.00	83.84	61.76	64.14	59.14	64.83
CEPE	12.98	7.03	18.12	21.58	14.35	22.58
Brevets	6.62	4.26	8.67	7.77	11.52	7.25
BAC	2.13	0.91	3.17	1.39	3.54	1.09
Licenses	0.64	0.25	0.98	0.43	1.42	0.30
Doctorats	0.29	0.08	0.47	0.18	0.13	0.19
Dipl. Prof.	1.82	0.89	2.62	0.64	2.25	0.41
Other	0.89	0.26	1.43	0.88	3.35	0.54
Not stated	2.64	2.48	2.77	2.99	4.31	2.81
Total	100.00	100.00	100.00	100.00	100.00	100.00

SOURCE: Recensement general de la population et de l'habitat de 1984, Congo.

Table 7.6 Economically active and not economically active Population by sex and age group, 1986

A. Number

Age groups	Economically active Both sexes	F	M	F/M	Not economically active Both sexes	F	M	F/M
12 - 14	194453	92613	101840	0.91	270350	139504	130846	1.07
15 - 24	814497	436235	375262	1.15	462406	266425	195981	1.36
25 - 44	1065730	498966	566764	0.88	204940	179803	25137	7.15
45 - 54	323132	139986	183146	0.76	57991	45472	12519	3.63
55+	311506	122393	189113	0.65	94761	60162	34599	1.74
Not stated	8292	2053	6239	0.33	3860	2838	1022	2.78
Total	2717610	1292246	1425364	0.91	1094308	694204	400104	1.74

B. Percentage distribution by age group

Age groups	Economically active Both sexes	F	M	Not economically active Both sexes	F	M
12 - 14	7.16	7.17	7.14	24.71	20.10	32.70
15 - 24	29.97	33.76	26.54	42.26	38.38	48.98
25 - 44	39.22	38.61	39.76	18.73	25.90	6.28
45 - 54	11.89	10.83	12.85	5.30	6.55	3.13
55+	11.46	9.47	13.27	8.66	8.67	8.65
Not stated	0.31	0.16	0.44	0.35	0.41	0.26
Total	100.00	100.00	100.00	100.00	100.00	100.00

SOURCE: Zambian Labour Force Survey, 1986

325. The age-specific activity rates can also be calculated from table 7.6 as follows:

	Both sexes	F	M
12-14	41.84	39.90	43.77
15-24	63.79	62.08	65.87
25-44	83.87	73.51	95.75
45-54	84.79	75.48	93.60
55+	76.68	67.04	84.53
Not stated	68.24	41.98	85.92
Total	71.29	65.05	78.08

Contribution to GDP

326. In each of the following examples it is assumed that certain information and certain statistical data are available. Different sets of data are assumed to be available in each example. Here again what has been said about availability should be remembered. Obtaining the data might represent no effort at all on the part of the user in case the data have already been calculated and possibly even published, or it can imply lengthy explanations with statistical authorities concerning the details of tabulations that have not been done before. In such circumstances, the tables as presented in the last chapter should be used to show what types of cross-classifications are needed.

327. The examples below begin by indicating the data and tables that can readily be made "available" (sometimes after a considerable effort). These will be referred to as "source documents" to distinguish them from the tables which will be the result of the process of transformation described in the example.

328. There are no special difficulties in setting up tables representing employment figures. Ratios such as the activity ratio or participation ratios are easy to calculate. The difficulties appear when it comes to tables and accounts expressed in monetary values and especially when figures on employment are combined with data on earnings. Therefore the examples that are presented below refer to these situations.

First example

329. This example is built on a scenario where at least one population census is available. In addition there is a sample survey on small-size industrial production units. The censuses present data by sex, and the industrial sample survey has data for industrial establishments classified by industries and size, but no data on sex.

330. The years of the censuses and the industrial survey do not coincide. The survey falls between the two censuses.

331. The size classification in the survey is based on the number of employees on the payroll; one of the classes is "no paid employees". The principal indicators shown are the number of establishments, number of persons engaged, value of output, cost of materials and industrial services and value added.

332. The population censuses have a table on employment by status and sex, classified by industries. Before presenting these tables, figures from the population censuses must be adjusted to the year of the survey. This can be done by either those in charge of censuses or the analyst using interpolation. In most cases simple interpolation will be the only possible solution. One should however be aware of its implications. It implies that the change has been linear i.e., has changed by the same amount each year. When it is known that this has not been the case, for example that there has been a deep depression between the two years, one should adjust the figure. In such cases the statistical authorities usually will be able to propose possible adjustments.

333. These are the documents to start with:

Source document 1. Principal indicators of industrial activity by kind of economic activity, establishments with no salaried employees.

Industry	Number of establish-ments	Number of persons engaged	Value of output (a)	Cost of materials, indust.Serv. (a)	Value added (a)
Agriculture	115	432	13200	1700	11500
Mining	16	29	5080	600	4480
Manufacture	30	70	23700	11700	12000
Electricity	-	-	-	-	-
Construction	-	-	-	-	-
Trade	110	310	31300	8200	23100
Transport	18	27	7860	2100	5760
Financing	-	-	-	-	-
Services	90	201	15650	3050	12600
TOTAL	379	1069	96790	27350	69440

(a) In national currency.

334. The next source document is essentially the same as table 10 in the previous chapter. The numbers in those categories which are not used in the example are omitted.

Source document 2. Employed population by sex, kind of economic activity and status in employment.

Industry	Employer		Employee		Own-acc. worker		Unpaid fam. worker		Member of coop.	
	F	M	F	M	F	M	F	M	F	M
Agriculture					100	15				
Mining					-	16				
Manufacturing					-	30				
Electricity					-	-				
Construction					-	-				
Trade					60	50				
Transport					-	18				
Financing					-	-				
Services					50	40				
TOTAL					210	169				

335. In source document 1, the value added by the productive units (establishments) which do not employ any salaried workers and which are therefore presumed to represent the informal sector is obtained. The amount for all industries is 69440 in national currency units. The sum for productive units in the informal sector is the same as the sum for all own-account workers. This then is the value added (census value added) by own-account workers of both sexes. What is still missing is the distribution of that value by sex.

336. In source document 2, the distribution by sex of all own-account workers is found. There is a total of 379 own-account workers, 210 women and 169 men. If it could be assumed that earnings of women own-account workers are equal to those of men, 69440 would be divided in accordance with their numbers. That would give 38476 as value added by women and 30964 by men. But to assume equal earnings in the case of women and of men is contrary to evidence that is currently available.

337. Thus information available is manifestly insufficient to resolve the problem. Unless some additional information (possibly from an ad hoc inquiry as discussed below) can be obtained the only thing to do is to adjust the above figures with some general assumptions.

338. But even before such adjustments, estimates can be improved by examining in more detail the figures given on industry of the own-account workers. For that purpose the following worksheet can be constructed:

Value added and number of own-account workers by industry.

Industry	Total Value added (1)	Own-account workers (2)	Value added per worker (3)	Own-account workers F (4)	Own-account workers M (4)	Value added F (5)	Value added M (5)
Agriculture	11500	115	100	100	15	10000	1500
Mining	4480	16	280	-	16	-	4480
Manufact.	12000	30	400	-	30	-	12000
Electricity	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-
Trade	23100	110	210	60	50	12600	10500
Transport	5760	18	320	-	18	-	5760
Financing	-	-	-	-	-	-	-
Services	12600	90	140	50	40	7000	5600
TOTAL	69440	379	183	210	169	29600	39840

339. In the above table, column 1 is obtained from source document 1 and column 2 from document 2 Column 3 is obtained by dividing column 1 by column 2. Column 4 is copied from document 2 and column 5 is obtained by multiplying column 3 by column 4.

340. This worksheet reveals some interesting facts. If women were evenly distributed among industries, say distributed in the same proportion as their total contribution to GDP would be 38,476 (210 women own-account workers by the overall value added per worker of 183). This total contribution would be higher than that of men. But women are not distributed among industries the same way as men. They bunch in certain aggregated industries. Due to this bunching in lower income activities., their total contribution is down to 29600 (less than the contribution of men) and their per capita value added is 141.

341. These differences are calculated even without information on income differentials between sexes in the same activities. This additional information would show still more clearly the discrepancies in product between sexes.

342. The above calculation could be improved if the classification by industries were presented in a more detailed way (divisions, groups and classes of ISIC-Rev 3, because the concentration of women in certain activities cannot be clearly discerned from the tabulation categories of ISIC Rev 3. Even within each division they are not distributed evenly, but cluster around the worst paid sub-classes of the divisions.

343. With the figures from the worksheet, table 34 shown in last chapter can be filled out, indicating in a footnote that, because of lack of information the same per-person product was assumed for men and women.

Second example

344. In real-life situations, the figures being handled are rather big and this makes calculations somewhat unwieldy. In the scenario below, in order to capture at a glance the relationships within the data, low figures are used so that calculations can be made instantly. That limitation will be relaxed in the next example.

345. For the present example, it is assumed that the source documents that can be obtained are the following:

Source document 3. Employment by economic activity and status in employment:

Activity	Employer	Employee	Own-acc. worker	Unpaid fam. worker	Member coop.	Total
Agriculture	2	14	10	30	2	58
Minin	-	-	-	-	-	-
Manufact.	5	50	30	20	-	105
Electricity	1	8	-	-	-	9
Construction	1	10	-	-	-	11
Trade	3	20	20	30	-	73
Transport	2	14	5	3	1	25
Financing	2	8	-	-	-	10
Services	3	9	12	14	-	38
Total	19	133	77	97	3	329

Source document 4. Own-account workers by kind of economic activity and sex:

Activity	Own-account workers		
	T	F	M
Agriculture	10	5	5
Mining	-	-	-
Manufacturing	30	12	18
Electricity	-	-	-
Construction	-	-	-
Trade	20	13	7
Transport	5	-	5
Financing	-	-	-
Services	12	7	5
Total	77	37	40

Source document 5. Average earnings of own-account workers by kind economic activity:

Activity	Monthly value added both sexes (national survey)
Agriculture	40
Mining	-
Manufacturing	90
Electricity	-
Construction	-
Trade	80
Transport	70
Financing	-
Services	60

346. The above classifications are all based on ISIC, Rev 2 (1968)

347. As can be seen the average earnings in the table above are for both sexes and there is no information on average earnings for women. However, an ad hoc inquiry has revealed that in agriculture women's average earnings were approximately three-fourths and in manufacturing only half the average earnings of both sexes and they were equal to men's average earnings in trade and services.

348. Accordingly the following values on monthly earnings of women own-account workers are assigned:

Agriculture	30
Manufacturing	45
Trade	80
Services	60

349. With these and the data on the number of women shown in source document 4, total earnings of women in each own-account activity can be arrived at:

Agriculture	150
Manufacturing	540
Trade	1040
Services	420

350. From the national point of view, these figures represent the contribution to GDP of women working in the informal sector. However, as GDP is expressed as an annual figure, the next step is to convert the above monthly figures to yearly figures (multiply by 12).

351. Thus the GDP created by women own-account workers in different activities is obtained, as follows:

Agriculture	1800
Manufacturing	6480
Trade	12480
Services	5040
TOTAL	25800

352. In order to compare women's contribution to that of men and arrive at the total contribution of the informal sector to GDP, the GDP created by men in the same sector must be calculated.

353. This can be done following the same procedures. The first step is again to calculate monthly average earnings, but this time for men.[7] They are as follows:

Average monthly earnings of male own-account workers

Agriculture	50
Manufacturing	120
Trade	80
Transport	70
Services	60

354. The next steps are to calculate men's total monthly and yearly earnings.

Total earnings of male own-account workers:

	Monthly	Yearly
Agriculture	250	3000
Manufacturing	2160	25920
Trade	560	6720
Transport	350	4200
Services	300	3600
Total	3620	43440

[7] For a shortcut, calculate earnings for both sexes, deduct women's earnings and divide the residual by the number of male own-account workers. In the case of manufacturing: 2700 - 540 = 2160; 2160 divided by 18 = 120. The average monthly earnings of a male own-account worker in manufacturing is 120.

355. Women's and men's total yearly earnings can now be compared and GDP created in the informal sector arrived at.

GDP in the informal sector by sex and kind of economic activity:

	GDP		
	F	M	Total
Agriculture	1800	3000	4800
Mining	-	-	-
Manufacturing	6480	25920	32400
Electricity	-	-	-
Construction	-	-	-
Trade	12480	6720	19200
Transport	-	4200	4200
Financing	-	-	-
Services	5040	3600	8640
Total	25800	43440	69240

356. On examination of table 34 of the previous chapter, it can be seen that the figures presented above are the first three columns of that table. Furthermore, the figures from source document 4 shown in the present chapter can be used without further elaboration to fill in the columns on employment of table 34.

357. The last three columns of table 34 are per-worker figures. This is in fact a different way to express averages. The column of per-worker for women and men can therefore be filled in from the figures given above. The last column of table 33 shows the relationship between women's and men's average (or per-worker) earnings. For those activities where there are no women own-account workers there can be no entry in the corresponding cell.

358. In this example the values for the F/M ratio are the following:

Agriculture	0.6
Manufacturing	0.375
Trade	1.0
Services	1.0

359. With these last entries, table 34 is completed, It is an essential tool in demonstrating the contribution of women in the informal sector to the economy of the nation.

Third example

360. Essentially the same procedure as those just described are used in the next example. It is more complex: the figures presented are those of a real-life situation and thus are high figures. To give a different perspective instead of working with kinds of activities the example is based on occupations.

361. This scenario assumes that data on employment by occupation and status are cross-classified by ten earning groups and presented separately for each gender (source document 6). This represents an advanced tabulation designed for a labour force or household survey. The data might be requested from the statistical authorities with reference to the layout of table 34 of chapter VI.

362. In surveys, earnings will usually be given as ranges, i.e. with an upper and a lower limit. The figures appearing in each cell indicate the number of individuals whose income falls within these limits. From these data, the average earnings of all individuals in that range have to be determined. The statistical authorities will usually be glad to be of help in doing this; quite frequently one will find that this task has already been done by them. The easiest way is to use either the middle point or the median of the range, or to distribute the population of the range according to the distribution of the whole population. As is the case in the example, the figures appearing in Column 2 are averages estimated from ranges.

363. Cols. 3-12 show the number of women and men (at the middle and at the bottom of the table) own-account workers with a certain average income (A, B, C,...,J) in different occupations (professional, manager...etc). Col. 13 is the sum of each row and shows the number of individuals in all occupations having the same average income. The bottom row shows the total number of individuals with different average incomes belonging to the same occupation. The occupation groups used are those in ISCO - 68.

364. The next step is to estimate the total income for each income class and occupational group by gender. This is done by multiplying each cell showing the number of persons (cols. 3-12) by the corresponding average income (col. 2). The results are placed in the cells of table A: "Income of own-account workers", where the upper part shows the income of both sexes, the middle part the income of women and the lower part the income of men. Col. 1 of this table indicates the income groups (A, B,...,J); cols. 2-11 show the income of own-account workers in each occupational group. The calculations are done separately for women and men and later added up to obtain the upper part of the table, which represents the income of different occupations and different income groups in the informal sector. Col. 12 shows total income in each income group for all occupations, the line before last the total income (sum of all income groups) for each occupation in the informal sector and the bottom line averages per month.

365. These data enable women's contribution to the informal sector by occupational group to be estimated, following the same procedure illustrated in the previous scenario. They serve to make the entries in table 35.

366. The coverage of the income concept, which is used to define the income group, determines the extent and limitation of the final estimates. In the case of the example presented above, the income data have been adjusted to the concept of income used in SNA and therefore the results can be compared with SNA estimates. As this is not always the case, sometimes the results based on labour or household surveys are not comparable with national aggregates, but they are sufficient to make comparisons between female and male contributions and that of the informal sector as a whole. In the worst case, they allow at least a comparison between women's and men's contribution to a sub-sector of the informal sector (e.g., income of street-vendors).

Source document 6. Employment and earnings of own-account workers by sex and occupation group:

A. Employment and average monthly earnings

Both sexes Income group	Average income/ month	Employment by occupational group: Prof	Adm., mgr.	Clerical	Trade	Agric.	Mining	Prod	Handi-crafts	Services	Not stated	Total emp.
A	0.270	135	0	0	11408	4720	0	90	12776	9019	0	38148
B	0.361	138	78	184	13668	9974	96	433	12564	9043	0	46178
C	0.575	429	0	76	21704	34517	7	1508	15058	7276	0	80575
D	0.940	1145	581	212	39120	91318	0	4199	19315	7294	0	163184
E	1.495	1338	374	208	46893	61812	119	10894	28862	10009	0	160509
F	2.164	3115	1397	621	54140	38822	519	25486	37479	8710	214	170503
G	3.139	2833	2404	571	49847	19228	50	37542	39598	6322	6	158401
H	4.552	1791	2186	723	19520	6074	210	30445	18217	2097	49	81312
I	5.922	1739	1939	18	9776	2100	14	11558	7970	1547	0	36661
J	11.295	4460	968	90	12174	2003	0	8790	3482	713	36	32716
	TOTAL	17123	9927	2703	278250	270568	1015	130945	195321	62030	305	968187

Female Income group	Average income/ month	Employment by occupational group: Prof	Adm., mgr.	Clerical	Trade	Agric.	Mining	Prod	Handi-crafts	Services	Not stated	Total emp.
A	0.257	135	0	0	9684	870	0	90	11209	8502	0	30490
B	0.330	138	78	184	8810	973	0	0	10510	7921	0	28614
C	0.476	429	0	76	10380	1927	0	74	10796	6533	0	30215
D	0.749	657	105	77	16984	3085	0	319	11322	5793	0	38342
E	1.181	494	187	118	15248	1390	0	117	9090	5879	0	32523
F	1.680	1323	298	105	11915	546	0	641	4450	3747	0	23025
G	1.958	986	228	195	8899	364	0	136	1855	2396	6	15065
H	2.809	727	481	351	2786	73	0	275	398	486	49	5626
I	3.927	385	80	0	1280	0	0	0	105	205	0	2055
J	7.617	574	126	0	1830	81	0	80	385	303	0	3379
	TOTAL	5848	1583	1106	87816	9309	0	1732	60120	41765	55	209334

Source document 6 (continued)

Male

Income group	Average income/ month	Employment by occupational group: Prof	Adm., mgr.	Clerical	Trade	Agric.	Mining	Prod	Handi-crafts	Services	Not stated	Total emp.
A	0.321	0	0	0	1724	3850	0	0	1567	517	0	7658
B	0.412	0	0	0	4858	9001	96	433	2054	1122	0	17564
C	0.635	0	0	0	11324	32590	7	1434	4262	743	0	50360
D	0.999	488	476	135	22136	88233	0	3880	7993	1501	0	124842
E	1.575	844	187	90	31645	60422	119	10777	19772	4130	0	127986
F	2.240	1792	1099	516	42225	38276	519	24845	33029	4963	214	147478
G	3.263	1847	2176	376	40948	18864	50	37406	37743	3926	0	143336
H	4.682	1064	1705	372	16734	6001	210	30170	17819	1611	0	75686
I	6.041	1354	1859	18	8496	2100	14	11558	7865	1342	0	34606
J		3886	842	90	10344	1922	0	8710	3097	410	36	29337
	TOTAL	11275	8344	1597	190434	261259	1015	129213	135201	20265	250	758853

Both sexes

Income group	Earnings by occupation group: Prof	Adm., mgr.	Clerical	Trade	Agric.	Mining	Prod	Handi-crafts	Services	Not stated	Total earnings
A	35	0	0	3040	1459	0	23	3381	2349	0	10287
B	45	26	61	4905	4029	40	178	4310	3073	0	16667
C	204	0	36	12134	21612	4	946	7848	3583	0	46367
D	980	554	193	34839	90456	0	4115	16468	5840	0	153445
E	1913	515	281	67853	96808	187	17112	41878	13449	0	239996
F	6237	2962	1332	114601	86656	1163	56730	81461	17412	479	369033
G	7957	7547	1609	151036	62266	163	122322	126787	17501	12	497200
H	7024	9334	2728	86175	28302	983	142028	84547	8908	138	370167
I	9691	11544	109	56350	12686	85	69822	47925	8912		217124
J	49912	10827	1055	135161	23141	0	102682	39226	7113	422	369539
Total	83998	43309	7404	666094	427415	2625	515958	453831	88140	1051	2289825
Mean	4.906	4.363	2.740	2.394	1.580	2.586	3.940	2.324	1.421	3.440	2.365

Female

Income group	Earnings by occupation group: Prof	Adm., mgr.	Clerical	Trade	Agric.	Mining	Prod	Handi-crafts	Services	Not stated	Total earnings
A	35	0	0	2487	223	0	23	2878	2183	0	7829
B	45	26	61	2904	321	0	0	3464	2611	0	9432
C	204	0	36	4943	918	0	35	5142	3111	0	14389
D	492	79	58	12725	2311	0	239	8483	4340	0	28727
E	584	221	139	18012	1642	0	138	10738	6945	0	38419
F	2223	501	176	20017	917	0	1077	7476	6295	0	38682
G	1930	446	382	17422	713	0	266	3632	4691	12	29494
H	2042	1351	986	7826	205	0	773	1118	1365	138	15804
I	1512	314	0	5026	0	0	0	412	805	0	8069
J	4372	960	0	13940	617	0	609	2933	2308	0	25739
Total	13439	3898	1838	105302	7867	0	3160	46276	34654	150	216584
Mean	2.298	2.462	1.660	1.199	0.845		1.825	0.770	0.830	2.720	1.035

Source document 6 (continued)

Male

Income group	Earnings by occupation group										
	Prof	Adm., mgr.	Clerical	Trade	Agric.	Mining	Prod	Handi-crafts	Services	Not stated	Total earnings
A	0	0	0	553	1236	0	0	503	166	0	2458
B	0	0	0	2001	3708	40	178	846	462	0	7235
C	0	0	0	7191	20694	4	911	2706	472	0	31978
D	488	475	135	22114	88145	0	3876	7985	1500	0	124718
E	1329	294	142	49841	95166	187	16974	31140	6504	0	201577
F	4014	2461	1156	94584	85739	1163	55653	73985	11117	479	330351
G	6027	7101	1227	133614	61553	163	122056	123155	12810	0	467706
H	4982	7983	1742	78349	28097	983	141255	83429	7543	0	354363
I	8179	11230	109	51324	12686	85	69822	47513	8107	0	209055
J	45540	9867	1055	121221	22524	0	102073	36293	4805	422	343800
Total	70559	39411	5566	560792	419548	2625	512798	407555	53486	901	2073241
Mean	4.258	4.723	3.480	2.845	1.606	2.586	3.969	3.014	2.639	3.600	2.732

VIII. CONCLUSION

General

367. In the preceding chapters, methods for assessing the contribution of women to development in general and to industry, trade and services in the informal sector in particular were discussed. It has been stressed that in order to undertake such a measurement properly, it is necessary also to calculate men's contribution. Thus although this Handbook is about statistics on women, these would be more useful if contrasted with those on men.

368. Most African countries do not have a satisfactory statistical series nor do the available data cover all the areas dealt with in the Handbook. Improvement in statistical coverage will only come when there is close collaboration between producers and users of statistics. Demand for accurate statistics will play a big role in improving the coverage and quality of data collected.

Work within African countries

369. With the publication of the Handbook, it is expected that its users who will range from statisticians working in the area of economic statistics to non-statisticians working in projects dealing with women in development will examine the tables in Chapter VI and complete them as much as possible with available data. These users can then discuss the data gaps with the national statistical offices and other producers of statistics on how these can be filled. In certain cases, this will involve the producers of statistics making available tabulated but not published data. It will also be possible for the producers to retabulate

available data in the format required by the user at a nominal charge. In most cases of unavailable data, however, there will be need to impress on the producers of statistics the importance of the missing data so that they can be included in any future programme of data collection.

370. The tables and methods outlined in chapters III and VI should then be used to estimate the contribution of women in the informal sector in industry, trade and services. In some cases it may be necessary to modify the techniques outlined in this publication because the available data do not conform strictly to those used in the numerical examples in chapter VII. Such modifications and the rationale behind them should be clearly indicated in any corresponding analysis that is carried out.

371. There should also be a concerted effort at the national level to improve concepts, definitions and classifications and methods of measurement within national statistical systems. The need for precision and harmonisation of these concepts should be emphasized. Adaptation of international concepts, definitions and classifications to national needs should be given urgent attention. Above all, efforts should be made to use the same concepts for all data collection systems in the same country to facilitate intra-country comparisons.

Expanded National Product

372. The concept of the expanded GDP in which housework is valued and added to the traditional GDP was dealt with briefly in Chapter III. The types of work being discussed here include cooking, washing up, sweeping, dusting, changing linen, washing clothes and gardening. Several methods for valuing such work have been used in research studies. They are summarised below (14,15).

373. The first approach is to take the average (actual) wages of females and apply it to the housewife. However, it is recognised that there is an element of discrimination in the wages paid to women in many countries. Thus, a hypothetical measure known as the average non-discriminatory remuneration is also sometimes applied. This measures the remuneration women would have received if they had not been discriminated against. The third method of valuation is the use of wages based on equivalent market, specialised function i.e. if the housewife worked for a certain number of hours as a cook or a laundress in her own home, her work will be valued by multiplying the number of hours by the wages of a woman performing the same function(s) for pay. The fourth method is an adjustment of the third by applying wages based on equivalent market, non-discriminatory specialised function rates. The specialised function can of course be replaced by a generalised one such as housekeeper and two other market rates (one actual and the other non-discriminatory) can be used to value the work performed. If the work done by the housewife results in a product, then her contribution can be assessed on the basis of value added, derived from the price of an equivalent market product.

374. There is some controversy surrounding the concept of the expanded GDP, especially as it applies to developing countries. For example, fetching water is one of the functions carried out by women in the rural areas in such countries. In some countries, this involves walking for about 10 kilometres a day, because there is no water source nearer. If the woman's work is valued and added to GDP, this gives an illusion of an improvement in GDP when in fact the need to fetch water is a sign of underdevelopment and should not be used to record an increase in GDP. However in spite of the controversy, a lot of research work is being done in this area and African countries should take the initiative in contributing to such studies.

375. Other studies not mentioned specifically in this Handbook can also be undertaken to throw further light on the contribution of women to development in the informal sector, particularly in industry, trade and services. The results should also be disseminated to all user target groups. There should be exchange of such research findings and studies with similar institutions in the region. If possible, national, sub regional and regional workshops should also be convened to review such studies.

376. The policy implications of the results of studies suggested in this Handbook should also not be overlooked. To maximise the use of the outcome of policy-oriented research, policy-makers and planners should be sensitized at every phase of the work. In particular they should be involved in determining the scope of the research.

377. Finally, it should be stressed that statistical methods are constantly being developed or improved and therefore users of the Handbook should keep themselves informed of new developments in this area. In particular, they should seek to familiarize themselves with the new revised System of National Accounts as soon as it is approved by the U.N. Statistical Commission at its next meeting.

ANNEXES

I. INTERNATIONAL STANDARD INDUSTRIAL CLASSIFICATION OF ALL ECONOMIC ACTIVITIES (ISIC, Rev 3)

LIST OF TABULATION CATEGORIES, DIVISIONS AND GROUPS

TABULATION CATEGORIES	GROUP	
A		AGRICULTURE, HUNTING AND FORESTRY
	DIVISION 01	AGRICULTURE, HUNTING AND RELATED SERVICE ACTIVITIES
	011	Growing of crops; market gardening; horticulture
	012	Farming of livestock
	013	Growing of crops combined with farming of livestock (mixed farming)
	014	Agricultural and animal husbandry service activities, except veterinary activities
	015	Hunting, trapping and game propagation, including related service activities
	DIVISION 02	FORESTRY, LOGGING AND RELATED SERVICE ACTIVITIES
	020	Forestry, logging and related service activities
B		FISHING
	DIVISION 05	FISHING, OPERATION OF FISH HATCHERIES AND FISH FARMS; SERVICE ACTIVITIES INCIDENTAL TO FISHING
	050	Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing
C		MINING AND QUARRYING
	DIVISION 10	MINING OF COAL AND LIGNITE; EXTRACTION OF PEAT
	101	Mining and agglomeration of hard coal
	102	Mining and agglomeration of lignite
	103	Extraction and agglomeration of peat
	DIVISION 11	EXTRACTION OF CRUDE PETROLEUM AND NATURAL GAS; SERVICE ACTIVITIES INCIDENTAL TO OIL AND GAS EXTRACTION , EXCLUDING SURVEYING
	111	Extraction of crude petroleum and natural gas
	112	Service activities incidental to oil and gas extraction, excluding surveying
	DIVISION 12	MINING OF URANIUM AND THORIUM ORES
	120	Mining of uranium and thorium ores
	DIVISION 13	MINING OF METAL ORES
	131	Mining of iron ores
	132	Mining of non-ferrous metal ores, except uranium and thorium ores

	DIVISION 14	OTHER MINING AND QUARRYING
	141	Quarrying of stone, sand and clay
	142	Mining and quarrying n.e.c
D		MANUFACTURING
	DIVISION 15	MANUFACTURE OF FOOD PRODUCTS AND BEVERAGES
	151	Production, processing and preservation of meat, fish, fruit, vegetables, oils and fats
	152	Manufacture of dairy products
	153	Manufacture of grain mill products, starches and starch products, and prepared animal feeds
	154	Manufacture of other food products
	155	Manufacture of beverages
	DIVISION 16	MANUFACTURE OF TOBACCO PRODUCTS
	160	Manufacture of tobacco products
	DIVISION 17	MANUFACTURE OF TEXTILES
	171	Spinning, weaving and finishing of textiles
	172	Manufacture of other textiles
	173	Manufacture of knitted and crocheted fabrics and articles
	DIVISION 18	MANUFACTURE OF WEARING APPAREL; DRESSING AND DYEING OF FUR
	181	Manufacture of wearing apparel, except fur apparel
	182	Dressing and dyeing of fur; manufacture of articles of fur
	DIVISION 19	TANNING AND DRESSING OF LEATHER; MANUFACTURE OF LUGGAGE, HANDBAGS, SADDLERY, HARNESS AND FOOTWEAR
	191	Tanning and dressing of leather; manufacture of luggage, handbags, saddlery and harness
	192	Manufacture of footwear
	DIVISION 20	MANUFACTURE OF WOOD AND OF PRODUCTS OF WOOD AND CORK, EXCEPT FURNITURE; MANUFACTURE OF ARTICLES OF STRAW AND PLAITING MATERIALS
	201	Sawmilling and planing of wood
	202	Manufacture of products of wood, cork, straw and plaiting materials
	DIVISION 21	MANUFACTURE OF PAPER AND PAPER PRODUCTS
	210	Manufacture of paper and paper products
	DIVISION 22	PUBLISHING, PRINTING AND REPRODUCTION OF RECORDED MEDIA
	221	Publishing
	222	Printing and service activities related to printing
	223	Reproduction of recorded media

DIVISION 23	MANUFACTURE OF COKE. REFINED PETROLEUM PRODUCTS AND NUCLEAR FUEL
231	Manufacture of coke oven products
232	Manufacture of refined petroleum products
233	Processing of nuclear fuel
DIVISION 24	MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS
241	Manufacture of basic chemicals
242	Manufacture of other chemical products
243	Manufacture of man-made fibres
DIVISION 25	MANUFACTURE OF RUBBER AND PLASTIC PRODUCTS
251	Manufacture of rubber products
252	Manufacture of plastic products
DIVISION 26	MANUFACTURE OF OTHER NON-METALLIC MINERAL PRODUCTS
261	Manufacture of glass and glass products
269	Manufacture of non-metallic mineral products n.e.c.
DIVISION 27	MANUFACTURE OF BASIC METALS
271	Manufacture of basic iron and steel
272	Manufacture of basic precious and non-ferrous metals
273	Casting of metals
DIVISION 28	MANUFACTURE OF FABRICATED METAL PRODUCT, EXCEPT MACHINERY AND EQUIPMENT
281	Manufacture of structural metal products, tanks, reservoirs and steam generators
289	Manufacture of other fabricated metal products; service activities to producers of fabricated metal products
DIVISION 29	MANUFACTURE OF MACHINERY AND EQUIPMENT N.E.C.
291	Manufacture of general purpose machinery
292	Manufacture of special purpose machinery
293	Manufacture of domestic appliances n.e.c.
DIVISION 30	MANUFACTURE OF OFFICE, ACCOUNTING AND COMPUTING MACHINERY
300	Manufacture of office, accounting and computing machinery
DIVISION 31	MANUFACTURE OF ELECTRICAL MACHINERY AND APPARATUS N.E.C.
311	Manufacture of electric motors, generators and transformers
312	Manufacture of electricity distribution and control apparatus
313	Manufacture of insulated wire and cable
314	Manufacture of accumulators, primary cells and primary batteries

315	Manufacture of electric lamps
319	Manufacture of other electrical equipment n.e.c.
DIVISION 32	MANUFACTURE OF RADIO, TELEVISION AND COMMUNICATION EQUIPMENT AND APPARATUS
321	Manufacture of electronic valves and tubes and other electronic components
322	Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy
323	Manufacture of television and radio receivers and associated consumer goods
DIVISION 33	MANUFACTURE OF MEDICAL, PRECISION AND OPTICAL INSTRUMENTS, WATCHES AND CLOCKS
331	Manufacture of medical appliances and instruments and appliances for measuring, checking, testing, navigating and other purposes, except optical instruments
332	Manufacture of optical instruments and photographic equipment
333	Manufacture of watches and clocks
DIVISION 34	MANUFACTURE OF MOTOR VEHICLES, TRAILERS AND SEMI-TRAILERS
341	Manufacture of motor vehicles
342	Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers
343	Manufacture of parts and accessories for motor vehicles and their engines
DIVISION 35	MANUFACTURE OF OTHER TRANSPORT EQUIPMENT
351	Building and repairing of ships and boats
352	Manufacture of railway tramway locomotives and rolling stock
353	Manufacture of aircraft and spacecraft
359	Manufacture of transport equipment n.e.c.
DIVISION 36	MANUFACTURE OF FURNITURE; MANUFACTURING N.E.C.
361	Manufacture of furniture
369	Manufacturing n.e.c.
DIVISION 37	RECYCLING
371	Recycling of metal waste and scrap
372	Recycling of non-metal waste and scrap
E	ELECTRICITY, GAS AND WATER SUPPLY
DIVISION 40	ELECTRICITY, GAS, STEAM AND HOT WATER SUPPLY
401	Production, collection and distribution of gaseous fuels through mains

	402	Manufacture of gas; distribution of gaseous fuels through mains
	403	Steam and hot water supply
DIVISION 41		COLLECTION, PURIFICATION AND DISTRIBUTION OF WATER
	410	Collection, purification and distribution of water
F		CONSTRUCTION
DIVISION 45		CONSTRUCTION
	451	Site preparation
	452	Building of complete constructions or parts thereof; civil engineering
	453	Building installation
	454	Building completion
	455	Renting of construction or demolition equipment with operator
G		WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES, MOTORCYCLES AND PERSONAL AND HOUSEHOLD GOODS
DIVISION 50		SALE, MAINTENANCE AND REPAIR OF MOTHER VEHICLES AND MOTORCYCLES; RETAIL SALE OF AUTOMOTIVE FUEL
	501	Sale of mother vehicles
	502	Maintenance and repair of mother vehicles
	503	Sale of motor vehicle parts and accessories
	504	Sale, maintenance and repair of motorcycles and related parts and accessories
	505	Retail sale of automotive fuel
DIVISION 51		WHOLESALE TRADE AND COMMISSION TRADE, EXCEPT OF MOTOR VEHICLES AND MOTORCYCLES
	511	Wholesale on a fee or contract basis
	512	Wholesale of agricultural raw materials, live animals, food, beverages and tobacco
	513	Wholesale of household goods
	514	Wholesale of non-agricultural intermediate products, waste and scrap
	515	Wholesale of machinery, equipment and supplies
	519	Other wholesale
DIVISION 52		RETAIL TRADE, EXCEPT OF MOTOR VEHICLES AND MOTORCYCLES; REPAIR OF PERSONAL AND HOUSEHOLD GOODS
	521	Non-specialised retail trade
	522	Retail sale of food, beverages and tobacco in specialized stores
	523	Other retail trade of new goods in specialized stores
	524	Retail sale of second-hand goods in stores
	525	Retail trade not in stores

	526	Repair of personal and household goods
H		HOTELS AND RESTAURANTS
	DIVISION 55	HOTELS AND RESTAURANTS
	551	Hotels; camping sites and other provision of short-stay accommodations
	552	Restaurants, bars and canteens
I		TRANSPORT, STORAGE AND COMMUNICATION
	DIVISION 60	LAND TRANSPORT, TRANSPORT VIA PIPELINES
	601	Transport via railways
	602	Other land transport
	603	Transport via pipelines
	DIVISION 61	WATER TRANSPORT
	611	sea and coastal water transport
	612	Inland water transport
	DIVISION 62	AIR TRANSPORT
	621	Scheduled air transport
	622	Non-scheduled air transport
	DIVISION 63	SUPPORTING AND AUXILIARY TRANSPORT ACTIVITIES; ACTIVITIES OF TRAVEL AGENCIES
	630	Supporting and auxiliary transport activities; activities of travel agencies
	DIVISION 64	POST AND TELECOMMUNICATION
	641	Post and courier activities
	642	Telecommunication
J		FINANCIAL INTERMEDIATION
	DIVISION 65	FINANCIAL INTERMEDIATION, EXCEPT INSURANCE AND PENSION FUNDING
	651	Monetary intermediation
	659	Other financial intermediation
	DIVISION 66	INSURANCE AND PENSION FUNDING, EXCEPT COMPULSORY SOCIAL SECURITY
	660	Insurance and pension funding, except compulsory social security
	DIVISION 67	ACTIVITIES AUXILIARY TO FINANCIAL INTERMEDIATION
	671	Activities auxiliary to financial intermediation, except insurance and pension funding
	672	Activities auxiliary to insurance and pension funding
K		REAL ESTATE, RENTING AND BUSINESS ACTIVITIES
	DIVISION 70	REAL ESTATE ACTIVITIES

	701	Real estate activities with own or leased property
	702	Real estate activities on a fee or contract basis
DIVISION 71		RENTING OF MACHINERY AND EQUIPMENT WITHOUT OPERATOR AND OF PERSONAL AND HOUSEHOLD GOODS
	711	Renting of transport equipment
	712	Renting of other machinery and equipment
	713	Renting of personal and household goods n.e.c.
DIVISION 72		COMPUTER AND RELATED ACTIVITIES
	721	Hardware consultancy
	722	Software consultancy and supply
	723	Data processing
	724	Data base activities
	725	Maintenance and repair of office, accounting and computing machinery
	729	Other computer related activities
DIVISION 73		RESEARCH AND DEVELOPMENT
	731	Research and development on natural sciences
	732	Research and development on social sciences and humanities
DIVISION 74		OTHER BUSINESS ACTIVITIES
	741	Legal, accounting, bookkeeping and auditing activities; tax consultancy; market research and public opinion polling; business and management consultancy
	742	Architectural, engineering and other technical activities
	743	Advertising
	749	Business activities n.e.c.
L		PUBLIC ADMINISTRATION AND DEFENCE; COMPULSORY SOCIAL SECURITY
DIVISION 75		PUBLIC ADMINISTRATION AND DEFENCE; COMPULSORY SOCIAL SECURITY
	751	Administration of the State and the economic and social policy of the community
	752	Provision of services to the community as a whole
	753	Compulsory social security activities
M		EDUCATION
DIVISION 80		EDUCATION
	801	Primary education
	802	Secondary education
	803	Higher education
	809	Adult and other education

N		HEALTH AND SOCIAL WORK
	DIVISION 85	HEALTH AND SOCIAL WORK
	851	Human health activities
	852	Veterinary activities
	853	Social work activities
O		OTHER COMMUNITY, SOCIAL AND PERSONAL SERVICE ACTIVITIES
	DIVISION 90	SEWAGE AND REFUSE DISPOSAL, SANITATION AND SIMILAR ACTIVITIES
	900	Sewage and refuse disposal, sanitation and similar activities
	DIVISION 91	ACTIVITIES OF MEMBERSHIP ORGANIZATIONS N.E.C.
	911	Activities of business, employers and professional organizations
	912	Activities of trade unions
	919	Activities of other membership organizations
	DIVISION 92	RECREATIONAL, CULTURAL AND SPORTING ACTIVITIES
	921	Motion picture, radio and television and other entertainment activities
	922	News agency activities
	923	Libraries, archives, museums and other cultural activities
	924	Sporting and other recreational activities
	DIVISION 93	OTHER SERVICE ACTIVITIES
	930	Other service activities
P		PRIVATE HOUSEHOLDS WITH EMPLOYED PERSONS
	DIVISION 95	PRIVATE HOUSEHOLDS WITH EMPLOYED PERSONS
	950	Private households with employed persons
Q		EXTRATERRITORIAL ORGANIZATIONS AND BODIES
	DIVISION 99	EXTRATERRITORIAL ORGANIZATIONS AND BODIES
	990	Extraterritorial organizations and bodies

INTERNATIONAL STANDARD CLASSIFICATION OF OCCUPATIONS (ISCO-1988)

Major Group 1. Legislators, senior officials and managers

Sub-major and minor groups

11 Legislators and senior groups

111 Legislators

112 Senior government officials

113 Traditional chiefs and heads of villages

114 Senior officials of special-interest organizations

12 Corporate managers [1]

121 Directors and chief executives

122 Specialized managers

13 General managers [2]

131 General managers

Major Group 2. Professionals

21 Physical, mathematical and engineering science professionals

211 Physicists, chemists and related professionals

212 Mathematicians, statisticians and related professionals

213 Computing professionals

214 Architects, engineers and related professionals

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[1] This group is intended to include persons who, as directors, chief executives or specialized managers, manage enterprises requiring a total of three or more managers.

[2] This group is intended to include persons who manage enterprises on their own behalf, or on behalf of the proprietor, with the assistance of no more than one other manager and/or some non-managerial help.

22 Life science and health professionals

221 Life science professionals

222 Health professionals (except nursing)

223 Nursing and midwifery professionals

23 Teaching professionals

231 College, university and higher education teaching professionals

232 Secondary education teaching professionals

233 Primary and pre-primary education teaching professionals

234 Special education teaching professionals

235 Other teaching professionals

24 Other professionals

241 Business professionals

242 Legal professionals

243 Archivists, librarians and related information professionals

244 Social and related science professionals

245 Writers and creative and performing artists

246 Religion professionals

Major Group 3. Technicians and associate professionals

31 Physical science and engineering associate professionals

311 Physical science and engineering technicians

312 Computer assistants and computer equipment controllers

313 Optical and electronic equipment controllers

314 Ship and aircraft controllers and technicians

315 Building, safety, health and quality inspectors

32 Life science and health associate professionals

321 Life science technicians and related workers

322 Modern health associate professionals (except nursing)

323 Nursing and midwifery associate professionals

324 Traditional medicine practitioners and faith healers

33 Teaching associate professionals

331 Primary education teaching associate professionals

332 Pre-primary education teaching associate professionals

333 Special education teaching associate professionals

334 Other teaching associate professionals

34 Other associate professionals

341 Finance and sales associate professionals

342 Business services agents and trade brokers

343 Administrative associate professionals

344 Government associate professionals

345 Social work associate professionals

346 Artistic, entertainment and sports associate professionals

347 Non-ordained religion associate professionals

Major Group 4. Clerks

41 Office clerks

411 Secretaries and keyboard operating clerks

412 Numerical clerks

413 Material recording and transport clerks

414 Library, mail and related clerks

42 Customer services clerks

421 Cashiers, tellers and related clerks

422 Client information clerks

Major Group 5. Service workers and shop and market sales workers

51 Personal and protective service workers

511 Travel attendants and guides

512 Housekeeping and restaurant services workers

513 Personal care workers

514 Other personal services workers

515 Astrologers, fortune-tellers and related workers

516 Protective services workers

52 Salespersons, demonstrators and models

521 Shop salespersons and demonstrators

522 Stall and market salespersons

523 Fashion and other models

Major Group 6. Skilled agricultural and fishery workers

61 Market-oriented skilled agricultural and fishery workers

611 Market gardeners and crop growers

612 Market-oriented animal producers

613 Market-oriented crop and animal producers

614 Forestry and related workers

615 Fishery workers, hunters and trappers

62 Subsistence agricultural, fishery and related workers

621 Subsistence agricultural, fishery and related workers

Major Group 7. Craft and related workers

71 Extraction and building trades workers

711 Miners and blasters, stone cutters and carvers

712 Building frame and related trades workers

713 Building finishers and related trades workers

714 Painters, building structure cleaners and related workers

72 Metal and machinery trades workers

721 Metal moulders, welders, sheet-metal workers, structural metal prepares and related workers

722 Blacksmiths, toolmakers and related workers

723 Machinery mechanics and fitters

724 Electrical and electronic instrument mechanics and fitters

73 Precision, handicraft, printing and related trades workers

731 Precision workers in metal and related materials

732 Potters, glass formers and related workers

733 Handicraft workers in wood, textile, leather and related materials

734 Printing and related trades workers

74 Other craft and related trades workers

741 Food and related products processing trades workers

742 Cabinet makers, wood treaters and related trades workers

743 Textile and garment trades workers

744 Pelt, leather and shoemaking trades workers

Major Group 8. Plant and machine operators and assemblers

81 Industrial plant operators

811 Mining and mineral-processing plant operators

812 Metal-processing plant operators

813 Glass and ceramics kiln and related operators

814 Wood-processing and papermaking plant operators

815 Chemical-processing plant operators

816 Power-generating and related plant operators

817 Automated assembly-line and industrial robot operators

82 Stationary machine operators and assemblers

821 Metal and mineral products processing machine operators

822 Chemical products machine operators

823 Rubber and plastics products machine operators

824 Wood products machine operators

825 Printing, binding and paper products machine operators

826 Textile products machine operators

827 Food and related products processing machine operators

828 Assemblers

829 Other stationary machine operators and assemblers

83 Drivers and mobile machine operators

831 Railway engine drivers and related workers

832 Motor vehicle drivers

833 Agricultural, earth-moving, lifting and other mobile materials-handling equipment operators

834 Ships' deck crews and related workers

Major Group 9. Elementary occupations

91 Sales and services elementary occupations

911 Street vendors and related workers

912 Shoe cleaning and other street services elementary occupations

913 Domestic helpers and cleaners and related workers

914 Building caretakers and window cleaners

915 Messengers,watchers and security workers

916 Garbage collectors and related labourers

92 Agricultural, fishery and related labourers

921 Agricultural, fishery and related labourers

93 Labourers in mining, construction, manufacturing and transport

931 Mining and construction labourers

932 Manufacturing labourers

933 Transport labourers

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