

**ST/ESA/STAT/SER.F/75/Vol.1**

**Department of Economic and Social Affairs  
Statistics Division**

**Studies in Methods, Series F, No. 75/Vol.1  
Handbook of National Accounting**

**Household Accounting:  
Experience in Concepts and Compilation**

**Volume 1  
Household Sector Accounts**

**United Nations  
New York, 2000**

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ST/ESA/STAT/SER.F/75/Vol.1  
United Nations publication  
Sales No. E.00.XVII.16, Vol.1  
ISBN 92-1-161430-9  
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## ***Introduction to the Handbook.***

### **I. General remarks**

1. This handbook focuses on household sector accounts and their possible extensions as described in the *System of National Accounts 1993 (1993 SNA)*.<sup>1</sup> Its intention is to describe the experiences of countries with regard to conceptual and compilation issues of household sector and satellite accounting.

2. The present handbook is part of the series “Handbooks of National Accounting” prepared by the United Nations Statistics Division (UNSD) in support of the implementation of the System of National Accounts 1993 (1993 SNA). The series includes, besides this one, the following handbooks which have already been published (or will soon be published) on:

- Integrated Environmental and Economic Accounting;<sup>2</sup>
- Use of the System of National Accounts in Economies in Transition;<sup>3</sup>
- Input-Output Table Compilation and Analysis;<sup>4</sup>
- Links between Business and National Accounts;<sup>5</sup>
- A Systems Approach to National Accounts Compilation;<sup>6</sup>
- Analytical and Policy Uses of National Accounts;<sup>7</sup>

3. Besides the handbooks prepared by UNSD, other member organizations of the Inter-Secretariat Working Group on National Accounts (ISWGNA) such as Eurostat (the Statistical Office of the European Communities), the International Monetary Fund (IMF), and the Organization for Economic Co-operation and Development (OECD), as well as other international organizations such as the Food and Agriculture Organization (FAO), the World Tourism Organization etc., also prepare handbooks in their specialized fields of statistics. All handbooks published or soon to be published in support of the implementation of the 1993 SNA are announced in the ISWGNA *SNA News and Notes* which is a bi-annual newsletter edited and published by UNSD.<sup>8</sup>

4. This handbook is a compilation of contributions made by various authors specialized in national accounts and related fields. In preparation for this handbook, the authors met during the United Nations “Expert Group Meeting on Household Satellite Accounting” at United Nations (Headquarters) in New York from 6 to 10 October 1997. At this meeting the papers submitted were discussed and, where necessary, proposals for changes were made. A summary of the discussions of the Expert Group follows this introduction. Some comments were also made by the Group on the “spirit” of the handbook which are presented in the following section.

### **II. “Spirit” of the handbook**

5. Traditionally, the household sector is the least developed sector of the System of National Accounts. Although the previous 1968 SNA recommended the compilation of household accounts, only a few countries currently produce such accounts. The 1993 SNA describes the concepts underlying a complete sequence of accounts for all sectors including the household sector. As the household sector is comprised of all economic information on individual residents of the country, the challenge is to devote more resources to the compilation of household sector accounts. This handbook is seen as a means of assisting such efforts. The goal is to develop a more independent (i.e. based on its own data sources) compilation of household sector accounts than the prevailing practice of treating the household sector as more or less a residual.

6. Besides the household sector accounts, there is a need to develop further household satellite accounts and social accounting matrices (SAMs). Two main issues emerge. First, since economic growth does not automatically translate into human development for all groups in a society, the need to study the links between economic and social factors is coming to the forefront of policy making. Those links were extensively discussed during major UN conferences such as the Social Summit in Copenhagen or the Women's Conference in Beijing, and satellite accounts and SAMs were felt to be an appropriate means of analyzing such links. Second, since societies are moving not only from the agricultural to the industrial age, but also from the industrial to the services and information age, it is necessary to provide a basis for analyzing this change. This can be achieved by developing further the concepts and compilation approaches to analyzing the characteristics of human capital and changes therein within the household sector, its household groupings, labour categories and industries.

7. Macro-economic policy worldwide relies very much on the main aggregates of the SNA, including Gross Domestic Product (GDP), final consumption, capital formation, etc. However, given the increasing socio-economic policy demands, the usefulness of the national accounts for policy analysis may be strengthened by making more use of the flexibility of its framework, in particular through satellite accounts and analysis.

8. The main target users of the handbook are national accountants in developed as well as in developing countries. It should prepare them for a dialogue with data-collecting statisticians in various social fields, as well as researchers and policy makers.

9. Given the diversity of social issues among countries, it is illusory to look for exhaustive guidelines. Although the handbook covers various issues of importance for the subject, it cannot and does not intend to be comprehensive, neither with respect to concepts nor with respect to practical descriptions on how to set up household sector and household satellite accounts.

### **III. The overall structure of the handbook**

10. This handbook is subdivided into two volumes. The first volume is called "Household Sector Accounts" and is devoted to the development of household sector accounts as they are described in the central framework of the 1993 System of National Accounts (1993 SNA). The second volume is called "Household Satellite Extensions" and concentrates on various types of household satellite accounts as extensions of household sector accounts.

11. Chapter I of volume 1 contains the description of the household sector according to the 1993 SNA and gives details on further elaborations of the household sector. Chapter II focuses on the concept of the informal sector which is a crucial feature of the 1993 SNA with regard to the market production of household units, the income received from those production activities, as well as employment opportunities in the informal sector. Chapter III presents country and case studies on the compilation of household sector accounts. Finally, Chapter IV describes the links of the household sector with selected other sectors.

12. Volume 2 is primarily devoted to various types of household satellite accounting: labour accounting, functional satellite accounting, accounting for household production, and socio-economic accounting as reflected in Human Resource Accounts (HRAs), SAMs and Systems of Economic and Social Accounting Matrices (SESAMEs) which are all described in Chapter V. Chapter VI of volume 2 focuses on the measurement of social issues. It describes various social indicators, problems in measuring them and potential data sources.

13. The papers in volume 1 and 2 of the handbook reflect experiences in a variety of fields related to national accounting. Since each field has its own literature, the papers provide a list of references of work done elsewhere and it is intended to be as comprehensive as possible. The list of references may include literature on concepts and compilation methods, but will also reflect experiences in applying those concepts and methods in different parts of the world.

#### **IV. The content of volume 1 “Household Sector Accounts”**

14. Chapter I of volume 1 “The household sector in the 1993 SNA” focuses on the concept of the household sector in the 1993 SNA and further elaborations. Since it is felt that issues affecting households are scattered throughout the SNA, this chapter helps to summarize them as an introduction to the handbook. In particular, the chapter deals with the definition of the household sector and its sub-sectors and the different aspects of household activities as producers, recipients of income, and consumers. It also considers the members of households as comprising an economically active population.

15. Chapter I also gives further details on important aspects of households which are not further elaborated in the handbook. Other aspects, however, such as the informal sector within the household sector or the production boundary, will be discussed again in more detail in later chapters of the handbook.

16. Chapter II “The Informal Sector as Part of the Household Sector” focuses on the concept of the informal sector which is a crucial but often neglected feature of the 1993 SNA. It covers the market production of household units, the income received from those production activities as well as employment in the informal sector. The concept of the informal sector and how this concept is transformed into a methodology for conducting informal sector surveys are covered by the first paper in this chapter. The paper describes in detail the definition of the informal sector agreed upon at the 15th International Conference of Labour Statisticians in 1993. The second paper elaborates further on an integrated approach to survey activities of national statistical offices for large, medium and in particular for small enterprises which is called the FIRST methodology.

17. The third paper of chapter II describes the experiences of the Philippines in collecting urban informal sector data in general and data on homeworker and working children in particular. The next paper of the chapter makes a proposal for a minimum data set on the informal sector for national accounting purposes. The last paper presents an overview of progress made in the measurement of the informal sector and provides data on the level and development of informal sector employment and production.

18. Chapter III on “Experiences in Compiling Household Sector Accounts” gives an overview of selected country practices on the compilation of household sector accounts. The chapter starts with a paper on the Canadian experience, followed by papers on experiences in India, Nepal, and Malaysia. The last paper of that chapter elaborates on micro-macro data links with regard to household sector accounting.

19. Chapter IV on “Links of the Household Sectors to Other Sectors” is the last chapter of volume 1. It starts with a paper on the Norwegian experience with the links of the household sector to the government sector, followed by a paper on the links between the household sector and the non-profit sector. Finally, some experiences are discussed regarding the direct and indirect links of the household sector with the rest of the world with a special focus on the socio-economic dimension of the household and particular household sub-groups. In particular, the paper on the Caribbean experience demonstrates the vulnerability of small countries to external links.

## **V. The content of volume 2 "Household Satellite Extensions"**

20. Volume 2 of the handbook focuses on satellite extensions of the household sector. Chapter V on “Types of Household Satellite Accounting” presents five different types of such extensions. The first one is Labour Accounting, a further elaboration of chapter XVII of the 1993 SNA on “Population and Labour Inputs”. It is argued that Labour Accounting is an essential adjunct for national accounting. However, elaborated Labour Accounting is, as the paper demonstrates, a tool which is as yet scarcely developed in national accounting practices.

21. The next example of satellite accounts is Functional Satellite Accounts. The paper presented in this handbook focuses on the French examples of Functional Satellite Accounting which date back to the 70s when France began to develop Functional Satellite Accounts on research and development, health, social protection, etc. It describes the impact of policy needs on satellite accounts development.

22. Another example of household satellite accounts is the measurement of household production both within the SNA production boundary and, in particular, outside it. Various issues are raised in the papers on that subject which are not only of a methodological nature but also cover classification and valuation as well as country practices. The last paper in the section discusses theoretical issues in valuing non-market activities.

23. The fourth type of household satellite accounts described in volume 2 focuses on the Human Resource Accounts (HRA) developed by UNSD. In contrast to the Functional Satellite Accounts, HRAs are so-called integrated satellite accounts (1993 SNA, §21.122/3). They are a comprehensive presentation of the SNA which include some changes in concepts and further detail in the classifications in support of alternative satellite analysis. They provide an integrated framework of socio-economic data. The general features of the accounts are presented in the first paper in that section. The following papers report on the experiences of compiling these accounts for the Republic of Korea and Colombia.

24. In the last section of chapter V, Social Accounting Matrices and their extensions (SAMs and SESAMEs) are presented. Like the HRAs they are also comprehensive presentations of the SNA and therefore may also be referred to as integrated satellite accounts. The first paper in this section describes the general features of SAMs and in particular of SESAMEs in measuring welfare. The other two papers reflect the experience of introducing SAMs and SESAMEs in the Netherlands and in Indonesia.

25. The structure of chapter V is guided by the scope of satellite accounts: Labour Accounts as well as Functional Satellite Accounts focus on special aspects of the socio-economic dimension of the household sector. Accounting for household production encompasses those activities not covered by the SNA production boundary. HRAs, SAMs and SESAMEs capture all previous aspects, in particular those on the labour market and those reflected in the Functional Satellite Accounts. In addition, SESAMEs and Human Resource Accounts provide the link between the social indicators approach and the national accounts. Moreover, SESAMEs are also intended to incorporate environmental accounts. SESAMEs are

the most detailed system of socio-economic accounting; at the same time they are the most demanding framework regarding data and resources.

26. Chapter VI is the final chapter of volume 2 and is entitled "Measurement of Social Issues". Satellite accounts address social issues such as poverty, health and education. To describe those issues statistically is the subject of this chapter. The first paper of chapter VI concentrates on the definition and measurement of selected indicators and the progress made in the last decades. The next paper describes in detail efforts made to establish appropriate indicators to address "poverty" as a social issue. The final paper describes surveys as a source of data for the compilation of social indicators.

## Endnotes

<sup>1</sup> Commission of the European Communities, International Monetary Fund, Organization for Economic Co-operation and Development, United Nations, World Bank (1993): *System of National Accounts 1993*, Brussels/Luxembourg, New York, Paris, Washington D.C. (United Nations publications, Sales No. E.94.XVII.4).

<sup>2</sup> United Nations Statistics Division, Studies in Methods, Handbook of National Accounting, Series F, No. 61 (United Nations publications, Sales No. E.93.XVII.12).

<sup>3</sup> United Nations Statistics Division, Studies in Methods, Handbook of National Accounting, Series F, No. 66 (United Nations publications, Sales No. E.96.XVII.121).

<sup>4</sup> United Nations Statistics Division, Studies in Methods, Handbook of National Accounting, Series F, No. 74 (United Nations publications, Sales No. E.99.XVII.9).

<sup>5</sup> United Nations Statistics Division, Studies in Methods, Handbook of National Accounting, Series F, No. 76 (United Nations publications, forthcoming in 2000).

<sup>6</sup> United Nations Statistics Division, Studies in Methods, Handbook of National Accounting, Series F, No. 77 (United Nations publications, Sales No. E.99.XVII.10).

<sup>7</sup> United Nations Statistics Division, Studies in Methods, Handbook of National Accounting, Series F, No. 81 (United Nations publications, forthcoming in 2000).

<sup>8</sup> *SNA News and Notes* is published in four UN-languages (English, French, Russian and Spanish) and can be accessed on the internet: <http://www.un.org/Depts/unsd>. Correspondence including requests for free subscriptions may be addressed to: UNSD, Room DC2-1720, New York, NY 10017, U.S.A., tel.: +1-212-963-4854, fax: +1-212-963-1374, e-mail: [sna@un.org](mailto:sna@un.org)

## **Summary of the Discussions of the Expert Group**

27. The Expert Group, at its meeting from 6 to 10 October 1997, had intensive discussions about the papers presented. The following summary lists the main topics discussed beyond those which were already presented in chapter II of the introduction.

### **I. Household sector accounts**

#### **A. The household sector**

28. The first volume of the handbook summarizes various aspects of household sector accounting as they are outlined in the 1993 System of National Accounts (1993 SNA). Further clarifications are needed with regard to certain concepts outlined in the 1993 SNA. In particular further work on operationalization and measurement is necessary with regard to concepts such as actual consumption, the informal sector, hidden or illegal activities, and household production.

29. With respect to the scope of the household sector accounts, the compilation of production, income and use of income accounts of households has priority in order to derive savings of households. Depending on needs, data availability and resources, countries may further develop household sector accounts, including capital and financial accounts and even balance sheets.

30. With respect to the detailed analysis of economic and social links, the development of a possible international sub-classification of the household sector is proposed. The classification may be developed on the basis of several criteria, including socio-economic characteristics such as the level of educational or the occupational category of the reference person, whether the household is an agricultural household or not, its regional location in rural or urban areas or other regional characteristics, the size of the household, etc. Also, level of income may be used as a classification criterion.

31. The central framework of the SNA includes a part of households' non-market production (e.g. agricultural production and all goods for own consumption). For many reasons, among which are the presentation of the homogeneity of macro-economic aggregates, valuation difficulties due to the absence of economically meaningful prices, and the usefulness of central national accounts for government policy purposes, the SNA production boundary should remain where it stands (for further details see SNA 1993, Chapter 6, paragraphs 6.19 to 6.22). For analytical purposes, it was proposed that the satellite account for non-market household production should cover the entire range of such production, i.e. that it should cover activities lying both outside and within the SNA production boundary, and that these should be presented separately in the satellite account so as to offer the widest and most flexible possibilities for analysis of the non-market share.

#### **B. The informal sector as part of the household sector**

32. With regard to the delineation of informal sector production as opposed to total household sector production, further operationalization and clear attribution of producing units to their respective sectors is necessary in order to avoid data gaps or double counting in countries and to increase international comparability.

33. Following the 1993 SNA, the informal sector should be also identified as a subdivision of the institutional sector of households, so that welfare-oriented measures can be derived. For instance, informal sector households could be defined as those which receive most of their income from informal sector production.

34. An integrated system of surveys of household activities has advantages compared to surveys covering only one or a few sub-sectors or activities. With respect to the still prevailing deficiencies of data on the market production of households, survey strategies are described. These are the FIRST method, and the mixed household and enterprise survey strategy developed by the ILO for informal sector activities and employment.

35. With regard to informal sector surveys, given the lack of book-keeping by informal units and the cost of detailed inquiries, informal sector sample surveys may concentrate on a simplified set of data items. In particular for national accounts purposes, small data sets in combination with additional information from supplementary surveys as well as further estimates may provide a comprehensive picture of the informal sector in the household accounts.

36. The Delhi Group on Informal Sector Statistics held its first meeting in May 1997. Part of the future work of the Delhi Group will be devoted to the data needs of national accounting with respect to the informal sector.

### **C. Experiences in compiling household sector accounts**

37. With regard to the compilation of household sector accounts, which requires the combined use of independent data sources, there is a need to develop more practical and detailed examples and guidelines, to be based on the practical experiences of pioneering countries.

38. Links between micro- and meso-/macro-data are useful though hard to maintain. In some countries, microdata from the household survey are carefully scrutinized and adjusted and completed, so that a comprehensive and internally compatible database provides the basis for the compilation of household sector accounts. Thereafter, adjustments are made to reconcile the data with the SNA concepts, including imputation, and then further adjustments are made to integrate the data with separate estimates of small scale production by households and data from other (institutional) sectors of the economy. The latter adjustments, however, are not reflected in the microdata, which implies that at that point of compilation the link between micro- and macro-data is cut.

### **D. Links of the household sector with other sectors**

39. The central framework of national accounts provides users with a functional breakdown of the final consumption of households, government, and non-profit institutions. Beyond this integrated approach, actual final consumption can be adapted in satellite accounting to particular social concerns, e.g. with respect to education, health, etc. This adaptation would then result in a partial incorporation of non-household expenditures in those areas, and may also include some collective expenditures, for instance general administrative expenses by the Ministry of Education or Health, which also need to be taken into account when the effectiveness of educational or health policies is examined.

40. With regard to the links of the household sector with non-profit institutions (NPIs), there is a need to further elaborate the SNA criteria with regard to the scope and classification of NPIs.

41. With regard to the links of the household sector with the rest of the world, the vulnerability of households to external influences is an important issue. This can be addressed by developing a breakdown of transactions showing "from whom to whom" links between the household sector and the rest of the world. Further work, however, is needed to develop the orientation of such a matrix and elaborate appropriate data sources.

## **II. Household satellite extensions**

### **A. Types of household satellite accounting**

42. The efforts to integrate economic and social analysis through satellite accounting are welcome. This integration would provide more adequate support for a balanced development of economic and social statistics.

43. Experimental and operational implementation of satellite studies has occurred in some countries. These studies include Labour Accounting Systems (LAS), Functional Satellite Accounts, accounting for household production, Human Resource Accounts (HRA), and Social Accounting Matrices and their extensions (SAMs and SESAMEs). In particular, this concerns accounting systems that have already been institutionalized in one or more countries. They provide a means of bringing closer together the practices of national accountants and the policy users of the accounting data.

44. The development of labour accounts within satellite systems such as Labour Accounts, Human Resource Accounts and SESAMEs was considered to be important as a means of further strengthening the role of employment in the central framework of the SNA (SNA Chapter XVII). Detailed information on employment by labour type (such as gender, skill level) provided by those systems would enhance the usefulness of other information provided by the SNA such as wages and salaries, output, etc

45. When reviewing the practices of the Functional Satellite Accounts, their decentralized use by technical, government agencies and social partners is considered an advantage. Such practice would make better use of technical capabilities in specialized areas and would help develop a better link between national economic and satellite accounting and its uses in policy analysis and modeling.

46. Extensions of the production boundary to non-market, non-SNA activities for special studies may be referred back to an early development initiated by some economists. Kuznetz, for instance, suggested in his studies that all activities needed to be considered whether market or not in order to determine whether the economy was growing or not.

47. Following the recommendations of the 1993 SNA, extensions of the production boundary to non-market, non-SNA household activities can best be implemented in a satellite framework. It was agreed that, as recommended in the SNA, the scope of "extended production" should be defined according to the third party criterion. Activities not meeting this criterion are sleeping, eating and listening to music. These are personal activities, not productive activities, and therefore not relevant for the satellite account. Due to valuation problems, some countries have so far imputed a monetary value only to household maintenance (food preparation, cleaning, repairs, etc.), while other countries have included, in addition, care of persons (care of children, of dependent adults). These differences in the "extent" of "extensions" should eventually disappear with the development of appropriate valuation techniques.

48. Classifications which can cover both economic and social production activities are proposed. However, caution is suggested, in particular as the unit of observation and classification for social activities, e.g. in time-use surveys, would be different from the unit used for descriptions of economic activities. Establishments, as defined in the SNA, are homogenous production units that use "bundles" of time-use activities and not the single time-use activities that are considered when determining the contribution of social production outside the SNA production boundary. (An example is the compilation of GDP based on the SNA. The economic activity of a creche consists of a combination of activities such as child care, food preparation and serving, transportation, doctor's visits, etc.) Further work will be needed to identify corresponding bundles of time-use activities within and outside the SNA production boundary.

49. The preferred method of valuing household non-market SNA and non-SNA activities is the output method. At the same time, the valuation should be applied with caution because it involves assumptions about interpersonal utilities and furthermore would involve valuation of household activities that were never part of market transactions and never gave rise to monetary income, but would result in changes in production and consumption patterns if market transactions had actually taken place. The various theories of value should be closely studied by those using valuations for non-market non-SNA activities, in particular the value theory developed by Hicks or Debreu, which is very closely followed in national economic accounting.

50. Some experts were in favor of valuing time-use activities in order to quantify their contribution to an extended concept of GDP. Others, who focused on the use of time-use data in the specification of functional relations of household behaviour, thought that valuation was methodologically and/or practically not feasible.

51. When reviewing the satellite accounts practices with regard to household sector concerns in the Functional Satellite Accounts approaches, HRA and SESAME, developers of the alternative analyses should prepare links between T-accounts presentations, matrices and separate tables, so that users are able to compare analyses more effectively. The matrix presentation provides more detailed data with regard to "from whom to whom" links between household sub-sectors and also with other sectors, and, providing sufficient data are available, this information is useful in analysis. In most cases such analysis could not, however, rely on assuming that coefficients are fixed.

52. When dealing with employment links between income generated in production and income used by households in HRAs and SESAMES, a distinction should be made between "job", which is generally the unit for which information is obtained from economic surveys, and "person", which is the unit of classification in household surveys. Such surveys should therefore be designed to ensure coverage of all jobs held by persons during the relevant reference periods. Furthermore, it should be kept in mind that on the "job" side there are filled and vacant jobs, and that there are employed persons and unemployed persons. The elements of a Labour Accounting System are to be taken into account when designing HRAs and SESAMES. It is recognized, however, that the additional elements of vacant "jobs" and unemployed persons included in a LAS might be difficult to identify in developing countries and in particular in the informal sector and/or in activities with pronounced seasonal fluctuation in employment.

## **B. Measurement of social issues**

53. Poverty and other income and capability indicators should be developed in close coordination with household sector satellite accounts. In particular, a link should be established between the classifications and concepts of the latter and poverty indicators. Also, data development of these separate efforts should be better coordinated, so that at the national level use can be made of the same database. This is even more important at the international level, as non-coordination of both efforts would result in many data gaps and, as a result, in non-comparability of indicators between countries. Poverty indicators should not only be merely descriptive of an overall situation but also identify special groups and issues that governments could target in their policies towards relieving poverty constraints.

54. Various activities are in progress to increase the quality and detail of household sector data. In particular, with regard to the social dimension of households, the efforts undertaken by survey types such as Living Standards Measurement Studies (LSMS) are acknowledged. However, the cost and burden of such surveys for respondents and the national statistical systems have to be taken into account. One might also favour “leaner” surveys which may be carried out more often in order to generate time series.

## Acknowledgments

This handbook is the result of the international cooperation between the United Nations Statistics Division (UNSD), national and international statistical agencies and individual experts who have volunteered to bring in their expertise and time in its preparation. Some countries and institutions also funded the participation of their experts in the Expert Group Meeting on Household Satellite Accounting held in New York from 6 to 10 October 1997.

UNSD is grateful to national statistical offices, international organizations and individual experts for their contribution to the successful completion of this handbook. The list of individual experts involved in the its preparation and their function as well as their institutional affiliation is given on the following pages. The opinions expressed in the handbook do not necessarily represent those of the United Nations or of the institutions the respective authors are affiliated to.

Mr. Bernd Becker was responsible for organizing the Expert Group meeting and for preparing the draft of the handbook. Thanks to generous financial support by the World Bank final editing was undertaken under the supervision of Mr. Robin Lynch [World Bank]. The conceptual outline of the handbook as well as of the agenda for the expert group meeting was developed together with Mr. Jan van Tongeren in close cooperation with Mr. Jean-Etienne Chapron. Regarding technical and organizational matters, special mention should be made of the valuable contribution made by Mr. Stefan Schweinfest in close cooperation with Mr. Ralf Becker, Ms. Elene Pfond, Ms. Juana Sanchez-Galvan, Ms. Anu Vempaty, and Ms. Marta Bergonzoli. The project was carried out under the responsibility of Ms. Cristina Hannig.

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## List of Abbreviations and Acronyms

BOP	Balance of Payments
BPM	Balance of Payments Manual
CARICOM	Caribbean Community
c.i.f.	cost, insurance, freight
COFOG	Classification of the Functions of Government
COICOP	Classification of Individual Consumption by Purpose
COPNI	Classification of the purposes of the non-profit institutions serving households
COPP	Classification of producers by purpose
CPA	Classification of Products by Activity
CPC	Central Product Classification
CPI	Consumer Price Index
CPM	Capability Poverty Measure
ECA	Economic Commission for Africa
ECE	Economic Commission for Europe
ECLAC	Economic Commission for Latin America and the Caribbean
ESA	European System of Accounts
ESCAP	Economic and Social Commission for Asia and the Pacific
ESCWA	Economic and Social Commission for Western Asia
EU	European Union
Eurostat	Statistical Office of European Union
FAO	Food and Agriculture Organization of the United Nations
f.o.b.	free on board
FIRST	fully integrated rational survey technique
FISIM	financial intermediation services indirectly measured
GDP	gross domestic product
GFCF	gross fixed capital formation
GFS	government finance statistics
GNI	gross national income
GNP	gross national product
HDI	Human Development Index
HDR	Human Development Report
HPI	Human poverty index
IARIW	International Association for Research on Income and Wealth
ICD	International Classification of Diseases and Related Health Problems
ICIDH	International Classification of Impairments, Disabilities and Handicaps
ICLS	International Conference of Labour Statisticians
ICP	International Comparison Programme
ICSE	International Classification of Status in Employment
IEA	integrated economic account
ILO	International Labour Organization
IMF	International Monetary Fund
INSEE	Institut national de la statistique et des études économiques
INSTRAW	International Research and Training Institute for the Advancement of Women
IO table	input-output table
IS	informal sector

ISCED	International Standard Classification of Education
ISCO	International Standard Classification of Occupations
ISIC	International Standard Industrial Classification of All Economic Activities
ISWGNA	Inter-Secretariat Working Group on National Accounts
IT	information technology
LAS	Labour Accounting System
LFS	Labour Force Survey
LSMS	Living Standard Measurement Study
MNSDS	Minimum National Social Data Set
MPS	Material Product System
NACE	General Industrial Classification of Economic Activities within the European Communities
NAFTA	North American Free Trade Agreement
NDP	net domestic product
n.e.c.	not elsewhere classified
NGO	non-governmental organization
NPI	non-profit institution
NPISHs	non-profit institutions serving households
OECD	Organization for Economic Co-operation and Development
OECS	Organization of Eastern Caribbean States
PIM	perpetual inventory method
PPP	purchasing power parity
PREALC	Regional Programme for Employment in Latin America and the Caribbean
psu	primary sampling unit
R and D	research and development
ROW	rest of the world
SAM	social accounting matrix
SEEA	system of environmental and economic accounts
SESAME	system of economic and social accounting matrices and extensions
SITC	Standard International Trade Classification
SME	Small and micro enterprises
SNA	System of National Accounts
SUT	supply and use table
TUS	time use statistics
UN	United Nations
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNSD	United Nations Statistics Division
VAT	value added tax
WHO	World Health Organization
WTO	World Trade Organization

## **CHAPTER I**

### **THE HOUSEHOLD SECTOR IN THE 1993 SNA**



# **The concept of the household sector in the 1993 SNA and further elaborations**

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## **I. Introduction**

1. This paper deals mainly with the conceptual framework of the 1993 System of National Accounts (1993 SNA) household sector accounts with further elaboration, including satellite accounts. The so called "Blue Book" describes the SNA as a conceptual system and explains in detail the rationale for the treatment applied. The compiler looking for theoretical justification and additional details would be well-advised to look up the corresponding subjects in the Blue Book. As it is not organized by sectors, references to the household sector are spread throughout the Blue Book and in order to make them easier to find, the paragraphs in the Blue Book that correspond to a particular item treated in this paper are shown in brackets. It is recommended that the reader look up the paragraphs indicated where additional details on the subject under discussion can be found. Where the text of the Blue Book is self-explanatory, the original wording has been maintained as far as possible in this paper. Due to the interrelation of different parts of the national accounts, some repetitions could not be avoided in this paper.

2. The household sector comprises the entire population of a country and its role in economic and social life is fundamental. The accounts and tables for this sector can be a substantial source of information for all kinds of social inquiries and they are indispensable for economic analysis and policy decisions. On the supply side, the sector provides the entire labour force and entrepreneurship of an economy, and, in a direct and immediate way, a certain part of capital used in production. The remaining part is supplied by other institutional units such as corporations and government, over which households and individuals have only indirect control as shareholders and voters. The direct contribution of households to the output of goods and services is channeled through household enterprises. The output of this mode of production is difficult to measure statistically, but in connection with the interest in the informal sector, the output of household production and the productivity per worker and/or per unit of capital of household enterprises has been under intense scrutiny. The question these inquiries try to answer is the relationship between income in the informal sector and incomes in other sectors. However, there is a conspicuous lack of trustworthy quantitative information on this subject, due in part to the fact that statistics and accounting on the household sector have had low priority. Somewhat more information is available on the role of the household sector as a factor of demand, namely private final consumption expenditure. This item has traditionally appeared in all previous of the SNA and is used widely to show changes in the welfare of households in the long run, as well as their impact on the cyclical behavior of the economy. In accordance with the Human Development Report, published by UNDP, using data from the World Bank, private consumption represents, with a few exceptions, more than half of total GNP in almost all countries. It is around 62% of GNP for all countries of the world taken together; but as high as 85% in the least developed countries, with only a slight difference between other developing countries and the industrialized ones (61% for the former and 62% for the latter). However, taking into account the distinction between household consumption paid by households and their consumption paid by other

sectors, part of the consumption expenditures of other sectors, especially the government, must be added to the above percentages. This item amounts to 16% for the world as a whole and varies from 10% and 30% in different countries.

3. National accounts record and quantify the activities of households in those aspects which are considered significant by different analysts. There is a great and growing demand for data on the household sector throughout the world as purely theoretical work is being complemented by empirical studies by international bodies and NGOs, policy advocates and policy makers, development economists, those concerned with local development or planning, human resources institutions, those investigating social conditions, market researchers, social workers, financial institutions interested in extending their activities to consumers, model builders, academicians and many more. They all complain that the supply of information they need is insufficient and there can be no doubt that supply lags far behind demand in this area. As the type of information required might differ from one analytical purpose to another, and in order to fashion the supply to the requirements of the demand, it is worthwhile having a look at some of these, rather heterogeneous, requirements.

4. One analysis may look at the whole nation and examine the role of the household sector in maintaining a healthy national economy or its impact on growth and development. These investigators will look not only to government policies, but also to household behavior with respect to work effort, consumption expenditures, saving and fertility. They will examine, not only flows, but also stocks: the wealth of households and their indebtedness. Or the analyst may focus on a particular sector or subject: the existence and development of human capital; the relation between human and physical capital; the role of different types of households within the production process; involuntary unemployment; social and economic disparities between specific groups of population and between sexes and age groups; the distribution of income and welfare; the extent and depth of poverty; the participation of different household groups in cultural and political life; their health, and cultural level. The theorists of convergence will examine the starting level of human capital as a crucial factor in accelerated development. Some analysts will be looking for a relation between quality of life, mainly health and education, and productivity. While business cycle economists will be interested in the behavior of households at different stages of the business cycle.

5. Tax authorities will try to measure the taxable capacity of households and the impact of various types of taxation on different household sub-sectors. Those who devise minimum subsistence packages or contrive safety nets need information on households' incomes and consumption in order to determine the composition of the baskets and how to implement safety nets. The number and characteristics of households in a region will serve as guidelines for labour-intensive industries looking for places to move to.

6. Labour unions have to know the particulars of households when negotiating wage rates and specific allowances. So do social security schemes and insurance companies as well as all those who look for private sector solutions to fill the gaps left by the state's institutions. Even investigative journalism is asking for more details on the household sector.

7. One might venture to say that, in general, the users of household data will be more tolerant with respect to time lags in presenting figures; a problem that plagues the relationship between national accountants and other types of users, especially the monetary and fiscal authorities.

8. In their pursuit of welfare, households act as producers in order to obtain income, which is then used for consumption and, if possible, for saving and capital formation, physical and human, with the purpose of improving their future production and welfare. Each of these aspects is of interest to different users of such data. And each has its implication for the construction of household sector accounts and

tables. In fact the demand is so great that not all of it can be satisfied at the present state of statistical development. In connection with this one might ask to what extent the lack of pertinent information is an obstacle to correct policy decisions. A question that should be taken into account when pondering the cost of new statistical series.

9. For some uses - those considered to be the most frequent ones - detailed guidelines are laid down in the Blue Book, for other uses less detailed indications are given. Among the many roles households represent, the most relevant are households as producers and providers of labour and other factors of production, households as recipients of income and consumers, households as savers, accumulators and holders of capital and wealth, suppliers of funds, senders and recipients of international transfers and investors. Some of these roles are specific to the household sector, while other are performed by households together with other sectors. For the latter, concise indications are given and for a more detailed treatment, the reader is referred to the corresponding paragraphs of the Blue Book.

10. The 1993 SNA distinguishes two main kinds of institutional units or sectors: legal entities and households. The SNA proposes to compile for these sectors a sequence of accounts which comprise current accounts, accumulation accounts, balance sheets and tables. Current accounts are subdivided into production accounts and distribution and use of income accounts.

11. The accounts proposed by the 1993 SNA present information that can be used for economic analysis, decision taking and policy making, and provide a record of the economic activities that take place in markets or elsewhere (see § 1.1 of the 1993 SNA). This last remark is important for the analysis of the household sector because of the many household activities that take place outside the market. Besides, it is also the starting point for many kinds of elaborations, which go beyond the boundaries set up by the 1993 SNA.

12. The 1993 SNA provides information not only about economic activities, but also about the levels of an economy's productive assets and the wealth of its inhabitants (1.1). This again has special significance for the household sector as it leads to questions concerning not only physical assets, but also the population and its living conditions.

13. The integrated system of economic accounts for the household sector (table 19.2) presents the following sequence: production, generation of income, allocation of primary income, secondary distribution of income, redistribution of income in kind, use of income, and capital and other accounts referring to finance and balance sheets. In the present paper, this sequence has been condensed in presenting the subjects of production (households as producers), generation and distribution of income (households as recipients of income) and use of income (households as consumers). Capital formation has been incorporated into the section on production and some items of a financial nature appear in the section on income. Because of transfers, specifically transfers in kind, there is some overlap between what is said in the section on income and that on consumption. As to balance sheets, their importance for socio-economic analysis, always considerable but frequently underestimated by statisticians, has increased in the wake of globalization, and the change from publicly to privately held wealth. However, there exist almost insurmountable difficulties in collecting the relevant information.

14. An important feature that must be mentioned is the fact that the 1993 SNA may be implemented at different levels of aggregation: individual economic agents, total economy, institutional units or groups of units. While the 1993 SNA is currently thought of as accounting for the nation as a whole, for most analytical purposes it has to be implemented at lower levels. For the household sector this means that it has to be disaggregated into different sub-sectors.

15. The criteria for the sub-sectoring recommended for different analytical purposes, which in

addition to purely economic analysis can extend to social questions, will be taken up in the first sections of this paper. The other subdivisions examine the different roles of households in economic and social life, referring to production, income creation and consumption and the problems that are directly and indirectly connected to them. Accordingly, the chapters of this paper are structured as follows:

Chapter II:	The household sector and its sub-sectors
Chapter III:	Households as producers
Chapter IV:	Households as recipients of income
Chapter V:	Households as consumers
Chapter VI:	Population and labour inputs

16. The accounts and tables presented in the System are intended to cover many different situations and respond to many different needs. The compiler will have to decide which are those that respond to his or her existing requirements. It is the need of the users that determines what accounts and tables should be produced and what priorities should be assigned to them. In this respect it must be kept in mind that the accounts and tables produced by national accounting are not a final but an intermediate product, which serve as input into analysis and policy making. While this has been repeated many times, an important implication is often lost sight of, namely that the architects of innovation in national accounting and also the compilers of those accounts should constantly review the needs of actual and potential users and give priority to these requirements over questions of neatness and symmetry in the design of accounts.

17. In recent years, there has been a strong interest in creating, for different social and cultural areas, statistical systems similar to the SNA which try to express the phenomena under consideration succinctly and quantitatively. The similarity with the SNA consists in maintaining internal coherence and in arriving at aggregates which can be related directly to entries in national accounts. Now, the 1993 SNA presents an opportunity to place such elaborations within the SNA under the guise of satellite accounts and tables.

18. The 1993 SNA Blue Book contains a special chapter on "Satellite Accounts and Tables" in which it states that the approach to satellite accounts may vary "from just introducing some additional figures to redesigning the main concepts of the central framework" (see § 21.6 of the 1993 SNA). An important recommendation points out that "it is useful to associate non-monetary figures to the monetary ones" (21.57). This could represent a kind of umbilical cord between satellite accounts and the core of the 1993 SNA.

19. The countries of the world are at different stages of social and economic development and this implies that their institutions, legal frameworks and production characteristics differ. The Blue Book distinguishes between productive activities, economic activities and market activities and though this distinction is applicable to all countries, the relative importance of each is different in different countries. This is especially true when it comes to defining what is an informal production unit or sector. What is formal, that is, in accordance with rules, customs and conventions in one country, might be non-formal in another. Own-account enterprises are not the most frequent type of enterprise in developed economies, but they can be the most common type in less developed economies. Therefore, to classify them as "informal enterprises" means to apply the standards of developed economies to those which are not. Moreover, there are tremendous differences among the countries classified as "underdeveloped". These differences are much greater than those among the developed ones. Differences between low and high income countries in the developed world are much smaller than in the underdeveloped world. A cursory look at figures in the World Bank publication "Social Indicators of Development 1996" shows that on a relative scale such differences go from one to less than ten in the case of developed and from one to almost one hundred in underdeveloped economies. (GNP per capita, most recent estimate available: Switzerland US\$ 37,180 - Portugal US\$ 9,370; Malawi US\$ 140, Sierra Leone US\$ 150 - Kuwait US\$ 19,040, Argentina US\$ 8,060). Thus, because of the wide range of economies, it is a Herculean task to

establish a definition which is equally valid and useful for all these economies. Faced with this dilemma, it might be advisable to adopt a definition of the informal production unit and informal sector which takes advantage of existing statistical classifications, already in use in the statistical output of most countries.

## **II. The household sector and its sub-sectors**

20. According to the 1993 SNA, the economy consists of institutional units grouped into five sectors. One of these is the household sector. The household sector has been in the past one of the least developed sectors in the national accounting system of most countries. In part this underdevelopment can be explained by the difficulties in collecting information in an environment not used to keeping records. But there are many other reasons and one of them, and not the least important, is the fact that the sector embraces many more units than any other sector in national accounting and these units are extremely heterogeneous. Therefore, as a single aggregate, its use for policy purposes is rather limited. By subdividing it into more homogeneous sets, its usefulness for analysis and policy can be increased immensely.

21. On the other hand, sub-sectoring requires more detailed information, and items which are negligible for the global household sector may be of great importance for a sub-sector. For example, in the case of goods produced in households for own use, the Blue Book states that when the amount is believed to be quantitatively unimportant in relation to the total supply of the goods in the country, it is not worthwhile estimating it (6.25). While unimportant for the country as a whole, this production may be of crucial importance for some sub-sector. Similar differential consequences may derive from sampling procedures. If the universe from which the samples are drawn represents housing or dwellings, homeless persons are automatically excluded. Again, this may be negligible for the country as a whole, but not so for the lowest income sub-sectors.

### **A. The household sector**

22. The household sector comprises all resident households and includes unincorporated enterprises. A household is defined in the system as a small group of persons who share the same living accommodation, who pool some, or all, of their income and wealth and who consume certain types of goods and services collectively, mainly housing and food. Persons who reside in institution, (monasteries, hospitals, prisons, and retirement homes) represent a different kind of household. These are called institutional households (4.132 - 4.137). Non-profit institutions serving households (NPISHs), although closely related to households, are not included in the household sector (4.162).

23. The household sector is, therefore, very broad and includes units whose economic objectives, functions and behavior are widely different. Although primarily consumer units, they can engage in any kind of economic activity as when they operate their own producer units, that is, household or unincorporated enterprises (4.20). The latter type of household carries out domestic and production transactions. "There is only one figure for this unit's saving and one for its net worth. There is no way of observing, after entrepreneurial income has been calculated, how this income is distributed partly to the household as consumer, and partly retained in the enterprise, because no such distribution actually takes place" (19.7).

24. The household sector covers a wide range of units, so sub-sectoring the household sector will increase the degree of homogeneity of each sub-sector and enhance the analytical usefulness of the statistic presented. This will be of help to a great number of studies and investigations on the household sector. The fact that in most countries there is an increasing interest in social studies enhances the

importance of accounts for the household sector and its subdivisions. These accounts mirror social reality with more rigour than those of other sectors.

25. The Blue Book suggests several alternative methods of sub-sectoring. The suggestions are summarized in table 19.1, which proposes sub-sectoring based on socio-economic status, economic activity, type and/or size of enterprise, skill and location. However, its advice is to implement the System flexibly with respect to sub-sectoring the household sector (4.151-160; 19.9-13).

## **B. Methods of sub-sectoring**

26. Two main types of sub-sectoring are suggested in the Blue Book, one based on criteria that apply to the household as a whole and another based on methods that require a reference person to be identified. Among the characteristics that can be related directly to a household as a whole, the most relevant is income.

### **1. Global characteristics of the household**

27. One method of sub-sectoring based on the household as a whole might be to group households according to the nature of the largest source of income accruing to the household. These sources are:

- employers' mixed incomes;
- own-account workers' mixed incomes;
- compensation of employees;
- property and transfer incomes.

28. The four sub-sectors corresponding to these sources are:

- employers;
- own-account workers;
- employees;
- recipients of property and transfer incomes.

29. Due to the heterogeneity of the units included in group "recipients of property and transfer incomes" the Blue Book proposes that this group should be further subdivided into three additional groups:

- recipients of property incomes;
- recipients of pensions;
- recipients of other transfer incomes.

30. The classification must be based on the total household income. That is, the whole household would be classified under one heading, even though some of its members may have a different income source. For example, a household whose main income is mixed income is classified in the "own-account worker" group, though other members of this household may be employees.

31. Other methods that follow criteria referring to characteristics of the household as a whole, may be

based on the following:

- the size of the total income of the household;
- the size of the per capita income of the household;
- the size of the household in terms of the number of persons;
- the type of area (urban, rural) in which the household is located;
- the industry where the income is originated.

(note that this is not an exhaustive list).

32. Sub-sectors based on the size of per capita income of the household are needed for studies on poverty. The poverty line is used to distinguish households classed as poor.

## 2. Characteristics of the household reference person

33. Sub-sectoring based on the characteristics of a reference person is based on the socio-economic characteristics of a person that belongs to the household and has been chosen as a reference person. First, it is necessary to decide how to identify the reference person. It may be:

- the main provider of income;
- the person who makes the major decisions with regard to the consumption of the household;
- the person with the largest income.

34. Usually, in household surveys, the members of the household decide who the reference person is. Following this criterion, sub-sectoring may be done according the following characteristics:

- the occupation of the reference person;
- the industry, if any, of the reference person;
- the educational attainment of the reference person;
- the qualifications of the reference person;
- the income of the reference person (source or size).

35. Though it has been argued that it is more appropriate to allocate households to sub-sectors according to characteristics related to the total or main income of the household rather than the characteristics of an individual, it is true that data on individuals are more easily available.

36. An awkward situation may arise when dealing with imputed income from owner-occupied dwellings. This imputed income may turn out to be the largest income of the household. Nevertheless, it is not advisable to classify this household as “own-account worker household”, instead, the monetary income received may be used as a criterion for classification.

37. Some final remarks: the reason for sub-sectoring is to create more homogeneous groups for analysis and policy decisions. A group comprising street vendors and medical doctors would not be very useful for either purpose.

38. While measuring the size of an enterprise by the number of people working in it is probably the only possibility available to the statistician given the present state of our art, it is far from satisfactory because the number of people working in an enterprise can be, and is being, substituted by the introduction of more advanced technology. In former years enterprises were asked to indicate the total amount of horsepower they were using, but this has lost most of its significance today. More appropriate today would be questions on the use of technology and especially Information Technology (IT). Work in this direction could be rewarding.

39. To use the reference person for sub-sectoring presents a dilemma in cases where there are several breadwinners in the household who, in addition, might have different socio-economic status, and moreover, when the reference person has been selected according to prestige in the household and not necessarily according to her or his contribution to the household income.

### **C. Complete set or selected accounts?**

40. Should the whole sequence of accounts be prepared for each sub-sector? The answer to this question hinges to a great extent on the availability of information. Sub-sectoring may be interpreted as a subdivision of the whole sector in such a way that the full sequence of accounts is applied to each sub-sector. For the first (highest) level in the hierarchy, this should be the recommendation. However, the full set of accounts need not be applied to subsequent disaggregations, because the data requirements may become overwhelming.

41. Moreover, not all accounts are relevant to all sub-sectors. The employers' and own-account workers' sub-sectors need the production and generation of income accounts. Incomes from production (rents of owner-occupied dwellings, services of paid domestic staff, incidental production) are of secondary interest for the others. Income distribution and redistribution are pertinent to all sub-sectors.

42. Some important attributes of the production account such as economic activity and informality are of less importance for other accounts. However, location (urban/rural, region), size of income and size of consumption are important characteristics for the analysis of the other accounts.

43. The members of a household often vary significantly in their economic characteristics, that is: activity status (employed, inactive), employment status (salaried workers, own-account workers, employers, family helpers), economic activity and occupation. When the sub-sectoring is done by socio-economic group, determined by the source of the largest income of the household (or the reference person), this heterogeneous composition is not shown. According to household surveys, most households have more than one active person.

44. When the sub-sectoring is prepared by income size, the full set of accounts may be prepared, which is feasible when an income and expenditure survey is used as a source of data. All accounts are

significant in this case. The use of per capita income instead of the total income of the household gives more homogeneous groups of households.

45. These comments show that there are alternative methods of sub-sectoring. The preparation of the full set of accounts is not applicable in all cases. The alternative is to prepare the full set only for those sub-sectors considered of special importance for socio-economic analysis.

## **D. Informal sector**

46. According to the Blue Book, “it is particularly important for many developing countries to be able to distinguish between the formal and the informal sectors of the economy. As to its features we are referred to the ILO. The fifteenth International Conference of Labour Statisticians (Geneva, January 1993) adopted Resolution II concerning statistics on employment in the informal sector. The resolution provides, among other guidelines, an international statistical standard definition of the informal sector” (4.159). It provides a concept of the informal sector as well as operational definitions. It points out that for particular analytical purposes definitions that are more specific may be developed. Such definitions vary according to the needs of the users of the statistics.

47. The concept as given by the resolution is: “The informal sector may be broadly characterized as consisting of units engaged in the production of goods or services with the primary objective of generating employment and incomes to the persons concerned. These units typically operate at a low level of organization, with little or no division between labour and capital as factors of production and on a small scale.” It adds that the informal units have the characteristics of unincorporated enterprises. The activities performed by informal productive units are not necessarily performed with the deliberate intention of evading payment of taxes or social security contributions, or infringing labour or other legislative or administrative provisions (see annex to chapter IV of the 1993 SNA and chapter II of this handbook).

48. Informality, therefore, is a concept related to the characteristics of the productive unit and not to the characteristics or quality of life of the people involved. The individuals who depend on income generated by informal productive units may be poor or not. According to studies in developing countries, their incomes vary over a wide range. Some informal workers would rather stay as they are than accept a formal job. Moreover, many employees in the formal sector are poor.

49. The ILO resolution divides the informal sector into two groups: informal own-account enterprises and enterprises of informal employers. The first comprises household enterprises owned and operated by own-account workers, either alone or in partnership with members of the same or other households, which may employ contributing family workers and employees on an occasional basis, but do not employ workers on a continuous basis. In some instances, according to national circumstances, it may comprise only those own-account workers not registered under specific forms of national legislation.

50. The second group comprises household enterprises owned and operated by employers, either alone or in partnership with members of the same or other households, which employ one or more employees on a continuous basis. For operational purposes, the definition is based on the following criteria: (i) size of the unit below a specified level of employment; (ii) non-registration of the enterprise or its employees.

51. Presently, there is no agreement on the precise scope of the informal sector. Certain issues, such as whether to include or exclude agricultural units, professionals and technicians, domestic services and hidden activities are being discussed by national statistical offices. The decision depends on the importance of the sector for the country and the uses to which the statistics are being put.

52. It is not easy to define the sector in unambiguous terms. The scope of the informal sector is indeed very wide. The activities covered range from petty trading and services to small-scale transport, construction and manufacturing. The sector is heterogeneous: although many units operate in an autonomous fashion, acting freely in the various markets, there are also units which operate exclusively with other firms or individuals.

53. The term “informal” has remained elusive. The various interpretations have caused considerable ambiguity and confusion because sometimes it is used to refer to the urban poor or those living in informal housing. However, it is important to keep in mind that in the System, the concept is only used in reference to the characteristics of the productive unit. Informal workers are those employed by an informal unit (Note: From there it follows that an informal worker might be also employed in a formal job).

54. The lack of international comparability should not be a restraint on the measurement of, and research into, the informal sector. These studies are important for the country to take decisions with respect to different policy areas, mainly on the labour force

55. The definition chosen by each country is intended to serve its own purposes. To encompass various units under the same label, in this case informality, means to confer on all of them a common characteristic, useful for some purpose to be addressed by a particular policy. Therefore, it is up to the country to decide which units should be grouped together. This explains why agricultural workers/units are usually not included in the informal sector. Agricultural policies are specific.

56. The relevant accounts for this sub-sector are production and income generating accounts, further disaggregated by economic activity. Though the full set of accounts may be prepared for the sub-sector, the importance of such accounts is not obvious.

57. Sub-sectoring the household sector means putting together a number of households, including all their members, in a single group. When referring to informality, which is a characteristic related to the form of organization of the productive unit, it is possible to group these productive units, and even, up to a point, the workers employed by them. But it is awkward to refer to a group of households as being part of the informal sector. Households are not informal; at most the households thus labeled are those dependent on income accruing from informal enterprises, which means that this type of income is the most important in relation to the total household income. Frequently, in such households there are additional types of income, either from formal employment, from production for own-use or from transfers. Nevertheless, for countries where this type of production is of decisive importance for a sizeable number of persons, creating accounts for an informal sector, as a sub-sector of households, may be a useful tool for specific policies.

### **III. Households as producers**

58. The production of households affects not only the households themselves but also in some way or another most of the other sectors of the economy. The figures for the household sector produced by the compiler will correspond to the boundary set up by the 1993 SNA and can therefore be directly related to other figures in the national accounts. But this is not so in the case of special elaborations that transcend these boundaries. In order to allow the possibility of relating such figures with other SNA accounting

data, the compiler should always indicate whether a particular figure corresponds to 1993 SNA standards or not, or, where appropriate, show which part is “SNA” or “non-SNA”.

59. Many questions arise in the course of compiling accounts that the compiler must decide upon. The questions concerning households as producers that the compiler will face are taken up in this section. They are presented in the following order:

- A. Production in the system and the production boundary
- B. Household enterprises
- C. Market and non-market production
  1. Goods and services
  2. Production for own use
  3. Agriculture and subsistence farming
  4. Services of owner occupied dwellings
  5. Domestic workers
  6. Communal activities
  7. Informal production
- D. Valuation of output
- E. Illegal and concealed production, underground economy
- F. Capital formation
  1. Gross fixed capital formation
  2. Inventories

## **A. Production in the System and the production boundary**

60. The meaning of the word “production” is clear in everyday language, but when it comes to its use in national accounting it is necessary to examine carefully its extent and limits. The concept of production is fundamental in the 1993 SNA. The basic characteristics that define production as conceived by the 1993 SNA refer to:

- physical process;
- management by an institutional unit;
- output that is sold in the market (or provided by one unit to another).

61. In the process of production, labour and assets are used to transform inputs of goods and services into outputs of other goods and services, which must be such that they can be sold on markets or at least be capable of being provided by one unit to another, with or without charge.

62. The 1993 SNA production boundary is drawn in such a way that it includes within its limits all production actually destined for the market, whether for sale or barter. In addition, all goods and services provided free to individual households or collectively to the community by government units or non-profit institutions serving households (NPISHs) are also included within the 1993 SNA production boundary (1.20).

63. The 1993 SNA distinguishes between processes in some way dependent on human activity (e.g. an institutional unit assumes responsibility for the process, owns the output or is entitled to be paid for services provided) and those where there is no direct involvement by some person or institution, and which are purely natural processes (e.g. the unmanaged growth of fish stocks in international waters; 6.15).

64. In the case of households, activities carried out within the household for own use, may present doubts as to their inclusion in production. Paragraph 1.21 lists the activities carried out by households for their own use:

- the production of agricultural goods by household enterprises for own final consumption;
- the production of other goods for own final use by households: the construction of dwellings, the production of foodstuffs and clothing, etc.;
- the production of housing services for own final consumption by owner-occupiers;
- the production of domestic and personal services for consumption within the same household: the preparation of meals, care of children, cleaning, repairs, etc.

65. This listing corresponds to what the Blue Book defines as the General Production Boundary. But this definition of the general production boundary leaves some problems to be solved when dealing with household production, namely the production of goods and services that could have been supplied to others on the market, but are actually retained by their producers for their own use. It adds that although all these activities are productive in a general economic sense, their economic significance is different from the monetary transactions carried out by households. Because the value assigned to this output has also to be considered as income and consumption of households, the Blue Book states that the inclusion of large non-monetary flows can obscure what is happening in markets and reduce the analytic usefulness of the data.

66. On account of this, the System adopts a different treatment in the case of goods and in the case of services. All production of goods for own use is included within the 1993 SNA production boundary, because, even after they have been produced, goods can be switched between market and non-market uses, but it excludes all production of services for own final consumption within households (except for the services produced by employing paid domestic staff and the own-account production of housing services by owner occupiers).

67. The rationale behind this differentiation is that services are consumed as they are produced and once produced, cannot be switched to sales in the market. Therefore, says the Blue Book, the links between their production and market activities are more tenuous than for the production of goods.

68. As can be seen, the limits concerning what has to be considered production and what does not are drawn in a way that represents a compromise between the preferences of different users. Although a compromise, it is a deliberate choice which stems from the intention to serve the purposes of most users.

69. At the same time a far-reaching implication of this decision must be noted which concerns population and labour force statistics. In the ILO labour force statistics, economically active persons are defined as those engaged in productive activities and these in turn are defined in accordance with the 1993 SNA guidelines. There is a convincing reason for acting in this manner. If the production boundary were extended to include the production of personal and domestic services by members of households for their own final consumption, all persons engaged in such activities would count as self-employed in the labour force statistics. This would create an awkward situation making the measurement of unemployment virtually impossible (1.22). Therefore, a different definition of productive activities and active persons, which is needed for specific purposes, should be a complement and not a substitute for the

existing one.

70. Summing up the activities carried out by households that are included in the production boundary, we arrive at the following list (6.18):

- the production of all individual or collective goods or services that are supplied to units other than their producers, or intended to be supplied, including the production of goods or services used up in the process of producing such goods or services;
- own-account production of all goods that are retained by their producers for their own final consumption or gross capital formation;
- own-account production of housing services by owner-occupiers and of domestic and personal services produced by employing paid domestic staff.

71. Hence, there is no imputed value to unpaid domestic and personal services nor to voluntary work nor do-it-yourself decoration, maintenance and small repairs, because all these are service activities. The System sets out at length the reasons why the production of services for own final use is not included within the restricted production boundary (6.19 to 6.22).

72. However, it should be noted that this definition has been criticized, especially by the school of the “Household Economy” and those who consider that the exclusion of household services for own consumption from the SNA production concept negatively affects the interests of women who produce such services. Proposals exist to complement the SNA definition by a more extensive coverage of activities, which would avoid this deficiency. The 1993 SNA opens the way for the type of elaboration intended to broaden the analytical capacity of national accounting through the creation of satellite analysis and accounts (see chapter XXI of the 1993 SNA and volume 2 of this handbook).

## **B. Household enterprises**

73. Having determined the boundaries of economic production, we now turn to the units in which production takes place, that is enterprises. The System classifies enterprises into two groups: (1) corporations and quasi-corporations, which are legal/social entities and (2) unincorporated enterprises. The producer units included in the household sector are all unincorporated enterprises. However, not all unincorporated enterprises are deemed to belong to the household sector. Those which possess a commercial accounting system which allows a distinction to be drawn between their business transactions and their household transactions are called quasi-incorporated enterprises and are classified within the corporate sector (4.49 - 4.53).

74. An unincorporated enterprise is not a legal entity distinct from the household itself. This implies that the enterprise as such cannot engage in transactions with other economic units and cannot incur liabilities on its own behalf. Its liabilities are the personal liabilities of its owners who are personally liable, without limit, for any debts or obligations incurred in the course of production (4.140 - 141).

75. When individual members of households engage in economic activities, they are treated as acting on behalf of the households to which they belong and not as separate entities (4.138).

76. It makes no difference whether the unincorporated enterprises are directly owned and controlled by members of a household individually or in partnership with other partners belonging to different households. The liability of the partners must be unlimited for the partnerships to be treated as unincorporated enterprises (4.139; 4.145).

77. The Blue Book adds the following considerations on this matter: The owner of a household unincorporated enterprise usually plays a dual role, as an entrepreneur and as a worker. As an entrepreneur, any surplus from production he or she may obtain represents primarily return to entrepreneurship, but if his or her principal function is to provide labour, most of the surplus may, in effect, represent remuneration for work done (4.142).

78. Household unincorporated market enterprises are created for the purpose of producing goods or services for sale or barter on the market. They can engage in virtually all kinds of activity. They can range from single persons working as street traders or shoe cleaners with virtually no capital or premises of their own through to large manufacturing, construction or service enterprises with many employees (4.144).

79. Household unincorporated market enterprises also include unincorporated partnerships that are engaged in producing goods or services for sale or barter on the market. The partners may belong to different households. In these cases, in order to be treated as unincorporated enterprises, the liability of the partners for the debts of the businesses must be unlimited (4.145).

80. Special treatment is proposed by the 1993 SNA for enterprises made up of professionals such as lawyers, architects, accountants and others. Such firms are likely to behave like corporations and provided that they keep complete sets of accounts, should be treated as quasi-corporations. As a general rule, partnerships whose partners enjoy limited liability are effectively separate legal entities and should be treated as corporations (4.145).

81. One of the main concerns of the compiler will be to elicit the right kind of data from those households where production activities intermingle with consumption. The Blue Book emphasizes the difficulty in obtaining information from these household unincorporated market enterprises, which would allow the separation of the enterprise from the owner. Part of the production may be consumed by the same household, and buildings and capital equipment may be used for production or for consumption purposes (4.146).

## **C. Market and non-market production**

82. This leads us to the distinction between market and non-market production. This distinction is essential for most types of analysis. The analyst might examine the relation between production and other data in the national accounts, such as its impact on the external sector or its connection with financial data, and in such instances the difference between market and non-market production is indispensable and must be highlighted. A case in point is activities related to tourism. Moreover, the distinction between market and non-market production is crucial for economic and social policy: policy measures targeted at market production will be fundamentally different from those that aim at non-market production. Furthermore, the elasticity of response by market producers and non-market producers to policy measures will vary considerably. In developed economies, most production takes place in corporate market enterprises, but there is no economy without a certain amount of non-market production. While it may be smaller in purely financial terms, its importance can be considerable from a social point of view.

### **1. Goods and services**

83. The definitions of goods and of services given in the Blue Book read as follows:  
Goods: “Goods are physical objects for which a demand exists, over which ownership rights can be established and whose ownership can be transferred from one institutional unit to another by engaging in transactions on markets” (6.7). Services: “Services are not separate entities over which ownership rights can be established. They cannot be traded separately from their production. The production of services must be confined to activities that are capable of being carried out by one unit for the benefit of another. Otherwise, service industries could not develop and there could not be a market for services” (6.8; 6.9).

84. The dividing line between market and non-market production is not always as straightforward as it may seem and the Blue Book devotes a number of paragraphs to its explanation. The explanation goes as follows:

85. The System includes the production of all goods within the production boundary. At the time the production takes place it may not even be known whether, or in what proportions, the goods produced are destined for the market or for own use. The following types of production by households are, therefore, included, whether intended for own final consumption or not (6.24):

- the production of agricultural products and their subsequent storage (storage is considered an extension of the goods-producing process); the gathering of berries or other uncultivated crops; forestry; wood-cutting and the collection of firewood; hunting and fishing;
- the production of other primary products such as mining salt, cutting peat, the supply of water (which is considered a goods-producing activity); etc.;
- the processing of agricultural products; the production of grain by threshing; the production of flour by milling; the curing of skins and the production of leather; the production and preservation of meat and fish products; the production of dairy products such as butter or cheese; the production of beer, wine or spirits; the production of baskets or mats; etc.; other kinds of processing such as weaving cloth; dressmaking and tailoring; the production of footwear; the production of pottery, utensils or durables; making furniture or furnishings; etc.

86. The number and kinds of products created by own-account production is enormous and it would be a Herculean task to enumerate them all. The Blue Book admits this but points out that the list given above covers the most frequent ones. The compiler faced with the task of estimating the value of such items should bear in mind that they should be recorded and included in the compilation only to the extent that they constitute a relatively important quantity (relative to the total supply of that good in the economy). If not, says the Blue Book, it is not worthwhile trying to estimate them (6.25). The decision as to what is important and what classification of goods should be used in these cases is left to the compiler. Nevertheless, in many instances this production, small according to this criterion, may be of decisive importance for specific groups of the population, who may derive their livelihood from it.

## 2. Production for own final use

87. Some household unincorporated enterprises produce goods or services primarily for their own final use: consumption or own gross fixed capital formation. It is convenient to separate the producers of goods for own final use from producers of services for own final use.

88. Producers of goods for own final use comprise the following categories (4.147; 4.148):

- subsistence farmers or others engaged in the production of agricultural goods for their own final consumption;
- households engaged in the construction of their own dwellings or other structures for their own use, or on structural improvements or extensions to existing dwellings or structures;
- households engaged in the production of other goods for their own consumption such as cloth, clothing, furniture, other household goods, foodstuffs (other than meals for immediate consumption), etc.

89. Doubts may arise concerning the treatment of enterprises whose production is absorbed in part by their own household and in part sold in the market. The treatment will depend on whether their sales in the market are casual or permanent. Such enterprises may sell any output that is surplus to their own requirements, but if they regularly sell most of their output, they should be treated as market enterprises. Groups of households engage in the communal construction of buildings, roads, bridges, etc. for their own individual or community use, should be treated as informal partnerships engaged in non-market production (4.148).

90. The inclusion of producers of services for own final use within the 1993 SNA boundaries is more restricted than is the case for producers of goods for own final use. “Domestic or personal services produced by members of households for each other are, by convention, treated as falling outside the production boundary of the System” (6.87).

91. Two categories only are included: the services of owner-occupied dwellings and domestic services produced by employing paid staff:

- services of owner-occupied dwellings: owner-occupiers are deemed to own household unincorporated enterprises that produce housing services for their own consumption. This constitutes an exception to the general 1993 SNA philosophy of placing own-account service production outside the production boundary. The reason for this exception given in the Blue Book is that if no imputation were made for the value of own-account housing services, international and intertemporal comparisons of the production and consumption of housing services could be distorted (6.29);
- domestic services produced by employing paid staff: households are deemed to own household unincorporated enterprises in which they employ paid staff, servants, cooks, gardeners, etc. to produce services for their own consumption (4.149).

92. The specific features presented by these two types of services included within the 1993 SNA boundary refer to the fact that the production of these services does not generate mixed income. By convention, the supposition is that there is no labour input into the production of services of owner-occupied dwellings so that any surplus arising is operating surplus. As to paid domestic services, there is no surplus generated by employing paid staff as, by convention, the value of the output produced is assumed to be equal to the value of the compensation of employees paid to the domestic staff and no other inputs are recognized (4.150). This is another aspect that has been criticized and for which an alternative treatment has been proposed in some elaborations.

93. Other types of services for own use are not included in the production boundary and hence, they are not part of household production. Examples are personal services, do-it-yourself activities as well as voluntary community services. Only the materials purchased are taken into account and treated as final consumption expenditure (6.26). Here again, it should be remembered that elaborations, which go beyond the 1993 SNA core system, might treat these items in a different way.

### 3. Agriculture and subsistence farming.

94. The definition given in the Blue Book for agriculture and subsistence farming is the following (6.94): "... the growth of crops, trees, livestock or fish which is organized, managed and controlled by institutional units constitutes a process of production in an economic sense. Growth is not to be construed as a purely natural process, which lies outside the production boundary. Most processes of production merely exploit natural forces".

95. Agriculture and subsistence economies present a serious challenge to the national accountant, especially due to the fact that the process of production extends over many months, and sometimes years, so that the element of "work-in-progress" is an essential part of book-keeping in agriculture. The Blue Book points out that in the case of unincorporated farms, unpaid labour inputs provided by the owners may account for much of the real cost incurred and it explains in detail how to allocate the costs (6.94-6.100).

96. The value of the finished products is then estimated by the values (at current basic prices) of the following items:

- finished products sold or bartered;
- entries of finished products into inventories, less withdrawals;
- finished products used by their producer for final consumption.

97. Where agriculture represents a key activity of the national economy, the System recommends special treatment for unincorporated farms, particularly as concerns the accounts to be established: "When the key activity is an agricultural one, like coffee in certain countries, the situation is more complex. Most producers are probably unincorporated enterprises that do not qualify as quasi-corporations. Ideally, the key sector accounts would include a complete set of accounts for the households that carry out these productive activities. Because this may be difficult to do in practice, it may be necessary to limit oneself to showing only the accounts and transactions which are most closely linked to the key activity. This may include production, generation of income and entrepreneurial income accounts from one side and main transactions of the capital and financial accounts from the other" (19.55).

98. A special mode of production is subsistence farming, i.e. the production of agricultural goods for own final consumption of the producer. Farms producing exclusively for own consumption are becoming less frequent as some of them try to sell part of their production in the market. Referring to these units the Blue Book reminds us that "...such enterprises may sell any output that is surplus to their own requirements, but if they regularly sell most of their output they should be treated as market enterprises" (4.148). The valuation of the output of such enterprises must be adjusted to reflect the prices prevailing in the market for similar products.

99. Regarding the income of workers from production for their own final consumption, the Blue Book states: "Workers engaged in production undertaken entirely for their own final consumption or own capital formation, either individually or collectively, are self-employed. Although a value may be imputed for the output of own-account production based on costs, including estimated labour costs, no imputation is made for the wages of workers engaged in such production, even in the case of collective, or communal projects undertaken by groups of persons working together. The surplus of the imputed value of the output over any monetary costs or taxes on production explicitly incurred is treated as mixed income" (7.24 [a]). The important feature here is the fact that this income is classified as mixed income. Contrast this with the treatment of services produced for own final use - services of owner-occupied

dwellings and domestic services produced by paid staff - which do not generate mixed income, but operating surplus in the first case and compensation of employees in the second case (4.150).

#### 4. Services of owner-occupied dwellings

100. The treatment of the services provided by owner-occupied dwellings constitutes an exception to the treatment given to the production of own-account services in the System. The reasons for this exception lie in the interests of making international comparisons, and the ratio of rented to owner-occupied dwellings varies greatly from country to country. This same relation may also vary in the same country from one date to another.

101. The valuation of such services must unavoidably be rather approximate. Moreover the conditions for valuation vary widely in different countries. The Blue Book offers a lengthy explanation on the subject: "Heads of households who own the dwellings which the households occupy are formally treated as owners of unincorporated enterprises that produce housing services consumed by those same households. As well-organized markets for rented housing exist in most countries, the output of own-account housing services can be valued using the prices of the same kinds of services sold on the market in line with the general valuation rules adopted for goods or services produced on own account. In other words, the output of the housing services produced by owner-occupiers is valued at the estimated rental that a tenant would pay for the same accommodation, taking into account factors such as location, neighborhood amenities, etc. as well as the size and quality of the dwelling itself. The same figure is recorded under household final consumption expenditures" (6.89).

#### 5. Domestic workers

102. The only services for own final consumption falling inside the production boundary set by the 1993 SNA are the services of owner-occupied dwellings and the services produced by employing paid domestic staff. In both cases, the treatment departs from the usual treatment adopted by the 1993 SNA. The procedure applied to the services of owner-occupied dwellings has been presented in the last paragraph. As to the services provided by paid domestic staff, the rules for recording them are as follows: these workers (servants, cooks, chauffeurs, etc.) are considered employees of an unincorporated enterprise owned and managed by the household. Thus the producer and consumer of these services are the same unit and this person represents a form of own-account producer. The valuation of this output is based on the following: "By convention, any intermediate costs and consumption of fixed capital incurred in the production of domestic services are ignored and the value of the output produced is deemed to be equal to the compensation of employees paid, including any compensation in kind such as food or accommodation. The same value is, therefore, recorded under the household's final consumption expenditures" (6.88).

#### 6. Communal activities.

103. Communal activities may assume many different forms and their treatment in accounting will depend on the particular way they are organized and performed. In some cases there will exist only a very tenuous dividing line between them and non-profit institutions serving households. There may exist NPISHs which do not have any legal status or formal organization. The classification, however, does not hinge on their organizational status but on their function. If it is similar to those with legal status and

formal organization, they should be considered NPISHs. On the other hand, groups of households collaborating on communal construction projects (roads, bridges, etc.) are classified as informal partnerships engaged on own-account construction. The Blue Book proposes this clue to differentiating between one and the other: “NPISHs should normally have a continuing role to play and not be deemed to be created for single projects of limited duration” (4.66).

## 7. Informal production

104. Informal production is understood to be the production originating in informal enterprises. As it refers to the way production is carried out, a convenient expression would be "mode of production"; but this expression is not used in the Blue Book. The 1993 SNA links informal production to developing countries. It says: “It is particularly important for many developing countries to be able to distinguish between formal and informal sectors of the economy” (4.159). The Blue Book does not itself provide a definition of the informal sector (as it does for other institutional sectors) but refers to the Resolution of the Fifteenth International Conference of Labour Statisticians of January 1993 (see pages 111-112 of the 1993 SNA for an extract from the resolution and the annex of the paper by Ralf Hussmanns in chapter II of this handbook for the full version of the resolution). This is a resolution concerning statistics of employment (see also the section on sub-sectoring).

### D. Valuation of output

105. In addition to questions of the inclusion or exclusion of production activities performed in households, there is the question of how that production should be valued. Production destined for the market finds its valuation in the market, but no such valuation is available in the case of production that does not reach the market. Therefore it is necessary to use stand-in prices, prices of similar products sold on the market, or, if this procedure is not desirable or possible, to base the valuation on costs. The Blue Book sets down guidelines for the valuation of goods and services for own use, own-account construction, domestic services and services of owner-occupied housing, under the title of "Measurement of output produced for final use". There it states the following: “The goods and services should be valued at the basic prices at which they could be sold if offered for sale on the market. In order to value them in this way, goods or services of the same kind must actually be bought and sold in sufficient quantities on the market to enable reliable market prices to be calculated which can be used for valuation purposes. When reliable market prices cannot be obtained, a second best procedure must be used in which the value of the output of the goods or services produced for own use is deemed to be equal to the sum of their cost of production: that is, as the sum of: intermediate consumption, compensation of employees, consumption of fixed capital, and other taxes (less subsidies) on production” (6.85).

106. Goods and services produced for own use should be recorded as their production takes place (6.84). A point in case is water-carrying.

107. Own-account construction will usually be valued on the basis of costs, as it is difficult to directly value an individual and specific construction project not offered for sale. When own account construction is undertaken by a business enterprise, the requisite information on cost may be easily ascertained, but not in the case of construction of dwellings by households or communal construction for the benefit of the community undertaken by informal associations or groups of households. Most of the inputs into communal construction projects, including labour inputs, are likely to be provided free so that even the valuation of the inputs may pose problems. As unpaid labour may account for a large part of the inputs it is important to make some estimate of its value using wage rates paid for similar kinds of work done on local labour markets. While it may be difficult to find an appropriate rate, it is likely to be less difficult than trying to make a direct valuation of a specific construction project (6.86). It should be mentioned

that recompense for this type of labour is accounted as mixed income and not as compensation of employees.

108. Domestic service such as paid domestic servants, cooks, gardeners, chauffeurs, etc., are formally treated as employees of an incorporated enterprise that is owned and managed by the head of the household. The same unit, which produces them therefore, consumes the services produced, and they constitute a form of own-account production. By convention, any intermediate costs and consumption of fixed capital incurred in the production of the domestic services are ignored and the value of the output produced is deemed to be equal to the compensation of employees paid, including any compensation in kind such as food or accommodation. The same value is therefore, recorded under the household's final consumption expenditures (6.88).

109. The output of own- account housing services is valued at the estimated rental that a tenant would pay for the same accommodation, taking into account factors such as location, neighborhood amenities, etc. as well as the size and quality of the dwelling itself. The same figure is recorded under household final consumption expenditures (6.89).

110. On the subject of the valuation of output and welfare, the Blue Book declares: "In a market economy, the prices used to value different goods and services should reflect not only their relative costs of production but also the relative benefits or utilities to be derived from using them for production or consumption. This establishes the link between changes in aggregate production and consumption and changes in welfare. However, changes in the volume of consumption, for example, are not the same as changes in welfare. The distinction between the quantity of some good or service and the use derived from consuming it is clear enough at the level of an individual good or service. For example, the quantity of sugar consumed by households is measured in physical units. It is measured quite independently of any use that the households may, or may not, derive from consuming it" (1.76).

## **E. Illegal, concealed production and the underground economy**

111. In addition to the above consideration on the limits of production as registered in the 1993 SNA, the question arises as to whether illegal or concealed production should be taken into account when measuring production. The 1993 SNA says such production should be recorded.

112. The concept of the production boundary has nothing to do with legal issues; the manufacturing and distribution of drugs, smuggling and prostitution are examples of illegal activities recorded in the System. There are two kinds of illegal production: the first is related to goods or services whose sale, distribution or possession is forbidden by law; and second, there are production activities which are usually legal, but which become illegal when carried out by unauthorized producers (6.31). Though these activities may be carried out by large enterprises, for obvious reasons they are not registered as corporations.

113. Otherwise legal businesses may conceal activities to escape taxes or regulations they find cumbersome. These may be payments of taxes and or social security contributions, legal standards (minimum wages, maximum hours, safety or health standards) or administrative procedures, like registration. They are considered part of the underground economy. As such they all fall inside the production boundary and their production should be considered as production of household enterprises when carried out by unincorporated enterprises (6.34).

114. Sometimes confusion has arisen between the hidden economy and the informal sector. On this

subject the ILO states that the concept of informal sector activities should be distinguished from the concept of activities of the hidden or underground economy (see the Resolution of the fifteen Conference of Labour Statisticians).

115. Illegal and concealed activities may be quite important in some countries. In such cases, the Blue Book proposes estimating total production including the questionable part of it, even if that part cannot be separated from the total. It mentions some activities where such situations may present themselves: In some industries, such as agriculture or construction, it may be possible by using various kinds of surveys and the commodity flow method to make satisfactory estimates of the total output of industry without being able to identify or measure that part of it which is underground (or indeed illegal; 6.36). However, these methods cannot identify the contribution of the household sector legal as well as illegal.

116. Data on production are presented in the 1993 SNA in the production account. This account shows on the "Uses" side the entries corresponding to intermediate consumption and consumption of fixed capital and on the "Resources" side the output, divided between market output and output for own final use.

## **F. Capital formation**

117. Capital formation is an important aspect of any production unit, large or small, incorporated or unincorporated. However, capital formation in a unit does not mean that that unit has produced the corresponding goods. In fact, in most cases, capital formation by household enterprise units has been produced in the corporate sector.

### **1. Gross fixed capital formation**

118. With regard to households, it is necessary to point out certain features of capital formation, as defined in the 1993 SNA, in order to distinguish it from acquisitions of durable goods which are not tied to 1993 SNA production activities. The definition as given by the 1993 SNA reads as follows: "Gross fixed capital formation does occur exclusively in institutional units in their capacity as producers and it is defined as the value of their acquisitions less disposal of fixed assets. These are produced assets (mostly machinery, equipment, buildings or other structures but also including some intangible assets) that are used repeatedly or continuously in production over several accounting periods" (more than one year; 1.49).

119. In the case of household enterprises care must be taken to distinguish between items which are intended for purposes of final consumption and those intended for production, as there are items which can be used for one or the other purpose. The Blue Book calls attention to these items - furniture, kitchen equipment, computers, communications equipment, etc. - that are acquired by households for purposes of final consumption but are not treated as gross fixed capital formation. But houseboats, barges, mobile homes, caravans and similar items, when used as the principle residences of households are treated as dwellings, so that their acquisition by households is included in gross fixed capital formation (10.82). This capital formation corresponds to the household unincorporated enterprise providing dwelling services.

120. Once it is established what should be considered capital formation, the remaining task is to quantify it. The measurement of capital formation is taken up by the Blue Book in the chapter on the

capital account. There it is stated that the gross fixed capital formation of an institutional unit or sector is measured by the value of its acquisitions less disposals (other than consumption of fixed capital) of new or existing (tangible or intangible) capital fixed assets. Fixed assets are those outputs of production processes that are used repeatedly or continuously in other processes of production and have an active life of one year or more. Changes in assets may be either positive or negative (10.26; 10.33).

121. The valuation of fixed assets is different in the case of those assets bought by and those produced by the user. New fixed assets acquired by purchase are valued at purchasers' prices and those produced for own use are valued at basic prices or by their cost of production (10.37).

122. It is essential to point out that the goods and services contributing to the formation of gross fixed capital can be produced by different types of enterprise, corporate as well as unincorporated. They may range from the most complex machine tools produced for their own use by an engineering company to the modest extension made by the household to its living quarters. They may also include communal construction activities undertaken by groups of households (6.47).

123. Gross fixed capital formation covers a wide range of very different items. The Blue Book distinguishes the following main types (10.34):

- acquisitions, less disposals, of new or existing tangible fixed assets, subdivided by type of asset into: (i) dwellings; (ii) other buildings and structures; (iii) machinery and equipment; (iv) cultivated assets, trees and livestock, that are used repeatedly or continuously to produce products such as fruit, rubber, milk, etc.;
- acquisitions, less disposals, of new or existing intangible fixed assets, subdivided by type of asset into: (i) mineral exploration; (ii) computer software; (iii) entertainment, literary or artistic originals; (iv) other intangible fixed assets;
- major improvements to tangible non-produced assets, including land;
- costs associated with the transfers of ownership of non-produced assets.

124. Details on items such as communal construction, cultivated assets, livestock, plantations, orchards, computer software and others can be found in the Blue Book in paragraphs 10.77 to 10.95.

125. In the case of household enterprises, the question may arise regarding the treatment of small and inexpensive items. Concerning such items there may exist a question as to whether they should be treated as capital formation or intermediate consumption. The decision is left to the discretion of the compiler. He or she will take into account the frequency and the cost of replacement (compared with the cost of more complex equipment) and whether from the macro-economic point of view these items constitute a sizable part of the total stock of an industry's durable producer's goods (10.64).

126. The time at which gross fixed capital formation is recorded is when the ownership of the fixed assets is transferred to the institutional unit that intends to use them (10.36). Other details referring to the treatment of assets, like tangible fixed assets under financial leases, improvements to fixed assets, improvements to land, costs of ownership transfers, cultivated assets, livestock, mineral exploitation, computer software and others, are taken up in the Blue Book in paragraphs 10.39 to 10.117.

## 2. Inventories

127. The treatment of inventories is similar to that described for assets. However, specific problems arise in connection with the valuation of inventories and changes in inventories. The Blue Book draws

attention to these problems in paragraphs 10.96 to 10.98. Concerning their valuation, it determines that finished goods transferred into inventories should be valued as if they were sold at that time, while additions to work-in-progress be recorded in proportion to the estimated current basic price of the finished product.

#### **IV. Households as recipients of income**

128. Income is the most commonly used indicator of households and the one that most closely describes their economic well-being. Although, as far as welfare is concerned one has to look at the results and income and outcome are not always identical. Outcome manifests itself in consumption and savings. Savings are mentioned at the end of the present section and consumption is taken up in detail in the next section.

129. The income of households consists of two main items:

- A. primary incomes;
- B. transfers.

#### **A. Primary incomes**

130. Primary incomes are incomes that accrue to institutional units as a consequence of their involvement in processes of production or ownership of assets that may be needed for the purposes of production. Primary incomes are registered in the allocation of primary income account. The three kinds of income are:

- 1. Compensation of employees;
- 2. Operating surplus or mixed income;
- 3. Property income

##### **1. Compensation of employees**

131. Compensation of employees is defined as “the total remuneration, in cash or in kind, payable by an enterprise to an employee in return for work done by the latter during the accounting period” (7.21). Note: The self-employed do not receive compensation of employees, they receive mixed income. The self-employed are persons who work for themselves and the enterprise is not a separate legal entity. Voluntary and unpaid family workers are also considered self-employed persons.

132. Compensation of employees has two main components (7.31):

- wages and salaries payable in cash or in kind;
- value of social contributions payable by employers.

133. Employers' social contributions are payments by employers to secure for their employees the entitlement to social benefits in case of sickness, accidents, redundancy, retirement, etc.

##### **2. Operating surplus or mixed income**

134. Operating surplus or mixed income is a measure of the surplus accruing from the processes of production before deducting any explicit or implicit interest charges, rents or other property incomes payable on the financial assets, land or other tangible non-produced assets required to carry on the production (7.82). They are two alternative names used for different types of enterprises. They are defined as a balancing item and equal to (7.80):

value added  
minus compensation of employees  
minus taxes on production payable  
plus subsidies receivable

135. Mixed income corresponds to unincorporated enterprises owned by households, either individually or in partnership with others. It contains an element of work done by the owner(s).

### 3. Property income

136. Property income is defined as: the income receivable by the owner of a financial asset or a tangible non-produced asset in return for providing funds to, or putting the tangible non-produced asset at the disposal of, another institutional unit (7.88).

137. Owners of land and sub-soil assets may let them to other units receiving a payment in return. These payments are often called royalties, but the SNA considered them as rents. Rents are property incomes and the Blue Book reserves this term for rents on land and sub-soil assets.

## B. Transfers

138. The other forms of income besides primary incomes are transfers: “A transfer is defined as a transaction in which one institutional unit provides a good, service or asset to another unit without receiving from the latter any good, service or asset in return as counterpart” (8.27). In other words, in the case of transfers there is no quid pro quo. The main kind of income transfers to households are:

1. social benefit
2. social transfers in kind

### 1. Social benefits

139. Social benefits are current transfers received by households for needs like sickness, unemployment, retirement, education or similar circumstances. There are two kinds:

1. social insurance benefits
2. social assistance benefits

140. Social insurance benefits are provided under organized social insurance schemes. They encompass general social security schemes, private funded social insurance schemes and unfunded schemes managed by employers for the benefit of existing or former employees, without involving insurance enterprises or pension funds. Social assistance benefits are intended to meet the same kind of needs as social insurance benefits, but are provided outside of an organized social insurance scheme and are not conditional on previous payments of contributions (8.7). Social benefits may be in cash or in kind.

141. The System classifies social benefits other than social transfers in kind into four categories (8.77):

- social security benefits in cash;
- social assistance benefits in cash;
- private funded social insurance benefits;
- unfunded employee social insurance benefits.

142. Social security benefits in cash cover all social insurance benefits payable in cash to households by social security funds, such as: sickness and invalidity benefits; maternity, children's or family allowances, other dependents' allowances; unemployment benefits; retirement and survivors' pensions; death benefits; and other allowances or benefits.

143. Social assistance benefits in cash include all transfers made by government units or non-profit institutions serving households to meet the same needs as social insurance benefits, but which are not made under a social insurance scheme. They do not cover transfers made in response to natural disasters such as drought, floods or earthquakes (8.81-8.83).

144. Private funded social insurance benefits are payments to households by insurance enterprises or other institutional units administering private funded social insurance schemes. Examples of transfers are similar to those listed for social security benefits, but no distinction is made between transfers in cash and in kind (8.79).

145. Unfunded employee social insurance benefits are paid by employers administering unfunded social insurance schemes. They include the continued payment of normal or reduced wages during periods of absence from work as a result of ill health, maternity leave, etc.; the payment of family, education or other allowances in respect of dependents; the payment of retirement or survivors pensions, the payment of severance allowances to workers or their survivors in the event of redundancy, incapacity, accidental death, etc.; general medical services not related to the employee's work; convalescent and retirement homes (8.80). Note: It is not easy for employers to distinguish payments for unfunded social benefits to employees from ordinary payments on wages and salaries (8.76).

## 2. Social transfers in kind

146. The System records a variety of transfers in kind, including social transfers in kind, which consist of social security and social assistance benefits in kind together with goods and services, such as education, health, housing, etc. (non-market goods and services) provided to households outside any social insurance scheme by government units or NPISHs.

147. When the individual purchases the services, but is reimbursed by the insurance or assistance scheme, this is still an in-kind transaction (3.41, 3.42). A different situation occurs when it is the

enterprise which provides the health or education service free. In this case this flow is not considered a transfer, but part of wages and salaries in kind.

148. Social transfers in kind, are recorded as non-monetary transactions between the government units or the NPISHs and the households who actually consume the goods or services and are valued by the expenditure already incurred on them. This value is then added to the final consumption expenditures of households to obtain their actual consumption (3.43).

149. Goods produced on the market which are delivered to households but are paid for by the government or NPISHs are considered social transfers. On this subject the Blue Book states: “Expenditures by government or NPISHs on goods or services produced by market producers that are provided directly to households, individually or collectively without any further processing constitute final consumption expenditure by government or NPISHs and not intermediate consumption. The goods and services in question are one form of social transfers and enter into the actual consumption of the households” (6.174).

150. Although there is no quid pro quo in a transfer, its recording originates four entries in the accounts. It affects the disposable income (secondary distribution of income account) of the units involved, it increases the disposable income of the receiving unit, while reducing the income of the other unit, for both cash and in-kind transfers.

151. When social transfers in kind are involved, the registers affect also the redistribution of the income in kind account (8.34-42).

## **C. Savings**

152. In the 1993 SNA, savings represent the link between the accumulation accounts and the income accounts. Savings are defined from an accounting point of view as disposable income not spent on consumption of goods or services. Savings can be positive or negative. Corresponding records of savings are essential to an in-depth analysis of household sub-sectors. If saving is negative, the excess of consumption over disposable income must unavoidably be financed by disposing of assets or incurring liabilities (1.10). The direct relationship between income, consumption and saving is presented in this way in the Blue Book: “Saving represents that part of disposable income that is not spent on final consumption goods and services. It may be positive or negative depending on whether disposable income exceeds final consumption expenditure, or vice versa. Assuming that saving is positive, the unspent income must be used to acquire assets or reduce liabilities. In so far as unspent income is not used deliberately to acquire various financial or non-financial assets, or to reduce liabilities, it must materialize as an increase in cash, itself a financial asset. If saving is negative, some financial or non-financial assets must have been liquidated, cash balances run down or some liabilities increased” (9.19).

153. From the operational point of view, it must be pointed out that data on savings derived from comparing data on income with data on consumption often do not agree with corresponding data taken from financial statements.

154. On the other hand, household sample surveys generally do not pay enough attention to savings. This is partly due to the fact that questions on savings and financial matters are usually resented by the members of the household, especially if questioned in the presence of other members of the household.

## **V. Households as consumers**

155. Before addressing the role of households in consumption, it is convenient to remember the boundaries the System assigns to it. This is what it says regarding the consumption boundary: “The boundary of production determines the amount of value added recorded and hence the total amount of income generated by production. The range of goods and services that are included in household final consumption expenditures, and actual consumption, is similarly governed by the production boundary; for example these expenditures include the estimated values of the agricultural products consumed by households that they have produced themselves and also the values of the housing services consumed by owner occupiers, but not the values of “do-it-yourself” repairs and maintenance to vehicles or household durables, the cleaning of dwellings, the care and training of children, or similar domestic or personal services produced for own final consumption. Only the expenditures on goods utilized for these purposes - e.g. cleaning materials - are included in household final consumption expenditures. This boundary is one of the most controversial from the point of view of those who perform these services. In fact, the example given is a flagrant demonstration of its shortcomings: absence of cleaning materials will make the housewife work harder and longer, but the more she works the less will be the value added of the service performed.”

156. The questions that arise in accounting for households as consumers and aspects related to it are commented on in this section. They are taken up in this order:

- A. Expenditures
- B. Household final consumption expenditure
  - 1. Actual expenditures
  - 2. Imputed expenditures
- C. Household actual final consumption
  - 1. Expenditures on individual and collective goods and services
  - 2. Actual final consumption of households
- D. Social transfers in kind
- E. Social contributions
- F. Classifications
- G. Expenditures on dwellings
- H. Expenditures on valuables

157. The 1993 SNA deals with the consumption of households, distinguishing between final consumption expenditures and actual final consumption, differentiating between expenditures on and acquisitions of goods and services.

## **A. Expenditures**

158. Expenditures are defined in the Blue Book as the values of the amounts that buyers pay to sellers in exchange for goods or services provided to them or to other institutional units designated by the buyers. Government or non-profit institutions serving households frequently pay for goods or services that sellers provide to households (9.22).

159. A distinction is made in the System between units which make the payment to the seller and

those which ultimately bear the cost. This is illustrated in the Blue Book by an example of a household that purchases a good or service and is subsequently reimbursed out of social security funds. The amount of the reimbursement is charged to the expenditures of the social security fund (9.23).

160. Regarding valuation and the time of recording a transaction the following observations must be borne in mind: the values of expenditures are measured by the values of amounts receivable and payable at the times the expenditures are incurred. (9.25). That is, when the purchaser incurs a liability to the seller (9.64). The expenditure is at the purchaser's prices including any taxes on products which may be payable and transport charges incurred by the purchaser (9.66) but excluding interest or service charges, when the seller arranges for credit to be provided to the purchaser (9.69).

161. Sometimes, instead of paying cash or incurring a liability, the buyer and the seller may agree to make an exchange of goods or services. An example is the remuneration in kind received by employees. In this case, workers receiving remuneration in kind are treated as making expenditures equal to the market value of the goods or services received (9.28).

## **B. Household final consumption expenditure**

### **1. Actual expenditures**

162. Household final consumption expenditure consists of expenditures by households on the consumption of goods or services; but it excludes expenditure on dwellings or valuables. This exclusion is justified by the fact that dwellings are classified in the system as gross fixed capital formation (they produce housing services) and valuables are considered as a store of value as they are not used up in consumption or production (9.45).

163. Regarding licenses and fees, households make payments to government to obtain licenses, permits, certificates, etc., and in some cases, it is not clear whether the government actually provides services in return or the payments are, in fact, taxes. The System decided, by convention, that payments for licenses to own or use vehicles, boats or aircraft as well as those to hunt, shoot or fish are considered taxes, while payments for all other kinds of licenses, permits, certificates, etc. are treated as purchases of services and included in household consumption expenditure (9.62).

164. Households with members who are proprietors of unincorporated businesses present a problem with respect to the delimitation of business expenses and expenses on household consumption. In these cases it is necessary to ensure that only expenditures for the direct satisfaction of human needs and wants are included in household final consumption expenditure; while expenditure incurred for business purposes are excluded (9.47).

165. Durable goods acquired by a household are included in its consumption expenditure, regardless of their physical durability. Household final consumption expenditures comprise goods that can be used once, as well as those that can be used repeatedly or continuously; the latter are named "durable" goods. The System recommends care when dealing with purchases of durable goods made by households that own unincorporated enterprises. These goods when used for productive purposes should be considered as part of gross capital formation. When the good is used partly for business purpose and partly for personal satisfaction, the expenditure must be split between final consumption and capital formation. The decline in value of goods used for production purposes should be recorded as the consumption fixed capital of the unincorporated enterprise (9.48).

## 2. Imputed expenditures

166. *Barter transactions:* All goods and services acquired in barter transactions are considered imputed expenditures. In cases where the goods object of the barter is an existing good, negative imputed expenditure must be recorded for the unit offering the good (9.49).

167. *Expenditures on goods and services received as income in kind:* Final consumption expenditure of households comprises income received in kind by employees provided by employers as remuneration for work done. Care must be taken to distinguish between those goods, which are part of the remuneration of employees and which can be used for the satisfaction of their personal needs, and those which are needed for the performance of the production process. These latter constitute intermediate consumption of the production unit (9.50, 9.51).

168. *Expenditures on goods and services produced for own consumption:* Goods or services produced as outputs of unincorporated enterprises owned by households, when retained for consumption by members of the household, should be included in household final consumption expenditure, at imputed values (9.52).

169. *Services of owner-occupied dwellings:* Persons who own the dwellings where they live are treated as owning unincorporated enterprises that produce housing services and these services are considered imputed expenditures, included in household expenditures. Nevertheless, all expenditures incurred in the repair, decoration and maintenance of the dwellings should be treated as intermediate expenditure of the unincorporated enterprise (9.58-59).

170. *Imputed financial charges:* Financial intermediation charges, even though not explicit, should be charged to household expenditures. The nominal rates of interest financial institutions charge households are higher than those they pay to them for their deposits. This difference constitutes an indirect method of charging households for intermediation services (6.121, 6.122; 9.54). The allocation of this imputed service depends on the country's policy. There is no intermediation when an unincorporated moneylender lends only from his or her own funds and therefore, there is no productive activity involved (6.134).

## C. Household actual final consumption

171. The 1993 SNA makes a distinction between final consumption expenditure and actual final consumption. This distinction is geared to the general distinction between expenditures on, and acquisitions of, goods and services (9.21). An institutional unit incurs an expenditure when it pays, or agrees to pay, for goods or services provided to it or to other institutional units. An institutional unit acquires goods or services through expenditures and through transfers in kind received from other institutional units.

172. Both, final consumption expenditures and final consumption must be presented in the accounts. The reasons for this, as given in the Blue Book, are : “Expenditures are attributed to the institutional unit that bears the costs even if they are not the units to whom the goods or services are delivered. Thus, expenditures that government units or non-profit institutions serving households make on individual goods and services that they provide to households as social transfers in kind must be recorded as final expenditure incurred by government units or non-profit institutions serving households. Although they do not physically consume the goods and services provided as social transfers in kind, the government units or non-profit institutions serving households are the units that pay for them and take the decisions about

the amounts to be provided. Information about their expenditure on such goods and services must, therefore, be recorded in the accounts of the System in conjunction with their disposable income. However, merely to record the expenditures is not sufficient when the goods and services are consumed by different units than those that control and finance the expenditure. In order to identify the units that benefit from their consumption it is necessary to recognize that the goods and services are in fact transferred to households. Actual final consumption must be recorded as well as final consumption expenditure” (9.8).

## 1. Expenditures on individual and collective goods and services

173. There is a distinction between individual consumption goods and services and collective consumption services. Households, in order to satisfy the needs and wants of members of a given household, acquire individual consumption goods or services (9.42). Collective consumption services are services provided simultaneously to all members or a particular section of the community. Such services are automatically acquired and consumed (6.43).

174. The consumption expenditures incurred by government and non-profit institutions serving households must be classified into those incurred for the benefit of individual households and those incurred for the benefit of the community as a whole (9.80).

175. Expenditures incurred by government at a national level in connection with individual services such as health and education when they are concerned with the formulation and administration of government policy, the setting and enforcement of public standards, the regulation, licensing or supervision of producers, etc. are to be treated as collective. However, overhead expenses connected with the administration or functioning of a group of hospitals, schools, colleges or similar institutions are to be included in individual expenditures (9.86).

176. By convention, all the services provided by non-profit institutions serving households are treated as individual (9.85; 9.44).

## 2. Actual final consumption of households

177. Actual final consumption of households is intended to measure the value of the consumption goods acquired by households, whether by purchase or by transfer from government units or non-profit institutions serving households, and used by them for the satisfaction of their needs and wants. It is considered a better indicator of their living standards than their final expenditure alone. Actual final consumption, but these terms are not used in the System (9.11). It includes (9.72 and 9.96):

- the value of households' expenditures on consumption goods or services including expenditures on non-market goods or services sold at prices that are not economically significant;
- the value of expenditures incurred by government units on individual consumption goods or services provided to households as social transfers in kind;
- the value of expenditures incurred by non-profit institutions serving households on individual consumption goods or services provided to households as social transfers in kind

178. The imputed value of these social transfers is equal to the costs incurred by government or NPISHs less any payment made by households (9.73). Because all the services provided by non-profit institutions serving households are treated as individual, this institutional unit has no actual final

consumption.

## **D. Social transfers in kind**

179. A transfer is defined as a transaction in which one institutional unit provides a good, service or asset to another unit without receiving from the latter any good, service or asset in return as counterpart (8.27). The main kinds of transfers are taxes, social contributions and benefits and other current transfers (8.3).

180. Social transfers in kind consist only of social benefits in kind and the transfer of individual non-market goods and services provided to resident units by government units, including social security funds, and non-profit institutions serving households (8.19).

181. Transfers, and especially transfers in kind, play an important role in household consumption. Moreover, from the point of view of information, they present numerous complexities which require a clear definition of the concepts involved. The main definitions are given below. They are taken from the Blue Book where additional explanations and details can be consulted. The compiler should check these against the legal and administrative provisions of his or her economy.

182. Many transfers in kind are recorded in the System, including social transfers in kind, which consist of social security and social assistance benefits in kind together with goods and services, such as education, health, housing, etc. (non-market goods and services) provided outside any social insurance scheme by government units or non-profit institutions. When the household or the individual purchases the services, for which there is afterwards a reimbursement by the insurance or assistance scheme, this is still considered an in-kind transaction (3.41; 3.42). Free health or education services by an enterprise are not considered a transfer, but part of wages and salaries in kind. They should however, be recorded in a separate entry.

183. Social transfers in kind, as such, are then recorded as a set of non-monetary transactions between the government units or the non-profit institutions and the households who actually consume the goods or services, the goods and services being valued by the expenditure incurred. By adding the value of these goods and services to the final consumption expenditure of households, we obtain their actual consumption (3.43).

184. Expenditures by government or non-profit institutions serving households on goods or services produced by market producers that are provided directly to households, without any further processing are final consumption expenditure by government or non-profit institutions serving households and not intermediate consumption. The goods and services in question are one form of social transfer and enter into the actual consumption of the households (6.174).

185. Doubts may arise concerning the treatment of government collective services provided to enterprises. All enterprises, including household enterprises, may benefit from the provision of transport facilities, security, etc., even individual services like veterinary services to farmers. By convention, such services are not considered intermediate consumption of enterprises (6.173).

186. The recording of transfers creates four entries in the accounts. It affects the disposable income (secondary distribution of income account) of the units involved, it increases the disposable income of the receiving unit, and reduces the income of the other unit (for cash and in-kind transfers). When social transfers in kind are involved, the registers affect also the redistribution of income in kind account. The details of recording transfers are presented in the Blue Book (8.34-42) and there is a special summary

concerned with transfers in kind which reads as follows: “Two separate accounts exist in the System to allow for the special recording of social transfers in kind. The transfers as such are recorded in the redistribution of income in kind account under resources for households and under uses for the government unit or NPISHs making the transfer. The consumption of the goods and services transferred is recorded in the use of adjusted disposable income account. All other transfers in kind are recorded in the secondary distribution of income account along with those taking places in cash. The goods and services transferred are recorded as consumption expenditures by the recipients in the use of disposable income account” (8.41, 8.42).

187. Non-life insurance premiums and contributions paid by households are treated in the accounts as transfers, because, though the insured is entitled to a contingent future payment, the amount of benefit may bear no relation to the amount of the premium or contribution previously paid (8.28). On the other hand, payments of premiums on individual life insurance policies taken by households on their own initiative outside any social insurance scheme are not transfers, neither are the benefits received when the policies mature. They are acquisitions and disposals of financial assets (8.29).

## **E. Social contributions**

188. Social contributions are payments (actual or imputed) to social insurance schemes to make provisions (made by employers, self-employed or non-employed persons) for future social insurance benefits. In the System, these payments, when paid by employers directly to the social insurance scheme, are treated as if they were made to employees who later make the payments to the insurance organizations. Thus, they appear first as part of compensation of employees. This is called 're-routing' (8.8, 8.67).

189. Social contributions constitute resources for any sector, mostly government (including social security funds), insurance corporations and pension funds. They are registered under uses only for households. The employers' and employees' social contributions are registered at the time when the work is carried out that gives rise to the liability to pay the contribution. In the case of private funded schemes, it includes also the property income attributed to insurance policy holders (less the service charges, when appropriate). There are similar payments made by self-employed and non-employed persons (2.120, 8.8, 8.68-70).

190. In cases where the employer operates an unfunded social insurance scheme, it is necessary to register an imputed social contribution. It has to be entered in both the generation of income account of the employer as part of the remuneration to employees and in the secondary distribution of income account of the households as if the employees were paying back the same amount to the employer (8.71-74).

## **F. Classifications**

191. Four different classifications are proposed by the System to identify the purposes and objectives of consumption and outlays:

- Classification Of Individual Consumption by Purpose (COICOP);
- Classification Of the Functions Of the Government (COFOG);
- Classification Of the Purposes Of the NPISHs (COPNI);
- Classification Of Outlays of Producers by Purpose (COPP).

192. The first classification scheme, COICOP, lists specifically the individual consumption by purpose

and normally contains the bulk of household consumption. The remaining classifications refer to different institutions. They show the outlay structure of government, NPISHs and producers classified by purpose categories. The list of purposes is different in each case and this limits the possibility of integrating them in order to construct a table presenting consumption of household sub-sectors divided by categories of COICOP (food, housing, education, health, etc.) and showing for each category how it has been financed (household proper, government, non-profit institution, enterprises). Information contained in such a table or account is essential for understanding the socio-economic situation of household sub-sectors. It would require a revision of COICOP, as well the other classification schemes to provide for a better integration of data. Such a revision would mean mostly subdividing some of the established categories. On the other hand, there is no need to insist on the usefulness of such an account for the great majority of users.

193. COICOP as it appears in the Blue Book in table 18.1 and on page 598 lists ten categories of individual consumption: food, beverage and tobacco; clothing and footwear; housing, water, electricity, gas and other fuels; furnishings, household equipment and routine maintenance of the house; health; transport; leisure, entertainment and culture; education; hotels, cafes and restaurants, and miscellaneous goods and services. Each of these categories is subdivided into several sub-items. But even the subdivision is not the most appropriate for many important kinds of analysis. The table has three columns, which show individual consumption expenditure, social transfers in kind (categ. COFOG) and in the last column, actual individual consumption.

194. The categories listed in COFOG (table 18.2 and page 599) refer to general public services; defense; public order and safety; education; health; social security and welfare; housing and community amenity; recreation, cultural and religious affairs; fuel and energy; agriculture; mining; transportation and communication; and other economic affairs and services.

195. COPNI lists (table 18.3 and page 600) research and scientific services; education services; health services; welfare services; recreational services, cultural and related services; religious services; services of professional and labour organizations and civic associations; and miscellaneous services n.e.c.

196. COPP shows (table 18.4 and page 600) selected outlays of producers. The only category that refers specifically to outlays, which benefit households, is the one on employee training, welfare and morale. Other categories of COPP also contain amounts which are siphoned off into the consumption of households, but they are mixed with other kinds of outlay and are no longer distinct in the classification. All the outlays of this kind are recorded as compensation of employees. Other items recorded as intermediate consumption of enterprises have been the subject of discussion as to whether they should be considered part of household consumption.

197. Among the complementary classifications mentioned in the Blue Book, two respond to the requirements of a detailed analysis of household final consumption expenditure and household actual final consumption (page 590):

*Household final consumption expenditure*

	Purchases of consumption goods and services
minus	Sales of existing consumption goods and services
plus	Bartered consumption goods and services (net)
plus	Own final consumption
	in subsistence economy
	services of owner-occupied dwellings
	domestic services produced by employing paid domestic servants
	other
plus	<i>Compensation of employees in kind</i>
plus	Transfers in kind (other than from government or NPISHs)
plus	Insurance services
plus	Pension funds services
plus	Financial intermediation services indirectly measured

*Household actual final consumption*

Household final consumption expenditure  
Social transfers in kind

198. For the subject under discussion, i.e. the creation of a system of household sector and sub-sector accounts and tables which would comprise a wider spectrum of subject matters than up until now, these classifications are of crucial importance. They can be used to construct an account or a table that would throw light on how consumption has been financed in different household sub-sectors. The importance of this aspect is evident.

199. Likewise, a subdivision of miscellaneous current transfers allows the user to get a better grasp of given situations. The Blue Book proposes to register the following items (page 592):

*Miscellaneous current transfers*

of which

- Transfers to non-profit institutions
- Transfers between resident households
  - in cash
  - in kind
- Remittances from family members living abroad
  - In cash
  - In kind
- Fines and penalties
- Lotteries and gambling
- Payments of compensation

200. Finally, many countries may find it useful for specific purposes to disaggregate household expenditure by type of good or service, using the Central Product Classification (CPC; 5.44 and page 597). This is of special interest in those cases in which the categories given in a classification scheme are considered insufficient. For example, the first category presented in COICOP, “food, beverages and tobacco”, may be considered unsatisfactory from the vantage point of social as well as nutritional analysis. From this point of view it might be preferable to separate out alcoholic beverages and also tobacco. This is not the only item that fails to correspond to existing interests. The whole classification appears somewhat dated, corresponding more to the requirement to connect its entries to the classification of industries supplying different goods and services, than to questions which worry analysts and politicians. A painstaking review of this classification seems advisable for the present purpose. For

example, in view of people's anxieties about security of life and property (and the increasing amounts that individuals and governments spend on protection), it might be advisable to introduce an item on this matter into the classification.

## **G. Expenditures on dwellings**

201. According to the System, owner-occupied dwellings are unincorporated enterprises producing imputed housing services received by the owners. Dwellings are goods used by their owners to produce housing services. Expenditure on dwellings by households, therefore, constitutes gross fixed capital formation. When dwellings are rented by their owners, rentals are recorded as output of housing services by owners and final consumption expenditure by tenants. When dwellings are occupied by their owners, the imputed value of the housing services enters into both the output and the final consumption expenditure of the owners (9.45). Expenditures on major improvements to dwellings are treated as gross fixed capital formation (9.60).

## **H. Expenditures on valuables**

202. Valuables are expensive durable goods acquired as stores of value and not for consumption or production. They consist mainly of works of art, precious stones and metals and jewelry (9.45).

# **VI. Population and labour inputs**

## **A. Population and per capita estimates**

203. The Blue Book contains a chapter on population and labour inputs. Both concepts are closely related to the household sector. Households are one way of classifying population and they are the source of labour inputs. While households and population were present in former versions of the SNA and were always a crucial element of national accounting analysis, the 1993 SNA heightens the importance of the subject by dedicating to it a special chapter in the Blue Book. This corresponds to the present trend in social studies, but, on the other hand, it requires basic data of a kind that national accountants hitherto have not been accustomed to dealing with.

204. The inclusion of these subjects into the 1993 SNA accounting framework is justified in the Blue Book by two facts, one related to consumption, the other to production. Specifically, the System requires a definition of population to express gross domestic product and consumption aggregates in per capita terms and labour input variables in order to examine productivity (17.1). These items add to the usefulness of a number of national accounts figures. Without such per capita figures comparisons between big and populous countries and small sparsely-populated ones would be meaningless. The same can be said for intertemporal comparisons in the case of countries where population for one or another reason has changed markedly. For broad aggregates such as GDP, GNI or household final consumption, the Blue Book suggests using the total (resident) population as the denominator.

205. For accounting purposes, the population is defined as the annual average of counts of persons present at a number of points of time. Here again a remark is needed about indicating clearly what type of definition is used in the actual presentations of figures. The Blue Book cautions the compiler that data

on population and labour inputs must generally be adjusted in order to be consistent with the System's concepts, definitions and classifications and adds that the resulting tables are an integral part of the SNA (2.238).

206. As indicated in the Blue Book, the household sector consists of all resident households and comprises also institutional households (4.11). It does not include non-profit institutions.

## **B. Population and household sub-sectors**

207. Turning to the sub-sectoring of the household sector, the Blue Book points out that it requires data on the numbers of households and the number of persons living in each sub-sector (2.236).

208. The question arises whether such data should be presented as part of the SNA. The answer given by Blue Book is affirmative. It uses a special graphic presentation to show the concepts, which are part of the SNA (figure 17.1). These concepts are:

- Population
- Jobs
  - Employee jobs
  - Self-employment jobs
- Total hours worked
- Compensation of employees
- Full-time equivalent employment

209. Detailed guidelines are presented in the chapter on the distinction between employees and the self-employed. They can be looked up in paragraphs 17.9 and 17.10. With some minor exceptions, the concepts used in the labour statistics conform to ILO specifications (17.8). As the analyst will often combine data from these SNA tables with other data from the ILO, it is convenient to clearly indicate to what type of data reference is made.

## **C. Labour inputs**

210. To maintain consistency, labour inputs should be classified in the same way as the data on value added and employees' compensation, that is according to the International Standard Classification of All Industrial Activities (ISIC). For special purposes the system leaves open the possibility of different types of classification. One such classification is the following:

- Rural*
  - Self-employed
    - Agricultural
      - Small farmers
      - Medium farmers
      - Large farmers
    - Non-agricultural
      - Informal, own-account
      - Informal, employers
      - Formal, own account
      - Formal, employers (typographical error in the Blue Book)

Employees  
 Agricultural  
 Non-agricultural  
     Unskilled  
     Skilled  
     Highly skilled

*Urban*

Self-employed  
     Informal  
     Formal  
 Employees  
     Unskilled  
     Skilled  
     Highly skilled

211. An additional breakdown is suggested for employees according to the sectors or sub-sectors where they are employed:

- household or sub-sector;
- non-profit institution serving households;
- public corporation;
- government;
- national private corporation;
- foreign corporation.

212. A still different breakdown for employees is presented in the 1993 SNA when dealing with matrix presentation. It classifies employees by sex and by occupational groups (see table 20.6).

213. Labour inputs furnished by households can also serve as a criterion for household sub-sectoring. Households can be grouped by the number of employed persons in the household. We then get “one employed person households”, “two employed persons households”, etc. (This criterion has been used recently in a discussion on the relationship between minimum wage levels and the cost of the family consumption basket, in which the number of “breadwinners” in a household was taken into consideration.) A drawback of the procedure is that it is too comprehensive: a person who works just one hour a week would, in accordance with existing definitions, be included among the persons employed. (One could think of raising the requirement of hours worked per week, but it does not seem advisable to do so unless it could be done within new provisions in labour force statistics.) A refinement of this method would be to consider not simply the total number of persons but the percentage that such persons represent within the total number of persons in that household, and instead of employment in general, use employment in certain activities, sectors or sub-sectors. For example: households the major part (50%?) of whose members work in the informal sector would be considered “Informal Sector Households”.

214. One attribute of labour inputs is the time element. It is one of the concepts that has been shown above to form part of the accounting system where it is used to relate employment to remuneration. But time records can do more than this. If we want to throw light on the gray area of non-remunerated work, especially that done by women, data on time use are the most efficient statistical tool for the purpose. Although time-use data are beyond the 1993 SNA core system, they can be incorporated into 1993 SNA satellite accounts and tables. In addition these tables allow us to look at the time element not only from the vantage point of the producer but also from that of the consumer in the broad sense, including the use of time for recreation and leisure.



**CHAPTER II**  
**THE INFORMAL SECTOR AS PART OF THE HOUSEHOLD SECTOR**



The informal sector:  
Statistical definition and survey methods

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## I. Background

### A. *Concept of the informal sector*

1. The concept of the informal sector has been one of the ILO's most important contributions to development thinking. The first appearance of the term “informal sector” in an official document was in the report of a comprehensive employment mission to Kenya undertaken by the ILO in 1972. One of the main findings of the mission was that, in a developing country like Kenya, the main employment problem was not unemployment, but the existence of large numbers of “working poor”, many of them working very hard in the production of goods and services, but whose activities were not recognized, recorded, protected or regulated by the public authorities. This phenomenon was labelled in the report as the “informal sector”, and explained by the inability of the other sectors of the economy, agriculture or other rural activities on the one hand, and modern industry and services on the other, to provide adequate incomes or employment opportunities to a rapidly growing labour force. Since then, the term “informal sector” has come into wide use, although its precise meaning has remained somewhat elusive and the subject of controversy as the concept has been defined in different contexts with different meanings. In spite of a considerable amount of research and data collection during the past 25 years, the understanding of what the informal sector is, why it exists and how it operates is still far from adequate. It is a controversial subject because there are different viewpoints from which one can observe the informal sector. It can be viewed in a positive way as a provider of employment and incomes to millions of people who would otherwise lack the means of survival. It can be viewed more negatively as a whole segment of society which escapes regulation and protection. It can be romanticised as a breeding ground of entrepreneurship which could flourish if only it were not encumbered with a system of unnecessary regulation and bureaucracy. It can be condemned as a vast area of backwardness, poverty, insanitary conditions, hazardous work, illegality and the open use of child labour. Or it can simply be ignored.

2. While there have been, and will no doubt continue to be, controversies on precisely what types of activities and what categories of workers it covers, there does at least seem to be some common understanding of the main characteristics of the informal sector. The informal sector is a kind of umbrella concept to describe a variety of activities producing goods and services through which individuals derive employment and incomes. These activities are undertaken with the primary objective of the self-generation of employment and incomes, rather than the maximisation of profit or of return on investments as are typical in the formal sector. The conditions under which these activities come into existence and the constraints under which they are undertaken confer certain characteristics on them. They are informal in the sense that they are for the most part unregistered and unrecorded in official statistics, and also in the sense that they are operating on a very small scale and with a low level of organization. Most of them have very low levels of capital, productivity and income. They tend to have little or no access to organized markets, to credit institutions, to modern technology, to formal education

and training facilities, or to many public services and amenities. A large number of them are carried out without fixed locations or in places that are not visible to the authorities, such as small shops, workshops, stalls or homes. They are not recognized, supported or regulated by the government, and often compelled by circumstances to operate outside the framework of the law. The existence of informal sector activities on the fringes of the law has sometimes led public authorities to confuse them with illegal activities, and therefore to subject them to harassment and repression. Even where they are registered and respect certain aspects of the law, they are almost invariably beyond the reach of social protection, labour legislation and protective measures in the workplace.

3. Beyond these generalisations, the informal sector manifests itself in different ways in different countries, different regions within the same country, and even different parts of the same city. It encompasses different kinds of activities, different types of enterprise, and different motives for participation. The activities range from street vending, shoe shining, food processing and other petty activities requiring little or no capital and skills and with marginal output, to those involving a certain amount of investment in skills and capital and with higher productivity, such as manufacturing, tailoring, car repair and mechanised transport. While some informal sector activities resemble traditional activities in handicrafts, food processing or personal services, others such as car repair, recycling of waste materials or transport, are new and arise from modernisation. Informal sector activities are mostly operated by single individuals working on their own account as self-employed business operators, either alone or with the help of unpaid family members, although some are micro-entrepreneurs engaging a few paid workers or apprentices. Labour relations, if they exist, are based mostly on casual employment, kinship, personal or social relations rather than contracts with formal guarantees. Surveys have shown that there are considerable inequalities in the informal sector. Most people engaged in it, but not all, are poor, but not all poor people work in the informal sector. Some informal sector workers are quite destitute, while others earn incomes that are higher than the minimum wage in the formal sector. The informal sector is therefore not entirely synonymous with poverty; some formal sector wage earners are in fact in greater poverty than some informal sector entrepreneurs. It is important for the purposes of policy making to recognise the considerable heterogeneity of the informal sector. In spite of their heterogeneity, all informal sector activities have in common the fact that they are vulnerable. This vulnerability is due to the fact they have to rely as best they can on self-supporting and informal institutional arrangements for credit, training, social security, etc. which operate separately and independently of the institutions of the modern economy.

4. The motives for participation in the informal sector range from pure survival strategies undertaken by individuals facing a lack of (adequate) jobs, unemployment insurance or other forms of income maintenance, to the desire for independence and flexible work arrangements and, in some cases, the prospect of quite profitable income-earning opportunities, or the continuation of traditional activities. It should be noted, in this connection, that the vast majority of informal sector activities provide goods and services whose production and distribution are perfectly legal. This is in contrast to criminal activities or illegal production, i.e. activities which are forbidden by law or which become illegal when carried out by unauthorised producers (e.g. extortion, smuggling, drug trafficking, prostitution, foreign exchange). There is also a difference between the concept of the informal sector and that of the hidden or underground economy. Informal sector activities are not necessarily performed with the deliberate intention of evading the payment of taxes or social security contributions, or infringing labour legislation or other regulations. Certainly, some of the units prefer to remain unregistered or unlicensed in order to avoid compliance with some or all regulations and thereby reduce production costs. One should, however, make a distinction between those whose business revenue is high enough to bear the costs of regulations and those who are “illegal” because they cannot afford to comply with existing regulations as their income is too low and irregular, because certain laws and regulations are quite irrelevant to their needs and conditions, or because the State is virtually non-existent in their lives and lacks the means to enforce the regulations which it has enacted. In some countries, at least, a sizeable proportion of informal

sector enterprises is actually registered in some way and/or pays taxes, even though it may not be in a position to comply with the full range of legal and administrative requirements. Being deprived, to a large extent, of the right to appeal to the courts for contracts to be enforced or to claim security of tenure, many informal sector entrepreneurs would prefer to legalize their operations whenever possible and thereby obtain legal protection from the authorities. It should also be noted that substantial segments of the hidden or underground economy originate from enterprises belonging to the formal sector; examples include the production of goods and services “off-the-books”, undeclared financial transactions or property income, overstatement of tax-deductible expenses, employment of clandestine workers, and unreported wages and overtime work of declared employees. For these reasons, the concept of the informal sector needs to be distinguished from the concept of the hidden or underground economy. In reality, however, there will always be some overlap between the informal sector and the hidden or underground economy, and it is in respect of this overlap (i.e. deliberately concealed informal sector activities) that problems of non-response and under-reporting are most likely to occur in informal sector surveys.

5. In spite of its segmented, precarious and semi-legal existence, the informal sector cannot exist in total isolation from the formal sector. It largely serves markets which the modern sector is too inflexible or too high-cost to reach, formal sector workers are informal sector customers, and the existence of the informal sector depends much on its ability to deliver goods and services at lower prices or in smaller quantities than the formal sector, or to provide goods and services which would otherwise not be available at all. The informal sector also constitutes a huge “labour reserve” on which the formal sector can draw in times of expansion, or to which labour can be returned in times of contraction. Furthermore, in many countries an increasing number of informal sector activities are undertaken as secondary activities by farmers and formal sector employees in order to supplement their incomes. However, the nature of formal-informal sector relations varies. Some informal sector enterprises are highly dependent on modern enterprises for inputs, and modern sector enterprises can function as monopolies which increase the price of the inputs required. Other informal sector enterprises may act as subcontractors to the formal sector, and their weak economic power may make them vulnerable to exploitation. Other activities, consisting of jobs performed on an individual basis, are likely to be less directly linked to the formal sector, although even seemingly independent street vendors have sometimes been found to be part of well-organized commercial networks controlled by large-scale formal enterprises.

6. While there continues to be some controversy as to whether the informal sector concept is useful or appropriate either for analysis or for policy making, or whether the phenomenon that it describes can in any way be called a sector, the term “informal sector” is now widely used and accepted and is found not only in academic literature but also in many official documents and policy statements. From a statistical point of view, the informal sector has proved to be a useful concept for the collection of data on various types of activities which otherwise would not be sufficiently reflected in official statistics.

## **B. Need for statistical data collection on the informal sector**

7. In the past, the informal sector used to be largely ignored by official statistics. Informal sector activities were either omitted from the existing statistics or, if captured, were not identified separately. Little need was felt to collect data on informal sector activities because the development strategies pursued were mainly oriented towards modern, large-scale enterprises, and the informal sector was considered a transient phenomenon that would dwindle away in the near future as jobs were created through the growth of the modern, formal sector. However, during the past decade, economic recession, adjustment policies and continued high rates of urbanization and population growth have led to an unprecedented expansion of the informal sector in many countries, as modern sector enterprises, and especially the public sector, were obliged to release workers or reduce wages drastically. In some

countries, it was in fact only the informal sector which absorbed the labour force and kept the economy going, while the large, modern enterprises producing goods which require relatively capital-intensive technologies imported from the industrialized countries, reeled under the downturn. Moreover, the process of industrial restructuring in the formal sector led to a greater decentralization of production through subcontracting to small enterprises, many of them in the informal sector. According to rough estimates, the informal sector now accounts for up to 40, 55 and 70 percent of total urban or non-agricultural employment in Latin American, Asian and African countries respectively. Its contribution to the gross domestic product is usually lower but far too high to be negligible. There is every reason to believe that a large and probably increasing segment of the labour force in many countries will be engaged in the informal sector for many years to come, and that the informal sector will remain an important and probably expanding part of national economies. It is therefore increasingly recognized by researchers and policy makers that the informal sector can no longer be ignored and that it needs to be integrated, in one way or another, into the overall development process.

8. As a result, a growing number of national statistical agencies are being requested by their governments and others to provide, as part of their regular statistical programmes, comprehensive data on the size and characteristics of the informal sector and its evolution over time. This demand was reflected, for example, in the Addis Ababa Plan of Action for Statistical Development in Africa in the 1990s, which included the informal sector among the priority areas for future statistical programmes. The collection of data on the informal sector represents an important step forward towards the improvement of labour statistics, economic statistics and national accounts as an information base for macro-economic analysis, planning, policy formulation and evaluation, and the recognition of the contribution of the informal sector to various aspects of economic and social development, including employment creation, production, income generation, human capital formation and the mobilization of financial resources. The data can also be used for the design and evaluation of support policies and assistance programmes for the informal sector with a view to increasing its productive potential (and, hence, its employment- and income-generating capacity), improving the working conditions and social and legal protection of persons employed in the informal sector, developing an appropriate regulatory framework and promoting the organization of informal sector producers and workers, and for analysis of the situation of particular groups of informal sector workers such as women, children, rural-urban migrants or immigrants.

9. Informal sector statistics are especially needed in developing countries where the informal sector plays a significant role in total employment and income generation. It is beyond doubt that an informal sector also exists in industrialized countries, but the scale of the phenomenon and the context in which it occurs are quite different. For these reasons, the development of informal sector statistics is given less priority in industrialized countries and may require different measurement methods.

## **II. Statistical definition of the informal sector**

### **A. Fifteenth International Conference of Labour Statisticians**

10. It is obvious that the informal sector does not easily lend itself to statistical measurement. Due to the diversity of activities and modes of operation to which it refers, the concept of the informal sector as such is not very clear-cut. Accordingly, it is difficult to define the informal sector precisely in terms of statistical units and operational criteria, and to specify its scope and composition. Moreover, the large number of units to be surveyed and their characteristics (small size, high mobility and turnover, seasonal variations in activity, clustering in specific areas, lack of recognizable features for identification/location, lack of usable records, possible reluctance to survey participation, etc.) require modifications in traditional survey methods or the development of new methods.

11. In order to assist the statistical agencies of member States in these challenging tasks, the ILO Bureau of Statistics, following a request made by the Fourteenth International Conference of Labour Statisticians (1987), launched a series of activities during the late 1980's, which culminated in the adoption of a "Resolution concerning statistics of employment in the informal sector" by the Fifteenth International Conference of Labour Statisticians (15th ICLS) in January 1993. The resolution was intended, firstly, to provide the first (and so far only) internationally approved technical guidelines for the development of statistics on the informal sector, as a point of reference which would facilitate the task of national statistical agencies in developing definitions, classifications and methods of data collection on the informal sector as suited to the particular conditions of their country. Secondly, and less important in this case, the resolution was meant to reduce unnecessary differences in the informal sector statistics of different countries and thus improve the international comparability of the data.

12. The resolution covers a variety of issues relating to the definition of the informal sector and the design, content and conduct of informal sector surveys. It lays down the measurement objectives for informal sector data collection. It describes the concept of the informal sector and relates it to the conceptual framework of national accounting. It specifies the criteria of an operational statistical definition of the informal sector and makes a number of recommendations regarding the scope of informal sector surveys and the statistical treatment of particular cases which are on the borderline between the informal and other sectors. The resolution also provides fairly detailed guidelines for the design of informal sector data collection methods and programmes, account being taken of the measurement objectives pursued and differences in national statistical systems, and a recommendation to collect data on the informal sector on a regular basis as part of the national statistical programme. Finally, it includes a set of proposals regarding sub-classifications of the informal sector and the types of data which may be collected in informal sector surveys. A copy of the resolution is attached as an annex to this paper.

13. It should be noted that in spite of the title of the resolution, its relevance goes beyond employment statistics. In July 1993, the UN Economic and Social Council, on the recommendation of its Statistical Commission, adopted the revised System of National Accounts (1993 SNA). The informal sector definition adopted by the 15th ICLS forms part of the 1993 SNA. This is because one of the new features of the 1993 SNA is the recommendation to introduce, where relevant, sub-classifications of the household sector, including a distinction between the formal and informal sectors. Such a distinction makes it possible for national accounts to quantify the contribution of the informal sector to the national economy. The ILO, as the lead agency in the promotion of the informal sector concept, was asked to take part in this work by developing international guidelines for a statistical definition of the informal sector in such a way that the definition could also be used for national accounting purposes.

## **B. Links of informal sector definition with national accounts concepts**

14. The informal sector definition adopted by the 15th ICLS was linked with the conceptual framework of the SNA in order to: (i) enhance the compatibility of informal sector statistics with other economic and social statistics, and promote statistical integration; (ii) measure the informal sector as part of the economy as a whole rather than in isolation; (iii) use the same definition of the informal sector in labour statistics and national accounting; and (iv) integrate, or even collect jointly, data on employment

and data on other characteristics of the informal sector. These requirements had certain implications for the nature of the definition, as will be explained below.

15. Firstly, the informal sector had to be defined in terms of the characteristics of the production units (enterprises) in which the activities take place, rather than in terms of the characteristics of the persons involved or of their jobs. Accordingly, the population employed in the informal sector was defined as comprising all persons who, during a given reference period, were employed in at least one production unit of the informal sector, irrespective of their status in employment and whether it is their main or a secondary job. (The definition of the population employed in the informal sector stresses thus the distinction between “employed persons” and “jobs” in that it indicates that persons are classified into the informal sector through their relationship to a job in a production unit with specific characteristics. In this way, it is possible to account for the increasing number of informal sector activities which are undertaken as secondary jobs by persons whose main job is outside the informal sector (e.g. farmers, government employees), in order to compensate for stagnating wages and declining purchasing power). Persons exclusively employed in production units outside the informal sector are excluded, no matter how precarious their employment situation may be. Thus, the concept of persons employed in the informal sector is not identical with the concept of persons employed in informal employment relationships.

16. Secondly, the informal sector was considered as a sub-sector of the SNA institutional sector “households”, i.e. informal sector enterprises were defined as a subset of household enterprises or, synonymously, unincorporated enterprises owned by households. In accordance with the 1993 SNA, household enterprises, in contrast to corporations and quasi-corporations, are defined as production units which are not constituted as separate legal entities independently of the households or household members that own them, and for which no complete sets of accounts (including balance sheets of assets and liabilities) are available which would permit a clear distinction of the production activities of the enterprises from the other activities of their owners and would allow the identification of any flows of income and capital between the enterprises and the owners.

17. Household enterprises include unincorporated enterprises owned and operated by individual household members or by several members of the same household, as well as unincorporated partnerships and co-operatives formed by members of different households, if they lack complete sets of accounts. It should be noted that the enterprises may or may not employ paid workers, and that the activities may be carried out inside or outside the owner's home. The term “household enterprises” simply means that these units form part of the 1993 SNA institutional sector “households”. The characteristic features of household enterprises correspond well to the concept of the informal sector as commonly understood. The fixed and other capital used does not belong to the production units as such but to their owners. The enterprises as such cannot engage in transactions or enter into contracts with other units, nor incur liabilities on their own behalf. The owners have to raise the necessary finance at their own risk and are personally liable, without limit, for any debts or obligations incurred in the production process. Expenditure for production is often indistinguishable from household expenditure, and capital equipment such as buildings or vehicles may be used indistinguishably for business and household purposes.

### **C. Main criteria of the informal sector definition**

18. The first three criteria of the informal sector definition adopted by the 15th ICLS refer to the legal organization of the enterprises, their ownership and the type of accounts kept for them. These three criteria are embodied in the concept of household enterprises as described above. However, while all informal sector enterprises can be regarded as household enterprises, not all household enterprises can be considered as being part of the informal sector. The informal sector being a specific subset of the household sector, further criteria were needed to distinguish informal sector enterprises from other

unincorporated enterprises owned by households. For this purpose, the 15th ICLS adopted a modular approach (table 1). As a first step, within the conceptual framework of household enterprises a distinction was made between enterprises of employers and own-account enterprises. In accordance with the definitions of employers and own-account workers of the International Classification of Status in Employment (ICSE-93), the distinction was based on whether or not the enterprises employ at least one employee on a continuous basis (as contrasted with the employment of employees on an occasional basis and of unpaid family workers). The distinction was deemed important for definitional purposes: as compared with own-account enterprises, enterprises of employers necessarily have a higher degree of formality in their operations, and may therefore require one or more additional criteria for being classified in the informal sector. Moreover, the distinction between these two groups of enterprises was considered useful for the purposes of data analysis and policy making, and as an important variable for the stratification of informal sector survey samples.

**Table 1: Fifteenth ICLS: Framework of informal sector definition**

Household enterprises

(unincorporated enterprises owned by households)

Informal own-account enterprises	Other own-account enterprises	Own-account enterprises
Enterprises of informal employers	Other enterprises of employers	
Informal sector enterprises		Other household enterprises

Source: ILO

19. Accordingly, the informal sector was defined by the 15th ICLS as comprising (i) informal own-account enterprises and (ii) enterprises of informal employers, and separate criteria were specified for each of these two subgroups.

20. These criteria had to meet several requirements: (i) the number of criteria had to be small, as the definition was meant to serve the purposes of both data collection (i.e. specification of the scope of investigation) and data analysis; (ii) the criteria had to be operational, i.e. clear-cut, objective, simple, easily applicable in the field, and pertaining to characteristics that were readily measurable in various types of surveys, including labour force or other household surveys where respondents are not only the informal sector entrepreneurs themselves, but also the employees and unpaid family workers working with them, and where proxy responses by other household members can hardly be avoided; (iii) the criteria had to be relevant to the notion of informality, i.e. they had to be meaningful in their own specific right but at the same time be correlated with other criteria embodied in the informal sector concept; (iv) the criteria had to refer to characteristics of production units, be relevant to all kinds of informal sector activities and should, as little as possible, define ex ante characteristics of the informal sector which data collection was supposed to reveal ex post; (v) the definition had to be broad enough to allow for flexibility in data analysis and thereby accommodate the needs of various data users, i.e. the definition

was supposed to cover as large a universe as was practically feasible and conceptually compatible with the notion of the informal sector; and (vi) the definition had to be acceptable to a wide range of countries from the various parts of the world, which meant that it had to be general enough to encompass the variety of ways in which the informal sector manifests itself in different countries, and to provide flexibility for the adoption of more specific definitions at the country level according to the specific national circumstances, even if such flexibility was likely to affect the international comparability of the statistics.

21. A review of national practices shows that basically two different ways of viewing and defining the informal sector are being used by countries and that these, to some extent, are interrelated. One refers to the position of the enterprises in relation to the legal and administrative framework in force, and views the informal sector as made up of units which do not conform to that framework. This approach is used primarily by countries in Europe and in the French-speaking part of Africa. The other approach views the informal sector as a particular form of production, and defines it in terms of the way the enterprises are organized and carry out their activities. This approach is used primarily by countries in Latin America, Asia, and the English-speaking part of Africa. As described in detail below, the international definition of the informal sector adopted by the 15th ICLS incorporates both approaches in that it specifies non-registration and/or size in terms of employment as criteria to distinguish, among household enterprises, informal sector enterprises from other unincorporated enterprises owned by households.

22. The 15th ICLS specified that, depending on national circumstances, either all own-account enterprises should be considered informal, or only those which are not registered under specific forms of national legislation, legislation such as factories or commercial acts, tax or social security laws, professional groups' regulatory acts or similar acts, laws or regulations established by national legislative bodies, as distinct from regulations enacted by local authorities for the purpose of obtaining a trade licence or a permit to operate a business. These latter types of registration were not considered to be an appropriate criterion because they are governed by administrative regulations and their enforcement might vary considerably from one country to another and, even within the same country, over time or between different regions. Moreover, they were not considered to have much of an effect on the way the businesses are organized and operate, nor on their economic objectives and behaviour. (Similarity in economic objectives and behaviour is used in the 1993 SNA as the guiding principle for the distinction between the various institutional sectors and sub-sectors.) Recognizing that the criterion of non-registration would lack a clear conceptual basis unless it specified which of the various types of registration it referred to, the inclusion in the resolution of a precise statement on this matter was felt necessary (paragraph 8 (3)). It should also be noted that the 15th ICLS did not include any size criterion in the definition of informal own-account enterprises; such a criterion was considered superfluous as by their very nature virtually all own-account enterprises are likely to be small.

23. In respect of enterprises of informal employers, the 15th ICLS specified that these should be defined in terms of one or more of the following three criteria: small size of the establishment(s) in terms of employment, non-registration of the enterprise (defined in the same way as for informal own-account enterprises), and non-registration of its employees.

24. According to the 15th ICLS, the criterion of employment size may be formulated in terms of the number of employees employed on a continuous basis, the number of all employees (including employees employed on an occasional basis), or the total number of persons engaged during a specific reference period (including the entrepreneur, business partners and unpaid family workers in addition to the employees). The number of employees employed on a continuous basis was considered to be the ideal measure from the conceptual point of view, as it best matches the definition of informal own-account enterprises, which does not take account of the number of enterprise owners, business partners, unpaid family workers and casual employees working in the enterprise. In practice, however, information on the number of all employees or the total number of persons engaged may be more easily obtained from survey respondents than information on the number of employees employed on a continuous basis, and may correspond more closely to the criterion used to define the lower size limit or cut-off point for determination of the coverage of existing establishment censuses and surveys of formal sector units.

25. In the case of enterprises composed of more than one establishment, the 15th ICLS recommended using the establishment rather than the enterprise as the observation unit to which the size criterion refers. It was specified that an enterprise composed of more than one establishment should be considered informal if none of its establishments exceeds the size limit. The use of the establishment rather than the enterprise as the observation unit for the size criterion ensures compatibility with the determination of coverage of establishment censuses and surveys relating to the formal sector, so that informal and formal sector statistics can complement each other. It also becomes possible in this way to capture the development of informal sector enterprises which, for various reasons, tend to grow through the creation of additional small establishments rather than through an expansion of employment in the original establishment.

26. The size limit for enterprises of informal employers was not specified by the 15th ICLS because it may have to vary between countries and, even within a given country, between branches of economic activity. It was recommended that the choice of the size limit should take account of the coverage of establishment censuses and surveys of the larger units in the corresponding branches of economic activity, where such inquiries exist, in order to avoid an overlap. (Some countries actually prefer, however, to have a certain overlap in coverage as long as it can be identified. This is because response rates and data quality in establishment surveys tend to be relatively low in the case of the smaller units covered.) During the discussions of the conference, some reservations were expressed about defining the informal sector residually as comprising all units which were not covered in existing establishment censuses and surveys. The usefulness of such a definition was doubted for purposes of data analysis and policy making. It was pointed out that a residual definition might be rather unstable over time, because the informal sector would expand or contract if the coverage of the existing inquiries were changed. It was also feared that a residual definition of the informal sector might be too broad for some countries, depending upon the level of development of their statistical system. Consequently, it was stated that where the lower cut-off point used in existing inquiries appeared too high to be an appropriate upper size limit for enterprises of informal employers, efforts should also be made to extend the coverage of the existing inquiries and thereby close or reduce the gap from both ends. It was felt that in situations where it was not possible to lower the cut-off point of existing inquiries, it might sometimes be preferable to recognise the existence of an intermediate segment, and to cover it through a separate survey rather than to include it in the scope of informal sector surveys by substantially raising the upper size limit in the definition of enterprises of informal employers. This is because the survey methods used for informal sector enterprises may not be equally well-suited for the collection of data on medium-sized enterprises.

27. The criterion of non-registration of the employees of the enterprise was meant to refer to the conditions of employment in the informal sector regarding the workers' legal and social protection. It was defined in terms of the absence of employment or apprenticeship contracts which commit the employer to pay relevant taxes and social security contributions on behalf of the employees or which make the

employment relationships subject to standard labour legislation. An enterprise can be considered to meet the criterion, if none of its employees is registered.

## D. Additional provisions

28. In order to complement its definition of the informal sector, the 15th ICLS adopted a number of recommendations regarding the scope of informal sector surveys and the statistical treatment of particular cases at the borderline between the informal and other sectors.

29. *Non-economic activities:* As the informal sector definition adopted by the 15th ICLS was linked with the conceptual framework of the 1993 SNA, the scope of the informal sector was restricted to economic activities, i.e. activities included in the 1993 SNA production boundary. This restriction was considered necessary to ensure that employment, production and income generation in the informal sector can be measured as a share of total employment, domestic product and national income. Excluded are domestic and personal services provided by unpaid household members, as well as volunteer services rendered to the community. It should be noted in this connection that the 1993 SNA production boundary also includes illegal or concealed activities provided they are genuine processes of production whose outputs consist of goods or services for which there is an effective market demand (i.e. the transactions are made by mutual consent between the producers and consumers of the goods or services in question). In principle, all such activities fall within the scope of the informal sector if they are undertaken by units meeting the criteria of the informal sector definition. It was recognized, however, that in practice many such activities may go unreported in statistical surveys.

30. *Non-market production:* According to the 15th ICLS, household enterprises which are *exclusively* engaged in the production of goods or services for own final consumption or own fixed capital formation (i.e. building of own houses, etc.) should be excluded from the informal sector, with the possible exception of households employing paid domestic workers. This recommendation was based on two considerations. Firstly, units exclusively engaged in non-market production differ in their economic objectives and behaviour from informal sector enterprises, which are typically operated for the purpose of earning one's living or obtaining an additional income through the production of goods and services for sale to others. They should thus not be merged in the same concept. Secondly, it was considered prohibitively difficult to determine the value of goods produced for own final use unless the same units also produce some of their goods for sale to others.

31. *Agricultural activities:* Conceptually, there is nothing against the inclusion of household enterprises engaged in agricultural and related activities within the scope of the informal sector. For practical reasons of data collection, however, the 15th ICLS recommended excluding agricultural and related activities from the scope of informal sector surveys and measuring them separately. This is because many developing countries have a large agricultural sector which is mainly composed of small, unregistered household enterprises. Their inclusion in informal sector surveys would lead to a considerable expansion of the survey operations and a substantial increase in the survey costs. Moreover, many countries already have an established system of agricultural censuses and surveys whose coverage often extends to household enterprises engaged in agricultural and related activities, or can relatively easily be so extended. These data sources appear better suited than informal sector surveys to meeting the particular requirements of measuring agricultural and related activities in terms of concepts, definitions, classifications, survey content, questionnaire design, reference periods, sampling frames and procedures, organization of fieldwork, etc.

32. However, the 15th ICLS also recommended that the non-agricultural activities of household enterprises mainly engaged in the agricultural sector should be included if they meet the criteria of the

informal sector definition. Experience has shown that such non-agricultural activities are frequently undertaken as secondary activities of farm households or during the agricultural slack season.

33. *Rural areas:* Recognizing the large number of informal sector activities in the rural areas of many countries, the 15th ICLS recommended that, in principle, the informal sector should include enterprises located in rural areas as well as enterprises located in urban areas. However, countries starting to conduct informal sector surveys were given the option of confining data collection initially to urban areas only, until resources and appropriate sampling frames become available to cover the whole national territory.

34. *Professional and technical services:* It was sometimes suggested in the past that enterprises engaged in the production of professional or technical services by self-employed doctors, lawyers, accountants, architects, engineers, etc. be excluded from the scope of the informal sector because of the high level of skills involved. However, the 15th ICLS recommended that such enterprises should be included in or excluded from the informal sector on the same basis as other enterprises.

35. *Outworkers:* In accordance with the 1993 SNA, outworkers (homeworkers) were defined as persons who agree to work for a particular enterprise, or to supply a certain quantity of goods or services to a particular enterprise, by prior arrangement or contract with that enterprise, but whose place of work is not within any of the establishments which make up that enterprise. It was recommended that outworkers should be included among informal sector enterprises if they constitute enterprises on their own as self-employed persons, and if these enterprises meet the criteria of the informal sector definition. Criteria for the distinction between self-employed and employee outworkers include the basis of remuneration (income received as a function of the value of outputs produced vs. payment related to the amount of labour inputs provided), the employment of paid workers by the outworker, the existence of an employment contract with the enterprise receiving the goods or services produced by the outworker, decision-making on markets, the scale of operations and finance, and the ownership of machinery or equipment.

36. *Paid domestic workers:* In many situations it is virtually impossible to distinguish, among paid domestic workers engaged by households (e.g. maids, laundresses, watchmen, drivers, gardeners), those who are self-employed (i.e. owners of household enterprises producing services for sale on the market) from those who are employees of the households employing them (i.e. employees of household “enterprises” producing services for their own final consumption). Moreover, data on paid domestic workers and their remuneration are often already available from other sources, such as labour force surveys and household income and expenditure surveys. For these reasons, the issue of whether or not paid domestic workers should be included in the informal sector was left open for determination by countries themselves, depending upon their national circumstances and the intended uses of the statistics. If included in the informal sector, paid domestic workers should however be identified as a separate sub-category in order to enhance the international comparability of the statistics.

## E. Conclusion

37. The criteria of the informal sector definition adopted by the 15th ICLS are summarized in table 2. The approach used by the 15th ICLS to define the informal sector corresponds to the common understanding of the informal sector as an umbrella concept which encompasses a variety of different activities: “Informal sector was ... never proposed as a definition of a homogeneous group ...; rather it was identified with a sub-set of economic activities and intended to describe a domain like rural or urban sectors only to focus research and policy. Just as in the case of rural or urban sectors, one needs to disaggregate it in order to draw meaningful conclusions” (Sethuraman, 1988).

38. The informal sector as defined by the 15th ICLS therefore comprises a fairly heterogeneous set of units in any country. In order to show the structure of the informal sector, and to identify more homogeneous groups for data analysis, as targets for policies and support programmes, and as a basis for comparisons of statistics over time and between countries, paragraph 36 of the 15th ICLS resolution recommends the classification of informal sector enterprises by various characteristics (e.g. urban vs. rural location, kind of activity, type of workplace, size, composition of the workforce, type of ownership, relation with other enterprises). Moreover, it was recognised that for particular analytical purposes it may be necessary, at the national level, to develop more specific definitions of the informal sector by introducing further criteria on the basis of the data collected, and that such definitions may have to vary according to the needs of different users of the statistics (paragraph 10).

**Table 2: Fifteenth ICLS: Criteria of informal sector definition**

<b>Mandatory criteria</b>	
1. Legal organization	unincorporated enterprises
2. Enterprise ownership	households
3. Type of accounts	no complete sets of accounts
4. Product destination	at least some market output
5. Number of persons engaged/employees/ employees employed on a continuous basis in the establishment(s) and/or non-registration of enterprise and/or non-registration of employees of enterprise	to be specified according to national circumstances
<b>Optional criteria</b>	
6. Kind of economic activity	possible exclusion of agricultural and related activities and of paid domestic services
7. Geographic area	possible exclusion of rural areas

Source: ILO

39. It should be noted that the term “informal sector” has become so popular that it is used with different meanings for different purposes. Originally, it was used to refer to a concept for data analysis and policy making. Now, it is sometimes also used in a much broader sense to refer to a concept for the collection of data on activities not covered by the existing, conventional sources of statistics. In line with the original notion behind the concept, the starting point of the 15th ICLS for defining the informal sector was an understanding of the informal sector as an *analytical/political* rather than a *statistical*

concept; hence, care was taken to make the activities included in the informal sector definition as similar as possible regarding their economic objectives and behaviour and in respect of the information requirements for data analysis. From a practical point of view in terms of survey operations, a related consideration for the inclusion or exclusion of units was the need for and usefulness of their coverage in informal sector surveys. However, the 15th ICLS also tried to accommodate as far as possible the notion of the informal sector as a statistical concept, by extending the scope of the informal sector to include as large a universe of statistically unrecorded activities as deemed practically feasible and conceptually justifiable.

40. Nevertheless, the 15th ICLS withstood the temptation to interpret the umbrella concept of the informal sector as a “catch-all” concept for statistically unrecorded activities. Consequently, the definition adopted is likely to serve only partially the purpose of achieving a complete coverage of all productive activities, which is an important objective of national accounting. Similarly, the definition adopted was not meant to lead to a segmentation of the economy or the employed population according to a formal/informal sector dichotomy. The 15th ICLS recognised that activities excluded from the scope of the informal sector were not necessarily formal; examples are the non-market production of goods, small-scale agriculture, paid domestic services, and activities presently falling outside the 1993 SNA production boundary, such as domestic or personal services provided by unpaid household members and volunteer services rendered to the community. It was recommended that such activities should be identified as separate categories outside the formal/informal sector distinction.

### **III. Survey methods for informal sector data collection**

#### **A. Introduction**

41. It is obvious that by its very nature the informal sector does not easily lend itself to statistical measurement. This is because (i) the informal sector encompasses a variety of activities with different modes of operation, (ii) the number of informal sector units to be surveyed is large in many countries, and (iii) these units are often characterized by features which make their statistical measurement difficult. These features include their small size, high mobility and turnover, seasonal variations in business activity, clustering in specific areas, lack of recognizable features for identification/location, lack of usable records, possible reluctance to survey participation, etc.

42. For these reasons, it was often believed in the past that informal sector units and their activities were immeasurable, and that data collection on the informal sector was hence impossible. Apart from approximate estimates of informal sector employment based on combinations of data on industry, occupation and status in employment as provided by population censuses or labour force surveys, information on employment and value added in the informal sector used to be obtained in the past mainly through methods of indirect macro-economic estimation or the comparative analysis of data from different sources. However, such indirect methods were frequently criticized as being too approximate and hypothetical. They depend heavily on the assumptions made and on the coverage and quality of the data used. They tend to include components that are outside the scope of the informal sector, such as the statistically unrecorded, hidden or illegal activities of other parts of the economy, and thus do not identify the informal sector specifically. Moreover, these methods yield highly aggregated macro-economic estimates which do not provide information either about the composition of the informal sector or about the way it functions, information that is needed for policy purposes.

43. More comprehensive, reliable and detailed information on the informal sector can be obtained only by means of direct measurement through surveys. Recent experience in a number of countries has shown that it is indeed possible to obtain statistical data on the informal sector through various types of

surveys, provided the survey design and operations are adapted to the particular characteristics of the informal sector. This may require modification to traditional survey methods or even the development of new methods.

44. As shown below, it is the measurement objectives which determine the survey method to be used, and a combination of methods can be useful for the development of a comprehensive programme of informal sector data collection.

## B. Household surveys

45. If the aim is to monitor the evolution of informal sector employment in terms of the number and characteristics of the persons involved and the conditions of their employment and work, it is sufficient to include periodically in existing labour force or other household surveys a few additional questions pertaining to the informal sector and the characteristics of informal sector employment. These questions should be asked in respect of all persons employed during the reference period of the survey, irrespective of their status in employment, and in respect of their main and secondary jobs. In this way, it is possible to collect comprehensive data on informal sector employment and to obtain information on the conditions of employment and work from all categories of informal sector workers, including employees and contributing family workers. Moreover, data on the volume and characteristics of employment in the informal sector can be collected along with corresponding data on employment in other sectors and on unemployment obtained from the same source, and data on informal sector employment can be related at the micro-level to other information collected in the same survey. The additional cost of the measurement of informal sector employment is relatively low. The Fifteenth ICLS recommended that the evolution of informal sector employment should be monitored through measurement once a year, if possible.

46. In order to ensure that all informal sector activities are covered, it will often be necessary to undertake special investigation into activities that might otherwise go unreported, such as unpaid work in small family enterprises, activities undertaken by women on their own account at or from home, undeclared activities and informal sector businesses conducted as secondary jobs by farmers, government officials or employees of the private formal sector. In order to capture adequately the work of children in the informal sector, it may also be necessary to lower the minimum age limit which the surveys use for measurement of the economically active population. In designing or re-designing the survey sample, care should be taken to include an adequate number of sample areas where informal sector workers live.

47. When using labour force or other household surveys for the measurement of informal sector employment, one needs to be aware of certain limitations: (i) Informal sector employment is measured as part of total employment. In most cases, this is measured in relation to a short reference period, such as one week. As many informal sector activities are characterized by seasonal and other variations over time, data on informal sector employment obtained in respect of a short reference period are unlikely to be representative for the whole year. There may therefore be a need to improve the representativeness of the time dimension by repeating the measurement of informal sector employment at different times during the year in the case of quarterly or monthly surveys, or in using a longer reference period such as one year in the case of annual or less frequent surveys; (ii) An estimation of the number of informal sector enterprises is difficult, if not impossible; (iii) The application of the informal sector definition may pose problems in the case of employees, contributing family workers and proxy respondents, who usually have only limited knowledge of the characteristics of the enterprises in question, including the characteristics relating to the definition of the informal sector; (iv) The possibilities for disaggregation of the data on informal sector employment depend on the sample size and design.

48. If the measurement objectives are to collect detailed structural information on the composition of

the informal sector in terms of the number and characteristics of the businesses involved, and to obtain data for an in-depth examination of the production activities, employment, income generation and the capital equipment of informal sector enterprises, the conditions and constraints under which they operate, their organization and relationships with the formal sector and the public authorities, etc., surveys are required in which the informal sector businesses themselves and their owners are the observation and reporting units. According to the Fifteenth ICLS resolution, such surveys should be conducted every five years, if possible. For this purpose, various kinds of survey arrangements may be chosen, depending upon the data requirements of countries, the organization of their statistical systems, and the amount of resources available. These could be establishment surveys, mixed household and enterprise surveys, or a combination of these.

### C. Establishment surveys

49. The establishment survey approach presupposes the availability of a sampling frame for informal sector establishments. Establishment surveys of informal sector units can therefore only be conducted in conjunction with censuses of informal sector establishments or, preferably, general establishment or economic censuses which cover all establishments in the relevant branches of economic activity and contain the items required for the identification of informal sector units. If the informal sector survey is conducted immediately after the census, the census lists can be used as a list frame for the selection of a sample of informal sector establishments. If the informal sector survey is to be conducted later, data from the last establishment or economic census can still be used to construct an area sampling frame for the selection of sample areas, account being taken of the density of informal sector establishments of various types in the census enumeration areas. In this case, the systematic updating of the lists of establishments in the sample areas is usually required prior to the selection of the final sampling units (multi-stage design).

50. Establishment or economic censuses are large-scale, costly operations which many countries, due to resource constraints, cannot undertake or undertake only in the major urban areas. There is also the problem of achieving complete coverage of the informal sector, without omissions or duplications, in establishment censuses and surveys. Many informal sector businesses are difficult to identify or locate because they lack recognizable business premises; examples are activities conducted inside the business owner's home (e.g. tailoring, food processing) or without fixed location (e.g. construction, transport, ambulant trade). Unless substantial particular efforts are made, such activities are likely to be omitted from establishment censuses and surveys. One such effort, which has proven to be efficient and cost-effective in a number of countries (e.g. India), is the undertaking of an establishment or economic census concurrently with the house-listing operation for a population census. (It should be noted that this and similar efforts to improve the coverage of home-based and mobile activities are based on a combination of an establishment-survey approach with a household-survey approach. They therefore represent a step towards the mixed household and enterprise surveys discussed below.)

51. Moreover, because information is collected separately for each establishment, it may be difficult to show the linkages between several informal sector activities undertaken by the same individuals or households, and to consolidate the data at the enterprise or household level. There may be double-counting of activities in cases where, for example, some members of a family produce goods in a small workshop or at home, and other members of the same family sell these goods in a market or street stall. Notwithstanding these limitations, establishment surveys continue to be a useful and efficient method of data collection on the "upper" segments of the informal sector (identifiable establishments), which are often the main target groups of small enterprise development programmes.

## **D. Mixed household and enterprise surveys**

52. If the aim of the survey is to collect comprehensive data on the informal sector as a whole and the various segments of which it is composed, mixed household and enterprise surveys have been shown to be the most suitable approach. This is because it is relatively easy in such surveys to cover all informal sector entrepreneurs (except homeless persons) and their activities irrespective of the size of the businesses, the kind of activity and the type of workplace used, including activities undertaken inside the business owner's home or without fixed location, and irrespective of whether it is their main or a secondary job. Mixed household and enterprise surveys are based on area sampling and conducted in two phases. In the first phase, a comprehensive sampling frame for informal sector enterprises is obtained through a household listing or survey operation in selected sample areas, during which all businesses falling within the scope of the survey and their owners are identified (household survey component). In the second phase, all or a sample of the business owners are interviewed in order to obtain detailed information on their own characteristics and those of their businesses and workers, if applicable (enterprise survey component). As information during the first survey phase often has to be obtained from household members other than the business owners themselves (proxy respondents), it is normally not possible at this stage to obtain good quality data in respect of all the criteria of the informal sector definition. In order to ensure complete coverage, it is therefore preferable, during the first survey phase, to identify the owners of all businesses which potentially form part of the informal sector. On the basis of the data collected during the second survey phase, informal sector businesses can later on be identified more specifically (post-sampling identification).

53. Mixed household and enterprise surveys make it possible to analyze jointly, at the enterprise or household level, the various kinds of informal sector activities undertaken by the same individuals or households. Moreover, data on the characteristics of the informal sector activities and business owners can be related to the characteristics of the business owners' households as obtained from the same survey. This is important, in particular, for assessment of the contribution of other household members to the household income and for analysis of the impact of the household situation on the activities of women and children working as informal sector entrepreneurs.

### **1. Independent informal sector surveys**

54. Mixed household and enterprise surveys can be conceived either as independent informal sector surveys or as informal sector modules attached to existing labour force or other household surveys. In many cases, an independent survey is technically the better arrangement because its sample can be specifically designed and selected to meet the requirements of informal sector measurement, i.e. inclusion of the various types of informal sector businesses, for which reliable separate estimates are needed, in adequate number in the final sample. This aspect is important if one wants to be able to analyze the differences between various segments of the informal sector regarding their income-generating potential, constraints and other characteristics.

55. Independent informal sector surveys using the mixed household and enterprise survey approach are based on a multi-stage design involving the following steps: (1) selection of sample areas; (2) household listing; (3) selection of sample households with owners of (potential) informal sector businesses; and (4) main interviewing of sample households and business owners. Sample allocation and selection at the first and/or second stage of sampling should be made according to the density of informal sector entrepreneurs and type of activity (stratified sampling). The sample design must take into consideration the fact that some types of informal sector activities (e.g. transport, repair and other services) are likely to be less well represented in the universe than others (e.g. trade, cooked food sale). There are also informal sector activities (e.g. certain types of manufacturing) which tend to be

concentrated in specific areas. With a view to ensuring an adequate representation of all such activities in the sample and to reducing clustering effects, it is important to include a sufficient number of sample areas (primary sampling units or psus) in the sample. For allocation and selection of the psus, an area sampling frame should be used, consisting of enumeration areas of appropriate size, stratified according to the density of informal sector activities of different types or, at least, according to the overall density of informal sector activity in these areas. All available information should be used for the construction of such a frame, including data obtained from the latest population census on the density of employers and own-account workers in the enumeration areas. The data should be classified by broad activity groups (and, if available, by type of workplace and number of employees), data on the concentration of small establishments as obtained from the latest establishment or economic census, a stratification of enumeration areas by income level or other socio-economic criteria as made for the selection of household master or survey samples, relevant information obtained during listing or data collection for previous informal sector or other surveys, and local expert knowledge about the distribution of informal sector activities in the towns to be covered by the survey. These should normally provide a reasonably good approximation of the density of informal sector entrepreneurs living in the enumeration areas at the time of the survey. Enumeration areas with a high density of informal sector entrepreneurs in the relevant activity groups should then be selected at a higher rate to obtain more of the sample from such areas, to increase sampling efficiency, and to reduce the cost of the survey. The cost aspect is particularly important in respect of household listing which is an expensive operation unless it can be combined with listing for another survey. If more of the sample is obtained from areas with a high density of informal sector entrepreneurs, the number of households to be listed can be reduced in relation to the number of households included in the final sample.

56. In an independent informal sector survey, the first survey phase is confined to a listing of households in the sample areas. The quality of listing is a key factor for the overall quality of estimates obtained from such a survey. All households in the sample areas have to be listed, and all potential informal sector entrepreneurs and businesses of these households have to be identified. As a household listing approach may fall short of ensuring complete coverage of informal sector activities conducted in identifiable establishments outside the home of the business owner, some countries (e.g. the Philippines) have undertaken a dual, mutually exclusive, listing of (i) households and household-based business operators and (ii) establishments in the sample areas.

57. During the first phase of an independent informal sector survey, data on the kind of activity and other basic characteristics of the businesses must be collected as they are needed for the stratification and selection of the final sample of households. For the purposes of sample selection and weighting, it is easier if a single activity code is assigned to each household. The code determines the activity stratum into which the household is classified. In assigning it, priority can be given to activities less well represented in the universe so as to increase the number of such activities in the final sample. (However, once a household is selected into the final sample, information should be collected during the second survey phase on all informal sector activities undertaken by the members of this household.) The sample households are then selected by using differential sampling fractions for the various activity strata. The aim is to make the allocation of the final sample to the various strata as homogeneous as possible and to ensure that an adequate number of households from each stratum is included.

58. The design of an independent informal sector survey entails fairly complex survey operations and sample weighting/estimation procedures. It requires a team of qualified survey staff, sound training of interviewers, constant supervision and control of all survey operations, and care in keeping records of the listing operation, sample selection and sample outcome for each sample area.

## **2. Informal sector modules attached to household surveys**

59. The attachment of an informal sector module to an existing household survey means that the informal sector survey sample is obtained as a sub-sample of the base survey. The informal sector survey may be conducted simultaneously with the base survey or consecutively. For practical reasons, the consecutive arrangement is preferred in most cases, as it (i) facilitates the management and co-ordination of the two surveys, (ii) ensures that the survey operations for the base survey can proceed smoothly, (iii) is unlikely to have a negative impact on the quality of the base survey data, and (iv) provides better control over the identification and selection of the sub-sample for the informal sector survey.

60. The modular approach was first developed by statistical offices of Latin American countries with technical assistance from the ILO Regional Programme for Employment in Latin America and the Caribbean (PREALC). It is less complex and less expensive than the carrying out of an independent informal sector survey because information collected during the base survey provides the basis for the identification and selection of the sub-sample of households or persons for the informal sector survey, and no special household listing is required. However, the modular approach can only be used in situations where a suitable base survey (such as a labour force survey or a household income and expenditure survey) exists, and where it is feasible, in terms of survey operations and response burden, to combine data collection on the informal sector with data collection on another topic. As in the case of household surveys for the measurement of informal sector employment, the representativeness of the data in terms of time depends on the reference period of the base survey. Moreover, the modular approach may have certain limitations resulting from the fact that the base survey samples were usually not designed and selected for the purpose of informal sector measurement, either at the level of sample areas or at the level of sample households. The number of informal sector entrepreneurs included in the sample may therefore be quite small, and insufficient to yield reliable separate estimates for each type of informal sector activity for which such estimates would be desirable. There is no control over the distribution of the informal sector survey sample by type of activity and its representativeness. There are, of course, ways to increase the size of the informal sector survey sample. If the information required for identification of the units eligible for the informal sector survey is obtained during the listing operation for the base survey, the informal sector survey sample can be selected on the basis of all households in the sample areas, rather than only those selected for the base survey sample. Alternatively, if resources permit, the base survey sample may be increased by adding appropriately chosen supplementary sample areas to it. In this way, the sample design will most likely be improved not only for informal sector measurement but also for the base survey itself.

61. From the methodological point of view, the strengths of the modular approach lie in its suitability for (i) monitoring changes of the informal sector over time, if the base survey is conducted regularly and if an informal sector module is attached to it periodically at sufficiently frequent intervals; (ii) achieving complete coverage and the accurate identification of (potential) informal sector entrepreneurs in the sample households during the base survey interviews, particularly if a labour force survey is used for this purpose; (iii) using for the informal sector survey data the sampling weights of the base survey and thereby facilitating the estimation of the survey results; and (iv) relating data on the informal sector activities to data obtained from the base survey.

### **E. Means to improve contact/response rates and data quality**

62. To our knowledge, a systematic evaluation of data quality has never been made for any informal sector survey conducted to date. A characteristic (and for statisticians annoying) feature of many informal sector businesses is their high mobility and turnover. In order to reduce non-contact rates and distortions of the survey data resulting from sample units that have moved to a new location or changed or stopped

their activity, the time interval between the two survey phases (listing/identification and main interviewing) should be kept as short as possible. In addition, every possible effort should be made to trace sample units to their new location. Replacement by other units should be avoided. Another useful means of increasing contact rates, as well as the quality of the data obtained, is to interview, as far as possible, those informal sector entrepreneurs who conduct their business in fixed locations outside their home, at their actual place of work rather than the place of residence of their household. This applies to mixed household and enterprise surveys, in particular.

63. Most informal sector entrepreneurs have a low level of education and do not keep (usable) written records of their activities. They are not used to participating in statistical surveys and often not willing to devote much time to them. Some are difficult to contact anywhere because they operate without fixed location (e.g. ambulant vendors, taxi drivers, building craftsmen). There may also be a certain number of respondents who are reluctant to answer the survey questions for fear of subsequent taxation or harassment by the authorities. Under these conditions, it is essential to make provisions which help to improve response rates and data quality in informal sector surveys. These include: giving advance information to respondents regarding the survey and its purposes; a formal assurance of confidentiality of the data provided; choice of the date, time and place of the interviews in consultation with the respondents themselves; sound motivation, training and supervision of interviewers; establishment of good relations between interviewers and respondents; design of survey questionnaires which are manageable in the field in terms of content and length, and which are easy to follow and complete by interviewers; second visits to respondents, if necessary; formulation of questions in a way which is understandable by respondents, and which refers to their specific situation and the nature of their activities; and use of short reference periods which enable respondents to provide the required information with sufficient accuracy.

## F. Seasonal variations and estimation of annual values

64. Many informal sector activities are subject to seasonal and other variations over time. Hence the question arises as to how to capture such variations and estimate annual values as needed for national accounting and other purposes, through an informal sector survey. As the use of short reference periods is imperative, and repeated interviews with the same respondents at different times of the year are hardly possible, such variations are captured most accurately at the aggregate level, in spreading data collection over a period of a whole year by dividing the survey sample into independent sub-samples for different parts of the year.

65. For various reasons (including lack of human and financial resources) it is often not possible to capture seasonal and other variations in informal sector activities at the aggregate level. In such situations, one possible way of measuring variations and of estimating annual values is measurement at the individual level, through data collection in respect of short reference periods supplemented with questions on the intensity of business activity during each month of the year and on the average level of receipts/profits in months of high/low business activity as a percentage of the average level of receipts/profits in months of normal business activity.

## References

Hussmanns, R. 1996: "ILO recommendations on methodologies concerning informal sector data collection" in: Herman, B. and Stoffers, W. (eds.): *Unveiling the informal sector - More than counting heads* (Aldershot/Brookfield/Hong Kong/Singapore/Sydney, Avebury), pp. 15-29.

Hussmanns, R. 1996: *Data collection on small economic units of the informal sector*, Paper presented to

the UNSD/ECA Workshop on services in the informal sector in Africa, Addis Ababa, 17-21 June 1996.

International Labour Office 1991: *The dilemma of the informal sector*, Report of the Director-General (Part I), International Labour Conference, 78th Session 1991, Geneva.

International Labour Office 1992: Fifteenth International Conference of Labour Statisticians (Geneva, 19-28 January 1993), Report III: Statistics of employment in the informal sector, doc. ICLS/15/III, Geneva.

International Labour Office 1993: Fifteenth International Conference of Labour Statisticians (Geneva, 19-28 January 1993), Report of the conference, doc. ICLS/15/D.6 (rev.1), Geneva.

Sethuraman, S.V. 1988: "Informal sector: myth or reality?" in: *WEP Newsletter*, No. 30, March 1988 (Geneva, ILO).

## **Annex: Resolution concerning statistics of employment in the informal sector**

The Fifteenth International Conference of Labour Statisticians,

Having been convened at Geneva by the Governing Body of the ILO and having met from 19 to 28 January 1993,

Recalling paragraph 33 of the resolution concerning statistics of the economically active population, employment, unemployment and underemployment (resolution I), adopted by the Thirteenth Conference (1982) and the resolution concerning the informal sector (resolution VIII), adopted by the Fourteenth Conference (1987),

Considering that statistics on employment in the informal sector are especially needed in order to improve the statistical systems of countries where informal sector activities account for a significant proportion of total employment and income generation,

Observing the development of concepts and techniques for obtaining and analysing such statistics in a number of countries,

Recognizing that although these concepts and techniques will be further improved in the light of additional experience, there is currently a need for international standards to provide technical guidelines as a basis for the development of suitable definitions and classifications of informal sector activities and the design of appropriate data collection methods and programmes, and recognizing the usefulness of such standards in enhancing the international comparability of statistics,

Adopts this twenty-eighth day of January 1993 the following resolution:

### **Objectives**

1. Countries where the informal sector plays a significant role in employment and income generation and economic and social development should aim, where practicable, to develop a comprehensive system of statistics on employment in the informal sector to provide an adequate statistical base for the various users of the statistics, with account being taken of specific national needs and circumstances. The system to be developed should contribute to the improvement of labour statistics and national accounts as an information base for macro-economic analysis, planning, policy formulation and evaluation, to the integration of the informal sector into the development process and to its institutionalization. It should provide quantitative information on the contribution of the informal sector to various aspects of economic and social development, including employment creation, production, income generation, human capital formation and the mobilization of financial resources. The system may also provide data for the design and monitoring of specific support policies and assistance programmes for the informal sector as a whole or parts thereof with a view to increasing the productive potential and employment- and income-generating capacity of informal sector units, improving the working conditions and social and legal protection of informal sector workers, developing an appropriate regulatory framework and promoting the organization of informal sector producers and workers, and for the analysis of the economic and social situation of particular groups of informal sector workers such as women, children, rural-urban migrants or immigrants.

2. In order to fulfil the above objectives, comprehensive, detailed and reliable statistics should, as far as possible, be compiled on: (i) the total number of informal sector units, classified by various structural characteristics to provide information on the composition of the informal sector and identify particular segments; (ii) total employment in such units, including information on the number of persons engaged by socio-demographic and other characteristics and on the conditions of their employment and work; (iii) production and incomes generated through informal sector activities, derived, where possible, from data on outputs, inputs and related transactions; and (iv) other characteristics pertaining to conditions under which informal sector units are created and carry out their activities, including their relationships with other units inside and outside the informal sector.

3. In order to enhance their comparability and usefulness, statistics on the informal sector should, as far as possible, be compatible with other related economic and social statistics and with national accounts as regards the definitions, classifications and reference periods used.

4. Statistics on the informal sector should be compiled at regular intervals so that changes in the size and characteristics of the informal sector over time can be monitored adequately. The frequency of data collection may vary according to the different types of statistics mentioned in paragraph 2, survey methods required and their implications for the use of human and financial resources.

## **Concept**

5. (1) The informal sector may be broadly characterized as consisting of units engaged in the production of goods or services with the primary objective of generating employment and incomes to the persons concerned. These units typically operate at a low level of organization, with little or no division between labour and capital as factors of production and on a small scale. Labour relations, where they exist, are based mostly on casual employment, kinship or personal and social relations rather than contractual arrangements with formal guarantees.

(2) Production units of the informal sector have the characteristic features of household enterprises. The fixed and other assets used do not belong to the production units as such but to their owners. The units as such cannot engage in transactions or enter into contracts with other units, nor incur liabilities, on their own behalf. The owners have to raise the necessary finance at their own risk and are personally liable, without limit, for any debts or obligations incurred in the production process. Expenditure for production is often indistinguishable from household expenditure. Similarly, capital goods such as buildings or vehicles may be used indistinguishably for business and household purposes.

(3) Activities performed by production units of the informal sector are not necessarily performed with the deliberate intention of evading the payment of taxes or social security contributions, or infringing labour or other legislations or administrative provisions. Accordingly, the concept of informal sector activities should be distinguished from the concept of activities of the hidden or underground economy.

## **Operational definitions**

### *Informal sector*

6. (1) For statistical purposes, the informal sector is regarded as a group of production units which, according to the definitions and classifications provided in the United Nations System of National

Accounts (Rev.4), form part of the household sector as household enterprises or, equivalently, unincorporated enterprises owned by households as defined in paragraph 7.

(2) Within the household sector, the informal sector comprises (i) “informal own-account enterprises” as defined in paragraph 8; and (ii) the additional component consisting of “enterprises of informal employers” as defined in paragraph 9.

(3) The informal sector is defined irrespective of the kind of workplace where the productive activities are carried out, the extent of fixed capital assets used, the duration of the operation of the enterprise (perennial, seasonal or casual), and its operation as a main or secondary activity of the owner.

### ***Household enterprises***

7. According to the United Nations System of National Accounts (Rev.4), household enterprises (or, equivalently, unincorporated enterprises owned by households) are distinguished from corporations and quasi-corporations on the basis of the legal organization of the units and the type of accounts kept for them. Household enterprises are units engaged in the production of goods or services which are not constituted as separate legal entities independently of the households or household members that own them, and for which no complete sets of accounts (including balance sheets of assets and liabilities) are available which would permit a clear distinction of the production activities of the enterprises from the other activities of their owners and the identification of any flows of income and capital between the enterprises and the owners. Household enterprises include unincorporated enterprises owned and operated by individual household members or by two or more members of the same household as well as unincorporated partnerships formed by members of different households.

### ***Informal own-account enterprises***

8. (1) Informal own-account enterprises are household enterprises (in the sense of paragraph 7) owned and operated by own-account workers, either alone or in partnership with members of the same or other households, which may employ contributing family workers and employees on an occasional basis, but do not employ employees on a continuous basis and which have the characteristics described in subparagraphs 5 (1) and (2).

(2) For operational purposes, informal own-account enterprises may comprise, depending on national circumstances, either all own-account enterprises or only those which are not registered under specific forms of national legislation.

(3) Registration may refer to registration under factories or commercial acts, tax or social security laws, professional groups' regulatory acts, or similar acts, laws, or regulations established by national legislative bodies.

(4) Own-account workers, contributing family workers, employees and the employment of employees on a continuous basis are defined in accordance with the most recently adopted version of the International Classification of Status in Employment (ICSE).

### ***Enterprises of informal employers***

9. (1) Enterprises of informal employers are household enterprises (in the sense of paragraph 7) owned and operated by employers, either alone or in partnership with members of the same or other households, which employ one or more employees on a continuous basis and which have the

characteristics described in subparagraphs 5 (1) and (2).

(2) For operational purposes, enterprises of informal employers may be defined, depending on national circumstances, in terms of one or more of the following criteria:

- (i) size of the unit below a specified level of employment;
- (ii) non-registration of the enterprise or its employees.

(3) While the size criterion should preferably refer to the number of employees employed on a continuous basis, in practice, it may also be specified in terms of the total number of employees or the number of persons engaged during the reference period.

(4) The upper size limit in the definition of enterprises of informal employers may vary between countries and branches of economic activity. It may be determined on the basis of minimum size requirements as embodied in relevant national legislations, where they exist, or in terms of empirically determined norms. The choice of the upper size limit should take account of the coverage of statistical inquiries of larger units in the corresponding branches of economic activity, where they exist, in order to avoid an overlap.

(5) In the case of enterprises which carry out their activities in more than one establishment, the size criterion should, in principle, refer to each of the establishments separately rather than to the enterprise as a whole. Accordingly, an enterprise should be considered to satisfy the size criterion if none of its establishments exceeds the specified upper size limit.

(6) Registration of the enterprise may refer to registration under specific forms of national legislation as specified in subparagraph 8 (3). Employees may be considered registered if they are employed on the basis of an employment or apprenticeship contract which commits the employer to pay relevant taxes and social security contributions on behalf of the employee or which makes the employment relationship subject to standard labour legislation.

(7) Employers, employees and the employment of employees on a continuous basis are defined in accordance with the most recently adopted version of the International Classification of Status in Employment (ICSE).

10. For particular analytical purposes, more specific definitions of the informal sector may be developed at the national level by introducing further criteria on the basis of the data collected. Such definitions may vary according to the needs of different users of the statistics.

### *Population employed in the informal sector*

11. (1) The population employed in the informal sector comprises all persons who, during a given reference period, were employed (in the sense of paragraph 9 of resolution I adopted by the Thirteenth International Conference of Labour Statisticians) in at least one informal sector unit as defined in paragraphs 8 and 9, irrespective of their status in employment and whether it is their main or a secondary job.

(2) Where possible, the population employed in the informal sector should be sub-classified into two categories: persons exclusively employed in the informal sector, and persons employed both in and outside the informal sector. The latter category may be further divided into two sub-categories: persons whose main job is in the informal sector, and persons whose secondary job is in the informal sector.

(3) If the total employed population is to be classified into mutually exclusive categories of persons employed in and outside the informal sector, persons employed both in and outside the informal sector should be classified as a separate category, or criteria should be established to determine their main job (e.g. on the basis of self-assessment, time spent at work or amount of remuneration received in each job).

(4) In some countries, a significant number of children below the age specified for the measurement of the economically active population in population censuses or household surveys work in informal sector units and may represent a group of particular concern for labour legislation and educational and social policies. In such situations, every possible effort should be made in informal sector surveys to collect information on the work of all children irrespective of age, and children below the minimum age specified in population censuses or household surveys should be identified separately.

### **Treatment of particular cases**

12. (1) Different members of a household may be engaged as self-employed persons in different kinds of informal sector activities during a given reference period. In order to determine whether such activities should be regarded as separate enterprises or as parts of a single enterprise, due consideration should be given to the definitional requirements of an enterprise as specified in the International Standard Industrial Classification of All Economic Activities (ISIC, Rev.3). Where it is difficult in practice to apply these requirements, different activities carried out by different household members should be treated as separate enterprises if they are perceived as such by the household members themselves.

(2) A household member or group of household members may be engaged as self-employed persons in different kinds of informal sector activities during a given reference period. For practical purposes, all activities carried out at a time by the same household member or group of household members should be treated as parts of a single enterprise rather than as separate enterprises.

13. In the case of informal sector units which are engaged in different kinds of production activities during a given reference period, efforts should be made to collect as much separate information as possible in respect of each activity, even when the enterprises concerned need not or cannot be partitioned into establishments as defined by the International Standard Industrial Classification of All Economic Activities (ISIC, Rev.3). In particular, such separate information should be collected in respect of all activities of the enterprise which are horizontally integrated (i.e. producing different kinds of goods or services for sale or exchange and carried out in parallel with each other), irrespective of their share in the total value added of the enterprise.

14. Household enterprises, which are exclusively engaged in non-market production, i.e. the production of goods or services for own final consumption or own fixed capital formation as defined by the United Nations System of National Accounts (Rev.4), should be excluded from the scope of the informal sector for the purpose of statistics of employment in the informal sector. Depending on national

circumstances, an exception may be made in respect of households employing domestic workers as referred to in paragraph 19.

15. With account being taken of paragraph 14, the scope of the informal sector should include household enterprises located in urban areas as well as household enterprises located in rural areas. However, countries which start to conduct surveys of the informal sector may initially confine data collection to urban areas. Depending upon the availability of resources and appropriate sampling frames, the coverage of the surveys should gradually be extended to cover the whole national territory.

16. For practical reasons, the scope of the informal sector may be limited to household enterprises engaged in non-agricultural activities. With account being taken of paragraph 14, all non-agricultural activities should be included in the scope of the informal sector, irrespective of whether the household enterprises carry them out as main or secondary activities. In particular, the informal sector should include secondary non-agricultural activities of household enterprises in the agricultural sector if they fulfil the requirements of paragraphs 8 or 9.

17. Units engaged in professional or technical activities carried out by self-employed persons such as doctors, lawyers, accountants, architects or engineers, should be included in the informal sector if they fulfil the requirements of paragraphs 8 or 9.

18. (1) Outworkers are persons who agree to work for a particular enterprise, or to supply a certain quantity of goods or services to a particular enterprise, by prior arrangement or contract with that enterprise, but whose place of work is not within any of the establishments which make up that enterprise.

(2) In order to facilitate data collection, all outworkers should be potentially included in the scope of informal sector surveys, irrespective of whether they constitute production units on their own (self-employed outworkers) or form part of the enterprise which employs them (employee outworkers). On the basis of the information collected, self-employed and employee outworkers should be distinguished from each other by using the criteria recommended in the United Nations System of National Accounts (Rev.4). Outworkers should be included in the informal sector, or in the population employed in the informal sector, if the production units which they constitute as self-employed persons or for which they work as employees fulfil the requirements of paragraphs 8 or 9.

(3) In situations where the number of outworkers is significant or where outworkers represent a group of particular concern for data users, self-employed outworkers should be identified as separate sub-categories of informal own-account enterprises and enterprises of informal employers or of the owners of such enterprises.

(4) For purposes of distinction between employment on a continuous basis and employment on an occasional basis, and in application of the definition of registered employees according to paragraph 9(6), employee outworkers should be treated in the same way as other employees. Where relevant, employee outworkers may be identified as a separate sub-category of informal sector employees.

19. Domestic workers are persons exclusively engaged by households to render domestic services for payment in cash or in kind. Domestic workers should be included in or excluded from the informal sector depending upon national circumstances and the intended uses of the statistics. In either case, domestic workers should be identified as a separate sub-category in order to enhance international comparability of the statistics.

20. Activities excluded from the scope of the informal sector, such as domestic services, non-market production and agricultural activities, may be identified as separate categories outside the distinction between the informal and formal sectors.

### **Data collection programme and methods**

21. (1) The collection of data on the informal sector should be integrated into the regular national statistical system. The data collection programme should provide both for (a) the current monitoring, if possible once a year, of the evolution of employment in the informal sector and (b) the in-depth examination, if possible every five years, of informal sector units with respect to their numbers and characteristics, in particular, their organisation and functioning, their production activities and levels of income generation, as well as their constraints and potentials.

(2) The data collection programme with regard to the broad objective (a) should preferably be based on a household survey approach, with households as reporting units and individual household members as observation units. With regard to the broad objective (b) the data collection programme should preferably be based on an establishment survey approach or a mixed household and enterprise survey approach, or a combination of both, with the informal sector units themselves and their owners as observation and reporting units.

(3) Other measurement methods can also be considered, such as methods of indirect macro-economic estimation or the comparative analysis of data from different sources.

### ***Household surveys for monitoring informal sector employment .***

22. (1) Existing surveys of the economically active population and similar household surveys provide a useful and economical means of collecting data on employment in the informal sector in terms of the number and characteristics of the persons concerned and the conditions of their employment and work.

(2) For this purpose, questions pertaining to the definition of the informal sector should be incorporated into the survey questionnaire and asked in respect of all persons employed during the reference period of the survey, irrespective of their status in employment.

(3) Special care should be taken in the survey design and operations to ensure comprehensive coverage of the population employed in the informal sector as defined in paragraph 11(1) above. In particular, special efforts should be made in the sample design to ensure appropriate representativeness of areas where persons engaged in informal sector activities tend to live. It is also important to collect data on secondary activities of household members in the same detail as on the main activity, including the criteria used for defining the informal sector. Special probings may be needed with respect to informal sector activities that would otherwise go unreported, such as unpaid work in family enterprises or activities carried out by women on their own account at or from home. To obtain comprehensive data on children working in the informal sector, it may also be necessary to lower the minimum age normally used in the survey for measuring characteristics of the economically active population.

(4) The data collected should be analyzed in conjunction with other relevant information obtained from the same survey. In particular, a mutually exclusive breakdown may be made of the economically active population by employment in and outside the informal sector and unemployment. Depending on national circumstances and data needs, information on various forms of atypical or precarious employment outside the informal sector may be obtained along with data on the different forms of employment in the informal sector. For this purpose, all employed persons, whether working in the

informal sector or outside, should be classified by status in employment at an appropriate level of disaggregation.

(5) In order to monitor trends in informal sector employment over time, questions on employment in the informal sector should be included, if possible, once a year in existing infra-annual surveys of the economically active population or similar household surveys. Surveys conducted at less frequent intervals (e.g. annually or quinquennially) should include questions on employment in the informal sector in every survey round, if possible.

### *Establishment surveys of informal sector units*

23. It may be possible to collect data on informal sector units through various kinds of establishment surveys depending on the measurement objectives, the intended uses of the data, the calendar and structure of the national statistical system, and the availability of sampling frames and resources.

24. (1) In conjunction with an establishment or economic census or using the latest economic census as an area sampling frame, special surveys of informal establishments may be conducted to collect specific data on employment, production, income generation and other characteristics of informal sector units and their owners.

(2) For this purpose, the economic census should, in principle, contain the required items for identifying the informal sector units according to the definition set forth in paragraph 6. However, as the observation unit in economic censuses is typically the establishment, the reconstitution of informal sector enterprises on the basis of the available information may not be easy to achieve in practice.

(3) Unless particular measures are taken, the coverage of such surveys of informal sector establishments is limited by the scope of the economic census on which they are based. In particular, coverage typically excludes informal sector units which do not operate in fixed premises designated for the purpose of carrying out production activities or which are not identifiable as such from the outside during the listing operation.

(4) While it is generally preferable to cover all types of informal sector activities through a single survey, branch-specific surveys or a series of such surveys may be considered if the measurement objectives are limited to particular kinds of informal sector activities, or if the scale of a single survey is considered too large to be manageable in practice.

(5) In a branch-specific survey, the listing operation should be such as to identify all and only those informal sector units that fall within the scope of the survey. Rules need to be established for informal sector units also engaged in other activities, particularly if some of these activities fall outside the scope of the survey.

(6) When the intention is to cover all types of informal sector activities through a series of branch-specific surveys rather than a single survey, the data collection programme should be designed to ensure a comprehensive coverage of informal sector units without omission or duplication between surveys. The timing of the surveys and the methodology to obtain overall aggregates should be carefully planned.

### *Mixed household and enterprise surveys*

25. (1) The basic principle of mixed household and enterprise surveys is to construct a sampling frame of informal sector enterprises through a household survey operation, prior to the informal sector survey itself. The household survey component, if appropriately designed, makes it possible to identify informal sector enterprises rather than establishments, and to cover virtually all informal sector units irrespective of size, kind of activity, and type of workplace.

(2) Mixed household and enterprise surveys are based on area sampling and conducted in two phases: (i) informal sector enterprises and their working owners are identified during the first phase through a household listing or interviewing operation (household survey component); (ii) all or a sample of the business owners thus identified are interviewed during the second phase to obtain information on the characteristics of their enterprises (enterprise survey component).

26. (1) The time interval between the two phases should be kept as short as possible, to minimise loss rates of units.

(2) Informal sector enterprises should be identified on the basis of own-account workers and employers who are members of the sample households. Identification based on employees of informal sector units should be avoided.

(3) In order to avoid omissions, the household survey component must be targeted at all employers and own-account workers in the sample who are potentially included in the informal sector. The informal sector units are then subsequently identified on the basis of the information obtained from the enterprise survey component.

(4) While information during the first phase of the survey may often have to be obtained from proxy respondents, it is highly desirable in the second phase that the business owners themselves are interviewed. Where relevant, these interviews should preferably be conducted at the place of work rather than the place of residence of the household member.

27. (1) Since informal sector enterprises may be owned and operated by members of different households in business partnership, and such partnerships may differ significantly from other units in their characteristics, an appropriate procedure should be adopted, at the selection stage of the informal sector units, or, preferably, at the stage of assigning the sampling weights, to ensure that the resulting statistics are representative of the total survey universe. The sampling weights should be determined with great care.

(2) For a comprehensive coverage, all informal sector enterprises and their operators in the sample areas or in the sample households should be identified in the first phase of the survey. In particular, businesses operated as secondary activities of household members should be identified on the same basis as businesses operated as main activities. Special probing may also be necessary to identify women and children engaged in informal sector activities on their own account.

28. If information on seasonal variations of informal sector activities is to be obtained and annual estimates of the main aggregates are to be produced, data collection should be spread over a period of a whole year by dividing the sample into independent sub-samples for different quarters or months of the year.

29. The nature and efficiency of the survey design of a mixed household and enterprise survey will depend on whether the survey is conceived as (i) an independent survey, (ii) an attachment to an existing household survey, or (iii) part of an integrated survey designed to meet several objectives.

30. (1) In an independent survey, the sampling scheme may be designed to satisfy the specific requirements of informal sector measurement and to ensure an adequate representation of different types of informal sector activities or units in the sample.

(2) A sufficiently stratified sample at the first stage of selection helps avoid the need for differential last stage sampling rates for different categories of informal sector units and facilitates survey implementation in the field. Using the latest population census or other available information, an area sampling frame for the household survey component should be constructed so as to consist of area units of the desired size, stratified as far as possible according to the concentration of households that operate informal sector units. Provided data are available from the population census and retrievable at a sufficient level of geographical detail, the stratification of area units may be based on the concentration of own-account workers and employers by broad industry group, and, if possible, by type of location of the workplace and, for employers, by number of their employees. Where such data are not available, provision should be made to obtain them from the next population census.

(3) The household survey component of an independent mixed survey may be restricted to a household listing operation in the selected area units, in which information is obtained on the composition of the household and, in respect of each household member of working age, whether the person operated, as main or secondary activity, any informal sector business during a specified reference period. Basic information on the type of workplace, its location, branch of economic activity, and, if possible, number of employees should also be obtained.

31. (1) If the enterprise survey component of a mixed survey is conceived as an attachment to an existing household survey (e.g. a labour force survey or a household income and expenditure survey) efforts should be made to make up for the limitations resulting from the design and selection of the base survey sample.

(2) The effective sample size of the enterprise survey component may be increased by selecting the sample of informal sector units on the basis of all households identified during the listing operation of the base survey rather than only those selected for the base survey sample. Alternative procedures would be to add, if resources are available, appropriately chosen supplementary areas to the base survey sample, or, if the base survey is of a continuing nature, to cumulate the sub-samples of informal sector units over several rounds.

32. In developing integrated surveys for the collection of data on the informal sector and other topics (e.g. labour force, household economic activities), the requirements of informal sector measurement can be incorporated, to a greater or lesser extent, into the overall design of the survey, through appropriate methods of sample allocation and selection. The major requirement of the informal sector component is adequate representation of the different types of informal sector activities and units in the sample.

### **Items of data collection**

33. (1) The type of data to be collected on the informal sector depends largely upon the specific circumstances in each country, methods of data collection, the intended uses of the statistics and the practical feasibility of data collection. For determination of the items of data collection, the main users of the statistics should be consulted and the results of previous surveys analyzed or pilot surveys conducted.

(2) In order to enhance the usefulness of informal sector statistics for joint analysis with other related economic and social statistics and for the purposes of international comparison, the definitions

and classifications of the items of data collected should, as far as possible, be compatible with those used in other national surveys or censuses and correspond to the most recently adopted versions of relevant international recommendations and standard classifications.

34. The statistics obtained should include, as a minimum, the number of persons engaged in informal sector units by status in employment and by kind of economic activity and, if possible, the number of informal sector enterprises by kind of economic activity and by type (i.e. informal own-account enterprises, enterprises of informal employers).

35. (1) In addition, data may be collected in more or less detail and with appropriate frequencies on any one or more of the following topics:

(i) *Employment and working conditions*: number of persons engaged in informal sector units during the reference period by sex, age, migration characteristics, school attendance, educational attainment, kind of vocational training received, occupation, time spent at work and, where possible, other jobs held in or outside the informal sector taking account of the categories and subcategories mentioned in paragraph 11(2); number of employees by nature of employment (continuous, casual; registered, not registered); compensation of employees and its components (wages and salaries in cash or in kind, employers' social contributions), frequency and mode of remuneration, entitlement to paid annual or sick leave, etc.

(ii) *Production, income generation and fixed capital*: frequency of operation (perennial, seasonal, casual); duration of operation during the reference period; quantity and value of outputs produced during the reference period; total amount of sales; intermediate consumption; taxes paid on production and subsidies received, if any; property income received and property charges payable in connection with business activities; characteristics of loans taken for business activities; fixed assets owned by the units; fixed capital formation during the reference period; etc.

(iii) *Conditions of business operation*: legal organization of the units; type of accounts kept; type of ownership (individual ownership, household ownership, business partnership with members of other households); number of business partners from other households, if any; location (urban versus rural areas); type of workplace: workshop, shop, etc., fixed market or street stall, home of the enterprise owner, no fixed place (e.g. homes of clients, construction sites, mobile); type and number of customers, or proportion of output sold to different types of customers; extent and terms of work performed for other enterprises under subcontracting arrangements; sources of capital for the acquisition of fixed assets; origin of the main goods used for further processing or resale (importation, informal sector, other); type of registration or licensing of units; availability of public utilities at the place of work; participation in informal sector support programmes and kind of assistance received, if any; membership of associations or cooperatives of informal

sector producers; problems faced in the creation of enterprises and constraints on their operation or expansion; year of creation and evolution of enterprises; etc.

(iv) *Enterprise owners*: sex; age; marital status; place or country of origin; period of residence in the present area; previous place of residence, if any; educational attainment; acquisition of skills needed to conduct the business (formal versus informal kinds of training); present occupation; time spent at work in the business during the reference period; engagement in other economic activities; characteristics of other economic activities, if any, and main source of income of enterprise owners; reasons for working in the informal sector; characteristics of previous employment in or outside the informal sector, if any; plans for the future regarding business development or alternative employment;

(v) *Households of the enterprise owners*: other household members by sex, age, marital status, relationship to the reference person and activity status; employment characteristics of other household members employed in or outside the informal sector; amount and sources of income of the households; etc.

(2) For the purposes of national accounting, the collection of data on the production and incomes generated by informal sector units should aim at providing the elements needed for the estimation of gross output, value added and mixed income (operating surplus) as defined in the United Nations System of National Accounts (Rev.4).

(3) Since production activities of informal sector units often overlap with consumption activities of the households of the enterprise owners, efforts should be made in the collection of data on intermediate consumption, property charges and fixed assets to separate usage for business purposes from usage for household consumption. If a clear distinction is not possible, the expenditures concerned should at least be allocated approximately in proportion to the use for business purposes.

(4) In the case of informal sector units engaged in several different kinds of production activities, inputs into production in the form of labour, capital, goods or services, which cannot be clearly allocated to a specific kind of activity, should be distributed in an appropriate way over all activities for which they are used.

(5) The collection of data on characteristics of the households of the enterprise owners enables informal sector activities to be analyzed in the context of households as a whole. Such analyses may include studies of the role of other household members in providing additional income to households and the impact of the household situation on the activities of women in the informal sector.

## **Sub-classifications**

36. (1) In order to provide information on the composition of the informal sector and to identify more homogeneous groups for analytical purposes, as targets for social and economic policies and informal sector support programmes, and as a basis for comparisons of statistics over time and between countries, informal sector units should be sub-classified by various characteristics on the basis of the information collected.

(2) Enterprises of informal employers, when included in statistics of the informal sector, should be identified separately from informal own-account enterprises.

(3) Useful sub-classifications of informal own-account enterprises and enterprises of informal employers, both for the analysis of informal sector statistics at the national level and international comparison, include distinctions according to the following characteristics:

- (i) kind of economic activity;
- (ii) type of workplace: home of enterprise owner, other fixed premises, no fixed place;
- (iii) location: urban areas, rural areas;
- (iv) number of persons engaged;
- (v) type of ownership: individual ownership, household ownership, business partnership with members of other households;
- (vi) relation with other enterprises: independent producers, producers working under subcontracting arrangements for other enterprises.

(4) In addition, it may be useful to sub-classify informal own-account enterprises according to the composition of their workforce, distinguishing one person-units from two-and-more person units and, among the latter, users of occasional hired labour from non-users of such labour.

(5) Depending on the needs of data users and the size of samples, two or more of these characteristics may be combined into more complex classification schemes.

(6) For the purpose of international comparisons, the classification by kind of economic activity should adhere to or be convertible into the International Standard Industrial Classification of All Economic Activities (ISIC, Rev.3). For international reporting of the statistics, data should be provided at the level of ISIC tabulation categories, except for category “Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods” which should be subdivided appropriately. For other purposes, data classified according to kind of economic activity may be required in as much detail as is supported by the size of the samples. To reflect the diversity of informal sector activities, it may be necessary to develop appropriate further sub-divisions of some of the groups which the activity classification commonly used provides at its most detailed level. To ensure the comparability of informal sector statistics with other statistics, any such sub-divisions should be so defined that the data can be aggregated to higher level categories of the classification without cutting across their boundaries. Units engaged in more than one activity during the reference period should be classified according to their main activity which may be defined as that with the largest value added.

(7) The size intervals used for the sub-classification by number of persons engaged should be consistent with the standard size intervals recommended for the 1983 World Programme of Industrial Statistics, i.e. 1-4, 5-9, 10-19, etc. persons engaged. Depending upon the intended uses of the statistics, these intervals may be further subdivided.

## **Further action**

37. (1) In view of the particular characteristics of informal sector units and their owners, special efforts should be made in the design and operations of informal sector surveys to increase response rates and obtain the required information as accurately as possible.

(2) Countries collecting data on the informal sector should share their experiences with the International Labour Office.

38. (1) The International Labour Office should follow the developments in designing and implementing informal sector surveys, as well as surveys of household economic activities, disseminate and evaluate information about the lessons being learned from this experience for discussion at the next International Conference of Labour Statisticians, prepare a manual to provide technical guidelines on the contents of this resolution which reflects such improvements in concepts and techniques and, if necessary, arrange for a review of this resolution by a future International Conference of Labour Statisticians.

(2) The International Labour Office should co-operate, as far as possible, with countries in the development of statistics of employment in the informal sector in providing technical assistance and training.

# ***Conducting economic surveys - the FIRST methodology***

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## **I. Introduction**

1. The economies of many developing countries, as well as those in transition, such as China and the former Soviet Republics, have undergone rapid changes over the recent past. For several decades they had been characterized by an overwhelming presence of state enterprises, regular information flows for which are organized through administrative channels. However, the economic liberalization policies introduced during the past decade in these countries have drastically changed this situation and the fast economic growth over this period in many instances has mostly been generated by an enormous expansion of the private sector.

2. From a statistical perspective, this development has major consequences, as the main statistical instruments used for data collection need to be adjusted. Statistics derived from performance reporting through administrative channels, which is common for public sector enterprises, cannot be used for this part of the economy. A purely statistical approach needs to be developed instead. This is not a simple task and it is, moreover, rather costly.

3. An additional problem is that an important segment of the new enterprises, namely those (small) units that constitute the “informal” or “unorganized” segment of the private sector cannot be reached easily. The simplest low-cost solutions to data collection, such as the enumeration of registered companies on the basis of a list frame (often referred to as a business directory), cannot be extended to this part of the enterprise universe. The terms “unorganized” and “informal” are used here in a general way. Various definitions of the two concepts exist, but there is no consensus about the most appropriate ones.<sup>1</sup>

4. A methodology for a survey programme that efficiently captures information from the entire size-range of enterprises operating within an industry has been described in “Strategies for Measuring Industrial Structure and Growth”<sup>2</sup>, a recent publication of the United Nations Statistics Division. A survey programme for a typical country, using the most important characteristics of this methodology is described further on in this paper.

5. Before describing this methodology, it is however necessary to look at a survey’s coverage of small size units, that is, below its lower cut-off point. The 1993 SNA defines an economic unit as one which produces goods or services for sale or exchange. This definition should be used, where possible, to determine the lower cut-off point for the survey. In this regard, it is proposed here to also cover in the survey units without paid employment. The alternative, often used in economic surveys, is to limit surveys to establishments with paid employees and strip out the remaining, own-account, units and define them as the “household” sector with its own, generally incompatible data collection system. Such an approach creates unnecessary complications.

6. The following sections start with an outline of the FIRST methodology. This is followed by a discussion of some sampling considerations. Next, some important aspects of the data contents of the survey are given. Then, the questionnaire contents are described, while in the final section a simple questionnaire is presented.

## II. The FIRST methodology

7. In order to overcome the shortcomings of the various survey techniques, and taking into account conditions in the field, a completely new approach has been developed for establishment surveys. The Fully Integrated Rational Survey Technique (FIRST) methodology, which is described in this section, has been designed to work with the absolute minimum of information required for statistical survey work. At the starting point, some census enumeration (a population census will generally be sufficient) is required to establish the complete statistical universe for sample construction and sample selection. In addition, good supporting documentation on sample areas/enumeration blocks used for the benchmark enumeration is also needed. However, beyond these two basic requirements, it is conditions in the field that guide the selection of the most appropriate design for any particular FIRST survey.

8. The FIRST methodology is integrated both in terms of its scope across various economic activities and its coverage across size-classes within those activities. The FIRST methodology divides the statistical universe into two parts, namely a list frame of the large-scale sub-sector which is clearly defined and represented by relatively few enterprises, and an area frame of the medium and small-scale sub-sector that covers all other economic units and is not so readily defined.

9. In FIRST, the largest establishments/enterprises are covered on the basis of a business register/directory, preferably by mailed questionnaire with follow-up visits where required. The definition of large-scale used here is based on practical considerations and will probably differ from country to country. The ease of maintaining the directory forms the single most important criterion for the definition of the large-scale sub-sector. The directory is made up of the following groups which are easily identifiable:

- (a) public limited companies (i.e. companies listed on a stock exchange);
- (b) private limited companies (i.e. companies registered with a government agency such as the Justice Department, a Corporate Law Authority or the like);
- (c) government-sponsored enterprises (public sector units which may also have been included under (a) or (b) above).

The first two groups are mutually exclusive but the third group, government-sponsored enterprises, may overlap with either of the other two. Therefore, care should be taken to prevent double entries.

10. It may be observed that these groups can easily be identified. By law, each of these units must maintain proper business accounts and have a fixed address. This makes it easy to reach them with mailed questionnaires and to organize targeted follow-up visits.

11. The three groups listed above make up the directory of “large-scale” units. All units *not* covered within these groups fall within the part of the universe described as the “medium- and small-scale” sub-sector. Data collection for this sub-sector will be done on the basis of area sampling. It may be noted that the number of enterprises in the large-scale sub-sector is relatively small (in most countries not more than a few thousand), but that their economic importance is very large. In many countries these units represent more than three quarters of the output and value added of the industrial sector<sup>3</sup>.

12. It may be noted that the “small-scale” sub-sector, although discussed, is not defined here. It may include any or all economic units below a certain cut-off point, including those in the “informal” or “unorganized” sector, or only the latter.

13. For most economic activities outside agriculture<sup>4</sup> the FIRST methodology of integrated surveys for the large-scale sub-sector and medium- and small-scale sub-sectors will capture complete, consistent economic data. The major exceptions would be units engaged in mining and quarrying, and construction.

14. This limitation is not a deficiency in the FIRST methodology as such, but has to do with the nature of the sample frame. The frame should be a proper reflection of the distribution of the units in the economy. For many small-scale economic activities, the distribution is closely linked to population concentrations. Some clear exceptions are agriculture, which is mostly concentrated in rural areas by default; mining, which has to be undertaken in areas where the minerals are found, and construction. Major new construction developments take place in “virgin” areas, that is, areas with a very low population at the time construction starts. However, for most other activities, such as trade and transport, it can generally be assumed that the distribution of these activities is closely related to the distribution of the units in the survey frame (population or establishments, depending on the source). They can therefore be covered in the same survey.

15. If it is decided that non-establishment kind-of-activity units should also be covered in the survey, some additional questions need to be asked of households at the listing stage, to establish whether any of their members is engaged in such activities. If, for example, mobile trade and transport units are included, then a household member operating a taxi on own account or selling various goods along the street should be listed and they should be interviewed at the home address.

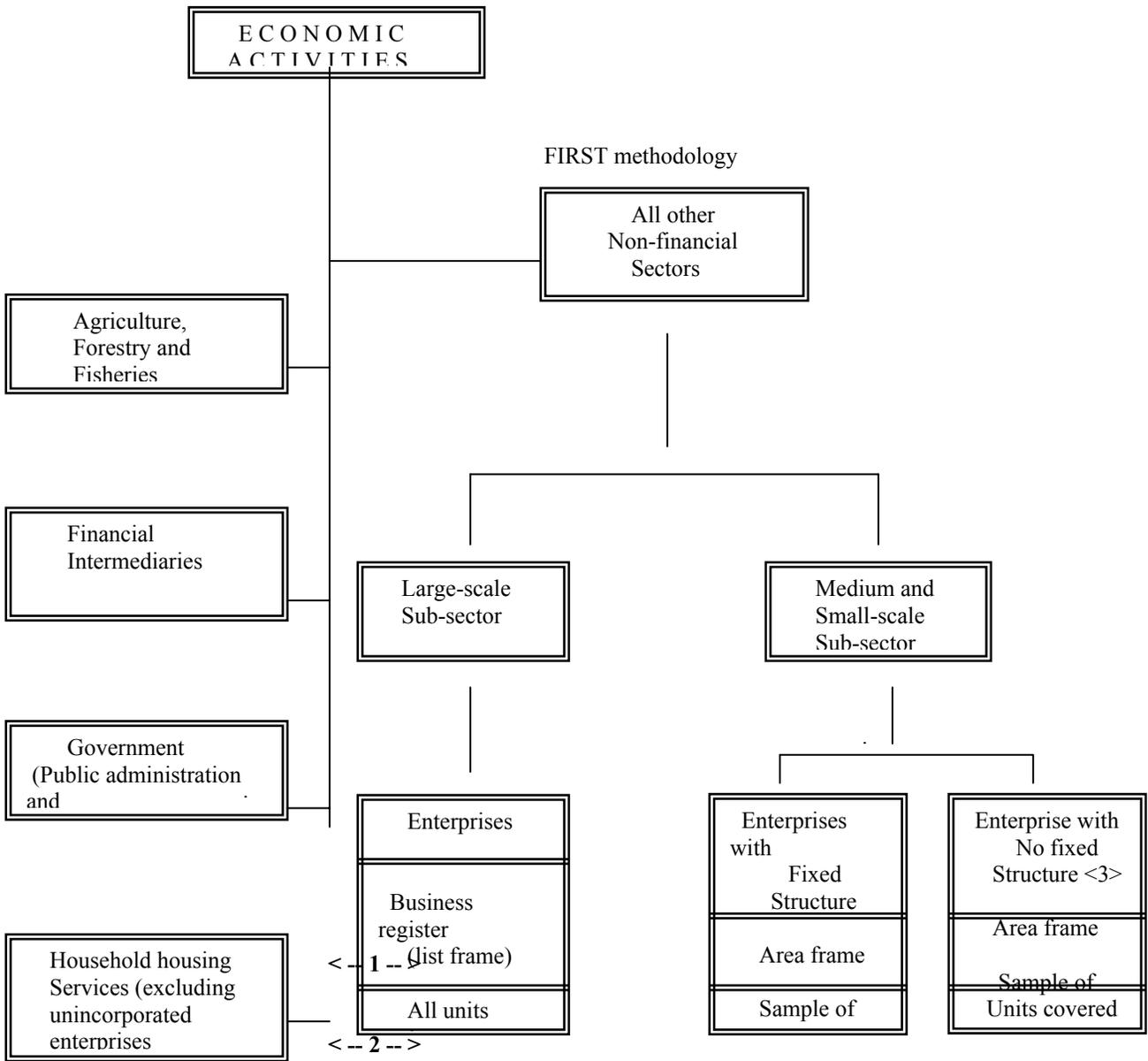
16. The place of the FIRST methodology in the collection of data for economic statistics in a broad sense is presented schematically in Figure 1.

17. All establishments in the selected areas that are within the scope of the survey should be covered. This has a major benefit (aside from reducing survey costs) in ensuring a non-overlapping grouping of establishments by kind of economic activity. Each establishment is classified in one and only one sector and the questionnaire design should be such that it is possible to re-classify an establishment afterwards if the data show an inappropriate sector assignment. In most surveys such a unique assignment is not easy as a number of sub-sectors, such as bakeries, tailors, shoemakers, etc, may be retailers, repairers or manufacturers according to the relative contribution of the various activities to total revenue. Evidence from different surveys in some countries suggests that such establishments may have been enumerated as manufacturers in one and as retailers or repair-shops in another survey, thereby inflating the level of economic activity in the country as well as incorrectly representing the structure of industrial activity. It is the potential for distortion of survey results presented by such inconsistencies in the assignment of an establishment to an economic activity which constitutes the most important reason for extending the scope of the survey exercise to include to the greatest possible extent all economic sectors.

18. Finally, a check needs to be made for units covered in the area sample on possible links with larger enterprises enumerated through the directory system. Those establishments whose activities are consolidated in a parent company's accounts have to be deleted from the area sample. This refers, for example, to warehouses or depots operated by manufacturing companies in different parts of the country or to retail outlets forming part of a chain. However, units with independent accounts that are controlled

by larger enterprises but whose links are through management and dividend/profit payments only, do form part of the sample universe.

**Figure 1. FIRST's place in data collection**



1. All units on the business register are excluded from the area frame.

2. All units in the sample that are part of a large-scale sub-sector unit and included therein are excluded from the sample.

3. FIRST methodology is applicable on the assumption that a distribution of units with no fixed structure is similar to that of enterprises with a fixed structure.

19. The same sample frame can, of course, be used to organize more frequent, smaller, surveys or

specific studies. Keeping these within the same frame, and using standard sampling procedures, allows a straight comparison between different survey results, something which is not possible when different procedures, methodologies and sample frames are used for individual surveys.

20. As mentioned earlier, a household survey can register the different sources of income of the members of households enumerated, both by amount and type. However, there is one essential difference between the household survey approach and FIRST: the sample design of a household survey is based on population size, while the FIRST sample design is weighted according to the concentration of economic activities rather than population size. Depending on the sample frame, economic activity may be defined in terms of establishment-type information, when using an establishment census or the like, or in terms of the characteristics of the economically active population, when a population census forms the basis. It is probably a fair assumption that in most countries kind-of-activity units show a distribution more in line with economic activity than with population. On this assumption, the FIRST sample can also be used to cover mobile units.

### **III. Sampling considerations**

21. Within an administrative unit of suitable size, which may be the whole country or a province for a small country, but could be an administrative unit at a lower level in the case of larger countries, a two-stage sampling procedure, whereby enumeration areas are selected as primary sampling units (psus) and establishments within those psus as secondary sampling units (ssus), normally provides an efficient model. If sufficient information is available (generally when an economic census forms the sample frame), a stratification of the areas by intensity of activity may give additional benefits. In those circumstances, all enumeration areas with a high concentration of activities would be one self-representing stratum (all enumeration areas are enumerated), with the other areas forming the second stratum. Consequently, the first stage raising factor (FRF) becomes 1 by definition.

22. In cases where the psus are not taken from the whole country but from a lower level administrative unit (e.g. a province), the results obtained for each unit need to be aggregated or weighted to arrive at country totals and averages.

23. Self-representing psus are those that exceed a minimum number of establishments or employment size units engaged in economic sectors falling within the scope of the survey. The minimum number can be determined separately by geographical area and urban/rural areas on an empirical basis.

24. The number of establishments in the self-representing psus is then deducted from the total number of establishments in the urban and rural areas of all geographical areas. The residual represents the sampling universe for the second part of the sample, from which the enumeration areas are sampled by random selection proportional to size by using as the measure of size the number of establishments in each area, their employment in each area or, when a population census forms the basis, the number of workers living in an area.

25. The establishments engaged in activities within the scope of FIRST then form the secondary sampling units (ssus) of the survey. For most economic sectors, all establishments found in the selected areas will be enumerated, but it is not strictly necessary. For more homogeneous activities (e.g. small retail shops) it may be adequate to gather information on a smaller number only, especially where many are expected.

26. On the basis of information by industry in the database an estimate can be prepared for the expected number of establishments (ssus) covered in the survey. Depending on the number of units expected and the variability in the kind of activity within each sector, sampling fractions for the different

sectors can be established. Information on the expected number of establishments to be covered can then be used to divide the workload among the available enumeration staff.

27. The information on the distribution of these activities derived from an initial round of FIRST can also be used to determine whether it is feasible for sampling purposes to sub-divide the sectors into sub-sectors which may be sampled in different fractions within the selected enumeration areas. However, lack of information in this respect often precludes the possibility of using this procedure (and therefore of reducing the sample size) for the initial round of a FIRST survey.

28. As regards the enumeration itself, for practical purposes it may be organized by activity, so that a particular enumerator visits units conducting the same activities and thereby gains proficiency in working with these specific industries, thus improving the quality and consistency of the data.

29. Any successful survey requires a clear and unambiguous definition of the statistical universe, without gaps and overlaps in its various segments. Integrated surveys such as those carried out under the Fully Integrated Rational Survey Technique (FIRST) are considered useful in this regard. The FIRST methodology offers the additional advantage that it provides a means by which comprehensive information can be collected in a short time-span with relatively modest means. The FIRST methodology, if properly implemented, obviates the need for trade-offs between survey contents and the timeliness of results that often play a large role in survey design considerations.

30. In the cycle of inquiries, emphasis has been given in the FIRST methodology to surveys of an annual frequency. These annual surveys are generally based on some form of census enumeration. This may have been specifically designed for use in economic surveys such as an economic census or in surveys of a more general nature, such as a population census. Such census enumeration may be repeated at regular intervals (for instance, every ten years), or may be one-offs. In the latter case, some procedures are generally established to update the sample frame on the basis of the data obtained from the annual survey so that the census information retains as much current value as possible. In addition, statistical information on economic activities is also normally collected for shorter periods, such as monthly and quarterly production data. Most of these surveys will be restricted to the (large-scale) corporate sector, as they require low-cost, fast enumeration methods, such as mailed or telephone inquiries. The analytical value of these frequent surveys can increase substantially if they are also based on the FIRST methodology. The major advantage of such an integration would be the elimination of sampling errors in the comparison of results from the different surveys.

31. In countries where an economic/establishment census has been conducted, this can normally be used as a sample frame, although a special survey of this kind is not really needed because of the close proximity of the number of economically active persons in various sectors and the number of medium- and small-scale enterprises, especially when some stratification is used (urban/rural; industrial or commercial areas/other areas). Thus, a population census may also be used as the frame, whereby the sample selection can take place on the basis of the number of economically active persons (outside agriculture) or households. This then replaces the number of persons employed or number of enterprises in an area as a measure of size that is commonly used when an economic census forms the sample frame. Stratification should normally be used by urban and rural areas and, where possible, by density of industrial and commercial activities.

32. While the FIRST strata can be determined directly from an economic census, it also can be done on a "local knowledge" basis. Areas comprising industrial estates or other concentrations of industry as well as commercial areas are easily identified and known to the local population.

33. FIRST is an establishment-type survey in principle, but uses for the medium- and small-scale

sector, area sampling techniques similar to those of household surveys. At the initial (listing) stage, each establishment in the selected areas is visited to determine whether economic activity is taking place there. If so, it is classified by kind of activity and, in the second stage, enumeration of the actual activity will take place.

34. If it is decided that (mobile) enterprises with no fixed structures/location should also be covered in the survey, some additional questions need to be asked of households at the listing stage, to establish whether any of their members is engaged in such activities. If, for example, mobile trade and transport units are included, then a household member operating a taxi on own account or selling various goods on the street should be listed and should be interviewed at the home address.

35. In sample surveys a major cost component is generally transport to and from sampled enumeration areas. The listing stage of the sampled enumeration area involves the same amount of work whether one or more sectors are included within the survey. Thus, extension of the survey work to more sectors generally entails only the extra costs for the time required to cover the larger number of establishments selected for the survey. This is a relatively minor cost component and if surveys were planned for various activities at some point of time, their inclusion in FIRST would yield substantial savings in time, manpower and finances.

36. As mentioned above, the scope of FIRST is not universal, but within the sectors included, all establishments, both in terms of size as well as location, are covered. An important part of economic activities that can only be covered by FIRST using some relatively safe, but disputable assumptions, is the mobile segment. These units are difficult to locate, while the intensity and regularity of their activity may vary greatly over time. For instance, enormous volumes may be traded on weekend markets, often by Government employees to supplement their incomes.

37. A household survey can register the different sources of income of the members of the households enumerated, both by amount and type. However, there is one essential difference between the household survey approach and FIRST: the sample design of a household survey is based on population size, while the FIRST sample design is weighted according to the concentration of economic activities rather than population size. Depending on the sample frame, economic activity may be defined in terms of establishment-type information when using an establishment census or the like, or in terms of the characteristics of the economically active population when a population census forms the basis. It is probably a fair assumption that in most countries mobile units show a distribution more in line with economic activity than with population. On this assumption, the FIRST sample can be used also to cover mobile units in a way similar to household surveys.

#### **IV. Data content of the survey**

38. The purpose of this article is to propose an affordable methodology for the measurement of the industrial structure of a typical country, with particular attention to the informal sector. The main design consideration is that it should yield accurate and timely information.

39. The items of information to be sought through the statistical activity are not specified here. In principle, all data required for specific industry-related studies<sup>5</sup> as well as those needed for the compilation of the national accounts<sup>6</sup>, should be collected where possible. Sometimes the methodology that is used determines the data items that can be collected, but limitations in this respect are often caused by more practical considerations relating to data availability. For instance, household/small manufacturing establishments in many countries do not maintain proper business accounts and it is therefore very difficult, using the standard line of questioning used for large units, to obtain detailed information on cost structures, levels of output and balance sheet items from this class of units.

40. The explicit reference to the collection of data required for the compilation of the national accounts in the previous paragraph is made to indicate that there are specific data needs for national accounting that have generally not been met in the industrial statistics programme. However, it is also recognized that there are specific data needs for industrial planning purposes which require either more detailed information or the presentation of data substantially different from those in the national accounts. Important measures used in inter-industry analysis are technical input-output coefficients and companion census value added<sup>7</sup>, that is, value added net of the goods producing sectors only. These measures present a clear picture of the technical details of the production process involved in the industry, unlike the national accounts concept of value added and input structures which may present a “distorted” picture of the industry as such. At the same time, the national accounts concept involves certain distinctions that may be very important for broader and financial analysis. For example, national accounts value added will be lower for the same establishment if more expense is incurred on leasing of equipment, advertising and sales promotion, but census value added is not influenced by such expenditure.

## V. Questionnaire contents

41. There are a number of important aspects in the survey that have to be taken into account when drawing up questionnaires. First of all, the questionnaires should be as short as possible and only the information that is really needed *and available* should be requested. This information should be asked for in such a way that it can be coded and entered into a data set on computer for analysis. All information received should be entered into the data set. Any information requested on both questionnaires should be compatible, that is, the data items should have the same definitions. In addition, for those items included in the FIRST large survey but omitted from the small survey questionnaire, summary estimates should be requested so that comparable totals relating to income and expenditures can be calculated for both data sets.

42. The survey questionnaire design of a more elaborate survey can take care of the diversity of activities by providing sector specific modules on typical incomes and outlays, while other, common items of information are asked for in the principal questionnaire, which is administered to all establishments. The questionnaire also makes optimal use of available information. Financial questions are divided in two parts, namely, one requesting information on an annual basis (last accounting year) for those establishments maintaining accounts, while for other establishments, the information is requested according to what can be most accurately supplied, such as taxes on an annual basis, electricity and gas bills on a monthly basis and other data possibly even on a weekly basis, to prevent memory lapse. Better integration of all economic data also requires that the concepts and definitions of the data items be standardized. For national accounting data items, definitions as used in the SNA should be used also here. These need to be supplemented by definitions required for other applications of the data, as well as other data items, including those provided in the international recommendations for industrial statistics.

43. Furthermore, the terminology used in requesting the data should be familiar to the respondents. For example, the term “value added” is not known in business circles and should therefore be derived by survey staff from the information requested on income and expenditures. For the FIRST large questionnaire, terms should be chosen that are familiar and used in the company accounts, where practical. The definitions should be spelled out so that respondents can determine exactly what to report against a particular data item.

44. Since the information requirements for various sectors of the economy are different, the questions can be grouped into two modules, namely one that is common to all and includes the data that are collected for all sectors, and a second module, which includes the sector-specific items relating to income and expenditures. A separate version of the second module will be prepared for each distinct sector.

## VI. Sample questionnaire

45. The questionnaire contents should be structured in a number of sections, so that the detail in each may be adjusted according to the needs of a particular survey. If more detailed information is required than can be provided in a large-scale survey for all observations (for cost or other considerations), it is also possible to restrict the administration of some part(s) of the questionnaire with detailed questions restricted to a sub-sample of the survey only.

The ten sections listed below would constitute a fairly comprehensive survey questionnaire. The first four sections on the list may be considered the core for an informal sector survey:

1. Identification
2. Labour force and employment costs
3. Production, income and markets
4. Consumption of materials, expenditures and sources
5. Fixed assets
6. Financing
7. Energy consumption
8. Environmental aspects of operations
9. Balance sheet (for large-scale units only)
10. Qualitative information

The suggested contents of each of the sections is detailed below.

### Section 1. Identification

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- 1.1 Name of company / owner  
(for identification in case call-backs are needed; data need not be entered in the computer except in panel" surveys, where the same units are interviewed year after year and the information for the different years needs to be linked)
- 1.2 Activity - description and code (e.g. ISIC)
- 1.3 Year of establishment
- 1.4 Location of business
  - mobile
  - in residence
  - separate business premises in residential area
  - business premises in commercial/industrial area
- 1.5 Complementarity measures  
(to ensure that the unit belongs to the survey and does not form part of an enterprise which is outside the survey scope)  
Depending on the criteria, questions on:
  - Small and micro enterprise (SME) definitions; where necessary with a check for lower boundary
  - ownership/legal status
  - license(s) obtained

Section 2. Labour force and employment costs

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- 2.1 Number of workers/employees at a specified time  
(broken down by sex, age group, skill level or type of labour)
- 2.2 Wages and salaries paid to employees  
(broken down by cash payments, payment in kind, social security contributions, etc)

Section 3. Production, income and markets

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- 3.1 Output in values by type of product and service
- 3.2 Quantity and value of production of major outputs  
(quantity could also be measured for services in many cases; this is important for the improvement of national accounting)
- 3.3 Destination of outputs
  - direct sales to households
  - sales to wholesalers/middlemen
  - direct sales to government bodies
  - direct exports
  - sales of intermediate products to other small enterprises
  - sales of intermediate products to large enterprises

Section 4. Consumption of materials, expenditures and sources

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- 4.1 Intermediate consumption in values by type of product and service  
(including utilities, which may be further specified in section 7)
- 4.2 Quantity and value of consumption of major inputs
- 4.3 Origin of main inputs
  - own production of agricultural products
  - direct purchases from farmers
  - purchases through wholesalers/middlemen
  - purchases/allocations through government bodies
  - direct imports
  - purchases of intermediate products from other small enterprises
  - purchases of intermediate products from large enterprises

Section 5. Fixed assets

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- 5.1 Capital assets used in business? Yes/No
- 5.2 Stock of capital assets in use by type; year end
  - of which owned
- 5.3 Purchases and disposals of fixed assets during the past year

Section 6. Financing

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- 6.1 Sources of finances for business
- own funds (owner and business partners)
  - family members or friends
  - informal sources (e.g. money lender)
  - bank credit (regular/special programme)
  - other sources
  - no significant investment

6.2 Cost of financing  
(breakdown as under 6.1)

6.3 Difficulties in obtaining finances  
(provide checklist)

Section 7. Energy consumption

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7.1 Is energy consumption significant? Yes/No

7.2 Sources of energy, by type, with values and quantities

- purchases, use, generation and sales

7.3 Difficulties in obtaining sufficient energy of the right type to meet requirements

Section 8. Environmental aspects of operations

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8.1 Is any significant amount of waste materials generated by the enterprise

solid wastes	Yes/No
liquid waste/effluents	Yes/No
fumes, gasses, etc	Yes/No

8.2 Methods of treatment and disposal of waste

- solid wastes
- liquid waste/effluents
- fumes, gasses, etc

(any other environmental issues)

Section 9. Balance sheet (for large-scale units only)

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not of interest for small-scale units

Section 10. Qualitative information

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10.1 Growth performance of the enterprise (since start/last few years)

- in terms of employment
- in terms of output volume

10.2 Expectations for the next few years  
(plus reasons for change)

10.3 Main problems in business environment  
(provide check-list)

## Endnotes

<sup>1</sup> Additionally, a terminology commonly used nowadays by the World Bank and OECD is Small and Micro Enterprises (SME), which are defined as units with less than fifty persons engaged. Micro enterprises are those with less than ten persons engaged and small enterprises have between 10 and 50 persons engaged. In the text the smallest segment of the SME, namely units with less than ten persons engaged, are referred to.

<sup>2</sup> Studies in Methods, Series F, No. 65, New York, 1994. Sales number E.94.XVII.11. In addition to the English-language version, the report is available also in Arabic, Chinese, French, Russian and Spanish.

<sup>3</sup> For the distributive trades and services, the pattern is somewhat different. The relative importance of large-scale units tends to be as high as for industry in developed countries, but in developing countries it is the small-scale sub-sector that accounts for the major share.

<sup>4</sup> Agriculture can be covered also in a FIRST survey, but it is not always straightforward as the nature of agricultural production is quite distinct from that of other sectors because of its seasonal nature. Furthermore, agriculture is largely concentrated in rural areas and sample frames based on population densities are not suitable for the agricultural sector. In developed countries, where a more corporate style agricultural sector exists, these problems are not as big as in developing countries where much of the sector's production is close to subsistence level and records on production, income and expenditure are nearly non-existent.

<sup>5</sup> Data items considered relevant for an internationally comparable industrial statistics programme are outlined in *International Recommendations for Industrial Statistics*, Statistical Papers, Series M, No. 48, Rev. 1, (United Nations publication, Sales no. E.83.XVII.8), United Nations, New York, 1983, pages 15 - 27.

<sup>6</sup> Data items on industrial statistics considered relevant for the internationally comparable national accounts programme are outlined in *System of National Accounts 1993* (Commission of the European Communities, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations, World Bank (1993): *System of National Accounts 1993*, Brussels/Luxembourg, New York, Paris, Washington, D.C.), Chapters VI and XV, pages 121-156 and 343-378, respectively.

<sup>7</sup> For definitions of output and value added according to the "census" concept, see *International Recommendations for Industrial Statistics*, *op.cit.*, paras. 200 – 212.



## **Informal sector statistics: Experiences from specialized surveys**

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### **I. Introduction**

1. The regular collection and compilation of official statistics on the informal sector is yet to be carried out in the Philippine Statistical System (PSS) even though the need for and importance of information on the informal sector has increasingly been recognized for policy making in the country's economic programs. A definitive methodology for producing these statistics that can be adapted by the PSS is still to be developed and implemented. As a result of this absence of hard data, the Philippine national accounts methodology generates indirect rather than direct estimates of the informal sector's contribution to the economy.

2. Internationally, a similar situation obtains and there are many reasons for this. Existing efforts show that, in general, the informal sector does not easily lend itself to statistical measurement. Who and what constitute the informal sector is a question that usually leads to more disagreements than agreements among users and producers of data. Even when given a conceptual definition of the informal sector, it is still a sector that is difficult to define precisely enough for use in statistical data collection on a wide scale. Typically, planners of data collection must wrestle with implementing details that include the identification of statistical units, operational criteria, and the specification of the scope and composition of the sector. The number of units that need to be surveyed and characteristics such as their small size, high mobility and turnover, clustering in specific areas, and lack of recognizable features for identification and location, pose challenges to survey statisticians. Modifications to traditional survey methods or even the development of new methods have thus become a knowledge gap in sample survey theory. In a May 1997 workshop on statistics on the informal sector sponsored by UNSD, ESCAP and the ILO in Bangkok, Thailand, 21 country reports described the reasons or the lack of these statistics.

3. This paper looks at the recent efforts of the Philippine statistical system to generate statistics on the informal sector and related special groups, homeworkers and working children. It focuses on the following special surveys conducted during the period 1993 to 1995:

- *The 1993/95 Survey on Homeworkers (SOH)*. The SOH used the sample design and sample primary sampling units (psus) of the regular *Philippine Quarterly Labour Force Survey (LFS)* but was conducted as an independent (as opposed to a "rider") survey;
- *The 1995 Urban Informal Sector Survey (UISS)* which was conducted as part of the Interdepartmental Project on the Urban Informal Sector launched by the International Labour Organization (ILO) in 1994. The 1995 UISS was an independent or stand-alone *ad hoc* mixed household and enterprise survey;
- *The 1995 Survey on Working Children (SOC)*. The field operations of the SOC were conducted as a rider to the July 1995 LFS.

4. Taken together, these surveys have collectively improved knowledge on the informal sector in both content and method. In discussing these surveys, the following points are covered:

- rationale and objectives;
- survey design: sample design and questionnaire design;
- developmental processes:
  - concepts and definitions and their operationalization;
  - sample design;
  - frame construction ;
  - questionnaire design ;
  - field operations and response rates;
  - data processing;
  - analysis, dissemination, utilization.
- lessons learned and recommendations:
  - sample design;
  - measurement issues;
  - institutionalization process.

5. Before discussing the individual surveys, however, the paper presents a brief overview of data collection on socio-economic statistics through surveys and censuses undertaken by the Philippine National Statistics Office (NSO). This overview provides background information on statistical undertakings, databases, and administrative structures that have a bearing on the three surveys in particular and to informal sector statistics in general. Where a particular survey or census is directly linked to planning and design considerations and decision points of the UISS, SOC or SOH, these points are also discussed.

6. The paper ends by presenting major recommendations on the generation of statistics on the informal sector based on the Philippine experiences.

## **II. Data collection on socio-economic statistics in the Philippines**

7. This section describes the major household-based and establishment-based censuses and surveys conducted by the NSO that have a bearing on the generation of statistics on informal sector workers from the three ILO surveys. These censuses and surveys are typically centrally planned by two technical departments, whose specializations are household-based and establishment-based statistics respectively, and the data processing unit. Field operations are handled by 15 regional offices, 77 provincial offices and about 250 district offices. The regular staff of the field offices are supplemented by specially hired staff for enumeration and data processing work, depending on the workload of a survey or census or overlapping surveys. Tabulation, analysis, publication, and the preparation of public use electronic files are done centrally. Special dissemination activities of survey results such as seminars and similar fora are undertaken both at the central and field levels.

### **A. Household-based censuses and surveys**

#### **1. Household-based censuses**

8. The *1990 Census of Population and Housing* is the source of the database for the *psu* frame of *barangays* (the smallest administrative unit in the Philippines) and EAs or enumeration areas which are delineated geographic areas for purposes of enumeration for the household-based surveys conducted after its completion. Specifically, its database on *barangays* and EAs provides the core information for the *psu* frame of the Integrated Survey of Households which is an application of the master sample approach to household surveys.

9. A Census of Population was conducted by the Philippines in 1995. Popularly known as the *Mid-decade Census*, it is mentioned here because in the determination of data items to be gathered in its abbreviated questionnaire (abbreviated relative to the usual decennial census), a main consideration was its potential use as the basis for building an *area-based* frame for a nationwide survey on the informal sector. Thus, the questionnaire obtained data for each household member five years old and over on *class of worker* and *industry of economic activity*.

10. The NSO typically conducts the *Census of Agriculture and Fisheries (CAF)* about a year after the decennial census of population. Data from the 1991 CAF is also a potential supplementary source for building an area-based frame for the informal sector particularly for rural areas where agriculture is the main economic activity. The question of what would constitute informal sector activities for rural areas as well as for the agricultural sector is still an unanswered one in the case of the Philippines.

11. The *1989 Census of Buildings* in urban areas was a pioneering effort to get a complete inventory of buildings, their distribution, their characteristics and usage, and an account of the economic activities engaged in by their occupants. This census is mentioned here because the *listing operations* for the 1995 UISS borrowed heavily from the census instrument and field operations procedures because of its area-based approach. Also, it is worth noting that a census of buildings is a potentially viable procedure for the construction of an area frame for an economic census or survey on the informal sector.

## 2. Household surveys

12. The *Integrated Survey of Households (ISH)* is a master sample and modular approach to the conduct of household surveys. That is, for a given 10-year cycle, a single set of sample psus is maintained and one-fourth of the secondary sampling units (ssus) (households) are rotated out on a quarterly basis. The sampling design of the ISH (from 1986 until July 1996 when a new design was instituted) yields a stratified two-stage cluster sample with barangays as the psus and households as ssus. The urban and rural areas of each province, and cities and municipalities with a population of 150,000 people or more as of 1990 are the principal domains of the survey. A total of 2,100 barangays comprise the psus with about 25,500 sample households.

13. The master sample of psus was selected by first arranging the barangays in each domain by population size in descending order and then grouping them into strata of approximately equal sizes. Four psus were independently selected with probability proportional to size. The number of sample households selected from each domain was determined to ensure that the sample was self-weighting within domains. Thus, the sample design results in self-weighting samples with a uniform sampling fraction of 1:400 for urban areas and 1:600 for rural areas.

14. Regional estimates from the sample generally yield reasonable levels of precision (the Philippines has 16 administrative regions). However, the precision of provincial estimates has been less than desirable for some economic variables such as unemployment rates, for example. The new sample design which was first applied during the July 1996 round of the Labor Force Survey has corrected this.

15. With regard to the National Capital Region, which is the geographic area covered by the 1995 UISS, the ISH design delineates seven separate domains from the 17 municipalities within which the 1,655 barangays are found. A special sample selection scheme at the ssu level is applied in six exclusive (rich) housing subdivisions. The major point to remember with regard to the ISH sample design is that it is basically population-size based because of the correlation between population size and employment. Industry or economic density distributions are not factors in the stratification. This is one of the basic reasons why the 1995 UISS did not use the ISH sample.

16. The core survey module of the ISH is the *Quarterly Labor Force Survey (LFS)*, which is the source of official statistics on levels and trends of employment, unemployment, and underemployment. In the context of potential data sources for the informal sector, one improvement in the LFS coverage and content that has been identified involves changes that need to be made to facilitate the collection of information on employment in the informal sector.

17. A regular module of the ISH is the *Family Income and Expenditure Survey (FIES)* which is conducted every three years. The FIES data are used for determining poverty levels and are the basis for the expenditure weights utilized in the computations of the monthly consumer price indexes. The latest completed FIES is the 1994 FIES. The FIES is a rider to the field operations of the January and July rounds of the LFS covering the reference year. The first round of the 1997 FIES was conducted in July 1997 using the new ISH sample design. Because the FIES is conducted only every three years, statistics on poverty are therefore updated only every three years. A UNDP-funded study is now being undertaken by the NSO to determine how best to implement an annual income survey which can then serve as the basis for annual statistics on poverty.

18. The *National Demographic Survey (NDS)*, *National Health Survey (NHS)* and the *Functional Literacy, Education and Mass Media Survey (FLEMMS)* are other ISH modules conducted every five years and are major sources of data on demography, health and education.

19. The *Survey on Overseas Filipinos (SOF)* is an annual survey on the origins and destinations of overseas Filipinos and their remittances to the Philippines and is a rider to the October round of the LFS. This survey is the only household-based source of information on overseas employment in the Philippines and reflects both overseas workers who have exited through formal channels and those who are locally referred to as “illegals”. Statistics compiled from the administrative records of the Philippine Overseas Employment Agency reflect workers overseas who leave the country through formal channels.

### 3. On master samples

20. A master sample and modular approach in the conduct of surveys has proven to be cost-effective in at least three aspects. Firstly, designing and selecting a sample becomes a one-time cost (except for updating operations at the ssu level) whose output is spread over the modular cycle. In the Philippine case, the ISH has always been designed with the assistance of external (to the NSO) experts. Actually, updating of the ssus in the sample psus has not been done as often as ideally desired in a regular and systematic manner precisely because of cost constraints. One such rare opportunity was the 1988 Integrated Listing of Households and Establishments. This listing operation had multiple objectives: (i) to update the ISH ssu frame, (ii) to construct an establishment frame for ISH psus which would be part of the total frame for a census of establishments, and (iii) to measure the extent of overlap in the coverage of household-operated activities and establishments. While the first two objectives were attained, the third was not because of a procedural flaw. However, the listing also served as the basis for an ssu frame for the 1988 Survey of Household Operated Activities (described later). The next opportunity for updating was a listing operation of segments of the sample psus carried out in 1993. This listing operation was also used to construct the frame of homeworkers for the 1993 Survey of Homeworkers. An updating of ssus in the current (new) ISH through a listing of households was scheduled for November 1997.

21. Secondly, while the system is able to obtain the quarterly labour force statistics, the costs of other special topic surveys are spread out over the years. Because of classic government budgetary process constraints, this allows the NSO to rationalize resource allocation during a given fiscal period.

22. Thirdly, the *rider system*, or piggy-back system, where the field operations of one or two surveys are synchronized with the ISH core module, allows the sharing of field operation costs among the surveys. The arrangement is also advantageous as it optimizes the involvement of trained field staff and the use of the facilities of the NSO. In recent years, this mode of co-operation among different government agencies needing statistical surveys has become increasingly popular. This is a boon in a country where the statistical system is highly decentralized. Also in relation to the purpose of this paper, this is the basic reason for running the 1995 Survey of Children as a rider to the July 1995 Labor Force Survey.

23. In addition, the master sample approach theoretically provides the means of linking data from various surveys conducted within the same year at the micro level. If two or more surveys are conducted as *riders* to the LFS for a quarter, then the linking of data should be even easier. This would produce a data file where labour force characteristics as well as data on income and health would provide analysts with a wealth of information for economic modeling and similar useful tools. Such a file would simulate the results of a single (incontrovertible) survey that includes data items from the LFS, FIES, NDS, SOF, and others.

24. Of course, in practice, the direct matching and linking of files from different surveys at the household and even household member level has proven to be no easy task. But because of the vast analytical potential of the resulting database, studies are being undertaken on the applications of statistical matching techniques to this problem. This point is mentioned here because of its possible implications in deciding whether or not an informal sector survey conducted on a regular basis can be designed as a rider to the LFS or a module of the ISH. Of special interest is the linking of information from the FIES on income sources and expenditure patterns which are obtained in more detail than will ever be possible for an independent informal sector survey. Another aspect worth exploring here would be the linking of data files for small-areas. Since certain types of informal sector activities are concentrated in small areas (e.g. tanning, shoe-making, jewelry-making, rag-making, vending), economic profiles of such areas can be built-up from linked files without having to conduct separate surveys for these special areas. A study on the application of record matching and small-area estimation techniques was undertaken along these lines in 1996.

#### 4. The 1988 Survey on Household-Operated Activities

25. The collection of data on *household-operated activities* in the Philippines was initially attempted in the 1975 Integrated Census of Population. Information on family-operated activities was collected as part of the 1978-83 series of the ISH. The *1988 Survey on Household-Operated Activities (SHOA)* was implemented in 1989 with the intention of including it as a module of the ISH to be conducted every five years. The overall objective was to discover the extent of the contribution of the household-operated activities to the overall economy. However, the SHOA has not since been conducted.

26. The objectives of the SHOA were:

- to measure the sectoral contribution of household-operated activities to national production;
- to determine the extent of employment generation in these activities;
- to determine the share of capital outlay of household-operated activities in gross fixed capital formation;
- to gather other information on the operation of household-operated activities.

27. The SHOA applied the following definitions:

- household-operated activity: any economic activity operated by any member of the household. The SHOA covered the following economic units:
  1. Crop farming and gardening, livestock and poultry, fishing and forestry activities not registered with the SEC;
  2. Mining and quarrying activities with less than five engaged persons;
  3. Wholesale and retail, manufacturing and other non-agricultural economic activities which are not *recognizable* (An economic unit is said to be recognizable when it can be located without the aid of any other person or without going into the actual area.);
  4. Sari-sari stores which are recognizable and with no paid employee.
- operator: any person who manages the economic activity and whose relationship to the economic activity where they work is either as *self-employed* or as *employer*.

28. The SHOA applied a sectoral approach in the design of its survey instruments. Seven separate questionnaires corresponding to seven groupings of economic activities were designed and utilized in gathering information on the following:

- description of household-operated activity;
- production (area, units of production, quantity, value, revenue-specific items depend on the type of activity);
- disposal of produce (specific items depend on the type of activity);
- cost of operation (quantity and cost by type of expenditure-specific items depend on the type of activity);
- employment, man-hours and compensation;
- fixed assets acquired in 1988 (type and acquisition cost);
- sources of financing;
- mode of marketing;
- operational problems.

29. The sampling design of the SHOA adopted the ISH design at the first stage but modified sample selection at the ssu level by stratifying ssus further, based on the economic activity of households with operators, as follows:

Stratum 1:	Agriculture, forestry and fishery
Stratum 2:	Manufacturing
Stratum 3:	Wholesale and retail trade
Stratum 4:	Mining and quarrying
Stratum 5:	All other activities

30. For multi-operator households or multi-activity households, the household was classified into one of the strata according to the following rules:

1. If there is at least one operator engaged in mining and quarrying, classify the household under stratum 4;
2. If there is no operator engaged in mining and quarrying but there is at least one operator engaged in manufacturing, classify the household under stratum 2;
3. If there is no operator engaged in mining and quarrying, and manufacturing, but there is at least one operator engaged in the wholesale and retail trade, classify the household under stratum 3;
4. If there is no operator engaged in mining and quarrying, manufacturing, and wholesale and retail trade but there is at least one operator engaged in agriculture, forestry and

- fishery, classify the household under stratum 1;
5. Classify all other households with operators under stratum 5.

31. For strata 1 and 3, a five percent random sample was drawn. For strata 2, 4, and 5, a ten percent random sample was taken. A minimum of two sample households per stratum was selected. For households without operators, a two percent random sample was also selected. This scheme resulted in a national sample of about 45,000 households.

32. Household-operated activities can be viewed as the larger universe of which informal sector activities comprise a subset. The 1988 SHOA provides benchmark information on this universe. The basic statistics generated by the survey in comparison with the results of the census of small establishments, and national accounts estimates based on an ILO report,<sup>1</sup> are presented in Annex A. This same report assesses the extent to which the SHOA achieved its measurement objectives, as follows:

1. The SHOA appears to have understated the output of the household-based sector;
2. Not much light could be shed by the survey on the extent of employment-generation of these activities;
3. There may also have been an undervaluation of the asset-formation activities of household enterprises by the survey.

## **B. Establishment-based census and surveys**

33. Economic statistics generated from establishment surveys are primarily used for the compilation of national accounts. In the Philippines, this includes the generation of both the annual and quarterly estimation of GDP on a national level and the annual estimation of gross regional domestic product. For quarterly estimates and preliminary annual estimates of GDP, monthly and quarterly surveys of establishments are sources of basic data on production, employment and compensation. These surveys are necessarily short in terms of data items (one-page questionnaires) and have a small sample size that basically covers large establishments (actual total engaged of 20 persons or more for the quarterly survey which covers all industries) and trendsetters (for the monthly survey which is a survey of key enterprises in manufacturing).

34. Benchmark and key ratios used in national accounts estimation procedures are provided by the more detailed quinquennial *Census of Establishments* and *Annual Survey of Establishments*. The last census had 1994 as the reference period and the last annual survey had 1995 as the reference period. Both data collection vehicles for establishment-based information are actually comprised of nine sectoral modules, following the 1-digit industry classification of the PSIC. This means that the coverage of establishment surveys is inclusive of all economic activities - agriculture, forestry and fishery, industry, and services.

35. While usual descriptions differentiate the census from the survey, the census (in the sense of complete enumeration) is actually a census only of establishments with at least 10 persons engaged and a sample survey of establishments with less than 10 persons engaged. The annual surveys, on the other hand, are censuses of establishments with a total number of persons engaged of 50 or over (100 or over for some sectors) and sample surveys of the remaining establishments. The more basic difference between the census and the survey is that the census sample selection defines 5-digit PSIC classifications as the industry strata while the survey uses 3- or 4- digit PSIC classifications. This results in a larger sample size for the census (about three times more) compared to the survey.

36. The cut-off at 10 persons engaged traditionally delineates “small” from “large” establishments. In

the context of discussions on the informal vs. the formal sector (unorganized vs. organized sector), “small” has come to be associated with possible overlaps between the sectors. Assessing the degree of overlap was one of the objectives of the 1988 Integrated Listing of Households and Establishments (ILHE) which, as mentioned earlier, was not met because of a procedural problem. What happened was that in the field operations, enumerators applied an *a priori* cut-off criteria to determine whether an economic unit was to be listed as household-operated or establishment-operated.

37. Experience in the collection of information from small establishments in all industry sectors indeed shows that for activities covered by the census and survey typically associated with the urban informal sector - food processing, subcontracting of garment manufacturing, handicrafts and toys, printing, house repair, vending, selling food, lending, repair shops, and personal services - problems typical of coverage of the informal sector persist. There are two issues that are related to informal sector surveys. The *first* issue is the high rate of non-response because establishments turn out to be closed and cannot be located. This is consistent with the observation that informal sector activities are volatile and mobile and, therefore, list frames that are compiled six months prior to a survey can rapidly become outdated for such businesses. The *second* issue is the inability of many small establishments to provide the detailed information required in classical establishment surveys, particularly with regards to revenue, cost and inventory details, resulting in item non-responses.

38. The problem of high non-response rates related to outdated list frames is one that can be addressed by *area sampling* rather than list-based sampling, which is the basis of the current sample selection for establishment surveys. The 1995 UISS attempted this approach, or at least one version of it, with some improvement in response rates. The use of area sampling for establishment surveys still has to be studied. The initial direction to be pursued for a planned study is to evaluate the new master sample of the ISH with regards to the suitability of the psus as basic area units. The new master sample did take into account the socio-economic classification of areas based on characteristics of households.

39. The problem of non-response has been addressed by instituting a new questionnaire starting with the 1994 census. Called the *common report* form, it is a simplified reporting form for small establishments uniformly used by all sectors. Prior to this, different questionnaires were used by different sectors with the same questionnaire being applied to both small and large establishments. Whether or not this will improve the response rate has still to be evaluated but the philosophy of simplicity and ease of completion by adopting a worksheet-type format is the same philosophy applied in the design of the UISS questionnaire, particularly for details on output, costs and inventory.

40. It is precisely because of the comprehensive coverage of the regular establishment surveys and censuses with respect to industry and size of business that these data collection vehicles are being looked at as alternatives to the conduct of annual surveys on the informal sector. One such suggestion is to introduce refinements so that the annual survey can provide a cross-tabulation of the data generated by institutional sector. Additional information can include that to be used in separating informal sector activities from the organized component within the household sector and data on man-hours for computing productivity measures used in the indirect estimation of gross value added in the IS.<sup>2</sup> With the results of the 1995 UISS and the 1995 Annual Survey of Establishments, these proposals now have a database to work with.

41. The frame for establishment surveys and censuses is a *List of Establishments (LE)* which was initially constructed as a result of the 1988 ILHE and has since been updated annually, primarily through comprehensive, barangay-based field updating operations. However, in years where resources were limited, updating was done on a selective basis. Thus, the process of updating has varied from year-to-year. The UISS made use of the 1995 LE in order to stratify psus according to economic density and industry stratum. It has to be noted that the 1995 LE is actually 1994-updated where the updating

procedures were carried out on a selective basis. This may pose a technical limitation to the UISS with respect to the accuracy of the information used for stratification purposes. However, as opposed to list-frame selection, the area-frame sample would not be as affected since individual economic units may change but the distribution and spatial patterns and densities would not.

### **III. The 1995 urban informal sector survey**

42. The 1995 Urban Informal Sector Survey (UISS) in the National Capital Region (NCR) was initiated and implemented as part of the ILO Interdepartmental Project on the Urban Informal Sector Survey. While the Philippine NSO was mainly responsible for all aspects of the survey, the Bureau of Statistics of the ILO provided financial resources and technical expertise on the operationalization of informal sector concepts within the Philippine setting, questionnaire design, sample design, and data evaluation. The Philippine Department of Labor and Employment also provided financial resources and project staff who assisted in the conceptualization of the survey definitions and questionnaire design, training for survey operations, and data analysis. It is worth noting that this three-pronged collaborative effort has proved to be a contributing factor to success in developing new statistical methodologies.

43. The UISS was limited in coverage to the National Capital Region which is classified as entirely urban because all of its 1,655 barangays are classified as urban. In the Philippine setting, urbanness is a characteristic applied to barangays. The categorization is done as follows:

1. Cities/municipalities with minimum density of 1,000 persons per sq. km.: all barangays are urban;
2. Cities/municipalities with minimum density of 500 persons: barangays in the center of town (poblaciones) irrespective of population size are urban;
3. Poblaciones not included in (1) or (2) above, regardless of population size which have the following characteristics:
  - (a) a street pattern or network of streets in either parallel or right-angle orientation;
  - (b) at least six establishments, either commercial, manufacturing, recreational and/or personal services;
  - (c) at least three of the following.
    - (i) a town hall, church or chapel with a religious service at least once a month;
    - (ii) a public plaza, park or cemetery;
    - (iii) a market place or building where trading activities are carried on at least once a week;
    - (iv) a public building like a school, hospital, health center or library.
4. Barangays with at least 1,000 inhabitants which meet the conditions described in (3) and in which the occupation of the inhabitants is predominantly non-farming/fishing.

44. The NCR is comprised of 17 cities/municipalities all of which fall under category one. This is important to know because the UISS results have to be interpreted bearing in mind that the other urban areas have characteristics that are quite different from the NCR.

### **A. Rationale and objectives**

45. The basic objective of the 1995 UISS was to obtain the following information on informal sector (IS) activities, operators and workers:

- number classified by various characteristics such as kind of activity and type of workplace;

- employment including number, socio-demographic status, status of employment, conditions of employment and work;
- output, value added, mixed income (operating surplus) and capital equipment;
- other characteristics pertaining to operations including linkages with the formal sector, mobilization of financial resources, position with regard to the existing framework of regulations, needs for assistance, and self-organization;
- characteristics of operators;
- situation of particular groups of IS workers including women, children and disabled persons.

46. As an integral part of the ILO project, the UISS was obliged to meet this basic objective as well as the timing considerations of the project. For the former, there was consistency between the country's and the ILO's interests although to date, data utilization for SNA estimation still has to be concretely spelled out. Timing considerations, however, presented administrative problems because of the competing needs of the 1995 Mid-decade Census, the 1995 SOC, and the UISS. These activities were all conducted in 1995 by basically the same group of technical staff in the NSO. In the course of prioritization, the scale of operations of the census and SOC compared to the UISS was the deciding factor. In fact, the main survey operations for the UISS were conducted in August, after the July operations for the SOC and before the September census.

47. This point is made here because typically, developmental activities undergo similar priority-led ranking. Further, in resource allocation, surveys which address "new topics" not traditionally included in the regular survey modules would fall victim to the same priority-led ranking, unless there is a clear demonstration that the topic should in fact be made part of the regular modules. Statistics on the informal sector are still in this no-man's land.

## **B. Basic considerations in the design of the survey**

48. The 1995 Urban Informal Sector Survey (UISS) in Metro Manila was designed as an independent (stand-alone as opposed to "rider"), mixed household and enterprise survey. For this purpose, the National Capital Region was divided into area units, with its 1,655 barangays as core units. The basic idea was to identify all economic activities within each area unit. For the purposes of delineating household-based and establishment-based economic activities, all economic activities whose operators live within the area unit are associated with the household of the operator and classified as household-based. On the other hand, an economic activity that is not associated with a household within the area is classified as establishment-based. It should be emphasized that the use of the term establishment in this description is, therefore, a modification of the usual definition.

49. Verma (1992)<sup>3</sup> describes this as the *dual approach*. Planning and technical considerations of the UISS were guided by this particular document and would thus provide the justification for the decisions made at this stage. Assuming that all economic operators can be identified in this manner (including mobile, street- and sidewalk-vending, public market operators who are identified through the household-based operator), operational definitions and inevitable cut-offs to delineate the informal sector enterprises were based on the following two characteristics of the economic unit:

1. Legal organization, with SEC-registered corporations definitely *not* informal;
2. Number of persons employed, enterprises with more than 10 definitely *not* informal.

50. The first criterion operationalized the description of IS enterprises as *unincorporated* and primarily *own-account* while the second operationalized the *smallness in scale* which, as mentioned in the discussion on establishment surveys, is typical of small (measured in terms of employment)

establishments.

51. It is to be noted that other criteria for identifying informal sector enterprises especially *social security coverage, record-keeping practice* and *other forms of registration* were not considered here. Due to the exploratory nature of the survey, *a priori* delimiting of the study universe in terms of these and other characteristics was postponed to the processing phase. However, insofar as these characteristics may be highly correlated with “small” and “unincorporated” then the two criteria would implicitly include such characteristics.

52. With regard to linkages between the concepts of household-operated and informal sector activities as covered by the SHOA and UISS, the SEC-registration criterion is applied to *all* activities in the UISS and not just to agriculture, forestry and fishery activities. The criterion on the number of persons engaged in the UISS is “less than 10 persons engaged” which is applied to all activities and not just to mining and quarrying. Sari-sari stores, whether recognizable or not, but operated within household premises (or ‘near’ enough) are considered as economic units covered by the UISS. The concept of recognizability as applied in (3) and (4) is made more precise in terms of whether these are operated within household premises or operated as establishments. This was needed because the UISS also covered establishment-based operations in the mixed household and enterprise approach. Thus, if household-based informal sector activities operating within the premises are conceptually to be subsets of household-operated activities these two surveys illustrate the need to align concept with operationalization, at least for the three criteria:

- registration with the SEC, where non-registration is equivalent to saying that the enterprise is unincorporated;
- cut-off size for number of persons engaged;
- recognizability.

53. The UISS covered all types of economic activities as opposed to focusing on specific sectors only. It dealt with the issue of seasonality by incorporating a set of questions which would capture low, normal and peak intensities within a year as opposed to pre-identifying sectors and their seasonal patterns. As an *ad hoc* survey with time constraints, it could not be designed with sub-rounds as discussed in Verma (1992).

54. Thus, the survey covered IS activities identified through their operators. Operators were identified either through their households or the establishments in which they conducted their activities. Operators identified through their households were asked about up to three income-raising activities which they considered most important and which they operated as self-employed, employer or partner during the past twelve months. The concept allowed for the listing of seasonal activities in which the operator was not involved at the time of listing but when taken within a year, he or she usually operated. Operators identified through establishments were asked about the current activity of the establishment.

55. Data items included in the questionnaire and the corresponding definitions and measurement were essentially those recommended by the ILO Interdep Project. One advantage of the UISS being part of the Project was that it was able to speed up certain of its preparations, especially in questionnaire design, by using the results and experiences of the other two cities involved in the Project. The final format of the questionnaire was influenced heavily by the results of pre-tests of the Dar es Salaam survey. Measurement issues were also resolved this way. Of course, the need for uniformity and consistency in the three surveys had to be ensured because of the concern with the comparability of results.

## **C. Field operations**

56. Phase I or the Listing Operations phase for frame construction for us was conducted by senior statistics students who were doing practicum work with the NSO, line department staff, and field staff of the NSO NCR office. The students, while lacking field experience, provided the technical backstop for the project. The field staff involvement helped ensure that the segments and areas to be covered were correctly identified and delineated and that interviews were professionally done. This phase had to be completed very quickly as the main survey operations depended on the results of the listing. Operations and processing were completed in 2.5 months. The main survey operations followed immediately.

57. Because of the competing activities, the UISS project decided to hire enumerators to carry out the main survey operations. NCR staff could not be called on for the purpose because of the overlap in the schedule of census operations and the UISS. Thus, the interviewers underwent rigid training and were closely supervised. (Some of them eventually joined the NSO as regular staff.) When evaluating the survey results, this may be one of the factors to be considered.

## D. Sample design and selection

58. With informal sector enterprises as the target universe for the UISS, the following basic sample selection strategy was adopted:

- the sample design is a three-stage stratified cluster sampling design;
- the primary sampling unit is the barangay;
- the secondary sampling units are area segments or clusters consisting of approximately 300 households within a sample barangay;
- the ultimate sampling units in the mixed household and enterprise survey are households with informal sector operators or establishment-based informal sector operators within a sample segment.

59. The *targeted* numbers in terms of these sampling units were, as follows:

- 200 sample barangays out of 1,655 barangays;
- 200 area clusters, one cluster per sample barangay;
- 3,600 sample households with informal sector operators from 10,224 such operators in the 200 sample area clusters;
- 400 sample establishment-based informal sector operators from 2,068 such units in the 200 area clusters.

60. As is usually the case, the targeted numbers and the actual sample sizes for the ultimate sampling units or *usus* (households with informal sector operators and establishment-based informal sector operators) are not exactly equal. In fact, the survey results generated were based on 2,899 sample households and 287 establishments.

61. In this case, the main reasons for the difference are misclassifications in the frame for the *usus* and non-response where units could no longer be found. Misclassifications were of two types:

1. Households classified as having IS operators which had no IS operators;
2. Establishment-based operators classified as IS operators and found to be formal rather than informal.

62. Minimal replacement was resorted to when these were discovered during field operations, mostly in cases where strata would have no samples. However, those not identified during the actual operations were further screened out during the processing phase, applying the criteria on SEC-registration through legal organization and size of employment.

63. A key requirement of the dual approach is the construction of frames for each stage of sampling. Corresponding to each type of sampling unit, the following sampling frames were constructed:

- frame of *psus* or barangays;
- frame of area clusters or segments for each sampled barangay;
- frame of household-based informal sector operators in sample area clusters;
- frame of establishment-based informal sector operators in sample area clusters.

64. The frame of psus was a list of the 1,655 total barangays in the NCR identified as of the 1990 Census of Population and Housing. Basic frame characteristics included number of households and number of small establishments (establishments with actual total persons engaged fewer than 10 as listed in the 1994 List of Establishments). Based on this information, psus were stratified, as follows:

1. By primary industry concentration into:
  - (a) trade
  - (b) community, social and personal services
  - (c) other services and other industries, and
  - (d) manufacturing

A *coefficient of industry concentration* was computed based on the definition given in Verma (1992). This is the ratio of the number of small establishments in the psu belonging to an industry group to the average number of small establishments in the industry group for all psus;

2. By overall economic density where *economic density* is defined, again following Verma, as the ratio between the total number of small establishments and the total number of households in the psu;
3. Implicitly within each stratum, by secondary industry concentration (also based on the coefficient of industry concentration) and geographic dispersion by sorting by municipality and barangay.

65. The 200 sample psus were allocated in the following proportions: 50 psus per industry strata distributed in the ratio 20 (high economic density) to 30 (low economic density) where high and low densities were determined by whether the economic density was higher or lower than a cut-off, the average number of establishments per psu. Psus were selected systematically within strata. The advantages and disadvantages and possible limitations of such a stratification scheme are discussed in Verma (1992) and will not be repeated here. As the evaluation and validation of the UISS results are still in progress, empirical insights are still forthcoming.

66. Sample psus selected at the first stage of sampling with an estimated number of households (based on 1990 household count and 1995 projections) exceeding 300 were partitioned (segmenting on paper with field verification) into clusters of 250 to 300 households. Desk segmenting was carried out with the aid of barangay maps from the 1990 CPH operations or the 1993 Listing of Households. One segment was selected at random from the total number of segments thus defined. The collection of segments comprised the frame for secondary stage selection.

67. Segmentation is always a tricky procedure especially when done without field verification. The desk segmenting was, therefore, verified in the field, an expensive proposition but necessary especially since the base information on population was circa 1990.

68. Frame construction for the two types of psus was the objective of the first phase of the UISS which consisted of a complete listing of buildings, households and economic units in the sample area clusters. The listing operations made use of a listing schedule which was the basis for identifying the 10,224 household-based and 2,068 establishment-based operators classified by industry. As mentioned earlier, this listing schedule learned from the experience of the 1989 Census of Buildings in terms of operationalizing criteria for identifying economic units, recognizability, and determining whether to list the activity (and the operator) as household-based or as (modified)-establishment-based.

69. Sample selection of the two types of psus was implemented, as follows:

1. Select sample of 3,600 households and 400 establishments;
2. Include all household and establishments in the following industry groups: agriculture, forestry and fishery, mining and quarrying, electricity, gas and water, and construction. For other industry groups, apply different sampling fractions.

70. The UISS applied a stratification scheme at the ssu level which involved classifying households into industries. In this case, the decision was to use nine strata representing standard 1-digit Philippine Industrial Classification (PSIC) industry codes. Each household was classified into a particular industry stratum based on the main activity of the household as identified during the listing operations for the UISS. *Main activity* was defined as the operator activity within the household that is identified as providing the largest income or main source of income of the household. Households were further stratified according to the psu industry stratum, which in a sense approximates the 5-stratum scheme applied in the SHOA. However, the application of complex classification rules like that of the SHOA, which may lead to biases due to misclassification, was avoided.

71. This stratification by industry stratum and by major industry resulted in a total of 36 strata. For households with IS operators as identified in phase I, equal allocation to the nine industry strata was modified because the frame yielded less than the required number for the industries listed in (2). Allocation across the psu stratum was proportionate. Implicit stratification was resorted to within strata by arranging households according to province (or NCR district), municipality and barangay. The usus were then systematically selected within strata.

72. All IS operators in a selected household and establishment were included in the sample of operators. These included not only the operators identified during the listing operations but also those identified during the actual survey operations.

73. Computations of concentration density and economic density were possible because of the existence of a frame for small establishments for the NCR. As part of the validation process of the stability of this stratification, similar computations were able to be made based on the 1996 LE which is more comprehensively updated than the 1994 LE. Another area for investigation would be the allocation of samples across strata, both at the psu stage and the ssu stage of sampling. In the UISS, the allocations were not based on optimality considerations partly because of the absence of variance estimates for suitable variables even from establishment surveys. There is an admission here of some inadequacy in this area.

## **E. Questionnaire design and processing issues**

74. Data items in the UISS were those prescribed by the Interdep Project. These were, however, adapted to local conditions especially with respect to usual business practices and conditions (subject matter), survey techniques (operations) and data processing practices. The planned units of analysis were households, operators, activities of operators, and enterprises.

75. Household information was obtained through a household questionnaire. In addition to capturing information on household income, income sources, and the socio-economic characteristics of household members, the questionnaire also was used to identify other IS operators who may have been missed during the listing operations. The basic format of the household questionnaire was a spreadsheet with columns for the identifier of household members and the characteristics.

76. A separate operator questionnaire was administered to each identified IS operator. Each operator

questionnaire was theoretically linked to the corresponding household questionnaire by the geographic identification and operator identification fields. This would be the ideal analysis datafile, merged information from both questionnaires. However, this was easier said than done because data encoding for the two questionnaires was carried out separately and so encoding errors and transcription errors altered some of the relevant codes.

77. The operator questionnaire had 75 major questions grouped into thirteen major topics:

- types of business activities engaged in, their organization, and mode of operation;
- why and how such businesses were started;
- employment and working conditions and benefits of workers;
- aspects of production output, inputs, expenses, and income generation;
- aspects of production practices such as sourcing of raw materials, contracting of work and marketing linkages;
- capital formation;
- practices regarding credit and loans;
- operational problems and sources of assistance;
- safety and health-related conditions in the workplace;
- business registration;
- self-organization;
- social protection;
- operator characteristics.

78. It is to be noted that most data items in the 1988 SHOA were also part of the information gathered by the UISS. An advantage of separate questionnaires for each activity (an approach utilized in the NSO annual surveys and quinquennial census of establishments) is that information such as production and cost which are highly activity-specific can be detailed better when questionnaires are activity-specific. Processing and systems development are also made easier with this approach. For manual processing, sector specialists need only work with their specific questionnaires. Data encoding and computer editing systems development can also be done on a sectoral basis. A disadvantage of a field interview operation is that each enumerator has to bring several types of questionnaires. For a household with multiple operators and multiple activities, keeping the various questionnaires intact for each household may present a physical problem although, theoretically, these questionnaires can be linked at the processing stage.

79. In the questionnaire design of the UISS, these issues were carefully considered and the decision was taken to have a single questionnaire per operator. Multi-activities of operators were taken care of through the use of columns for activity indicators. To take care of cost and production information that differ by industry sector, separate worksheets appeared as separate data items for groups of industries. As it turned out, while the physical aspect of keeping questionnaires for one operator linked, the linkage was not as clearly defined as in the processing stage. In cases where the questionnaire had to be left with the respondent (as was sometimes the case for establishment-based operators), it was a forbidding 40-page questionnaire that awaited him or her.

80. The nature of the items was a mix of questions usually designed for interviewing household respondents and questions usually designed for completion by an establishment. Thus, the questionnaire had to be designed so that it could be completed by interview but at the same time could be completed by the respondent. The interview-type questions were relatively easier to answer (these were basically structured questions) than the latter type, which included items on production outputs, inputs, other expenses, and capital formation and required valuation. While the perception was that these items were presented in the simplest way possible, the resulting response rates of these items were not as high as was

desirable. This would be an area for improvement and can be studied by looking at the response rates for each of the items in the questionnaire.

81. Although only a few operators had more than one activity (200 with 2 activities, 18 with 3 activities), the questionnaire had to be designed in order that these activities would systematically be covered per item. In some cases, it was not clear whether the same columns were being used for the same activity. Another problem the questionnaire presented was in the design of the data entry system. The application software for the data entry system, IMPS, is not designed to handle this type of questionnaire easily. The resulting data file structures were quite complex and the data management required to prepare the file for statistical data processing was a quite lengthy affair (SAS was used in this case because it would cut down on the processing time such as having to write up edit specifications and table specifications which would be needed if the standard application software are used). This would be, therefore, another area for improvement.

82. The UISS resorted to minimum edits, letting the data stand as is for the most part because of the “newness” of the information obtained. However, future endeavours would profit from edit specifications and imputation procedures, the former especially for valuation items and the latter for item non-responses. While data from surveys of small establishments could be used to establish ranges and acceptable ratios for output and input figures, these have to be refined from the data from UISS.

83. Again, table formats for the survey were developed through interaction with other Project experiences. These resulted essentially in tabulations with industry and gender dimensions. With 75 basic items, that is equivalent to a large number of tables, not to mention the cross-tabulations needed for more in-depth analysis. Perhaps, these can still be rationalized into a set of minimum tabulations which was indeed one of the recommendations adopted during the May 1997 Workshop on Statistics on the Informal Sector.

## **F. Dissemination of results**

84. The UISS results show that about 292,000 out of 1.7 million households in the NCR have at least one member engaged as an informal sector operator. The estimated number of IS operators is 351,000 operating 370,000 IS activities and hiring 169,000 workers. This adds up to a total of an estimated 520,000 persons employed in the IS, 13,600 of whom are unpaid family workers. In July 1995, the LFS estimated that there were 3.1 million employed in the NCR. Of these, 796,000 were either self-employed (675,000) or employers (121,000). The estimate for unpaid family workers was 75,000. Before comparing these figures, it should be noted that the universe for determining economically active household members in the UISS is those belonging to the 5-year-old and over population while the LFS figures are defined in terms of those 15 years old and over. However, most of the figures cited from the UISS are counts for the same age group since the IS operators and workers in the age groups 5 to 14 are minimal. Thus, the UISS results are consistent with the LFS figures and this would provide a rough external validation of the survey. However, it should be noted that there are differences in the measurement of employment between the two surveys primarily due to the operationalization of the survey instrument.

85. Some basic information from the 1995 UISS that may be useful for household accounts appears in Annex B. Tabulations similar to those of the SHOA, as contained in Annex A, are still forthcoming as results on output and capital formation are still being finalized at the time of writing.

86. The dissemination of the survey results was first conducted through a seminar to an audience consisting of a mix of policy makers, implementors of action programs for the IS, statisticians, and IS-

related associations. The programme included an overview of the Interdep Project and its statistical component and presented highlights of the UISS results. Invited speakers from the mix of participants were asked to prepare a brief treatise on the impact of such information on their particular concerns on the informal sector. The dissemination seminar thus served as a means of further validating the survey information and assessing its potential use to those who are concerned with the sector.

#### **IV. The 1995 survey of children (SOC)**

87. This survey was launched in July 1995 utilizing two survey instruments, the Survey on Socio-economic Profile of Filipino Households and the Survey of Children 5 - 17 years old. The instruments veered away from the use of the terms “working children” and “child labour” even though they were actually undertaken as components of the ILO’s International Programme for the Elimination of Child Labor (IPEC). A “rose is a rose by any other name” was not applicable in this situation where it was perceived that the term “child labour” or even “working children” would adversely affect response rates to the survey. This kind of consideration might also be considered for informal sector surveys because of the conditioning effect it may have and respondents may refuse to answer the survey because they are “anyway, not in the informal sector”.

88. This survey is the first probability survey undertaken in the Philippines on working children on a nationwide basis. As part of the statistical component of the IPEC, the SOC represented one possible model for generating information on working children, that of a rider to the regular labour force survey. As such it adopted the sampling design of the ISH up to the ssu level. That is, all LFS sample households identified as having 5 to 17 year olds were taken as sample households who were administered SCL Form 1 (Socio-economic Profile of Filipino Households). All children 5 to 17 years old who were identified through SCL Form 1 to have worked for at least one hour at any time during the past twelve months from the time of the survey were then interviewed through SCL Form 2 (Survey on Children 5 - 17 years old).

89. The household questionnaire (SCL Form 1) captured information on households not covered by the LFS including the following:

- activity (working, looking for work/idle, studying, housekeeping) of children;
- industry of household-operated activities, if any, and workers;
- perceptions of mothers about the work of their children and the effect on schooling;
- information on children working away from home;
- indications of family income and expenditures and housing characteristics.

The ideal respondent to this questionnaire was the parent of the child. In most cases this turned out to be the mother.

90. A separate questionnaire (SCL Form 2) was designed for getting information on the working child. The questionnaire was designed so that the child her or himself would be the respondent. The timing of the survey (July), however, made it difficult to get schoolchildren to respond because classes were in full swing by then. Enumerators, therefore, had to make special schedules so that they could visit the house when the child was expected to be home. This would reduce callbacks and minimize cases where someone else served as respondent for the child. Another problem was that even when the child was available for interview, parents would want to supervise the interview (and respond for the child, too) which could have an adverse effect on the spontaneity and truthfulness of the child’s response.

91. SCL Form 2 obtained information on:

- the working status of the child covering characteristics such as occupation, industry, nature and

status of employment, working hours, place of work for both the past twelve months and the past week;

- working conditions including safety and occupational-health related factors;
- perceptions about last/present job and future plans;
- schooling status;
- economic status;
- job search.

92. By illustrating the possible economic activities that a child could be engaged in, the list applicable to urban areas is typically associated with the informal sector: tricycle driver, fruit/market/food vendor, store operator, handicrafts, etc. Many of the items on economic activity and work, health and safety in the workplace and benefits, are similar to those in the operator questionnaire of the UISS. Thus, the SOC can also be a source of informal statistics on child workers in the Philippines. However, as the preceding paragraph points out, special techniques and arrangements have to be resorted to for getting responses from children.

93. According to the 1995 SOC, an estimated 92,000 children in the NCR worked during the previous week, 46 percent on a permanent basis. UISS estimates show 13,000 children working in the informal sector. If children typically work in the informal sector, then what would account for the difference in these numbers? This is a point for validation as well as the examination of possible measurement or conceptual differences between the two surveys in determining “work” when applied to children.

94. Additional information culled from the SOC is presented in Annex C.

#### **V. The 1993 Survey of Home-workers (SOH)**

95. The survey on home-workers was conducted during the early part of 1995 as the second phase of another ILO initiative, a project on the Social Protection and Welfare of Rural Women Workers in the Putting out System. At the country level, the survey was viewed as a means to:

1. Study working conditions and the social protection of home-workers in the Philippines for policy-making purposes, and
2. Initiate steps toward the continuing enumeration of home-workers in the Philippine statistical system.

96. The SOH represents a third type of model in survey methodology for a special group. A basic requirement was the construction of a frame of home-workers which could not be generated from existing information. To do this, a listing of households in 1993 to update the size data of the ISH sample psus was tapped to generate a list of home-workers. While this was a cost-efficient way of generating a list frame, it also illustrated the limitations of a list frame when the subject matter of the list is new and definitions are not operationally precise. The project report observed that when the SOH was actually carried out, there was a high number of out-of-scope units listed. That is, persons listed as home-workers using the listing schedule failed to meet the criteria of a home-worker as defined by the better designed survey instrument.

97. Basic definitions used in the survey that help clarify the relationship between home-workers and the informal sector are the following:

- *Homework*: the production of goods or the provision of services for an employer (provider of work) or contractor under an arrangement whereby the work is carried out at the place of the

worker's own choosing, often the worker's own home, where there is normally no direct supervision by the employer or contractor. The receiver of work is either a subcontractor, a subcontractee or an outworker.

- *Subcontractor*: party, whether a firm or individual, which assigns a job to a producer/worker, an arrangement whereby the work is carried out at a place of the producer's/worker's own choosing, often the producer's/worker's own home, where normally there is no direct supervision by the contractor. The subcontractor could be a mere buyer of the products or goods or could also be a producer of such goods at the same time.
- *Subcontractee*: person or party who takes on the contract for producing goods as specified by the contractor/buyer/subcontractor under an arrangement whereby the work is carried out at a place of her/his own choosing, often her/his own home, where normally there is no direct supervision by the contractor/buyer/subcontractor. The subcontractee could contribute to any one or more ingredients of production including capital, labour, raw materials, design, equipment, tools, utilities, etc. as may be needed for the production of goods.
- *Outworker*: person who performs the act of producing goods and contributes only his/her labour to the production of goods.

98. The SOH adapted the ISH psus but a separate listing provided the frame for home-workers. The survey covered only 5 of the 15 regions in the Philippines and yielded regional-level estimates for these regions. An interesting facet of the SOH was a post-enumeration survey aimed at determining the accuracy of coverage in the listing of home-workers which listed all those in the "informal sector" as a starting point. The IS was basically equated with self-employed, employer or unpaid family workers. Subcontractors, subcontractees and outworkers were then identified based on who provides the work, the place of work, supervision, disposition of products and services.

99. Basic data items for the survey included the following:

- demographic characteristics (age, sex, education);
- home-working characteristics such as kind of business engaged in, type of home-worker, nature of agreement, working hours, place of work, occupational health;
- work arrangements including materials used, production linkages, problems.

100. The 1993 SOH counted 194,000 home-workers in the NCR, 69 percent of whom were outworkers and 25 percent were subcontractors. The UISS includes "subcontractees/ home-workers" as a possible type of worker but counted only 3,000 working for IS operators. Some 5,000 operators accept contract work.

101. More information on the results of the SOH are contained in Annex D.

## **VI. Conclusions**

102. Institutionalizing the generation of informal statistics from survey data is yet to be achieved. In the Philippines, the 1995 Urban Informal Sector Survey in the National Capital Region is a major step in understanding the requirements of a survey targeting the estimation of number, characteristics, conditions of work, and needs of operators, activities, enterprises, and households of operators in the IS. In addition to the issues and concerns raised in this paper, the one major issue is the formulation of a precise and operational definition of informal sector activities and enterprises. The UISS demonstrated that identifying economic units on the ground can be done. Determining whether a unit is informal or not needs further clarification and agreement among users and producers of the data, which may somehow become a political or program-oriented definition.

103. The UISS is an illustration of the dual approach or mixed household and enterprise survey. Area sampling applications of this nature are still rare for large-scale surveys. One reason for this is the cost of a listing operation for frame construction. Timing becomes a factor here such as that used in the frame construction of the 1993 Survey of Home workers. An economic or population census can be the vehicle for such a listing but the survey would have to be conducted soon after the census.

104. The SOH results provide insights into how to operationalize measurement issues in identifying and categorizing home workers by type. It indicates that the LFS possibly does not correctly classify home workers into self-employed or employed workers; further, it may not cover some of these home workers.

105. Independent surveys are harder to justify when seeking resources to carry them out, so the experience of the 1995 Survey of Children can be an alternative model to the conduct of a regular informal sector survey, the UISS as a module of the ISH, to be more precise. The expected technical difficulties and decision points that need to be addressed for this type of approach are mentioned in Verma (1992). How often the survey should run would depend on its expected use, especially for national accounts computation. Furthermore, Alonzo (1993) suggests modification of the Family Income and Expenditures Survey and the Labor Force Survey as a better alternative to the collection of data on household-operated activities. Specifically, he mentions a FIES modification to get income by activity and improve valuation of investments undertaken by household enterprises. For the LFS, a basic modification would be obtaining information on the type of enterprise of both salaried and self-employed persons.

106. Informal sector surveys have necessarily complex sampling designs, and estimation procedures need to account not just for design weights but also for non-response and coverage errors. The computation of standard errors is not an easy task without specialized software. This is an important area for training and research.

## Annex A

**Table SHOA1. Number of enterprises: 1988 CE and 1988 SHOA**

<b>Activity</b>	<b>Census</b>	<b>SHOA</b>
Mining and Quarrying	111	21,171
Food processing	31,247	7,275
Garments & Leather	15,710	101,641
Wood & Wood Products	6,120	53,417
Other Manufacturing	14,070	28,335
Wholesale Trade	15,414	25,155
Retail Trade	128,970	835,729
Transport	812	150,094
Personal, household services	34,671	87,313
Restaurants and hotels	8,064	17,061
Other Services	51,085	32,351

Source: The Economics of Household-operated Activities in the Philippines. R. P. Alonzo. 1993.

## Annex A

**Table SHOA2. Value added: 1988 CE and 1988 SHOA**

<b>Activity</b>	<b>Census</b>	<b>SHOA</b>
Mining and Quarrying	12,140	300,487
Food processing	1,727,099	926,640
Garments & Leather	741,769	922,652
Wood & Wood Products	406,553	380,451
Other Manufacturing	1,200,553	306,048
Wholesale Trade	10,549,529	823,702
Retail Trade	6,858,376	12,816,481
Transport	139,589	2,553,085
Personal, household services	1,178,263	735,880
Restaurants and hotels	2,290,638	529,809
Other Services	838,057	658,177

Source: The Economics of Household -operated Activities in the Philippines. R. P. Alonzo. 1993.

## Annex A

**Table SHOA3. Net Income: 1988 CE and 1988 SHOA**

<b>Activity</b>	<b>Census</b>	<b>SHOA</b>
Mining and Quarrying	2,270	281,799
Food processing	1,171,050	837,539
Garments & Leather	496,521	800,777
Wood & Wood Products	254,398	309,918
Other Manufacturing	744,234	262,918
Wholesale Trade	9,947,933	795,059
Retail Trade	4,729,999	12,597,652
Transport	100,407	2,004,319
Personal, household services	744,515	635,452
Restaurants and hotels	1,497,463	513,663
Other Services	567,691	574,610

Source: The Economics of Household -operated Activities in the Philippines. R. P. Alonzo. 1993.

## Annex A

**Table SHOA4. Gross Value of Production and GVA: 1988 SHOA & 1988 National Accounts**

<b>Gross Value of Production</b>	<b>NA</b>	<b>SHOA</b>
<b><i>Total</i></b>	<b><i>1,467,955</i></b>	<b><i>110,159</i></b>
Agriculture	193,954	76,532
Mining and Quarrying	22,379	354
Manufacturing	784,121	4,939
Trade	155,323	17,790
Other Activities	321,178	10,544
<b>Gross Value Added</b>	<b>NA</b>	<b>SHOA</b>
<b><i>Total</i></b>	<b><i>656,758</i></b>	<b><i>81,475</i></b>
Agriculture	155,532	56,345
Mining and Quarrying	15,956	295
Manufacturing	279,147	2,650
Trade	114,317	15,736
Other Activities	91,806	6,449

Gross value added for SHOA is estimated as net receipts plus compensation of workers.

Source: The Economics of Household-operated Activities in the Philippines. R. P. Alonzo. 1993

## Annex B

**Table UISS1. Number of IS activities by industry group**

<b>Code</b>	<b>Industry Group</b>	<b>Frequenc y</b>	<b>Percent</b>
1-	Agriculture, Forestry, Fishery	11,728	3.1
2-	Textile, wearing apparel, leather manufacturing	19,322	5.2
3-	Other Manufacturing	20,301	5.5
4-	Construction	9,117	2.5
5-	Sari-sari stores	110,271	29.8
6-	Other food and beverage retailing	28,382	7.7
7-	Other trade	34,817	9.4
8-	Operators of bus, taxicabs, jeepneys	16,535	4.5
9-	Tricycles and other transport	17,012	4.6
10-	Renting of buildings, rooms	13,007	3.5
11-	Financing, insurance, real estate, business services	5,089	1.4
12-	Repair services	16,940	4.6
13-	Other personal and household services	17,307	4.7
14-	Restaurants, cafes and other eating & drinking places	26,589	7.2
15-	Hotels, motels and other lodging places	11,556	3.1
16-	Others	12,537	3.4
	<b>TOTAL</b>	<b>370,510</b>	<b>100.0</b>

## Annex B

**Table UISS2. Number of informal sector activities with workers by number of workers by industry**

Industry	No. of Workers			Total
	1-4	5-9	NR	
<b>Total</b>	<b>45,861</b>	<b>8,582</b>	<b>14,959</b>	<b>69,402</b>
Agriculture, Forestry, Fishery	645	416	216	1,277
Textile, wearing apparel, leather manufacturing	2,753	806	1,154	4,713
Other Manufacturing	6,966	1,996	2,422	11,384
Construction	595	130	233	958
Sari-sari stores	4,610	0	1,150	5,760
Other food and beverage retailing	3,254	681	172	4,107
Other trade	9,473	1,066	2,635	13,174
Operators of bus, taxicabs, jeepneys	2,044	166	1,097	3,307
Tricycles and other transport	528	31	579	1,138
Renting of buildings, rooms	56	0	0	56
Financing, insurance, real estate, business services	889	1,663	931	3,483
Repair services	4,572	58	1,366	5,995
Other personal and household services	3,547	21	976	4,545
Restaurants, cafes and other eating & drinking places	4,143	868	1,551	6,562
Hotels, motels and other lodging places	5	138	0	143
Others	1,779	544	477	2,799

## Annex B

**Table UISS3. Number of informal sector workers by type of worker by sex**

Type of Worker	Sex			Total
	Male	Female	NR	
Active business partner	4,761	2,187	0	6,948
Permanent employee	53,950	3,068	0	97,018
Temporary/seasonal	15,390	9,938	0	25,328
Casual employee	6,942	,950	0	16,892
Subcontractee/homeworker	2,161	989	0	3,151
Trainee/apprentice	988	708	0	1,697
Unpaid family worker	7,607	5,987	0	13,594
NR	2,074	1,392	759	4,225
<b>Total</b>	<b>93,874</b>	<b>74,219</b>	<b>759</b>	<b>168,852</b>

## Annex C

**Table SOF1. Number of children 5-17 years old who worked during the previous week, by urbanity, sex, age: July 1995**

<b>AGE GROUP SEX/URBANITY</b>	<b>PHILIPPINES</b>	<b>NCR</b>
<b>Both Sexes</b>	<b>2,851,674</b>	<b>92,284</b>
5-9 years old	162,500	8,465
10-14 years old	1,263,608	25,891
15-17 years old	1,425,466	57,928
<b>Male</b>	<b>1,894,634</b>	<b>35,950</b>
5-9 years old	104,643	2,750
10-14 years old	819,702	10,374
15-17 years old	970,289	22,826
<b>Female</b>	<b>957,040</b>	<b>56,334</b>
5-9 years old	57,958	5,715
10-14 years old	443,905	15,516
15-17 years old	455,177	35,103
<b>URBAN</b>		
<b>Both Sexes</b>	<b>950,630</b>	<b>92,284</b>
5-9 years old	48,909	8,465
10-14 years old	386,345	25,891
15-17 years old	515,376	57,928
<b>Male</b>	<b>580,056</b>	<b>35,950</b>
5-9 years old	28,631	2,750
10-14 years old	232,336	10,374
15-17 years old	319,089	22,826
<b>Female</b>	<b>370,575</b>	<b>56,334</b>
5-9 years old	20,278	5,715
10-14 years old	154,010	15,516
15-17 years old	196,287	35,103
<b>RURAL</b>		
<b>Both Sexes</b>	<b>1,901,043</b>	<b>0</b>
5-9 years old	113,691	
10-14 years old	877,262	
15-17 years old	910,090	
<b>Male</b>	<b>1,314,579</b>	<b>0</b>
5-9 years old	76,012	
10-14 years old	587,367	
15-17 years old	651,200	
<b>Female</b>	<b>586,466</b>	<b>0</b>
5-9 years old	37,679	
10-14 years old	289,896	
15-17 years old	258,891	

## Annex C

**Table SOF2. Number of children 5-17 years old who worked during the previous week by nature of employment, sex: July 1995**

STATUS OF EMPLOYMENT SEX/URBANITY	PHILIPPINES	NCR
<b><i>Both Sexes</i></b>	<b>2,851,674</b>	<b>92,285</b>
Worker in Private Household	226,282	22,310
Worker in Private Establishment	567,694	19,075
Worker in Govt./Govt. Corp.	11,088	748
Paid Worker in Own Hhld. Oper. Ent.	39,776	2,281
Self Empl. Without any Paid Emp.	193,802	9,031
Employer in Own Hhld. Oper. Ent.	26,442	1,554
Unpaid Worker in Own Hhld. Oper. Ent.	1,716,777	27,619
Unpaid Worker for Other Members	15,871	754
Not Reported	54,942	8,914
<b><i>Female</i></b>	<b>1,894,533</b>	<b>35,949</b>
Worker in Private Household	92,751	3,476
Worker in Private Establishment	395,372	10,892
Worker in Govt./Govt. Corp.	9,662	748
Paid Worker in Own Hhld. Oper. Ent.	30,125	765
Self Empl. Without any Paid Emp.	153,701	7,141
Employer in Own Hhld. Oper. Ent.	17,933	1,175
Unpaid Worker in Own Hhld. Oper. Ent.	1,165,880	10,915
Unpaid Worker for Other Members	11,043	377
Not Reported	18,166	459
<b><i>Male</i></b>	<b>957,039</b>	<b>56,334</b>
Worker in Private Household	133,531	18,834
Worker in Private Establishment	172,322	8,183
Worker in Gov/Govt. Corp.	1,425	
Paid Worker in Own Hhld. Oper. Ent.	9,651	1,515
Self Empl. Without any Paid Emp.	401,01	1,890
Employer in Own Hhld. Oper. Ent.	7,509	377
Unpaid Worker in Own Hhld. Oper. Ent.	550,897	16,703
Unpaid Worker for Other Members	4,827	377
Not Reported	36,776	8,455

Annex C

**Table SOF3. Number of children 5-17 years old who worked during the previous week by kind of business/industry, sex: July 1995**

MAIN INDUSTRY/SEX/URBANITY	PHILIPPINES	NCR
<b>Both Sexes</b>	<b>2,851,674</b>	<b>92,285</b>
Farming	1,594,256	
Fishing	193,124	1,168
Forestry/Logging	32,971	
Mining	1,008	
Quarrying	8,043	
Retail Trade	449,859	37,397
Wholesale Trade	16,448	1,805
Transportation	45,597	3,067
Communication	678	
Construction	36,149	2,223
Utilities	3,564	
Health Services	1,730	370
Education Services	1,776	
Food Manufacturing	47,230	3,872
Non-Food Manufacturing	114,455	3,900
Restaurant/Catering	46,330	3,838
Personal Services	194,426	17,688
Other Industry, NEC	64,030	16,957

## Annex C

**Table SOF3. Number of children 5-17 years old who worked during the previous week, by kind of business/industry, sex: July 1995**

MAIN INDUSTRY/SEX/URBANITY	PHILIPPINES	NCR
<b>Male</b>	<b>1,894,634</b>	<b>35,951</b>
Farming	1,201,066	
Fishing	174,870	
Forestry/Logging	26,547	
Mining	1,008	
Quarrying	8,043	
Retail Trade	191,402	13,497
Wholesale Trade	8,103	883
Transportation	45,019	3,067
Communication	678	
Construction	35,323	1,885
Utilities	2,720	
Health Services	868	370
Food Manufacturing	32,304	1,945
Non-Food Manufacturing	54,390	1,595
Restaurant/Catering	16,323	2,020
Personal Services	60,574	2,546
Other Industry, NEC	35,396	6,975
<b>Female</b>	<b>957,040</b>	<b>56,334</b>
Farming	393,190	
Fishing	18,254	
Forestry/Logging	6,424	
Retail Trade	258,457	23,900
Wholesale Trade	8,345	922
Transportation	578	
Construction	826	
Utilities	844	
Health Services	862	
Education Services	1,776	
Food Manufacturing	14,926	1,927
Non-Food Manufacturing	60,065	2,305
Restaurant/Catering	30,007	1,818
Personal Services	33,852	5,142
Other Industry, NEC	28,634	9,982

## Annex D

**Table SOH1. Estimated number of homeworkers by type, sex, age group and region, urban-rural: 1993**

REGION AND AGE GROUP, URBAN-RURAL	TYPE OF HOMEWORKER												
	TOTAL	SUBCONTRACTOR						SUBCONTRACTEE			OUTWORKER		
		Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
<b>TOTAL 5 EGIONS</b>	<b>1,199,089</b>	<b>254,207</b>	<b>944,882</b>	<b>104,321</b>	<b>51,561</b>	<b>52,760</b>	<b>260,202</b>	<b>97,126</b>	<b>163,076</b>	<b>834,566</b>	<b>105,520</b>	<b>729,046</b>	
Below 10 yrs	2,121	836	1,285	0	0	0	1,143	381	762	978	455	523	
10 - 14	23,325	5,721	17,604	768	194	575	3,310	1,525	1,786	19,246	4,002	15,244	
15 - 19	78,047	15,597	62,450	4,036	2,371	1,665	11,500	3,572	7,928	62,512	9,654	52,858	
20 - 24	103,652	21,521	82,131	6,137	2,972	3,165	12,805	5,216	7,589	84,710	13,333	71,377	
25 - 44	666,240	151,266	514,973	69,754	34,605	35,149	146,462	59,337	87,125	450,024	57,324	392,700	
45 - 54	197,820	51,131	146,690	24,874	14,812	10,062	56,661	18,108	38,553	116,285	18,210	98,075	
55 - 64	85,935	23,073	62,862	8,204	4,039	4,165	27,739	10,061	17,678	49,992	8,974	41,018	
65 yrs. & over	42,657	10,075	32,581	4,084	1,575	2,509	16,192	6,730	9,462	22,381	1,770	20,611	
<b>TOTAL URBAN</b>	<b>516,807</b>	<b>111,755</b>	<b>405,052</b>	<b>59,950</b>	<b>30,492</b>	<b>28,941</b>	<b>54,265</b>	<b>17,055</b>	<b>37,210</b>	<b>402,593</b>	<b>63,567</b>	<b>339,026</b>	
Below 10 yrs	717	194	523	0	0	0	0	0	0	717	194	523	
10 - 14	10,069	1,751	8,318	387	194	194	0	0	0	9,682	1,557	8,125	
15 - 19	32,555	7,720	24,835	2,226	1,586	640	727	253	474	29,603	5,881	23,721	
20 - 24	52,641	9,822	42,819	2,713	1,194	1,519	2,695	221	2,475	47,233	8,407	38,826	
25 - 44	310,595	72,959	237,636	44,642	22,053	22,589	34,937	12,790	22,147	231,016	38,115	192,901	
45 - 54	93,618	27,295	66,323	17,154	10,604	6,550	11,857	3,870	7,987	64,606	12,821	51,785	
55 - 64	35,251	8,242	27,008	4,864	1,535	3,329	6,189	1,899	4,290	24,198	4,808	19,390	
65 yrs. & over	17,420	3,460	13,960	2,541	1,202	1,339	2,491	568	1,923	12,388	1,690	10,698	
<b>TOTAL RURAL</b>	<b>682,282</b>	<b>142,692</b>	<b>539,890</b>	<b>44,371</b>	<b>21,069</b>	<b>23,819</b>	<b>205,938</b>	<b>80,072</b>	<b>125,866</b>	<b>431,973</b>	<b>41,953</b>	<b>390,020</b>	
Below 10 yrs	1,404	642	762	0	0	0	1,143	381	762	261	261	0	
10 - 14	13,256	3,970	9,285	381	0	381	3,310	1,525	1,786	9,564	2,445	7,119	
15 - 19	45,492	7,876	37,616	1,810	785	1,025	10,773	3,319	7,454	32,909	3,772	29,137	
20 - 24	51,011	11,700	39,312	3,424	1,778	1,646	10,110	4,996	5,114	37,478	4,926	32,551	
25 - 44	355,644	78,307	277,337	25,112	12,552	12,560	111,524	46,547	64,978	219,008	19,209	199,799	
45 - 54	104,203	23,836	80,367	7,720	4,208	3,512	44,804	14,238	30,566	51,679	5,390	46,289	
55 - 64	50,684	14,831	35,853	3,340	2,503	837	21,551	8,162	13,389	25,794	4,166	21,628	
65 yrs. & over	25,236	6,615	18,621	1,542	373	1,169	13,701	6,162	7,539	9,993	80	9,913	

## Annex D

### Table SOH1. Estimated number of homeworkers by type, sex, age group and region, urban-rural: 1993 (continued)

REGION AND AGE GROUP, URBAN-RURAL	TOTAL	TYPE OF HOMEWORKER									OUTWORKER		
		Male	Female	SUBCONTRACTOR			SUBCONTRACTEE			Both Sexes	Male	Female	
	Both Sexes			Both Sexes	Male	Female	Both Sexes	Male	Female				
Total NCR	193,515	69,472	124,043	48,185	25,157	23,222	13,353	7,160	5,999	132,171	37,155	94,822	
Below 10 yrs	194	194	0	0	-	-	0	-	-	194	194	-	
10 - 14	5,225	1,161	4,064	387	194	194	0	-	-	4,838	968	3,870	
15 - 19	13,546	4,644	8,902	1,742	1,355	387	0	-	-	11,804	3,290	8,515	
20 - 24	17,803	4,644	13,159	1,548	387	1,161	387	-	387	15,868	4,257	11,611	
25 - 44	99,660	37,735	61,925	29,414	14,320	15,094	8,128	5,225	2,903	62,118	18,190	43,928	
45 - 54	38,897	16,449	22,448	10,837	7,160	3,677	3,290	1,548	1,742	25,770	7,741	17,029	
55 - 64	14,127	3,483	10,643	3,096	968	2,129	1,161	387	774	9,869	2,129	7,741	
65 yrs. & over	4,257	968	3,290	1,161	581	581	387	-	387	2,709	387	2,322	
Region 3	254,219	24,151	230,068	17,033	5,339	11,694	10,169	1,525	8,643	227,018	17,033	209,985	
Below 10 yrs	0	0	0	0	0	0	0	0	0	0	0	0	
10 - 14	4,576	508	4,068	0	0	0	0	0	0	4,576	508	4,068	
15 - 19	20,846	2,034	18,812	508	254	254	0	0	0	20,338	1,780	18,558	
20 - 24	28,473	2,796	25,676	1,017	254	763	254	0	254	27,201	2,542	24,659	
25 - 44	151,006	12,203	138,804	9,915	2,796	7,118	6,864	763	6,101	134,228	8,643	125,584	
45 - 54	37,794	4,322	28,473	3,051	1,271	1,780	2,288	508	1,780	27,456	2,542	24,913	
55 - 64	11,210	2,058	9,152	1,525	763	763	508	254	254	9,176	1,041	8,135	
65 yrs. & over	5,339	254	5,085	1,017	254	763	254	0	254	4,068	0	4,068	
Region 4	261,304	36,276	226,028	17,507	7,578	9,930	51,477	12,020	39,457	192,581	15,678	176,903	
Below 10 yrs	7840	261	523	0	0	0	0	0	0	784	261	523	
10 - 14	4,703	784	3,919	0	0	0	261	0	261	4,442	784	3,658	
15 - 19	13,327	1,568	11,759	261	0	261	2,352	523	1,829	10,713	1,045	9,668	
20 - 24	28,473	2,796	25,676	1,017	254	763	254	0	254	27,201	2,542	24,659	
25 - 44	151,006	12,203	138,804	9,915	2,796	7,118	6,864	763	6,101	134,228	8,643	125,584	
45 - 54	37,794	4,322	28,473	3,051	1,271	1,780	2,288	508	1,780	27,456	2,542	24,913	
55 - 64	11,210	2,058	9,152	1,525	763	763	508	254	254	9,176	1,041	8,135	
65 yrs. & over	5,339	254	5,085	1,017	254	763	254	0	254	4,068	0	4,068	
Region 5	108,893	18,730	90,193	6,425	3,376	3,049	16,334	3,920	12,41	86,243	11,434	74,809	
Below 10 yrs	0	0	0	0	0	0	0	0	0	0	0	0	
10 - 14	2,722	980	1,742	0	0	0	0	0	0	2,722	980	1,742	
15 - 19	7,078	1,663	5,445	0	0	0	0	0	0	7,078	1,633	5,445	
20 - 24	10,345	1,198	9,147	762	544	218	544	0	544	9,038	653	8,385	
25 - 44	59,891	10,236	49,655	4,029	1,633	2,396	9,583	2,722	6,860	46,280	5,880	40,399	
45 - 54	16,007	2,722	13,285	1,307	980	327	3,158	218	2,940	11,543	1,525	10,018	
55 - 64	8,603	1,416	7,187	109	0	109	2,287	871	1,416	6,207	544	5,662	
65 yrs. & over	4,356	544	3,811	218	218	0	762	109	653	3,376	218	3,158	
Region 7	381,158	131,500	249,658	28,968	19,058	9,910	184,480	80,043	104,437	168,091	32,398	135,692	
Below 10 yrs	1,143	381	762	0	0	0	1,143	381	762	0	0	0	
10 - 14	6,099	2,287	3,812	381	0	381	3,049	1,525	1,525	2,668	762	1,906	
15 - 19	23,251	5,717	17,533	1,525	762	762	9,148	3,049	6,099	12,578	1,906	10,672	
20 - 24	32,398	11,054	21,345	2,287	1,525	762	9,529	4,955	4,574	20,583	4,574	16,009	
25 - 44	201,251	72,801	128,450	18,296	12,197	6,099	92,621	43,833	48,788	90,334	16,771	73,563	
45 - 54	65,178	20,583	44,595	4,193	3,049	1,143	37,735	12,959	24,775	23,251	4,574	18,677	
55 - 64	32,398	12,197	20,201	1,906	1,525	381	18,296	7,242	11,054	12,197	3,430	8,767	
65 yrs. & over	19,820	6,480	13,341	381	0	381	12,959	6,099	6,861	6,480	381	6,099	

**Table SOH2. Economic Activity of Homeworkers by Sex and By Region, Philippines: 1993**

Activity	Total for 5 Regions			Metro Manila			Central Luzon			Southern Tagalog			Bicol	
	Total	Male	Female	All areas	Male	Female	All areas	Male	Female	All areas	Male	Female	All areas	Male
<b>Total Homeworkers</b>	<b>199,089</b>	<b>254,207</b>	<b>944,882</b>	<b>193,515</b>	<b>69,472</b>	<b>124,043</b>	<b>254,219</b>	<b>24,151</b>	<b>230,068</b>	<b>261,304</b>	<b>36,276</b>	<b>226,028</b>	<b>108,893</b>	<b>18,730</b>
<b>Total Per Cent</b>	<b>100.0</b>	<b>21.2</b>	<b>78.8</b>	<b>100.0</b>	<b>35.9</b>	<b>64.1</b>	<b>100.0</b>	<b>9.5</b>	<b>90.5</b>	<b>100.0</b>	<b>13.5</b>	<b>86.5</b>	<b>100.0</b>	<b>17.2</b>
Agriculture, Fishery & Forestry	0.5	0.4	0.1	0.1	0.1	-	0.2	0.2	-	0.2	0.1	0.1	-	-
Food Manufacturing	0.7	0.3	0.4	0.9	0.4	0.5	0.8	0.1	0.6	0.4	0.1	0.3	1.4	0.1
Grain Milling	1.2	0.8	0.4	4.7	3.3	1.4	0.4	0.3	0.1	0.5	0.2	0.4	1.1	1.1
Hand Weaving	13.6	1.2	12.4	5.3	0.7	4.6	4.3	0.2	4.0	13.5	0.7	12.7	62.0	7.1
Garments Manufacturing	34.2	2.2	32.0	19.7	7.2	12.4	71.0	2.5	68.5	40.1	2.4	37.7	10.8	0.1
Leather product manufacturing	0.7	0.2	0.5	1.4	0.6	0.8	1.7	0.4	1.3	0.2	-	0.2	0.3	0.1
Footwear manufacturing	4.7	1.5	3.1	19.8	7.6	12.4	4.2	0.7	3.5	6.5	2.5	4.0	0.2	0.1
Wood cork manufacturing	20.7	6.7	14.0	5.3	2.4	2.9	10.5	2.5	8.0	27.0	4.7	22.4	13.1	3.1
Furniture manufacturing	2.6	1.7	0.9	3.8	2.3	1.5	1.6	1.2	0.4	1.0	0.9	0.1	1.6	1.1
Paper product manufacturing	2.5	0.4	2.2	6.2	1.2	5.0	0.2	-	0.1	4.9	0.5	4.5	6.6	1.1
Chemicals manufacturing	0.8	0.7	0.5	5.3	1.7	3.6	0.4	0.1	0.2	0.3	-	0.3	-	-
Non metallic manufacturing	0.6	0.2	0.3	1.1	0.3	0.7	0.2	0.2	-	0.3	0.1	0.3	-	-
Basic metal manufacturing	0.2	0.1	0.1	0.1	0.1	-	-	-	-	-	-	-	0.5	0.1
Fabricated metal	0.7	0.3	0.4	3.8	2.1	1.7	-	-	-	1.2	0.1	1.0	-	-
Jewelries manufacturing	4.7	0.9	3.8	0.1	0.1	-	0.2	-	0.2	-	-	-	0.1	0.1
Toys/Doll manufacturing	0.3	0.1	0.2	1.3	0.2	1.1	0.4	0.2	0.1	0.1	-	0.1	-	-
Stationery/office supply	0.2	0.1	-	1.3	1	0.3	-	-	-	-	-	-	-	-
Other manufacturing	9.1	3.3	5.8	16.9	3.2	13.7	2.1	0.3	1.8	1.4	0.8	0.5	0.1	-
Services	1.6	0.5	1.8	2.8	1.3	1.5	1.9	0.2	1.7	1.6	0.2	1.3	1.8	0.1
Not reported	0.6	0.2	0.4	0.1	-	0.1	-	-	-	0.7	0.1	0.7	0.5	0.1

## Endnotes

<sup>1</sup> P Alonso on The Economics of Household-Operated Activities in the Philippines : Micro and Macro Perspectives.

<sup>2</sup> *Methodology for the Quantifications Of the Contribution of the Informal Sector*, NSCB, Philippines, (1992).

<sup>3</sup> Verma (1992): *Methods of Data Collection on the Informal Sector*, Geneva, (1992).

## ***Minimum data set on the informal sector for national accounting purposes***

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### **I. Aspects of informal sector statistics**

1. The majority of informal sector units operate on a small scale, with low technology, and with low skills. Examples are the preparation and sale of food, maintenance and repair shops, sales of textiles, clothing and second-hand goods, passenger and freight transportation, etc. Production activities may take place at home and sales activities may not need fixed locations.

2. With traditional statistical approaches which rely for example on addresses provided by registers or sampling frames, these units are difficult to survey. Seasonal or occasional types of operation may increase their statistical invisibility. And even if informal sector units were eventually “caught” by statistical agencies, they may have difficulty providing all the information requested because informal sector units are by definition those which do not have a complete set of accounts.

3. A first step to a better survey of informal sector activities was the agreement of an international definition of the informal sector. According to the framework on statistics on the informal sector adopted by the fifteenth International Conference of Labour Statisticians in 1993 (ILO 1993), which is compatible with other related economic and social statistics such as the 1993 SNA, the informal sector comprises a *subset* of production units engaged in the production of goods and services with the primary *objective of generating employment and incomes* to the persons concerned. As long as those units do *not constitute as separate legal entities* and have *no complete sets of accounts* (including balance sheets of assets and liabilities), they form *unincorporated enterprises owned by households*. With regard to the scope of national accounting, informal sector units *operate therefore only within the household sector*.

4. Annex 1 translates the definition of the informal sector into statistical terms and here in particular into the concept of the household sector as it is understood in the 1993 SNA. Annex 1 deals with the fact that the internationally agreed upon definition of the informal sector is primarily an analytical and political concept rather than a statistical concept (Husmanns 1997). This means that the concept of the informal sector tries to include those units which have similar economic objectives and behaviour rather than to cover all those units within the household sector which are not covered by other conventional surveys. In addition, Annex 1 expresses the degree of flexibility given in the internationally agreed upon definition of the informal sector in applying its concept to national circumstances. Both reasons require explanations which make the footnotes of that annex relatively extensive.

5. Another step taken by the ILO towards providing a better report on informal sector activities is the development of an adequate survey strategy which takes into account the specific nature of informal sector units. The preferred strategy is a mixed survey approach where in a first stage households carrying out informal activities are identified by household surveys and in a second stage all relevant informal

sector information is obtained through an establishment survey (Husmanns 1997). Currently, the ILO is processing and preparing for publication the results of three pilot studies on informal sector surveys which were carried out in Bogota, Dar es Salaam and Manila (Guerrero 1997).

6. The next step towards providing a better report on informal sector activities would be that the respective governments of countries with a considerable share of informal sector activities decide to provide more funds for better surveying these activities. Typically, governments are primarily very much concerned with the statistical representation of employment and production in formal economic activities and regard informal activities as a minor phenomenon which may disappear as soon as the formal economy grows further. However, for many reasons, in particular the fact that many countries are under pressure to cut governmental budgets in order to foster growth, certain estimates indicate that the informal sector is already large and is indeed growing in many countries.

7. With regard to urban or non-agricultural employment and based on estimates for selected countries, the share of informal sector employment is estimated to be roughly around 20 - 60% in Asia, 50 - 60% in Latin America and 60 - 90% in Africa. The contribution of the informal sector to GDP in Africa is estimated to be roughly 20 - 40% of total GDP and 40 - 60% of non-agricultural GDP (Charmes 1997).

8. Currently, the state of informal sector statistics is not always satisfactory, because many countries do nothing at all to quantify the phenomenon and others prepare only rough, "conservative" estimates. Some try to survey the informal sector, however, funds for doing this properly are mostly inadequate (Becker 1998). UNSD carried out two workshops on informal sector statistics, one for the African region in 1996 (UNSD/ECA 1996) and one for the Asia and the Pacific region in 1997 (UNSD/ESCAP/ILO 1997; for the recommendations made by the workshop see Annex 3). Many countries indicated that they would increase their statistical activity with regard to informal sector activities in the coming years provided funds are not further cut.

9. The integration of informal sector data into larger data systems such as the national accounts is also at a very preliminary stage in many countries. Participants of the UNSD workshop on informal sector statistics held in Africa in 1996 strongly supported the integration of the informal sector into the national accounts, but "expressed unease about national accountants reluctance ... to use survey data for this purpose" (UNSD/ECA 1996, §34).

10. Besides the aforementioned ILO pilot projects which focus explicitly on informal sector statistics, the UN has also contributed towards work to adequately reflect household production activities in their efforts to improve household surveys (UN 1986, 1989, 1991 and 1994). Those efforts are focused on obtaining relatively detailed data on household sector activities which may require some substantial efforts with regard to survey design and data processing.

11. Although substantial progress has been made recently on defining the informal sector and statistical tools are being developed to collect data, adequate financing of the collection of informal sector data seems to be the current bottleneck in many countries in further improving informal sector statistics and promoting their use in larger frameworks such as national accounts.

12. Therefore, in the following, a strategy is developed on how to obtain a minimum set of data from informal sector units for national accounting purposes in order to minimize costs, without giving up the essential data requirements of national accountants.

## **II. A proposal for a minimum data set for national accounting purposes**

13. In statistics, there is always a conflict between data needs (as detailed as possible) and the cost and complexity of surveys, data processing, response rate and data quality. With regard to the data needs of national accounts on the informal sector, a compromise is developed in the following which relies both on selected, but essential data from the field plus additional estimates from statistical offices.

14. In Annex 2, a proposal is made for a minimum data set of informal sector data for use in national accounts. The rationale behind this strategy is that informal sector activities do not have a very sophisticated input and output structure: When certain key information such as the type, quantity and/or value of output, the duration of the activity, the number of employees and the composition of the household is known, then it requires only a few additional assumptions to estimate missing elements such as intermediate and own consumption as well as wages and salaries, which are necessary to compile the production and income accounts.

15. Besides the information needed to identify an informal sector unit, data on the following are considered to be essential:

- output sold, by type, quantity and if possible value;
- purchases and sales of equipment by type, quantity and if possible value;
- loans and their repayment.

16. For further calculations, data is needed on demographics and labour such as:

- number of household members, if possible by age and sex;
- number of employees in the units;
- number of jobs in other units, if possible differentiated by formal and informal units.

17. For both, the informal sector unit and informal employment, data on frequency and duration of production/job is essential.

18. Based on that information, other items needed to compile the accounts can be calculated in the statistical offices such as:

- output for own use by multiplying the number of household members by the average consumption of certain goods;
- wages and salaries paid and received are a result of employees (differentiated by type, duration, skills, etc.) of a unit or respectively jobs held in other units. Other accounting items such as intermediate consumption, major repairs and inventories may be calculated as a percentage of output sold. Some may even be zero, which will most likely be the case for some items such as taxes on production, subsidies, social contributions, social benefits, etc.

19. The calculations listed above are only examples. Further refinements have to be made. For example, the calculations have to differentiate between certain types of activities, type of work place, regions, etc.

20. It is still advisable to obtain the data on the informal sector even when the informal sector is not intended to be shown separately in the national accounts. When a country wishes to compile only the household production and income accounts, then one may not need to request information on capital formation and loans which would then reduce the minimum data set to a mini-minimum set.

### **Annex 1: Definition of the informal sector with regard to units as well as production**

Item	Definition of informal sector units and informal sector production (= shaded areas)
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I. Units	Unincorporated enterprises owned by households which are <i>not incorporated as legal entities</i> separate from the household and which have <i>no complete set of accounts</i> and which comprise
	1. Informal sector enterprises: 1.1 Informal own-account enterprises <sup>1</sup> ; 1.2 Enterprises of informal employers <sup>1</sup> ;
	2. Other unincorporated enterprises which do not meet the criteria of the informal sector definition.
II. Production	1. Production of household enterprises of all goods or services that are supplied to units other than their producers (market production)
	1.1 Market production of informal sector units (depending on practical reasons or national circumstances the informal sector may have either a broader or a narrower scope <sup>2</sup> )
	1.2 Other market production (which is carried out by household enterprises which do not meet the criteria of the informal sector definition).
	2. Own-account production of all <i>goods</i> that are retained by their producers for own consumption: 2.1 Subsistence farmers and others engaged in the production of agricultural goods for own final consumption; 2.2 Construction of own dwellings; 2.3 Production of other goods for own consumption.
	3. Producers of <i>services</i> for own final use such as 3.1 Domestic services produced by employing paid domestic staff; 3.2 Services of owner occupied dwellings.

1) Types of informal sector units:

- 1.1 *Informal own-account enterprises* owned and operated by own-account workers which may employ contributing family workers and employees on an *occasional* basis and which may comprise, depending on national circumstances, either *all* own-account enterprises or only those which are *not registered* under specific forms of national legislation, and
- 1.2 *Enterprises of informal employers* which employ one or more employees on a *continuous* basis and which, depending on national circumstances, may be defined in terms of one or more of the following criteria:  
(I) *Size* of the unit below a specified level of employment;  
(ii) *Non-registration* of the enterprise or its employees.

2) The application of definition allows for a certain degree of *flexibility* regarding the scope of the informal sector:

Examples for a *narrower scope*:

- (i) Depending on national survey capacities, the informal sector may comprise only *urban* areas;  
(ii) For practical reasons, the informal sector may be limited to units engaged in *non-agricultural*

activities. Examples for a *broader scope*:

- (i) Depending on national circumstances, *domestic services* may be included in the informal sector;  
(ii) If households sell (at least some of) their *own-account production of goods*, they belong to the informal sector provided that they meet the other criteria of the informal sector definition;  
(iii) Conceptually, *hidden (or grey, underground, illegal, etc.) activities* form part of the informal sector if they are undertaken by units meeting the criteria of the informal sector definition. Sources: 1993 SNA, §4.139ff., 6.14ff.; ILO, Resolution concerning statistics of employment in the informal sector, 15th International Conference of Labour Statisticians, Geneva, January 1993, Bulletin of Labour Statistics, 1993-2.

## Annex 2: Minimum data set on the informal sector for national accounting purposes

Accounts	Examples of data from informal sector units	Priority of data for national accounts	Data sources		
			Household survey	Enterprise survey	Mixed survey
Production account	<i>Input, intermediate consumption, output, own final use:</i> Type, quantity and value of output sold Type, quantity (and value) of output produced Type, quantity (and value) of output for own use, barter, etc. Type, quantity and value of inputs (raw materials, electricity, fuel, water, rent of land, buildings and machinery/vehicles, maintenance, transport, insurance, license fees, etc.) Frequency of operation, duration of operation, etc.	** * * *  **	-	x	x
Generation of income account, Allocation of primary income account	<i>Compensation of employees, paid and received, by informal sector units:</i> Wages and salaries in cash and in kind, bonuses, allowances, Frequency and duration of work, etc.	*  **	(x)	(x)	x
Capital and financial account	<i>Gross fixed capital formation, changes in inventories, etc:</i> Type, quantity and if possible value of purchases and sales of equipment (livestock, trees, furniture, machinery, vehicles, buildings, etc.) Loans, loan repayments	**  **	-	x	x
Technical information	<i>Information needed to identify and specify an informal sector unit:</i> Number of employees (family workers, employees on occasional and/or continuous basis), registration, book keeping, rural/urban, etc.	**	-	x	x
Additional information needed for socio-economic analysis	<i>Demographic information:</i> Sex, household composition, other jobs held in or outside the informal sector, etc. <i>Other socio-economic information:</i> Age, occupation, educational attainment, kind of vocational training received, type of ownership, year of creation and evolution of enterprise, type of activity, type of workplace (shop, fixed market stall, home, no fixed place, etc.), relation to formal sector, access to credit, training opportunities, etc.	**  *	x  x	-  (x)	x  x

\* additional; \*\* minimum data set for national accounting purposes; x available; (x) partly available; - not available

### **Annex 3: Recommendations of a UN Workshop on Informal Sector Statistics**

The UNSD/ESCAP/ILO Workshop on Informal Sector Statistics held in Bangkok, Thailand, from 12 to 16 May 1997 recalled its earlier discussions and made the following observations and recommendations.

#### **On the definition of the informal sector**

1. The participants agreed that there was a need to adopt a common definition of the informal sector for international comparability. It was recognized that the definition adopted should be flexible enough so that in operationalizing it, countries would be able to consider their own needs and capabilities. In relation to that, it was suggested that to facilitate comparability, statistics on the informal sector should be transparent in the sense that pertinent clarifications with regard to the operational criteria used in defining the sector should be included in reports and publications of such statistics.
2. Clarifications on the ILO definition as evolved and adopted in the 15<sup>th</sup> ICLS referred mainly to conceptual problems on the production boundary, e.g. non-market production, or hidden or underground activities, which could be answered by the 1993 SNA recommendations. It was acknowledged, however, that there was a need to ensure that the classification of employment status accounted for some types of arrangements peculiar to the informal sector.
3. There was discussion on the advantages and disadvantages of dividing the economy into sectors for which statistical systems were able to collect data on a regular basis and sectors for which statistical data were lacking or not regularly collected. It was recommended that the latter be referred to as statistically unrecorded activities and that the term “informal sector” be used as an analytical concept for policy-making purposes.
4. Further to operationalizing the collection of statistics on the informal sector, it was recalled that because of the flexibility innate in the ILO definition, coverage could include rural as well as urban areas, and agricultural and non-agricultural activities. In addition, it was agreed that cut-offs that defined employment size criteria and scope of registration would also be consistent with the definition.

#### **On data collection for informal sector statistics**

5. The participants recognized the need for and problems related to the institutionalization of data collection for the informal sector. For that process, it was recommended that countries continue to share their expertise and experiences in that area. The need for continuing dialogue among SNA experts, labour-employment statisticians and survey statisticians was also noted.
6. The Workshop pointed out the need for an initial and continuing inventory of data collection methods on the informal sector. Further, it recommended pursuing a research and training agenda which would include an evaluation of alternative approaches, e.g. economic census, mixed survey, modules in regular as opposed to independent surveys, with respect to sample design requirements, coverage and cost-efficiency. Research and training should also be conducted on frame construction, questionnaire design, quality assessment, and estimation procedures as further elaborated below.

7. Sample design problems focused on the elusiveness of pertinent units for data collection, with specific mention of the sector comprising a small population, occasional workers, open-air and mobile enterprises, and underground activities. The participants expressed the need for developing appropriate methods for covering rural and urban areas, the agriculture sector, special groups such as women, children and home-workers, and different industries.
8. With respect to questionnaire design, participants cited problems with recall bias, seasonal bias, and disaggregation of input costs. In that connection, the Workshop identified the need to study ways of balancing design requirements for household-based respondents and establishment or business respondents.
9. The Workshop emphasized the importance of controlling non-sampling errors to ensure data quality and improve response rates. The need for appropriate interviewer training was pointed out. Participants also sought assistance in assessing the data quality of information collected from surveys which could include post-enumeration surveys
10. Because of the complex designs required for informal sector surveys, the need for research and training in that area was noted, especially for estimation of design effects and sampling errors.
11. The Workshop recommended that a minimum set of data items for national accounts purposes should be identified to facilitate international comparability
12. The participants further agreed that there was a need to define a recommended tabulation programme for informal sector surveys.
13. It was also agreed that there was a need to improve current data dissemination efforts and activities on informal sector statistics.

### **On data needs for national accounts**

14. Data supply and data needs for building up a sequence of accounts for the household sector in general and the informal sector therein in particular were discussed. The participants indicated a preference for direct rather than indirect methods.
15. The Workshop noted that various direct data collection methods such as household income and expenditure surveys, mixed household and enterprise surveys, agricultural census surveys, economic/enterprise/establishment census/surveys, labour force surveys, population censuses etc. might provide relevant information on the informal sector.
16. It was noted that countries chose and combined data sources on the informal sector for building up national accounts depending upon the state of development of their statistical system, the resources available to them, and their priorities. However, in principle the participants agreed that for collecting direct information on the informal sector through sample surveys, a basic requirement was a frame covering all establishments and own-account enterprises with or without fixed premises.
17. It was proposed that the respective data sources (with regard to tabulation format, questionnaire design, sampling frame, interviewer instructions, quality control, etc.) should pay special attention to the specific nature of informal sector units (small-scale, mobile, home based, and/or seasonal operation) as well as aim to accommodate the specific needs of national accounts (type

and intensity of production, intermediate consumption, incomes received and paid, capital formation, etc.).

18. The participants noted the usefulness of mixed household and enterprise surveys adopting two phase sampling for obtaining information on the informal sector and recognized the need to examine alternative approaches to data collection from the point of view of cost-effectiveness and reliability
19. In principle, detailed questionnaires might be needed for national accounts purposes. These might be specifically adapted to various informal activities, regions etc. However, with regard to the lack of book-keeping by informal units and the costliness of detailed inquiries, informal sector sample surveys might concentrate on a small sub set of data items for national accounts purposes which then, in combination with additional information from supplementary surveys as well as further estimates, might provide a comprehensive picture of the informal sector in the household accounts.
20. The participants stressed the need to utilize all data sources on household economic activities available in a country in order to obtain the respective informal sector data. In order to fill the gaps in the data the participants suggested that efforts should be made to collect additional information and/or use indirect methods (using information on ratios/percentages of related variables). Methodological studies were needed for determining optimal combinations of various approaches.
21. Since all countries were expected to adopt the recent version of the System of National Accounts (1993 SNA) and revise not only their national accounting systems but also to compile explicitly the full sequence of accounts for institutional sectors, in particular the household sector (of which the informal sector was a subset), the participants agreed that this might also serve as an occasion to increase efforts to reflect informal activities adequately within the household sector account.
22. The participants also suggested that as a standard, the sub-classification of the household sector should be made a detailed one to show clearly within it the informal sector and its components.
23. In view of the complexity of compiling informal sector data for national accounting purposes, the participants felt the need to share expertise available in that field and the need for training courses, seminars, pilot studies etc. at national, regional and/or international level. The participants also noted the need to marshal donor support from international donor agencies. In addition, the participants expressed the need for the preparation of a handbook on the methodology of compiling informal sector accounts.

## References

- Becker, Bernd (1998): *Problems in Comparing Informal Sector Data*, paper presented to the joint meeting of the American Economic Association and the Society for Policy Modelling, Chicago, USA, 3-6 January 1998.
- Charmes, Jacques (1997): *Progress in Measurement of Informal Sector: Employment and Share of GDP*, paper prepared for the UNSD Expert Group meeting on household satellite accounting, New York, 6-10 October 1997.
- Guerrero, Margarita (1997): *Informal Sector Survey in the Philippines*, paper prepared for the UNSD Expert Group meeting on household satellite accounting, New York, 6-10 October 1997.
- Hussmanns, Ralf (1997): *Informal Sector: Statistical Definition and Survey Methods*, paper prepared for the UNSD Expert Group meeting on household satellite accounting, New York, 6-10 October 1997.
- ILO (1993): *Resolution Concerning Statistics of Employment in the Informal Sector*, 15th International Conference of Labour Statisticians, Geneva, 19-28 January 1993, Bulletin of Labour Statistics, 1993-2.
- SNA 1993: *System of National Accounts 1993*, Commission of the European Communities, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations, World Bank, Brussels/Luxembourg, New York, Paris, Washington, D.C., 1993.
- United Nations (1986): *Draft Recommendations for a Statistical Programme for Household and Small-scale Industries*, ST/ESA/STAT/Ser.M/80, New York, 1986.
- United Nations (1989): *National Household Survey Capability Programme*, New York, 1989.
- United Nations (1991): *Surveys of Household Economic Activities*, New York, 1991.
- United Nations (1994): *Strategies for Measuring Industrial Structure and Growth*, Studies in Methods, Series F, No. 65, New York, 1994.
- UNSD/ECA (1996): *Report of the Workshop on statistics on services in the informal sector*, DESIPA/STAT/ECA/96/WSSIS/7/Rev.1, held from 17-21 June 1996, Addis Ababa, Ethiopia.
- UNSD/ESCAP/ILO (1997): *Report of the Workshop on Statistics on the Informal Sector*, Bangkok/Thailand, 12-16 May 1997.



# **Progress in measurement of the informal sector: Employment and share of GDP**

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## **I. Introduction**

1. Despite 25 years of controversy surrounding the term, the concept of the informal sector has progressively influenced economic and political thinking. Small crafts and petty trade, casual work, street and household activities have been considered, for a long time, as forms of underemployment or hidden unemployment and viewed as phenomena resulting from an excess supply of labour, enabling rural migrants to earn a living in towns. As such, these activities would be reduced by industrialization and modernization and disappear under ad hoc interventionist state policies.

2. But with the financial crises faced by many developing countries, the generalization of structural adjustment programs and the failure of the public sector to create the number of jobs necessary to absorb the increase in the labour force which continues at a sustained and even accelerating pace, informal sector activities did not decrease. Indeed, they have even expanded, creating jobs more rapidly and securely than the state ever did. This explains why activities in the informal sector have drawn the attention of political powers and especially of international institutions, creating attitudes and policies more favourable to their promotion. The informal sector is now viewed as a viable alternative to the creation of formal employment, an alternative which implies the need for efforts in collecting comprehensive statistics.

3. After a brief reminder of the origin and prevailing definitions of the concept of the informal sector, we will examine, in the next section, the indirect methods used to give estimates of employment and production in the sector and we will indicate some of these estimates for different regions of the world. Then we will review the major types of surveys carried out to capture the size and profile of the informal sector, firstly, establishment surveys, and secondly, household surveys, especially multi-purpose or multi-stage household surveys.

## **II. Origins and definitions of the concept of the informal sector**

4. When it first appeared in the literature on development, the concept of the informal sector referred to all the activities undertaken by rural migrants drawn to cities and towns in search of a job and faced with unemployment. The likelihood of finding a job in the modern sector was far lower than could be anticipated by theories of economic development. Since unemployment benefits did not exist in developing countries, it was (and it remains) necessary for migrants to find any kind of job in order to make a living and survive.

5. The first authors to have proposed definitions of the informal sector insisted on features such as the opportunity of subsistence incomes, ease of entry (ILO, 1972), small scale of operations, weakness of the means of production (Sethuraman, 1976), all characteristics linked to the generation of low incomes. Since then, informal activities have been associated with hidden unemployment, urban underemployment, and poverty. Although the content of the concept has changed (a frequent source of confusion), this original notion has remained firmly rooted. Indeed since the three notions of unemployment, underemployment and poverty partly overlap with the notion of the informal sector, the term continues to

imply a set of heterogeneous activities, mainly under the influence of statisticians who are concerned with broadening the scope of their concepts and extending their surveys to the very boundaries of the modern sector. However, when it is defined in such a way, the concept of the informal economy, unregistered in permanent statistical surveys and records, and now tentatively caught in ad hoc and occasional surveys, provides more subtle and useful distinctions for economists, planners, policy makers and political scientists.

6. In addition to the focus on urban poverty and marginalization, another direction was taken early on by researchers, especially in the context of the ILO program on self-employment and skills acquisition in the informal sector in urban areas. Thus attention was paid to small scale enterprises and to their potential for creating jobs and generating incomes to be spent on consumption as well as on investment. In short, attention was now paid to the specific segment of the informal sector involving activities open to modernization and development.

7. These are some of the reasons why the concept of the informal sector has been more and more broadly used, even though some policy makers continue to perceive it as a set of subsistence, home and street peddling activities.

8. In fact, the broad definition used by the statisticians (statistical non-registration) is more satisfactory than it appears at first sight, since it evokes the conflicting and ambivalent nature of the relationship between informal sector participants and the state, which embodies the interests of other social groups.

9. However, the numerous ILO studies undertaken under the World Employment Programme and Regional Employment Programmes, and more recently, national censuses and surveys (as they have been tabulated and analyzed or even designed for this specific purpose by the statistical offices of a number of countries), have made it possible to list the main characteristics of informal units, the conditions under which they operate and their linkages with the rest of the economy, as well as the characteristics of the head of the unit, his or her household and the labour force employed.

10. The main features of informal units emerging after more than two decades of surveys are as follows: ease of entry; small scale of the activity; self-employment, a high proportion of family workers and apprentices; little capital and equipment; labour intensive technologies; low skills; low level of organization with no access to organized markets, to formal credit, to education and training or to services and amenities; cheap provision of goods and services or provision of goods and services otherwise unavailable; low productivity and low incomes according to some analysts, or, in contrast, for other observers, incomes that are notably higher than in the public sector, especially in the recent past and in the context of structural adjustment policies.

11. Although these activities are legal, they rarely comply with official and administrative requirements. More specifically, as they often go unregistered, they do not pay relevant taxes, mostly not out of a desire or willingness to escape and to remain concealed, but more likely because of the inability of governments to enforce often inadequate regulations. For example, in Peru, it was shown that it would take more than one year at a relatively high cost to set up a business in conformity with all the official regulations. This example can be generalized to many countries. Informal sector activities are often tolerated as a kind of recognition that the laws are inadequate. Furthermore, they have become a means for many countries to cope with population growth, rural-urban migration, economic crises and indebtedness. Informal employment has been estimated as absorbing 300 million people in developing countries. The figure is rapidly increasing due to structural adjustment programs and the ensuing decline in the number of jobs in the public sector.

12. In addition, many formal wage-earners are engaged in informal businesses as secondary jobs in order to compensate for declining wages and purchasing power. Thus, there cannot be considered to be a perfect distinction between participants in the informal sector on the one hand, and people who receive wages and salaries from government, the public and private modern sectors (usually called the protected sector), on the other.

13. Indeed, declining real wages in the modern sector have revealed how the informal sector contributes to the production of the modern sector (a role which differs from the one assigned by the economic theory of the labour pool). The informal sector supplies additional income opportunities to wage-earners who are more and more disenchanted (and less and less productive). A number of them have been compelled or even persuaded to leave their jobs in the formal sector to undertake informal businesses on a full-time basis, and recently some countries have even revised their legal regulations in order to allow civil servants to hold secondary jobs.

14. Industrialized countries, themselves entangled in similar difficulties due to economic and social crises, became inspired by the new international definition and have sought measurements of informal activities, especially with regard to the holding of additional jobs (Charmes and Grais, 1994; Charmes, 1995).

15. The complexity and looseness of the concept of the informal sector explain why it has not been possible until now to reach an international agreement on a definition which would satisfy the variety of analytical needs of data users. For this reason labour statisticians have decided to distinguish between the several definitions that may vary according to the needs of users at the tabulation stage, and the one single statistical definition for the purposes of data collection.

16. The underlying “umbrella” concept encompasses the various parts of the economy that are insufficiently reflected in official statistics. It refers to the specifics of the varying scopes of the relevant surveys; it is as simple as possible and uses one single criterion or a small number of operational criteria; yet, it is broad enough to cover as large a universe as is conceptually compatible with the notion of the informal sector.

17. Introduced for discussion by the International Conference of Labour Statisticians as early as 1987, the informal sector concept was adopted by the 15th Conference held in Geneva in January 1993 and has become a new concept within the labour force (ILO, 1993a and 1993b). Its use is recommended for data collection and the presentation of the results of surveys, censuses and administrative records dealing with the labour force.

18. The definition may be summarized as follows: For statistical purposes, the informal sector is regarded as a group of production units which form a part, within the System of National Accounts (SNA), of the household sector as unincorporated enterprises owned by households.

19. Household enterprises (or unincorporated enterprises owned by households) are distinguished from corporations and quasi-corporations on the basis of their legal status and the type of accounts they hold. Accordingly, household enterprises are not constituted as separate legal entities independently of the household or of the household members that own them, and no complete set of accounts is available which could permit a clear distinction between the production activities of the enterprises and the other activities of their owners.

20. The informal sector is defined, irrespective of the kind of workplace, the extent of fixed capital assets or the duration of the activity of the enterprise and its operation, as a main or secondary activity, as comprising: (i) informal self-owned enterprises which may employ family workers, and employees on an

occasional basis. For operational purposes and depending on national circumstances, this segment comprises either all self-owned enterprises, or only those which are not registered under specific forms of national legislation (factories or commercial acts, tax or social security laws, professional groups, regulatory or similar acts, laws or regulations established by national legislative bodies); (ii) enterprises of informal employers which may employ one or more employees on a continuous basis and which comply with one or both of the following criteria:

- size of the establishment below a specified level of employment (defined on the basis of minimum size requirements embodied in relevant national legislation or other empirical or statistical practices: the choice of the upper size limit taking account of the coverage of statistical enquiries in order to avoid an overlap);
- non-registration of the enterprise or its employees

21. Furthermore, and for practical purposes, the informal sector may be restricted to non-agricultural activities.

22. The value of this definition resides in the fact that it relies on existing practices for estimating informal employment at a national or a macro-economic level.

### **III. Indirect methods for estimating employment and production in the informal sector**

23. Whenever alternative sources are lacking, rough estimates for informal employment are found in population censuses or labour force surveys through non-wage employment, preferably non-agricultural non-wage employment, used as a proxy, providing that the required cross-tabulations exist. This estimate corresponds roughly to employment in household own-account enterprises, but only imperfectly since family workers are also employed in enterprises of informal employers and because occasional employees may be numerous in informal own-account enterprises. (However, in household surveys, occasional workers employed by informal enterprises often declare themselves as independent workers.)

24. However, as previously seen, the international definition also includes micro-enterprises of informal employers. But population censuses or labour force surveys do not collect any information allowing a clear distinction between wage-earners employed in the informal sector and those employed in the formal sector. This is because the definition of the sector is based on the characteristics of the establishment, not of the person. Rare are the source which collect data on the size of the enterprise or establishment. At the very most, a few countries ask questions on the type of workplace, but this characteristic does not fit with the new definition; and this was actually one of the reasons why survey statisticians were reluctant to use it, as they considered that wage-earners do not usually know whether the enterprise in which they work is registered or not, holds a complete set of accounts or not, and registers its other employees or not.

25. Due to these deficiencies in the main exhaustive sources, the best estimates of informal sector employment are obtained through comparative analyses of household surveys (population censuses included) and establishment surveys or censuses. In the past, this method has made it possible to estimate segments of micro-enterprises, other than household own-account enterprises, as it was possible to know (by residual balance) the proportion of employees to be included in the informal sector. This approach requires that detailed data by industry be available. But other estimates may be obtained by classifying individuals by occupation, which, in some countries, is more reliable than classification by industry; but it is then more difficult to determine the cut-off point for employees. Comparative analyses of sources consist, in fact, of assessing exhaustive sources of labour in relation to sources of registered employment (be they statistical: annual surveys of industries or activities for instance, or administrative: updated

registers of enterprises or establishments). The residual balance comprises the non-registered jobs. But in any case, the distinction between household enterprises and micro-enterprises remains only a proxy, as exhaustive sources do not always facilitate clear cut distinctions between occasional and permanent employees, nor between family workers employed by household enterprises and those employed by micro-enterprises.

26. Of course, when an establishment census is available, it is possible to apply the criterion of size (10 jobs for example) to clarify the distinction between the two components of the informal sector.

27. Tables 1 to 9 in the annex give such estimates for a set of countries for various periods of time. Tables 1 and 2 describe results from the African region. In table 3 the definition of the informal sector in Latin America is limited to household enterprises, i.e. the first segment of the new international definition, but table 4 allows us to take the second segment, micro-enterprises, into account. Table 5 gives a more appropriate view of the informal sector, following the lines of the new international definition and distinguishing the two segments of the sector (in this case, the micro-enterprise segment is defined by a size criterion: less than 5 or 10 workers) according to the availability of information in the various countries.

28. Estimates of informal sector employment in Asia are more scarce, because in a region which has known rapid and constant industrial growth over the past decades, interest in the informal sector as a sponge sector was of lesser importance. In the most densely populated countries such as India, the original concept of small-scale industries has been preferred to the concept of the informal sector. However, table 6 gives some estimates for household enterprises and table 7 shows the trend in unorganized sector employment in India.

29. Comparisons between data across sources cannot be taken as perfect as the jobs are enumerated at home in population censuses (people in the labour force) and at the workplace in establishment censuses (people at work). However, with a minimum of regional and activity differentiation, the gaps are usually sufficiently significant. It emerges from these estimates that informal sector employment is closely related to the rate of urbanization and industrialization, the level of female activity and living standards. It also appears that, during the past decade, it has dramatically increased in all countries, except in the New Industrialized Countries, where wage employment has steadily grown, but partly in the form of outwork.

30. An example from a developed country is Italy where the residual balance turned to be negative in certain regions and for certain activities. In this way, Italian statisticians reached an estimate of the number of additional jobs held by employees, and this estimate accounted for more than 41% of the 15% GDP re-evaluation in 1982.

31. Moreover, comparisons between population and establishment censuses also provide significant insights into the relative size of homework, outwork and enterprises in domestic premises, as shown by the Egyptian experience.

32. In this case, the comparison between population censuses and establishment censuses yields significant results, for Egypt is one of the few countries to have carried out simultaneously and on a regular basis, both types of census. Correspondingly, comparisons between the two sources facilitate the estimation of informal sector employment, and they are particularly useful as they reveal the importance of work in domestic premises and refine assumptions concerning the proportion of outworkers in the total. The population census asks whether homes or dwelling places are used for economic activities, and in the establishment census, the question is raised as to whether the activity is performed in domestic

premises. It is then possible, by differentiation, to measure the size of the labour force in large, medium and small establishments (in the establishment census), and for these three categories, mainly but not only for the last one, the proportion of jobs performed in domestic premises. Further, since the total number of jobs in establishments is always lower than the total number of jobs declared in households, and since the underlying difference is larger than independent work carried out within homes, one can evaluate the concealed segment of the labour force. Of course, this method can only be used and is only reliable when the comparisons are conducted at the micro-level This was done for Cairo Center and Greater Cairo in 1976 and 1986 (Charmes, 1990b). Table 8 gives an idea of the size of this component of the informal sector in Cairo.

33. Such comparative analyses may also be applied to national accounts, in order to assess the relative contribution of the informal sector to GDP. But the approach supposes the availability of specific data for the modern (registered) sector. Assumptions made for calculating aggregates must be known, which is rare. Generally, national accountants prefer to be discreet about the content of their "black box". They usually refer to the economists' assumptions about the productivity of labour in the informal sector, in such a way that comparisons between the residual balance of production and the balance of jobs leads to a circular reasoning The results merely confirm the low productivity of labour used as an assumption in the computation.

34. Table 9 refers to the national accounts which, in Africa, distinguish the informal sector according to their own compilations. These data are not always based on recent specific survey results. However they are an attempt to take into account activities which are still widely underestimated. Most of the time, the available results of national surveys (Benin, Mali, Niger) or more limited or "leaner" surveys (Mauritania, Burkina Faso) have been used to refine or even to revise the national accountants' assumptions and to improve, even if not in a definite and correct way, the account of the informal sector contribution to GDP. The informal sector currently accounts for more than 20% to 40% of the total GDP, and more than 40% to 60% of the non-agricultural GDP.

35. Of course, comparative analyses of sources are particularly instructive when both types of census are available. This is not usually the case, even if some other countries have carried out such experiences (Turkey, Iran 1986, Tunisia 1975-76 and 1981, India various years) which eventually failed (Algeria, 1987).

36. The use of establishment censuses represents nevertheless an appropriate introduction to direct methods for measuring the informal sector.

#### **IV. Survey methods for measuring informal sector employment and production**

37. Until recently, in fact until the International Conference of Labour Statisticians in 1993, censuses and surveys of establishments were the most usual and classical means of estimating the informal sector.

38. Door-to-door enumeration of establishments provided the basis for the selection of representative samples of small-scale establishments, surveyed through a detailed questionnaire in a second stage. The sample selection is based on the list of enumerated establishments and later on (when the list becomes out of date) on area sampling (a random selection of areas, drawn with a probability proportional to the number of establishments known in the area). Besides sample selection, this method also facilitates an easy updating of administrative registers of enterprises.

39. But this approach, taking establishments as the units of observation, has been criticized for covering only the largest segment of the informal sector: small and micro-enterprises performing their activities in identified non-domestic premises. Since the mid 80's, the household approach has been preferred, to the point of being recommended by the 15th International Conference of Labour Statisticians in 1993.

40. The method consists of a multi-stage survey. In the first stage, a household questionnaire is administered to a random sample of households (the household being the observation unit) and all members belonging to the labour force are listed. In the second stage, these household members are interviewed, at their workplace, with a detailed activity or establishment questionnaire, regardless of whether they are self-employed workers or employers and whatever the workplace, the duration of activity and its operation as a main or secondary activity (the establishment is the observation unit). Some surveys of this type have also been developed having a third stage with an income-expenditure questionnaire.

41. This method covers the whole set of informal activities, and one might view it as the best, since the advantages of establishment surveys are allied to a full coverage of the universe.

42. However some drawbacks can be identified and these should not be forgotten nor underestimated:

- the representativeness of the various industries and activities may be inadequate to facilitate the collection of data on a sufficient number of economic units. For instance, when trade activities are nationally the most numerous (a frequent occurrence in developing countries), the two-stage household survey leads to the selection of a sample of economic units where trade businesses constitute the bulk of the sample whereas manufacturing activities are under-represented;
- the addresses of the economic units may have been initially improperly collected (because, in many developing countries, addresses are rarely precise and well-known, and interviewees' declarations may be insufficient), so that it becomes difficult to find workplaces at the second stage and if this stage is not conducted at the worksite, the data collected become unreliable;
- above all, a two-stage survey is difficult to manage and the tendency is to reduce the questionnaire which is then not as complete and comprehensive as in classical establishment surveys.

43. In this respect, establishment censuses and surveys present two major advantages. The first one concerns the adaptation of questionnaires (meaning their extension). Sophisticated and adapted

questionnaires can be applied to the small units surveyed in the sample with a series of direct and indirect questions designed to capture the real levels of value added and incomes (through intermediate consumption, productive capacities and labour productivity). It is usually considered a sufficient adaptation to shorten the reference period of data collection (a day or a week rather than a month or a year) and to couple it with a detailed table of seasonal variations. But this is not enough.

44. The Tunisian experience (1977 - 78 and 1981 - 82) of the National Survey of Economic Activities, followed by the Moroccan National Survey on localized informal enterprises (1988) proved that reported incomes by small entrepreneurs as direct answers to questions worded as “amount of receipts for the reference period” represented half the actual incomes when these were reconstituted through other items of the questionnaires:

- notably, those items concerning intermediate consumption such as: “What is the technical coefficient of production?”, that is the quantity of wood is included in the price (or the production) of the furniture or the quantity of flour in the production of bread (or conversely, the number of loaves of bread which can be prepared with a sack of flour), or the quantity of leather in the price of a pair of shoes (or the number of pairs of shoes which can be cut from a skin);
- and those concerning labour productivity and production capacities: “How many days does it take for the workshop to make this product?”

45. In short, interviewees appear to underestimate the results of their activity by dividing their real income in half, which is the easiest division if we accept that division by 10 is not credible. In the Tunisian case, after corrections, the small entrepreneurs' incomes rise far higher than the minimum salary (4 to 9 times) and even several times higher than the mean salary in the modern sector (2 to 3 times).

46. The second advantage is that establishment censuses may throw some light on the “missing middle” or intermediate sector. This advantage is one of the least used and known, because of difficulties of implementation in countries where civil status registration is deficient. Whenever individual entrepreneurs' names are correctly collected, establishment censuses give a key to identifying enterprises through their establishments, revealing, as in Tunisia in 1981, that an important proportion (up to 15 %) of small-scale establishments (employing less than 10 persons) are parts of intermediate enterprises (employing from 10 to 50 workers), the famous “missing middle” in the economic theory of the informal sector. This also proves the dynamism of this sector and its potential for accumulation.

47. To conclude, no one single ideal methodology may be universally recommended or applied. The choice depends on the needs and priorities of data collection for specific policy design and resources planning. Progress in understanding the growing phenomenon that the informal sector represents, has often been made through a mix of different approaches. In the Arab region, Iran and Turkey, the establishment approach seems to have been favoured, perhaps because no recent experience has been made elsewhere to evaluate this sector at the national level, except in Turkey. On the other hand, India has, for a long time, carried out a mixed approach of what is called the unorganized sector, and in Latin America, the household approach was, until recently, the only source of data from which estimates of the informal sector were extracted. To be precise, it is from this wide range of experiences that emerged the new statistical concept of the informal sector and the new recommendations of survey methodologies.

Annexes

**Table 1: Informal sector employment as a share of the non-agricultural labour force in various countries of North Africa and Middle East**

Countries	1975	1976	1977	1980	1982	1985	1986	1988	1989	1990	1995	GDP/Capita in US \$ 1980
Algeria			21.8			25.4						1870
Tunisia	38.4			36.0					39.3		48.7	1310
Morocco					56.9							900
Egypt		58.7					65.3					580
Mauritania				69.4				75.3				400
Iran							43.5					2410
Turkey										17.4		1790

Sources: Personal compilation of the author. For a detailed description of the sources used see Charmes, 1990 and Charmes, 1995b.

**Table 2: Informal sector employment as a share of the non-agricultural labour force in various countries of sub-Saharan Africa**

	1976	1977	1979	1980	1983	1984	1985	1988	1989	1990	1991	1992	1993	1994	1996
<b>SUB SAHARAN AFRICA</b>															
<b>Sahelian Africa</b>															
Mauritania				69.4				75.3							
Senegal				76.0					78.6					90.4	94.1
Mali	63.1														
Niger		62.9													
Burkina-Faso							70.0					77.0			
Chad													74.2		
<b>Coastal Africa</b>															
Benin															
Guinea			86.0								74.9				
<b>Central Africa</b>															
Zaire															
<b>Eastern Africa</b>															
Kenya										61.4					

Sources: Idem Table 1.

**Table 3: Structure of non-agricultural employment in Latin America 1980-85**

Countries	Informal Sector	Formal Sector			Total
		Total	Public	Private	
<b>Latin America</b>					
1980		73.9	15.8	58.1	<b>100</b>
1983	26.1	70.6	16.5	54.1	<b>100</b>
1985	29.0	69.3	16.8	52.5	<b>100</b>
<b>Argentina</b>	30.7				
1980		73.7	18.8	54.9	<b>100</b>
1983	26.3	72.9	18.5	54.3	<b>100</b>
1985	27.1	71.1	18.9	52.1	<b>100</b>
<b>Brazil</b>	28.9				
1980		75.9	10.8	65.0	<b>100</b>
1983	24.1	69.8	10.9	58.9	<b>100</b>
1985	29.6	69.2	11.1	58.2	<b>100</b>
<b>Colombia</b>	30.1				
1980		68.0	n.a.	n.a.	<b>100</b>
1983	32.0	66.4	14.5	51.9	<b>100</b>
1985	33.6	64.6	n.a.	n.a.	<b>100</b>
<b>Costa Rica</b>	35.4				
1980		71.4	26.7	44.7	<b>100</b>
1983	28.6	70.7	27.6	43.1	<b>100</b>
1985	29.3	71.7	26.6	45.1	<b>100</b>
<b>Chile</b>	28.3				
1980		63.9	12.2	51.7	<b>100</b>
1983	36.1	62.8	10.9	52.0	<b>100</b>
1985	37.2	62.8	9.5*	52.5*	<b>100</b>
<b>Guatemala</b>	37.2				
1980		68.5	8.5	60.0	<b>100</b>
1983	31.5	67.2	9.3	58.0	<b>100</b>
1985	32.8	66.5	11.0*	55.7*	<b>100</b>
<b>Mexico</b>	33.5				
1980		75.8	21.8	54.0	<b>100</b>
1983	24.2	74.4	25.0	49.4	<b>100</b>
1985	25.6	70.5	26.1	44.4	<b>100</b>
<b>Peru</b>	29.5				
1980		65.8	18.7	47.1	<b>100</b>
1983	34.2	67.3	21.0	46.3	<b>100</b>
1985	32.7	65.1	21.1	44.0	<b>100</b>
<b>Venezuela</b>	34.9				
1980		73.9	25.5	48.4	<b>100</b>
1983	25.6	71.8	26.5	45.3	<b>100</b>
1985	27.3	73.0	24.5	48.5	<b>100</b>

\* 1984. - Source: ILO-PREALC (1986): Créacion de empleo productivo. Una tarea impostergable. Data are drawn from household surveys.

**Table 4: Structure and growth of urban employment in Latin America (1980-1989)**

	Structure (%)				Annual growth rate			
	1980	1983	1986	1989	1980/83	1983/86	1986/89	1980/89
Urban labour force	100	100	100	100	4.1	3.7	3.4	3.7
Urban employment	93	91	93	95	3.3	4.7	3.8	3.9
- Public sector	15	15	15	14	4.3	4.8	2.0	3.7
- Private sector	55	50	50	51	1.1	4.1	3.4	2.9
Large and medium enterprises	(40)	(33)	(32)	(30)	-2.1	3.2	0.9	0.5
Small enterprises	(15)	(17)	(18)	(21)	8.6	6.4	7.4	7.5
- Informal sector (household enterprises)	24	26	28	30	7.1	6.3	6.6	6.7
Unemployment	7	9	7	5	14.4	-7.7	-3.0	0.8

Source: Elaborated by PREALC (1990) on the basis of household surveys compiled by CEPAL. Provisional estimates.

**Table 5: Structure of non-agricultural employment in Latin America 1990-1995**

<b>Countries</b>	<b>Years</b>	<b>Total informal sector</b>	<b>Own-account and family workers</b>	<b>Micro-enterprises with less than 5 or 10 workers</b>	<b>Domestic servants</b>	<b>Public sector</b>	<b>Large private enterprises</b>
<b>Latin America</b>	1990	51.6	24.7	20.2	6.7	15.3	33.0
	1995	56.1	26.5	22.5	7.1	13.2	30.8
<b>Chile</b>	1990	49.9	23.6	18.3	8.1	7.0	43.0
	1995	51.2	23.9	20.8	6.5	7.7	41.1
<b>Argentina</b>	1990	47.5	24.7	14.9	7.9	19.3	33.2
	1995	53.3	27.2	18.5	7.6	13.8	32.9
<b>Brazil</b>	1990	52.0	21.0	23.3	7.7	11.0	36.9
	1995	57.6	23.0	25.2	9.4	9.6	32.8
<b>Uruguay</b>	1990	36.3	19.3	11.0	6.0	20.1	43.6
	1995	37.7	21.0	10.8	5.9	17.7	44.6
<b>Paraguay</b>	1990	61.4	21.2	29.4	10.7	12.2	26.4
	1995	65.5	25.3	29.7	10.6	11.9	22.6
<b>Bolivia</b>	1990	56.9	37.7	12.8	6.4	16.5	26.6
	1995	63.6	39.6	18.6	5.4	11.4	26.0
<b>Ecuador</b>	1990	51.2	32.5	13.0	5.6	17.6	31.2
	1995	53.5	31.3	16.3	5.9	13.4	33.1
<b>Peru</b>	1990	51.8	35.3	11.4	5.1	11.6	36.7
	1995	53.9	35.9	13.1	4.8	8.9	37.2
<b>Colombia</b>	1990	55.2	23.5	26.3	5.4	9.6	35.2
	1995	55.5	23.6	28.0	4.0	8.4	36.1
<b>Venezuela</b>	1990	38.8	22.1	12.6	4.1	22.3	38.9
	1995	46.9	27.1	17.6	2.3	19.5	33.6
<b>Panama</b>	1990	40.5	20.4	12.8	7.2	32.0	27.5
	1995	41.3	20.5	13.2	7.6	23.4	35.4
<b>Costa Rica</b>	1990	42.3	18.1	18.4	5.8	22.0	35.7
	1995	44.6	18.1	21.5	5.0	17.9	37.6
<b>Honduras</b>	1990	54.1	36.3	10.8	6.9	14.9	31.0
	1995	54.4	34.0	15.1	5.4	12.5	33.1
<b>Mexico</b>	1990	55.5	30.4	19.5	5.6	25.0	19.6
	1995	59.4	32.3	21.7	5.4	22.5	18.1

Notes: For Peru and Uruguay, data refer to Lima and Montevideo. - Source: Panorama laboral 96, ILO, CEPAL, Santiago, estimates on the basis of national household surveys and other official sources.

**Table 6: Informal sector employment as a share of the non-agricultural labour force in various countries of Asia**

<b>Country</b>	<b>1980</b>	<b>1981</b>
Hong Kong		10.0
Singapore	12.3	
South Korea	20.8	
Indonesia	39.2	

Source: Salome and Charmes (1988).

**Table 7: Trends in employment in the unorganized sector of India 1972-1988**

<b>Year</b>	<b>% of non-agricultural labour force</b>
1972-73	71.4
1977-78	74.3
1983	76.2
1987-88	78.6

Source: Visaria and Jacob (1995).

**Table 8: Estimated number of concealed establishments and number of establishments in domestic premises - Cairo, 1976-1986**

Item	1976		1986	
	Cairo Center	Total Cairo	Cairo Center	Total Cairo
- Number of establishments (Est. Census)	93,939	168,881	104,869	236,371
. Of which: in domestic premises (1)	14,277	18,819	15,256	26,237
- Number of domestic premises used for economic activity (Pop. Census) (2)	21,949	29,210	24,577	45,181
- Number of concealed establishments (2) - (1)	7,672	10,391	9,321	18,944
- Total number of establishments	101,611	179,272	114,190	255,315
- % domestic	21.6	16.3	21.5	17.7
- % concealed	7.8	35.6	8.2	41.9

Source: Charmes (1990b).

**Table 9: Informal sector as a share of non-agricultural employment and as a share of non-agricultural and total GDP in various African countries**

Countries (years)	% of non agricultural employment	% of non agricultural GDP	% of total employment	% of total GDP
Tunisia (1995)	48,7	22,9	37,8	20,3
Benin (1993)	92,8	57,0	41,0	36,5
Mali (1989)	78,6	41,7	13,3	23,0
Burkina Faso (1992)	77,0	40,0	8,6	24,5
Senegal (1991)	76,0	40,9		33,0
Mauritania (1989)	75,3	14,4		10,2
Chad (1993)	74,2	44,7	11,5	31,0
Niger (1995)		58,5		37,6

Sources: Personal compilations of the author.

## References

Charmes, J. (1990a): A Critical Review of Concepts, Definitions and Studies in the Informal Sector. OECD (1990) : The Informal Sector Revisited.

Charmes, J. (1990b): Trends in Employment Structures of Cairo Centre (1976-86). Published in French in "Egypte. Monde Arabe", no.1.

Charmes, J. (1994): Visible and Invisible: The Informal Sector in the Urban Economy of the Arab World. Published in French and Italian by Fondation Giovanni Agnelli, Torino, Italy.

Charmes, J. and Grais, B. (1994): Informal Employment, a Useful Concept Even in Developed Countries? Published in French in *Courrier des Statistiques*, no.70.

Charmes, J. (1995a): Recent Developments in Some European Data Collection Systems Pertaining to the Informal Sector. International Seminar on Informal Sector Employment Statistics, Islamabad, 3-5 September 1995.

Charmes, J. (1995b): Employment, Informalization, Marginalization: Africa in the Crisis and Under Adjustment. Published in French in "Crise économique africaine et dynamique démographique", Paris, CEPED.

ILO (1993a): Statistics of Employment in the Informal Sector: 15th International Conference of Labour Statisticians, Geneva, 19-28 January 1993, Report III.

ILO (1993b): XVth International Conference of Labour Statisticians, Report of the Conference, Geneva, ILO.

Salomé, B. and Charmes, J. (1988): In-Service Training, Five Asian Experiences. Paris, OECD. Development Centre Studies.

Visaria, P. and Jacob, P. (1995): The Informal Sector in India: Estimates of its Size, Data Needs and Difficulties in Collecting Them. International Seminar on Informal Sector Employment Statistics, Islamabad, 3-5 September 1995.

## **CHAPTER III**

### **EXPERIENCES IN COMPILING HOUSEHOLD SECTOR ACCOUNTS**



# **Compilation of ‘Personal Sector’ Accounts in the Canadian System of National Accounts <sup>1</sup>**

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## **I. Introduction**

1. The Canadian System of National Accounts (CSNA) provides an overall conceptually integrated framework in which to account for the various and interrelated aspects of the economic system. It draws on a wide array of statistical data, pulling them together to depict a coherent and consistent picture of the Canadian economy and its linkages with the wider global economy. In its broad outline, the CSNA bears a close relationship to the international standard as described in the *System of National Accounts 1993 (1993 SNA)* prepared under the auspices of the Inter-Secretariat Working Group on National Accounts, consisting of the Statistical Office of the European Communities, the International Monetary Fund, the Organization for Economic Co-operation and Development, the Statistics Division and regional commissions of the United Nations and the World Bank.

2. A comprehensive “historical” revision of the CSNA was largely completed in December 1997 which entailed (i) implementing the recommendations of the 1993 SNA and of the IMF *Balance of Payments Manual 1993*, fifth edition; (ii) undertaking a number of statistical revisions and methodological improvements; (iii) updating the base year of all constant price series to 1992 from 1986; (iv) re-defining the public sector universe along the lines of the proposed revisions to the IMF *Manual on Government Financial Statistics*; (v) harmonizing public sector statistics throughout the CSNA and reconciling them with Public Accounts and (vi) a thorough redesign of our table formats, publications and other products. Documentation related to this major revision, in the form of several papers and articles, is nearing completion.

3. The core framework of the CSNA consists of:

- Input - Output (I/O) Accounts, annually from 1961, at current and constant prices, with regional data available on an occasional basis (for 1984 and 1990) in the Provincial I/O Account (PIOA);
- Income and Expenditure Accounts (IEA), annually from 1926 and quarterly from 1947, at current and constant prices, with regional data available annually from 1961 in the Provincial Economic Accounts (PEA);
- Financial Flow Accounts (FFA), quarterly from 1961, at current prices;
- National Balance Sheet Accounts (NBSA), annually from 1961, at current prices;
- Balance of Payment (BOP) Accounts, annually from 1926 and quarterly from 1953, at current

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<sup>1</sup>The authors wish to thank, without implicating, our colleagues from the System of National Accounts Branch at Statistics Canada for comments and suggestions on earlier drafts.

- prices;
  - International Investment Position Account (IIPA), annually from 1926 at current prices.
4. At the time of writing only the revision of the “back-period” (1926 to 1960) of the IEA and the “back-period” (1961-1991) of the PEA remain to be done.
  5. Other closely related features of the system are the estimates of GDP at factor cost by industry, projected from the I/O system and available monthly from 1961 at constant prices, and the multi-factor productivity accounts, also based on the I/O system and available annually from 1961. Last but not least, work on satellite accounts has advanced on several fronts including the environment, natural resources, tourism and households' non-market production.
  6. The reconciliation, revision and release of the various parts of the CSNA is a co-ordinated, integrated process. A preliminary I/O Account is normally released about two and a half years after the reference year, and finalized one year later. The quarterly IEA, FFA and BOP Accounts are released simultaneously about 60 days after the reference period according to a pre-announced schedule. These estimates are open to revision every quarter during the current year and then once a year until reconciliation with the I/O Account, at which time they are considered “final”. Exceptions may be made under special circumstances, such as were made during the recent comprehensive revision.
  7. The annual NBSA and IIPA are normally released simultaneously, about 90 days after the reference period or about 30 days after the fourth quarter IEA, FFA and BOP estimates. Lastly, the monthly estimates of real GDP at factor cost by industry are released about 60 days after the reference period and timed to coincide with the quarterly IEA, FFA and BOP releases every third month. These estimates are open to revision every month during the current year and then once a year until reconciliation with the I/O Account.
  8. All accounts of the CSNA are based on a single set of accounting concepts and definitions. Key aggregates like Gross Domestic Product, Exports, and Wages, Salaries and Supplementary Labour Income have the same meaning and the same numerical values throughout the System. Thus, there is only one official estimate for GDP at market prices and only one for Personal Expenditure on Goods and Services. This is achieved through a process of internal reconciliation among the various areas of the System of National Accounts Branch at Statistics Canada. Not all estimates are reconciled across the System, for instance, GDP at constant prices differs between the I/O Account and the IEA due to two different approaches to deflation.
  9. One of the central features of the accounts is the grouping of all transactors into one of four broad institutional sectors: persons and unincorporated business, government, corporate and government business enterprises, and non-residents. The sectoring of the CSNA differs somewhat from that recommended in the 1993 SNA. The persons and unincorporated business sector represents both the household and non-profit institutions serving households (NPISHs) sectors of the 1993 SNA, while the corporate and government business enterprise sector of the CSNA is the aggregation of both the financial and non-financial corporations sectors of the 1993 SNA. Otherwise, the sectoring of the two systems is essentially the same.
  10. Another central feature of the CSNA is its sequence of accounts: production, income and outlay, capital and financial, other changes in assets accounts (which will be released for the first time in 1998) and balance sheet accounts. These correspond to the sequence of accounts as outlined in the 1993 SNA, with essentially the same content although there are some differences in presentation. In particular, the

primary distribution of income account, secondary distribution of income account and use of income account of the 1993 SNA are combined in the CSNA income and outlay account. The full sequence of accounts, except the production account, is compiled for each of the four sectors mentioned above. In the near future, this will be done for the financial corporations and non-financial corporations sectors as well (capital and financial and balance sheet accounts are already compiled separately for these sectors).

11. The production accounts of the CSNA follow a different sectoring than the other accounts of the System. The production accounts derive from the detailed input-output tables which encompass three broad sectors of the Canadian economy; the business sector and two non-market producer sectors, the government and NPISHs sectors. The business sector, an aggregation which is not found in the 1993 SNA, includes all unincorporated businesses owned by households and all incorporated businesses. Thus the production of the household sector, as defined in the 1993 SNA, is routed to the business sector of the CSNA. This sector is created, for the purpose of production accounts only, because estimates of inputs and outputs by commodity, are typically derived from establishment-based surveys which focus more on production data than on whether or not surveyed establishments belong to an incorporated or unincorporated enterprise. Statistics Canada is presently engaged in a major overhaul of its business surveys which will permit us to reconsider the sectoring of the production accounts of the CSNA at their next historical revision.

12. This paper focuses on the accounts for the persons and unincorporated business sector, more commonly known as the personal or household sector. This sector presents the most difficulty in terms of data collection and in some instances the data can only be obtained through residual derivation methods. To outline the rest of the paper, the next section describes the scope of the personal sector of the CSNA and changes in its coverage made during the recent comprehensive revision. Then the sources and methods used to compile the income and outlay, capital and financial, and balance sheet accounts for the personal sector are described. The paper concludes with a few remarks on stock-flow reconciliation accounts. The provincial dimension of the accounts and the constant price estimates will not be addressed in the discussion.

## **II. Scope of the personal sector in the CSNA**

13. The persons and unincorporated business sector covers two main types of transactors: (1) persons, households and other associations of individuals and (2) unincorporated businesses. Owing to statistical difficulties, charities, labour unions, professional associations, social clubs, religious institutions and other non-profit organizations have been retained here rather than separated out in a new sector for non-profit institutions serving households (NPISHs). Data on wages and salaries and depreciation exist, but there is insufficient data at present on transfers, operating expenses or balance sheet items, on which to base a full set of NPISHs sector accounts. In this respect, the CSNA does not go quite as far as the 1993 SNA recommendation to separate non-profit institutions serving households from the personal sector. Work will be done in the future to break out and develop the full set of NPISHs accounts, beyond the production account.

14. Farmers, professional practitioners and other owner-operators of unincorporated businesses are also included, as it is impractical to separate their business from purely personal transactions. Thus, the net income of unincorporated business, which is a mix of remuneration for work done by the owner and a return due to entrepreneurship, as well as the net rental income of unincorporated landlords, is included in the personal sector income statement. Also the investment in fixed capital and capital consumption allowances of unincorporated business are found in the personal sector capital finance account. With the recent comprehensive revision, non-farm unincorporated business investment in inventory has been from

that of incorporated businesses and is now recorded in the personal sector's capital finance account.

15. Private pension funds and life insurance companies are also included here as “other associations of individuals” and certain aspects of their management of personal financial investments are reflected in the personal sector accounts. Other activities related to their role as financial intermediaries are consolidated under the financial and balance sheet accounts for the corporate sector. Thus, their net investment income and saving are found in the personal sector (as opposed to being recorded in the corporate sector along with explicit flows between the two sectors), while their financial transactions are recorded under the corporate sector. Contributions and premiums paid in by persons and benefits and claims paid out to persons, on the other hand, are treated as intra-sector transfers and disappear during consolidation.

16. Coverage of the personal sector has been modified somewhat in the light of the 1993 SNA guidelines. In particular, non-profit residential care facilities, financed mainly by government, and universities have been reclassified to the government sector. Also, School Boards in Newfoundland and the Ontario Cancer Treatment and Research Foundation, formerly classified to the personal sector, have been reclassified to the government sector

### **III. The income and outlay account**

17. Table I below shows the income and outlay account for the personal sector as presented in the *National Economic and Financial Accounts*, with figures for 1996 incorporating changes made during the recent comprehensive revision. The data are compiled at a more detailed level but the table serves to highlight the main elements of the account: wages, salaries and supplementary labour income, unincorporated business net income, interest, dividend and miscellaneous investment receipts, current transfers to and from the personal sector and personal spending on goods and services. The estimate for savings of the personal sector, the balancing item of the account, is carried down to the capital and financial account of the sector.

#### **A. Income**

18. Wages, salaries and supplementary labour income is based largely on administrative data. The annual wages and salaries benchmark comes from tax forms submitted by employers to Revenue Canada and is normally incorporated a year and a quarter following the reference year. Supplementary labour income (SLI) includes employer contributions to public and private pension plans, employment insurance, workers' compensation, public and private health insurance plans and other accident and insurance plans. It is estimated from various data sources including tax forms, public accounts, annual reports of Workers' Compensation Boards, reports from the Office of the Superintendent of Financial Institutions (OSFI), and a survey of private pension plans. The estimates are updated to the current quarter with monthly series from the Labour Force Survey and the Survey of Employment, Payrolls and Hours. With the comprehensive revision and in line with the 1993 SNA, (i) employers' payroll taxes which were formerly under SLI are now treated as indirect taxes on production, (ii) retirement allowances derived from newly available tax data are now included in SLI and (iii) surcharges on employers for unfunded liabilities received by Workers' Compensation Boards as well as payments made directly by the Boards for medical treatment are now included under SLI.

**TABLE 1**

<b>Income and outlay account - persons and unincorporated business —1996</b>		<b>\$millions</b>
Income		680,412
Wages, salaries and supplementary labour income		429,601
Unincorporated business net income		52,948
Interest, dividends and miscellaneous investment receipts		89,085
Current transfers		
From government		106,103
Employment insurance benefits		12,324
Public service pension benefits		5,972
Social security and other pension benefits		87,807
From corporations		590
From non-residents		2,085
Outlay		50,415
Personal expenditure on goods and services		77,927
Current transfers		
To government		162,245
Income taxes		113,780
Contributions to social insurance and non-autonomous pension plans		44,411
Other		4,054
To corporations		9,134
To non-residents		1,109
Saving		29,997
Disposable income		518,167
Saving rate		5.8

19. Unincorporated business net income is built up separately for farm and non-farm businesses. Farm cash receipts come primarily from administrative data kept by Agriculture Canada and the Canadian Grain Commission, while expenses are estimated from surveys conducted by Statistics Canada's Agriculture Division. Farm net income includes an imputation for products grown and consumed on farms, an estimate of inventory change by type of crop, and an adjustment on grain transactions handled by the Canadian Wheat Board (whereby the "profits" of the Wheat Board are attributed to farmers when they are made rather than when they are paid out) along with a few other small adjustments related to subsidies and income stabilization programs to put farm income on an accruals basis.

20. Net income of non-farm unincorporated business includes net earnings of proprietors from their own business, net income of the self-employed and the net rental income of unincorporated landlords as well as the imputed net rent on owner-occupied housing. The annual benchmark for non-farm unincorporated business, excluding rental income, is based on Revenue Canada tax data made available about two years after the fact. Estimates for the current quarters are updated with a variety of indicators, including personal spending on services, indexes of real GDP at factor cost by industry, and the number of working proprietors by industry from Statistics Canada's monthly Labour Force Survey.

21. Net rental income is built up separately for the farm and non-farm sectors, and for residential and non-residential buildings. Benchmark estimates of the residential housing stock from the quinquennial census of population are further split into owner-occupied, tenant-occupied and unoccupied dwellings and updated with a series on the number of new dwellings completed less those destroyed. The stock of occupied dwellings is multiplied by the 'average contract rent per dwelling', estimated from the monthly Labour Force Survey on the assumption of an equal rental rate on owner-occupied and tenant-occupied dwellings, and adjusted for the difference in the number of rooms in each type of dwelling. Repairs, property taxes, insurance, mortgage interest, depreciation and other miscellaneous space expenses are then netted out. These latter come from a variety of sources including the annual Housing Repair and Renovation Survey, surveys of local government finances, the Bank of Canada and surveys of financial institutions. These data are seldom available separately for owner- and tenant-occupied dwellings and are thus split on the basis of the share of imputed and gross paid rents in the total.

22. Interest, dividends and miscellaneous investment income is calculated as the sum of many different parts. The annual estimate of bond interest of persons is simply the difference between interest paid by corporations, governments and government business enterprises and that received by these same institutions, insurance companies, pension funds and non-residents. The investment income, excluding dividends, of life insurance companies and fraternal societies is taken from the annual reports of the OSFI, while the investment income of trustee pension plans comes from an annual survey of such plans. The interest paid to persons on chartered bank deposits comes from the reports from the OSFI. Estimates of the deposit interest paid by trust and mortgage loan companies and credit unions come from quarterly surveys of financial institutions and those paid by government business enterprises, from annual reports. The portion of interest not paid to persons is deducted.

23. An imputation is included for financial intermediation services (FISIM) provided without explicit charge to the personal sector (as well as to governments and business) and included here on the income-side, and under personal expenditure on services on the expenditure-side. This imputed amount, in total, is the property income receivable by financial intermediaries minus their interest payable, as in the 1993 SNA. The CSNA also includes an imputation of services to the borrowers of intermediaries' own funds, unlike the 1993 SNA. FISIM was previously allocated between borrowers and depositors and among sectors based on the value of loans and deposits outstanding, on the assumption that a dollar borrowed or lent resulted in an identical service charge and that all sectors paid the same rate for FISIM. With the comprehensive revision, the split between borrowers and depositors is still made on the basis of outstanding loans and deposits. The allocation of FISIM across sectors on the borrowers side is made on the basis of shares in total liabilities while, in line with the 1993 SNA, reference rates are now used in the sectoral allocation of FISIM on the lenders side.

24. Current transfers from government, including employment insurance, public service pensions, social security and other pension benefits are based on administrative data, budget estimates and public accounts. Data at the federal level are benchmarked about one year after the reference period, while provincial data are benchmarked from two to four years after the fact. Current quarter updates are based on monthly federal accounting statements and a variety of monthly and quarterly provincial financial statements. At the local level, where transfers from the authorities are relatively small in comparison to those from other levels of government, the data are benchmarked on annual reports of the various provincial Departments of Municipal Affairs with a three to four year lag. Current updates are derived from ongoing sample surveys of municipalities.

25. Current transfers from corporations, including charitable donations to the personal sector, are based on data from the OSFI, normally available with a one quarter lag, and on the survey of financial statements of corporations, which is available for the current quarter. Write-offs of bad debt, which were formerly treated as current transfers from the corporate to the personal sector, are now treated as a balance sheet adjustment and will henceforth be recorded in the 'other changes in volume of assets account' for the corporate sector, in line with the 1993 SNA.

26. Current transfers from non-residents include personal, institutional and government pension and other remittances from abroad including withholding taxes on foreign-owned estates. These data are compiled for the BOP Accounts and carried over to the personal sector income and outlay account. Pension benefits paid out by foreign plans make up over two-thirds of the total, and come from data supplied by statistical agencies in the United States, the United Kingdom and Germany, supplemented with a rough estimate for other countries.

## **B. Outlay**

27. Personal expenditure on goods and services is estimated for over 130 categories of spending based on a variety of sources, especially the monthly Retail Trade Survey (RTS) which yields data about 30 days after the reference month. Adjustments are made to isolate sales to persons based on information from the annual RTS on sales by class of customer (available about two years after the fact), Statistics Canada's annual Family Expenditure Survey and data from manufacturers' and retailers' associations, or else they are calculated residually *via* commodity-flow balances. Adjustments are also made to put retail sales on a commodity basis using a series of weights giving the share of each commodity in the sales of each kind of business. In some important instances direct information on sales by commodity is available and used instead (e.g., motor vehicles, energy products, tobacco and alcohol). Other annual surveys are used to calculate purchases of goods not made at retail outlets (e.g., mail order, vending machines). Retail sales taxes and the Goods and Services Tax (GST) are added where applicable.

28. Personal spending on services relies on a variety of monthly and annual sources including the Restaurant, Caterer and Tavern Survey, the Traveler Accommodation Survey, the International Travel Survey, the Telephone Statistics Survey, and the Family Expenditure Survey. Spending on air, railway, inter-city bus transport as well as urban transit is estimated annually and projected quarterly with the number of passengers and operating revenues. Similarly, operating revenues are employed for postal and telephone services. Spending on lotteries is measured as sales less prizes paid out on the basis of monthly reports from lottery corporations, while net revenues are used for casinos and video lottery terminals. Personal spending on life, accident, property and automobile insurance is based on data from the OSFI. Non-personal expenditures are subtracted and retail sales taxes and the GST are added where applicable. In a number of cases, the data sources are weak, especially for spending on cultural services, health and social services, recreation services (except lotteries) and the operating expenses of non-profit organizations.

29. A number of changes have been or will be made to personal spending in light of the 1993 SNA. In particular, items purchased under finance leases of one year or more are now treated as goods bought outright or else, if the lease is under a year, as the purchase of a service. The output of the insurance industry, which was formerly equated to premiums less claims, now includes investment income from technical reserves, and this is carried through to personal spending on insurance. Also, payments by households for licenses to own or use vehicles, boats or aircraft as well as licenses to hunt, shoot or fish are now treated as indirect taxes whereas before they were treated as current transfers to government. The reclassification of universities and the capitalization of legal fees on housing sales has resulted in the

removal of university operating expenses and some legal fees from personal spending, and the addition of university tuition fees. Last but not least, the new *Classification of Individual Consumption by Purpose (COICOP)* has been adopted for all categories of spending and will eventually be incorporated for goods and services provided by government and by non-profit institutions.

30. Current transfers to government, including income taxes, contributions to social security and non-autonomous pension plans and other current transfers to government, are benchmarked and updated on the same sources as transfers from government. Personal sector transfers to corporations consist entirely of interest on consumer debt, after a deduction is made for the administrative expenses incurred by financial intermediaries in rendering services (which are already included elsewhere in the outlay account, as personal spending on services). The data, for banks, come from monthly reports of the OSFI, and for other corporations, from the quarterly survey of the financial statements of corporations.

31. Transfers to non-residents include personal and institutional remittances and withholding taxes paid to foreign governments. Again, these data are compiled for the Balance of Payments Accounts and carried over to the income and outlay accounts. Personal remittances to non-residents are based on data from the annual Family Expenditure Survey. The US Internal Revenue Service supplies data on withholding taxes paid by Canadians to the US government. There is no direct source for withholding tax paid by Canadians to other foreign governments, but some rough estimates are made.

#### **IV. The capital and financial account**

32. Table II below shows the capital and financial account of the persons and unincorporated business sector, with the recently revised data for 1996. Again, the data are compiled at a more detailed level than presented, but the table serves to highlight the main items of the account: personal saving, capital consumption allowances, net capital transfers, non-financial capital acquisition, including fixed capital and inventories and net purchases of existing assets, and transactions in financial assets and liabilities. The balancing items on capital account (net lending) and on financial account (net financial investment) should be the same in principle, but differ for various statistical reasons and this discrepancy is simply reported as it stands. Measurement error arises mainly due to the fact that the sector transactions are compiled from diverse sources.

##### **A. Capital account**

33. Personal saving, the balancing item of the income and outlay account is calculated residually, as total income less total outlay, and carried down to the capital and financial account. The sector's total saving thus appears as a source of funds either for non-financial capital acquisition or to acquire financial assets or pay down financial liabilities.

34. Capital consumption allowances (CCA) are for the most part measured at replacement cost for the personal sector. CCA consists of the depreciation on the residential housing stock, on non-residential buildings owned and rented out by persons, on the buildings and machinery and equipment of unincorporated farms and other unincorporated businesses, churches and other non-commercial organizations, the amortization of consumer durable goods supplied to tenants, and an allowance for insurance claims paid to business and landlords. Depreciation on the housing stock is computed as one half of one percent of each quarter's opening stock (i.e., 2% each year, for a 50 year service life) measured at constant prices, adjusted for buildings destroyed, and revalued at current prices with the implicit price index of investment in residential construction (excluding transfer costs).

35. Depreciation on non-residential buildings owned and rented out by persons is benchmarked to

administrative tax data, available about two years after the fact, and updated to the current quarter on the trend of depreciation on the housing stock. For farm buildings, machinery and equipment, the estimated depreciation corresponds to that used to arrive at imputed net rents and unincorporated farm net income, respectively. The straight line depreciation method is used. In the case of other unincorporated business, depreciation is calculated by major industry group in most cases by estimating ratios of CCA to gross business income of the corporate sector and then applying these ratios to gross business income of unincorporated businesses. With the recent comprehensive revision, depreciation for universities has been transferred to the capital account of the government sector.

**TABLE II**

**Capital and financial account - persons and unincorporated business - 1996 — \$millions**

Gross saving and capital transfers	66,239
Saving	29,997
Capital consumption allowances	26,232
Net capital transfers	10,010
Government	1,764
Non-residents	8,246
Non-financial capital acquisition	48,997
Fixed capital	45,148
Inventories	413
Existing assets	3,436
Net lending	17,242
Transactions in financial assets	44,601
Currency and deposits	14,605
Canadian debt securities	-2,323
Corporate shares and mutual funds	36,722
Life insurance and pensions	16,363
Other financial assets	-20,766
Transactions in liabilities	27,446
Consumer credit	7,275
Bank and other loans	5,909
Mortgages	17,192
Trade payables	-2,930
Net financial investment	17,155
Sector discrepancy	87

36. Capital transfers to the personal sector consist mainly of net inheritances and migrants' funds from non-residents. The estimates are built up using administrative data from Immigration Canada. With the recent comprehensive revision, migrants' funds have been expanded to include funds left abroad. Capital transfers from government arise from forgiveness of student loans, and are derived from public accounts and administrative data.

37. Gross fixed capital formation of the personal sector consists largely of residential dwellings, with a small non-residential component reflecting the unincorporated business share of capital formation in the agriculture, retail trade, and personal and business services industries. Investment in residential dwellings

is divided into three parts: new housing construction, alterations and improvements, and transfer costs. New housing construction is estimated on the basis of housing starts by type of dwelling from a monthly survey of the Canada Mortgage and Housing Corporation, combined with “work-put-in-place coefficients” (which measure the fraction of work completed each quarter, by quarter of start, type of dwelling and province). The data on housing starts are valued using average values of building permits.

38. Prior to the comprehensive revision, capital formation in the personal sector was deemed to occur as residential construction took place. Now, and in line with the 1993 SNA, work-put-in-place for residential dwellings is treated as investment of the corporate sector until completed and sold, when it is recorded on the personal sector's capital account. The personal sector share of new investment in residential construction, calculated as a portion of sales of new housing (excluding land) by type (singles, multiples) and by intended use (home ownership, rental, co-op housing, etc.), is based on information compiled by the Canada Mortgage and Housing Corporation and calculations done by the Income and Expenditure Accounts Division.

39. Capital formation in the form of alterations and improvements to existing dwellings by homeowners is available with a one year lag from the Housing Repair and Renovation Survey and updated on a quarterly basis with more timely indicators such as building permits and sales of lumber and building materials. Spending on secondary residences (e.g. cottages) and spending by landlords come from other data sources. This expenditure is allocated to the personal sector except for renovation spending by incorporated landlords (based on building permit detail).

40. Transfer costs related to the sale of existing residential dwellings include real estate commissions, legal, appraisal and inspection fees as well as land transfer taxes, with estimates derived from monthly statistics of the Canadian Real Estate Association and from the annual Family Expenditure Survey. Before the comprehensive revision, transfer costs covered only real estate commissions, while legal and other fees tied to housing sales were included in personal spending on goods and services. In line with the 1993 SNA, these latter transfer costs are now capitalized.

41. Inventory accumulation for the personal sector is comprised mostly of farm inventories and grain in commercial channels. The former are estimated by crop using quantities valued at market prices prevailing during the reference period. Withdrawals from stocks are subtracted from harvested additions to stocks for each crop. For tobacco and livestock, inventory change is obtained directly from quarterly and annual surveys. Information on grain in commercial channels comes from weekly statistics published by the Canadian Grain Commission, and is measured as the change in the quantity of grain held by the Canadian Wheat Board and held privately by commercial dealers, valued at the prevailing market price. With the recent comprehensive revision, inventory accumulation for the personal sector has been extended to cover non-farm unincorporated business inventories, a relatively small amount, most of which is in the retail trade industry.

42. Net purchases of existing assets were formerly subsumed implicitly in the net lending position on the capital account but reported explicitly on the financial account, whereas now, following the comprehensive revision, they are explicit throughout the system. Existing asset flows cover net transactions in used capital as well as land. For the personal sector, the estimates cover mainly (i) acquisition of land from the corporate sector on the purchase of new housing, and (ii) sales of agricultural land to the corporate sector for development. Net acquisition of valuables, however, is not covered, due to data problems, and remains implicit in the net lending position.

43. The sale of land surrounding residential structures is calculated as the difference between sales to

the personal sector of new homes including land, obtained from the Canada Mortgage and Housing Corporation, and sales of new homes excluding land, calculated by the Income and Expenditure Accounts Division of Statistics Canada. For the pre-1981 period, however, the value of residential land sales is obtained by applying land-to-structure ratios to fixed capital formation in housing by the personal sector.

44. Sales of agricultural land to the corporate sector for development are derived from census data on farm acreage, the average price per acre of farm land and the change in builders' land inventory. Other small items also show up under existing assets, such as repossessed/resold assets which come from the quarterly surveys of lending institutions.

## **B. Financial account**

45. At the detailed level on the financial side of the account (*Financial Flow Accounts*), transactions are tracked for over 30 sectors of the economy and about 22 financial instruments. The source data come from quarterly surveys of corporate financial statements, administrative and regulatory authorities, and in most sectors provide almost universal coverage. The estimates are constrained so that the total asset flows equal the total liability flows over all sectors for any given financial instrument. In some cases, this identity is met *via* residual derivation of assets held in the persons and unincorporated business sector. Transactions are mainly calculated from adjusted balance sheet positions of the surveyed sectors.

46. In almost all cases, balance sheet changes are adjusted for gains/losses, fluctuations in exchange rates, universe changes and reclassification of assets/liabilities in order to estimate transactions. As such, the quality of financial data in the personal sector hinges mainly on the accuracy and timeliness of the quarterly surveys of financial institutions and non-financial corporations conducted by the Industrial Organization and Finance Division and Income Statistics Division (for pension plans) of Statistics Canada.

47. Financial transactions of the personal sector are derived in one of three ways, depending on the instrument. First, they may be equated to the change in the net asset position of an institutional sector that is itself an “association of individuals”, as is the case with life insurance companies and trustee pension plans. Mutual funds assets are treated in a similar fashion, where it is assumed that over 90% of their investments are on behalf of individuals. Second, they may be based on “counterpart entries”, in other words, from reports or surveys of the parties engaged in transactions with the personal sector. This is done for deposits and loans, where banks, trust and mortgage loan companies, credit unions, and sales finance and consumer loan companies are asked to report the share of their (loans) assets and/or (deposits) liabilities due to the personal sector. Last, they may be derived residually by setting a liability/asset control total and then deducting surveyed sector asset/liability transactions. This is done for the personal sector's acquisition of marketable securities (short-term paper, bonds and corporate shares) and the transactions in trade payable liabilities of unincorporated business.

### **1. Financial assets**

48. Transactions in personal sector Canadian dollar- and foreign currency-denominated deposits at chartered banks come from (i) the chartered banks' booked-in-Canada balance sheet and (ii) the supplementary schedule “deposit liabilities classified by institutional sector” reported variously to OSFI, the Bank of Canada and Statistics Canada. Canadian-owned banks and subsidiaries of foreign banks operating in Canada are covered. Surveys of non-bank, deposit-taking financial institutions, such as credit unions and caisses populaires, as well as trust and mortgage loan companies for the most part serve to identify remaining personal sector deposits. Canadian currency held in the sector consists of a small percentage of (i) coins in circulation (a liability of the federal government) and (ii) notes in circulation (a

liability of the Bank of Canada).

49. Transactions in Canadian debt securities are made up of short-term paper and bonds. Short-term paper covers Government of Canada and provincial treasury bills and short-term paper, corporate and finance company paper and bankers' acceptances, as well as short-term asset-backed securities. Other instruments include government bonds (including federal and provincial government savings bonds), corporate and government business enterprise bonds and asset-backed securities (mainly mortgage-backed securities).

50. Estimates of personal sector net acquisitions of Canada Savings Bonds and provincial savings bonds are counterpart entries, derived from the government sector accounts. All types of marketable debt securities held by the personal sector, however, are residually derived as total new security issues minus net security transactions (acquisitions less sales) of surveyed institutional sectors. As such, any problems with the coverage, quality of response or classification and valuation of asset transactions in surveyed sectors are transmitted through to the residually-derived personal sector estimates.

51. Net flows of corporate equities are also derived residually, and are subject to the same caveat. Personal sector transactions in mutual fund shares, in contrast, are equivalent to net new unit purchases and are measured as over 90% of the sum of the financial asset transactions made by the funds less their transactions in short-term payables.

52. In the financial accounts, the intermediation activity of life insurance companies and pension funds is included in the corporate, rather than the personal, sector. As a result, personal sector transactions represent changes in equity; these are the increases/decreases in the claims of persons on the net asset flows of life insurance companies and trustee pension plans (i.e., insurance technical reserves). These are calculated as the asset transactions of these institutional sectors less their current liabilities transactions. With the recent comprehensive revision, a small part of the net assets of life insurance companies is allocated to the corporate sector.

53. The item "other assets" of Table II covers foreign securities, loans and other assets, not elsewhere included. Net investment in foreign securities (equity and debt) is derived, like other marketable securities, by deducting total portfolio investment abroad (compiled for the Balance of Payments Accounts) from the transactions of surveyed institutional sectors. Loan asset transactions cover only mortgage assets (held either directly or indirectly through estate/trust funds), and are estimated with trust company data and taxation statistics. Other assets, n.e.i., are derived residually and cover the following flows: accrued interest on deposits; accrued interest on bonds, including savings bonds; net payables of investment dealers to clients plus clients' credit balances; insurance companies' provision for unpaid claims, plus premiums received in advance (i.e., insurance technical reserves); actuarial liabilities recorded by employers in respect of trustee pension plans; and financial derivatives. The reported amount is also (residually) net of "other liabilities" (an item which is not an explicitly estimated liability of this sector).

## 2. Liabilities

54. The principal liabilities of the personal sector are mortgage and non-mortgage loans. Personal sector flows are derived from the asset detail of the surveyed lending institutions, calculated as the first difference of loan asset positions. In almost all cases, these level differences are adjusted for changes in the allowance for bad debts account, in order to yield transactions.

55. Transactions in consumer credit include loans made to finance the purchase of consumer goods and services. For the most part, personal sector loan liabilities by type can be identified on the survey forms and/or supplementary schedules. Personal sector loans at chartered banks (domestic and foreign subsidiaries) come from the booked-in-Canada balance sheet and the supplementary schedule "non-mortgage loans classified by institutional sector" reported to OSFI, the Bank of Canada and Statistics Canada. Other personal sector loans for the purpose of acquiring consumer goods and services are detailed in the surveys of non-bank lending financial institutions, such as credit unions and caisses populaires, trust and mortgage loan companies, as well as sales finance and consumer loan companies.

56. Transactions in other loans for the purpose of home renovation, investment in mobile homes, loans for tax-sheltered and other financial investments, auto leases, and loans to unincorporated business, consist of credit extended from banks and other lending institutions. In the case of bank loans, the chartered banks' supplementary schedule clearly spells out individual and unincorporated business loans. In the case of loans from other institutions, it is sometimes difficult to identify transactions with the personal sector.

57. Mortgage transactions cover mortgage loan and agreements of sale secured by real property, mostly residential buildings. Total mortgage flows, residential and non-residential, are derived from the first difference of asset positions of surveyed lending institutions. Mortgage loans at chartered banks come from the booked-in-Canada balance sheet and the supplementary schedule "mortgage loans report" submitted to OSFI, the Bank of Canada and Statistics Canada.

58. To estimate mortgage liability flows that represent personal and unincorporated business net borrowing, the detail on the type of mortgages, residential, non-residential, farm, is used in conjunction with other indicators (e.g. personal sector acquisitions of new residential real estate, the level of activity in the existing home market, the housing stock in the personal sector, census data on the portion of incorporated farms, the annual data on Farm Debt Outstanding compiled by the Agriculture Division of Statistics Canada, and residential and non-residential mortgage borrowing in the non-financial corporate sector). In the end, most residential and farm mortgages are allocated to the personal sector, with a small portion of non-residential mortgages allocated to non-farm unincorporated business.

59. Transactions in trade payables of unincorporated business are derived residually as the difference between total trade receivables less trade payables of surveyed sectors.

## V. The balance sheet account

60. Table III shows the balance sheet account of the persons and unincorporated business sector, with the new estimates for 1996 from the recent comprehensive revision. The balance sheet account contains data corresponding to and integrated with those of the capital and financial account. Non-financial assets are built up separately and are tied into non-financial capital acquisition in the capital account. Personal sector financial assets and liabilities are built up from essentially the same sources as those used to track financial flows. At present there is no household survey data on which to benchmark the personal sector

balance sheet. Currently, the data are constructed from a variety of sources and methods. However, in 1998, Statistics Canada was to initiate a comprehensive household asset and debt survey to improve the data in this area.

## A. Non-financial assets

61. Non-financial assets are, for the most part, built up from the investment series that appear in the capital account. These assets are valued at current prices.

62. The largest asset under fixed capital is residential structures, which is the net stock counterpart to fixed capital formation in housing. The estimates are prepared by the Investment and Capital Stock Division of Statistics Canada, using the perpetual inventory method to yield depreciated replacement cost values. Investment flows are capitalized, adjusting for depreciation and discards/demolitions, yielding current and constant dollar estimates. The current dollar series is the total housing stock, from which a personal sector component is calculated. Information on structure type (singles, doubles, rows, apartments, mobile homes, cottages), whether the dwelling is occupied or vacant, and on tenure (owned versus rented) is used in this exercise. With the comprehensive revision to the balance sheet account the new data on builders' inventories have been incorporated.

**TABLE III**

### **Balance sheet account - persons and unincorporated business - 1996 - \$millions**

Total assets	3,105,896
Non-financial assets	1,409,921
Fixed capital	967,873
Inventories	16,683
Land	425,365
Financial assets	1,695,975
Currency and deposits	531,489
Canadian debt securities	109,965
Corporate shares and mutual funds	456,173
Life insurance and pensions	519,934
Other financial assets	78,414
Liabilities and net worth	3,105,896
Liabilities	564,150
Consumer credit	123,156
Bank and other loans	58,013
Mortgages	374,300
Trade payables	8,681
<b>Net worth</b>	<b>2,541,746</b>

63. A small portion of the capital stock (non-residential structures and machinery and equipment), also built up with the perpetual inventory method, is attributed to unincorporated business (mainly in agriculture). The method used to establish these levels is identical to that used in sectoring non-residential fixed capital formation.

64. Consumer durable goods are included on the balance sheet, even though they are treated as current consumption in the other personal sector accounts, despite the 1993 SNA recommendation to include them only as a memorandum item. These estimates are also derived with the perpetual inventory technique. Most items classified to consumer durable goods and some semi-durable goods are capitalized.

65. Inventories on the personal sector balance sheet consist mainly of farm inventories. Farm inventory levels, at current values, are obtained from price and volume data compiled by Statistics Canada's Agriculture Division. The proportion of inventories due to farm unincorporated business is based on census data on unincorporated versus incorporated farms. A small amount of non-farm inventories is allocated to unincorporated business for the retail trade industry. This is calculated as derived book values, where an opening stock is established and the value of physical change in inventories and the inventory valuation adjustment are cumulated to yield current value stocks.

66. The item "Land" consists of land surrounding residential and non-residential structures and agricultural land. Estimates of the value of land surrounding residential structures are essentially derived using land-to-structure ratios and other indicators. The land-to-structure ratios are built up with data on absorption prices and building permit values from the Canada Mortgage and Housing Corporation, census data, as well as research done to establish values for core (urban) and non-core (suburban) areas in Canadian cities. Essentially the ratios are calculated as absorption (selling) prices, less building permit values, divided by building permit values. This is done for all new residential building activity, by year, for both core and non-core areas as well as by type of structure (singles, multiples). Census weights are then used to derive total land-to-structure ratios. The estimates for years prior to 1990 are derived with Canada Mortgage and Housing Corporation data on real estate prices and the new housing price index, compiled by Statistics Canada's Prices Division, as indicators.

67. The proportion of land allocated to persons is basically the sector's single and multiple dwellings multiplied by the relevant land-to-structure ratios. Agricultural land is the next largest component of land in the personal sector. Data on the capital value of farms are based on the agricultural census and inter-census projections compiled by the Agriculture Division of Statistics Canada. Essentially, buildings are calculated as a proportion of total farm capital, with land being the residual. The proportion of farm inventories to unincorporated business is based on census data of unincorporated versus incorporated farms. Land surrounding unincorporated business non-residential structures is very small, and is based on land-to-structure ratios derived from aggregate data on non-financial corporations.

## **B. Financial assets and liabilities**

68. At the detailed level (*National Balance Sheet Accounts*), balance sheet data are tracked for the same 30 sectors of the economy and the same financial instruments as in the Financial Flow Accounts. The source data, as well, are basically the same, giving almost universal coverage in most sectors. The estimates are constrained so that the total assets equal the total liabilities over all sectors for any given financial instrument. In some cases, this identity is met *via* residual derivation of assets held in the persons and unincorporated business sector.

69. Financial assets and liabilities of the personal sector are derived in one of three ways, depending on the instrument. First, they may be equated to the net asset position of an institutional sector that is itself an "association of individuals", as is the case with life insurance companies and trustee pension plans. Mutual funds assets are treated in a similar fashion, where it is assumed that over 90% of their investments are on behalf of individuals. Second, they may be based on "counterpart entries". This is done for deposits and loans, where banks, trust and mortgage loan companies, credit unions, and sales

finance and consumer loan companies are asked to provide information on the personal sector's share of their (loans) assets and/or (deposits) liabilities. Third, they may be derived residually by (i) setting a liability/asset control total and (ii) deducting surveyed sector assets/liabilities. This is done for the personal sector's marketable securities (short-term paper, bonds and corporate shares) and the trade payable liabilities of unincorporated business.

70. Financial assets and liabilities are largely valued at book in the surveyed sectors. This means at issue price for liabilities and at acquisition cost for financial assets. In the latter case, this means marketable securities are carried on the books somewhere between issue price and market value, depending on the date of acquisition. Unlike the financial flow accounts, balance sheet accounts reflect gains/losses on financial instruments, whether the result of trading or foreign currency fluctuations. This tends to distort the composition of residually-derived marketable securities in the personal sector. Still, total personal financial assets are, for the most part, not adversely affected; given that corporate equity liabilities include retained earnings, the residually-derived corporate share assets absorb the “offsetting” gains/losses.

71. The Balance Sheet Accounts will soon be available on a quarterly basis; they have been released only on an annual basis to date. The new quarterly balance sheets are expected to be released within ten weeks of the reference period.

## **VI. The other changes in assets account**

72. Net worth of the personal sector is the balancing item between the sector's assets and liabilities. In the other changes in assets account, the link between personal saving and changes in net worth can be articulated by asset and liability category. This account was to be released with the quarterly balance sheet data later in 1998. These stock-flow reconciliation follow the 93 SNA guidelines and resemble the provisional estimates compiled in 1985.

## References

Commission of the European Communities, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations, World Bank: *System of National Accounts 1993*, Brussels/Luxembourg, New York, Paris, Washington, DC, 1993.

International Monetary Fund, *Balance of Payments Manual*, fifth edition, 1993.

Lal, Kishori, "Remaining Differences Between the 1997 Canadian System of National Accounts and the 1993 International System of National Accounts," System of National Accounts Branch, Statistics Canada, April 1998.

Lal, Kishori, "The 1997 Historical Revision of the Canadian System of National Accounts: Record of Changes in Classification of Sectors and Transactions, Concepts and Methodology," System of National Accounts Branch, Statistics Canada, March 1998.

Lal, Kishori, "The 1997 Historical Revision of the Canadian System of National Accounts: Current Price Gross Domestic Product (1961-1993), A Statistical Representation from the Old to the New," System of National Accounts Branch, Statistics Canada, March 1998.

Lal, Kishori, "The 1993 International System of National Accounts: Its Implementation in Canada," Income and Expenditure Accounts Division, Technical Reprint Series No. 32, Statistics Canada, January 1995.

Statistics Canada, "The Persons and Unincorporated Business Sector: Notes and Supplementary Detail," in *National Balance Sheet Accounts, 1989*, Catalogue 13-214-XPB, February 1991.

Statistics Canada, *Guide to the Income and Expenditure Accounts*, Studies in National Accounting, No. 1, Catalogue 13-603-XPE, October 1990

Statistics Canada, *A Guide to the Financial Flow and National Balance Sheet Accounts*, Catalogue 13-585-XPE, February 1989.

Statistics Canada, *A User Guide to the Canadian System of National Accounts*, Catalogue 13-589-XPE, November 1989.

Statistics Canada, *The Canadian Balance of International Payments and International Investment Position: A Description of Sources and Methods*, Catalogue 67-506-XPB,

Statistics Canada, "Reconciliation Accounts," in *The National Balance Sheet Accounts, 1961-1985*, Catalogue 13-213-XPB, November 1986.

United Nations, *Provisional International Guidelines on the National and Sectoral Balance Sheet and Reconciliation Accounts of the System of National Accounts*, Statistical papers, Series M, No. 60, 1977.



## **The household sector with particular emphasis on the informal sector in the Indian context**

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### **I. Introduction**

1. National Accounts Statistics (NAS) in India are compiled following the guidelines set out in the United Nations System of National Accounts (SNA), 1968. Details of the data sources used and methodology adopted are given in the Central Statistical Organisation (CSO) publication, National Accounts Statistics: Source and Methods, 1989. India is in the process of revising its national accounts series from the present base 1980-81 to 1990-91 and also simultaneously of adopting, as far as possible, the revised 1993 SNA. The revised System is a comprehensive, consistent and flexible set of macro-economic accounts intended to meet the needs of government and private sector analysts, policy-makers and decision takers. The 1993 SNA embodies the results of harmonizing the SNA with other international statistical standards. It recommends the preparation of a sequence of accounts comprising current and accumulation accounts separately for each of the institutional sectors: government, corporations (financial and non-financial), non-profit institutions serving households (NPISHs), and households.

2. Household sector accounts have not yet been prepared in the Indian national accounts statistics. The main problem has been the non-availability of information on the income and expenditures of households. Income and expenditure surveys have been tried without success as pilot studies by the National Sample Survey Organisation (NSSO), the official agency responsible for large-scale household and enterprise survey operations. The pilot studies have not been successful due to the lack of reliable information on income. Full-scale surveys have, therefore, not been conducted, despite a demand from national accounts statisticians. However, the NSSO, conducts large-scale household socio-economic surveys on various topics of interest periodically in its annual rounds for the use of the planners, policy makers and researchers. Further, in the last two decades the CSO has conducted three Economic Censuses, which provided the requisite frame for formulating efficient sampling designs for the collection of data on the unorganized sector of the economy, and three rounds of follow-up Enterprise Surveys covering various economic activities to fill the existing data gaps relating to the unorganized sector. This paper discusses the definition and concept of the informal sector as a part of the household sector in the Indian context by (i) detailing the unorganized sector, the term used in the Indian national accounts statistics, (ii) enumerating the data sources for the unorganized sector, (iii) reviewing practices of incorporating the unorganized sector into the NAS, and (iv) indicating possibilities for preparing household sector production and generation of income accounts for unincorporated enterprises owned by the household sector from the existing data sources.

### **A. The household sector**

3. In the 1993 SNA, the household is defined as a small group of persons who share the same living accommodation, pool some or all of their income and wealth and consume certain types of goods and services collectively, mainly housing and food. In general each member of a household should have some claim upon the collective resources of the household. As a minimum, decisions affecting consumption or other economic activities must be taken for the household as a whole. Households often coincide with

families, but members of the same household do not necessarily have to belong to the same family, so long as there is some sharing of resources and consumption. Households may be of any size and take a wide variety of different forms in different societies or cultures depending on tradition, religion, education, climate, geography, history or other socio-economic factors. Servants or other paid domestic employees who live on the same premises as their employer do not form part of their employer's household even though they may be provided with accommodation and meals as remuneration in kind. Paid domestic employees have no claim on the collective resources of their employer's households.

4. The household sector consists of all resident households. Defined as institutional units, households include unincorporated enterprises owned by households, whether market producers or producing for own final use, as integral parts of those households. Only those household unincorporated market enterprises that constitute quasi-corporations are treated as separate institutional units. The household sector may be divided into four sub-sectors according to their main source of income: (a) employers, (b) own account workers, (c) employees, (d) recipients of property and transfer incomes. The households act as producers as well as consumers of goods and services, and they provide the labour for the economy. Production within the household sector takes place within enterprises that are directly owned or controlled by members of the household, either individually or in partnership with others. When members of households work as employees for corporations, quasi corporations or government, the production to which they contribute takes place outside the household sector. Producer units within the household sector are all unincorporated enterprises. Households as producers can be placed in two categories: (i) household unincorporated market enterprises and (ii) household enterprises producing for own final use. Household unincorporated market enterprises are created for the purpose of producing goods or services for sale or barter on the market.

5. At present in the Indian National Accounts Statistics, the term household sector is used to denote households as described above together with non-profit institutions serving households (NPISHs). Thus, units not belonging to the public or corporate sector are taken as belonging to the household sector. In India, as in any other country, while preparing national accounts for production and generation of income, capital formation, etc, all data available from the national statistical system from organized (or formal) and unorganized (or informal) segments of each of the industries (economic activities) are utilized. In India the term “informal” is used formally neither in the official statistics nor in the NAS. The terms used in the Indian NAS are “organized sector” and “unorganized sector.” But quite often researchers and users use the terms “unorganized” and “informal” interchangeably.

## **B. The informal sector**

6. The informal sector refers to productive institutional units characterized by (a) low level of organization, (b) little or no division between labour and capital, and (c) labour relations based on casual employment and/or social relationships as opposed to formal contracts. These units belong to the household sector and they cannot be associated with other units. In such units, the owner is totally responsible for all financial and non-financial obligations undertaken for the productive activity in question. For statistical purposes, the operational definition of the informal sector is a group of production units which form part of the household sector as household enterprises or equivalently unincorporated enterprises owned by households. Within the household sector, the informal sector comprises, (i) informal own account enterprises and (ii) enterprises of informal employers. The informal sector is defined irrespective of the kind of workplace where the productive activities are carried out, the extent of capital assets used, the duration of the operation of the enterprise and its operation as either the main or secondary activity of the owner.

7. Another important point to be noted for the informal sector, though not explicitly mentioned in the 1993 SNA, but stated clearly in paragraph 7 of the Resolution made at the fifteenth International Conference of Labour Statisticians, is that household enterprises are units engaged in the production of goods or services which are not constituted as separate legal entities independently of the households or household members that own them and for which no complete sets of accounts (including balance sheets of assets and liabilities) are available which would permit a clear distinction between the production activities of the enterprises and the other activities of their owners and the identification of any flows of income and capital between the enterprises and the owners.

### **C. The organized sector in the Indian economy**

8. The organized sector in the Indian NAS broadly includes all operating units with the following characteristics: units carrying out mining activities for major minerals; units carrying out manufacturing activities and registered under the Factories Act; units carrying out non-manufacturing activities in the private corporate sector and public sector comprising administrative departments, departmental commercial undertakings (DCU) and non-departmental commercial undertakings (NDCU). The exact coverage of the Indian organized sector is given in Annex 1. This sector is called organized as statistics for it are available regularly from budget documents, annual reports in the case of the public sector and through the results of the Annual Survey of Industries (ASI) in the case of registered manufacturing.

9. Separate accounts are prepared in India for the public sector because of the importance of this public organized sector whose contribution to the economy is more than twenty five per cent. In the public sector, an enormous amount of data is generated as a by-product of administration i.e. budget documents, demand for grants, receipts in the case of administrative departments and DCUs, and annual reports in case of NDCUs. These data sources are used in the compilation of macro-economic aggregates and accounts for the public sector.

10. The other organized but private sector is the corporate sector. Corporate sector statistics are compiled by the Reserve Bank of India (RBI), which undertakes studies of companies on a sample basis. The results of the sample companies are raised for complete coverage by the ratio of paid-up capital of all companies to sample companies, and this is the only available data source for the corporate sector. Due to the inadequate sample size - the sample is not based on sound random sampling techniques (as selected companies do not always make available their annual reports) and the poor raising factor - it has not been possible to prepare separate accounts for the corporate (particularly non-financial) sector. For the financial corporate sector, however, there is no problem of data as most banks, non-banking financial companies and insurance companies/corporations are in the public sector NDCUs. Separate accounts are prepared for this institutional sector as well as for the non-financial NDCUs.

11. Viewing the Indian statistical system by type of economic activity (industries) we find that for manufacturing activity, data are collected and compiled in a well organized manner for establishments registered under the Factories' Act, i.e. those employing more than (i) ten workers using power and (ii) twenty workers without using power through the Annual Statistical Inquiry (ASI) by the CSO. Similarly detailed data on major minerals is collected and compiled by the Indian Bureau of Mines (IBM) through annual returns on a regular basis. Thus detailed data are available on a regular basis for the public sector as mentioned above, for the factory sector through the ASI and for major minerals through the IBM. For the Indian NAS these sectors form the organized segment of the economy. The organized segment covers about thirty six per cent of the economy.

## D. The unorganized sector in the Indian economy

12. In the Indian NAS the unorganized sector refers to those operating units whose activity is not regulated under any statutory act or legal provision and/or which do not maintain any regular accounts. Non-availability of regular accounts has been the main criteria for defining the sector as unorganized. This definition helps to demarcate the organized from the unorganized sector. For example, units not registered under the Factories Act constitute the unorganized (informal) segment of manufacturing on account of the fact that their activity is not regulated under the relevant Act. In the case of the sectors for trade, transport, hotels and restaurants, storage and warehousing and other services, all non-public operating units constitute the unorganized segment on account of the non-availability of regular accounts of activity. More than 60 per cent of the income of the economy is generated in the unorganized (informal) segment in India.

13. The unorganized sector is labour intensive in the Indian economy and it can be typically viewed as a proxy for the productive activities of the household sector combined with NPISHs. The major component of the unorganized sector is household enterprises but there is a sizeable number of establishments (for the distribution of enterprises see table 1) as well in the unorganized sector, as all the manufacturing establishments which are not covered by the ASI and all the non-public sector and unincorporated enterprises/ establishments in various non-manufacturing economic activities are also in the unorganized sector.

**Table 1: Number of own-account enterprises/establishments and employment in non-agricultural economic activities 1990**

million

Economic Activity	Rural				Urban			
	Own-account Enterprises		Establishments		Own-account Enterprises		Establishments	
	Number	Employment	Number	Employment	Number	Employment	Number	Employment
Mining	0.029	0.052	0.013	0.222	0.004	0.007	0.004	0.163
Manufacturing	2.783	5.081	0.647	7.118	1.021	1.928	0.901	8.879
Electricity, gas, water sup.	0.006	0.007	0.024	0.146	0.002	0.003	0.015	0.241
Construction	0.103	0.122	0.024	0.119	0.079	0.092	0.027	0.178
Trade	3.905	4.825	0.471	1.328	3.205	4.204	1.271	4.672
Hotel and restaurant	0.459	0.706	0.133	0.443	0.243	0.377	0.243	1.244
Transport	0.186	0.204	0.038	0.159	0.208	0.233	0.071	0.740
Storage	0.022	0.027	0.032	0.134	0.072	0.084	0.070	0.308
Communication	0.002	0.003	0.085	0.209	0.002	0.003	0.020	0.402
Finance	0.076	0.094	0.073	0.380	0.135	0.187	0.177	1.854
Other Services	1.903	2.487	1.612	6.324	1.208	1.685	1.067	10.764
<b>Total</b>	<b>9.474</b>	<b>13.608</b>	<b>3.152</b>	<b>15.455</b>	<b>6.179</b>	<b>8.803</b>	<b>3.866</b>	<b>29.445</b>

Source: Economic Census 1990, CSO, Department of Statistics, Government of India.

14. The informal sector concept as defined by the International Labour Organisation (ILO) and the unorganized sector described above are conceptually somewhat different. Whereas the ILO concept focuses on a target group for social/political reasons, the unorganized sector depends on country practices to generate information for the different parts of the economy in an organized way. In the Indian context, as indicated above, the unorganized sector is one which is not organized and would include own account

production of goods, services of owner-occupied dwellings, domestic services and some quasi corporations, etc. Therefore, strictly speaking, to get information on the informal sector one should omit the contribution of the above-mentioned activities from the unorganized sector. Normally the unorganized sector would be larger than the informal sector but it could be the other way round as well if country practices for generating information in an organized way on a regular basis are strong. In the Indian National Accounts, however, the unorganized sector is roughly 4 to 5 percent larger than the informal sector on account of the inclusion of the non-informal sector activities mentioned above.

## **II. Data sources for the unorganized sector**

15. In India the household sector including private unincorporated enterprises is viewed as the unorganized segment of the economy. For agriculture, the principle sources of information used for the purpose of building up the national income estimates are (i) land use statistics, (ii) area and turn-out of principal crops and (iii) cost of cultivation studies. Statistics on land utilization are a by-product of the normal departmental activities of the State Revenue Departments who collect them for various administrative needs of land revenue collection. Periodic estimates of area and turn-out of principal crops, generally known as forecast crops, are prepared by the state agencies and are consolidated by the Directorate of Economic and Statistics, Ministry of Agriculture. Final estimates of production are based on complete coverage of area as mentioned above and yield rates obtained through crop cutting experiments conducted by the respective State Governments. The cost of cultivation studies conducted on various crops in different states provide information (rates, per hectare) on the inputs of agriculture such as seed, consumption of diesel oil, electricity consumed, feed to animals, repair and maintenance of farm machinery, etc. Input data relating to electricity, fertilizers and insecticides are not utilized from cost of cultivation studies as better and more reliable data are available from the Central Electricity Authority, the Fertilizer Association of India and the Pesticide Association of India from the supply side. There are many other agencies which provide data for agriculture on plantation crops, cash crops and oil seeds, etc. These are the Tea Board, Coffee Board, Rubber Board, Arecanut Board, Directorate of Cashewnut Development Board, Directorate of Sugar and Vanaspati, etc. Estimates of the output of livestock production are prepared on the basis of the results of Integrated Sample Surveys and studies made on the advice of the Technical Committee of Direction for Improvement of Animal Husbandry and Dairying Statistics. The Indian Livestock Census conducted every five years is the main source of data on livestock numbers. Other sources for data are State Animal Husbandry Departments, the Directorate of Marketing and Inspection (DMI), the National Sample Survey Organisation (NSSO), the Central Silk Board, the Khadi and Village Industries Commission (KVIC), etc.

16. The non-agricultural part of the unorganized segment has been covered in the Indian economy through various surveys organized in the regular programmes of the NSSO and follow-up surveys of the Economic Census organized and coordinated by the CSO. India has conducted three Economic Censuses, the first in 1977, the second in 1980 and the third in 1990. The fourth Economic Census was due to be held in 1998. The Economic Census provides basic information on the location, activity, employment etc. of all the enterprises. The items of information collected under the Economic Censuses include location, nature of activity, number of persons usually working, type of ownership, social group and gender of owner, whether there are fixed or no premises, power/fuel used, and whether registered or licensed under any act. In India, the Economic Censuses conducted have provided the required frame for the conduct of the follow-up surveys on various activities: manufacturing, trade, transport, hotels and restaurants and other services covering the unorganized segment of the non-agricultural economy. One problem experienced in the conduct of the Economic Census has been that the results become out of date quite quickly as the own-account enterprises and small and tiny establishments are very dynamic in nature because their set-up and close-down rates are very high. A gap of ten years between censuses is too long

on account of the dynamic nature of the small establishments' and own account entrepreneurs' behaviour. It is important to update the frame based on the Economic Census periodically and frequently, at least every five years. India has finally succeeded in establishing quinquennial Economic Censuses.

17. The follow-up enterprise surveys have been conducted utilizing the frame provided by the economic censuses. These surveys have helped in filling the data gaps which existed prior to 1977 when Economic Census and follow-up surveys were not conducted. India has a quinquennial programme of follow-up surveys to the Economic Census. Thus, a particular activity is a candidate for further investigation once every five years. Amongst the non-agricultural economic activities, the two major activities are manufacturing (unregistered) and trade (in terms of the number of establishments and own-account enterprises. For actual numbers as per the 1990 Economic Census see table 2).

**Table 2: Number of Own-account Enterprises(OAE), establishments and employment million**

<b>Item</b>	<b>Rural</b>	<b>Urban</b>	<b>Total</b>
Number of OAE	9.474	6.179	15.653
Employment in OAE	13.608	8.803	22.411
Number of establishments	3.152	3.866	7.018
Employment in establishments	15.455	29.495	44.950
<b>Total employment in OAE and establishments</b>	<b>29.063</b>	<b>38.298</b>	<b>67.361</b>

Source: Economic Census 1990, CSO, Department of Statistics, Government of India.

18. Therefore, in the follow-up surveys, these two major activities, unregistered manufacturing and unorganized trade are covered as a twin programme with larger samples. Under the first programme, a survey of Non-Directory Establishments (NDE, those employing 1 to 5 workers) and Own Account Enterprises (OAE) is carried out by the NSSO covering a sample of some 150,000 operating units, while under the second programme, the CSO covers about 40,000 Directory Establishments (DE, employing more than 5 workers and not registered/non-public sector). For other economic activities, enterprise surveys are conducted covering all DE, NDE and OAE, about 40,000 enterprises/establishments in total. Thus, under the five year programme, in one year trade activity (twin programmes one covering DE and the other NDE and OAE) is covered, in another year manufacturing activity (twin programmes one covering DE and the other NDE and OAE) is covered and in the remaining years other economic activities i.e., hotels and restaurants, transport, storage and other services are covered under the enterprise surveys (covering all DE, NDE and OAE).

19. The follow-up surveys have provided detailed information on the value of output, intermediate consumption, value added and additions to capital stock required for national accounts purposes. A list of follow up enterprise surveys conducted so far is given in annex 2. Experience has shown that the sample surveys provide reliable information on ratios but not on individual characteristics. Thus, ratios such as value added per worker of the activity are taken from the survey results and multiplied by the work force of the activity, based on the population census results, to arrive at the value added of the activity. It

should however be mentioned that problems have been encountered in the use of follow-up surveys, particularly in the surveys on non-directory trading establishments and own-account trading enterprises which have not provided reliable estimates. The problem with these surveys has been that small establishments and own account entrepreneurs do not keep accounts for the business, and information is collected by asking questions orally. Fear of attracting taxation and/or other reasons have resulted in non-usable results such as negative value added.

### **III. Practices to incorporate unorganized sector data into national accounts**

20. In the Indian NAS the total economy is covered as the sum of organized and unorganized segments of each of the industries (economic activities). Practices in use to compile domestic product from unorganized segments of various economic activities are described below.

#### **A. Agriculture and allied activities**

21. The agriculture and allied activities sector covers production of all agricultural crops, raising of livestock and poultry, livestock products and the operation of irrigation systems. Apart from the operation of government irrigation systems and plantation crops such as tea, coffee, etc, most of the agricultural activity is in the household sector. The value added of this sector is computed through the production approach i.e. value of output less intermediate consumption comprising seed, manure, fertilizers, pesticides, repair and maintenance of assets, irrigation charges, electricity, diesel oil, etc. Value of output is estimated as the product of the out-turn of crops and average prices. The out-turn of a crop is estimated as the product of the area under the crop and the per hectare production norm of the crop. Inputs in agriculture are estimated on the basis of the results of cost of cultivation studies which are undertaken for each of the crops in different states. The value of output of livestock products comprising milk, eggs, poultry, meat and other livestock products is estimated on the basis of various studies/surveys conducted. Operation of the government irrigation system is considered an allied activity but this is an activity of the organized sector. As agriculture is mostly carried out by household sector own-account enterprises, the allocation of primary income is in the form of mixed income. Mixed income is derived from the value added by subtracting the components of compensation of employees, estimated on the basis of the information available, from the cost of cultivation of studies.

22. Plantation crops such as tea and coffee are mostly managed by the corporate sector and data is available from the Tea Board and Coffee Board. To a large extent, agricultural activity is carried out by own-account workers with the help of unpaid family workers and paid workers on a temporary basis. Agricultural production activities are also carried out by both market and non-market producers. A market producer has the prime intention of selling produce in the market. Of course, they do keep a part of their produce for their own consumption. Non-market producers produce primarily for their own final consumption, and these producers are generally tribal. Agricultural and allied activities in India are by and large unorganized and have the characteristics of the informal sector. The ILO resolution states that for practical reasons household enterprises engaged in agricultural activities may be outside the scope of the informal sector. It may also be worthwhile to mention rural activities and kitchen gardens in the case of the urban areas where fruits and vegetables are produced primarily for own consumption. In current practice, this production is not adequately covered. However as this activity is very much within the production boundary of the 1993 SNA, these are required to be estimated. It is proposed to cover this activity by utilizing the results of NSSO consumption expenditure surveys where a specific question is asked of the respondent as to how much of the item he or she consumed was from his or her backyard/kitchen garden.

## **B. Forestry**

23. Forestry activities cover major products comprising industrial wood and fuel wood and minor products comprising a large number of heterogeneous items such as bamboo, fodder, lac, sandalwood, honey, resin, gum, tendu leaves, etc. The major products are covered by the public sector as the forests are mostly under the control of the government. The Ministry of Environment and Forest is responsible for the collection of statistics from the respective State Forest Departments. Fuel wood and minor forest products are however mostly collected by households either without payment or by payment of a licence fee for the collection. These activities therefore are in the unorganized sector as they are performed by households as own-account enterprises. Also, there is lot of unauthorized taking of both major and minor products of forests which becomes an illegal activity. These activities are therefore not properly accounted for in the national accounts. In the NAS, fuel wood production is covered by the consumption approach. The information from the consumer expenditure surveys conducted by the NSSO is used as a proxy for the production of fuel wood

## **C. Fishing**

24. The activities covered in the fishing sector are commercial fishing in ocean, coastal, offshore and inland waters; subsistence fishing; and gathering of seaweeds, sea shells, pearls, etc. Value added is estimated by the production approach. The value of output is estimated separately for marine fish and inland fish, and inputs in the form of repairs and maintenance of boats, nets and other operational costs are based on specific studies. The value added of the unorganized sector of this activity is obtained as a residual i.e. taking the value added figure from the production approach and netting out from it the components of the public sector and corporate sector, estimated separately from the budget documents, annual reports and the results based on sample studies on private companies, expanded for coverage on the basis of the ratio of global paid up capital (PUC) to the PUC of sample companies.

## **D. Mining and quarrying**

25. The estimates for mining and quarrying are compiled separately for major minerals and minor minerals. Information on major minerals comes from the annual surveys of mining, covering all major minerals, conducted by the Indian Bureau of Mines. Petroleum and natural gas production is totally within the public sector and is covered by the Oil and Natural Gas Commission (ONGC). The unorganized segment of this activity is minor minerals and quarrying. Data on minor minerals at present is collected by the State Geological Departments. The information on minor minerals and quarrying is not adequately covered. India has only now for the first time included this activity in the programme of follow-up surveys of the Economic Census and the results of the survey are awaited.

## **E. Manufacturing**

26. For the purpose of estimation of domestic product, the entire range of manufacturing activities is classified into two broad sectors: organized and unorganized. In the Indian NAS, the organized sector is taken as the registered sector covering those factories employing 10 or more workers and using power, or those employing 20 or more workers but not using power. All such factories are registered under the Indian Factories Act and data from these factories are collected through the annual survey of industries conducted by the CSO. The unorganized sector which is termed “unregistered” is covered using the results of the follow-up surveys of the Economic Census. The unregistered manufacturing sector is

covered by two surveys, namely; (i) the directory manufacturing establishments survey covering establishments not registered under the Factories Act and employing more than 5 workers; (ii) the other survey covering the remaining units engaged in unregistered manufacturing activity i.e. non-directory manufacturing establishments- those units employing 1 to 5 workers and own-account manufacturing enterprises which may employ only unpaid family labour or casual labour. These two follow-up surveys are conducted simultaneously every five years and the results provide information on the value added per worker, which is multiplied by the workforce to obtain the value added of the unregistered sector in the base year. The estimate of the workforce in the unregistered sector is calculated as the difference between global employment in manufacturing as available from the population census and employment for the registered manufacturing sector available from the ASI. The estimates for other years are obtained by extrapolating the base year figure by appropriate physical indicators and price indices. Whereas the indices of wholesale prices of the respective group have been used to obtain current industry price estimates, the physical indicators for moving the base year figure are chosen for the specific industry group at two digit level of National Industrial Classification (NIC). For example, for the food products industry group, the chosen physical indicator is an index of value of output of paddy, wheat, sugarcane, oil seeds and pulses; for the beverages industry group, the chosen physical indicator is value of production of grapes, citrus fruits and mangoes; for the tobacco product group, the chosen physical indicator is production of tobacco leaf; and for other two digit level industry groups, the physical indicators are the weighted indices of industrial production of relevant groups at 3-digit level of the NIC.

27. The unregistered manufacturing sector in the Indian NAS as mentioned above, represents the unorganized component of manufacturing activity in the economy but it is not the informal sector component of the household sector (including unincorporated enterprises) contribution. To obtain the contribution of the informal sector, appropriate netting out of the corporate sector included in the unregistered manufacturing sector component has to be made, even though it may be minimal.

## **F. Construction**

28. In India, as in most countries, construction activity is measured through a very indirect approach. The value of the output of construction is estimated through a commodity flow approach i.e. by taking into account the net availability of the basic materials which are inputs to the construction activity. Based on the estimated value of these basic materials, the output of construction is estimated as a proportion of the value of basic materials. The proportions are estimated on the basis of research type studies carried out on various categories of construction activities e.g. roads, bridges, buildings. Construction activity also has a component of labour intensive production techniques, i.e. improvement of land, plantation, construction of traditional houses by households themselves making use of free natural material (bamboo, leaves, etc.). The value of construction by type of institution is taken as the expenditure made by the type of institution in the acquisition of the construction assets. For the government and corporate sectors, these are the expenditures made by them on the construction activity. The household sector construction component (i.e. the unorganized sector) is arrived at as a residual i.e. from the total value of construction obtained as indicated above, netting out the components of the public sector and the corporate sector.

29. It is very difficult to get reliable information on construction through sample surveys as construction can take place at any site and no frame of sites exists to allow a sample to be drawn. Also there are other conceptual problems, for example, when government or a company spends money on construction, construction work is done by a contractor who either sub-contracts or employs casual labour. Thus the figure relating to the construction activity of the public sector or corporate sector does not necessarily mean that the construction has been carried out by the organized (formal) sector.

## **G. Electricity, gas and water supply**

30. The electricity, gas and water supply sector is mostly in the hands of the government. A small component of the informal sector which exists is in the case of water supply. This is the activity of carrying water by water fetchers whose sources of water are wells and manual water pumps and whose services are sold to clients for a fee. This activity is included in the production boundary. Another activity which falls in the unorganized segment is gobar (cow dung) gas. This activity is mostly carried out by households for their own consumption but the possibility of selling part of it cannot be ruled out. The contribution of gobar gas is estimated on the basis of information on the number of gobar gas plants received from the Khadi and Village Industries Commission.

## **H. Trade, hotels and restaurants**

31. The trade and hotels and restaurants services sector is covered separately for the organized and unorganized segments. The estimate for the unorganized sector is arrived at as the product of multiplying the workforce and per worker value added. The workforce of the unorganized segments is obtained as the difference between global sectoral employment as available from the population census and employment in the organized (public) sector units engaged in these activities available from the Employment Market Information. The per worker value added is taken from the results of sample surveys, the enterprise surveys conducted for the purpose. First, the benchmark estimates are prepared separately for rural and urban areas as a product of number of workers and per worker Gross Value Added (GVA). The benchmark estimates of GVA are carried forward to other years through a index of Gross Trading Income (GTI) prepared specifically for the purpose by taking into account the marketable surplus of agricultural commodities, the domestic output of industrial goods, and imports.

32. The number of own-account trading enterprises is very large (see table 1 for number of enterprises as per the 1990 Economic Census) but there is a problem in estimating their contribution to national income on the basis of the results of follow-up surveys where questions are asked on the commodities purchased and sold. The tendency not to tell the truth for a variety of reasons, maybe fear of attracting taxation, lack of understanding, not attaching importance to the survey, etc, is very common. In India the three rounds of follow-up surveys conducted so far on the trading activity have not yielded usable results, even indicating negative value added. Alternative methods of capturing data for this activity and methodological studies to solve the problems are needed. The current survey on trade has included a question asking the trader what margin he gets normally on the commodity he trades rather than asking details on the purchases and sales of the various commodities the trader handled. Results are awaited.

## **I. Transport, storage and communication**

33. For transport and storage services the practices followed are the same as for trade and hotels and restaurants. Railway transport in India is in the hands of the Indian Railways, a departmental commercial undertaking. For transport by other means, i.e. other than railways, the unorganized component is the private sector except shipping companies which are in the organized corporate sector. Public sector transport services include not only passenger transport by bus and tramways, ocean and inland water transport and scheduled air services, but also the support services for water and air transport. The activities of unorganized transport are covered separately for the various types of transport, namely mechanized road transport, non-mechanized road transport, sailing vessels other than private shipping companies, water transport support services and services incidental to transport. The practice followed is

to estimate the gross value added of the activity as the product of the gross value added per worker and the number of workers engaged in each activity. Information on per worker value added is obtained from the follow-up enterprise surveys of the Economic Census conducted by the CSO. The estimates of number of workers for the activity are obtained from the population census after due adjustments for secondary and marginal workers and netting out of the workers in the public sector in respect of the activity concerned. In the case of services incidental to transport, comprising packing, crating, travel agency operations, etc, the estimates are prepared on the basis of annual data on commission paid to the booking agencies by shipping companies, air companies, railways and road transport.

34. Much of the communication activity is within the public sector as the post and telegraph, and telephone services, etc. are managed by them. It is a recent phenomenon that some of the communication activities such as cellular phone, faxes and transmission of information via satellite, e-mail, etc, have become important. Such activities at present are not adequately covered.

## **J. Banking and insurance**

35. Most of the activities of banking and insurance take place in the organized (public) sector. Yet there are informal financial transactions through household operations such as pawnshops, own-account money lenders, informal chit-funds, etc. These services are only approximately accounted for in the national accounts, estimating the value added to be one-third of the value added in the organized non-banking financial enterprises. There is a need to capture these activities through enterprise surveys. India is planning to conduct an enterprise survey on these unorganized non-banking financial undertakings and own-account money lenders.

## **K. Real estate and ownership of dwellings**

36. Ownership of dwellings is a service which is produced and consumed by the households themselves and therefore will not be considered as falling in the informal sector in the strict sense. However, in the Indian NAS the contribution of this activity is included in the unorganized segment. Real estate activity in the unorganized sector is covered by the enterprise surveys, the follow-up surveys of the Economic Census.

## **L. Other services**

37. The other services sector includes educational services, research and scientific services, medical and health services, sanitary services, religious and other community services, legal services, recreation and entertainment services, personal services such as domestic laundry, dry-cleaning, barbers, beauty shops, etc, and services not elsewhere classified. The practices followed for covering these services in the unorganized sector is the same as those mentioned above i.e. the workforce of a particular activity multiplied by the value added per worker. The per worker value added is estimated from the enterprise survey results.

## **IV. Results of recent NAS for the unorganized sector**

38. Factor incomes by kind of economic activity are compiled regularly and presented, separately for the organized and unorganized segments, in the NAS. As per the latest results, the unorganized segment of the economy accounts for more than 62 per cent (see table 3).

39. It should be mentioned that the share of employment for the unorganized segment in India is 92 per cent. Of course, employment in agriculture itself is about 70 per cent. The share of the unorganized segment in various economic activities varies a lot. For example, in agriculture, the share of the unorganized segment is over 95 per cent, whereas the share of the unorganized segment in electricity, gas and water supply is now less than 3 per cent. Leaving aside agriculture, the activities of trade, transport, construction and manufacturing comprise a high share of the unorganized segment. Half of the unorganized segment is contributed by agriculture. Besides agriculture, trade, hotels and restaurants and manufacturing are the other two major economic activities contributing significantly to the unorganized segment of the economy. It is for this reason that in India the activities of manufacturing and trade are covered through larger samples with a twin programme covering DE, and NDE and OAE separately.

**Table 3: Structure of Net Domestic Product (NDP) in the unorganized sector and share of unorganized sector's NDP to total NDP**  
%

Economic Activity	Structure of NDP in unorganized segment		Share of unorganized segment's NDP to total NDP	
	1994-95	1980-81	1994-95	1980-81
Agriculture, forestry and fishing	49.4	54.3	96.5	95.2
Mining and quarrying	0.2	0.2	7.3	9.6
Manufacturing	10.9	11.2	38.8	46.3
Electricity, gas and water supply	0.1	0.1	2.4	6.0
Construction	5.1	3.6	52.4	48.0
Trade, hotels and restaurants	20.4	16.6	85.3	89.6
Transport, storage and communication	5.6	2.2	52.5	45.2
Financing, insurance and real estate	4.4	7.8	32.2	65.0
Other services	4.0	4.1	32.2	46.2
<b>All sectors</b>	<b>100</b>	<b>100</b>	<b>62.2</b>	<b>70.0</b>

## V. Possibility of estimates for the household sector

40. In the preceding sections it has been demonstrated that in the Indian context the unorganized segment, adjusted for the components of the private corporate sector, can be taken as a proxy for the joint household and NPISHs sector. The unorganized segment has an element of the private corporate sector which can be removed from each of the industry unorganized segments to get the adjusted estimates. In order to do so, industry estimates are required in the private corporate sector from the existing data sources for the corporate sector as mentioned above. If it is further possible to identify the NPISHs component in the adjusted unorganized segment, then we may be able to estimate the household sector.

41. As the Economic Census in India does not provide a frame for NPISHs, it has not been possible to consider sample surveys for the NPISHs sector. However, we may estimate this sector by considering the activities of (i) education (minus the public sector), (ii) research and scientific workers minus the public sector, (iii) religious and other community services, (iv) an assumed fraction of the recreation and

entertainment services (maybe five per cent), and (v) an assumed fraction (maybe fifty per cent) of international and other extra territorial bodies such as the NPISHs sector. These activities could be removed and kept outside the unorganized segment estimates to arrive at, approximately, the household sector component. In the forthcoming Economic Census a provision has been made in the code of the establishment to identify whether an establishment is a NPISH. This will enable us to get a frame for the NPISHs and it would then be possible to conduct separate surveys on NPISHs to determine their contribution to value added, capital formation, etc. It will then be possible to make separate accounts of NPISHs and also to identify the household sector more accurately making use of the enterprise surveys data.

## **Annex 1: Coverage of the organized sector in the Indian National Account Statistics**

In the Indian National Accounts Statistics, the coverage of the organized sector by economic activities is as follows:

- (i) Agriculture: government irrigation system, non-departmental enterprises and crop production in plantation crops of tea, coffee and rubber covered in private corporate sector
- (ii) Forestry: recorded production of industrial and fuel wood
- (iii) Fishing: non-departmental enterprises
- (iv) Mining and quarrying: major minerals
- (v) Manufacturing: registered factories covered under the Factories Act
- (vi) Electricity, gas and water supply: total activity of electricity, public sector part of gas and water supply
- (vii) Construction: construction work in the public sector and private corporate sector
- (viii) Trade, hotels and restaurants: public and private corporate sector and co-operatives
- (ix) Railways: total
- (x) Transport by other means: public sector, private shipping companies and road transport under the private corporate sector
- (xi) Storage: warehousing corporation in public sector, cold storage covered under the Factories Act
- (xii) Communication: total
- (xiii) Banking and insurance: total activity except the commission agents attached to Life Insurance Corporation of India and unorganized non-banking financial undertakings including professional moneylenders and pawn brokers
- (xiv) Real estate, ownership of dwellings and business services: real estate companies in the private corporate sector and public sector
- (xv) Public administration and defence: total
- (xvi) Other services: public sector medical, education and sanitary services, TV and radio broadcasting and recognized educational institutions in the private sector

## **Annex 2: List of follow-up surveys of the Economic Census**

### ***Based on the first Economic Census, 1977***

- (i) Survey of directory manufacturing establishments, 1978-1979.
- (ii) Survey of non-directory manufacturing establishments and own-account manufacturing enterprises, 1978-1979.
- (iii) Survey of directory trading establishments, 1979-1980
- (iv) Survey of non-directory trading establishments and own-account trading enterprises, 1979-1980
- (v) Enterprise Survey-1979-80 (Transport, hotels and restaurants, storage and warehousing and services sector covering all directory establishments, non-directory establishments and own-account enterprises).

### ***Based on the second Economic Census, 1980***

- (i) Enterprise Survey - 1983-1984 (Transport, hotels and restaurants, storage and warehousing and services sector covering all directory establishments, non-directory establishments and own-account enterprises).
- (ii) Survey of directory manufacturing establishments, 1984-1985.
- (iii) Survey of non-directory manufacturing establishments and own-account manufacturing enterprises, 1984-1985.
- (iv) Survey of directory trading establishment, 1985-1986.
- (v) Survey of non-directory trading establishments and own-account trading enterprises, 1985-1986.

### ***Based on the updated frame of 1987-1988***

- (i) Enterprise Survey - 1988-1989 (Transport, hotels and restaurants, storage and warehousing and services sector covering all directory establishments, non-directory establishments and own-account enterprises).
- (ii) Survey of directory manufacturing establishments, 1989-1990.
- (iii) Survey of non-directory manufacturing establishments and own-account manufacturing enterprises, 1989-1990.
- (iv) Survey of directory trading establishment, 1990-1991.
- (v) Survey of non-directory trading establishments and own-account trading enterprises, 1990-1991
- (vi) Enterprise Survey - 1991-1992 (Educational, medical, community and cultural and other services).

### ***Survey based on the Economic Census, 1990***

- (i) Enterprise Survey- 1992-1993 (Mining and quarrying, storage and warehousing).
- (ii) Enterprise Surveys-1993-1994 (Hotels and restaurants and transport).
- (iii) Survey of directory manufacturing establishments, 1994-1995.
- (iv) Survey of non-directory manufacturing establishments and own-account manufacturing enterprises, 1994-1995
- (v) Survey of directory trading establishment, 1996-1997.
- (vi) Survey of non-directory trading establishments and own-account trading enterprises, 1996-1997
- (vii) Enterprise Survey -1997-1998 (Educational, medical, community and cultural and other services).

## References

Commission of the European Communities, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations, World Bank (1993): System of National Accounts 1993, Brussels/Luxembourg, New York, Paris, Washington, D.C.

Economic Census, 1990, Central Statistical Organisation, Department of Statistics, Government of India.

ILO (1993): Resolution Concerning Statistics of Employment in the Informal Sector, 15th International Conference of Labour Statisticians, Geneva, 19-28 January, 1993.

National Accounts Statistics - Sources and Methods, 1989, Central Statistical Organisation, Department of Statistics, Government of India.

National Accounts Statistics, 1996, Central Statistical Organisation, Department of Statistics, Government of India.

# Quantification of household production and gender aspects in Nepal

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## I. The challenge

1. The United Nation's new manual on the System of National Accounts (1993 SNA) draws a distinction between the general production boundary and the SNA production boundary. The general production boundary encompasses all production of goods and services as per the second person criteria. Only those activities which cannot be effectively performed by others for a person (e.g. eating, sleeping, recreation, etc.) are beyond the general production boundary. The SNA production boundary, on the other hand, is limited to the inclusion of the production of goods and services for the market and the production of goods for own use by households (except when the services are performed by paid domestic servants).

2. Market production as defined in the 1993 SNA comprises all goods and services transacted in the market regardless of the institutional unit producing them. Non-market production includes goods produced and consumed at home, non-financial corporations own-use production and goods supplied by the government free or at non-significant prices. The production and processing of primary products for own use, the production of other goods for own use and the production of fixed assets for own use, although facing numerous measurement problems, are all conceptually within the current SNA boundary. Also included is the imputed value of home ownership and goods produced and consumed in kind. The rest of the activities classified as services are beyond the current SNA boundary. (For further details on classifying those activities, see volume 2 of this handbook on "Accounting for Household Production")

3. From the perspective of developing countries and with respect to gender, the new system is a definite improvement over the 1968 Manual. Many of the activities, previously classified as unproductive and outside the National Accounting System have now been classified as productive. Moreover, all production of goods in households is now theoretically within the SNA boundary:

- particularly, the processing of market goods for own consumption and water collection have now been included in the SNA;
- households have now been explicitly recognized as units of production as well as consumption ;
- the definition of the general production boundary has been broadened to include all production of goods, whether for sale or not, and the production of domestic and personal services for consumption within the same household, i.e. the preparation of meals, care of children and others, cleaning, repairs etc. The demarcation line between what can be included in the SNA and what cannot, is fixed for various historical and practical reasons. This is a substantial improvement over the earlier definitions of productive and unproductive, because it recognizes the historic nature of the present boundaries;

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<sup>1</sup>This paper would not have been possible without the cooperation of Mr. Haribol Shrestha and his colleagues at the Central Bureau of Statistics of Nepal. Much of the information is obtained from conversation and questions to them and I deeply appreciate their cooperation in writing this paper.

- for domestic and personal services not included in the SNA, a satellite account is proposed..

4. Nevertheless, the 1993 SNA still retains a caveat that production considered insignificant from a national point of view may be ignored. But in a country where the majority of households are subsistence level producers and their survival depends on scattered small scale activities, one needs some baseline information to decide what is important and what is not important from a national perspective. Without such knowledge, the encroachment of the market on the sources of livelihood of the poorer sections of the population goes unnoticed, often leading to erroneous policy measures harmful to the poor (see Acharya 1994).

5. Aggregate economic indicators of income and employment which focus on market activities and leave out a large proportion of survival activities undertaken by rural subsistence households present an incomplete picture of development. When in the process of development, activities are shifted from the household sector to the market (e.g. food processing and cooking) and from the market to the household (e.g. transport in developed countries), a statistical system which focuses only on the market leaves out much from the social transformation process. Indicators of employment and income become irrelevant for the majority of the population whose life is dominated by subsistence work.

**Table 1: Composition of household income**

Item	Rural				Urban <sup>1/</sup>			Nepal
	Mountain	Hills	Tarai	Rural	Hills <sup>2/</sup>	Tarai	Urban	
Rs.								
Average household income	1116	1125	1287	1192	2108	1407	1785	1233
%								
Agricultural enterprises	64.3	59.6	68.3	65.2	15.5	25.3	21.4	60.8
Non-agricultural <sup>3/</sup> enterprises	3.7	6.7	4.9	5.4	20.0	23.0	21.1	6.8
Wages and salaries	16.0	17.3	14.2	15.6	33.0	30.1	31.7	17.3
Other income	16.0	16.4	11.6	13.8	31.5	21.6	25.8	15.1

<sup>1/</sup> Mountains have no urban areas.

<sup>2/</sup> Includes Kathmandu Town; without Kathmandu average income is Rs. 1640.

<sup>3/</sup> Includes consumption of home produced goods including some non-agricultural items which is negligible

Source: Multipurpose Household Budget Survey (MPHBS) 1984/85, Nepal Rastra Bank, 1988.

6. Nepal is a typical example of a country where subsistence is the primary mode of production and therefore much of what is generated in this sector may not be reflected in the GDP. As the Multipurpose Household Budget Survey (MPHBS) indicates, more than 67 percent of household income is generated from agricultural and non-agricultural household enterprises (see table 1). It is not clear how much of this is included in the Nepalese national accounts.

7. Further, from a gender perspective, GDP calculations have drawbacks as indicated in the following:

- (a) Many activities classified as services are still outside the SNA production boundary. Even though there seems to be little difference in value added from food processing and cooking for self-consumption, the first is within and the second outside the SNA. The 1993 SNA provides mainly practical reasons for that distinction (See §6.19ff. of the 1993 SNA).
- (b) Many activities attributable to women's work have a large probability of being excluded from SNA accounts because of the caveat about small scale activities already cited above. These activities are primarily performed by women and may contribute substantially to the survival strategies of poor households. Ignoring them results in an under-evaluation of women's economic contributions.
- (c) Even when households sell domestically produced goods in the market, the fact that women may have contributed exclusively or substantially to this product is generally ignored and the "income" is attributed to the male head of the household. Women are not recognized as a productive labour force unless they enter the organized labour market directly. This does not comply with international standards on labour force statistics nor national accounts. In developing countries such as Nepal, the traditional role of males and females within the household may be still dominating the implementation of international statistical standards.

8. The primary task now should be to construct national accounts for all countries according to the definitions of products and activities as proposed in the 1993 SNA. A further attempt can be made to construct satellite accounts for those services which are still outside the SNA.

9. The problem, nevertheless, lies in capturing all such products. Particularly in countries at an early stage of development, where subsistence production constitutes a large part of total household resources, much of this production tends to be left out of GDP statistics due to the scattered nature of the activities and the lack of reliable methods of estimating them accurately. The case of Nepal's GDP contents and the methods of their calculation is presented below as an example to illustrate the nature of the problem.

## **II. Current GDP calculations in Nepal - issues of coverage and gender**

10. Presently the Central Bureau of Statistics (CBS) publishes estimates of GDP at current and constant prices annually, classified according to the International Standard Industrial Classification (ISIC). On the whole, the estimates are based on the industry approach. No statistics are compiled institutionally (Shrestha, 1997). Households and their production activities have been investigated only occasionally, in National Agricultural Credit Surveys, Farm Management Studies and Family Budget Surveys. Expenditure surveys are carried out more often. Therefore the CBS has very little basic information with which to construct household sector production accounts.

11. The following analysis will focus on those sectors which seem to be most relevant for the household sector as producing units.

## **A. Agriculture and forestry**

12. This sector includes crop cultivation, livestock, fisheries, poultry, forestry, etc. The agriculture sector within the GDP estimates is based on the commodity approach. Commodities selected for annual estimation under crop cultivation are the five major cereals (paddy, maize, wheat, millet and barley) and the five major cash crops (potatoes, oilseeds, sugar cane, tobacco and all other crops such as tea, cardamom, ginger etc). Crop sector accounting is limited to value added estimation. National output is the sum of individual crops derived by adding district totals. District totals of output are estimated by farm-level surveys conducted by the CBS in collaboration with the Department of Agriculture local staff. Vegetables and fruit production data are compiled by the respective departments in the Ministry of Agriculture. These estimates are based on reporting by field level staff, who are located in all villages in Nepal.

13. In the livestock sector, products are grouped into eight categories for estimation purposes, i.e. milk (cow and buffalo), meat (mutton, buffalo, goat and pig), poultry (chicken, duck meat and eggs), wool, hides and skins, bullock labour, manure, and increment in livestock population. Fishery output includes production from both natural habitats and man-made fish ponds. Annual surveys are carried out for estimating both livestock and fishery sub-sector outputs.

14. Forestry production comprises wood, logs, medical herbs and other forest products. The Department of Forests which issues permits to users of forest products and other product specific trading parastatals are the main sources for estimating forestry output. This is felt to be inadequate and Family Budget Surveys are used to derive household-level wood-fuel production. Fodder collection is included in forest production only when large fields are recorded as fodder grasslands.

## **B. Electricity, gas, water**

15. The electricity, gas and water sector output estimates cover electricity and water supply from parastatals. This does not include production of electricity from gobar gas and from other sources by the private sector for its own use. Also cowdung fuel produced at home and used extensively in Nepal's villages is ignored.

## **C. Manufacturing**

16. Manufacturing output comprises two sub-sectors, i.e. output from those manufacturing units which employ more than 10 persons and those units employing less than 10 persons. The main sources of information for larger establishments, i.e. those employing more than 10 persons, were the Surveys of Manufacturing Establishments, the last of which was carried out in 1994/95. Since then no such survey has been carried out and therefore production figures are based on the Annual Manufacturing Index, compiled by the CBS on a quarterly basis and on the Annual Manufacturing Price Index.

17. For the cottage industry section the basis for estimates is provided by the Survey of Small Manufacturing Establishments, carried out in 1991/92. In subsequent years it has been assumed that the value added in this sub sector follows the trends of large establishments.

18. Two issues arise in relation to its coverage. First, what is the population domain for sample selection? Tiny household units which manufacture products occasionally for household use or sale were not covered by the Survey. An establishment was defined as an "economic unit which engages under a

single ownership or control, in one or predominantly one economic activity at a single physical location, for example mine, factory, workshop”. Only establishments “engaging less than ten persons but a minimum of one hired labourer and household industries without hired labour but having the sole income to run the house” have been included in this survey. This seems to leave out much of the manufacturing output sold occasionally by many rural households and also products manufactured by them for household use. Examples would be clothes and clothing for household use, much of the basketry, mats, brooms etc, for household use and occasional sale, processed food for preservation and out-of-season consumption, value added from the processing of livestock products such as purified butter, and alcohol production for sale and household consumption etc.

19. Secondly, the assumption that production from the small and cottage-level units increases annually at the same rate as general manufacturing is also not valid, since many such products are being replaced by mass produced goods.

## **D. Construction**

20. Production from the construction sector is based on estimates of the total supply of construction materials, domestic and imports and estimates of own account (Kachhy Construction, Survey 1992/93). It is supplemented by an alternative approach, i.e. construction by government, households, non-profit bodies and the rest. Construction is divided into buildings and other construction making allowance for the use of total construction materials by them. An addition is made for farm construction and land improvement on the basis of a fixed ratio estimated previously from Agricultural Credit Surveys.

## **E. Trade, restaurants and hotels**

21. Trade: No baseline survey has been carried out so far in Nepal for estimating value added from internal trade. Estimates of value added from the trade sector are based on a mark-up system at various levels of trade, wholesale or retail, based on a commodity flow approach. First, the percentage of the tradable volume of goods is set apart and a percentage of trade margin is allocated for those goods individually. Percentages of tradable volumes and margins are based on spot interviews and expert opinions.

22. The volume of goods is divided into imports, domestically manufactured goods and agricultural commodities. The gross output from trade having been estimated, intermediate consumption in trade is taken as 20 percent of that output, except for petroleum products and chemical fertilizers, for which consumption is estimated separately. The constant price estimates of the sub-sector are based on an index of total value of trade deflated by a composite price index of agricultural and manufacturing commodities.

23. Restaurants and hotels: This sector is divided into star hotels, non-star tourist hotels, urban hotels and lodges, and rural hotels and lodges. For the first two, annual income and expenditure details are processed to derive value added. For the other three categories, estimates are derived on the basis of changes in the price of restaurant meals and number of units recorded. The number of units is obtained from the municipalities and district headquarters, where restaurants and hotels are required to register. It seems that rural unregistered tea shops and overnight stops on numerous trekking routes are not reflected in these statistics.

## **F. Transport, communication and storage**

24. This sector covers land, water and air transport and services incidental to transport. Land transport comprises commercial bus, truck, tanker, taxi and tempo. Value added from public sector transport is estimated on the basis of their annual accounts. Estimates of value added (VA) and other related aggregates are based on a small 1994 survey for deriving VA per vehicle and the respective number of vehicles. Air transport VA is based on companies annual accounts. Similarly VA from services incidental to transport like travel, trekking, rafting, cargo agencies, parcel delivery, etc are based on ratios and rates from a 1994 survey. Updating is done by estimating changes in the volume of services and their prices, etc.

25. According to the above analysis it is evident that much of the post harvest or later food processing undertaken within the household mostly by women for self-consumption is left out. Only food-processing in the “manufacturing establishment” is included. Similarly production estimates for livestock and minor crops leave out products generated for household consumption on a small scale. However, estimates of wood-fuel production and farm-level capital formation by households seem to be already included in GDP. Value added from the processing of purchased goods and water collection is excluded according to the 1968 SNA system and is therefore not included in the GDP of Nepal. Moreover, since the GDP calculations are product based, women's contributions are indistinguishably included in the product conventionally allocated to men, even when they are included in the national accounts. In Nepal no system of national accounts is compiled by institutional sectors.

26. According to the above description of the SNA calculation methodology in Nepal, production from the following activities in particular seem to have been left out, either completely or partially, in Nepal's GDP calculations.

- fodder collection and fetching water;
- house repair and construction, partially included since 1992/93;
- hunting and gathering for household consumption;
- food processing for household consumption;
- processing of primary and market goods for household consumption, e.g. weaving clothes, tailoring, garments for household consumption;
- domestic services;
- rural tea/sweet shops, alcohol stops, overnight stops etc.

## **III. A proposed analytical framework**

27. To deal with the problems discussed in the preceding sections an extended scheme of the SNA with three blocks including a satellite account is proposed. Part I in this scheme will contain GDP generated in the market sector. Part II will contain imputed value of non-market products. Probably this second block should be divided into production for own-use and for sale in the market. Since part of the production for the informal market would have been already included in part I of the box, this issue should be further clarified. Currently GDP statistics include all market production and part of non-market production. Major components of non-market production, which enters GDP, are comprised of the imputed value of own account agricultural products and owner-occupied housing. According to the revised manual of the 1993 SNA, future GDP statistics will include the imputed value of additional non-market products as discussed above in para. 1. and 2.

28. The third block in the above scheme would contain the imputed value of production from *household maintenance activities* which are still beyond the production boundary of the SNA, and for which a satellite account is proposed. (see table 2 below). *Household Maintenance Work* includes all domestic and people-related (caring) activities carried out in the household: meal preparation, cleaning up, child care and various other services. Repair services relate to repairing things or taking things to a repair shop to get them repaired, etc. Financial services includes banking, paying bills, legal services, etc. All of these items would be valued in a satellite account.

29. Following the 1993 SNA, activities not included in the production boundary are also divided in two sets. One set consists of service activities which cannot be delegated to another person but must be done for oneself. The other set consists of services which can be delegated to others and which could therefore be traded in the market. The latter services should be accounted for in an overall accounts framework and it is proposed that they constitute the third block in an overall accounting scheme. A household satellite account should include household maintenance activities, caring activities, and volunteering apart from goods produced and consumed at home. Remaining personal maintenance, personal development, and personal recreation activities would fall outside both the SNA accounts and the proposed satellite account.

#### **IV. Nepalese experiences of measuring household production by gender**

30. Several household-based studies in Nepal have compiled data on household production and tried to compile a fuller picture of the household production system. In such calculations women and girls have been found to contribute more than 50 percent of the household income (see table 2). Inclusion of imputed value of household maintenance activities would increase women's contribution to more than 60 percent of household production (see table 3). Two examples of such a calculation are presented in the following pages.

31. The first example presented in table 2 below is extracted from a 1978 intensive household level study covering 192 households from eight villages representing different ethnic groups and geographical regions of the country (Acharya & Bennett, 1981).

32. Prevailing market prices of the same or similar goods in the market were used to value the traded products. Where such prices were not available because such goods were not traded, e.g. dried green vegetables, they were valued at the prices of the cheapest vegetable in the off-season.

33. Value added from food processing activities was calculated in four steps:

- recording the quantities of inputs, paddy processed at home, or wheat or maize ground at home and outputs, rice, wheat, maize, flour or milk, etc;
- recording the prices of outputs (e.g. rice, wheat and maize flour) and inputs (e.g. paddy, wheat, maize, etc.) in the market;
- recording the milling costs and other expenses involved if any;
- multiplying inputs and outputs by respective prices and deducting value of total costs from total value of output.

This yields value added from paddy processing or wheat or maize grinding in the household.

34. Calculation of value added from products such as cooked food or alcohol, which were sold in the market by households, was carried out in a similar manner. When the inputs comprised home produced goods, e.g. alcohol, imputed value of inputs had to be used. This presented no difficulty as most of the inputs used in such production were traded in the market. Vegetable processing involved mostly home produced items. In such cases only the variable costs of growing vegetables (if any) was deducted, and the use of capital was ignored. This was not expected to matter too much because Nepalese agriculture uses very little capital, specially at subsistence level. Wood fuel collected and by-products were valued at market prices of a similar bundle in the market. Home made fuel from manure was not valued. Specific attention was given to record the maximum number of items produced at home. A series of forms, divided in three parts, was designed for the collection of production and sale information. (see Acharya & Bennett, 1983 for details on the instruments). Water collection was not valued.

**Table 2: Contributions of household members to household income**

Activities	Adults 15 +		Children 10-14		Total
	Male	Female	Male	Female	
1. Animal husbandry	69,119 (46.95)	50,069 (34.01)	12,440 (8.45)	15,590 (10.59)	147,218 (100.00)
2. Agriculture	458,271 (45.79)	490,197 (48.98)	18,615 (1.86)	33,728 (3.37)	1,000,811 (100.00)
3. Hunting and gathering	40,589 (43.70)	45,289 (48.76)	1,793 (1.93)	5,211 (5.61)	92,882 (100.00)
4. Manufacturing	15,698 (43.05)	19,899 (54.57)	332 (0.91)	536 (1.47)	36,465 (100.00)
5. Food processing	30,054 (10.75)	236,878 (84.73)	2,544 (0.91)	10,092 (3.61)	279,568 (100.00)
6. Profit from trading	58,220 (60.33)	38,283 (39.67)			96,503 (100.00)
7. Wage and salary	154,902 (77.01)	42,932 (21.34)	1,385 (0.69)	1,925 (0.96)	201,144 (100.00)
Total household income	826,853	923,547	37,109	67,082	1,854,591

Source: Condensed from Acharya and Bennett, 1981. Figures in parenthesis are percentages derived from the data on time use. Figures in brackets are derived from this table.

35. Moving from this household level production data to GDP calculations is a complicated process of identifying precisely those activities and parts of the product which are not reflected in the SNA. Product lists must be quite comprehensive to capture all types of products. This exercise was not undertaken in 1981.

36. But male and female contributions to household income and production were estimated on the basis of time allocation data. The forms for time use were designed to reflect both activities included in the 1993 SNA production boundary and those not included. A ratio of household time input in various kinds of activities was applied to allocate joint production to males or females. The estimates presented in table 2 have two components, namely, wage and salary income and all other income. Classification of wage, salary and pensions by age and sex groups presented no difficulty, since the individual contributors could be identified easily. Income generated in other sectors was allocated to different age/sex groups in proportion to the time spent by these age/sex groups in respective sectors. For example, in the sample households a total income of Rs. 147,218 was generated from activities classified under animal husbandry. Adult female time constituted 34.01 percent of the total time spent by all members of the same sample households on these activities. Then 34.01 percent of the total income of Rs. 147,218 has been attributed to women. Total contributions have been calculated by aggregating the sectoral estimates.

37. More recently another exploratory study (IIDS, 1995) was carried out to construct an accounting system including a satellite account on value added from household maintenance activities (see table 3). Table 3 is subdivided into three parts. The first part relates to official GDP statistics in Nepal as described earlier. The second part of the table presents an estimate of the magnitude of production, which, according to the 1993 SNA should in theory be included in estimates of the GDP for Nepal, but in practice is probably not included.. This part amounts to 52 billion Rs. which is 45 percent of the official GDP of 116 billion Rs. in the year 1991. 58 percent of that 52 billion Rs. is attributable to female work. The third box is an estimate of the monetary value of household maintenance activities which are outside the 1993 SNA production boundary. Almost 93 percent of such production is contributed by women.

38. Procedures for estimating women's contribution to regular GDP will depend on the availability of gender-specific data on wage payments and earnings. In Nepal such statistics are not available. Figures for GDP or value added at factor cost, the number of male and female workers by industry and male/female wage rates for agricultural and construction labourers are available.

**Table 3: Contributions to GDP and Household Maintenance Satellite Account 1991**  
million Rs.

	<b>Male</b>	<b>Female</b>	<b>Total</b>
<b>I Regular GDP</b>	84242	31886	116128
1. Agriculture	32653	22715	55368
2. Trade, restaurants and hotels	9848	3054	12902
3. Others	41741	6117	47858
<b>II Additional non-market production</b>	21616	30186	51802
<b>III Household maintenance</b>	10592	135773	146365
1. Cooking, serving and cleaning dishes and pots	6971	120690	127661
2. Laundry and cleaning of house	888	6609	7497
3. Child care	2733	8474	11207
4. Shopping and other work 1/	-	-	-
<b>Total I + II + III</b>	116450	197845	314295

1/ Value could not be imputed to this category because activities included in this category have different values. Source: For GDP Economic Survey, 1993-1994. Note: US\$ 1 = Rs 50.00 (1993/94). 1990/91 GDP has been used because the labour force data is for 1991.

39. This information has been used to derive the male/female contribution to major groups of production. Sectoral GDP and labour force data have been regrouped in three sectors because female/male wage ratios are available only for the agricultural and construction sectors. On the basis of available data, in agriculture the female/male wage ratio is assumed to be 0.85 and in construction 0.60. The wage differential in the construction sector has been assumed to approximate to the general male/female differential in non-agricultural wages except in the trade, restaurant and hotel groups. In the trade, restaurant and hotels sector, the male/female wage ratio has been assumed to be one because this sector employs a large number of women workers, and there seems to be no particular difference in the distribution of male and female workers between high and low paying jobs (subjective evaluation). Further, own account small business establishments are mostly run by women. Therefore female/male

wage rates are assumed to be equal in this sector.

40. A similar methodology was used by Shamin Hamid (1993) to calculate women's contribution to GDP in Bangladesh. In the absence of data on male/female earnings, this seems to be an acceptable alternative for such estimations.

41. Although according to the new the 1993 SNA manual, GDP should include all products and processing activities undertaken within households, GDP figures in Nepal still leave out many products and services as discussed above. Since the 1994 household survey by the Institute for Integrated Development Studies was not designed to generate data on such activities, an approximate method has been used to derive some estimates. Time-use data was collected on a national scale by the Multipurpose Household Budget Survey (MPHBS) in 1984/85. Its report provides information on time use classified by conventional economic (termed “regular” here) and subsistence economic activities for urban/rural regions separately. Subsistence economic activities include fuel/fodder collection and fetching water, house repair and construction (own use), hunting and gathering and food processing. Conventional economic activities, on the other hand, include agriculture, production, trade and commerce, services in the market, and construction. It is assumed that products generated by conventional economic and subsistence economic activities are proportional to time input in these two sectors by men and women. Since, the MPHBS provides information on time input in these activities by geographical regions, population weights have been used to calculate the national average for daily time inputs in these two categories of activities by men and women. The ratios of these time inputs in urban and rural areas have been used to derive men's and women's additional contributions, which is not reflected in regular Nepalese GDP (for details on methodology see IIDS, 1995 or Acharya, 1996).

42. Values for major categories of household work were derived from a survey of 276 households to represent various geographical regions of the country. The valuation process used for deriving value added from cooking was product based and similar to that used for food processing. For other services, direct market price where possible and replacement costs where not possible were used to derive the value added for various household maintenance activities. These values have been applied to time-use data from the MPHBS to estimate an aggregate value added at national level from the time input in household maintenance activities classified into three major groups, cooking, serving and cleaning dishes and pots, laundry and cleaning of house, and child care. For the last category, shopping and other work, no values have been assigned because this aggregates qualitatively different kinds of activities such as sick care and shopping. Further, 80 percent of shopping time is already accounted for in the calculations of value added from cooking. Similarly a large proportion of water collection was for cooking purposes and this was included in time devoted to the preparation of meals.

## **V. Concluding remarks**

43. The scheme described above serves several purposes simultaneously. It reflects human activities to a fuller extent than conventionally reflected in the SNA and it shows the relative contributions of men and women to the national production process and human welfare. Of particular interest is the second box which tries to capture that part of production which is theoretically within the SNA production boundary, but in practice may be excluded from GDP calculations in many countries. The most important example of such activities could be food processing for self-consumption. Even according to the 1968 definition of the SNA, the processing of primary products was supposed to be included in the SNA. But whether it is included in practice needs to be examined on a country by country basis. Value added from the processing of purchased goods for own-consumption and water collection were theoretically outside the SNA until 1993. Further, historical records constructed according to this scheme would facilitate an

understanding of the dynamics of market/non-market interactions and its impact on various sections of the population.

44. The scheme goes a step further than what is recommended for household accounts within the 1993 SNA and tries to present a satellite account representing value added from household maintenance activities. Calculation of this box did not involve any methodological assumptions different from those currently used in national accounting practices. Rather, valuation of meals at prices of similar meals in the market allowed us to capture the value of products such as water and fuel collected for self use or shopping for food products through meal prices.

45. Conceptually the methodology involves the following steps:

- (i) Estimating women's contribution to market GDP on the basis of available information;
- (ii) The collection of detailed data on all products and services generated at the household level for sale or for own use. This would cover kilograms of paddy, vegetable, fruits, milk, meat, wool, number of mats, carpets etc, all products produced and processed in the household. Construction of the third block in this scheme involves estimating the volume of household output in various household maintenance activities, e.g. number of meals cooked, number of old people and children cared for, quality and content of meals, quality and frequency of child care activities, etc;
- (iii) Valuing this product at market prices of products when they are also partially sold. When they are not sold, prices of such products, which are equivalent to the goods and services produced in the market, may be used. Where even this is not possible, wage-based methods may be used (see INSTRAW, 1994). One has to make sure that the "bundle of goods and services" sold in the market and those whose values are being imputed are similar. For example, restaurant meals comprise a "bundle of services" such as water and fuel collection, shopping for food, cooking, servicing and cleaning pots and pans and the kitchen.(see Acharya in INSTRAW, 1996);
- (iv) Deducting intermediate consumption of both market-purchased and home-produced goods valued at market prices of equivalent goods, to derive the value added within the household sector. One should be careful to avoid double counting. If outside labour is employed in the process of generating this value added, the costs of employing such labour must be deducted at this stage to derive the value added by the household members. Payments to outside labour must also be disaggregated by gender, so as to derive gender disaggregated wage income from the household sector. Finally, depreciation of capital goods used in the process of production should also be deducted to arrive at net value added;
- (v) Allocating the value, thus calculated, to various members of the household according to their respective labour inputs in production of various goods and services. This labour input must include time devoted to management also.

46. Such data collection needs carefully designed prelisting of activities and products because many of the products and services are generated on a small scale on a daily basis. Food and other processing

activities are often carried out as part of cooking which is outside the SNA. Separation of such activities from cooking and related work which is a part of the third box requires detailed clarifications.

47. Since most of the production is the result of joint labour inputs, it is necessary to collect data on labour allocation or time use to make women's contributions visible. If the product categories are matched with time-use categories it becomes possible to allocate imputed or market income to various individuals according to their labour input. (For a detailed discussion on this issue see Acharya & Bennett, 1983 and Acharya, 1988).

48. A major concern often expressed about the imputation of value to household services such as cooking and child care is non-comparability of the content of the household services for own use to market services. It is argued that there is a component of love and concern involved in household services which are not found in market services.

49. Another argument against valuation of household services is that market prices are socially determined and by using market prices for valuation and estimations of women's contribution to GDP, we are undervaluing women's work. These are valid reservations. However, the imputed prices give only the minimum value of such services and not the maximum value. As such, use value of food cooked at home or the love that goes with a mother's child care should not be an issue in the valuation debate.

50. Further, all prices reflect the social realities and socio-economic structures of the moment. It has to be remembered that, in national accounts, the aggregated monetary value of actual market transactions is measuring exchange values and not use values of products. Finally, while acknowledging the reasons for not merging services produced within households for own final consumption and products produced in a market context, we think that the monetary valuation of such services provides a more precise framework for comparative analysis of market and non-market work, based on money as a useful standardized unit of measurement. Time-use data by itself may serve very many analytical purposes, but for understanding the dynamics of market/non-market shifts and their impact on the livelihood of various sections of the population, valuation of all production within the household, SNA or non-SNA with clear demarcations, is found to have a powerful illustrative value.

## References

Acharya Meena (1988). *Time-use survey: Proposed Project Design and Questionnaires*, report presented to UNDP for a Pakistan Study, mimeo.

- (1994). "Time-use Surveys and Valuations of Women, Men & Children's Work". Report submitted to INSTRAW/UN, Santo Domingo, Dominican Republic.
- (1996). Measurement of Contributions of Women and Men to National Accounts in "Valuation of Household Production and Satellite Accounts", INSTRAW, Santo Domingo, Dominican Republic.

Acharya Meena & Bennett Lynn (1981). *The Rural Women of Nepal: An Aggregate Analysis and Summary of 8 Village Studies*, The Status of Women in Nepal, Center for Economic Development and Administration, Tribhuban University, Kathmandu, Nepal.

- (1983). *Women and the Subsistence Sector Economic Participation and Household Decision Making in Nepal*, World Bank Staff Working Paper, #526. Washington DC., USA

Central Bureau of Statistics (1991). *Multipurpose Production Survey (Rural)*, Kathmandu, Nepal.

- (1992). *Multipurpose Production Survey (Urban)*, Kathmandu, Nepal.
- (1993). *System of National Accounts in Nepal*, An Updated Manual.
- (1993). *Report on the Survey of Own Account Construction 1991/92 (Urban)*, Kathmandu, Nepal..
- (1993). *Report on the Survey of Own Account Construction 1991/92 (Rural)*, Kathmandu, Nepal.
- (1994). *Survey of Small Manufacturing Establishments 1991/92*, Kathmandu, Nepal.
- (1997). *National Accounts of Nepal*, Kathmandu, Nepal.
- (1997). Questionnaires for various surveys.

Commission of the European Communities, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations, World Bank (1993). *System of National Accounts 1993*, Brussels/Luxembourg, New York, Paris, Washington, D.C.

Hamid, Shamin (1993). *Non-market Work and National Income. The Case of Bangladesh*, Bangladesh Institute of Development Studies (BIDS), Dhaka, Bangladesh.

Institute for Integrated Development Studies, IIDS (1995): *Valuation of Household Maintenance Work and the Satellite Account*, Nepal.

INSTRAW (1995). *Measurement and Valuation of Unpaid Contributions: Accounting through Time and*

Output; Santo Domingo, Dominican Republic.

- (1996). Valuation of Household Production and the Satellite Accounts. Santo Domingo, Dominican Republic.

NEPAL RASTRA BANK (1988). *Multipurpose Household Budget Survey: A Study on Income Distribution, Employment, and Consumption Patterns in Nepal*; Kathmandu, Nepal.

Shrestha, Hari Bol (1997). "National Income Accounting System in Nepal" Paper presented to the Seminar on Valuation of Household Maintenance Work and the Satellite Account -Nepal". Organized by IIDS and UNDP, Kathmandu, July 7 1997. Nepal.

# **The compilation of the household sector accounts in Malaysia<sup>1</sup>**

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## **I. Introduction**

1. The household sector accounts were compiled in Malaysia as part of the compilation of the institutional sector accounts according to the 1993 System of National Accounts, in a project financed by UNDP and technically supported by the United Nations Statistics Division. The economy is divided into 13 sectors of which the household sector is one separate sector. The compilation covers the sequence of accounts up to the capital accounts. They were prepared for 1987 and 1993 so as to check the consistency of the data and the methods used in estimation

2. The household sector consists of all resident households, imputed services of owner-occupied housing and the unincorporated enterprises owned by households which are involved in the production of goods or services for own final use or for sale in the market. By the 1993 SNA definition, unincorporated enterprises are economic entities that are not legally independent of their owners. They normally do not keep a full set of accounts and if they do, they usually may not be able to separate appropriately their expenditures into those used for business and those used for their own consumption.

3. The household sector in Malaysia also includes Non-profit Institutions Serving Households (NPISHs), which provide goods or services to their members or to households free of charge or at prices that are not economically significant. NPISHs could be treated as a separate sector but because the data on NPISHs are too scarce in Malaysia, it was decided that NPISHs should be treated as a part of the household sector.

4. The household sector, by definition, should also include all economic activities that might either be illegal or underground.

## **II. Data sources and estimation methods**

### **A. Data sources**

5. Different data sources are used to compile the accounts. Some of the most important are:

- (i) Common questionnaire surveys;
- (ii) Estate surveys on agricultural production;
- (iii) Mini-surveys conducted by the Department of Statistics;
- (iv) Government accounts on revenues and expenditures;
- (v) Reports of statutory bodies such as Employees Provident Funds, the Social Security Organization, the Armed Forces Fund, the Teachers Provident Fund and the Pilgrims

- Fund Board;
- (vi) The tabulation on deposits, and loans by types of economic activities, compiled by Bank Negara Malaysia (the Central Bank);
- (vii) The insurance report of the Central Bank;
- (viii) Household income and expenditure surveys;
- (ix) Input-output supply and use tables.

## **B. Estimation methods for output, input and value added**

6. The industries that are covered by the annual Common Questionnaire Survey (CQ) are manufacturing, mining, construction, transport and some selected services industries. Retail and wholesale trade surveys were carried out for only two years, 1983 and 1993. From these sources, data for individual proprietorship and partnerships are classified into the household sector.

7. The results of annual surveys of industries are inflated to obtain totals for the full census frame of the base year. However, even the census may not cover fully the activities of the household sector since censuses cover only those that are enumerated in the listing of the census frame. Detail of underground activities, not covered by censuses, are obtained as the result of balancing the supply and use tables. It is true that some underground activities may be the work of corporate enterprises, but due to lack of information it is assumed that they all belong to the household sector.

8. Mini-surveys conducted by the Department cover industries which are not already covered by the CQ such as laundries, barbers and support services to land transport. Supplementary information is obtained from the various government agencies or from other informed sources such as the Fishery Department and Pepper Marketing Board.

9. Annual estate surveys of agriculture cover estates producing rubber, oil palm, tea, coconut, and cocoa. Estate is defined as "land, contiguous or non-contiguous, aggregating not less than 40.47 hectares (100 acres) in area, planted with the specified crop or on which the planting of the specified crop is permitted and is under a single legal ownership". Though estates are classified into the non-financial corporate sector, the output of smallholdings estimated as the difference between total output and estate output is classified into the household sector. In general, total output is estimated as the product of yield and planted areas.

10. Methods similar to that applied to agriculture are applied to fishery, forestry and husbandry. However, as data on fishery are much less reliable since there are no separate data for the corporate sector, interviews with experts are carried out in order to obtain the corporate sector's share of output. For intermediate consumption, a similar input structure is used for both the corporate and household sectors.

## **C. Estimates of property income and current transfers**

11. Government accounts provide information on interest on government bonds, social contributions receivable from households and benefits payable to households. Pension funds and insurance reports

provide information for the estimation of contributions payable and benefits receivable by the household sector.

12. Information from the central bank allows the allocation of interest receivable by and payable to households. The allocation of financial intermediary service charges and net interest is complicated. It will be discussed separately in the next section.

13. Regarding insurance and financial intermediation services to households, it is important to know that the allocation of service charges as either intermediate or final consumption of the household sector can be done only after the output of the insurance and financial intermediary is calculated.

#### **D. Allocation of FISIM**

14. The household sector uses financial intermediation services for both production activity and final consumption. Financial intermediation services indirectly measured (FISIM) provided to facilitate the deposits and loans of household enterprises are treated as intermediate consumption of the household sector. FISIM provided for consumer loans and household deposits are treated as final consumption. For the purposes of allocation, it is assumed that only interest payable on loans provided by financial intermediaries and interest receivable on deposits at the financial intermediaries are to be charged with service charges.

#### **Estimating FISIM**

15. FISIM for all sectors, including the household sector, must be prepared together in order to balance, in an integrated manner, both sources and uses not only of services but of all types of financial instruments which serve as the basis for allocation. The task is to estimate FISIM paid by the different sectors for the loans borrowed from financial intermediaries and for the interests received on deposits.

16. Before any allocation of FISIM for the sectors can be made, the total FISIM charges by the financial intermediaries as well as the shares of the FISIM charges on borrowers and lenders have to be estimated. Total FISIM charges (TISC) by the financial intermediaries is equal to total interest receivable minus total interest payable by the financial intermediaries. The share of FISIM charges on the borrower is the ratio of the difference between the lending rate ( $i_l$ ) and the pure interest rate ( $i_r$ )<sup>2</sup> over the difference between lending rate and deposit rate ( $i_d$ ), while the FISIM charges on the lender (depositor) is the ratio of the difference between the pure interest rate and the deposit rate over the difference between lending rate and deposit rate. These ratios are applied to all the financial intermediaries to find the total FISIM charges on loans (TISC<sub>l</sub>) and the total FISIM charges on deposits (TISC<sub>d</sub>):

- Share of FISIM charges on borrower =  $(i_l - i_r) / (i_l - i_d)$
- Share of FISIM charges on depositor =  $(i_r - i_d) / (i_l - i_d)$

17. Based on these formulas, TISC can be split into two parts:

- Share of the FISIM charges on loan borrower  $[(i_l - i_r) / (i_l - i_d)]$  is 0.6
- Share of the FISIM charges on lender (depositor)  $[(i_r - i_d) / (i_l - i_d)]$  is 0.4

18. To find the FISIM charges on deposits and loans for the sectors, the following steps are taken:

- (i) Find the total interest receivable on loans given by the financial intermediaries (TIL);
- (ii) Find the total interest payable on deposits at the financial intermediaries (TID);  
Find the total FISIM charges on loans (TISC<sub>l</sub>) given by the financial intermediaries, with the assumption given above that it is equal to 0.6TISC;
- (iv) Find the total FISIM charges on deposits (TISC<sub>d</sub>) by the financial intermediaries, with the assumption given above that it is equal to 0.4TISC;
- (v) Find the ratio of service charges per ringgit<sup>3</sup> of interest on loan (borrower) (RSCL).
- (vi) RSCL = total FISIM charges on loan (0.6TISC)/total interest on loans (TIL);
- (vii) Find the ratio of service charges per ringgit of interest on deposit (lender) (RSCD).

RSCD = total FISIM charges on deposit (0.4TISC)/total interest on deposits (TID).

19. As an example, say, the FISIM rate on loan (RSCL) is 0.238, which means for every ringgit of interest payable on loans a service charge of 0.238 ringgit is imposed by the financial intermediaries. Furthermore, the FISIM rate on deposit (RSCD) is 0.384, which means for every ringgit of interest receivable on deposits a service charge of 0.384 ringgit is imposed by the financial intermediaries. Therefore,

$$\begin{aligned}
 &= \frac{\text{total FISIM charges on the total interest payable on loans}}{\text{total interest payable}} \times 0.238 \\
 &\text{and} \\
 &= \frac{\text{total FISIM charges on the total interest receivable on deposits}}{\text{total interest receivable}} \times 0.384
 \end{aligned}$$

### Pure interest receivable/payable

20. Financial intermediaries impose a service charge on depositors, by deducting it from the interest (pure interest) they are supposed to transfer from borrowers to depositors, therefore pure interest receivable is equal to gross interest receivable plus total FISIM payable on deposits. In the case of loans, financial intermediaries add a service charge to the interest (pure interest) they are supposed to transfer from borrowers to depositors, therefore pure interest payable is equal to gross interest payable minus total FISIM payable on loans. For example:

- Interest receivable on fixed deposit is 28. Pure interest receivable is therefore equal to 28 plus 28 \* 0.384, which is equal to 39.
- Interest payable is 181. Pure interest payable is therefore equal to 181 minus 181 \* 0.238, which is equal to 138.
- Total FISIM charges payable is equal to 11 + 43 = 54, which is the intermediate consumption of unincorporated enterprises.

## **E. Allocation of insurance service charges**

21. To allocate the non-life insurance service charges to the household sector as well as any other sectors which use non-life insurance services, the total insurance output for the non-life insurance sector has to be estimated first. Then the ratio of insurance services is found in order to estimate the insurance service charges on enterprises and households which use the non-life insurance services. This ratio of insurance service charges is equal to total non-life insurance output divided by the total premium received by the non-life insurance sector.

22. Let us assume that the ratio of insurance charges is 52% of total premium payable. For example, insurance premium payable is 18, out of which the insurance service charges is equal to  $18 * 0.52 = 9$ . Net premium (gross premium minus service charges) is equal to  $18 - 9 = 9$ , which is treated as current transfer in the secondary distribution of income account.

23. For non-life insurance premiums payable, an insurance service charge is estimated and included as part of either the intermediate consumption of the industry and the household sector or final consumption of the households depending on who is paying and for what purposes.

24. Life insurance is supposed to be paid and benefits only the household sector, therefore all output of life insurance is treated as final consumption of households. Premiums payable are treated as current transfer payable and benefits receivable are treated as current transfer receivable in the secondary distribution of income account.

25. The results from household income and expenditure surveys are mainly used to complement the data already available from the questionnaires used in the Department and also to check for consistencies. They are used to estimate certain components that are not covered by any other surveys.

## **F. Estimation of capital account**

26. Data on gross fixed capital formation (GFCF) from the CQ surveys include:

- (i) Purchase/acquisition of new or old capital goods;
- (ii) Sales/disposal of capital goods;
- (iii) Own-construction of the following capital goods:
  - land improvement
  - buildings - residential and non-residential
  - machinery/equipment
  - transport equipment
  - furniture and fixtures.

27. Total GFCF by sectors is estimated based on the control totals which are the national accounts estimates (published figures). The GFCF for the private and the public corporations covered by the CQ are raised by the raising factor for output. The difference between the control total GFCF and the total inflated GFCF of the corporations plus the GFCF of the registered household unincorporated enterprises covered by CQ is then the GFCF for the unregistered household unincorporated enterprises not covered by the CQ survey.

### **III. Other estimates on the sequence of accounts**

28. Output at basic prices and intermediate consumption at purchasers' prices for most industries are obtained from published data by the Department of Statistics. However, these data are prepared according to the 1968 SNA. In view of this, the published figures have to be adjusted for service charges of financial intermediaries. This is one of the important differences between the 1968 SNA and the 1993 SNA. This adjustment eventually will affect the value added which is the difference between output and intermediate consumption.

29. Shares of value added by sectors and by economic activities for 1987 and 1993 are shown in Annex 1 and the sequence of accounts is shown in Annex 2.

30. There are two concepts of final consumption used in the 1993 SNA:

- (i) Final consumption expenditure of households which includes only the value of all purchases of goods and services made by households;
- (ii) Actual final consumption which includes not only final consumption expenditure made by the households but also final consumption expenditures made by the general government and non-profit institutions serving households (NPISHs) for the benefit of the households. These final consumption expenditures made by the general government and NPISHs are called individual final consumption expenditures or social transfers in kind.

31. Households undertake actual final consumption with adjusted disposable income which is equal to its disposable income plus the value of social transfers in kind receivable from the general government and NPISHs. The balancing item for the account is saving and the amount is the same irrespective of which concept of final consumption is used. The two concepts of household disposable income and final consumption are shown separately in Annex 2 in the use of disposable income account (C6) and the use of adjusted disposable income account (C7).

### **IV. Overall analysis of the household sector**

32. The household sector is an important sector in the economy, particularly with respect to its sources of income, final consumption and saving. The following paragraphs will focus more on analyzing changes to some important indicators of this sector during the 1987-1993 period. It is important to recognize that the household sector even in the simple form of T-account in the SNA sequence of accounts provides important information on the evolution of the sector in the economy.

#### **A. Analysis of the primary income of the household sector**

33. The household sector earns income from various sources. Households earn income in terms of: (i) operating surpluses or mixed incomes by operating their own household enterprises which are called unincorporated enterprises by the SNA; (ii) compensation of employees for working as employees for other sectors and (iii) net property income through managing their financial assets. Therefore, it is also of great interest to see the make up of these sources of income and the changes of their shares of primary income over time.

34. The following table shows the composition of the primary income of the household sector in

1987 and 1993. During this period, it is quite clear that the households were involved less in conducting their own business and inclined more to become employees of other sectors. This observation is reflected in the decline in the shares of operating surplus and mixed income from 34.3 % to 29.5 % and the increase in the share of compensation of employees from 55.9 % to 60.2 %. The share of net property income did not change meaningfully. (Net property income is property income receivable less property income payable.)

**Table 1: Components of primary income of the household sector**  
million RM and percentage

Item	1987	Shares	1993	Shares
Operating surplus	1,441	3.1%	296	0.0%
Mixed income	14,578	31.2%	29,597	29.5%
Compensation of employees	20,092	55.9%	60,428	60.2%
Net property income	4,563	9.8%	10,017	10.0%
<b>Total primary income</b>	<b>46,674</b>	<b>100.0%</b>	<b>100,338</b>	<b>100%</b>

## B. Analysis of income taxes

35. For the household sector as a whole, the ratio of taxes paid out of primary income increased from 5 % to 6 % during the 1987 to 1993 period.

**Table 2: Average primary income tax rates**  
million RM and percentage

Item	1987	1993
Total primary income	46,674	100,338
Income taxes	2,329	6,034
<b>Average income tax rates</b>	<b>5.0%</b>	<b>6.0%</b>

## C. Analysis of saving rate of the household sector

36. In analyzing the household sector, it is also important to observe the rate of saving out of its primary income and disposable income. Disposable income is primary income adjusted for net current transfers. During the same period under study, the saving rate out of primary income declined significantly from 19.5% in 1987 down to 10.5% in 1993. The rate of saving with respect to disposable income of the household sector declined even more significantly, from 21.3% in 1987 down to 11.9% in 1993. The latter rate is used more frequently by economic analysts. One of the important reasons for the decline might be the increase in the households' consumption of durable goods that was encouraged and

financed by the maturing financial sectors. The decline in the household saving rate should be the subject of interesting in-depth analyses by economists.

**Table 3: Saving rate of the household sector**  
million RM and percentage

<b>Item</b>	<b>1987</b>	<b>1993</b>
Total primary income	46,674	100,338
Disposable income	42,763	89,032
Saving	9,118	10,599
Saving rate over primary income	19.5%	10.5%
Saving rate over disposable income	21.3%	11.9%

## Endnotes

<sup>1</sup> This paper was written on the basis of the results of the project to develop institutional sector accounts for Malaysia financed by UNDP and technically supported by UNSD. The figures presented are for demonstration purposes and should not be taken as reflecting properly the economy of Malaysia.

<sup>2</sup> Pure interest rate, also called reference rate, is computed as the average inter-bank interest rate.

<sup>3</sup> Data on total loans or total deposits by the non-financial sector are not available. However, interest payable on loans and receivable on deposits by the non-financial sector can be estimated. Therefore, it is better to find the ratio of service charges per ringgit payable on loans and receivable on deposits.

**APPENDIX I: VALUE ADDED BY INSTITUTIONAL SECTORS**

	VALUE ADDED PERCENTAGE SHARE							
	PUBLIC		PRIVATE		HOUSEHOLDS		GOVERNMENT	
	1987	1993	1987	1993	1987	1993	1987	1993
TOTAL FINAL SECTOR	43.0%	29.7%	57.0%	70.3%	0.0%	0.0%		
BANKS	47.7%	41.9%	52.3%	58.1%	0.0%	0.0%		
OTHER FINANCIAL RATIIONS	39.9%	16.5%	60.1%	83.5%	0.0%	0.0%		
INSURANCE AND PENSION FUNDS	23.2%	17.4%	76.8%	82.6%	0.0%	0.0%		
TOTAL NON-FINANCIAL	19.3%	12.1%	52.0%	61.2%	28.7%	26.7%		
AGRICULTURE	6.5%	4.4%	40.9%	52.9%	52.7%	42.8%		
Other agriculture	0.0%	0.0%	13.2%	13.2%	86.8%	86.8%		
Rubber planting	8.3%	9.9%	22.8%	17.6%	68.9%	72.4%		
Oil plan (estates)	12.6%	14.0%	29.4%	32.5%	58.0%	53.6%		
Coconut estates & smallholding	85.3%	32.6%	13.5%	6.2%	1.2%	1.2%		
Tea estates	99.1%	21.4%	0.9%	8.6%	0.0%	0.0%		
Livestock	0.0%	0.0%	45.8%	58.3%	54.2%	41.7%		
Agricultural services (H/H)	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%		
Hunting & trapping	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%		
Forestry & logging	5.3%	2.0%	93.1%	6.5%	1.5%	1.5%		
Fishing	0.0%	0.0%	14.1%	17.6%	85.9%	82.4%		
MINING	6.6%	17.8%	92.9%	2.1%	0.5%	0.2%		
Crude petroleum & natural gas production	6.9%	18.8%	93.1%	81.2%	0.0%	0.0%		
Metal mining	2.8%	6.3%	88.6%	90.2%	8.6%	3.5%		
Other mining	4.4%	5.2%	93.8%	93.2%	1.8%	1.6%		
MANUFACTURING	35.4%	6.3%	60.6%	90.4%	3.9%	3.2%		
ELECTRICITY/MATER/GAS	100.0%	96.7%	0.0%	3.3%	0.0%	0.0%		
Electricity, gas & steam	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%		
Water	100.0%	77.8%	0.0%	22.2%	0.0%	0.0%		
CONSTRUCTION	18.5%	9.2%	48.9%	61.5%	32.7%	29.3%		
WHOLESALES & RETAIL TRADES	0.0%	1.9%	70.6%	72.4%	29.4%	25.7%		
HOTEL & RESTAURANTS	0.9%	3.1%	40.8%	47.0%	58.3%	49.9%		
TRANSPORTS & COMMUNICATION	53.2%	47.8%	32.1%	34.5%	14.7%	17.7%		
Railway transports	100.0%	100.0%	100.0%	0.0%	0.0%	0.0%		
Other land transport	4.6%	4.1%	42.1%	5.2%	53.3%	50.7%		
Water transport	25.5%	24.5%	72.5%	73.6%	2.0%	1.9%		
Air transport	99.8%	98.8%	0.2%	1.2%	0.0%	0.0%		
Services to allied to transport	5.1%	2.9%	90.0%	92.5%	4.9%	4.6%		
Communication	99.1%	87.5%	0.9%	12.5%	0.0%	0.0%		
OTHERS	2.5%	1.9%	24.6%	27.6%	72.9%	70.5%		
Real estates	0.0%	0.0%	39.4%	45.0%	60.6%	55.0%		
Ownership of dwellings	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%		
Business services	3.7%	5.5%	35.8%	2.1%	60.5%	62.4%		
Sanitary & similar services	0.0%	0.0%	54.8%	4.8%	45.2%	45.2%		
School, universities & other educational facilities & services	0.0%	0.0%	26.1%	6.1%	73.9%	53.9%		
Medical, dentist, other health & vet. Service	0.0%	3.7%	37.3%	41.2%	62.7%	55.2%		
Motion picture & other entertainment. services n.e.c.	0.0%	1.8%	66.5%	64.2%	33.5%	35.0%		
Radio & TV broadcasting services	54.6%	69.1%	45.4%	30.9%	0.0%	0.0%		
Libraries, museums & other cultural & recreational services, n.e.c.	16.0%	0.0%	84.0%	100.0%	0.0%	0.0%		
Repair of motor vehicles & motorcycles	0.0%	0.0%	30.0%	30.0%	70.0%	70.0%		
Other repair services n.e.c. (ftwear, watch etc.)	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%		
Laundries, laundry services, cleaning & dyeing plants	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%		
Domestic services	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%		
Other personal services	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%		
Religious organization (NPISH)	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%		
GENERAL GOVERNMENT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
Federal	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
State	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Local	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
VA AT BASIC VALUE AFTER FISIM ADJ.	17.9%	12.4%	44.4%	6.1%	24.3%	22.1%	13.1%	9.6%
VALUE ADDED/GOP	16.5%	11.3%	40.9%	1.3%	22.4%	20.2%	12.3%	8.6%

**APPENDIX 2**

**RESOURCES & USES BY THE HOUSEHOLD SECTORS**

**YEARS 1987 AND 1993 (RM MILLIONS)**

TRANSACTIONS AND BALANCING ITEMS		1987	1993
<b>PRODUCTION ACCOUNT (C1)</b>			
Resources	Output at basic prices	30,100	62,932
Uses	Intermediate consumption	12,290	26,794
Balance	Valued Added, gross / Gross Domestic Product (1)	17,910	36,138
<b>GENERATION OF INCOME ACCOUNT (C2)</b>			
Resources	Value Added, gross / Gross Domestic Product (1)	17,810	36,138
Uses	Compensation of Employees	1,753	6,030
	Wages and salaries	1,636	5,607
	Employers' social contributions	116	422
	Taxes on production and imports	123	263
	Taxes on products		
	Other taxes on production	123	263
	Subsidies	(84)	(48)
	Subsidies on products		
	Other subsidies on production	(84)	(48)
Balances	Operating surplus, gross	1,441	295
	Mixed income, gross	14,578	29,597
<b>ALLOCATION OF PRIMARY INCOME ACCOUNT (C3)</b>			
Resources	Operating surplus, gross	1,441	296
	Mixed income, gross	14,578	29,597
	Compensation of employees	26,092	60,428
	Wages and salaries	22,982	53,983
	Employers' social contributions	3,105	6,446
	Property income	5,050	15,368
	Pure interest	1,736	7,788
	Distributed income of corporations	244	1,024
	Property income attributed to insurance policy holders 3,000		6,491
	Rent	70	66
Uses	Property income	487	5,351
	Pure interest	418	5,045
	Rent	69	307
Balance	Balance of primary income, gross/National income, gross	46,674	100,338
<b>SECONDARY DISTRIBUTION OF INCOME ACCOUNT (C4)</b>			
Resources	Balance of primary income. Gross	46,674	100,338
	Social benefits other than social benefits in kind	2,805	4,327
	Other current transfers	4,529	11,068
	Non-life insurance claims	260	884
	Current international cooperation	4	0
	Miscellaneous current transfers	4,264	10,185

**Appendix 2 (continued)**

Uses	Current taxes on income, wealth etc,	2,329	6,034
	Taxes on income	1,814	4,902
	Other current taxes	515	1,133
	Social contributions	7,155	15,472
	Other current transfers	1,761	5,195
	Net non-life insurance premiums	261	996
	Current international cooperation	4	0
	Miscellaneous current transfers	1,496	4,299
Balance	Disposable income, gross	42,763	89
<b>REDISTRIBUTION OF INCOME IN KIND ACCOUNT (C5)</b>			
	Disposable income, gross	42,763	89,032
	Social transfer in kind	5,081	8,022
	Individual government output net of sales	5,081	8,008
	NPISH output net of sales	0	14
	Social transfers in kind	0	14
	Individual government output net of sales	0	14
	NPISH output net of sales	0	14
	Adjusted disposable income, gross	47,844	97,040
<b>USE OF DISPOSABLE INCOME ACCOUNT (C6)</b>			
Resource	Disposable income, gross	47,763	89,032
	Adjustment for the change in net equity of Households on pension funds	4,008	10,294
Uses	Final consumption expenditure	37,653	88,727
	Individual consumption expenditure	37,653	88,727
Balance	Saving, gross	9,118	10,599
<b>USE OF ADJUSTED DISPOSABLE INCOME ACCOUNT (C7)</b>			
Resources	Adjusted disposable income, gross	47,844	97,040
	Adjustment for the change in net equity of households on pension funds	4,008	10,294
Uses	Actual final consumption	42,734	96,735
Balance	Saving, gross	9,118	10,599
<b>CAPITAL ACCOUNT (C8)</b>			
	SAVING GROSS	9,118	10,599
	CURRENT EXTERNAL BALANCE		
	Capital transfers, net	160	39
	CHANGES IN NET WORTH DUE TO SAVING AND CAPITAL T		
	Gross fixed capital formation		
	Changes in inventories		
	Acquisition less disposals of valuables		
	Acquisition less disposals of non-produced non-financial asset		
	Acquisition less disposals of land and other tangible non-prod		
	Acquisition less disposals of intangible non-produced assets		
Balance	NET LENDING (+) NET BORROWING (-)	7,283	380

# ***Micro-macro (-micro) data links for use of household sector accounting***

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## **I. Introduction**

1. This paper is essentially concerned with the *statistical* problems of putting macro-economic accounts on a micro-data foundation. The foundation could turn out to be explicit or implicit or non-existent, with variable consequences. The paper covers the special case of household sector accounts in a national economic accounting framework. When micro-data foundations are constructed in one form or another then we have micro-macro (-micro) data links for use of household sector accounts. The statistical problems are only indirectly related to the *theoretical* problems of reconciling macro-economics with micro-economics, as discussed in the economics literature where the “whole” could theoretically be greater than the “parts”. In this statistical paper, the “whole” should be equal in magnitude to the summation of the “parts”.

2. This paper is built upon several *suppositions*. First, it is assumed that the reader has some general background in the area of micro-macro-data links in national economic accounting. A basic reference is Ruggles, 1996 and further details are spelled out in Postner, 1996. The present paper will try not to repeat unessential detail from the previous paper, but rather apply the material to the special problems of household sector accounts within a national accounting framework. Reference will be made to those particular aspects of Becker, Schweinfest and van Tongeren (1996), but we will also emphasize important aspects that are essentially “missing” from that paper. In addition there is a focus on a series of technical problems that have not yet been dealt with in the available literature. Purely technical considerations are relegated to appendices.

3. Second, it should be clear that the paper now presented does not draw a formal distinction between the statistical and compilation capabilities of developed nations, on the one hand, and developing nations, on the other. One might say, therefore, we have adopted a forward-looking orientation in which the data processing environment has become universal as a result of the information/communications revolution. This is also, in part, in the spirit of the 1993 SNA though this aspect is, unfortunately, not spelled out in the new SNA.

4. Third, the paper is dominated by what is called the viewpoint of the Austrian school of economics (also known as “methodological individualism” in the words of Kenneth Arrow, 1980). The Austrian school and the subject matter of micro-macro data links may seem, at first glance, like strange bedfellows. But a search of the literature does reveal at least one reference where a follower of the Austrian school actually investigated the properties of macro-data *vis-à-vis* micro-data from an economic and statistical standpoint (but not in a national accounting context); see Spadaro, 1956 and also the more general philosophy outlined in Shivakumar, 1997. All this can be traced back to the fundamental investigations of the Austrian physicist Ludwig Boltzmann (1844-1906) as well as to the Austrian economists of the late 19<sup>th</sup> century.

5. Fourth, it will be found that the paper deploys certain relationships that are at the heart of the

study of logical methods, e.g. Tarski, 1946. It is unfortunate that these simple notions have been overlooked in the literature of micro-macro data links. The logical relations expose basic questions of critical practical importance in the area of the compilation of national and household economic accounts.

6. As a consequence of the above *four* suppositions, it will be assumed that household sectoral accounts are *not* drawn up and estimated as a residual, merely reflecting the counterpart entries of other sectors together with external accounting balance identities. It is rather assumed that household sector accounts are largely drawn up directly and independently of other sectoral accounts. Otherwise there is not much point in discussing micro-macro (-micro) data links for the use of household sector accounting. But some of the household accounting entries might still come from articulated data sources “outside” the household sector *per se* so long as the sector’s accounts remain in internal balance. (The distinction between “external balance” and “internal balance” was emphasized in Postner, 1988 and 1994.).

7. There is one more point that requires clarification. It seems best to adopt the terminology of micro-macro (-micro) data *linkages* rather than micro-macro (-micro) data *integration*. The former term implies more modest goals and a more realistic assessment of what could be accomplished. This point will be taken up later in the paper. But the more limited goal of data “linkages” still opens up a range of problems that should be resolved to the benefit of economic and social analysis within (or even outside of) a national accounting framework.

8. The paper is followed by a fairly comprehensive list of references only some of which are explicitly mentioned in the text.

## **II. Editing and micro-data preservation**

9. It should be noted that this paper is limited to micro-macro linkage problems that occur in benchmark years and to annual data in current prices. The idea is to focus on essentials without getting involved in things like revision cycles, interpolations, extrapolations, periodicity, panel data and deflation procedures. We also abstract, for the most part, from administrative issues within the statistical agency. If applications of micro-macro linkages are to be made in full force, however, these limitations will need to be relaxed. The most serious omission involves panel data.

10. When household sector accounting data are directly sourced, via formal/informal economic surveys or via administrative records/registers, then these measures ultimately stem from micro-data sets, the smallest analytical units that are observable. It is true that the term “micro-data sets” may not be formally used in developing statistical agencies because the micro data are not preserved and tend to disappear in processing and tabulations. But we take the view that “preservation” is becoming a feasible statistical fact of life once the data processing environment is brought up to date.

11. Statistical editing and cleaning of data source observations must be performed at the micro-data record level. There is only very limited scope for so-called macro-data editing (quasi-aggregated editing) and where such editing is carried out it is typically a test and preliminary to the identification of micro data edits that are required. (A full discussion of the traditional issues is now available in Van de Pol and Bethlehem, 1997). It should be known, however, that the term “macro-edits” is sometimes used to describe the final reconciliation procedures used to balance national macro-economic accounts. This term is, therefore, confusing and should always be avoided and will be avoided in this paper.

12. Some statistical agencies may be tempted to perform edits at a quasi-aggregated level as a kind of shortcut procedure to meet budget constraints. Aside from the loss of the micro data *per se*, this

procedure could easily lead to economic nonsense when the edits are of a non-linear nature, e.g. conditional edits and ratio edits. It only “works” when the quasi-aggregated units are all alike, but this is one of the unknowns. This type of problem turns up in a more serious way in the next section.

13. When micro data are meant to be directly utilized for analytical purposes, e.g. micro simulation exercises, non-trivial statistical edits must be performed with extreme care. This is because we wish to maintain the full *configuration* aspects of micro unit heterogeneity and micro unit idiosyncrasy (further discussed in Postner, 1996). This implies that the standard automated (“hot-deck imputation”) editing procedures are suspect and so are some of the related procedures used to strengthen the “quality” of micro data records. In fact, we suggest turning some well-known shortcut methods “on their heads”: *outliers* become a good thing and *inliers* become a bad thing! This point is implicitly recognized in United Nations (1994). There do not appear to be any other shortcut procedures, short of comprehensive and universal follow-up operations, for statistical editing requirements in non-trivial cases when our goal is a micro data foundation for household sector accounts.

14. One possibility, though, is the new field of statistical editing and imputation based on “neural networks” as in Roddick, 1993 and Nordbotten, 1996, i.e. editing by means of an expert learning process with respect to changing statistical data patterns. So far only Canada and Norway have limited editing experience with “neural networks”. The jury is still out. But “neural networks” do appear to have promising characteristics and should be further investigated in the context of household and closely-related surveys if and when agencies’ budget constraints are relaxed.

15. In a compilation framework such as that in Becker *et al.*, 1996, Table 5 it should be noted that there will be borderline cases between the stage 1 of “statistical editing” and the stage 2 of data “conversion adjustments”. Some practices such as balance edits, multivariate edits and subject-based edits, could be considered as falling in either stage depending on particular circumstances. The important point is that all such operations should normally be performed at the micro-unit record level, *prior* to tabulation and aggregation. It is equally important to note that advanced statistical agencies often have procedures for *ordering* the various editing and imputation operations in a quasi-optimal manner (e.g. Statistics Canada, 1994). The question of ordering aggregation and conversion operations is discussed in some detail in the next section.

16. To conclude we pose the following questions. If statistical editing operations should almost always be performed at the micro data level, why in this day and age must we *rush* into aggregation? Why cannot the micro data be preserved and only aggregated at the final stage of production of national household sector accounts? This would maximize the opportunities of yielding micro data foundations for household accounts with documented economic and social policy applications.

### **III. Aggregation, conversion adjustments and non-commutatively**

17. This is the key section of the present paper. In order to keep the exposition reasonably brief, it is helpful to refer to Becker *et al.*, 1996 and Postner, 1996. We do, however, try to produce an exposition that is reasonably self-contained with respect to the main arguments. Some excellent background material with regard to the micro-macro empirical problems of fitting the results of household economic surveys into a national accounting framework such as the SNA can be found in the various United Nations publications relating to the National Household Survey Capability Programme (especially United Nations 1989). Another important reference is the last joint paper produced by Richard and Nancy Ruggles 1986.

18. The *standard* approach is to presuppose that household micro-data, stemming from

administrative or survey sources, must be aggregated immediately after editing and before being subject to a sequence of conversion adjustments required for compatibility with national accounting precepts. The *conversion adjustments* involve statistical matters of coverage, classification, conceptual and definitional transformation, imputation and consolidation as well as matters of attribution and re-routing. For simplicity, the treatment of sample weighting could be considered a part of aggregation and auditing adjustments could be considered a part of editing. These matters are spelled out in both Becker *et al.*, 1996 and Postner, 1996 and will not be repeated here. Unfortunately, this standard approach tends to “forget” that statistical agencies have already learned to manipulate and process micro data for editing and closely-related purposes.

19. The immediate aggregation of household micro data following editing, or even while editing, violates a 100-year old scientific principle enunciated by the Austrian physicist, Ludwig Boltzmann, and often discussed within the context of information theory (see brief account in appendix A). A more scientific approach would favour the performance of conversion adjustments on the micro data *per se* to the maximum extent possible and the postponement of aggregation until all the adjustments are completed.

20. But this is not all! It is evidently not realized that the various conversion adjustments are generally *non-commutative* with each other with respect to aggregation *per se* when dealing with non-linear adjustment processes and heterogeneous data (though non-linear adjustments can sometimes be cast in linear form). This has the important consequence that, e.g. two statistical agencies with access to identical sets of micro data records and auxiliary information might easily end up with significantly different macro data constructs depending on: (1) the chosen sequence of conversion adjustments, and (2) the point or stage at which aggregation is performed.

21. If aggregation is performed too soon, the macro data constructs of household accounts will not have an *explicit* micro data foundation (this follows from Boltzmann). But when conversion adjustments are non-linear and when aggregation is performed too soon, the resulting macro data constructs will not even have an *implicit* micro data foundation (this follows from non-commutativity). The macro data constructs of household economic accounts will then only have a vague and distorted connection with micro-economic (individual unit) behaviour as reflected in household micro data records and closely-related auxiliary sources. In a sense the contentions of the Austrian school, that only micro data and individual unit behaviour are economically meaningful, would be vindicated.

22. The technical considerations underlying the main points in the preceding two paragraphs are illustrated in more detail in appendix B. It should be noted, though, that there are still some open questions requiring more investigation.

23. Is it feasible to postpone aggregation as suggested earlier? Once we become committed to a goal of this nature, then a lot could be done, calling for some new directions in the statistical compilation of household macro-accounts. But it is not a matter of: All or None! Some components or sub-accounts of national household accounts could end up with a *strong* micro data foundation; other components may have a *weak* (or synthetic) micro data foundation; and still other components may have no micro data foundation at all (where coverage adjustments dominate). These distinctions were already made in Postner, 1996 and are further pursued in that paper. In the meantime, the ultimate goal stimulates new research thinking with respect to applications and opportunities opened up by an SNA with significant micro data foundations. We now briefly consider some examples of new problem areas built upon existing capabilities or, at least, potential capabilities.

24. Once we agree to preserve micro data, the problem of *ordering* the sequence of conversion adjustments becomes more apparent. Though the problem of ordering is evidently recognized in statistical editing circles, it is apparently overlooked in economic compilation circles where administrative convenience seems to be the “order of the day”. The lack of compilers’ sensitivity to this matter probably stems from two factors: (1) the micro data and auxiliary support data are aggregated too soon, and (2) the lack of administrative communication between micro data sources and national accounting, including household accounting, compilation “deadlines”.

25. The advantages of performing conversion adjustments at the micro data level are clear. There is opportunity to make full maximum use of related auxiliary support data complemented by carefully formulated economic assumptions. This is what the science of economic statistics is all about as so well illustrated by Ruggles and Ruggles (1975). The postponement of aggregation until all editing and conversion adjustments are complete yields the potential for micro data foundations, both explicit and implicit, of household macro-economic accounts. There is, then, an “optimal” point for aggregation, i.e. administrative considerations aside.

26. But do the conversion adjustment processes also have an “optimal” ordering? When the required adjustments and their required tools are laid out in formal detail and performed at the micro data level, it is this writer’s belief that a natural “optimal” ordering will become apparent based on economic meaning (just as an “optimal” ordering of editing adjustments becomes apparent based on statistical meaning). This is not an academic exercise because we know that in the presence of non-linearities, or more exactly in the absence of universal linearities, the various conversion adjustments become non-commutative, and possibly even non-associative, with respect to both aggregation and each other; see appendix B. But the prime *motivation* for careful distinction, manipulation and treatment of conversion adjustments becomes lost once the source micro data and corresponding support data are pre-aggregated for administrative convenience.

27. This paper does recognize that the data origins of household account economic characteristics can often come from government, enterprise and financial sector sources rather than household unit records and closely-related surveys. This is made evident in Becker *et al.*, (1996, Table 4). How can these outside data sources be allocated and attached to incomplete and probably unreliable micro data records stemming from household and administrative unit surveys? This key problem is compounded by the fact that “outside” data sources are typically pre-aggregated or are incompatible from a classification point of view with household unit records, whatever they may be. These records do not possess the statistical handles to pick up and somehow allocate “outside” sectoral data to “inside” micro data without introducing arbitrary assumptions.

28. The suggested resolution of this problem is quite simple: the scope of household unit records and surveys should be made more complete (United Nations, 1989) and more reliable (with editing and auditing) to the maximum extent possible. Once we begin “borrowing” household account entries from external accounting counter-entries, then we lose the very essence of both double-entry and quadruple-entry bookkeeping that essentially supports the whole framework of national economic accounts (Postner, 1994). Counter-entries are for checking and balanced reconciliation purposes; not for unequivocal superimposition!

29. As for the matter of allocating “outside” sectoral data to “inside” household data, there are innovative opportunities to handle this matter as witnessed by the International Symposium on Linked Employer-Employee Data, Washington, D.C., May 1998. New cross-linkages of that sort have the potential for bypassing some of the bottlenecks that currently present difficulties for the drawing up of household sector accounts on a micro data foundation in the framework of the generally accepted 1993

SNA (see again Ruggles (1996) and Becker *et al.*, (1996)).

30. Fine! But what could we do in the meantime? To summarize, there are two complementary courses: (1) full *creative* use of the science of economic statistics in its broadest sense (Ruggles and Ruggles 1975), and (2) full realization of the *pitfalls* of maintaining the standard approaches to the compilation of household macro-economic accounts that yield vague and distorted connections with household micro units and limited potential for applications of economic policy simulation.

#### IV. Where are we with micro-macro-micro data links

31. It is this writer's considered opinion that the best we could do in the foreseeable future is to *aim* for household sector accounts that feature micro-macro linkages. This means that there should exist a set of national household macro-accounts with significant micro data foundations, preferably of the explicit type. Once again, there are sometimes strong micro-macro linkages, sometimes weak (or synthetic) micro-macro linkages, and sometimes no linkage at all, depending on the degree and nature of conversion adjustments and depending on how successful we are in postponing aggregation. A good deal would also depend on the creative use of auxiliary data to support conversion adjustments at the micro-level. The various components (sub-accounts) of national household accounts will differ significantly with respect to their capability of attracting and absorbing micro-macro linkages.

32. But the household sector accounts at the macro-level that we are describing would *not* be identical to the "published" accounts that are supposedly integrated with and fully reconciled with the framework of national economic accounts as a whole.

33. The reason for this is very simple. After household sector accounts are produced in aggregate (and consolidated) form, these accounts are normally subject to an *iteration* of balancing and checking adjustments at the strictly macro level in order to produce coherence with the other macro sectoral accounts of the national economy. When the balancing adjustment operations are completed, the new household macro-accounts become "out of joint" and unaligned with their micro data foundations, at least to the extent that such foundations have been created. Again, not all the components (or sub-accounts) of the household sector are affected in the same way by the iterated reconciliation procedures. Indeed, some components may remain intact and invariant. But, typically speaking, household accounts bear a major share of the burden of the economy-wide balancing process especially when the compiler of household accounts attempts to remain *faithful* to the principles of quadruple-entry bookkeeping, without unequivocal superimpositions.

34. Unfortunately, there is no general way of propagating macro-level balancing adjustments *back* to the micro data level without making a series of economically outrageous assumptions (or without "going back to basics" and possibly staying there). The best we can do is to "keep track" of the resulting statistical discrepancies between the original-macro and the balanced-macro household accounts. But the existence of such discrepancies does not prohibit the deployment of the existing micro-foundations of the original macro-accounts in economic policy-oriented exercises such as: micro-simulation modelling with micro-macro links (Arrow 1980), or even macro-econometric modelling with micro-macro links, *provided* that the links are explicit and reasonably strong, i.e., uncontaminated by configurative and distributive distortions. The modelling, though, would need to be appropriately calibrated to "keep track" of the statistical discrepancies.

35. This paper, therefore, does not favour or advocate the full-feedback-mode apparatus of so-called micro-macro-micro links. It is advisable, then, not to claim that micro and macro data have been fully

“integrated”. This clarifies our continued usage of the term “linkages” rather than “integration”. Keeping track of the (possibly) pervasive discrepancies that result from the suggested procedure should also help to improve dialogue/operations within national statistical agencies (“going back to basics”). The ultimate dissemination and publication of statistical discrepancies might help restore the public’s confidence in statistical agencies featuring a more “open door” policy with respect to the limitations and opportunities of their produced national accounts.

## V. Conclusion

36. Complaints about the state of national economic accounts are not new nor are they limited to “frustrated” national income accountants. Consider the following insightful quotation from Kenneth Arrow (1980, p.259):

“On the aggregation question, it seems to have been taken as axiomatic that a complete model of the entire economy should be consistent with national income accounting. That may not, however, be right. Since we happen to have a large number of national income statistics, there are obvious reasons for seeking consistency. But it may be that, in terms of behavioural manifestations at the individual level, the national concepts as we have them now are not in fact useful.”

37. More recently, Edmond Malinvaud (1995, p.12) has pointed to: “the over aggregation of heterogeneous classes” and “the failure to include in the aggregate laws enough (statistical) moments of individual variables”. Malinvaud applauds the efforts of Richard and Nancy Ruggles (1986) who, to quote again from Malinvaud (1995):

“... have gone as far as to claim that national accounts should have a broader scope and incorporate (micro) panel data bases representative of the various agent categories. Their proposal is worth considering as we now enter a new period of reflection after the latest revision of our systems.”

38. The present paper is certainly not an empirical one; there are lots of practical examples floating around the statistical literature. The paper is, rather, meant to provide conceptual guidance and principles with which practitioners can identify. But much more work is required even within the chosen context. For example, it is not yet known how “distorted” household sector accounts can become when such macro accounts are drawn up and compiled without an implicit micro data foundation. In the meantime it might be possible to estimate such distortions, in simple cases, by means of experimental simulations using a combination of real and artificial data.

39. Once again, in still another dimension, it is not simply a matter of whether there is or there is not a micro data foundation. Sometimes a micro data foundation, with respect to a household sub-account, may be “on its way” or “almost there” and that should certainly count for something (see appendix B).

40. We conclude with the following two statements: (1) Unless we give sufficient weight to clarifying issues and corresponding pitfalls, such as those spelled out in this paper, we run the risk of ending up with “measured” household sector macro-accounts that are essentially non-comparable across nations and over time. We cannot count on the degree of economic distortion, however measured, to remain “constant” in any sense.

41. (2) In order to minimize economic distortions, however measured, we should aim to proceed as far as possible with conversion adjustments performed on edited micro data, i.e., under conditions of postponed aggregation, even if it implies “stretching” the available auxiliary support data and even if it implies “deploying” synthetic assumptions. All this would, at least, advance the state of the art. Partly simulated micro data foundations of macro data constructs are better than no micro data foundations at all!

## Appendix A

42. The reference to Ludwig Boltzmann in section III can be traced back to J. von Neumann (1962, p.342) where the following statement occurs and is now directly quoted:

“The closeness and the nature of the connection between information and entropy is inherent in L. Boltzmann’s classical definition of entropy (apart from a constant, dimensional factor) as the logarithm of the “configuration number”. The “configuration number” is the number of *a priori* equally probable states that are compatible with the macroscopic description of the state, i.e. it corresponds to the amount of microscopic information that is missing in the macroscopic description.”

43. This idea has had considerable influence among the Austrian school of economics, e.g. Ludwig von Mises and his followers as represented by Spadaro (1956) and others. The term “configuration” is used in a more statistical sense in Postner (1996) and the present paper.

## Appendix B

44. This appendix is meant to clarify some technical statements made in sections III and V of the text. We only consider the simplest cases that are needed to clarify the matters.

45. Suppose there are two household units characterized by micro data observations  $x_1$  and  $x_2$ , after editing. Each micro datum is preserved and requires a sequence of conversion adjustments for compatibility with national macro-accounting precepts. Suppose only one *type* of conversion adjustment is needed and it is represented by the functional transformation  $f$ . The particular transformation could differ from household to household depending, perhaps, on auxiliary support data or on the observations  $x_1$  and  $x_2$ , themselves. For simplicity we represent the two transformations (of the same type) by  $f_1$  and  $f_2$ . Then the two transformed micro data observations become:

$$\ddot{u}_1(x_1) \quad \text{and} \quad \ddot{u}_2(x_2).$$

46. This is, in fact, an *explicit* micro data foundation of the corresponding aggregated macro data construct:

$$\ddot{u}_1(x_1) + \ddot{u}_2(x_2).$$

47. If the two transformed micro data observations are not preserved, then the macro-data construct alone has an *implicit* micro data foundation.

48. Now suppose the (edited) micro data observations are not preserved *per se*, but are immediately and additively aggregated after editing. The aggregate of two observations, namely  $x_1 + x_2$ , must then be subject to a similar transformation of the same type that we simply represent as  $f$ . This yields:

$$\ddot{u}(x_1 + x_2),$$

which clearly does not have an explicit micro data foundation. But does the transformation of the aggregate of the two micro data observations have an implicit micro data foundation when  $x_1 \neq x_2$ , i.e. does:

$$\ddot{u}(x_1 + x_2) \stackrel{?}{=} \ddot{u}_1(x_1) + \ddot{u}_2(x_2).$$

49. Clearly this would be a desirable property. The left-hand side of this latter expression is what we obtain from “early aggregation”; the right-hand side of the expression is what we obtain from “postponed aggregation”. Unfortunately, the equality of the two sides of the expression is only *guaranteed* when all functional transformations are linear and equal with respect to their marginal coefficients. So, generally speaking, with “early aggregation” we lose not only an explicit micro data foundation, but an implicit micro data foundation as well.

50. Now let us make the situation really simple by assuming just one household unit, or equivalently, that all household units are identical. The common micro datum observation will be called  $x$ . But now suppose that there are two *distinct types* of conversion adjustments needed for compatibility with national accounting precepts. The two types are represented by the functional transformations  $\mathcal{G}$  and  $h$ . Suppose one nation performs the two conversion adjustments in the sequence  $\mathcal{G}$  followed by  $h$ ; and another nation performs the adjustments in the sequence  $h$  followed by  $\mathcal{G}$ . If the two nations possess the same

common micro datum observation for households, namely  $x$ , would it turn out that:

$$h[g(x)] \stackrel{?}{=} g[h(x)].$$

51. Clearly this would be a desirable property. Unfortunately, the equality of the two sides of the expression is only *guaranteed* when the two functional transformations are of the linear homogeneous form. Otherwise, the two transformations are *non-commutative* with each other. In fact in the case analysed earlier, we might say that the two operations, aggregation over different households and the single conversion transformation, are themselves non-commutative with each other. The specific order in which operations are performed really matters!

52. In the real world of compilation of national household accounts, there are enumerable different household units and a fair number of different types of conversion adjustments required to be processed. It is not difficult to see that, in the most general case, there are real economic benefits from postponing aggregation and from standardizing the sequence of conversion adjustments. Indeed, any concrete steps in those directions would be better than doing nothing at all! One place to begin would be a careful and comparative *characterization* of the conversion adjustments that are required. Another place to begin would be further exploration of the administrative and statistical *feasibility* of postponed aggregation.

53. Finally it should be noted that conversion adjustments and their non-commutativity does not imply well-defined and continuous functional relations. Non-commutativity could equally occur in the context of more loosely-defined and discrete relations with conditional elements that often characterize conversion adjustments in the compilation of national economic accounts. It is not yet known whether conversion adjustments can also become non-associative with each other. But this would be a natural phenomenon to investigate because of its parallel with administrative arrangements within statistical agencies.

## References

- Arrow, K.J., "Micro data Simulation: Current Status, Problems, Prospects", in R. Haveman and K. Hollenback (eds.), *Microsimulation Models for Public Policy Analysis*, New York and London, Academic Press, Vol. 2, 1980.
- Becker, B., Schweinfest, S. and van Tongeren, J.W., "Micro-macro Data Links and Household Satellite Accounting" paper presented to 24<sup>th</sup> General Conference, IARIW, Lillehammer, Norway, August 1996.
- Bergmann, B. and Bennett, R. "Macroeconomic Models on Microfoundations: Data Requirements", *Working Paper No. 1983-4, Department of Economics, University of Maryland*, 1982.
- Blackburn, K., "After Frameworks: What Then?", paper presented to 24<sup>th</sup> General Conference IARIW, Lillehammer, Norway, August 1996.
- Blackburn, K. and Harrison, B., 'Household Income and Expenditure: Relating the Micro and Macro Data Sets', paper prepared for *Conference of Economists, University of Melbourne*, July 1992.
- Cotton, C., "Fundamental Description of the Generalized Edit and Imputation System", document prepared for Statistics Canada, Ottawa, August 1993.
- Malinvaud, E., "Economic Theory and Advances in National Accounting", *Courriers des statistiques*, English series, No. 1, (annual issues), 1995.
- Nordbotten, S., "Editing and Imputation by means of Neural Networks", *Statistical Journal of the United Nations*, ECE, Vol. 13, 1996.
- Postner, H.H., "From Here to Eternity and Back: Framing the Integration of Micro and Macrodata from a Pragmatic Viewpoint", paper presented to 24<sup>th</sup> General Conference. IARIW, Lillehammer, Norway, revised version, October 1996.
- \_\_\_\_\_, "A Historical Note on Quadruple-Entry Bookkeeping", in Z. Kenessey (ed.) *The Accounts of Nations*, IOS Press, Amsterdam, 1994.
- \_\_\_\_\_, "Linkages Between Macro and Micro Business Accounts: Implications for Economic Measurement", *Review of Income and Wealth*, September 1988.
- Roddick, L.H., "Data Editing Using Neural Networks" unpublished paper prepared for Statistics Canada, Ottawa, February 1993.
- Ruggles, R., "The United Nations System of National Accounts and the Integration of Macro and Micro Data", in J.W. Kendrick (ed.), *The New System of National Accounts*, Boston, Kluwer Academic Publishers, 1996.
- Ruggles, R., "Integration of Macro and Microdata: Discussion of Session Five", paper presented to 24<sup>th</sup> General Conference. IARIW, Lillehammer, Norway, August 1996.

\_\_\_\_\_, “The United Nations System of National Accounts: Its Implementation for Developing Countries”, *Conference on Development Analysis, Yale University*, May 1992.

Ruggles, R. and Ruggles, N., “The Role of Microdata in the National Economic and Social Accounts”, *Review of Income and Wealth*, June 1975.

\_\_\_\_\_, “The Integration of Macro and Micro Data for the Household Sector”, *Review of Income and Wealth*, September 1986.

Shivakumar, S.J., “Validation as an Issue in National Accounting and Policy Analysis”, paper presented to *Expert Group Meeting on Household Satellite Accounting*, United Nations, New York, October 1997.

Spadaro, L.M., “Averages and Aggregates in Economics”, in M.H. Sennholz (ed.) *On Freedom and Free Enterprise: Essays in Honor of Ludwig von Mises*, Princeton, New Jersey, Van Nostrand, 1956.

Statistics Canada, *General Survey Processing: Products and Services, Information and Methodology*, Ottawa, September 1994.

Tarski, A., *Introduction to Logic and to the Methodology of Deductive Sciences*, New York, Dover Publications, 2<sup>nd</sup> edition, 1946.

United Nations, Statistical Data Editing: Methods and Techniques, *Statistical Standards and Studies*, Vol. 1, No. 44, New York, 1994.

\_\_\_\_\_, “Subsectoring of the Household Sector and the Macro-Micro Link”, paper presented by the Central Bureau of Statistics of Norway, *Seminar on Statistics of Household Income*, Geneva, July 1991.

\_\_\_\_\_, National Household Survey Capability Programme: *Technical Report*, New York, 1989.

Van de Pol, F. and J. Bethlehem, “Data Editing Perspectives”, *Statistical Journal of the United Nations*, ECE, Vol. 14, 1997.

Von Neumann, J., “*Probabilistic Logics and the Synthesis of Reliable Organisms from Unreliable Components*”, *Collected Works of Von Neumann*, Princeton University Press, 1962.

## **CHAPTER IV**

### **LINKS OF THE HOUSEHOLD SECTOR TO OTHER SECTORS**



# ***Household sector flows with special emphasis on actual final consumption and other links to the government sector***

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## **I. Introduction**

1. The accounts of the SNA provide a comprehensive and detailed record of the complex economic activities taking place within an economy and of the interaction between the different economic agents, and groups of agents (see 1993 SNA, § 1.1). These accounts are designed to provide analytically useful information about the behaviour of institutional units and the activities in which they engage, such as production, consumption and the accumulation of assets (1.12). Two main kinds of institutional units, or transactors, are distinguished in the System, households and legal entities such as corporations, NPIs or government units, including social security funds (1.13). The introductory remarks of this handbook draw attention to the interaction or links between households and the other institutional units. In this chapter of the handbook, we take a closer look at the main interactions between the household sector and other sectors. It does not include all the transactions in the SNA. For instance, there are no references to balance sheet data, non-financial assets or employment as a factor of production provided by households for production.

2. Household transactions with the general government sector are very important. There are, of course, transactions with other sectors, such as the rest of the world (e.g. international tourism), NPISHs (e.g. fees and donations), and the private corporate sector primarily through the market place and acquisitions for household consumption.

3. This paper is in two sections: first, a brief section dealing with the concepts, and then the main section covering the methods of compilation of data and experiences. The conceptual section deals with the recording scheme of the integrated economic accounts of the 1993 SNA. The section on the compilation of data is illustrated through the experience gained in the author's own country. In 1995, Norway was a pioneer in implementing the new System of National Accounts. The compilation section, therefore, includes illustrations from this national experience. A major part of its contents covers actual final consumption, one of the main features of the new SNA, which reflects the main interactions between the household and government sectors.

4. Following this short introduction, Section II presents a review of the main conceptual links between the household sector and other sectors. This is described within the framework defined by the sequence of accounts of the SNA. Sections III to VI constitute the compilation part. As an introduction, Section III deals with the institutional sector framework which is of fundamental importance to the compilation of data in this field. In particular, the household sector, the NPISHs sector and the general government sector are described from a Norwegian point of view. Sections IV and V deal with actual final consumption. Section IV describes how actual consumption is compiled from final consumption expenditure, while Section V takes a closer look at education and health, two areas in which inter-sectoral links are of vital importance for making the distinction between household and government final

expenditure, the two main consumption items of the SNA. In Section VI, the Norwegian compilation of the household sector, from output to saving, is illustrated by results fitting into Table A.V.6 of the 1993 SNA, Annex V, Part II. It will be shown that actual national figures and illustrative figures from international manuals do not always provide a consistent story. Finally, in Section VII, household sub-grouping issues are considered, in three separate stages. First, a distinction is drawn between the two main sectors, households and NPISHs. Second, the household sector is divided into its socio-economic sub-sectors following the SNA. Third, the household sector is further subdivided, taking into account other criteria for constructing suitable household groups in a satellite setting. The first two stages have been completed for Norway, while the third stage is still incomplete in Norway, and so the description is rather brief.

## **II. Links between the household sector and other sectors**

5. Links between the the household sector and other sectors in the widest sense include all kinds of inter-sectoral flows. Most flows are transactions, classified as either monetary and non-monetary, as a first distinction, then as transactions with or without counterparts (3.9 onwards). More detailed recordings in the SNA are rearrangements of transactions, such as re-routing transactions, partitioning transactions, and recognizing the principal party to a transaction. Non-monetary transactions can be transactions within an institutional unit or two-party transactions, which can consist of barter, remuneration in kind, payments in kind other than compensation in kind, and transfers in kind.

6. The conceptual part that follows considers two aspects of the accounts: rearrangements of transactions and non-monetary transactions. Main actual monetary transactions are referred to only occasionally. The description does not attempt to be exhaustive. Social transfers in kind from general government and NPISHs are the link to the recording of the actual final consumption of households. In the part dealing with the compilation of data, links between NPISHs and general government are also discussed.

### **A. The allocation of primary income account**

#### **1. Compensation of employees**

7. Compensation of employees is the first item contained in the sequence of accounts for which links between households and general government are recorded. By re-routing transactions, this item is recorded in the allocation of income account as including employers' social contributions as income for households, while in the secondary distribution of income account the employers' social contributions are shown as a use for households. Ultimately, general government records the social contributions' part as resources (income). This treatment also means recording employers' social contributions as part of labour cost, and part of compensation of employees, in the income generation account. Usually, employers' social contributions are not paid out to employees, but paid instead directly by employers to government or social security funds. It should be noted that this treatment was also a feature of the 1968 SNA.

8. Wages and salaries, the main part of compensation of employees, include remunerations in kind, i.e. payments from employers (of the various sectors) to employees (of the household sector) in the form of goods and services instead of money (3.38). The new SNA is more explicit on introducing significant non-monetary flows than was the old one. For wages and salaries, both in cash and in kind, the links are two-party transactions linking employers in various sectors to households.

#### **2. Property income**

9. In the field of insurance, another case of re-routing transactions takes place. The property income

earned on the reserves of certain life insurance funds is recorded as paid to the policyholders (of the household sector) and then paid back again as premium supplements even though in fact the property income is earned by the insurance companies. This means that the saving of households includes the saving of the re-routed property income while the saving of insurance enterprises does not (3.27). This re-routing can be viewed as a special kind of link between the households and financial corporations sectors. It should be noted that this treatment was also a feature of the 1968 SNA. A new feature of the 1993 SNA is that this treatment of re-routing applies to both life and non-life insurance.

10. Withdrawals from income of quasi-corporations is another case. Although a quasi-corporation is treated as if it were a corporation, the owner, or owners, of a quasi-corporation may choose to withdraw some or all of the entrepreneurial income of the enterprise (7.115). This can be viewed as a kind of link between the household and corporations sectors, the purpose of which is to distinguish the income of the quasi-corporation from that of the owner.

## **B. The secondary distribution of income account**

### **1. Current taxes on income, wealth, etc.**

11. Taxes are compulsory, unrequited payments, in cash or in kind, made by institutional sectors to government units (8.43). One of the main institutional sectors to pay taxes to general government is the household sector. Current taxes on income, wealth, etc, are transactions between households and central or local government. The link between government and employers in the various sectors, i.e. the arrangement for employers to deduct «pay-as-you-earn» taxes, is not relevant for the System's recording in this respect.

### **2. Social contributions**

12. The same kind of link between the household and general government sectors also applies to social contributions as for current taxes except that, in addition, the re-routed transactions of employers' social contributions are recorded among uses for households. Most social contributions are recorded as resources for general government, but some also go to the corporations sectors, i.e. social contributions may also be paid to insurance enterprises or other autonomous or non-autonomous pension funds (8.68). These actual social contributions are also partly recordings that have originated from voluntary employers, and are then re-routed through the household sector as for the compulsory employers.

13. Employers' social contributions are in two parts, actual social contributions (described above) and imputed social contributions. The latter apply when social benefits are provided directly to employees, etc, without involving an insurance enterprise or autonomous pension fund (8.72), and are also re-routed through the household sector. Employees are recorded as paying back to their employers the same amount as if they were paying it to a separate social insurance scheme. In practice, it may be difficult to decide how large such imputed contributions should be, and the benefits actually paid in the current period may provide the best available estimates (8.73). Social contributions by self-employed and non-employed persons constitute another item of the same nature and are treated in the same way as current taxes on income, wealth, etc, and employers' and employees' social contributions, except that general government is the only sector for which incomes are recorded in this case. These contributions are also partly compulsory and partly voluntary.

### **3. Social benefits other than social transfers in kind**

14. Under this heading are included all social insurance and social assistance benefits in cash and all social insurance benefits provided under private funded and unfunded social insurance schemes, whether in cash or in kind (8.77). All these social benefits are receivable by households. Social insurance benefits in cash and social assistance benefits in cash are flows payable by general government (or NPISHs), while private funded social benefits are payable by the corporations sector (mostly insurance enterprises), and unfunded social benefits may be payable in part by general government and in part by corporations.

15. Social benefits take the form of various kinds of allowances and benefits, covering the risks or needs of sickness, invalidity, disability, occupational accident or disease, old age, survivors, maternity, family, promotion of employment, unemployment, housing, education and general need. The private funded benefits cover a similar list of risks or needs. The same applies to social assistance benefits, which however are benefits not made under a social insurance scheme incorporating social contributions and social insurance benefits.

#### **4. Other current transfers**

16. Other current transfers include a number of different transfers between institutional sectors serving quite different purposes. The most important categories involving the household sector are non-life insurance premiums and claims, current transfers to NPISHs, current transfers between households (e.g. remittances from residents or non-residents), fines and penalties, lotteries and gambling, and payments of compensation. The case of lotteries and gambling may be seen as an example of partitioning transactions, since the amounts paid consist of two elements, a service charge and a residual current transfer paid out to the winners, the latter part being considered as transfers between households in the System.

17. Current transfers to NPISHs involve households making payments to NPISHs, for a large part being cash transfers in the form of membership dues, subscriptions, voluntary donations, etc. Current transfers to NPISHs from general government may also be quite substantial in some countries (at least in countries like Norway). It should also be noted that the latter flows may partly act as statistical source indicator for the NPISHs sector in compiling the sequence of accounts from the production account onwards (see below).

### **C. The redistribution of income in kind account**

18. Social transfers in kind, instead of being recorded in the secondary distribution of income account, are separated from other social benefits to serve as a link to the new concept of adjusted disposable income, which again should match the new item of actual final consumption. Consumption expenditures by general government and NPISHs on behalf of households are undertaken for the purpose of making social transfers in kind. Social transfers in kind are thus recorded differently from other transfers in kind (8.38). In the System, social transfers in kind are recorded on the resources side of the redistribution of income in kind account in the case of households, and on the uses side in the case of general government and NPISHs.

19. Social transfers in kind include social benefits in kind and transfers of individual non-market goods or services. Social benefits cover goods and services when actually bought by households and then reimbursed, and also when provided directly to households as beneficiaries. In this case general government or NPISHs are either producing the goods and services themselves, or purchasing them directly from producers on behalf of the beneficiaries. Examples are medical treatment, hospital accommodation, medical appliances or equipment and similar goods or services in the context of social risks or needs. Any payments made by households themselves should be deducted. Apart from social

benefits in kind, social transfers in kind include transfers of individual non-market goods or services provided free or at prices which are not economically significant, by non-market producers to government units or NPISHs. In total, social transfers in kind make up the incomes side corresponding to the individual consumption expenditure of general government and of NPISHs. Two sets of transactions are involved. Expenditures on the final consumption of goods and services provided as social transfers in kind are recorded as being incurred as costs by the government units or NPIs. These may be either monetary or non-monetary transactions depending upon whether the goods or services are purchased from market producers or produced by non-market producers owned by the government units or NPIs. Social transfers in kind are then recorded as a set of non-monetary transactions between government units or NPIs, and the households which actually consume the goods or services, the goods and services being valued by the expenditures already incurred on them (3.43).

20. In this way, the link to the use of income account is established. Household actual final consumption, which is all individual, is composed of government individual consumption expenditure (as social transfers in kind), plus NPISHs consumption expenditure (as social transfers in kind), plus household final consumption expenditure in total. By convention, all goods and services provided for consumption by NPISHs are treated as individual (NPISHs final consumption expenditure = NPISHs individual consumption expenditure).

#### **D. Use of income account**

21. The term “consumption” can be ambiguous and misleading, as it is sometimes used to refer to consumption expenditure, sometimes to acquisitions of consumption goods and services and sometimes to the physical use of the goods and services for the direct satisfaction of human needs or wants (9.74). Consumption as used in the 1968 SNA was mainly used to denote “consumption expenditure”, while the other interpretations were not captured by the former system. By making this new distinction between consumption expenditure and actual final consumption, this kind of ambiguity can be avoided. However, a pre-requisite for this distinction is another distinction, that between individual consumption expenditure and collective consumption expenditure.

22. Consumption expenditure, i.e. consumption recorded on an expenditure basis, refers to the institutional units that in fact incur the expenditures and hence control and finance the amounts of such expenditures (who pays). Actual final consumption, i.e. consumption recorded on an acquisition basis, refers to the institutional units that actually acquire the goods and services and benefit from their use (who acquires or consumes). For households, this distinction can make a big difference, mainly because general government in a great number of countries provides a significant share of households’ acquisitions of consumption goods and services.

23. Actual final consumption by households means the consumption of individual goods and services in a “private” sense as opposed to “public goods”. This aggregate of individual consumption expenditure consists in fact of three building blocks: first, household consumption expenditure as the main block, second, NPISHs consumption expenditure, and third, the individual part of government consumption expenditure. The individualized goods and services acquired for consumption in

households comes from three institutional units (sectors), and is financed by each of them, i.e. the households themselves, NPISHs and general government all contribute.

24. The problem of identification applies only to the general government part. Individual consumption expenditure of government must be distinguished from its collective consumption expenditure. The borderline between individual and collective goods and services is drawn in the System by utilizing the Classification of the Functions of Government (COFOG). This functional classification is due for revision, (and the revised version is referred to as the 1997 version), and the part of individual consumption expenditure by general government is the last section (section 14) of the revised COICOP classification, i.e. Classification of Individual Consumption of Purpose. The next few paragraphs refer both to COFOG in the 1993 SNA and to the revised 1997 version of COFOG.

25. Individual consumption expenditure of government when referring to COFOG in the 1993 SNA, comprises, by convention, the following COFOG headings:

(a) Including in general:

- 04 Education
- 05 Health
- 06 Social security and welfare
- 08.01 Sport and recreation
- 08.02 Culture

(b) Including when important:

- 07.11 (part of ) the provision of housing
- 07.31 (part of) the collection of household refuse
- 12.12 (part of) the operation of the transport system

(c) Excluding from the headings of (a) and (b):

Expenditures on general administration, regulation, research, etc, in each category (which should always be treated as collective consumption expenditure)

26. Individual consumption expenditure of government, when referring to the revised 1997 version of COFOG, comprises, by convention, the following COFOG headings:

- 1. Health
  - 1.1 Medical products, appliances and equipment
  - 1.2 Out-patient medical services
  - 1.3 Out-patient dental services
  - 1.4 Out-patient paramedical services
  - 1.5 Hospital services
  - 1.6 Public health services
- 2. Recreational and cultural services
  - 2.1 Sporting and recreational services
  - 2.2 Cultural services
- 3. Educational services

- 3.1 Pre-primary and primary education
- 3.2 Secondary education
- 3.3 Tertiary education
- 3.4 Education not definable by level
- 3.5 Subsidiary services to education
  
- 4. Social protection services
  - 4.1 Social protection services
  
- 5. Housing
  - 5.1 Housing services
  - 5.2 Refuse collection and sewerage services

27. Government consumption expenditure not classed as individual is therefore classed as collective consumption expenditure of government. As government consumption expenditure must be either individual or collective, collective consumption expenditure is equal to actual final consumption of general government. The individual part is transferred to actual final consumption of households.

## **E. The capital account**

28. A capital transfer is either one in which the ownership of an asset is transferred, or is a monetary flow which obliges one or both parties to acquire, or dispose of an asset (8.3). Capital transfers cover capital taxes, investment grants and other capital transfers. The household sector may very well be a party to the transactions, e.g. capital taxes payable by households to general government, such as inheritance taxes. While investment grants should not involve households (other than as producers when partly financing the costs of their acquiring fixed assets), other capital transfers may include e.g. large gifts or large donations by households to NPIs to finance gross fixed capital formation.

## **III. Institutional sector framework**

29. In sections III through VI, the links described in the conceptual part are considered from a practical compilation point of view. The main theme dealt with is actual final consumption. Experiences in the area of revised consumption estimates is at the center of national accounting work in Norway. Actual final consumption estimates have resulted from this work, complementary to the traditional estimates of final consumption expenditure.

30. Throughout the compilation section, references are made to the Norwegian experience in implementing the 1993 SNA. Good progress was made when, for the first time, a full sequence of accounts for the household sector was compiled, including the production account. This sector was previously considered to a large extent a residual sector in the former national accounts. The new estimates of the activities of the self-employed based on accounting statistics have been compiled through an independently-based approach for the production and income generation accounts of the household sector. It should be added that the integration of institutional sector accounts with real economy national accounts data in the new system is based on a common database with direct links to databases of the government accounts.

31. Work is still in progress on the elaboration of the household sector into sub-sectors, and on the use of household sector data in the construction of household sector accounts. Some earlier experience in Norway on household socio-economic groups has recently been reviewed for a broader approach on

macro-micro links, in addition to approaching the sub-sectoring of the household sector as in the 1993SNA. In order to afford a better understanding of the descriptions that follow, dealing with households, NPISHs and general government sectors and sub-sectors, the institutional sector framework established in Norway is described in section III.

## **A. Household sector and sub-sectors**

32. In the revised Norwegian National Accounts (NNA), the household sector comprises all persons in the economy, the institutional unit in the household consisting of one individual or a group of individuals. Defined as institutional units, households include unincorporated enterprises owned by households, whether market producers or providing for own final use, operating as an integral part of the households.

33. Until recently, the household sector as defined in Norway included NPISHs as well. As for many other countries, figures for households and NPISHs used to be published in combination, i.e. NPISHs formed an unspecified sub-sector of the household sector. In the 1995 general revision, for some items such as final consumption expenditure, a split was made between household final consumption expenditure and NPISHs final consumption expenditure. The National Accounts 1997 publication, however, has a separate presentation of the household and NPISHs sectors for the complete sequence of accounts from output to net lending.

34. The 1993 SNA specifies four sub-groups of the household sector: employers, own account workers, employees and recipients of property and transfer income, with a further breakdown of the fourth group into recipients of property income, recipients of pensions and recipients of other transfers. The 1993 SNA also refers to alternative breakdowns on the basis of other criteria of an economic, socio-economic or geographical nature. ESA 1995 has a slightly different sub-grouping (employers, employees, recipients of property and transfer incomes, and other households, and the same further breakdown of recipients of property and transfer incomes).

35. The 1993 SNA refers to the principle of sub-sectoring according to the nature of the largest source of income (4.153). For instance, the sub-group of employers would consist of the group of households for which employers' mixed incomes are the largest source of income. Thus, for the SNA sub-groups, the following types of household income need to be distinguished: employers' mixed incomes, own-account workers' mixed incomes, compensation of employees, and property and transfer incomes. When more than one income of a given category is received within the same household, the classification must be based on the total household income within each category. Other methods of sub-sectoring usually require a reference person, "head of the household", who is normally the person with the largest income. The 1993 SNA (4.156) allows for a sub-grouping according to the main income of the reference person if it is not possible to group on the basis of the largest income received by the household.

36. National data considerations must play an important role in determining which sub-grouping is adopted in the national accounts. In Norway, annual household surveys on incomes (a sample of 13 000) and on consumption expenditures (a smaller sample of 1 300) are vital sources of information. In particular, household surveys on incomes have a major bearing on selecting the further sub-grouping of the household sector. Considering households as producers, a breakdown according to industry has been considered, as has a breakdown using tax statistics data. Other sources contain household data as well, such as labour force surveys and population and housing censuses.

37. Norwegian statistical data are such that the alternative principle of sub-grouping according to main income receiver of the household has been adopted to determine the sub-groups. Employers are defined as main income receivers if they are self-employed or have mixed incomes as main income. Employers are divided into two groups, i.e. employers in agriculture, forestry and fishing, and employers in other industries. In a country like Norway, the income of the agricultural group is to a large extent determined by the public authorities, a main reason for making this distinction in the sub-grouping. Employees constitute the largest sub-sector. It might have been possible to make a further split into several groups of employees, according to whether they receive compensation of employees or compensation of employees with mixed incomes, or pensions and the like. This kind of extended sub-grouping has not been implemented so far, however. Recipients of pensions constitute an important sub-group, increasing in importance over time. The last household sub-group of the central framework is other households, which include institutional households (persons living permanently in institutions), recipients of property incomes, and recipients of other transfer incomes (other than pensions and the like). The latter two groups are recommended for separate sub-sub-groups in the SNA and ESA, but are small groups in Norway and will not, at least for the purpose of publication, be treated separately. On the compilation level, institutional households constitute one separate sub-group (but combined for publication purposes).

## **B. Non-profit institutions serving households (NPISHs)**

38. Traditionally, in most countries, non-profit institutions serving households (NPISHs) have been an integral part of the household sector, mostly due to data limitations. The 1993 SNA brought greater clarification to the NPI concept, however, with a new emphasis on describing its activity in the context of national accounts. There are still data problems to overcome, which might mean deviations from the SNA principles. One such deviation is that NPISHs controlled and mainly financed by government, which should be allocated to the general government sector (4.62), are included with the NPISHs in the Norwegian system. These are entities with their own accounts, but whose detailed production costs are not included in the central or local government accounts. Their treatment as NPISHs is considered a second best solution in this case.

39. In the NNA, seven kinds of activities are specified in NPISHs production. These are education (primary education services, secondary education services), human health activities (hospital services, ambulance services), social work activities (social work services with accommodation, other social work services, such as provided by disaster and aid institutions), combined nursing activities (combined nursing services for old people and for the handicapped), activities of membership organizations (services furnished by trade unions, other membership organization services), motion picture and other entertainment activities, news agency and cultural activities (artistic creation and interpretation services, library, archives, museums and other cultural services), and sporting activities and other recreational activities (sporting services, own-account construction in sporting and other recreational activities). The activity level specified is in accordance with the ordinary activity breakdown in the spheres of market production and other non-market production.

## **C. General government sector and sub-sectors**

40. In describing links between the household sector and other sectors, it is necessary to refer to the general government sector and sub-sectors, since these are the most frequently encountered other sectors. Two alternative methods of sub-sectoring the general government sector are proposed in the System. One that distinguishes between the four sub-sectors of central government, state government, local government, and social security funds (4.114), the other that allocates the fourth item, social security

funds, to the three other sub-sectors in respect of those social security funds operating at the respective government level (4.115). For instance, the activity of a comprehensive National Insurance Institution could be an integral part of central government (i.e. social security funds operating at the central government level). The choice between the two methods is mainly determined by the size or importance of the social security funds within a country and on the way in which they are managed (4.116). State government may be inappropriate as a sub-sector for most countries, except for those countries with a federal constitution or otherwise exercising fiscal, legislative and executive authority at such a level.

41. In Norway, the alternative method of integrating social security funds with central government has been chosen. The central government sub-sector is an aggregate of the three institutional sectors applied in government financial statistics. These are (i) central government, (ii) social security (the National Insurance Scheme, other insurance schemes administered by the National Insurance Administration, National Insurance Fund and Pension Insurance for Seamen) and (iii) other central government (advance and deposit accounts, government funds, price regulation funds, public service pension funds, central government special accounts and the Norwegian Guarantee Institute for Export Credits). The reason for not introducing a social security sector into the national accounts is the lack of a sufficient degree of autonomy. Size has not been considered an important factor in this respect, despite the fact that social security counts for some 30 per cent of central government in terms of the level of income or outlay.

42. In the NNA, the general government sector consists of just two main sub-sectors, central government and local government. In government financial statistics, local government accounts include accounting data for municipalities as well as counties. The latter constitute an intermediate level of government (there are 19 counties in Norway and 435 municipalities), but the counties lack the necessary degree of autonomy to qualify as a state government sub-sector. At the level of compilation, there are more sub-sectors: central government splits into three: (i) central government, fiscal accounts, including the National Insurance Scheme, (ii) other central government accounts, and (iii) sector tax collection, central government. Similarly, local government splits in three: (i) local government, counties, (ii) local government, municipalities, and (iii) sector tax collection, local government. The sector for tax collection is needed for technical reasons; the income and outlay account of this sector makes the difference between figures recorded on an accruals basis and on a cash basis.

#### **IV. Actual consumption of households**

43. Before describing the method of compiling the various items leading to the ultimate estimate of actual final consumption of households, it is useful to have a clear picture of the main final results. This is seen in table 1. 1990 is the year used for illustration as in the detailed documentation provided in the Norwegian GNP Inventory submitted to Eurostat, and later in 1996 published by Statistics Norway in the series Documents (96/5 and 96/6).

44. Table 1 shows that household consumption increased by one third, from 338.2 to 450.1 billion kroner, when moving from the concept of household consumption expenditure to the concept of actual final consumption of households. From the other point of view, 75 per cent of their final consumption is incurred by the households themselves, while local government contributes one-sixth of the total, and relatively small contributions (4 per cent each) come from central government and NPISHs. The table also reveals that most local government consumption expenditure is individual (more than 80 per cent), while the opposite is the case for central government (70 per cent collective and just 30 per cent individual).

	<b>Billion kroner</b>	<b>Percentages Total</b>	<b>GDP</b>
Actual final consumption of households	450.1	100.0	62.3
Household consumption expenditure	338.2	75.1	46.8
NPISHs consumption expenditure	18.9	4.2	2.6
Central government consumption expenditure	61.3		
- individual consumption	18.5	4.1	2.6
Local government consumption expenditure	88.1		
- individual consumption	74.5	16.6	10.3

### A. Estimation of final consumption expenditure

45. The compilation of final consumption expenditure of households, of NPISHs and of central and local government is a fundamental stage in the estimation of actual final consumption of households. Final consumption expenditure is one of the most important aggregates of the national accounts. Final consumption expenditure of the three sectors combined often accounts for three quarters or more of GDP. In a country like Norway, with an export surplus and a relatively high propensity to capital formation, the GDP share of final consumption expenditure has been lower recently, 70.2 per cent in 1990 according to the revised 1993 SNA-based estimates (NNA), down from 71.9 per cent for the same year according to the former 1968 SNA (FNA). The composition of final consumption expenditure before and after implementing the new system is seen in table 2. NPISHs consumption expenditure was not estimated in the FNA, but included with household consumption expenditure to form private final consumption expenditure. A tentative estimate of the FNA for NPISHs may be as modest as 3 billion kroner or 0.5 per cent of the former 1990 GDP.

	<b>Before revision (SNA 1968)</b>	<b>Share of GDP</b>	<b>After revision (SNA 1993)</b>	<b>Share of GDP</b>
Final consumption expenditure	475.2	71.9	506.6	70.2
- Households	336.1	50.9	338.2	46.8
- NPISHs	..	..	18.9	2.6
- Central government	56.1	8.5	61.3	8.5
- Local government	83.0	12.6	88.1	12.2

#### 1. Household consumption expenditure

46. Four different sources are used in the NNA estimation of household final consumption expenditure: (i) household consumer surveys, (ii) retail trade statistics, (iii) various price and quantity information and other supplementary statistical information, and (iv) the commodity flow method. There is an interplay between these sources, described as a four-step procedure. In step 1, household consumer survey data are used for detailed groups, while relevant totals are related to retail trade statistics for

combinations of consumption totals and NACE branch totals. In step 2, other sources are preferred for specific consumption groups. In step 3, an adjustment is made to achieve the same growth rate for totals as recorded in NACE branches of retail trade statistics. Finally, in step 4, adjustments to detailed consumption groups are made arising from either trends in household survey data or the commodity flow method and the direct use of household survey data.

47. Estimates are compiled at a detailed level, specifying some 110 consumption groups and involving a large number of product flows. Approximately 1000 products are specified in the product classification used in the NNA, of which about one half are goods and services allocated partly or wholly to household consumption expenditure. The product classification used is based on the CPA (usually 2 or 3 digits or in some combination). Consumption groups closely follow the COICOP classification as adopted for the 1993 SNA. A background OECD paper from 1986 helped us prepare the detailed 3-digit COICOP-based classification adopted in the NNA. The share of services consumption groups was increased and approached 40 per cent of the total number of consumption groups. Goods consumption groups are also classified as durable, semi-durable and non-durable.

48. Returning to sources, household consumer surveys have been conducted annually in Norway since 1974. One aim is to provide source data for the national accounts, but until the recent general revision, these surveys were used mostly only for control purposes. However, the quality of the survey data has increased recently and their use for national accounts purposes has increased correspondingly, both for benchmark estimation in the revision process and as a tool for the current compilations on an annual basis. The annual household consumer surveys cover all the consumption groups. At the time of writing, the correction items, i.e. direct purchases abroad by resident households and direct purchases in Norway by non-resident households, are still part of the estimations. They will be excluded, and then the household consumer survey will be more directly applicable to the current system.

49. Annual retail trade statistics are compiled from information in Statistics Norway's Business Register, containing data on employment and turnover. The register data are updated each year, i.e. new establishments are entered based on information from the VAT Register and the Register of Employers. Information on employment and turnover for the previous year is collected directly through an annual survey covering most establishments. For enterprises with a single establishment, turnover data are extracted directly from the VAT Register, an arrangement that has considerably improved the quality of the statistics, and achieved better coverage. The employment and turnover data are grouped by branches (currently based on NACE Rev.1 as opposed to ISIC Rev.2 at the time of the general revision). This source is used for the estimation of goods consumption groups through a consumption groups x branches matrix. To expand this source to an overall wholesale and retail trade industry basis, use is also made of annual statistics of accounts covering large enterprises.

50. Various price and quantity data are used in the compilation of certain consumption groups. For example, the Consumer Price Index (CPI) material is used with quantity information on beverages and tobacco, to give estimates of current values. Other supplementary sources used are the annual surveys of repair activities (COICOP 2 Clothing and footwear), housing statistics of various kinds, (including surveys on actual rents), annual electricity statistics, annual energy statistics (COICOP 3 Housing, water, electricity, gas and other fuels), central government accounts and local government accounts, income sample surveys for private practitioners, dentists, etc. (COICOP 5 Health), annual accounts and statistics of various transportation services, statistics on new registrations of motor vehicles (COICOP 6 Transport), sources used for output in areas of NACE 92 (COICOP 7 Leisure, entertainment and culture), statistics of business accounts for hotels and restaurants and from the Business Register, accommodation statistics on guest nights (COICOP 9 Hotels, cafes and restaurants), and local government accounts,

social statistics and health statistics (COICOP 10 Miscellaneous goods and services).

51. National accounts work in Norway has always been based on the commodity flow method. It has served as the basis for a complete integration of the national accounts and the input-output tables. Thus, supply and use tables have been used for more than 30 years in the Norwegian national accounts. Information in four dimensions, by products, by industry, by categories of final use and at different valuations, is used in the system design. The system has a supply side and a user side, the two sides being balanced in basic prices and forming the basis of the national accounts and input-output tables. In the NNA, the balanced commodity flow system contains supply use tables for the various stages in building purchasers' prices, i.e. basic prices, non-deductible VAT, investment levy, other taxes on products, subsidies on products, and trade margins and other margins.

52. In estimating household consumption expenditure by consumption groups, the product composition of each group is usually unaffected, applying the same growth to each of the products in a particular COICOP group, except where particular product information is used. During the balancing process in basic prices, estimates can be changed directly or indirectly through e.g. trade margins. It should be emphasized that the balancing process is not just a computerized operation, i.e. going back to the most detailed primary statistics may seem necessary from time to time. The commodity flow method is thus considered a means of detecting errors in the data input, and might also have a decisive influence not just on the commodity composition, but also on the total size of the final use categories.

53. Valuation is treated in an articulated way. Between the two main price concepts of basic prices and purchaser's prices, six different intermediate price components are specified: taxes on product, subsidies on product, wholesale and retail trade margins, net taxes on trade margins, non-deductible VAT and investment levy. These apply to all the product flows of the use table to the extent applicable. An illustration given by the household consumption expenditure of beer in 1990 helps explain this (figures in billion kroner): value in basic price = 0.7, tax on beer = 1.7 (value in producer's price = 2.5), wholesale and retail trade margins = 1.3, and non-deductible VAT = 0.8, which gives value in purchaser's price = 4.5.

54. Finally, it should be underlined once again that basic data in purchasers' prices and the CPI aggregates have a guiding role in the final compilation of the household consumption expenditure estimates at current and constant prices. The category of household consumption expenditure is not one of the categories most often affected by the commodity flow balancing approach. This category is estimated independently in purchasers' prices as a general rule, and only in exceptional cases, in particular for some services, consumption group totals are re-estimated when supply side information is considered more reliable than use side information (such as household consumer survey information). Furthermore, in the compilation procedure, the aggregate CPI indices are preferred and used to correct the outcome of the balancing procedure at constant prices.

## 2. NPISHs consumption expenditure

55. Estimation of NPISHs consumption expenditure is indirect, both conceptually and in terms of sources used. Most often government accounts have to be utilized. Five items of function are specified with 12 NNA-products. The functions specified are “COFOG-based”, referring to services in the areas of health, recreation and culture, education, welfare, and the services of membership organizations.

56. The sources used are the same ones used for NPISHs output. In health, this information includes payments from central and local government to the NPISHs institutions, e.g. items of grants from National Insurance, stipulating share of costs. Items of cost expenditure data in annual social statistics etc. are used to estimate combined nursing services for old people and for the handicapped. Another important item, the services of disaster and aid institutions, is however estimated on a weaker basis. Ambulance services are partly considered NPISHs output (not those for hospital services), in which case households’ membership fees are recorded as transfer payments to NPISHs as a contribution to this producer. In education, there are grants to private schools from central government accounts and from local government that are utilized as sources in addition to information from education statistics. For membership organizations, special calculations are made based on the number of members and estimated average membership fees, and also using information on grants to NPISHs from central government. For recreational and cultural services, information from cultural statistics, from the Norwegian Confederation of Sport, and annual reports (theatres, music houses, museums) are used in combination with household consumer surveys and current government transfers data. Local amateur groups in music, theatres and the like are also included in the estimates made. Where appropriate, i.e. for items of deduction (fees from households), household consumer surveys are used as supplementary sources.

57. Sources are scattered, which means that direct statistical data are not available in a comprehensive manner. In fact, NPISHs is the only institutional sector not covered by any form of accounting statistics. The main source at present is therefore the government accounts, using flows that also help identify the activities of recipients. In future, the Business Register might provide more information, but probably not for the entire population of NPISHs because many institutions would not have to report to the underlying registers which serve in updating procedures.

## 3. Central government consumption expenditure

58. Final consumption expenditure of central government is compiled on the basis of the central government accounts, one of the principal sources of the statistical system. The items of the central government accounts are tabled with a whole set of information, more detailed for central government than for local government. Central government tabled information is grouped by chapter, item and sub-item, by type, by NNA-product, by purpose or function, by activity, and by institutional sector.

59. The item identifications in terms of chapters and corresponding items and sub-items are the ones given in the central government accounts. Each of these most detailed specifications has information on the counterpart to the transactions. The COFOG version introduced in the FNA in 1985 is used as the classification for central government consumption expenditure, specifying 51 groups structured within a framework of 14 main groups. Central government consumption expenditure is calculated indirectly, deducting fees from the household and other sectors from output of central government production. Data for output, measured as costs of production, are available from items by type on the cost side of the government accounts. Data on fees appear on the income side of the government accounts. In addition, according to the new system, government consumption expenditure also includes government purchases from non-government producers supplied to households without any transformation as social transfers in

kind. Data for this additional component are also available in the government accounts.

60. COFOG is cross-classified by products. That means each of the COFOG groups has a product breakdown from the CPA-based product classification applied in general in the NNA. The COFOG-by-product flows have been set up in a rather pragmatic way. The starting point has been the current items and sub-items of the government accounts. A relevant NNA product has been connected to each of these items (sometimes difficult). Take two examples for illustration. One is the first COFOG group 011, for which consumption expenditure is estimated at 3.9 billion NOK. The most important product of this group is financial and fiscal services, with consumption expenditure of 2.4 billion. Output in this case has been estimated at 2.7 billion from more than 100 items of the main source and some items of other government accounts. Deducted (0.2 billion) are some 25 items on government fees. The balance (2.5 billion) is then distributed over 5 COFOG groups, of which nearly all (2.4 billion) is allocated to this first COFOG group (011). Another example refers to the second COFOG group on health (052) and the medical practice services that constitute the main product (1.5 of 3.1 billion). In this case, almost no government output exists (0.0), while 1.5 billion is purchased by central government as social transfers in kind from a 3.2 billion output of market producers. In total, the non-government produced part of central government consumption expenditure was 10 per cent.

#### 4. Local government consumption expenditure

61. Final consumption expenditure of local government is compiled on the basis of local government accounts, again one of the principal sources of the statistical system. The items of the local government accounts are tabled with a whole set of information, grouped by chapter, by type, by NNA-product, by purpose or function and by activity. Each of these most detailed specifications is also, in this case, given a set of connected information. In local government, COFOG groups are confined to 25, although a few do not have a counterpart in central government. One such group is combined nursing services that had to be introduced, as the split between health and social security and welfare could not be made at the local government level.

62. Local government consumption expenditure is calculated indirectly, by deducting fees from households and other sectors from the output of local government production. The non-government produced part of local government consumption expenditure is mostly limited to child day-care services and medicaments, in 1990 estimated at 2.1 billion or less than 3 per cent of local government consumption expenditure in total. The description given above for central government on the method of estimation also applies to local government. Similar examples as given for central government could also be presented for local government.

#### **B. Estimation of individual consumption expenditure**

63. The distinction between individual and collective consumption expenditure for central government and for local government is the remaining compilation work that is needed. It remains, then, for individual as opposed to collective consumption expenditure to be estimated for central and local government. This is then combined with household and NPISHs expenditure to give “actual final consumption of households”.

64. Actual final consumption compilation work in Norway, when first estimates were made during the general revision, was provisional since COFOG was due for international revision (now known as the COFOG 1997). The provisional nature of the compilation work so far means that: (i) expenditures on general administration, regulation, research etc. allied to purposes of education, health, social security and welfare are not distinguished and treated for collective consumption expenditure, and (ii) the three (part-)

groups in the areas of housing, household refuse and transport, are not considered for individual treatment. Then, there is a third kind of deviation from the 1993 SNA rule. The main COFOG group 08 Recreational, cultural and religious affairs and services, not specified by sub-groups, is excluded from individual consumption expenditure in the case of central government. The reason is institutional as the activities of the State Church of Norway are considered collective rather than individual. Since religious affairs and services is a major part of the COFOG 08 group for central government consumption expenditure (of which the State Church is the most important element), it has been decided to allocate this main group in total to collective instead of individual consumption expenditure. On the other hand, for local consumption expenditure, the COFOG 08 group is treated as individual consumption expenditure in accordance with the 1993 SNA rule.

65. Individual central government consumption expenditure is estimated according to the main rule, allocating all flows of the COFOG main groups 04 (education), 05 (health) and 06 (social security and elfare) to the category of individual consumption expenditure, while leaving all the other COFOG main groups 01 to 03 and 07 to 14 in the category of collective consumption expenditure.

66. Individual local government consumption expenditure is estimated according to the main rule as well, allocating all flows of the COFOG main groups 04 (education), 05 (health), 06 (social security and welfare) and 08 (recreational, cultural and religious services) to the category of individual consumption expenditure, while leaving all other COFOG main groups 01 to 03, 07 and 09 to 14 in the category of collective consumption expenditure. It should be added that another main group 15 introduced in the Norwegian system also is included in individual consumption expenditure, as these are expenditures for combined nursing services which should have been split between main groups 05 and 06, but which proved impossible to implement for institutional reasons.

### **C. Estimation of actual consumption of households**

67. Table 3 on actual final consumption of households is a more disaggregated version than table 1, emphasizing the various blocks and reflecting a 2-digit breakdown of the 1993 SNA functional classifications (COICOP, COFOG and COPNI), and is shown as presented in the annual national accounts publication of Norway.

68. In table 4, a rearranged and modernized version of table 3 is presented. It reflects the 1997 version of COICOP with the three integrated sections for household consumption expenditure, NPISHs consumption expenditure, and individual government consumption expenditure. The rearrangement reflects the integration of the NPISHs, central government and local government elements into the first 12 main headings of the COICOP 1997 version of individual consumption expenditure by households (i.e. main groups 01 to 12). However, for a complete adherence to the new classification a recalculation is necessary.

69. Interestingly, by comparing table 4 and the upper part of table 3, it is seen that ranks and shares are clearly affected by the conceptual change. In terms of consumption expenditure, housing etc. is at the top (11.3 per cent of GDP), followed by food etc.(10.4 per cent) and transport (7.0 per cent), while health (1.1 per cent) and education (0.3 per cent) are at the bottom. In terms of actual final consumption, health has become third in rank (7.1 per cent) after housing, etc, and food, etc, and education has also advanced considerably (5.3 per cent). Another interesting feature is the more even distribution of the groups in table 4. Among the 12 groups, 6 groups have GDP shares between 5 and 10 per cent (food and non-alcoholic beverages; health; transport; miscellaneous goods and services; recreation and culture; education). Housing, water, electricity, gas and other fuels is still the top group, but not far above 10 per cent, while

the remaining 5 groups have GDP shares between 1 and 3 per cent (the lowest share being for communications; then hotels, cafes and restaurants; alcoholic beverages, tobacco and narcotics; furnishings, etc; clothing and footwear).

## **V. Particular actual estimation in households**

### **A. Actual final consumption of education**

70. Table 5 summarizes household actual final consumption of education by sector. Local government is far the largest contributor at 73 per cent. The full government share of consumption expenditure on education in Norway was over 93 per cent in 1990.

71. Household consumption expenditure covers just 5 per cent of actual final consumption in the case of education in Norway. It consists of education services (in higher education and adult education in particular), but also semi-durable goods in terms of educational materials. The services are estimated using the commodity-flow method, while annual household consumer surveys and retail trade statistics are used to estimate spending on books and other educational materials. For instance, about 15 per cent of the total uses of books is allocated to this particular consumption group (while the share of the usual group on books, contained in the main group of leisure, etc, is estimated at some 30 per cent). It may also be added that ancillary educational services have not been estimated in the NNA so far.

72. NPISHs consumption expenditure on education contains two items, one of secondary education services and one of primary education services. (The alternative treatment as government consumption expenditure would have been more appropriate in these cases.) They are both calculated as output less fees from households and less purchases by central government (a minor amount).

73. Central government consumption expenditure grouped with COFOG 04 Educational affairs and services consists of various items within five of the education groups, among which those of tertiary education are most important. NNA-product higher education services are estimated at 5.7 billion, from output at 6.4 billion less fees from households (0.1 billion) and less exports and other fees (0.6 billion) and allocated to this COFOG group exclusively. The basic items of central government accounts grouped with the Ministry of Education and Research have a total of 21.8 billion. Table 5 indicates that 7.7 billion is counted as consumption expenditure, most of which are items of the Ministry of Education and Research, but partly also of other ministries (e.g. agricultural and police high schools with the Ministry of Agriculture and the Ministry of Justice, respectively). Main items not counted as consumption expenditure from the total of the Ministry of Education and Research are 4.5 billion on primary schools and 4.0 billion on secondary schools, which are recorded as transfers to local government. Also excluded are a number of items treated as transfers to other sectors, other production subsidies, etc, while some items are recorded as consumption expenditure of other COFOG groups (e.g. libraries and museums, meteorological purposes). Items and sub-items treated as compensation of employees, intermediate consumption or subsidies on products are otherwise allocated to COFOG groups 04.1 to 04.6 (except 04.5), based on supplementary information on their contents in each case. There are various subsidies on education services, for which two NNA products are relevant, higher education services, adult and other education services etc, and these are paid mostly by central government and partly by local government.

**Table 3. Actual final consumption of households, Norway. 1990**  
Sectorial origin and breakdown by main functions

	Billion kroner		Percentages GDP
		Total	
Actual final consumption of households	450.1	100.0	62.3
Origin: Household consumption expenditure	338.2	75.1	46.8
Food, beverage and tobacco	74.8	16.6	10.4
Clothing and footwear	22.7	5.0	3.1
Housing, water, electricity, gas and other fuels	81.7	18.2	11.3
Furnishings, household equipment and routine maintenance of the house	21.4	4.8	3.0
Health	8.2	1.8	1.1
Transport	50.2	11.2	7.0
Leisure, entertainment and culture	28.9	6.4	4.0
Education	2.0	0.4	0.3
Hotels, cafes and restaurants	16.9	3.8	2.3
Other goods and services	27.7	6.2	3.8
Direct purchases abroad by resident households	13.9	3.1	1.9
Direct purchase in Norway by non-resident households	-10.2	2.3	1.4
Origin: NPISH consumption expenditure	18.9	4.2	2.6
Health services	3.1	0.7	0.4
Recreational and cultural activities	3.6	0.8	0.5
Education	0.6	0.1	0.1
Social services	5.8	1.3	0.8
Religion and other membership organizations	5.8	1.3	0.8
Origin: Central government consumption expenditure, Individual part	18.5	4.1	2.6
Education	7.7	1.7	1.1
Health	8.4	1.9	1.2
Social security and welfare	2.4	0.5	0.3
Origin: Local government consumption expenditure individual part	74.5	16.6	10.3
Education	27.7	6.2	3.8
Health	31.4	7.0	4.3
Social security and welfare	11.6	2.6	1.6
Recreation, culture and region	3.8	0.8	0.5

**Table 4. Actual final consumption of households, Norway. 1990**  
Breakdown by main functions of revised COICOP

		Billion Kroner	Total	Percentages GDP
<b>Actual final consumption of households</b>		<b>450.1</b>	<b>100.0</b>	<b>62.3</b>
01	Food and non-alcoholic beverages	57.8	12.8	8.0
02	Alcoholic beverages, tobacco and narcotics	17.0	3.8	2.4
03	Clothing and footwear	22.7	5.0	3.1
04	Housing, water, electricity, gas and other fuels	81.7	18.2	11.3
05	Furnishings, household equipment and routine maintenance of the house	21.4	4.8	3.0
06	Health	51.1	11.4	7.1
07	Transport	50.2	11.2	7.0
08	Communications	7.0	1.6	1.0
09	Recreation and culture	42.1	9.4	5.8
10	Education	38.0	8.4	5.3
11	Hotels, cafes and restaurants	16.9	3.8	2.3
12	Miscellaneous goods and services	44.2	9.8	6.1

74. Local government is by far the most important sector for consumption expenditure on education. It is a basic feature of Norwegian society, since municipalities (primary education) and counties (secondary education), which constitute the local government sector, have the real responsibility in this area. The most important NNA products are primary education services at 16.0 billion and secondary education services at 8.1 billion of the respective COFOG groups. The former has an output of 16.8 billion, from which fees are deducted (0.1 billion) and distributed over two COFOG groups of the main group 04 (041 and 044). The important NNA products also allocated to group 044 (education services not definable by level) are adult and other education services n.e.c., and to group 046 (education affairs and services n.e.c.) administrative education services. The last item might instead have been allocated to a COFOG group outside education.

<b>T</b>		<b>Table 5. Household actual final consumption of education, Norway. 1990 Billion kroner</b>
<b>Actual final consumption of education</b>		<b>38.0</b>
-	Household consumption expenditure	2.0
-	NPISHs consumption expenditure	0.6
-	Central government consumption expenditure	7.7
-	Local government consumption expenditure	27.7

## **B. Actual final consumption of health services**

75. Table 6 summarizes household actual final consumption of health by sector. Again, local government is the largest contributor at some 61 per cent. Full government share in the case of health was 78 per cent in 1990. The private, or non-government part, is thus larger in health than in education, but still clearly a minority category.

**Table 6. Household actual final consumption of health, Norway. 1990. Billion kroner**

<b>Actual final consumption of health</b>		<b>51.1</b>
-	Household consumption expenditure	8.2
-	NPISHs consumption expenditure	3.1
-	Central government consumption expenditure	8.4
-	Local government consumption expenditure	31.4

76. Household consumption expenditure contributes 16 per cent of actual final consumption of health. It consists of medical and pharmaceutical products and therapeutic appliances and equipment (3.2 billion) and non-hospital medical and paramedical services (4.9 billion), plus a small amount on hospital services (0.1 billion). Consumption goods are estimated from a combination of data from household consumer surveys, retail trade statistics and the commodity flow method, distributed over 20 products. For instance, in the case of medicaments, about 30 per cent of total uses (5.7 billion) is allocated to this consumption group, while other uses are intermediate consumption in health and social work industries (1.0 billion) and some other industries (0.1 billion), exports (0.3 billion), central government consumption expenditure purchased from market producers (2.6 billion), and reduction in inventory (-0.1 billion). The services are estimated using the commodity flow method in combination with household consumer survey data and ad hoc income sample surveys for dentists, physicians, physiotherapists and other paramedical personnel. For instance, about 25 per cent of total medical practice services (3.2 billion) is allocated to the relevant consumption group of households, while other uses are central government consumption expenditure (1.5 billion), local government expenditure (0.7 billion) and intermediate consumption particularly in non-market production of local government health services (0.2 billion). It may be added that sickness and accident insurance services so far have not been estimated (assumed insignificant in Norway).

77. NPISHs consumption expenditure on health contains two items, i.e. hospital services and ambulance services. Hospital services are the most important (2.9 billion), and are calculated as output less fees from households and less purchases by local government. Ambulance services are determined equal to output.

78. Central government consumption expenditure grouped under COFOG 05 Health affairs and services consists of various items within the six groups, among which hospital affairs and services (1.6 billion), clinics, and medical, dental and paramedical practitioners (3.1 billion), and medicaments, prostheses, medical equipment and appliances or other prescribed health-related products (3.0 billion) are the important ones. For medical practice services, taxi services etc, and medicines, which are the most important NNA-products in this respect, there is practically no government output, and these are purchased by central government as social transfers in kind from the output of market producers. The relevant items of National Insurance are incorporated in central government accounts.

79. In local government accounts, nearly 150 items might have been treated as non-market output of health services. In one third of these, however, there is a problem of identification (combined nursing services for old people and for the handicapped). The value added share of these combined nursing activities is considerable at 2.3 per cent of GDP. For local consumption expenditure of combined nursing services, the items of output (15.8 billion) have been reduced by fees from households (2.3 billion) and distributed over the two COFOG groups of additional main group 15. However, for presentation and reporting purposes in tables of local government consumption expenditure, combined nursing services in nursing homes, etc, are allocated to consumption expenditure of health affairs and services (COFOG 05),

while combined nursing services in old peoples homes are allocated to consumption expenditure of social security and welfare affairs and services (COFOG 06). Due to this underlying identification problem, the estimates presented for health consumption in tables 3, 4 and 6 above are to some extent uncertain. However, for tables by activity, health and social work are presented in a combined way, without attempting a split (same NACE 2-digit group). Furthermore, making the split or not has no influence on the full aggregate of actual final consumption, as both COFOG 05 and 06 groups belong to individual consumption expenditure.

80. Local government is also the most important category for consumption expenditure in the case of health. This reflects the fact that counties have the main responsibility for providing hospital services in Norway. The most important NNA product is general hospital services (13.5 billion); also important are psychiatric hospital services (2.4 billion), other human health services (1.2 billion) and medical practice services (1.5 billion). Output of general hospital services has been estimated at 14.0 billion, from which fees from households are deducted (0.4 billion) and then allocated to COFOG group hospital affairs and services exclusively. In the case of medical practice services (and also dental practice services), an additional amount is purchased by local government as social transfers in kind from the output of market producers.

## **VI. Sequence of accounts estimates for households**

81. By way of summary, illustrative 1990 estimates for Norway are placed in the framework of Part II Accounts of the 1993 SNA, i.e. table set A.V.6 Full sequence of accounts for households. This kind of presentation reflects the way institutional sector accounts are presented in the Norwegian national accounts publication.

### **A. The production account**

82. Table 7 presents the 1993 SNA - I: Production account with 1990 figures for the household sector of Norway. The production account of the household sector was estimated for the first time when the NNA was implemented in 1995. Accounting statistics of the self-employed have been used, a source which became available for the first time in 1991 and 1992 as a means of evaluating the tax reform taking place in Norway from 1992. Accounting data were collected in a sample survey, which was wider in scope than those held in earlier years. The source material is based on tax data in tax declarations and accounts submitted to the tax authorities, and so will be influenced by tax rules and tax auditing practice. The sample of 12 000 persons was determined using information from the 1990 population census and the 1990 tax register (including information on entrepreneurial incomes of the people taxed). A calibration method was used in order to avoid biased data.

83. In the institutional sector accounts, output is valued at producers' prices in the case of market production. This reflects the nature of the data in the sources used. Adaptation to valuation in basic prices will be discussed later. Sub-item output for own final use is part of the regular production accounts by industries, with contributions of output from agriculture, hunting and fishing, construction, dwelling services and domestic services (72.1 billion in 1990). In order to cover all output for own final use of households, a small part from market production of agricultural products should be added as well, identified as products for own final use (0.2 billion). Consumption of fixed capital is arrived at by using the PIM method (Perpetual Inventory Method), primarily classified by industries, and subsequently redistributed into institutional sectors. In the case of households, dwellings are the most important fixed asset, other significant assets being non-residential buildings, machinery and equipment in agriculture, etc. Gross value added of the household sector (104.8 billion) as a percentage of GDP (722.1 billion) was

14.5 per cent in 1990.

<b>Table 7. Household production account, Norway. 1990. Billion kroner</b>		
	<b>Uses</b>	<b>Resources</b>
P.1	Output	166.4
P.11	Market output	94.1
P.12	Output for own final use	72.3
P.2	Intermediate consumption	61.6
B.1 $\xi$	Value added, gross	104.8
K.1	Consumption of fixed capital	27.4
B.1r	Value added, net	77.4

## B. The income generation account

84. Table 8 presents the 1993 SNA - II.1.1: Generation of income account with 1990 figures for the household sector of Norway. The balance in this account, the part generated from dwelling service production, is allocated to operating surplus, while the remaining production generates mixed income. Households' share of national operating surplus/mixed income was 45.9 per cent in 1990. Nearly half of that comes from dwelling services.

<b>Table 8. Household income generation account, Norway. 1990. Billion kroner</b>		
	<b>Uses</b>	<b>Resources</b>
B.1n	Value added, net	77.4
D.1	Compensation of employees	13.8
D.11	Wages and salaries	11.6
D.12	Employers' social contributions	2.2
D.121	Employers' actual social contributions	2.2
D.122	Employers' imputed social contributions	0.0
D.29	Other taxes on production	1.5
D.39	Other subsidies on production	12.7
B.2	Operating surplus	34.8
B.3	Mixed income	39.9

## C. The allocation of primary income account

85. Table 9 presents the 1993 SNA - II.1.2: Allocation of primary income account with 1990 figures for the household sector of Norway. The balance of primary incomes, consisting of operating surplus, mixed income, compensation of employees and property income, net, is 403.2 billion. Thus, households' share of national income (700.6 billion) was 57.6 per cent in 1990, i.e. just over half.

<b>Table 9: Household allocation of primary of income account, Norway. 1990. Billion Kroner</b>		
	<b>Uses</b>	<b>Resources</b>
B.2	Operating surplus	34.8

B.3	Mixed income		39.9
D.1	Compensation of employees		355.8
D.11	Wages and salaries		295.7
D.12	Employers' social contributions		60.1
D.121	Employers' actual social contributions		58.7
D.122	Employers' imputed social contributions		1.4
D.4	Property income	72.3	45.1
D.41	Interest	71.8	24.0
D.42	Distributed income of corporations	-	1.3
D.44	Property income attributed to insurance policyholders	-	19.2
D.45	Rent	0.5	0.7
B.5	Balance of primary incomes	403.2	

#### D. The secondary distribution of income account

86. Table 10 presents the 1993 SNA - II.2: Secondary distribution of income account with 1990 figures for the household sector of Norway. The distinctions between compulsory and voluntary are omitted as virtually all are compulsory. Likewise, items D.6112 and D.6113 might not be split in the Norwegian case. The balance of this account is disposable income. Household disposable income consists of the balance of primary incomes, social benefits other than social transfers in kind, current transfers net, less current taxes on income, wealth, etc, and less social contributions. Its 1990 value, at 341.6 billion, leaves the household sector share at 60.0 per cent of disposable income for Norway, i.e. 2 to 3 percentage points higher than the sector's corresponding share of national income (see above).

#### E. The redistribution of income in kind account

87. Table 11 presents the 1993 SNA - II.3: Redistribution of income in kind account with 1990 figures for the household sector of Norway. The table reveals that there is no breakdown of social transfers in kind. Instead, they are determined from the expenditure side through the sectoral contributions of individual consumption expenditure from central government, local government and NPISHs. These calculations have been described in great detail above. The balancing item of this account is adjusted disposable income. Household adjusted disposable income consists of disposable income (as defined above) plus social transfers in kind. The latter are a significant addition (111.9 billion) that increases disposable income by more than 30 per cent. The 1990 value of 453.4 billion for adjusted disposable income of households also increases the household sector share of disposable income for Norway from 60 per cent to 80 per cent. If we remember that total disposable income and total adjusted disposable income are identical, this means that the shares of adjusted disposable income of general government and of NPISHs have both decreased correspondingly when the concept of disposable income is replaced by adjusted disposable income.

		Uses	Resources
B.5	Balance of primary incomes		403.2
D.5	Current taxes on income, wealth, etc.	86.1	
D.51	Taxes on income	80.5	
D.59	Other current taxes	5.6	

D.61	Social contributions	89.4	
D.611	Actual social contributions	88.0	
D.6111	Employers' actual social contributions	58.7	
D.6112	Employees' social contributions	29.3	
D.6113	Social contributions by self- and non-employed persons	..	
D.612	Imputed social contributions	1.4	
D.62	Social benefits other than social transfers in kind		123.1
D.621	Social security benefits in cash		86.8
D.622	Private funded social benefits		6.5
D.623	Unfunded employee social benefits		1.4
D.624	Social assistance benefits in cash		28.4
D.7	Other current transfers	17.6	8.4
D.71	Net non-life insurance premiums	4.9	
D.72	Non-life insurance claims		4.9
D.75	Miscellaneous current transfers	12.7	3.5
B.6	Disposable income	341.6	

**Table 11. Household redistribution of income in kind account, Norway, 1990. Billion kroner**

		Uses	Resources
B.6	Disposable income		341.6
D.63	Social transfers in kind		111.9
D.631	Social benefits in kind		
D.6311	Social security benefits, reimbursements		
D.6312	Other social security benefits in kind		
D.6313	Social assistance benefits in kind		
D.632	Transfers of individual non-market goods and services		1.4
B.7	Adjusted disposable income	453.4	

## F. The use of disposable income account

88. Table 12 presents the 1993 SNA - II.4.1: Use of disposable income account with 1990 figures for the household sector of Norway. With a special adjustment item on pension funds added to household disposable income, and by deducting household consumption expenditure, household saving is derived as the balance of this account. The estimation of household consumption expenditure has been described above in great detail. In 1990, saving was estimated at 4.7 billion or a modest 1.4 per cent of household disposable income. A saving ratio of some 5 per cent has been a more normal result in recent years.

**Table 12. Household use of disposable income account, Norway, 1990. Billion kroner**

		Uses	Resources
B.6	Disposable income		341.6
D.8	Adjustment for the change in net equity of households on pension funds		1.4
P.3	Final consumption expenditure	338.2	

P.31	Individual consumption expenditure	338.2
B.8	Saving	4.7

## G. The use of adjusted disposable income accounts

89. Table 13 presents the 1993 SNA - II.4.2: Use of adjusted disposable income account with 1990 figures for the household sector of Norway. The same special adjustment item on pension funds is added to household adjusted disposable income in this case, while by deducting household actual final consumption, an identical estimate of household saving is derived as the balance of this account as well. The estimation of household actual final consumption has been described above. The saving's ratio is even lower in this case, 1.0 per cent of adjusted disposable income.

		Uses	Resources
B.7	Adjusted disposable income		453.4
D.8	Adjustment for the change in net equity of households on pension funds		1.4
P.4	Actual final consumption	450.1	
P.41	Actual individual consumption	450.1	
B.8	Saving	4.7	

## VII. Household sub-grouping issues

90. The three main household sub-grouping issues have already been introduced in section III above. In this last section the aim is nonetheless to share some Norwegian experiences gained so far with readers, although the Norwegian situation at the time of writing is less settled for household sub-grouping than for the household sector as a whole. A full sequence of accounts of NPISHs has been prepared and published, i.e. the combined households and NPISHs sector accounts are split into the accounts of the two separate institutional sectors from 1997 onwards. This addresses the first kind of sub-grouping issue. It can be seen as a first sub-sectoring of the household sector and is described in the following section. The sub-grouping issues of the second kind (household sub-sectors) and the third kind (further household groups) are discussed more briefly at the end.

## A. Sequence of accounts estimates of NPISHs

91. Table 14 presents the main items from the sequence of accounts of NPISHs. It shows the household estimates and the percentage shares of NPISHs of households and NPISHs combined. The sequence of accounts of NPISHs are compiled in the same accounting framework as households. The percentage shares illustrate the relative size of the two sectors, which may be useful as background information for countries embarking on such a split. The shares of NPISHs vary quite substantially between main items. It is quite negligible for items like balance of primary incomes and adjusted disposable income, and is also small for consumption of fixed capital, property income and other current transfers as uses. The explanation is the large weight of compensation of employees in the household items of balance of primary incomes and adjusted disposable income. For disposable income and for final consumption expenditure, the NPISHs share is 5 to 6 per cent. For output and value added, the NPISHs share is about twice this, or 10 to 11 per cent. The ultimate balance, saving, for this particular year is nearly the same size for the two sectors. Likewise, compensation of employees as uses is also almost as high for employers of NPISHs as for employers in households. Other current transfers as resources constitute nearly the whole disposable income in the NPISHs sector, and more than 70 per cent of other current transfers of the two sectors combined.

92. Output of NPISHs is estimated as the sum of production costs following the general principle used for non-market production. However, little is known about these costs. The output estimation, therefore, has to be based on the incomes of NPISHs, assuming there is a close relation between production costs and their incomes, either for same size or a given share of the incomes. For most NPISHs industries, it is assumed that their incomes should cover all production costs plus an allowance for depreciation of capital. Other current transfers are a main source of resources for NPISHs, notably current transfers from central and local government. Such items are identified in the central and local government accounts, thus determining total incomes of NPISHs, and at the same time identifying the activities involved (education, health, etc). Information on the expenditures made by households (on fees) is available from household consumer surveys. In addition, accounting statistics are used as counterpart information (households, corporations). Accounting data for some institutions are collected and used in the next step of compilation: splitting production costs between intermediate consumption, compensation of employees, etc. For services mainly produced in government (such as education, health), cost-structure data (intermediate consumption, wages and salaries) of the activities are taken from the government accounts. However, in order to arrive at the balances of saving and net lending there are items that have to be "imputed" without much information directly or through counterpart information.

93. Let us look at the example of the health production activity of NPISHs. Hospital services produced by non-market producers outside government are normally part of the county health plans and partly financed by government. Current transfers from government to NPISHs were partly from the National Insurance Scheme (0.3 billion in 1988), but mostly from local government (2.1 billion). In addition, it is assumed that 10 per cent of the incomes (0.3 billion) are transfers from various NPIS (foundations, institutions, etc) which had an original interest in providing these kinds of health services. There are also fees directly charged for out-patient services (0.2 billion) estimated on a more or less firm basis. This adds up to an estimate of 2.9 billion as total incomes for these hospitals, thus defining at the same time their output. The cost components were estimated as fixed shares of output based on information from 1988 health statistics, i.e. compensation of employees 76 per cent, intermediate consumption 22 per cent and consumption of fixed capital 2 per cent (share of equipment used as a proxy, but later to be replaced by an estimate following the general PIM method conducted after the general revision). A similar estimation is added for ambulance services. For later years, total output (hospital and

ambulance services) has been extrapolated by using as an indicator current transfers from central government (and from households). The 1988 percentage shares are also used for later years to determine compensation of employees, intermediate consumption and consumption of fixed capital.

<b>Table 14. Sequence of accounts of NPISHs. Main items, Norway. 1990. Billion kroner</b>			
<b>Corresponding main items of households and distributive shares</b>			
	<b>NPISHs</b>	<b>Households</b>	<b>NPISHs percentage share of total</b>
Output	21.0	166.4	11.2
Intermediate consumption	9.9	61.6	13.8
Value added	11.0	104.8	9.5
Consumption of fixed capital	0.8	27.4	2.8
Compensation of employees (as uses)	10.3	13.8	42.7
Property income (as resources)	1.3	45.1	2.8
Property income (as uses)	0.4	72.3	0.6
Balance of primary incomes	0.8	403.2	0.2
Other current transfers (as resources)	21.8	8.4	72.2
Other current transfers (as uses)	0.3	17.6	1.7
Disposable income	22.3	341.6	6.1
Final consumption expenditure	18.9	338.2	5.3
Saving	3.4	4.7	42.0
Adjusted disposable income	3.4	453.4	0.7
Actual final consumption	-	450.1	-
Saving	3.4	4.7	42.9

94. The estimation of final consumption expenditure of NPISHs has already been described. NPISHs consumption expenditure is classified by five COPNI groups, and with direct links between the services produced and the consumption groups. For the output of NPISHs health activities the link is to COPNI groups on both health and welfare (assumed shares), otherwise the links are straightforward for education and membership organizations, while cultural and sporting activities and services are linked with the recreation and culture consumption group.

95. Evidently, the estimation of the NPISHs sector suffers from a lack of direct sources and weak methods in determining the cost-structure of the sector. The assumption of total incomes as a proxy for total production costs may also seem questionable. Current transfers to NPISHs, other than from central and local government, are also uncertain estimates. Hopefully, we shall see a development of better register data in the future, to give at least a good estimation basis for employment in this sector.

## **B. Further sub-sectoring of the household sector**

96. Further sub-sectoring of the household sector may be multi-dimensional. Although the 1993 SNA recommends a particular solution with one of two variants (4.153), it also says that statistical authorities are advised to implement the System flexibly with respect to sub-sectoring the household sector (4.152). For instance, it might be useful to adopt two-dimensional matrices of sub-sectors, in which one dimension defines the main recommended socio-economic breakdown of sub-sectors of the households sector, while the other may define a further breakdown of each sub-sector, e.g. in a kind of satellite

accounting context. Household groups emerging from such a two-way matrix may easily become numerous. For example, when combining the four sub-sectors of the Norwegian household sector with a grouping of households by status, size and age, many cells of household groups are generated. With such a breakdown, no doubt we are entering a supplementary satellite-like treatment far beyond the central framework of national accounts. Another two-way matrix of household groups might be defined by combining the basic sub-sectors with a regional grouping along the other axis, i.e. by regions of residence for the households. If say a handful of regions are of interest, the regional sub-grouping two-way matrix to be designed would contain 20 different household groups. Other two-way matrices of the two kinds mentioned might be attempted as well.

97. The Norwegian approach to the sub-grouping of the household sector is a satellite one in its ultimate form, with two kinds of indicator breakdown, regional and a combined indicator set by age, size and status. The central framework part of the sub-sectoring, from which the indicators are based, is of the kind proposed by the System, i.e. socio-economic breakdown of households on the basis of income and partly by industry (agricultural, non-agricultural).

98. For the household sector as a whole, the ultimate goal is a full sequence of accounts prepared for the sub-groups as well. Since this is a formidable task in view of the many elements of household groups and the many accounts and items of the full sequence of accounts from output to net lending, it may be preferable to organize the compilation work in stages. A first stage could be the preparation of the accounts through the secondary distribution of income account with disposable income as the balancing item, while the use of income account with saving as the balancing item could be achieved in a second stage. Likewise, a first and second phase might also seem natural for the compilation of the accounts for the household sub-groups, using the recommended socio-economic breakdown income indicator base in a first phase, while leaving work on the satellite-type indicator-based groups for a second phase.

99. In preparing the estimates of the household sub-sectors and groups, various types of sources may be used. Among the most important sources for consideration are household sample surveys, tax statistics, government accounts data and credit market statistics. Household sample survey data may include income data or consumption expenditure data, or both, and other sources may also provide household data (population and housing census, surveys of housing and living conditions). The unit employed in these statistics may be the person or the household (the latter usually for household sample surveys only). Compilers should be most careful about this distinction. Another important factor to be properly analyzed is the extent to which household survey data can be extended to cover individual household groups. At some point, the sample might be too unrepresentative for direct use. Uncertainty as to individual group items should be taken into account when designing the household sub-group scheme. There is also an important consideration to be taken into account in co-ordinating samples of household surveys in the two areas of income and consumption expenditure, respectively.

100. Leaving aside household sample surveys and their possible use, as well as the inherent micro-macro link problems, we shall finally return to the first stage SNA household sub-sectors. Table 15 shows the relative size distribution of main items between the four sub-sectors based on unpublished 1993 estimates of the Norwegian national accounts. The table illustrates the main structural relations within the household sector. Reading the table horizontally, we see that it illustrates the relative size shares of the main items. Reading vertically, the table sums up results for each sub-group, in terms of what happens to their relative size shares, moving from income allocation activities through income redistribution activities.

**Table 15. Household sector by sub-sectors, Percentages. Norway. 1993**  
**Provisional relative size distribution. Percentages of household sector totals.**

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
	<b>Employers, in agriculture etc.</b>	<b>Other employers</b>	<b>Employees</b>	<b>Other households</b>
Wages and salaries	1	2	94	3
Mixed income / operating surplus	13	30	41	16
Property income (as resources)	6	10	61	23
Property income (as uses)	4	10	77	9
Balance of primary incomes	4	7	83	6
Social benefits	1	2	47	50
Other current transfers (as resources)	2	3	51	44
Current taxes on income, wealth etc.	3	6	81	10
Other current transfers (as uses)	2	4	87	7
Gross disposable income	3	5	70	22

101. The household sub-group employees is the largest sub-group. In 1993, almost 57 per cent of total households are grouped here. Naturally, their share of wages and salaries is close to 100 per cent (94 per cent). Almost as high is their share of current taxes on income, wealth, etc (81 per cent), and other current transfers as uses (87 per cent). Their share of property income (61 and 77 per cent on resources and uses, respectively) is also high. On the other hand, this group has a percentage share below 50 per cent for social benefits (47 per cent) and for mixed income/operating surplus (41 per cent). The latter share is still unexpectedly high, because nearly 65 per cent of operating surplus of dwelling services for own final use is with the employees group.

102. The household sub-groups employers in agriculture, etc, and employers in other industries count for 2.3 and 3.6 per cent of total households, respectively. For most main items, their shares, even combined, are quite small, above 10 per cent only for mixed income/operating surplus (43 per cent combined) and for property income (16 and 14 per cent combined as resources and uses, respectively).

103. The sub-group of other households constitutes more than 37 per cent of total households in Norway. Items for which the share is high consist of social benefits (50 per cent) and other current transfers as resources (44 per cent). The share is also relatively high for mixed income/operating surplus (16 per cent) due to this group's considerable share (28 per cent) of operating surplus on dwelling services for own final use, and for property income as resources (23 per cent), i.e. for interest income in particular. For other main items the percentage share is below 10 per cent.

104. Finally, from the vertical viewpoint, it is noted that the share of employees is reduced from a high 83 per cent for balance of primary incomes in households to 70 per cent of total household disposable income, when moving through the secondary distribution of income activities. Other households show a movement in the opposite direction from 6 to 22 per cent.

## References

Commission of the European Communities, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations, World Bank (1993): *System of National Accounts 1993*, Brussels/Luxembourg, New York, Paris, Washington, D.C.

Eurostat (1996): *European system of accounts*, Brussels – Luxembourg.

Statistics Norway (1996): *Norwegian National Accounts. Documentation of the Compilation and Methods Applied (2 Volumes)*, Oslo.

Statistics Norway (1997): *National Accounts 1978-1996. Production, Uses and Employment*, Oslo-Kongsvinger.

Statistics Norway (1997): *National Accounts 1978-1996. Institutional Sector Accounts*, Oslo, Kongsvinger.

UN (1968): *A System of National Accounts*, New York.

## **Non-profit institutions and the household sector**

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## **I. Introduction**

1. The System of National Accounts (1993 SNA) provides a standard framework for the measurement and formal representation of national economies. It covers the economic activities of households and organizations (institutions and establishments). The activities are measured and classified systematically in a formal sequence of inter-related accounts (see United Nations, 1993; Kendrick, 1996; Eisner, 1989). Non-profit institutions (NPIs) are part of this system. In this paper, we examine the definition, classification and treatment of NPIs in the 1993 SNA and in the Johns Hopkins Comparative Non-profit Sector Project, a major international effort to measure the size, composition and revenue structure of the non-profit sector in a cross-section of countries (Salamon and Anheier, 1996). Focusing on the links between NPIs and the household sector, this paper first compares the concepts and methodologies of both approaches, then analyzes the differences and similarities in the resulting estimates of the non-profit sector, and finally explores the impact of the various allocation rules for NPIs on estimates of sector size, composition, and revenue.

### **II. Non-profit institutions in the System of National Accounts**

2. Before entering into empirical analysis, it is useful to review the basic 1993 SNA definition and treatment of NPIs (see 1993 SNA; Anheier, Rudney and Salamon, 1993; Tice, 1993), as well as the related I/O accounts and tables which utilize identical SNA definitions (see Rudney and Young, 1989; Tice, 1993; Anheier and Rudney, 1998).

### **A. Definition**

3. A non-profit institution (NPI) is defined as an economic unit, which, in its own right, conducts economic transactions, owns assets, and incurs liabilities (1993 SNA: 4.54-4.56). A NPI can consist of one or more establishments. By definition, NPIs are not permitted to be a source of income, profit or other financial gain for the persons or entities that establish, control, or finance them. "Although they may not be a source of profit to other institutional units, NPIs may nevertheless be market producers if they provide services for which they charge prices or fees that are economically significant" (1993 SNA: 4.161). Economically significant prices influence both the amounts producers are willing to supply, and the amounts consumers are willing to buy. The 1993 SNA assumes that market-producing NPIs are less frequent than non-market producers, i.e. that the majority of NPIs are often created for charitable, philanthropic, or welfare reasons.

### **B. Sector allocation**

4. The SNA groups economies into five major sectors: (1) the non-financial corporate sector; (2) the financial corporate sector; (3) the general government sector; (4) the household sector; and (5) NPIs serving households (NPISHs). All institutional units of a particular type are consolidated into one sector, except NPIs, which are the only type of institution that can be spread across sectors. In fact, NPIs are allocated to four of the five sectors in the 1993 SNA, with the exception of the household sector. The sector to which NPIs are assigned is determined by a complex sequence of rules based on the assumed *purpose* of the organization, its market *behaviour*, who *controls* it, and on its *revenue* structure. Within this sequence, NPIs are first separated according to the types of services they produce (collective vs. individual). NPIs producing individual services are then split into market and non-market producers. Finally, the latter group is further divided into those mainly financed and controlled by government, and a residual group of entities. This residual group is the only one separately identified as *non-profit institutions serving households* or NPISHs in the 1993 SNA. The other types are allocated to other sectors. The result is a four-fold division of NPIs, as follows:

- *NPIs in the Non-financial Corporate Sector:* NPIs that produce individual services of a non-financial character (e.g. health care, education, day care, nursing home care) and that receive half or more of their income from the sale of such services at prices that are economically significant (1993 SNA: 4.58) are allocated to the non-financial corporate sector and thereby lose their identity as NPIs. Similarly, NPIs that serve enterprises in the financial corporate sector, such as trade associations, are also included in this non-financial corporate sector.
- *NPIs in the Financial Corporate Sector:* NPIs that serve enterprises in the financial corporate sector, or that produce individual services of a financial character (e.g. insurance, banking services, credit provision) and that receive half or more of their income from the sale of such services at prices that are economically significant are allocated to the financial corporate sector and also lose their identity as NPIs.
- *NPIs in the Government Sector:* NPIs that (i) produce *collective* services (e.g. parks, clean air) or (ii) produce individual services that are provided mostly for free or at prices which are not economically significant, and that are *controlled and mainly financed by government units or funds*, are allocated by the 1993 SNA to the government sector and lose their identity as NPIs.
- *NPIs in the Non-profit Institutions Serving Households (NPISHs) Sector:* Only those NPIs that produce individual services provided mostly for free or at prices that are not economically significant, and that are financed mostly by transfers from non-governmental sources (e.g. households, businesses, and foreigners), are considered by the 1993 SNA guidelines as a separate sector, referred to as the Non-profit Institutions Serving Households Sector.

5. Table 1 summarizes this 1993 SNA sector structuring and shows how the SNA system allocates NPIs among four different sectors. As should be clear, what is identified as the “non-profit sector” in the 1993 SNA is thus really a residual that contains only a portion of all NPIs in any economy.

6. This residual character of the NPISHs sector can be illustrated further by way of an example. Let us assume, therefore, an economy that contains NPIs producing \$1,000 in gross output. Of this total, let us further assume that \$100 in gross output is produced by NPIs providing mostly collective goods in the form of land reclamation projects. The remaining NPIs generate \$900 in output in the form of individual services. Of this, \$350 worth of services are provided by NPIs that primarily sell their services at economically significant prices and another \$50 is assumed to be produced by trade associations serving businesses. Another \$200 in output is produced by NPIs that are significantly funded and controlled by government. Finally, the remaining NPIs, generating \$300 in output, provide their services for free or at economically insignificant prices essentially to households that subsidize their operations through contributions.

**Table 1: Institutional Units Cross-Classified by Sector and Type, 1993 SNA**

Type of Institutional Unit	SECTOR				
	Non-financial corporations sector	Financial corporations sector	General government sector	Household sector	NPISHs sector
<b>Corporations</b>	Non-financial corporations and quasi-corporations	Financial corporations and quasi-corporations			
<b>Government units</b>			Government Units and social security funds		
<b>Households</b>				Households	
<b>NPIs</b>	Non-financial market NPIs	Financial market NPIs	Non-market NPIs controlled and financed mainly by government		Non-market NPIs serving households

7. As shown in Table 2, this example would yield a “non-profit sector” in the 1993 SNA system that represents only \$300 out of the \$1,000 in output generated by NPIs. The remaining NPIs, accounting for \$700 in output, would be allocated partly (\$400) to the corporate sector (either financial or non-financial) and partly (\$300) to the government sector (\$100 generated by the collective goods producers and the \$200 generated by NPIs disposing of their output for free or at below-market cost and that are controlled by and financed by government).

8. The 1993 SNA justifies this treatment of NPIs on the assumption that the NPIs allocated to sectors other than the NPISHs sector are generally limited in number and scale. As we will see, however, this assumption has become increasingly untenable, creating serious problems both for the treatment of NPIs in the SNA system, and for the treatment of the other sectors as well.

**Table 2: Illustration of 1993 SNA Sector Allocation of NPI Output (in current expenditures)**

	1993 SNA Sector
--	-----------------

	allocation in \$
<b>Total universe of NPIs</b>	<b>1,000</b>
<b>Corporate sector</b>	<b>400</b>
<i>of which:</i> market production	350
serving businesses	50
<b>Government sector</b>	<b>300</b>
<i>of which:</i> Collective	100
Individual	200
<b>Household sector</b>	<b>0</b>
<b>NPIs serving households</b>	<b>300</b>

9. This is not to say, of course, that the 1993 SNA sectoring system does not serve other valid purposes. “Sectoring” of the economy as done by current 1993 SNA rules enhances the economic analysis of enterprises, governments, and households in a country's economy. For the most part, the 1993 SNA does this well, as the analysis is generally directed at the economic functions of institutions in the economy. Thus, the combination of what are assumed to be essentially “commercial” NPIs with corporations in the 1993 SNA corporate sectors is appropriate and useful if one is analyzing private production by entities that charge “economically significant prices” irrespective of the legal form of ownership or profit distribution. Similarly, merging NPIs having strong government orientation with government agencies is also appropriate and useful, say, for the measurement and analysis of the overall role and influence of government and quasi-public entities in the economy.

10. Yet the SNA “sectoring” creates some problems, too. First, NPIs included in the government sector, though they provide collective benefits, may be quite independent of government in terms of control and finances. For example, NPIs may provide collective services by setting public standards for safety, education, health and the like. Thus, the government sector may include fully private initiatives concerned with the public good. Second, NPIs may seek to cover substantial parts of their operating costs even though they are not interested in making a profit. This seems to imply economic behaviours quite different from that typical of market producers. Although we could mention other instances where the sector allocation creates conceptual problems, the basic point is that merging large numbers of NPIs into either the corporate or the government sector creates “hybrid” sectors that may contain quite distinct elements in terms of economic behaviour. In other words, the presence of NPIs in corporate and government accounts may not only limit our view of NPIs to a residual sector, i.e. NPISHs; it may by implication also reduce the validity of analyses directed either at purely private business or at purely public sector functions.

## C. Classification

11. In addition to the classification of NPIs based on their purpose, behaviour and control, the 1993 SNA further classifies the activities of those NPIs assigned to the NPISHs sector using the COPNI system.<sup>1</sup> COPNI, the Classification of the Purposes of NPIs serving households, is a functional classification that recognizes seven categories in addition to a class of miscellaneous services (1993 SNA: 18.1; Table 18.3):

1. research and Scientific Services
2. education Services
3. health Services
4. welfare Services
5. recreational, Cultural, and Related Services
6. religious Services
7. services of Professional and Labour Organizations and Civic Associations
8. miscellaneous Services Not Elsewhere Classified

12. The structure of COPNI generally follows the system used to classify the functions of government (1993 SNA: 18.12), and covers current transactions, capital outlays, and some types of assets. However, it is important to keep in mind that COPNI does not cover all NPIs. Some are included in the other sectors (corporate, government). For example, non-profit business associations are part of the corporate sector, whereas unions (serving employees as members of households, not of the corporation) and professional associations (serving members of a profession, not their businesses) are allocated to the NPISHs sector.

## D. Implications

13. What are the implications that follow from the 1993 SNA treatment of NPIs? One answer to this question can be found in the important study by Parker (1998), who explored the effects of the various SNA allocation rules for US educational institutions. Parker's study focused on different interpretations of what "economically significant prices" might mean for the treatment of NPIs, in this case 2 and 4-year colleges. In 1990, the over 3,500 accredited institutions of higher learning enrolled 13.8 million students. Parker reports that according to present US national accounts (NIPA), these institutions accounted for 1.5% of GDP, and 2.8% of total employment. Over half of these institutions are NPIs, although they enroll only 21.6% of the students. In his study Parker assumed that colleges produce two products: educational services largely for households, and research activities, which largely serve government and the corporate sectors.

14. If all non-profit colleges are classified as market producers of educational services, their output would amount to \$75.5 billion in sales, largely tuition. Were we to treat them all as non-market producers, total output amounts to \$129.7 billion in costs of production, a difference of \$54.2 billion. Parker then applies various rules operationalizing the sector allocation guidelines of NPIs. For example, in one instance, in an effort to operationalize the 1993 SNA meaning of "economically significant prices," he treats all colleges as market producers if sales of educational services to students exceed 50% of their cost of production. This shifts most colleges to the non-financial corporate sector, following the 1993 SNA assumption that these institutions are market producers.

15. In a further rule, he combines educational services, primarily consumed by households, and

research services into a joint product. The latter services are less likely to be directed at household demand, and are probably carried out for government and corporations. Treating education and research as a joint product resulted in significant shifts in the allocation of NPIs, particularly among 4-year colleges, to the corporate and government sectors depending on the mix and type of research financing involved. For our purposes, it is important to realize the wide variations that result from these applications, making NPISHs appear significantly smaller or larger depending on the rules and assumptions employed.

16. One lesson to be drawn from Parker’s study is that the picture of NPIs revealed by the 1993 SNA will not only depend on actual transactions and transfers between NPISHs and other institutional sectors, but also on how the 1993 SNA rules are applied to available data. Parker’s study addressed the problem of measuring, and deciding upon, “economically significant prices,” i.e. the dividing line between the corporate sector and NPISHs. But similar problems exist with the guideline that NPIs engaged in non-market production and “controlled and mainly financed by government” (1993 SNA: 4.61) should be allocated to the government sector, “irrespectively of the types of institutional units that benefit from their activities” (1993 SNA: 4:62), including households. Government control is defined as “the ability to determine the general policy or program of the NPI by having the right to appoint the officers managing the NPI” (1993 SNA: 4.62). Although not specified explicitly, “mainly financed” seems to imply providing half or more of current revenue.

17. Yet, leaving operational difficulties of interpretation aside (e.g. What type of government majority, if any, is needed in the appointment procedure of officers?), the joint requirement of control *and* finance allows for two “borderline” scenarios that may be difficult to deal with in terms of operationalization and measurement (table 3): NPIs mainly financed but not controlled by government such as non-profit hospitals and social service agencies in Germany or schools in the Netherlands, and NPIs largely controlled but not primarily financed by government, e.g. most NPIs in countries like Egypt or Japan. It is important to note that both groups may be substantial in terms of size and include significant parts of entities otherwise classified as NPISHs.

**Table 3: 1993 SNA Allocation of NPIs According to Government Control and Finance**

	<b>Controlled by Government</b>	<b>Not Controlled by Government</b>
<b>More than 50% of revenue from government sources</b>	NPI allocated to Government Sector	? [most likely allocated to government sector in some countries]
<b>Less than 50% of revenue from government sources</b>	? [most likely allocated to government sector in some countries]	NPI allocated to NPISHs

## **E. Estimation of size and composition**

18. Assuming for the moment that countries made comparable decisions based on the 1993 SNA allocation rules for NPIs, what is the yield in terms of data and their interpretation? At the outset, it should be noted that only a very few countries report fully on NPISHs in the SNA tables, including the United States, which has a non-profit sector that ranks among the largest in the world. Beyond this, three observations seem in order (see table 4):

- first, the NPISHs sector seems to be quite small, and not reporting on it in the first place would seemingly do minimal harm to the overall quality of the SNA data. In 1971, for example, only two countries, the UK and the US, reported a NPISHs sector of greater than 1 percent of GDP, a number that for most countries is probably well within the estimation error of larger account aggregates in the corporate or government sector. By 1990, only two of the seven countries indicate a non-profit sector greater than 2 percent of GDP
- second, while the reported estimates generally increased for most countries throughout the period from 1971 to 1990, changes were, with the exception of Sweden and the US, below one percentage point, and typically much less. What is more, countries where significant policy reforms affecting the non-profit sector were put in place during the years in question do not seem to register any changes in the relative size of NPISHs. France is perhaps the best case in point. Beginning in 1980, the government implemented an ambitious decentralization policy that shifted responsibilities to local non-profit organizations, leading to a significant growth in the number of non-profit associations (Archambault, 1997). The French example suggests that the 1993 SNA may frequently fail to capture the effect major policy changes have on NPISHs in particular, and, more generally, on their relationships with other sectors in the economy;
- third, cross-national differences, while rather pronounced in some cases, seem difficult to explain. Why is it that France and Germany have NPISHs sectors so different in size? What is more, why is one remarkably stable, with the other stagnating at first, and growing afterwards? Why is Italy's NPISHs sector declining, while Sweden's is growing? While there may be economic reasons for these patterns, a more plausible explanation is that they reflect measurement and allocation decisions that differ widely across different countries.

19. A similar conclusion emerges when we look at data on the major components of NPISHs gross input and output by country. Three OECD countries offer a fairly complete picture of the respective shares of intermediate consumption and wages in NPISHs input (see table 5). Two countries, France and Germany also offer information on the share of sales in gross output. In both cases, confusing anomalies are apparent in the data that seem hard to explain in terms of the underlying economic realities. In the first place, despite immense changes in production processes over the twenty-year period covered, the relative shares of wages and intermediate consumption in the gross input of NPISHs, as reported in the 1993 SNA, have remained remarkably constant. In the second place, wages, as reported in the SNA data, comprise less than half of the gross input for French NPISHs but well above half for Germany's and Sweden's.

20. In short, it appears that the NPISHs sector, at least in the present 1993 SNA-based data system, represents a residual sector, not only in conceptual terms, but empirically as well. Not only does this distort the true picture of the scale and composition of NPIs, however, it also distorts the true picture that the 1993 SNA provides of the scale and composition of the corporate and government sectors. What is more, these distortions can potentially affect the link between NPISHs and the household sector to a considerable extent. This is highlighted in a study carried out by the Dutch economist van Heemst (1993). Excluding the field of education, von Heemst found that the economic weight of the NPIs allocated to other sectors amounted to 93% of the total current revenues of NPIs in the Netherlands. In other words, only 7% of NPI-revenue is reported in NPISHs. As table 6 indicates, the majority of NPIs were shifted to the corporate sector, followed by the government sector. When education services, which in Holland are largely financed by government, are included, the balance shifts towards the government sector, which would then include NPIs in the amount of 28 billion guilder in value added, or twice the size reported in table 6.

**Table 4: NPISHs as Percent of GDP, by Country, 1971-1990**

Country	1971	1975	1980	1985	1990
France	0.24%	0.26%	0.26%	0.24%	0.24%
Germany	1.28%	1.57%	1.81%	2.02%	2.12%
Italy*	0.55%	0.53%	0.27%	0.28%	0.24%
Japan	0.88%	1.40%	1.64%	1.70%	1.71%
Sweden*	0.63%	0.70%	1.53%	1.53%	1.75%
UK*	1.12%	1.20%	1.21%	1.50%	1.99%
US	2.87%	2.99%	3.07%	3.34%	4.00 %

Source: based on OECD, 1993, Table 1: *GDP by institutional sector of origin*

\* reports final consumption expenditures on GDP

21. In summary, several lessons can be drawn from the discussion so far:

- in most countries, NPISHs include probably only a small proportion of all of NPIs;
- the majority of NPIs are allocated to the corporate sector based on their assumed market behaviour;
- another substantial portion of NPIs is shifted to the government sector;
- the remaining set of NPIs retained to form the separate NPISHs sector is minuscule compared to the actual size of the NPI universe, thus creating serious distortions;
- there are significant conceptual and methodological issues in terms of data coverage and measurement of NPISHs.

22. Against this backdrop it is revealing to compare the treatment of NPIs in the 1993 SNA to the approach taken by the Johns Hopkins Comparative Non-profit Sector Project, the international project on the scope and structure of NPIs the present authors have been directing in a number of countries. It is to this task that we therefore now turn.

**Table 5: Components of NPISHs Gross Input and Output, by Country, -1970-1990  
in Percent**

<b>COUNTRY</b>	<b>1971</b>	<b>1975</b>	<b>1980</b>	<b>1985</b>	<b>1990</b>
<b>France</b>					
Intermediate Consumption as % of Gross Input	58%	58%	55%	55%	55%
Wages as % of Gross Input	40%	40%	43%	45%	43%
Sales as % of Gross Output	49%	49%	54%	55%	50%
<b>Germany</b>					
Intermediate Consumption as % of Gross Input	30%	29%	31%	31%	30%
Wages as % of Gross Input	63%	64%	62%	63%	64%
Sales as % of Gross Output	57%	67%	64%	63%	61%
<b>Sweden</b>					
Intermediate Consumption as % of Gross Input	20%	20%	29%	29%	31%
Wages as % of Gross Input	79%	78%	70%	70%	66%

Source: based on OECD, 1993

**Table 6: Allocation of Dutch NPIs, 1985  
in Billions of guilders**

<b>Current Revenues</b>	<b>NPIs in Corporate Sector</b>	<b>NPIs in Government Sector</b>	<b>NPISHs</b>	<b>Other, n.e.c.</b>	<b>TOTAL NPIs</b>
<b>Sales</b>	23.6	1.6	0.6	0.9	26.3
<b>Transfers</b>	0.8	12.6	2.3	0.1	15.7
<b>TOTAL</b>	24.3	14.1	2.9	0.6	42.0
<b>As % of Total</b>	58.0%	34.0%	7.0%	1.0%	100.0%

Source: based on Van Heemst, 1993

### III. Johns Hopkins Comparative Non-profit Sector Project and household sector links

23. The Johns Hopkins Comparative Non-profit Sector Project is an international study to examine the size, composition and revenue structure of the non-profit sector in a broad cross-section of countries (see Salamon and Anheier, 1996). The project is based on a systematically comparative approach that included a common definition and classification system for NPIs. As we will see, the Johns Hopkins Project goes beyond NPISHs and covers a broader set of NPIs.

#### A. Definition

24. For purposes of comparison, it was necessary to develop a common definition of the non-profit sector for this project. After exploring a variety of definitional criteria (Salamon and Anheier, 1992), we settled on a definition that includes five features that address key structural and operational characteristics of NPIs (Salamon and Anheier, 1997). To be covered by the project, therefore, an organization had to be <sup>2</sup>

1. *Organized, i.e. institutionalized to some extent.* What is important is that the organization have some institutional reality to it. In some countries this is signified by a legal charter of incorporation. But institutional reality can also be demonstrated in other ways where legal incorporation is neither common nor readily available. These include some degree of internal organizational structure, relative persistence of goals, structure and activities, and meaningful organizational boundaries, e.g. some recognized difference between members and non-members. What are excluded are purely ad hoc and temporary gatherings of people with no real structure or organizational identity.
2. *Private, i.e. institutionally separate from government.* NPIs are not part of the apparatus of government. They are “non-governmental” in the sense of being structurally separate from the instrumentalities of government. This does not mean that they may not receive significant government support or even that government officials cannot sit on their boards. What is important from the point of view of this criterion is that the organization has an institutional identity separate from that of the state, that it is not an instrumentality of any unit of government whether national or local, and that it therefore does not exercise governmental authority.
3. *Self-governing, i.e. equipped to control their own activities.* Some organizations that are private and non-governmental may nevertheless be so tightly controlled either by governmental agencies or private businesses that they essentially function as parts of these other institutions even though they are structurally separate. To eliminate such situations, we add the further criterion that NPIs must be self-governing. To meet this criterion, organizations must be in a position to control their own activities to a significant extent. This implies that they must have their own internal governance procedures and enjoy a meaningful degree of autonomy.
4. *Non-profit-distributing, i.e. not returning profits generated to their owners or directors.* NPIs may accumulate profits in a given year, but the profits must be ploughed back into the basic mission of the agency, not distributed to the organizations’ owners, members, founders or governing board. The fundamental question is: How does the organization handle profits? If they are reinvested or otherwise applied to the stated purpose of the organization, the organization would qualify as a non-profit institution. In this sense, NPIs are private organizations that do not exist primarily to generate profits, either directly or indirectly, and that are not primarily guided by commercial goals and considerations. This differentiates NPIs from the other component of the private sector, private businesses.
5. *Voluntary, i.e. involving some meaningful degree of voluntary participation.* To be included within the non-profit sector, organizations must embody the concept of voluntarism to a

meaningful extent. This involves two different, but related, considerations. First, the organization must engage volunteers in its operations and management, either on its board or through the use of volunteer staff and voluntary contributions. Second, “voluntary” also carries the meaning of “non-compulsory.” Organizations in which membership is required or otherwise stipulated by law would be excluded from the non-profit sector. Similarly, “voluntary” implies that contributions of time (volunteering) and money (donations) as well as contributions in kind may not be required or enforced by law, or otherwise be openly coerced.<sup>3</sup>

## **B. Classification**

25. In addition to a common definition of the non-profit sector, the project also formulated a classification system for sorting such organizations. Based largely on the International Standard Industrial Classification, the *International Classification of Non-profit Organizations (ICNPO)* groups NPIs on the basis of their primary economic activity (Salamon and Anheier, 1997). Entities are thus differentiated according to the types of services or goods they provide (e.g. health, education, environmental protection). As shown in table 7, the ICNPO groups NPIs into 12 *Major Activity Groups*, including a catch-all “Not Elsewhere Classified” group. These 12 Major Activity Groups are in turn further subdivided into 24 *Subgroups*. Each of the Subgroups has in turn been broken into a number of *Activities*, but the ICNPO system as currently developed does not attempt to achieve standardization at the level of activities because of the great diversity of the non-profit sector in different locales.

## **C. Estimation of size and composition<sup>4</sup>**

26. The non-profit sector as defined above turns out to be a major economic force in the countries we examined. NPIs account for significant amounts of both paid and unpaid employment and have sizable operating expenditures. In particular, such organizations employed 11.9 million employees in the eight countries for which we were able to compile empirical data (U.S., U.K., France, Germany, Italy, Sweden, Hungary, and Japan). This represented 4.5 percent of the total labour force in these countries, or close to one out of every 20 jobs, and one out of every 8 service-sector jobs. In addition, these organizations attracted the energies of volunteers whose time translates into the equivalent of close to 5 million additional full-time employees.

27. *Cross-National Variations in Scale.* Table 8 shows that, as a share of total national employment, non-profit employment varied from a low of 0.8 percent in Hungary to a high of 6.9 percent in the United States, with Italy, Japan, and Sweden grouped towards the lower end of the spectrum, and Germany, the U.K., and France toward the higher end. At the same time, the degree of variation among countries is relatively small. Most countries are within one standard deviation (in this case 1.7 percentage points) from the eight-country average of 3.3 percent.

28. When volunteer staff is included as well, some interesting changes occur. Most notably, Sweden vaults ahead of the other European countries in the scale of its non-profit sector. In particular, from one of the smallest non-profit sectors in Europe, it jumps to one of the largest. Evidently the non-profit sector takes a different form, and potentially assumes a different role, in Sweden as opposed to the other countries we are examining, a point to which we will return below.

**Table 7: The International Classification of Non-profit Organizations**

GROUP 1: CULTURE AND RECREATION
1 100 Culture and Arts
1 200 Sports
1 300 Other Recreation and Social Clubs
GROUP 2: EDUCATION AND RESEARCH
2 100 Primary and Secondary Education
2 200 Higher Education
2 300 Other Education
2 400 Research
GROUP 3: HEALTH
3 100 Hospitals and Rehabilitation
3 200 Nursing Homes
3 300 Mental Health and Crisis Intervention
3 400 Other Health Services
GROUP 4: SOCIAL SERVICES
4 100 Social Services
4 200 Emergency and Relief
4 300 Income Support and Maintenance
GROUP 5: ENVIRONMENT
5 100 Environment
5 200 Animal Protection
GROUP 6: DEVELOPMENT AND HOUSING
6 100 Economic, Social and Community Development
6 200 Housing
6 300 Employment and Training
GROUP 7: LAW, ADVOCACY AND POLITICS
7 100 Civic and Advocacy Organizations
7 200 Law and Legal Services
7 300 Political Organizations
GROUP 8: PHILANTHROPIC INTERMEDIARIES, VOLUNTARISM, PROMOTION
GROUP 9: INTERNATIONAL
GROUP 10: RELIGION
GROUP 11: BUSINESS AND PROFESSIONAL ASSOCIATIONS, UNIONS
GROUP 12: [NOT ELSEWHERE CLASSIFIED]

**Table 8: Non-profit Sector Employment as Percent of Total Employment,  
With and Without Volunteers, 1990 (\*)**

Country	Percent of Total Employment	
	Paid Employment Only	Paid & Volunteer Employment
Hungary	0.8%	2.1%
Italy	1.8%	2.9%
Sweden	2.5%	8.3%
Japan	2.5%	2.5%
Germany	3.7%	6.1%
U.K.	4.0%	~
France	4.2%	6.8%
U.S.	6.9%	12.8%
<b>Average</b>	<b>3.3%</b>	<b>5.9%</b>

(\*) Employment figures are reported in full-time equivalent. Volunteer hours were converted to full-time equivalent numbers of jobs. Source: Salamon, Anheier, and Sokolowski, 1996.

29. *Cross-national Variation in Composition.* Not only does the non-profit sector vary in scale from place to place; it also varies in composition. The extent of the variation is somewhat "constrained," however. Specifically, four components seem to dominate the sector almost everywhere. In particular, education and research, health, social service, and culture and recreation organizations account overall for nearly 80 percent of sector expenditures. What is more, these four components account for at least 75 percent of sector expenditures in seven of the eight countries, and in the only exception (Sweden) they account for well over half (see Table 9).

30. Nevertheless, as table 9 also shows, considerable variation is also apparent within this overall pattern. Thus, for example, culture and recreation falls out of the top four fields of non-profit activity in three of the eight countries (Germany, Japan, and the United States); education falls out in two (Germany and Hungary); and health falls out in three (Hungary, Sweden, and the U.K.). Indeed, in terms of expenditure dominance, it is possible to detect at least four distinct patterns of non-profit composition among the countries we examined, although significant variations can still exist within these patterns both in terms of the specific subtypes of organizations that are responsible for the pattern and in terms of the rest of the composition of the sector in each country. These four patterns are as follows:

- *Japan and the U.K.: Education-Dominant.* In two of our project countries, Japan and the U.K., education organizations dominate the non-profit sector in terms of expenditures. Forty-three percent of all non-profit expenditures in the U.K., and 40 percent of all non-profit expenditures in Japan, go for education and research. Outside of the education field, however, the Japanese and U.K. non-profit sectors differ considerably: in Japan, the second largest component is health while in the U.K. it is culture and recreation.
- *U.S. and Germany: Health-Dominant.* If education dominates the non-profit sectors of Japan and the U.K., health dominates the non-profit sectors of the United States and Germany. Over half (53 percent) of all non-profit expenditures in the United States is made in the health field. This reflects the dominance of NPIs among American hospitals, over half of which are non-profit in form. In Germany, the proportion of total non-profit spending on health is somewhat smaller, but at 35 percent it still represents the largest single component.
- *France and Italy: Social Services-Dominant.* A third pattern of non-profit sector structure is evident in France and Italy, where the social service field dominates non-profit expenditures. Thus almost 30 percent of French non-profit expenditures and about a quarter of Italian non-profit expenditures are made by social service agencies. The second most important field of non-profit activity is also identical in these two countries: education. Beyond this, however, these two countries differ in important respects, with French NPIs concentrating more on culture and recreation and Italian ones on business and professional activities.
- *Sweden and Hungary: Culture and Recreation-Dominant.* Finally, a wholly different pattern of non-profit sector structure is evident in Sweden and Hungary. In Sweden, as table 10 indicates, over one quarter (27%) of all non-profit expenditures are in the culture and recreation component of the sector. In Hungary, this sub-sector accounts for the overwhelming majority (57 percent) of all non-profit sector expenditures.

31. If the non-profit sector appears to be roughly comparable in aggregate scale among the countries examined here, its composition, and therefore, role, nevertheless differ considerably from country to country.

32. *Revenue Structure.* Not only do the composition and scale of the non-profit sector differ from place to place, but so does its revenue structure. We differentiate three broad classes of non-profit revenue:

- *private charitable giving*, including gifts from individuals, corporations, foundations, and bequests, whether given directly or through various federated fund-raising efforts;
- *government, or public sector, payments*, including outright grants, as well as third-party payments and other contracts, and payments by government or public agencies to non-profit providers for particular services delivered to eligible recipients; and
- *private fees and payments* that the non-profit sector receives from the sale of its own services or of some other product directly to a consumer.

33. As reflected in table 10, private giving turns out to be the least important source of non-profit income in the eight countries we studied, at least in terms of aggregate scale. The average share of total non-profit income originating from private philanthropic giving is only 10 percent, most of it (about 60 percent) from individuals, with corporations and foundations providing most of the rest. Even though giving varies across countries, in none is private giving the major source of non-profit revenue. In contrast, almost half (49 percent) of all non-profit income in these eight countries comes on average from fees and sales, and this source is the dominant one not only overall but also in six of the eight countries.

Finally, a significant 41 percent of non-profit income comes from government, and this source is actually the major one in two of the countries (Germany and France).

34. While the revenue structure of the non-profit sector is fairly uniform at the aggregate level, it is far more varied at the sub-sector level, as Table 11 shows. Thus, for example, earned income is the dominant source in six fields. In contrast, in four fields government support is dominant, and private giving in none.

35. *Non-profit Sector Growth:* Although information on the non-profit sector is much less complete than would be needed to draw a fuller conclusion, there are indications that the sector has expanded considerably in recent years, both in the developed parts of the world as well as in developing countries. To see this, we compared the non-profit share of total employment to the non-profit share of job *growth* during the decade of the 1980s for three countries for which historical data could be assembled (U.S., France, and Germany). The results are quite striking. With about 6 percent of total employment as of 1990, NPIs accounted for nearly 13 percent of the net new jobs added in these countries between 1980 and 1990. In other words, the non-profit sector was proportionately almost twice as successful in adding new jobs during this period as its overall scale would suggest. What is more, this was not simply a product of the performance of just one of the countries. This suggests that the sector's contribution to job creation has been increasing. In fact, the sector's contribution to job creation seems consistently high in all the countries on which we were able to compile time-series data. Thus, NPIs accounted for one out of every seven net new jobs created in the French economy during the 1980s, and one out of every eight to nine net new jobs created in the German and U.S. economies

#### **IV. Methodological and empirical comparison**

36. Clearly, the Johns Hopkins approach leads to strikingly different results and conclusions from what seems to come out of the 1993 SNA treatment of NPIs. Are these approaches irreconcilable, or can they complement each other? In this section, we will explore the answer to this question.

#### **A. Definition and classification**

37. Although the 1993 SNA uses a different definition of the non-profit sector for its Non-profit Institutions Serving Households sector from the one used by Salamon and Anheier in the Johns Hopkins project, there are considerable areas of overlap. Thus, as noted in table 12 below, both approaches focus on the essentially organized or institutionalized portion of the non-profit sector rather than more informal and irregular types of social activity. Similarly, both draw distinctions between non-profit institutions on the one hand, and business and governmental ones on the other.

38. At the same time, however, the 1993 SNA system treats the non-profit-distributing criterion of the Johns Hopkins project as a far less salient criterion and therefore splits organizations that meet this criterion into several different sectors based fundamentally on the source of their income. Thus, where the structural/operational definition of the Hopkins Project requires that organizations simply be private and not *part of* the government in order to fall into the non-profit sector, the 1993 SNA system, in addition, requires that they not receive more than half of their revenues from the public sector. This more demanding requirement results in the allocation of a substantial number of NPIs to the government sector in the 1993 SNA system. Similarly, where the structural/operational definition of the Hopkins Project differentiates non-profit organizations from business in terms of their adherence to a non-profit-

**Table 9: Composition of Non-Profit Sector Expenditure by ICNPO and Country, in Percent, 1990**

Major ICNPO Group	FRANCE %	GERMANY %	HUNGARY %	ITALY (1991) %	JAPAN %	SWEDEN (1992) %	UNITED KINGDOM %	UNITED STATES %	8 - COUNTRY AVERAGE %
Culture, Recreation	17.8	7.3	56.2	11.2	1.2	25.1	20.5	3.1	17.8
Education, Research	24.8	11.9	4.0	21.3	39.5	13.5	42.4	22.7	22.5
Health	14.5	34.5	0.9	16.1	27.7	2.8	3.5	52.6	19.1
Social Services	28.9	23.1	24.9	22.2	13.8	10.4	11.5	9.9	18.1
Environment	0.7	0.3	1.5	0.2	0.2	1.7	2.2	0.7	0.9
Development & Housing	6.4	14.8	1.4	1.7	0.3	9.0	7.8	3.1	5.6
Civic & Advocacy	2.9	1.1	0.4	2.4	0.9	5.6	0.7	0.3	1.8
Philanthropy	0.0	0.2	0.7	0.9	0.1	2.5	0.7	0.4	0.7
International Activities	1.1	1.5	0.1	1.3	0.5	5.9	3.7	1.2	1.9
Business Associations	2.9	5.3	9.4	22.8	11.4	21.4	7.0	5.1	10.7
Other	0.0	0.0	0.5	0.0	4.5	2.1	0.0	0.9	1.0
	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	
	FF	DM	HUF	Lire 1,000	¥ 1,000	SKr	£	\$	
<b>TOTAL (millions)</b>	<b>216,649</b>	<b>86,808</b>	<b>25,922</b>	<b>26,606</b>	<b>13,716</b>	<b>58,653</b>	<b>26,352</b>	<b>346,355</b>	<b>-</b>
<b>TOTAL (millions US\$)</b>	<b>39,895</b>	<b>53,862</b>	<b>395</b>	<b>22,258</b>	<b>95,080</b>	<b>9,600</b>	<b>46,997</b>	<b>346,355</b>	<b>76,805</b>

Source: Salamon, Anheier, Sokolowski (1996)

Table 10: Composition of Non-profit Sector Revenue, 1990, in Percent

	FRANCE %	GERMANY %	HUNGARY %	ITALY (1991) %	JAPAN %	SWEDEN (1992) %	UNITED KINGDOM %	UNITED STATES %	8 -COUNTRY AVERAGE %
<b>Public Sector Payments</b>	<b>59.5</b>	<b>68.2</b>	<b>23.3</b>	<b>40.7</b>	<b>38.3</b>	<b>28.7</b>	<b>39.8</b>	<b>29.6</b>	<b>41.0</b>
<i>of which:</i>									
Central Govt./Grants & Contracts	45.2	38.0	-	-	44.9	-	57.4	31.2	31.2
Local Govt./Statutory Transfers	25.0	10.1	-	-	-	-	34.9	31.2	31.2
3rd Party Payments/Other Govt.	29.8	51.9	-	-	55.1	-	7.7	67.8	67.8
<b>Private Donations</b>	<b>7.1</b>	<b>3.9</b>	<b>19.7</b>	<b>4.9</b>	<b>1.3</b>	<b>9.1</b>	<b>12.0</b>	<b>18.6</b>	<b>9.6</b>
<i>of which:</i>									
Foundations	5.9	14.4	-	-	0.2	-	20.0	10.9	10.9
Business	40.6	16.6	-	-	-	-	23.5	9.8	9.8
Individual	53.4	54.6	-	-	3.3	-	53.8	74.5	74.5
Federated Campaigns	-	14.3	-	-	-	-	2.7	4.9	4.9
<b>Private Fees and Payments</b>	<b>33.5</b>	<b>27.9</b>	<b>57.0</b>	<b>55.7</b>	<b>60.4</b>	<b>62.3</b>	<b>48.2</b>	<b>51.8</b>	<b>49.6</b>
<i>of which:</i>									
Fees	79.1	33.7	-	-	47.8	-	55.3	88.7	88.7
Sales	inc. in Fees	19.5	-	-	0.1	-	6.7	2.6	2.6
Dues	18.9	30.9	-	-	25.9	-	13.2	inc. in Fees	inc. in Fees
Investment Income	1.6	7.1	-	-	9.1	-	12.3	4.5	4.5
Other Revenue	0.4	8.8	-	-	17.1	-	12.6	5.4	5.4
<b>100 %</b>	<b>100 %</b>	<b>100 %</b>	<b>100 %</b>	<b>100 %</b>	<b>100 %</b>	<b>100 %</b>	<b>100 %</b>	<b>100 %</b>	<b>100 %</b>
FF	DM	HUF	Lire	¥	SKr	£	\$		
<b>TOTAL REVENUE (millions)</b>	<b>218,001</b>	<b>93,412</b>	<b>30,865</b>	<b>28,180,382</b>	<b>19,508,519</b>	<b>63,538</b>	<b>29,993</b>	<b>423,519</b>	<b>100 %</b>
<b>TOTAL REVENUE (millions US\$)</b>	<b>40,144</b>	<b>57,959</b>	<b>471</b>	<b>23,575</b>	<b>135,227</b>	<b>10,739</b>	<b>53,490</b>	<b>423,519</b>	<b>93,141</b>

Source: Salamon, Anheier, Sokolowski (1996)

Table 11: Patterns of Funding NPIs, by Field and Revenue Source, 1990  
in Percent

Subsector (ICNPO)	8-country average		
	Public Sector	Private Donations	Commercial Income
Culture and Recreation	23%	11%	66%
Education and Research	43%	9%	48%
Health	58%	14%	28%
Social Services	52%	15%	33%
Environment	31%	17%	52%
Development and Housing	34%	10%	56%
Civil and Advocacy Organizations	47%	12%	41%
Philanthropic Intermediaries	11%	31%	58%
International Activities	37%	34%	30%
Professional Associations, Unions	5%	3%	92%
Total Non-profit Sector Revenue	40.9%	9.5%	49.6%

Source: Salamon, Anheier, Sokolowski (1996)

Table 12: Comparing NPI Definitions

Focus	SNA-NPISHs Definition	Salamon/Anheier Structural-Operational Definition
Basic types of entities covered	Formal, separate entity	Organization with identifiable institutional structure
	-	Voluntary
Distinction from government entities	Private <i>and</i> less than 50% of revenue from government sources	Private, not part of government
Distinction from corporate entities	Non-profit-distributing <i>and</i> less than half of income from market sales at economically significant prices	Non-profit-distributing
	Not serving businesses	-

distribution constraint, the 1993 SNA system requires as well that non-profit organizations not receive a significant share of their income from market sales at economically significant prices. This more demanding requirement results in the allocation of another substantial number of NPIs to the corporate sector. Taken together, therefore, the 1993 SNA definition, while similar in structure to the Hopkins Project definition, restricts the non-profit sector for national income purposes to a rather insignificant, residual replica of its true size. While this may be appropriate for existing national income purposes, however, the Hopkins Project demonstrates that an alternative approach is nevertheless possible for analytical, and some policy, purposes.

39. Similarly, as table 13 shows, the Hopkins Project also demonstrates that this broader concept of the non-profit sector can be classified meaningfully using a classification system that is consistent with the one already incorporated in the SNA. Thus, as this table shows, a number of the categories incorporated in the ICNPO system developed in the Hopkins Project are direct matches with categories in the COPNI system. This is true, for example, with culture and recreation, education and research,

**Table 13: Comparing ICNPO and COPNI**

ICNPO	COPNI
1. Culture and Recreation	1. Recreational, Cultural, and Related Services
2. Education and Research	2. Education Services, Research and Scientific Services
3. Health	3. Health Services
4. Social Services	4. Welfare Services
5. Environment	-
6. Development and Housing	-
7. Advocacy	-
8. Philanthropy	-
9. International	-
10. Religion	5. Religious Services
11. Business and Professional	6. Services Of Professional and Labor Organizations, Civic Associations
12. Not elsewhere classified	7. Miscellaneous Services Not Elsewhere Classified

health, social services, and religion. In other cases, the ICNPO has broken out separately types of organizations that are grouped together in COPNI (e.g. civic associations and business and professional organizations). Finally, in a few areas the ICNPO system, because of its broader reach, contains categories that find no clear equivalent in the COPNI system. All in all, however, the general conclusion is that these two systems should be reconcilable. Indeed, the current revision of COPNI under way at the

time of writing promises to bring these two classification systems into even closer harmony.

## **B. Estimation of size and composition**

40. It will have become clear that the Hopkins approach identifies a non-profit sector much larger, more diverse, more dynamic, and therefore more policy-relevant than the set of institutions allocated to NPISHs in the SNA. Specifically:

- *Size:* NPISHs yield a non-profit sector typically around 1% of GDP, whereas the Hopkins approach leads to much higher estimates. Even though data limitations did not allow for estimates of value added in the Johns Hopkins Project, it seems safe to assume that the total size of NPIs under the Johns Hopkins approach is about three to eight times as large.
- *Composition:* Given the differences in basic coverage, it should come as no surprise to learn that the current 1993 SNA approach and the Hopkins Project approach yield quite different images of the composition of the non-profit sector. In particular, since the SNA approach eliminates many of the largest non-profit organizations from the non-profit sector as it defines it, it is naturally left with a sector dominated by organizations that are more informal in character, supported by charitable contributions, or supported by dues from members (e.g. professional associations, unions, clubs). In contrast, this underplays the role of the large-scale health, education, social service, and cultural institutions that play such a major role in the non-profit sector as it is defined in the Hopkins Project (and in most common usage in the various countries).
- *Revenue:* The revenue base of the non-profit sector as defined by the 1993 SNA system also naturally differs from that depicted in the Hopkins Project since the SNA system essentially eliminates from the sector as it defines it organizations that receive the bulk of their income from commercial or governmental sources. This creates a curious tautology so far as the revenues of non-profit organizations are concerned, creating a very misleading impression of the financial base of this set of organizations.
- *Growth:* Finally, while neither the 1993 SNA nor the Hopkins Project has extensive data on trends in non-profit development, they nevertheless convey quite different images from the data that are available. Since much of the growth of the non-profit sector in recent years has been in the segments that the SNA system allocates to other sectors, it follows that the SNA system suggests far more limited growth in the non-profit sector than was revealed in the Hopkins Project.

## **C. Implications**

41. Two implications can be drawn from our discussion so far. First, NPISHs, while in accordance with the underlying principles of the 1993 SNA, offer limited information on the role of NPIs in general, and on the link between NPIs and the household sector specifically. The problem is not only conceptual, i.e. the NPISHs sector, as defined in the 1993 SNA, is very much a residual sector, practical problems are also involved. These practical problems will likely continue to discourage many UN member countries from reporting on NPISHs (see 1993 SNA; United Nations, 1990) or encourage them to rely on rough estimates instead. As a result, an entire segment of the 1993 SNA system is not being implemented.

42. Second, not only is the current treatment of NPIs in the 1993 SNA leading to a gap in coverage in the overall SNA system, but it is also potentially causing distortions in other aspects of SNA accounting and limiting the utility and policy relevance of the entire system. This is so, in the first instance, because, as NPIs continue to grow in size and economic weight, the distortion caused by having them included in the corporate and government sector has become more significant. This is especially true in countries that fail to maintain a separate NPISHs sector and put the residual NPIs in their household sector, as is done in the United States. Because NPIs often have considerable endowments, this can have the effect of boosting the apparent household savings rate. Beyond this, this usage limits the availability of the SNA system for examining a number of key trends and developments affecting the non-profit sector, trends and developments that have become increasingly salient in policy debates in recent years, such as the changing balance of non-profit and for-profit providers in the health and social service fields, changing patterns of job creation, and the impact of government policies on the growth and viability of NPIs. These and other issues concerning NPIs cannot be adequately addressed given the current SNA treatment. What can be done therefore to satisfy both SNA and policy-related concerns? The answer we suggest, is the development of a satellite account on non-profit institutions.

## **V. Towards a satellite account for non-profit institutions**

43. Because the 1993 SNA guidelines offer a simplified representation of a highly diverse and complex economy, they may not be able to serve a number of the specific analytical purposes which do not fit the framework, but may nevertheless reflect important economic, environmental, social or political concerns (Van Tongeren and Becker, 1995, p.1). In such cases, the 1993 SNA guidelines suggest expansion of the SNA through the development of satellite accounts (see United Nations, 1993, p. 489). Satellite accounts, typically a set of related descriptive and analytical tables on a specific topic or field, expand the capacity and applicability of the 1993 SNA without overburdening and disrupting the central system.<sup>5</sup> Based on the discussion above, we believe the time is ripe for the construction of a special Satellite Account for Non-profit Institutions (SANPI) for use by countries seeking to report comprehensive economic data on NPIs. This is so for two reasons:

- First, as we have seen, the socio-economic importance of NPIs has grown substantially in virtually all countries, irrespective of their level of economic development and political regime (Salamon, 1994; Salamon and Anheier, 1996);
- Second, there is a notable increase in interest by researchers, governments and international organizations in improving quantitative and qualitative reporting on the non-profit sector, both at national and international levels. Researchers from various social science disciplines are calling for comprehensive and over-time information on the size, scope, structure, and growth trends of the non-profit sector.

44. The proposed satellite account system would pull together all NPIs, irrespective of their sector allocation in the 1993 SNA, into a consolidated system of accounts. In effect, NPISHs would be merged with NPIs allocated to the government and corporate sectors. As a result, SANPI would cover a larger set of entities and report on links with other sectors that would be more pronounced than is the case in the current SNA. As a result, the link between NPIs and households should be more fully revealed under SANPI. In addition, this system would allow researchers and policy makers to address questions such as:

- How much of a country's resources is devoted to NPI activity?
- How much does the non-profit sector spend to provide non-profit services?
- How much of non-profit activity is supported by government, business, households, and foreign sources?
- What proportion does the non-profit sector, as a producer of services, contribute to the country's

total output?

- What proportion of business, government, and household funds purchase non-profit services?
- What proportion are transfers or subsidies to the non-profit sector?
- What proportion of non-profit services go to households, government, business, and foreigners?
- What kind of business enterprises buy non-profit services?

45. Obviously, it will be necessary to implement SANPI within the context of a number of actual 1993 SNA data systems to prove its usefulness and feasibility, both for economic and policy-related purposes. Nonetheless, we can already point out a number of implications for country-based and cross-national work on NPIs.

46. First, generally speaking, and against the backdrop of our comparison of NPISHs and the Johns Hopkins approach, the *basic implementation* of SANPI would probably not require any more data items than the 1993 SNA already requires under the current treatment of NPIs. We should keep in mind that according to the 1993 SNA guidelines, countries would be required to implement better statistical reporting systems on all entities in national economies, including NPIs, regardless of their actual allocation to specific sectors. At the same time, a *fuller implementation* of SANPI would likely require data on philanthropic giving and volunteering that are now beyond the core data required by the 1993 SNA. However, cost effective ways have already been developed to generate these data as well.

47. Second, it may well be in the interest of statistical offices to implement (or maintain in the case of some European countries) an identification system for NPIs that would allow for their allocation and reallocation according to NPISHs or SANPI. Such identifiers could be easily attached as an extension to the respective codes in the ISIC and related classification systems. Moreover, an identification system could be applied for purposes other than the non-profit satellite account, since questions of organizational form and institutional auspices are likely to remain at the forefront of much analytical and policy-related concern in the future.

48. As the non-profit sector gains in economic and social importance, policy makers and analysts alike will have greater demand for comprehensive and systematic information on this set of institutions, a demand that exists at industry levels as well as at national and international levels. The proposed satellite account on NPIs would represent a major step forward toward such a comprehensive economic data system. It would usefully supplement 1993 SNA reporting in NPISHs, and make up for current data deficits by providing a more complete coverage of NPIs generally, including their links to households and other institutional sectors.

## References

- Anheier, Helmut and Gabriel Rudney. (1998), "An Exploratory Input-Output Analysis of the Non-profit Sector in Germany and the United States" *Annals Of Public And Cooperative Economics*, forthcoming
- Anheier, Helmut, Gabriel Rudney and Lester Salamon. (1993), "Non-profit institutions in the United Nations System of National Accounts: Country Applications of SNA Guidelines", *Voluntas* 4 (4), 486-501.
- Archambault, E. (1997). *The Non-profit Sector In France*. Manchester: Manchester University Press
- Bartelmus, P., C. Stahmer, and J. Van Tongeren. (1989). *SNA Framework For Integrated Environmental And Economic Accounting*, International Association for Research in Income and Wealth.
- Carson, Carol. and B. Grimms. (1990-1991). *Satellite Accounts In A Modernized And Extended SNA*, Washington D.C.: Bureau of Economic Analysis, U.S. Department of Commerce.
- Commission of the European Communities, International Monetary Fund, Organization for Economic Co-operation and Development, United Nations, World Bank (1993): *System of National Accounts 1993*, Brussels/Luxembourg, New York, Paris, Washington, D.C.
- Eisner, Robert. (1989). *The Total Income System Of Accounts*, The University of Chicago Press, Chicago and London.
- Eisner, Robert. (1996). "Expansion of Boundaries and Satellite Accounts", in Kendrick, see below.
- Kendrick, John W, (ed.).(1996). *The New System Of National Accounts* Boston: Kluwer Academic Publishers.
- Lemaire, M. (1987) "Satellite Accounting: A Relevant Framework for Analysis in Social Fields", *Review of Income and Wealth* 33 (3), 305-325.
- Organization for Economic Cooperation and Development (OECD). (1993). *National Accounts: Detailed Tables*, Paris.
- Parker, Robert. (1998). "The effects of alternative rules for determining the sectoral classification of colleges and universities for national income and products accounts for the United States" *Voluntas*, forthcoming.
- Rudney, G., and P. Young, (1989) "The Non-profit Sector of the US Economy: A Methodological Statement", *Review Of Income And Wealth*. 33.(1), 56-80.
- Ruggles, Richard and Nancy Ruggles, (1986) "The Integration of Macro and Micro for the Household Sector", *Review Of Income And Wealth*, 32 (3), 245-76.
- Salamon, Lester M. (1994). "The Rise of the Non-profit Sector" *Foreign Affairs* 73 (4), 109-122.

Salamon, Lester M. and Helmut K. Anheier. (1992). "In Search of the Non-profit Sector. I: The Question of Definitions" *Voluntas* 3 (2), 125-152.

Salamon, Lester M. and Helmut K. Anheier. (1996). *The Emerging Non-profit Sector* Manchester: Manchester University Press.

Salamon, Lester M. and Helmut K. Anheier. (1997). *Defining the Non-profit Sector: A Cross-National Analysis* Manchester: Manchester University Press.

Salamon, Lester M., Helmut K. Anheier, Wojtech Sokolowski, and Associates. (1996) "The Emerging Sector: A Statistical Supplement" *Papers of the Johns Hopkins Comparative Non-profit Sector Project*. Baltimore: The Johns Hopkins Institute for Policy Studies.

Schäfer, K. and C. Stahmer. (1990). "Conceptual Considerations on Satellite Systems." *Review of Income and Wealth* (36)(2) June: 167-176.

Tice, Helen S. (1993). "The Non-profit Sector in National Accounts Framework", *Voluntas* 4 (4) 445-464.

United Nations. (1987) "Private Non-profit Institutions Serving Households in the System of National Accounts, mimeo., U.N. Statistical Office, New York.

United Nations. (1990). International Standard Industrial Classification of all Economic Activities. New York: United Nations.

Van Heemst, Jan. (1993). "The Non-profit Sector in the National Accounts: A Numerical Exercise with Data for the Netherlands" *Institute for Social Studies Working Papers Series* No. 164. The Hague, The Netherlands.

Van Tongeren, Jan and Bernd Becker. (1995). "Integrated Satellite Accounting, Socio-economic Concerns and Modeling" *Working Paper Series of the Department for Economic and Social Information and Public Policy* New York: United Nations.

Young, Paula. (1993). "Non-profit Institutions in the Input-Output Framework", *Voluntas* 4.(4), 465-485

## Endnotes

<sup>1</sup> COPNI s currently being revised by OECD.

<sup>2</sup> This section draws on Salomon and Anheier (1997)

<sup>3</sup> To keep the empirical work manageable, we have applied two additional criteria:

- *Non-religious*, i.e. not primarily involved in the promotions of religious worship or religious education. Religiously affiliated non-profit service organizations are included in the project. But not the congregations, synagogues, mosques or churches where religious worship takes place;
- *Non-political*, i.e. not primarily involved in promoted candidates foe elected office. Organizations that engage in advocacy activity to change government policy on particular topics (e.g. civil rights, the environment) are included in the project, but political parties and other organizations devoted principally to getting people elected to public office are not.

<sup>4</sup> This section draws on Salomon and Anheier (1996) and Salomon, Anheier and Sokolowski (1996).

<sup>5</sup> On the concept and construction of satellite accounts see Eisner, 1996; Schafer and Stahmer, 1990; Lamaire, 1987; Carson and Grimms, 1990-1991; Bartelmus, Stahmer and Van Tongeren, 1989



# ***Households and the Global Economy: German and Mexican Examples***

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## **I. Introduction**

1. Various factors determine the socio-economic status of households. Many of them are dealt with in the household sector accounts of the System of National Accounts.<sup>1</sup> Examples of such factors are:

- the level and structure of revenues received by households either as income from employment, business or assets (wages and salaries, interest, dividends, rent, etc) or as transfers (of particular importance are social benefits and social transfers in kind in terms of educational or health services supplied by government) minus payments made either as taxes or social contributions;
- the level and structure of consumption of the household members;
- the level and structure of employment of the household members.

2. When analyzing the standard of living of households in a specific country, the focus is usually on domestic factors, such as the policies adopted by the respective governments, the infrastructure and/or overall economic and social development, etc. However, many countries have substantial relations with foreign countries in terms of trade, finance or migration. Some of these links show up in the System of National Accounts, but others are less easy to quantify and/or attribute to the household sector and its various sub-groupings. Yet all of them affect the socio-economic status of households to varying degrees. For a better understanding of household accounts, it is, therefore, important to direct our attention to the links the household sector has not only with the domestic economy but also with the outside world.

3. One example of the direct links of households with the outside world are the remittances of workers employed abroad to their families back home. Employment opportunities in import and export industries and the global investment decisions of multinational corporations are other examples which are currently very common as major factors in the debate about the pros and cons of “globalization.”<sup>2</sup>

4. In the following, we try to systematize the relations of households with the foreign sector. First, we start by looking in chapter II at the relevant accounting concepts of the Balance of Payment statistics and the household sector accounts as reflected in the System of National Accounts (1993 SNA). Then, in chapter III we illustrate some of these accounting concepts by referring to German and Mexican examples, before we try to widen the scope in chapter IV by looking at the recent Mexican Peso crisis and its impact on the socio-economic situation of Mexican households.

## II. The Balance of Payments (BOP) and the System of National Accounts (SNA)

5. The current fifth edition of the IMF's 1993 Balance of Payments (BOP) manual<sup>3</sup> distinguishes two major components of the BOP, the "Current Account" and the "Capital and Financial Account", together with selected supplementary information. The former refers to goods and services, income and current transfers, while the latter refers to capital transfers and the acquisition or disposal of non-produced, non-financial assets as well as financial assets and liabilities.

6. Conceptually, the BOP accounts are closely linked with the 1993 SNA. Since the SNA records the transactions of the resident economic entities of a particular economy, it uses the "Rest of the World Account" as the link to capture flows where non-resident entities are involved. That account consists of the external account of goods and services, the account of primary incomes and current transfers, the accumulation account including the capital and financial account, and the assets and liabilities account.<sup>4</sup>

7. The BOP "form an integral part of the SNA, there is virtually complete concordance ... on such issues as the delineation of resident units ..., valuation of transactions and the stock of external assets and liabilities, time of recording transactions and stocks ... ," etc.<sup>5</sup> For example, both systems regard resident units as those which belong to that territory where they have their center of economic interest for more than one year (there are some exceptions such as students who belong to the country from which they originate). Regarding valuation, both systems in their current version value imports on a f.o.b. basis, i.e. excluding the cost of insurance and freight after the goods have left the frontier of the exporting country. This concordance between the 1993 BOP and the 1993 SNA was one of the goals of the revision process of both systems.<sup>6</sup>

8. The various flows recorded in the BOP affect in various ways the accounts of the SNA, i.e. the production, generation and distribution of income, consumption and accumulation accounts. Imports and exports are major components of both systems and determine the structure and level of GDP. From the demand side, GDP is the sum of all domestic demand components plus exports minus imports.

9. Regarding income, all types of primary income flows generated domestically (compensation of employees, property income, taxes, transfers, etc) may not only be received by resident units (which contributes to the domestic GDP) but also by non-resident units (which affects the Rest of the World Account and the BOP). Conversely, income generated abroad may flow to resident units. The difference between the total primary incomes receivable by residents from non-residents and the total primary incomes payable by residents to non-residents reflects the conceptual and quantitative difference between Gross Domestic Product (GDP) as a production measure for the economic territory and Gross National Income (GNI: formerly named Gross National Product, GNP) as an income measure for the resident units of the territory.<sup>7</sup> These and other definitional linkages between the major aggregates of the SNA and BOP can be formalized as in annex1<sup>8</sup>

10. In principle, the Balance of Payments of a country is ex-post always balanced, and the same holds, of course, for the world. In theory, the sum of world current account balances as well as the capital and financial accounts balances should be zero. However, different practices of individual countries in compiling their data as well as errors and omissions in the data, lead to statistical discrepancies which are shown as an extra entry in the BOP of countries. With regard to the discrepancies in the world current account, there seems to have been a tendency for these to settle at around \$80 billion annually during 1993-05, down from around \$100 billion in the early 1990s.<sup>9</sup>

### III. Two illustrations: The BOP of Germany and Mexico

11. In the following, the BOP of Germany and Mexico, two very differently structured countries at different stages of economic and social development, will be compared. With regard to the data for the year 1995, one interesting observation is that direct financial relations between domestic households and the foreign world in terms of compensation of employees are in both countries very small: Germany pays 2 billion US-\$ as compensation of employees to foreign countries, whereas Mexico receives 1 billion US-\$. Because of the criterion that a person is considered a resident only when his or her center of economic interest is located in that country for more than one year, it is mostly seasonal or short-term workers who receive those wages and salaries.

12. Another very clear direct monetary link between households and foreigners are remittances which are an entry in the current transfer account. For Germany, 5 billion were paid in 1995 to foreign households in terms of remittances. Mexico, however, received 4 billion from foreign countries. Foreign workers play an important role in the development of both countries. Many workers from South and South East Europe migrated to Germany, whereas many Mexican workers migrated to the USA.

13. The investment income component of the income account (or property income in terms of the SNA, which is in general dividends and interest payments) may also have a substantial impact on the incomes received and paid by households from abroad provided one can distinguish which part of it flows to households and which part to corporations or the government. The balance of such investment income as it is shown in the BOP was small for Germany (+2), however the income received from this source amounted in 1995 to 93 billion US-\$ and the amount paid to non-residents was 91 billion US-\$. In Mexico, the balance of property income paid to foreigners is relatively high at -13 billion, a result of the huge direct and portfolio investments of foreigners in Mexico.

14. Besides these direct monetary links between households and foreigners, other links may affect the households via the consumption of goods and services or via the labour market. The traditionally high positive goods balance of Germany amounted to 66 billion US-\$ in 1995. The German services balance, however, is chronically negative, at -47 billion US-\$ in 1995. Most of that amount was spent on travel abroad, either for business or for leisure. The German current account balance closed negative at -21 billion US-\$. It could be said that the high German exports are needed to finance not only the travel of Germans to foreign countries, but also to finance current transfers such as remittances. In addition, the positive German goods balance also affects the level and structure of German employment, because exports are mainly produced by the manufacturing sector.

15. After the Peso crisis at the end of 1994, Mexico's goods balance is clearly positive again at 7 billion US-\$. Together with the 4 billion US-\$ received as remittances, this amount is enabling Mexico to finance the investment incomes payable to foreigners and to balance the current account.

16. Although the monetary value of the direct monetary links of households with the outside world may be relatively small compared to other sources of income and transfers, it would be desirable to attribute those flows not only to the household sector in general but to particular household groups. The information, however, is not easily obtained. Specific questions put in household surveys may provide further information.

#### **IV. The Mexican household sector and the Peso crisis**

17. In the previous chapters, we outlined some accounting concepts of the BOP statistics as well as of the household sector accounts laid out in the SNA and we pointed to some examples to illustrate the relevance of these concepts. The following chapter will focus on some socio-economic phenomena which are mostly reflected in the BOP or in the SNA, but which are less clearly attributable to the household sector and yet have a profound and lasting impact on the socio-economic status of the Mexican households.

18. On December 20th 1994 Mexico devalued the Peso. By devaluing the currency, the Mexican Government intended to improve Mexico's current balance account. However, the devaluation went out of control. The Peso plunged by almost half its value.<sup>10</sup> As a consequence, foreign investors lost confidence in the Mexican economy and withdrew their funds from Mexico. The Mexican Government stood on the verge of a liquidity crisis<sup>11</sup>. In early 1995, when Mexico was in danger of defaulting on its obligations, the international community put together a rescue package equal to about \$53 billion. Two major components of the package were \$20 billion from the Exchange Stabilization Fund of the US Department of the Treasury<sup>12</sup> and \$17.8 billion from the International Monetary Fund (IMF). At the time, the \$17.8 billion loan from the IMF was "the largest financing package approved by the IMF for a member country, both in terms of the amount and the overall percentage of quota, 688.4%."<sup>13</sup>

19. In order to guarantee to the US Government and the IMF the appropriate use of the money and to pay back its debt once the crisis was overcome, the Government of Mexico committed itself to meeting several economic conditions. When it turned out that these commitments, made in January and February 1995, were not sufficient to contain the outflow of foreign funds from Mexico, the Government decided to introduce even stricter measures at the beginning of March. Its main goals were to control inflation and to reduce the current account deficit. To this end, the Government intended to raise revenues by increasing prices for government-provided services, gas and diesel, and to make spending cuts in the budget. Moreover, it increased Value Added Tax and allowed wages only to rise by a margin well below the projected inflation rate.

20. During the course of 1995, Mexico experienced its worst recession in decades. Gross Domestic Product shrank by 6.2 percent, inflation went back into double-digit figures and unemployment soared. While many analysts have focused on the macro-economic implications of the Peso crisis, this chapter will concentrate on the consequences of the crisis for the Mexican household sector. "The share of the population living in absolute poverty increased from 19% in 1984 to 24% in 1989. In urban areas the number of people living in absolute poverty then fell slightly until 1992. But in rural areas, where more than 80% of those in absolute poverty live, the number of poor people increased throughout the period, rising from 6.7 million to 8.8 million."<sup>14</sup> Despite the fact that many macro-economic indicators point to a recovery of the Mexican economy in 1996 and 1997,<sup>15</sup> it is safe to say that the living conditions of many Mexicans in private households have not improved. The following paragraphs will outline and discuss the economic effects of the commitments that the Mexican Government made in order to attract the loans of the United States Government and the IMF.

21. The Peso crisis and the commitments of the Mexican Government may be illustrated by three effects on the household sector: effects on income, consumption and employment.

## **A. Effects on income**

22. Households suffered a further substantial decline in real wages. While the Government increased the federal minimum wage twice, by 7 percent in January 1995 and by an additional 10 percent in March 1995, amounting to a total of 17%, the increase turned out to be well below the 35% increase in consumer prices for 1995 and 1996.<sup>16</sup> Thus, the trend of declining real wages in Mexico continued. Real minimum wages had been decreasing since the late 1970s and real average wages in manufacturing have dropped in the aftermath of the Peso crisis.<sup>17</sup> Moreover, the income gap between the rich and the poor has further widened. In 1996, the richest 10 percent of Mexicans earned 41% of the national income, while 50 percent received only 16% of Mexico's income. The Government admits that the number of Mexicans living in extreme poverty has grown to 22 million, an increase over the last 15 months (i.e. between early 1995 and July 1996) of 5 million people."<sup>18</sup>

23. Another part of the effect on income is that interest rates have risen significantly in the aftermath of the devaluation. As a consequence, credits and loans from commercial banks became very expensive and unaffordable for most people in the country. Many Mexicans had difficulty servicing their mortgages or car loans. Small and medium-sized businesses were not able to obtain loans from commercial banks; there was virtually no new business lending. As a result, numerous small firms and enterprises went out of business; investments at local community levels stagnated; employees in the small business sector were laid off.<sup>19</sup>

## **B. Effects on consumption**

24. In early 1995, many everyday household goods became more expensive in Mexico. As overall price levels increased, private consumption decreased by an estimated 12.9% from 1994 levels.<sup>20</sup> Virtually all Mexican households felt the impact of the increase in Value Added Tax (VAT), the increase in gas/diesel prices as well as the price of electricity. VAT, the national sales tax, rose by 50% (from 10 to 15 percent), increasing the price of virtually all everyday household goods. The Government raised the tax on fuels. Prices for gas and diesel increased by 35 percent in March, and then on by monthly increments of 0.8%, amounting to a total price increase of 48.5 percent by the end of 1995. Again, this measure affected many households but especially aggravated the burden of private, unincorporated businesses.<sup>21</sup>

25. On top of that, the Government raised user fees for airports, ports and toll roads by 2.5 percent per month. Fares on highways became so expensive that few working people could afford to use them. "One 13-mile stretch of concrete between Mexico City and Toluca, for instance, costs \$6 to use, or about twice the daily minimum wage here."<sup>22</sup>

## **C. Effects on employment**

26. The Peso crisis cost an estimated one million Mexicans their jobs during 1995. Although official unemployment rates were only 4% to 6% in 1996 and 1997,<sup>23</sup> unofficial estimates claim that it is still twice or even three times as much.<sup>24</sup> However, it is not only the sheer number of people without work that affected the Mexican household sector. It is also the kind of work, the conditions in the workplace, as well as the geographical location where work can be found that has altered the way of life of many households.

27. The devaluation of the Peso fostered the growth of the Maquiladora plants.<sup>25</sup> The Maquiladoras are factories set up primarily along the border with the United States. Under the Maquiladora program established in 1965, companies (primarily US companies) were allowed to import intermediate parts from the USA and assemble them using relatively cheap Mexican labour. Mexican wages were and still are considerably lower than wages on the Northern side of the border. Eventually, finished products such as cars, electronic goods and textiles, were shipped back duty-free to the US market. Whether the Maquiladora industries are “god” or “bad” for Mexican development remains the subject of an ongoing discussion. For some, the Maquiladoras are the driving force of Mexican development because they create employment and pay comparatively high wages. For others, they are the ultimate symbol of dependence on the United States. Opponents say that foreign companies simply take advantage of low wages and the lack of enforcement of environmental standards, without transferring technology, or guaranteeing workers a safe work environment.

28. Mexico’s *Instituto Nacional de Estadística Geografía e Informática* (INEGI) estimates that as of April 1996 the Maquiladoras employed 723,871 workers, an increase of 13.2% on April 1995.<sup>26</sup> These numbers sharply contradict the numerous forecasts of experts who argued that the Maquiladora industries would start to disappear once the North American Free Trade Agreement (NAFTA) came into effect on January 1, 1994. Instead the industry is growing as rapidly as in the 1980s. The devaluation contributed to this development because the “average *maquiladora* workers wage is expected to drop from \$2.50 an hour to \$2 an hour.”<sup>27</sup>

## V. Concluding comments

29. The above examples are of an illustrative nature only, without intending to provide an exhaustive account of the recent socio-economic history of countries, to explain the causes which led to the Peso crisis or to comment on policy measures which were taken to overcome the crisis. They also do not give hints as to which of the socio-economic impacts on the well-being of Mexican households is of domestic or external origin. Finally, it is not intended to give the impression that only such extreme events have an impact on the economy in general and on households in particular; any open economy is under more or less permanent external influence. However, what we have tried to exemplify is that while analyzing the socio-economic status of households, both domestic and external factors have to be taken into account.

### Annex 1: Definitional linkages between mayor aggregates on the SNA and the BOP

GDP	= C + G + I + X - M
CAB	= X - M + NY + NCT
BGS	= X - M
GNDY	= C + G + I + CAB
GNDY - C - G	= S
S	= I + CAB
S - I	= CAB
S - I + NKT - NPNNA	= CAB + NKT - NPNNA = NFI
BCA	= NKT - NPNNA

#### Explanation of the symbols

C	=	private consumption expenditure
G	=	government consumption expenditure
I	=	gross domestic investment
S	=	gross saving
X	=	exports of goods and services
M	=	imports of goods and services
BGS	=	balance on goods and services in the BOP (X - M)
NY	=	net income from abroad
GDP	=	gross domestic product
GNDY	=	gross national disposable income
CAB	=	current account balance in the BOP
NCT	=	net current transfers
NKT	=	net capital transfers
NPNNA	=	net purchases of non-produced, non-financial assets
NFI	=	net foreign investment or net lending/net borrowing vis-à-vis the rest of the world
BCA	=	balance on the capital account of the BOP (NKT - NPNNA)

## Annex 2: Major items of the balance of payments and other information

billions of US-\$

Item	Germany	Mexico
	1995	
Current account, balance	-21	-1
A. Goods, balance	66	7
Exports (f.o.b.)	523	80
Imports (f.o.b.)	-457	-72
B. Services, balance	-47	1
Of which: Travel	-35	3
Transportation services	-7	-2
C. Income, balance	0	-12
Compensation of employees	-2	1
Investment income	2	-13
D. Current transfers, balance	-41	4
Of which: Remittances	-5	4
General government	-30	0
Capital and financial account, balance	32	14
Capital account, balance	-1	-
Financial account, balance	33	14
A. Direct investment	26	7
B. Portfolio investment	-27	-11
C. Other investment	32	18
Reserves and related items	-7	-11
Net errors and omissions	-4	-3
Supplemental information:		
Export / GDP	23%	31%
Imports / GDP	22%	28%
Private consumption / GDP	57%	67%

Source: IMF: Balance of Payments Statistics Yearbook 1996; International Financial Statistics, July 1997

## Endnotes

<sup>1</sup> 1993 SNA

<sup>2</sup> See for example Human Development Report 1997, chapter 4 on “Globalization - poor nations, poor people” or Rodnick (1997).

<sup>3</sup> IMF (1993)

<sup>4</sup> 1993 SNA, p. 667ff.

<sup>5</sup> BOP, chapter 38

<sup>6</sup> For further details see 1993 SNA, pages 536 - 538.

<sup>7</sup> Ch. 7.17 of the 1993 SNA. Regarding GDP and GNI, the terms “domestic” and “national” are meant as synonyms; the difference between GDP and GNI refers to the “P” and “I” which indicate that the former underlies a production/output- and the latter an income-perspective of the same resident units.

<sup>8</sup> BOP chapter 53.

<sup>9</sup> Motola (1997), p. 24.

<sup>10</sup> World Economic Factbook 1996/97, p. 289.

<sup>11</sup> A thorough economic analysis provide Sachs, Jeffrey/Tornell, Aaron/Velasco, Andrés (1995) and Weintraub (1995).

<sup>12</sup> For an overview of the decision-making process inside the US Government see Congressional Quarterly, Weekly Report (1995).

<sup>13</sup> IMF Survey, February 6, 1995, p. 42.

<sup>14</sup> *Winners and losers in Mexico*, Human Development Report (1997), p. 88.

<sup>15</sup> *Emerging-market indicators*, The Economist, vol. 342, no. 8000, January 18, 1997, p. 106 and *Mexico grows 8.8% in quarter, reinforcing optimism*, The New York Times, Tuesday, August 19, 1997, p. D4.

<sup>16</sup> Economic Intelligence Unit (EIU) 1997, Country Report Mexico, p. 3.

<sup>17</sup> Barkin, David/Ortiz, Irene/Rosen, Fred, (1997), p. 23.

<sup>18</sup> *Income gap in Mexico grows, and so do protests*, The New York Times, Saturday, July 20, 1996, Sec 1, p. 3. See also Economic Commission for Latin America and the Caribbean (1996), pp. 41 - 51.

<sup>19</sup> *Peso crisis bites into Mexico's long-ruling party*, The New York Times, Friday, July 4, 1997, p. A3.

<sup>20</sup> World Bank (1996), p. 340.

<sup>21</sup> Uri, Noel D. (1997).

<sup>22</sup> *Mexico's privately run highways prove a costly failure*, The New York Times, Saturday, August 23, 1997, Sec 1, p. 3.

<sup>23</sup> *Emerging-market indicators*, The Economist, vol. 342, no. 8000, January 18, 1997, p. 106.

<sup>24</sup> *Peso crisis bites deep into Mexico's long-ruling party*, The New York Times, Friday, July 4, 1997, p. A3. Other accounts even talk about an unemployment rate of 30% throughout Mexico: Darlin, Damon (1996), pp. 111-112.

<sup>25</sup> For a general account of the phenomenon see Comisión Económica para América Latina y el Caribe. Naciones Unidas (1996).

<sup>26</sup> World Wide Web page of the Instituto Nacional de Estadística Geografía e Informática (INEGI).

<sup>27</sup> Palmeri, Christopher (1995), p. 44.

## References

- Barkin, David/Ortiz, Irene/Rosen, Fred (1997): Globalization and resistance. The remaking of Mexico. In: *NACLA Report on the Americas*, vol. 30, no. 4, (Jan/Feb) pp. 14-27.
- Comisión Económica para América Latina y el Caribe. Naciones Unidas (1996). México: *La Industria Maquiladora*. Santiago de Chile.
- Congressional Quarterly, *Weekly Report* (1995): Collapse of Mexican Loan Plan Expose Leaders' Limitations. February 4, pp. 372-374.
- Darlin, Damon (1996): Maquiladora-ville. In: *Forbes*, May 6, p. 111-112.
- Deutsche Bundesbank (1996): *The German Balance of Payments in 1995, Monthly Report*, March 1996.
- Economic Commission for Latin America and the Caribbean (1996): *Social Panorama of Latin America*. 1996 edition. Santiago, Chile.
- EIU (1997): *The Economist Intelligence Unit, Country Profiles and Country Reports: Mexico*, various issues.
- IMF (1993): *Balance of Payments Manual*, fifth edition, Washington, D.C., 1993.
- IMF (1996): *Balance of Payments Statistics Yearbook 1996*.
- IMF (1997): *International Financial Statistics*, July 1997.
- Motala, John (1997): *Statistical Discrepancies in the World Current Account*, *Finance & Development*, March 1997.
- Palmeri, Christopher (1995): The flip side of devaluation. In: *Forbes*, February 13, pp. 44-45.
- Rodrik, Dani (1997): Sense and Nonsense in the Globalization Debate, *Foreign Policy*, Summer 1997.
- Sachs, Jeffrey/Tornell, Aaron/Velasco, Andrés (1995): "The collapse of the Mexican Peso: What have we learned?" NBER Working Paper No. 5142.
- SNA 1993: Commission of the European Communities, International Monetary Fund, Organization for Economic Co-operation and Development, United Nations, World Bank (1993): *System of National Accounts 1993*, Brussels/Luxembourg, New York, Paris, Washington, D.C., 1993.
- UNDP (1997): *Human Development Report 1997*, New York, 1997.
- Uri, Noel D. (1997): An evaluation of the economic effects of higher energy prices in Mexico, in: *Energy Policy*, vol. 25, no. 2, pp. 205-215.

Weintraub, Sidney (1995): "The Mexican economy: Life after devaluation", in: *Current History*, vol. 94, no. 590, pp. 108-113.

World Bank (1996): *Trends in developing countries*. Washington, D.C.

World Economic Factbook (1996/97), fourth edition. Published by Euromonitor, London, Chicago.

# **The household sector and the rest of the world: A Caribbean perspective**

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## **I. Introduction**

1. Since the finalization of the System of National Accounts (1993 SNA), it was expected that further research would be carried out in the compilation of separate institutional accounts describing the economic transactions of each sector and linking them with related fields of analysis. This paper will examine the development of household accounts from the perspective of small Caribbean economies. The paper is divided into seven sections. Following this introduction, the next section deals with a brief description of Caribbean economies. It attempts to demonstrate the vulnerability of small open economies to external factors, especially of small island economies dependent on one or two export commodities. Section 3 examines the desegregation of the institutional sectors in Trinidad and Tobago. Section 4 looks at the borderline issues between the local non-financial corporate sector and the household sector. Section 5 examines the flows between the household sector and the Rest of the World (ROW) and identifies data gaps with respect to the capital accounts and balance sheets. Section 6 sets out the methodology for deriving the trade flows of the household sector and Section 7 lists further points for discussion.

## **II. Characteristics of Caribbean economies**

2. Demas (1965) stated in his book, *The Economics of Development in Small Countries*: “However broadly or narrowly defined, the Caribbean illustrates many of the characteristics of small open economies as well as some of those of the large underdeveloped countries, and has many peculiar features of its own as well.” The following lists the main features of these characteristics.

1. Typical of many underdeveloped countries:
  - (a) an unfavourable ratio between population on the one hand and the stock of capital and of natural resources on the other hand (the Malthusian constraint);
  - (b) the dualism of the economic structure as reflected in the varying levels of productivity in different sectors and in the large volume of unemployed, whose productivity is, of course, zero;
  - (c) a domestic agricultural sector, the growth of whose production is lagging behind the increase in demand for food;
  - (d) the absence of a developed capital market.
2. Typical of small open economies:
  - (a) a high ratio of foreign trade to Gross Domestic Product;
  - (b) the domination of the export trade and in some cases the whole economy by one particular export, petroleum in Trinidad and Tobago, bauxite in Jamaica, sugar in Barbados and the Leewards, bananas in the Windwards;
  - (c) the absence of a diversified resource base and the narrowness of domestic markets;

- (d) the almost complete lack of domestic inter-industry transactions, most transactions being with the outside world;
3. Peculiar to the West Indies:
- (a) the dichotomy between plantation and peasant agriculture, a peculiar West Indian manifestation of dualism;
  - (b) a high-cost export agriculture, sheltered by special and other preferential arrangements in the U.K. and Canadian markets;
  - (c) the firm commitment by present leaders to full-blown political democracy and a free trade union movement;
  - (d) the pressure to generalize wage rates obtaining in the modern sector, but which are beyond the capacity of the less advanced sectors to pay;
  - (e) the sharply rising expectations of the population as a result of long proximity to the Western way of life;
  - (f) the dependence on foreign capital for the development of the mineral-producing, manufacturing and, to some extent, the sugar industries, and the consequent large gap between the domestic product and the national income;
  - (g) the nature of the public finance system as a consequence of large educational and other recurrent expenditures, revenue foregone through tax incentives and the diseconomies of scale in providing administrative services for small populations.

3. Some of the above characteristics are quite vividly demonstrated in tables 1 to 5 in the annex. Table 1 shows the high unemployment rates existing in Barbados, Jamaica and Trinidad and Tobago. Unemployment may mean poverty for the households affected by it, and if it is persistent, it can have a negative psychological impact on the individual members of the household. In addition, high unemployment also means an economic cost to society when its existence implies an opportunity cost through lost potential output. Table 2 shows the high ratio of foreign trade to Gross Domestic Product, while table 3 displays for six economies the domination of these economies by one or two commodities. Tables 4 and 5, on the other hand, indicate the dependence on foreign capital for development. The point to note is that the Caribbean economies have witnessed no significant structural changes since Demas made these observations in the mid 1960's.

### **III. The institutional sectors in Trinidad and Tobago**

4. The national accounts of Trinidad and Tobago are divided into five mutually exclusive institutional units as recommended by the 1993 SNA, i.e. the non-financial corporate sector, the financial corporate sector, the general government sector, the non-profit institutions serving households sector (NPISHs) and the household sector. The broadest principle of sectoring is used, whereby units that behave in a similar fashion or carry out similar activities are grouped together. Since, in the System, institutional units cannot be divided among sectors, the basis of classification is primary objectives, function or behaviour. The non-financial corporate sector is further sub-divided into state owned enterprises, foreign corporations (25% and more foreign shareholding) and the local corporate sector. The financial corporate sector is sub-sectored into central bank, trust and mortgage companies, commercial banks, finance companies and merchant banks, trust and mortgage finance companies, insurance companies and other non-bank financial institutions. The general government sector is disaggregated into central government, local government and statutory boards and similar bodies. At this point in time no disaggregation is made to the NPISHs or the household sector.

## **IV. The household sector in Trinidad and Tobago**

5. The household sector includes groups of persons who share the same living accommodation, who pool some or all of their income and wealth, and who consume certain types of goods and services collectively. In assigning institutional units to sectors, the major problematic area was the allocation of the borderline cases between the local corporate sector and the household sector. To resolve the issue in Trinidad and Tobago it was decided that for an establishment or institutional unit to be included in the household sector, it must satisfy at least four of the following eight characteristics:

1. The establishment or institutional unit must not be a limited company or behave like or possess features of a limited company, i.e. it must be an unincorporated enterprise.
2. The establishment or institutional unit must be owner operated.
3. The ordinary household activity cannot be separated from the economic activity undertaken, i.e. from the point of view of decision making.
4. There exists no kind of formal business accounting.
5. The employment size of the establishment or institutional unit must be less than five persons.
6. The establishment or institutional unit must not be VAT registered.
7. The output of the enterprise can be for the market, produced for own final use or be other non-market output. The size of the output will depend on the economic activity undertaken.
8. The household unit must be a resident of Trinidad and Tobago. The concept and coverage of residence here are identical to those of the Balance of Payments Manual, i.e. "the institutional unit has a centre of economic interest in the economic territory of the country".

6. In Trinidad and Tobago Value Added Tax (VAT) was introduced in 1990, when the threshold for VAT registration was \$100,000 per year. In 1996 the VAT threshold was increased from \$100,000 to \$150,000 per year. This meant that once an enterprise has a commercial output including the sale of goods or prescribed services which exceeded \$12,500 per month it must be registered under the provisions of the Value Added Tax Act, 1989. A VAT registrant is assigned a unique VAT number which must be used on all official documents, including all customs documents. A VAT registrant is also required under the Act to maintain a full set of accounts. All market producing unincorporated enterprises owned by households who are VAT registrants as a result, are classified as *quasi-corporations* in the corporations sector.

7. It is to be noted, that in Trinidad and Tobago Gross Domestic Product (GDP) is initially obtained using the output or value added approach. GDP is therefore compiled by kind of economic activity and at the micro-level each establishment is assigned to an industry or sub-industry. Since the majority of the establishments in Trinidad and Tobago are single-establishment enterprises it is not too difficult to map value added by kind of economic activity into value added by institutional sectors. As mentioned above, the main problem areas arise between the local corporate sub-sector and households. The classification of production accounts by institutional sectors was first attempted in 1996 using the 1994 value added data.

## **V. Flows between the household sector and the rest of the world**

8. In section II of this paper an attempt was made to demonstrate the vulnerability of small, open

Caribbean economies to external relations. There exist significant flows between these economies and the rest of the world, some of which are being threatened. For example, the uncertainty over the banana industry remains despite the World Trade Organization (WTO) ruling against preferential treatment of Caribbean bananas in the European Union (EU). Would there be a grace-period for the phasing out of preferences? What would be the size of the industry once preferences have ended? What impact would this have on the economies of St. Lucia, St. Vincent and Dominica and especially on the household sector that contributes to banana production and exports?

9. The 1993 SNA, the fifth edition of the Balance of Payments Manual (BPM5) and its accompanying compilation guide and textbook deal conceptually with households and the rest of the world. It is firmly established that the Balance of Payments (BOP) accounts are closely linked to the 1993 SNA and that the BOP forms an integral part of the SNA. These texts have demonstrated in many ways how the various flows recorded in the BOP affect in different ways the accounts of the SNA. These and similar issues will not be revisited in this paper (for more details, see the paper of Becker/Pfeil in this volume of the handbook). Instead the daunting task of quantifying the flows between the domestic economy and the rest of the world, and the disaggregation of these flows occurring between households and ROW will be highlighted.

10. Table 6 presents the major items of the Balance of Payments relating to the household sector. These items impact in one way or another on the household sector's production/external accounts of goods and services, distribution and use of income accounts and accumulation accounts. Unfortunately, (i) the published data for Barbados, the Organisation of Eastern Caribbean States (OECS) and Trinidad and Tobago are in too aggregated a format, (ii) the BOP presentation is not standardized throughout the region, and (iii) for Barbados, annual BOP accounts are only available up to 1994.

11. The data presented in table 6 in most instances are for the entire economy or in other words, for all sectors. The challenge to the national income accountant is to obtain from the global estimates the share of the household sector.

12. An analysis of table 6 will reveal the following:

1. The significance of trade flows in the economies of the OECS, Barbados and Trinidad and Tobago.
2. The importance of tourism flows in Barbados and the OECS.
3. The low levels of compensation of employees as income flows measured between the domestic economy and the ROW.
4. A significant level of unrequited transfers.
5. The data gaps in the BOP accounts, especially in the capital and financial accounts and balance sheets.

13. To fully develop the relations between the household sector and the ROW, the data gaps identified must be filled. This will require the compilation of detailed BOP accounts as recommended by BPM5. To achieve this goal, additional surveys need to be undertaken and in the case of Trinidad and Tobago, the surveys should be targeted to obtain a further disaggregation of incomes in the current account and detailed capital, financial, and balance sheets accounts. The surveys must address not only the flows between the ROW and the domestic economy but the disaggregation of these flows between households and the corporations sectors.

## VI. Trade flows of the household sector

14. This section of the paper will outline the methodology used to obtain the imports and exports of goods of the household sector in Trinidad and Tobago. An important tool for the following analysis is Customs Declaration (Import/Export) Form C82 which is used throughout the Caricom region. It is a “Single Administrative Document” in the sense that all information related to the imports and exports of goods are recorded in this single document. It records the name and addresses of the exporter or importer and his unique registration number, which in the case of VAT registrants is his VAT number. This is an alphanumeric code with the first digit a “V”, e.g. V652131. Importers and exporters who are not VAT registrants and are regular importers or exporters are assigned a unique number. If the goods are of a commercial nature the number will begin with an “N”, e.g. N632140 and if of a non-commercial nature the first digit will be a “J”, e.g. J687560.

15. Box 26 of the form records the Customs Procedure Code (CPC) applicable to the item imported or exported. CPC's are sub-divisions of the Customs Regime Codes. They indicate the manner in which goods are to be treated, e.g. C401, C4 denotes the regime and 01 indicates the procedure.

C4: goods entered for domestic use

01: goods relieved of all duties and taxes under the second schedule.

16. C950, personal household effects, and C951, returning nationals' household effects, are not included in the published trade statistics. It must be remembered that in our definition of the household sector, establishments/institutional units who are VAT registrants are considered part of the corporations sector. Trade data for the household sector can therefore be obtained by sorting the Trade Master File and selecting the required codes from boxes 1, 5 and 26.

17. The household trade data will therefore include:

- (a) Importers/exporters without a VAT number i.e. no numbers in boxes 1 to 5.
- (b) Importers/exporters without a VAT number, but classified as “J” in boxes 1 or 5.
- (c) Importers/exporters without a VAT number, but classified as “N” in boxes 1 or 5.
- (d) C950 - personal household effects.
- (e) C951 - returning nationals' household effects.

18. Using the above methodology, table 7, Imports and exports of the household sector, was generated. This quantifies the imports and exports of the household sector by SITC sections for the period 1995, 1996 and 1997 (January-July). The data presented are preliminary and generated for the first time for this exercise. Further examination and analysis of the data at the item level is required. In addition, the imports of intermediate goods required for household production will necessitate the disaggregation of household imports into capital goods, intermediate goods and final consumption goods.

## **VII. Further points for discussion**

### **A. Foreign currency accounts**

19. In Trinidad and Tobago the trade and foreign exchange regimes were liberalized. This resulted in many new financial instruments. Households can now open foreign currency accounts with the commercial banks. First, interest earned on foreign currency accounts was not taxed and second, these deposits do not qualify for the imposition of the Central Bank's reserve requirements of 21% on deposits liabilities. Third, there was currency substitution to avoid taxation on interest and to guard against further depreciation of the Trinidad and Tobago dollar. Are these foreign currency deposits to be treated as assets in the ROW? From a BOP perspective the transaction occurred between residents. Should the transaction be rearranged or rerouted? The commercial banks reinvest these deposits in the ROW and these investments are reflected in the commercial banks foreign assets and liabilities account. Is paragraph 14.132 of the 1993 SNA applicable? At the end of 1996, there were 39,728 accounts valued at \$US 497.7 million. Of these 30,216 accounts were under \$5,000 with a value of \$US 41.0 million. Clearly it can be assumed that these accounts under \$5,000 belong to the household sector (see table 8).

### **B. Foreign mutual funds**

20. In addition to the creation of foreign currency accounts, commercial banks and their subsidiaries, stockbrokers and money managers were selling foreign mutual funds to resident units. How should these funds be treated *vis-a-vis* the ROW? Should the purchases by households be part of household assets in the ROW or should the transaction be between the financial institutions and the ROW?

### **C. Credit cards**

21. Since the liberalization of foreign exchange, international credit cards like Visa and MasterCard have been introduced by the commercial banks in Trinidad and Tobago. How should foreign credit card transactions be treated in the system? Households use their international credit cards for purchases abroad, to pay for accommodation while on vacation abroad and for business trips. Will there be some form of double counting if these transactions are included?

## **VIII. Conclusions**

22. Caribbean economies are at different stages in the improvement and preparation of their national accounts. It must be recognised that Caribbean economies are unique and their special problems are quite different from those of neighbouring countries in Latin America. In order to implement the 1993 SNA with greater speed, precision and at lower cost, technical co-operation and training must be channelled into the region.

**Annex**

**Table 1: Unemployment rates**  
percent

<b>Country</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>
Barbados	23.0	24.3	21.9	19.7	16.4
Jamaica	15.7	16.3	15.4	16.2	16.0
Trinidad and Tobago	19.7	19.8	18.4	17.2	16.3

Sources: UNECLAC and CSO, Trinidad and Tobago.

**Table 2: Foreign trade to Gross Domestic Product**  
percent

<b>Country</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>
Barbados					
Exports	49.96	51.76	52.15	50.30	na
Imports	42.30	46.55	47.54	51.81	na
Jamaica					
Exports	65.66	55.07	58.37	55.40	na
Imports	66.65	64.63	65.79	66.00	na
OECS					
Exports	76.74	77.23	74.25	87.13	na
Imports	86.76	86.42	83.74	87.18	na
Trinidad and Tobago					
Exports	42.68	43.96	46.63	55.62	54.04
Imports	33.44	38.60	33.05	40.60	43.21

SOURCE: UNECLAC and CSO, Trinidad and Tobago.

**Table 3: Exports of selected commodities/total export earnings by country**  
percent

<b>Country</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>
Barbados				
Sugar	4.2	3.3	3.3	2.8
Tourism	59.3	62.6	66.6	61.6
Guyana <sup>1</sup>				
Sugar	46.1	28.0	25.4	29.7
Bauxite	18.6	17.6	16.7	18.2
Jamaica				
Sugar	3.6	5.6	3.1	na
Bauxite and aluminum	24.6	29.4	24.7	na
St. Lucia				
Bananas	17.6	15.4	13.1	na
St. Vincent				
Bananas	30.1	21.5	15.2	na
Trinidad and Tobago				
Mineral, fuel, lubricants, related materials	42.8	38.0	32.7	38.6
Chemicals	12.3	13.8	22.8	21.2
Sugar	1.4	1.3	1.2	1.5

<sup>1</sup>Total exports consist of only merchandise.

SOURCE: UNECLAC and CSO, Trinidad and Tobago.

**Table 4: External debt**  
million US \$

<b>Country</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>
Barbados	375.0	352.0	357.2	358.9	355.3
Jamaica	3,678.0	3,687.2	3,651.8	3,451.9	3,231.9
OECS	648.4	648.5	685.1	700.5	704.2
Trinidad and Tobago	2,215.0	2,102.1	2,063.5	1,905.2	1,875.7

SOURCE: UNECLAC and CSO, Trinidad and Tobago

**Table 5: External debt/GDP**  
Percent

<b>Country</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>
Barbados	23.0	21.0	21.0	19.0	na
Jamaica	106.0	114.0	86.0	na	na
OECS	41.0	39.0	39.0	39.0	na
Trinidad and Tobago	41.0	46.0	42.0	37.0	34.0

SOURCE: UNECLAC and CSO, Trinidad and Tobago

**Table 6: Major items of the Balance of Payments relating to the household sector**  
\$m US

Item	OECS		Barbados		Trinidad and Tobago	
	1994	1995	1993	1994	1994	1995
<b>Current Account</b>						
A. Merchandise - net	-163.8	-240.0	-329.7	-355.6	597.7	592.2
Exports (f.o.b.)	1306.8	1336.0	181.6	188.7	1971.9	2477.4
Imports (c.i.f.)	1470.6	1584.0	511.3	544.3	1374.2	1885.2
B. Services — net	667.7	643.6	5.5	5.7	-65.9	-72.4
Travel: Credit	794.6	764.4	0	0	35.0	21.0
Debit	73.4	77.4	34.4	37.5	78.7	71.0
Passenger Fares: Debit	42.6	43.4	28.9	31.8	22.2	22.4
C. Income — net						
Compensation of Employees	1.0	3.0	26.8	22.4	na	na
D. Unrequited Transfers	58.8	163.5	25.1	40.1	-4.0	-13.3
Remittances: Credit	97.9	197.0	34.9	49.9	27.6	31.8
Debit	39.1	33.5	9.8	9.8	31.6	45.1
<b>CAPITAL ACCOUNT</b>						
Migrant Transfers	25.2	27.9	0	0	na	na
<b>FINANCIAL ACCOUNT</b>						
Portfolio Investment	na	na	-9.0	-7.4	na	na
Trade Credits	na	na	35.6	-17.7	na	na
Deposits in Overseas Banks	na	na	-10.1	-1.7	na	na

SOURCE: Balance of Payments of: OECS, 1991-1995, Barbados 1995, Trinidad and Tobago 1995.

### Explanatory notes for table 6

Item	Explanation	Effect on Household
Exports (f.o.b.) Imports (c.i.f.)	Merchandise exports and imports in conformity with IMF, SNA's definition	See methodology used to disaggregate households' share
TRINIDAD AND TOBAGO		
Travel: Credit	Represents the expenditure of foreign visitors staying in private homes	Part or whole can be treated as household income in kind
Travel: Debit	Students and tourist and other travellers expenditure abroad	Included as part of household final consumption expenditure
Passenger fares: Debit	Passenger fares and excess baggage payments made by residents to foreign-owned carriers	Included in household final consumption expenditure
Remittances: Credit	Migrants transfers and remittances to individuals	Transfers to households from the Rest of the World (ROW)
Remittances: Debit	Remittances abroad and includes maintenance, gifts and donations, emigrants transfer, legacies and settlements of Trust and other remittances	Transfers from households to the ROW
BARBADOS		
Passenger fares: Debit	Payments by residents to foreign carriers for transport of persons by sea, air and other forms of transport	Included in household final consumption expenditure
Travel: Debit	Personal expenditure by residents abroad on health, education and related expenditure	Included in household final consumption expenditure
Compensation of employees	Income of Barbadian seaman saving or foreign lines and expenditure of foreign crewmen	Household: Generation of Income account
Remittances: Credit	Workers remittances and other private transfers	Transfers to households from ROW
Remittances: Debit	Workers remittances and other private transfers	Transfer to households from ROW

<b>Item</b>	<b>Explanation</b>	<b>Effect on Household</b>
Migrant transfers	Changes in financial items that arise from the migration of individuals from one economy to another	Household capital account
Portfolio investment	Usually in the form of long-term corporate bonds or debentures	To determine what share belongs to households: Household financial account
Trade credits	Credit lines extended to importers	Households as producers also import. Need to determine household's share
Deposits in overseas banks	Foreign deposits accounts	Household financial account: To obtain households proportion of total deposits household financial account
OECS Services and unrequited transfers	No disaggregation presented in supporting tables to the BOP	Households' share of these items need to be calculated and assigned to relevant accounts

**Table 7: Imports and exports of the household sector - Trinidad and Tobago**  
**1995, 1996, 1997 (January - July)**

\$ TT

SITC sections	Imports		
	1995	1996	1997 (Jan. - July)
0. Food and live animals	65,567,698	69,937,398	35,751,321
1. Beverages and tobacco	273,247	582,207	23,118,805
2. Crude materials inedible except fuels	5,883,150	5,202,932	4,204,817
3. Minerals, fuels, lubricants and related materials	312,756	196,924	185,680
4. Animal and vegetable oils and fats	353,506	270,084	2,150,885
5. Chemicals	110,539,725	12,712,042	10,989,570
6. Manufactured goods classified by materials	34,043,372	26,456,909	25,173,175
7. Machinery and transport equipment	120,010,365	81,892,927	50,323,343
8. Miscellaneous manufactured articles	42,314,775	33,120,373	26,528,013
9. Miscellaneous transactions and commodities	16,457,620	15,487,840	34,315,967
<b>Total all sections</b>	<b>395,756,214</b>	<b>302,759,636</b>	<b>212,741,576</b>
	Exports		
0. Food and live animals	52,521,091	60,542,148	41,486,860
1. Beverages and tobacco	3,775,586	3,641,649	3,938,454
2. Crude materials inedible except fuels	9,089,358	4,513,580	1,879,298
3. Minerals, fuels, lubricants and related materials	1,128,312	188,242	68,379
4. Animal and vegetable oils and fats	148,683	605,866	997,965
5. Chemicals	70,220,147	10,131,398	5,259,681
6. Manufactured goods classified by materials	11,367,850	11,958,789	7,923,656
7. Machinery and transport equipment	1,365,497	1,000,829	1,280,296
8. Miscellaneous manufactured articles	10,285,385	13,309,124	7,465,166
9. Miscellaneous transactions and commodities	72,769	1,076,420	68,970
<b>Total all sections</b>	<b>159,974,678</b>	<b>106,968,045</b>	<b>70,368,727</b>

SOURCE: Central Statistical Office - Trade Division.

**Table 8: COMMERCIAL BANKS: FOREIGN CURRENCY ACCOUNTS, DISTRIBUTION OF DEPOSITS**

FOR THE QUARTER ENDING: DECEMBER 30, 1994

<b>TOTAL ALL BANK</b>	<b>Demand Deposits</b>		<b>Savings Deposit</b>		<b>Time Deposits</b>		<b>Total Deposits</b>	
Size of Deposits	No.	Value (US)	No.	Value (US)	No.	Value (US)	No.	Value (US)
Under \$ 5,000	284	448,706	15,077	19,435,106	1,970	4,390,506	17,331	24,274,318
\$5,000 - \$ 50,000	326	4,934,421	3,351	40,018,600	1,347	20,064,230	5,024	65,017,251
\$50,001 - \$100,000	56	4,146,182	106	7,237,575	127	9,697,176	289	21,080,933
\$100,001-\$200,000	29	3,834,328	37	4,803,183	65	9,776,710	131	18,414,221
\$200,001-\$500,000	13	3,604,511	13	3,929,437	62	21,691,694	88	29,225,641
OVER \$500,000	17	15,957,849	8	8,217,241	48	129,853,905	73	154,028,995
<b>TOTAL</b>	<b>725</b>	<b>32,925,997</b>	<b>18,592</b>	<b>83,641,142</b>	<b>3,619</b>	<b>195,474,219</b>	<b>22,936</b>	<b>312,041,359</b>

FOR THE QUARTER ENDING: DECEMBER 30, 1994

<b>TOTAL ALL BANK</b>	<b>Demand Deposits</b>		<b>Savings Deposit</b>		<b>Time Deposits</b>		<b>Total Deposits</b>	
Size of Deposits	No.	Value (US)	No.	Value (US)	No.	Value (US)	No.	Value (US)
Under \$ 5,000	483	825,979	20,959	24,492,070	2,773	6,337,882	24,215	31,655,931
\$5,000 - \$ 50,000	281	5,156,267	4,221	52,273,103	2,171	31,749,802	6,673	89,179,172
\$50,001 - \$100,000	73	4,793,363	189	12,564,913	174	13,098,154	436	30,456,429
\$100,001- \$200,000	34	4,652,199	66	9,896,394	123	17,865,738	223	32,414,331
\$200,001- \$500,000	14	4,448,890	20	6,044,065	63	20,285,537	97	30,778,492
OVER \$500,000	11	14,132,375	7	8,361,470	68	179,479,440	86	201,973,284
<b>TOTAL</b>	<b>896</b>	<b>34,009,072</b>	<b>25,462</b>	<b>113,632,014</b>	<b>5,372</b>	<b>268,816,552</b>	<b>31,730</b>	<b>416,457,639</b>

FOR THE QUARTER ENDING: DECEMBER 30, 1994

<b>TOTAL ALL BANK</b>	<b>Demand Deposits</b>		<b>Savings Deposit</b>		<b>Time Deposits</b>		<b>Total Deposits</b>	
Size of Deposits	No.	Value (US)	No.	Value (US)	No.	Value (US)	No.	Value (US)
Under \$ 5,000	423	2,878,168	26,401	30,211,322	3,392	7,864,414	30,216	40,953,903
\$5,000 - \$ 50,000	261	5,900,726	5,372	69,217,589	2,823	41,161,201	8,456	116,279,517
\$50,001 - \$100,000	51	4,185,577	234	14,886,003	255	18,762,378	540	37,833,957
\$100,001- \$200,000	36	5,361,556	95	12,666,379	131	18,148,567	262	36,176,502
\$200,001-\$ 500,000	33	10,197,314	40	11,895,291	93	28,036,265	166	50,128,870
OVER \$500,000	14	34,693,793	10	19,170,817	74	162,479,323	98	216,343,934
<b>TOTAL</b>	<b>818</b>	<b>63,217,133</b>	<b>32,152</b>	<b>158,047,402</b>	<b>6,768</b>	<b>276,452,149</b>	<b>39,738</b>	<b>497,716,683</b>

SOURCE: Central Bank of Trinidad and Tobago

## References

Central Bank of Barbados (1995): *Balance of Payments of Barbados 1995*, Director of Research, Central Bank of Barbados, Bridgetown, Barbados.

Central Statistical Office and Central Bank of Trinidad and Tobago (1997): *The Balance of Payments of Trinidad and Tobago, 1995*, Chief Economist, Research Department, Central Bank of Trinidad and Tobago.

Commission of the European Communities, International Monetary Fund, Organization for Economic Co-operation and Development, United Nations, World Bank (1993): *System of National Accounts 1993*, Brussels/Luxembourg, New York, Paris, Washington, D.C.

Demas, William G (1965): *The Economic of Development in Small Countries with Special Reference to the Caribbean*, Montreal, McGill University Press.

Economic Commission for Latin America and the Caribbean - ECLAC (1997): *Statistical Yearbook for Latin America and the Caribbean, 1996 Edition*, United Nations, New York.

Economic Commission for Latin America and the Caribbean - ECLAC/Caribbean Development and Cooperation Committee (1997): *Summary of Caribbean Economic Performance, 1996*, General LC/CAR/G. 502, 18th June 1979, Port of Spain, Trinidad.

International Monetary Fund (1993): *Balance of Payments Manual, Fifth Edition*, Washington, DC, USA.

International Monetary Fund (1995): *Balance of Payments Compilation Guide*, IMF, Washington, DC, USA.

International Monetary Fund (1996): *Balance of Payments Textbook*, IMF, Washington, DC, USA.  
ados (1995): *Balance of Payments of Barbados 1995*, Director of Research, Central Bank of Barbados, Bridgetown, Barbados.