
INTERNATIONAL LABOUR ORGANIZATION

Report II

**Household income and expenditure
statistics**

Seventeenth International Conference of Labour Statisticians

Geneva, 24 November-3 December 2003



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1. Introduction

Historical background

1. The ILO has been concerned with statistics on the living and working conditions of workers and their families since its founding in 1919. In this regard, several previous International Conferences of Labour Statisticians (ICLS) have passed resolutions on family expenditure surveys and household income and expenditure surveys. These include the resolutions adopted by the First ICLS (ILO, 1926), the Seventh ICLS in 1949 (ILO, 1951) and the Twelfth ICLS in 1973 (ILO, 2000). This last, and still existing, resolution deals with the objectives, frequency and scope of household income and expenditure surveys; the organization of surveys; units of data collection; basic concepts and definitions of income and of consumption expenditure; basic methodology; classifications; tabulation and presentation of results.
2. Parallel to this work, the Office has also considered on several occasions consumer expenditure surveys in the context of its work on consumer price indices. Resolutions adopted by the Second ICLS (1925), the Sixth ICLS (1947), the Tenth ICLS (1962) and the Fourteenth ICLS (1987) recognize the importance of household expenditure surveys for the derivation of weights for compiling consumer price indices. That of the Fourteenth ICLS recommends that within the limits of available resources, these surveys should be representative of household size, income level, regional location, socio-economic group and any other factors which may have a bearing on household expenditure patterns (ILO, 2000).
3. The Office has also produced a series of publications covering methodological descriptions and results of national surveys relating to family living studies, family budget surveys and household income and expenditure surveys (ILO, 1961a; ILO, 1961b; ILO, 1992; ILO, 1995). In addition to the work on family living studies and consumer price indices, there are also related resolutions concerning an integrated system of wages statistics and the measurement of employment-related income passed respectively by the Twelfth ICLS in 1973 and the Sixteenth ICLS in 1998 (ILO, 2000).

Activities of other organizations

4. Other international and regional agencies have also been involved in developing and promoting standards in household income and expenditure statistics as well as supporting their application (UN, 1964; UNDTCD, 1989). In 1994, on behalf of the United Nations Statistics Division (UNSD) and some other organizations, the Statistical Office of the European Commission commissioned work, the results of which were presented in "Statistics on the distribution of income, consumption and accumulation of households (DICAH)" (Franz et al., 1998). This was a revision of the guidelines that had been issued earlier by UNSD (UN, 1977). EUROSTAT has produced a manual on household budget surveys, EUROSTAT HBS (EU-HBS, 1997) and a draft manual on income statistics, EUROSTAT draft manual on income measurement (EU-SILC, 2002). The World Bank has published a three-volume handbook on conducting multi-purpose household surveys based on its experiences from surveys for measuring living standards (World Bank, 2000).
5. Efforts have also been made at the national level in developed countries to elaborate a framework for the production of their household income and expenditure statistics. For example, the Australian Bureau of Statistics published *A provisional framework for*

household income, consumption, saving and wealth as a conceptual map for the production of statistics relating to the economic well-being of households (ABS, 1995).

6. There has also been some recent work at the international level relating to standards in income statistics. The Canberra Group on Household Income Statistics (Canberra Group) has produced a final report (Canberra Group, 2001) giving guidelines on income distribution statistics.

Justification for new recommendations

7. The international standards adopted by the Twelfth ICLS in 1973 on household income and expenditure surveys are now outdated and no longer fulfil their original purpose. There is therefore a need to devise new international guidelines for the production of income and expenditure statistics.
8. It has long been recognized that statistics on consumption expenditure are in many instances the preferred measure of living standards. Statistical systems in developing countries in particular use these statistics for the analysis of poverty, inequality and social exclusion. Given the preponderance of self-employment and non-monetized economic activities in these economies, income statistics can have only limited uses. However, apart from the efforts mentioned above, not much has been done at the international level to develop standards for consumption expenditure statistics, especially for use in developing economies and for compiling CPI.
9. Although other agencies, both at the international and national levels, have been active in the area of income statistics as discussed above, their approaches have been driven by concerns related to specific areas and topics.
10. It was in view of the above that the Governing Body of the ILO convened a Meeting of Experts on Labour Statistics in Geneva from 22 to 31 October 2001 with two agenda items: household income and expenditure statistics and consumer price indices. The Meeting was attended by government experts and experts nominated by the Employers' and Workers' groups of the Governing Body. Observers and representatives of intergovernmental organizations also attended the Meeting. The Office prepared a report on household income and expenditure statistics (ILO, 2001a), which formed the basis for discussion of the first agenda item. The Meeting's conclusions (ILO, 2001b) have been taken into account in the preparation of the present report. In particular, the Meeting recommended that the Office present a revised resolution on household income and expenditure statistics to this Conference.

Structure of the report

11. The report is organized in eight chapters as follows:
 - (a) Chapter 1 (this chapter) gives the background to, and justification for, making draft proposals for the revision of the resolution on household income and expenditure statistics;
 - (b) Chapter 2 describes the objectives and major uses of household income and expenditure statistics;
 - (c) Chapter 3 discusses a conceptual framework and operational definition for income identifying the components to be included in the operational definition, those that

are within the conceptual framework but excluded from this definition for measurement reasons and those receipts that are not income;

- (d) Chapter 4 presents concepts and operational definitions relevant to consumption expenditure and household expenditure identifying those disbursements that are included in the former and those excluded from the latter;
- (e) Chapter 5 deals with measurement issues such as statistical units, coverage and characterization of households, as well as reference periods for data collection, analysis and dissemination;
- (f) Chapter 6 describes methods of collecting data for the production of income statistics and expenditure statistics, especially using household surveys;
- (g) Chapter 7 discusses classification, estimation including valuation and production of aggregates, analysis and dissemination.
- (h) Chapter 8 highlights possible areas for further work.

2. Objectives and uses

12. Household income and expenditure statistics serve a variety of purposes with respect to economic, social and other forms of description and analysis.

Consumer price index (CPI)

13. The CPI measures the changes over time in the cost of a “basket” of goods and services representative of households’ consumption expenditures. It is considered as the best available measure of inflation of the prices of consumer goods and services in the economy. Thus CPI is used to index payments as well as, on occasion, in the formulation of monetary policies. In some countries, CPI is conceived and constructed to be a cost-of-living index that reflects changes over time in the prices of goods and services relative to what is required to maintain the same standard of living as that of the reference period.
14. Consumption expenditure statistics are used in the compilation of CPI to: (i) identify the goods and services that should go into the basket; and (ii) derive the component expenditure shares for categories of the goods and services covered by the CPI. The latter are used as weights in the computation of CPI. The key statistics required are the levels or share of expenditures for different categories of goods and services, assumed to have similar price movement for the population groups covered. Although other sources are used in the construction of weights, expenditure surveys are considered the main source for this purpose.

(Paragraph 1(a) of the draft resolution)

Welfare analysis

15. Assessing levels and trends in the well-being of members of a society is essential in order to describe the welfare of that society. One of the most important and most accessible indicators of well-being of a household is that of economic well-being represented by the totality of economic resources available to the household. These resources consist of its current and capital receipts and its stock of assets and liabilities that give the household the capacity to acquire goods and services. They are reasonably measurable, meaningful, concrete and so can be used to place households in relative positions. Welfare analysis makes use of measurements of households’ command over these resources, their capacity to consume and/or to save them and to decide on the mix between these. It also assesses the changes in these resources over time and space and the disparity of their distribution across population groups.
16. The flow of receipts and disbursements representing income, consumption expenditure and investments (future capacity to consume) therefore defines limits to the lifestyle of the household and its level of wealth. Another major use of income and expenditure statistics is thus to assess the level, structure and trends in economic well-being of households.
17. The capacity to consume (measured by income, assets and access to credit) and actual consumption (measured by consumption expenditure) are two sides of the same coin of economic well-being. The relative conceptual and measurement advantages of using income or using consumption expenditure in doing this are well known. Consumption expenditure is relatively more stable over time, as households tend to smooth out their consumption, and so is a better measure of living standards. It is also easier to understand

conceptually as well as less sensitive and so probably more accurately measured. Cash income, which in many countries forms the bulk of income, is less complex to measure and so can be observed reasonably accurately, frequently and relatively cheaply. Ownership of assets is also an important variable in assessing a household's economic well-being, both in terms of the capacity of assets to generate income, economic security and power, which is useful for financing consumption expenditure. However, the collection of data on assets and liabilities from the same source as income and expenditure data is difficult for reasons such as greater sensitivity, as well as differences in accounting periods and in reporting units.

18. Statistics of income and consumption expenditure are used to generate distributions of income/consumption expenditure across households for:

- (1) studying population groups at the bottom end of this distribution (poverty) or the measurement of its dispersion (inequality);
- (2) analysis of the characteristics of population groups at different levels of the income/consumption expenditure distribution;
- (3) producing various statistics relating to income/consumption poverty, inequality and social exclusion, such as a poverty line;
- (4) analysis of non-monetary dimensions of poverty and social exclusion such as employment, health, education, housing conditions;
- (5) measuring the level, nature and structure of living conditions of households in time and space, especially for specific sub-populations, such as the elderly, the young and various categories of workers.

(Paragraph 1(b) of the draft resolution)

National accounts

19. In the compilation of national accounts, income and expenditure statistics based on micro data can serve both as the basis for estimates of certain components for the household sector and as quality control checks for estimates of components produced from other types of statistics. For example, consumption expenditure statistics based on micro-data can be used for some components of personal consumption expenditure in national accounts supplementing production and sales statistics. These statistics could also be used for the production of satellite accounts such as the tourism satellite account (Pérez Mira, page 9, 2002).

20. There are, however, conceptual, coverage and measurement differences between the statistics discussed in this draft resolution and the national accounts. These differences need to be taken into account in using household micro-data for compiling national accounts. Also there are fundamental differences in purpose and frequency of compilation and production of the different statistics. Many countries do not produce household income and expenditure statistics on an annual basis; national accounts estimates need to be prepared at least annually.

(Paragraph 1(c) of the draft resolution)

Evaluation of government policies

21. Income and expenditure statistics are also used for the formulation, implementation, monitoring and impact evaluation of economic and social welfare policies, and of changes to such policies. Examples of this include:

- (1) the redistributive effects on the disposable income of households/families with various characteristics of taxation and other fiscal policies;
- (2) the effects of state benefits and family support policies on the income/consumption expenditure distribution;
- (3) social security income support programmes (pensions, cash benefits, etc.);
- (4) structural adjustment programmes and their impact on levels of living among diverse socio-economic groups;
- (5) migration policy, family planning, etc.

(Paragraph 1(d) of the draft resolution)

Other types of analysis

22. Some other types of studies using income and expenditure statistics include:

- (1) analysis of the relationship between income distribution, economic activity and returns to labour, capital and land;
- (2) labour market analysis – relationships between income, or some components of income, and characteristics of workers, jobs, place of work and job search;
- (3) formulation and monitoring of wage policies – including the setting of minimum wages;
- (4) analysis of the determinants of consumer behaviour;
- (5) analysis of the generation and uses of income – informal sector income, rural income, financing of consumption expenditure;
- (6) analysis of savings behaviour of individuals in different types of households;
- (7) analysis of indebtedness, ownership of assets, etc.;
- (8) analysis of the effect on households of drastic sudden changes in economic and social policies such as in the transition economies;
- (9) measuring the economic impacts of tourism.

(Paragraph 1(e) of the draft resolution)

Consumer demand and market research

23. Household income and expenditure surveys provide a rich source of data for studying the consumption and buying habits of different population groups and for market research,

provided sample sizes are large enough and expenditures at product categorization are available. Using synthetic methods to combine consumption expenditure statistics and data from population censuses enriches these types of analyses.

(Paragraph 1(f) of the draft resolution)

Other special uses

24. Statistics on income and consumption expenditure have an important role in the analysis of nutrition, health, access to and effects of education, etc.

(Paragraph 1(g) of the draft resolution)

Conclusion

25. These various uses cannot all be served equally well from one single source for these statistics. The methods for collecting the basic data and the degrees and details of information required are different. For some descriptive and analytical uses, it would be necessary to combine the statistics from one source with information from other sources through statistical matching or modelling.
26. The use to which the expenditure statistics are to be put dictates the concepts, classifications and survey design used in most expenditure surveys. For example, to compile CPI using plutocratic weighting (that is, a household's weight is relative to the size of its total expenditure), the data required are aggregate expenditure data by type, while, for welfare analysis, individual household level data, but not necessarily by type of expenditure, would be needed. This has implications for the design of the survey.

(Paragraph 2 of the draft resolution)

27. An important consideration in producing these guidelines is the need to ensure consistency in the national production of income statistics and expenditure statistics, both in terms of their identified common components and in the measurement of these components. Consistency with other international guidelines on income statistics as well as with other socio-economic statistics is also considered desirable.

(Paragraph 3 of the draft resolution)

3. Household income

Introduction

28. Statistics on household income can be approached from the standpoint of its use for policy analysis as the best proxy for economic well-being of individuals and households, that is in terms of those receipts that contribute to economic well-being of individuals by increasing their potential to consume or to save. Emphasis is then on those receipts that individuals consider as being of direct benefit to themselves as well as on the distribution of income across households. A different perspective is from the aggregated macroeconomic level, e.g. within the system of national accounts where the total income accruing to households is described in relation to other aggregate components of this system. While undoubtedly there are several overlaps between these two perspectives, there are nevertheless important differences arising from their different objectives. The guidelines in the draft resolution are motivated by the former. Those for the latter have already been adequately dealt with in the System of National Accounts (SNA 1993). Thus, in these guidelines, income is considered only in terms of the receipts of individuals and their households without regard to consistency with corresponding costs to the sources producing the income.
29. The proposals presented in the draft resolution follow to a large extent those put forward by the Canberra City Group on Household Income in its final report (Canberra Group, 2001). There are however some important differences relating to in-kind transfers and the classification of some income receipts.
30. The draft guidelines presented here extend those that were adopted by the Sixteenth ICLS in 1998 to cover components that come from sources other than employment activities. The Sixteenth ICLS resolution is itself an extension of the Twelfth ICLS resolution concerning an integrated system of wages statistics, as it covers (a) those receipts from paid employment not included in the earlier resolution; and (b) receipts from self-employment. These were completely out of the scope of the earlier resolution. Thus the two earlier resolutions and the one being proposed in this report are fully consistent with each other in the sense that they simply progressively extend the scope and coverage of the components covered (Annex 1).
31. Although the components covered in the earlier resolutions are also included in the subsequent resolutions (ILO 1998a, pages 8-9 and 17), there are still distinct advantages in retaining all three because they have different objectives and related income aggregates. There was also a greater level of details and sub-specifications given when each component was first introduced. Thus the draft guidelines in this report do not repeat the details already provided in the earlier resolutions, although they include all income components specified there for the sake of completeness.

(Paragraph 3 of the draft resolution)

Conceptual framework

32. Three principles usually discussed in connection with the definition of income for a specified reference period are:
- (1) receipts should be expected to recur regularly to be considered as “income”;

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- (2) to be considered as “income”, receipts should contribute to current economic well-being;
- (3) receipts arising from a reduction in net worth should be excluded from the concept of income.
- 33.** One widely quoted concept of income developed from economic theory is the *Hicks concept* based on the following statement by Hicks (1946, page 172):

... it would seem that we ought to define a man’s income as the maximum value which he can consume during a week, and still expect to be as well off at the end of the week as he was at the beginning.

He further elaborated by referring to income as the maximum amount of money which the individual can spend this week, and still expect to be able to spend the same amount in real terms in each ensuing week. All of the above three principles are explicitly or implicitly embedded in this approach.

- 34.** In another concept from economic theory, referred to as the *Haig-Simons approach* (see Simons (1938) in Atkinson and Stiglitz (1980), page 260), income is defined as the sum of consumption expenditure and change in net worth in a period. This approach does not impose any requirement of regular recurrence nor requires the notion of not reducing net worth. No restriction to only those receipts available for current consumption expenditure is made. The implication is that income should include all receipts, recurrent or otherwise, regular and irregular and even those resulting in a reduction of net worth.
- 35.** The System of National Accounts (SNA) has recommendations on the definition of income for use in preparing national accounts. In its 1993 version (SNA, 1993, section 8.15, page 187), the proposed definition of disposable income is:

... the maximum amount that a household or other unit can afford to spend on consumption goods or services during the accounting period without having to finance its expenditures by reducing its cash, by disposing of other financial or non-financial assets or by increasing its liabilities.

- 36.** This definition excludes receipts resulting from the drawing down on assets and from incurring liabilities. It is equivalent to the *Hicks concept* only if capital transfers or other changes in volume of assets (e.g. from natural disasters) or real holding gains/losses do not change net worth. This is not an issue for SNA. It records capital transfers in the capital account and the latter two in the assets account and so net worth as used in the SNA definition is already adjusted for these non-income account transactions.
- 37.** The SNA definition as quoted above does not directly refer to the principle of regular recurrence. However, the SNA does make a distinction between current and capital receipts (SNA, 1993, section 8.32, page 189) in itemizing the components of income. Current receipts are usually small, frequent, regular and wholly available for consumption expenditure within the reference period. These are the receipts that households come to depend on when making consumption decisions, as they are regular and expected to continue being received in the short term, at least. Capital receipts, on the other hand, are relatively large, lump-sum, one-off or infrequent payments that can have an effect beyond the reference period and are not considered by a “rational” household as totally available for immediate consumption. As stated in SNA, 1993 (section 8.31): “A prudent household will not treat a capital transfer that happens to be received during a particular period as being wholly available for final consumption within the same accounting period.” The argument then is that the distinction in the SNA between current and capital receipts is important in its definition of income, with the former included as income and

the latter usually excluded. Thus, the SNA definition also implicitly entails the notion of regular recurrence in terms of the distinction between current and capital receipts.

- 38.** Although the SNA does not explicitly mention the exclusion of deferred benefits in the definition of primary income, it introduces this condition implicitly in the above definition of disposable income and explicitly through its definition of current transfers. One difference between the micro and macro approaches to total income is in the treatment of “forced savings” or deferred benefits such as the employer’s contribution to social insurance schemes, profit-sharing pay to employees in the form of profits actually distributed at retirement or at some future date outside the reference period.
- 39.** The Canberra City Group on Household Income Statistics (Canberra Report) produced a set of recommendations on the conceptual and operational definitions of household income in its Final Report (Canberra Group, 2001). Its definition of income is based on an approach (section 1.3.1, page 3) that: “In broad terms, income refers to regular receipts ... Large and irregular receipts from inheritances and the like are considered to be capital transfers because it is unlikely that they will be spent immediately on receipt and are ‘one-off’ on nature.” The Canberra Report further considers that, as the interest of micro analysts is in the measurement of current economic well-being, it is important to require that income receipts should be available for expenditure on consumption within the reference period (Canberra Group, 2001, section 2.2.2). The Canberra Report also states that, conceptually, receipts that leave the household worse off at the end of the accounting period than at the beginning of it (that is those that reduce net worth) should be excluded. Thus, the Report recommends that all three of the above principles are important. It however recognizes that some exceptions would be necessary with respect to the first and last principle.
- 40.** In summary, the Canberra Report proposes the use of the SNA definition as a basis for the definition of income within the context of income distribution statistics (Canberra Group, 2001, section 2.2.3, page 16). The reasoning is that the SNA definition is similar to the position taken in the Report with some exceptions, notably with respect to changes in net worth and flexibility in the recurrence requirement. These exceptions would be necessary because of the differences between the objectives of the SNA and those of income distribution analysis. The concern in SNA is mainly the exhaustiveness, consistency and exclusiveness of the various elements of the accounting framework. That of income distribution analysis is principally the circumstances of individual households in the household sector, with less concern for consistency with measurements for elements that are not relevant for households as such.
- 41.** The EUROSTAT draft manual on income measurement adopts the definition of income proposed in the Canberra Report (EU-SILC, 2002, page 12).
- 42.** The Sixteenth International Conference of Labour Statisticians passed a resolution on employment-related income in which income includes all payments received by individuals as a result of their current or former involvement in paid or self-employment (ILO, 1998b, paragraph 5, page 55). No requirement for regular recurrence is explicitly made for these receipts though, apart from severance and termination pay, the other receipts do meet this requirement by virtue of their employment-related nature (ILO, 1998a, paragraph 138, page 28). The report for the Conference (ILO, 1998a, paragraph 57, page 12) argues for the exclusion of deferred benefits from employment-related income on the basis that these receipts “represent only an expectation of income” at some future date and/or under uncertain conditions.
- 43.** The resolution adopted by the Twelfth ICLS in 1973 concerning household income and expenditure surveys (ILO, 2000) defines income as follows:

Household income is the sum of money income and income in kind and consists of receipts which, as a rule, are of a recurring nature and accrue to the household or to individual members of the household regularly at annual or at more frequent intervals. (paragraph 14(i) of the resolution)

This definition, while including the first of the above principles, does not make explicit reference to the use of the receipts, nor to changes in net worth. However, deferred benefits are not included in the components of income cited in paragraph 14(ii) of the resolution whilst receipts that lead to a reduction in net worth are amongst the exclusions in its paragraph 14(iv).

44. Many other approaches have to some extent also encompassed the above principles. For example, the ABS Framework Publication (ABS, 1995, page 4) defines income as follows: "... income consists of receipts, as money or in-kind, that are received or accrued regularly and are of a recurring nature."
45. The concept of income proposed to the Meeting of Experts in October 2001 (ILO, 2001) was:

Household income consists of receipts in cash, in kind or in services, that are usually recurrent and regular and are received by the household or by individual members of the household at annual or at more frequent intervals. During the reference period when they are received, such receipts are potentially available for current consumption and, as a rule, do not reduce the net worth of the household.

46. The view of the Meeting was that the regular recurrence criterion should have greater flexibility than is conveyed by the inclusion of "usually". It was therefore recommended to replace "usually recurrent and regular" by "... **all** receipts in cash, in kind or in services, **but excluding windfall gains, that** are received by ...". The Meeting however later on agreed to exclude some receipts which are not windfalls, such as medical claim reimbursements and insurance claims, on the grounds of their irregularity on non-recurrence. The proposal in the draft resolution therefore takes this into account.
47. The Meeting also raised some questions about the issue of not reducing net worth. The arguments put forward included the difficulty in defining and measuring net worth at the household level as well as in accounting for the possible effects of external factors such as a slump in the world economy, or assets generally, on the net worth of a household. There was also the feeling that the phrasing did not give the flexibility required to account for the inclusion of pensions as income. Some participants argued that it would be preferable to spell out what was meant by reduction in net worth, such as increasing liabilities etc. The Meeting recommended the replacement of the words "as a rule", which qualifies the clause on reduction of net worth in the above proposal, by "**except in certain well-defined circumstances.**" The proposal in the draft resolution builds on these recommendations.

(Paragraph 4 of the draft resolution)

48. Some participants at the Meeting were concerned about the requirement that receipts should be available for current consumption, particularly with respect to the social security contributions of employers. Another concern expressed was with respect to the inclusion of in-kind income, as such receipts were not fungible and so would have some element of forced consumption.

Operational definition

49. The operational definition of income is best discussed on the basis of a listing of its components. There is at present no standard classification of income components, although several are used at national levels and proposed at the international level (Canberra Group, 2001, page 18, table 2.1; EU-SILC 2002, page 31, table 2.1; ABS, 1995, pages 34-46). Whilst most components are classified in a similar way in all of them, there are some differences that arise as a result of the underlying classification principle used. The choice should depend on the analytical purposes for which the classification is required.
50. In the system proposed below, an important consideration is that it should be possible to separately identify income arising out of employment-related activity within the larger component of income from productive activity. Income is thus defined in terms of a broad grouping of sources of income as follows:
- (1) **income from employment** comprises receipts from involvement in economic activities, strictly in an employment-related capacity as defined in the ICLS resolution concerning statistics of the economically active population, employment, unemployment and underemployment (ILO, 2000). It consists of **employee income** (e.g. wages) and **self-employment income** (return to labour);
 - (2) **property income** from ownership of financial and other assets, e.g. interest payments;
 - (3) **income from household production of services for own consumption**, e.g. services of owner-occupied housing, household production of domestic services for own consumption;
 - (4) **transfers received in cash and goods** from government (e.g. pensions), other households (e.g. alimony, parental support) and non-profit institutions serving households (NPISH) (e.g. scholarships, strike pay);
 - (5) **transfers received as services**, e.g. social transfers in kind (STIK), care services from other households.

(Paragraphs 5 and 6 of the draft resolution)

51. Income as defined is total or gross income before any deductions, compulsory or otherwise. For most micro-analysts, the most relevant concept is in fact disposable income, which is deducible from total income as discussed below. The classification of the components described below and their relationship with other international standards are given in Annex 2.

Employee income

52. In keeping with the definition of income related to paid employment adopted by the Sixteenth ICLS, employee income consists of direct wages and salaries, cash bonuses and gratuities, commissions and tips, directors' fees, profit-sharing bonuses and other forms of profit-related pay, remuneration for time not worked (e.g. as sick leave or annual leave), free or subsidized goods and services from an employer as well as severance and termination pay. Employee income can be in cash (in the sense of monetary), in kind as goods or services.

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53. A detailed description of each of the proposed subcomponents of employee income is given in paragraph 12 of the resolution concerning the measurement of employment-related income, adopted by the Sixteenth ICLS and discussed in the report to the Conference (ILO, 1998a, pages 19 ff). Some, however, merit special mention.
54. *Non-monetary income*: It should be noted that the Canberra Report excludes non-monetary income from its practical definition of employee income (Canberra Group 2001, page 61, table 4.1). This is because both the non-availability of this information for many countries and the different methods of evaluating such receipts could contaminate the comparability of income statistics across countries, which was the primary objective of the Canberra Group. As put in the report, “DPI (disposable personal income) includes cash and near-cash components in order to get as close as possible to an apples-to-apples comparison” (Canberra Group 2001, page 60). Indeed, apart from own account production that is included due to its importance to developing countries, this is the approach taken for all components of income. The position in the EUROSTAT draft manual is the inverse of this with respect to both of these components, reflecting their differing importance for EU countries (EU-SILC, 2002, page 100, table 5.3).
55. In this report, the proposal is to include employee income in kind and in services in the operational definition of income in keeping with the ICLS resolution on employment-related income. The attention of the Conference is drawn to the issue of “imposed payments in kind” that arises when an employer imposes goods and services produced by the enterprise on employees in lieu of cash remuneration. As noted in the report to the Sixteenth ICLS on employment-related income, this practice could be in contravention of the Protection of Wages Convention, 1949 (No. 95). The recommendation is the same as was made then, that is to exclude such payments, i.e. to assign them zero value in computing employee income. To enhance international comparability, as far as possible, the non-monetary component of employee income should be tabulated separately.
56. *Severance and termination pay*: These receipts are not regular even if on some occasions they may recur. At the Meeting of Experts, there were conflicting views about including them as income. Some participants argued that these receipts could sometimes be large, corresponding to more than six months’ pay, and paid as a lump sum. Thus, they are considered as wealth and mostly saved. They are also usually unexpected and so the recipient cannot plan for their use. They should therefore be excluded as income. Others, however, took a different stance. One such was that they represent the return to investment of the employee’s working time in the enterprise and so should be treated as property income. Others stated that these receipts could provide for consumption expenditure while the recipient looked for another job and so served as a replacement for wages or salary. They are therefore some form of employee income. This is the position adopted in the Canberra Report (Canberra, 2001), in the EUROSTAT draft manual (EU, 2002) and in the ICLS resolution on employment-related income. Moreover, most micro analysts now argue for the inclusion of severance and termination pay as income even though it is neither regular nor recurring. Therefore, although the Meeting recommended that the treatment of this type of receipt should be left open in any guidelines, the recommendation in the draft resolution is for their inclusion as employee income, consistent with other international recommendations on their treatment.
57. *Employer’s social insurance contributions*: Unlike their treatment in the SNA, employer’s social insurance contributions are excluded from the concept of employee income in ILO (1998a) on the grounds that they represent “entitlement to future benefits”, the receipt of which is subject to some uncertain conditions. These contributions include payments to social security funds, insurance companies or other institutional units responsible for social insurance schemes for their employees. A Worker participant supported this position at the Meeting of Experts, as workers did not perceive these

payments as income. However, an argument in favour of including them as income put forward at the Meeting was that if the employer did not make such contributions, a prudent employee would have to spend out of that person's income to provide for retirement income. One disadvantage in their inclusion is that it could lead to double counting at the aggregate level, as pensions received are also included in gross income. Moreover, there may be practical difficulties measuring them at the micro household level. Since these contributions are deducted in computing disposable income (Canberra Group, 2001), frequently the measure of analytic interest, the recommendation in the draft resolution is to include them in total income for consistency with the SNA. This treatment also avoids the problem of cross-country differences arising out of different national policies on such contributions.

(Paragraphs 7 and 8 of the draft resolution)

Income from self-employment

- 58.** According to the resolution concerning the measurement of employment-related income, "Income related to self-employment is defined as the income which is received, over a given reference period, by individuals, for themselves or in respect of their family members, as a result of their current or former involvement in self-employment jobs" (ILO 2000, page 50, paragraph 16). In keeping with this resolution, income from self-employment is taken as income received as a result of involvement in a self-employment job.
- 59.** It should be noted that this component is restricted to owners of unincorporated enterprises who work in such enterprises. Thus, it excludes profits from capital investment in such enterprises by partners who do not work in these enterprises ("sleeping partners"), dividends and directors' fees paid to owners of incorporated enterprises. The first two are considered property income while the third is employee income.

(Paragraph 9 of the draft resolution)

- 60.** The basis for the measurement of income from self-employment is almost always the SNA's concept of mixed income from the unincorporated enterprise. Mixed income consists of the value of gross output less operating costs and after adjustment for depreciation of assets used in production (ILO, 1998b; Canberra Group, 2001; ABS, 1995). Gross output is total production for market, for use as benefits in kind and for own consumption. It includes any subsidies received. Operating costs are the sum of employee compensation, cost of raw materials, maintenance of equipment, vehicles, etc., cost of utilities, indirect taxes, interest paid and rent paid. Depreciation is the reduction in the value of the capital (e.g. machinery, facilities) used in the production. Sometimes also referred to as profit/loss from the unincorporated enterprise, the concept of mixed income includes income from goods and services produced for barter as well as the estimated value of goods produced for own consumption less expenses.
- 61.** An issue of classification arises from the fact that, as mixed income represents a return to labour as well as a return to capital, entrepreneurship, etc. some elements of it are more properly property income. This was one of the issues brought up during the Meeting of Experts.
- 62.** Some difficulties arise in using mixed income as the basis for self-employment income, as noted by the Meeting of Experts. Mixed income can be negative. Also, enterprises may not know their profit or loss for the survey reference period at the time of the survey due

to the tax systems under which they are operating. The self-employed are a very heterogeneous group – casual workers, market women, experts in financial and banking services, information technology specialists, shop-keepers, etc. Some artisans on contract hire, for example, may not think of their earnings in terms of profit nor consider themselves as self-employed. Some self-employed, e.g. operators of small and micro-enterprises, especially those in the informal sector, may have their receipts and expenditures inextricably mixed up with those for the household, which makes reporting their income difficult. For these reasons, it has sometimes been argued that mixed income may not be the best measure of self-employment income in all instances.

63. One alternative that has been proposed is to use “drawings” from the business. This was discussed at the Fifteenth ICLS (1993) and in the report prepared for the Meeting of Experts on income from employment (ILO, 1997). On both occasions it was rejected on the grounds that drawings may include only part of income (the rest being reinvested in the business and will thus represent saving) or more than income (a drawing down of assets).
64. Another alternative is to separate out groups of the self-employed on the basis of whether they keep accounts and to treat those who do not keep accounts in the same way as employees, that is to ask for their earnings instead of profits (Martin et al., 1996). It has also been suggested that for some amongst this latter group, e.g. some informal sector workers, it may be better to use their consumption expenditure as the value of their income. The assumption is that they have little or no assets and do not save. They could, however, be financing consumption expenditure through increasing their liabilities.
65. There are also some borderline cases with respect to determining who is self-employed, as noted in the resolution on the International Classification of Status in Employment (ICSE) adopted by the Fifteenth ICLS in 1993 (ILO, 2000). The point is best illustrated using outworkers. According to this resolution, an outworker is a worker who holds explicit or implicit contracts of employment with an enterprise but whose place of work is not within any of the establishments that make up the enterprise. As explained in the EUROSTAT draft manual on income measurement, an outworker should be classified as an employee if that person’s remuneration depends basically on the time worked or the amount produced but as self-employed if “the person’s remuneration is a function of receipts or profits from the sale of his/her products or services” (EU-SILC, 2002, page 81). The issue is one of classification, which arises when it is important to distinguish between employee and self-employment income. Otherwise, it has no effect on total income.
66. While noting the above measurement difficulties and other issues, the Meeting of Experts nevertheless decided to accept mixed income as the basis for measuring self-employment income.

(Paragraph 10 of the draft resolution)

Property income

67. Property income consists of receipts received as a result of ownership of financial and non-financial assets that are provided to others for their use. These are usually in the form of interest receipts, dividends, rents received for the use of unproduced assets (natural resources), royalties for use of intellectual property and rents received for produced assets.

(Paragraph 11 of the draft resolution)

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68. *Interest receipts* are payments received from bank accounts, building societies, credit unions and other financial institutions, certificates of deposit, government bonds/loans and securities, debentures and loans to non-household members.
69. Interest is paid on loans associated with business (self-employed), home-ownership (mortgage interest) or for financing consumption expenditure (e.g. credit purchases). Interest on business loans is normally deducted in computing mixed income while mortgage interest is taken into consideration when valuing services from owner-occupied dwelling. Interest on consumer credit is considered to be consumption expenditure (Chapter 4). However, in some circumstances (e.g. when loans are repackaged and marketed as a bundle) these payments cannot be separately identified and so treated. The Canberra Report recommends netting all of them out of interest received in obtaining total income (Canberra Group 2001, page 20). The EUROSTAT draft manual on income measurement recommends deducting all of them out of total income in determining disposable income (EU-SILC 2002, page 31). This notwithstanding, the recommendation to the Conference is to record interest received gross as the above problematic instances are not yet common in many countries or for many households.

(Paragraph 12 of the draft resolution)

70. *Dividends* are receipts from investment in an enterprise in which the investor does not work. Pensions or annuities in the form of dividends from voluntary private insurance schemes are also included. The ABS framework publication includes bonus shares as dividend income that are received and saved as one notional transaction (ABS, 1995). However, as acknowledged in the publication, these receipts are not available for consumption expenditure and for that reason should not be included as income.

(Paragraph 13 of the draft resolution)

71. Although for consistency with macro-level practices interests and dividends should be recorded on an accruals basis, i.e. as they are earned, the information likely to be available from sources used for household data is payment received.
72. *Rents* are payments received for the use of unproduced assets (natural resources), such as land, and for produced assets, such as houses. The SNA includes only rents received for the former as property income. It argues that rents from produced assets, which are referred to as rentals, result from productive activities such as creation, maintenance and repairs carried out by households operating an unincorporated enterprise. They should therefore be included as self-employment income. While these receipts are income from entrepreneurial activity, it is uncertain the extent to which they involve employment activities, at least during the relevant reference period. It would thus be difficult to associate the resulting income with current employment activities. Moreover, it could be said that households look on their rented property as investment, with receipts resulting from their lending this non-financial asset to a third party. The Canberra Report treats rentals as a separate component so that it could be aggregated either way. The recommendation to the Conference is to follow common practice amongst countries and so to treat rents, including rentals, as property income. This is also the treatment recommended in the ABS framework publication (ABS, 1995). Rents should be recorded net of expenses.

(Paragraph 14 of the draft resolution)

73. *Royalties*: An item treated in the Canberra Report as self-employment income is royalties from writings, inventions, etc. (i.e. patented or copyright materials) which are regarded as a return for effort expended. This is also the treatment of royalties in the SNA (SNA,

1993, section 7.92) and in the draft EUROSTAT manual (EU-SILC 2002). However, in the ABS framework publication, these payments are classified as property income (ABS, 1995, page 40). Their proposed inclusion in property income and therefore their exclusion from the definition of self-employment income in ILO (1998a) implies that, there also, these payments are not considered as coming from employment activities.

74. Whilst appreciating that these payments are in return for services from intangible produced assets, there are two problems in classifying them as income from employment. Firstly, their receipt is often at a different reference period from that of production of the patented or copyright material and so it would not be possible to associate the resulting income from employment with any employment activity during the same period. Secondly, royalties are sometimes paid to persons other than the person responsible for the production of the patented or copyright material, for example, through inheritance. Participants at the Meeting of Experts expressed opposing views on the classification of these receipts and were unable to reach any consensus on it. Although it is desirable to strive for consistency with recommendations from other international institutions, in this case it would conflict with the stance of the Sixteenth ICLS on employment-related income and would complicate analysing the relationship between employment and income from employment. Therefore the recommendation to the Conference is that they are classified as property income.

(Paragraph 15 of the draft resolution)

Income from household production of services for own consumption

75. These are services produced within the household for the household's own consumption and not for the market. They include services from owner-occupied dwellings and from consumer durable goods owned as well as own-produced domestic services. They are valued net of expenses that go into their production (Chapter 8).
76. *Owner-occupied dwellings:* The Canberra Report treats the net imputed value of housing services provided by owner-occupied dwellings as self-employment income (Canberra Group, 2001). The basis for this is that the SNA treats homeowners as unincorporated enterprises providing these services to their own households. However, the SNA states that: "... There is no labour input into the production of the services of owner-occupied dwellings ..." (SNA, 1993, paragraph 4.150). Thus, SNA does not associate this income with any employment activity.
77. The ICLS resolution on measurement of employment-related income does not include this estimated value as income related to self-employment (ILO, 1998b). Also, the ABS framework publication classifies this income as "other non-market income" (ABS 1995, page 44). In the EUROSTAT Household Budget Surveys manual, it is separately classified as rents along with the estimated value for free/subsidized housing services provided by others as well as with rental income (EU-HBS, 1997, page 66). The EUROSTAT draft manual on Income Measurement proposes continuing with this treatment except for rentals, on the grounds of consistency and similarity in valuation methods for these items (EU-SILC, 2002, page 42).
78. Views expressed at the Meeting of Experts ranged from altogether rejecting this estimated value as income, since it does not change an owner's living standards and is unrealized, to classifying it as property income consistent with the treatment of rents. Another point made was that there should be consistency between its treatment as income and as consumption expenditure. It was suggested that an alternative, at least for

analytical purposes, could be to restrict measurement to rent-free income by omitting both this estimated value and the rents paid by renters from income.

79. The recommendation to the Conference is to classify this net estimated value as income from household production of services and neither as property income nor as income from self-employment.
80. *Consumer durables*: A similar discussion to that for housing services applies to the services from household consumer durables such as cars, washing machines, cookers, etc. Conceptually, the imputed value of such services less expenses, even if it could be determined, cannot be classified as self-employment income but should be treated as a separate form of income that is not employment related. The Canberra Report excludes the imputed value of services from consumer durables from its income measurement on the grounds that, in comparison with housing, it is likely to be small, have a shorter life and less impact on income analysis. The Meeting of Experts disagreed with this assertion of insignificance for the value of these services but accepted the proposal that it should be excluded from the operational definition of income on grounds of the difficulty in valuing such services. As noted in the case of housing, it is important to ensure consistency between their treatment as income and as consumption expenditure.
81. *Own-produced domestic services*: In the ABS framework publication, the estimated value of own-produced domestic services such as cooking, housekeeping, minor repairs, childcare, etc. is classified in a similar way to that of housing services, i.e. as “other non-market income” (ABS, 1995). The Canberra Report acknowledges that the well-being of households is affected by the provision of such services but states that their valuation is still fraught with problems. So although it would conceptually have treated this value as self-employment income, the difficulties associated with the valuation are such that the report opts to exclude it altogether from the definition of income.
82. The own production of goods is considered as an economic activity within the SNA and its estimated value treated as self-employment income. The corresponding production of domestic services is not considered as an economic activity, however. One reason given for this is that they cannot be stored for possible later trading in the market. Therefore, participation in it is not measured as employment in employment statistics. Thus, its estimated value, even if it could be determined, should not be treated as self-employment income since it is necessary to associate this income with the corresponding employment statistics. The Meeting of Experts accepted that these services affect the living standards of households and have policy implications but it was agreed that their value should be excluded from the operational definition of income because of valuation difficulties.

(Paragraph 16 of the draft resolution)

Transfers

83. Transfers are receipts for which there is no “quid pro quo”, i.e. nothing tangible is given by the recipient to the donor in return for the receipts. Transfers may be made between households, between households and government or between households and charities. Their generation is motivated mainly by the intention to redistribute income either by government (e.g. pensions) or privately (e.g. child support, private pensions). They reduce the capacity of the donor to consume and increase that of the recipient. Transfers can consist of cash (in the monetary sense), of goods or of services. They can cross national boundaries.

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- 84.** Transfers that are one-off or irregular, usually large, lump-sum receipts, are referred to as capital transfers in contrast to current transfers that usually recur regularly (relative to the reference period used for income) and tend to be small. Current transfers are also mostly available for use in consumption expenditure during the reference period while recipients of capital transfers do not usually regard them as income and do not use them wholly for consumption expenditure during the reference period. The SNA treats all current transfers as income, which differs from the treatment adopted by some micro-analysts (Canberra Group, 2001, page 21, section 2.4.2.5).

(Paragraph 17 of the draft resolution)

Current transfers received (cash and goods)

- 85.** These consist of:

- (1) *social security pensions/schemes* (including military and overseas pensions), insurance benefits (e.g. unemployment, sickness) and allowances generated from government-sponsored or legislated social insurance schemes (compulsory/legal schemes);
- (2) *pensions and other insurance benefits* (e.g. education allowance, medical expenses) from employer-sponsored social insurance schemes not covered by social security legislation (both funded and unfunded);
- (3) *social assistance benefits from governments* (universal or means-tested) which provide the same benefits as social security schemes but are not provided for under such schemes;
- (4) *current transfers from non-profit institutions*: regular gifts, financial support (e.g. scholarships, unions' strike pay, sickness benefits and relief payments), etc. from non-profit institutions, including charities;
- (5) *current transfers from other households*: family support payments (e.g. alimony, child support); regular receipts from inheritances and trust funds; regular gifts or financial support.

- 86.** The first two groups of transfers are referred to as social insurance benefits, which along with social assistance benefits, the third group, make up social benefits. (See ILO, 1997, page 11, paragraphs 50 ff or ILO, 1998b, page 22, paragraphs 105 ff for a detailed discussion of these benefits.) There is general agreement to include these receipts as income among the different international recommendations and national practices, although they are differently classified. The above approach, based on source of payment, is that used in the SNA and in the Canberra Report (Canberra Group, 2001, page 18, table 2.1). The latter, however, excludes all in-kind transfers from its operational definition of income. Other classifications are by means of payment or by the risks or needs which give rise to the payments (EU-SILC, 2002, page 46). Transfers can be to individuals or to the household/family as a group. They are also sometimes limited to specific population groups such as the elderly.

- 87.** *Pensions*: Pensions received from contributory or private-funded schemes represent a running down of the household's assets. They are, however, included as they are considered as income by households, especially retired households, and used for consumption. Otherwise, the analysis of income distribution will be affected since these households will then have little or no income. It has also been argued that members of these households deliberately planned for this dis-saving by saving in earlier period and

so it is intrinsically different from those other dis-savings that are involuntary in nature (Canberra Group, 2001, page 4, paragraph 1.3.2). However, this argument could as well be applied to the disposal of other assets that were also deliberately accumulated during the working life of these household members for this purpose but which are not treated as income for their households.

- 88.** The inclusion of these receipts as income is one of the exceptions provided for in the conceptual definition of income. If employers' social contributions are also included as income, some amount of double counting will occur when "gross income" is aggregated across groups. Disposable income will, however, be unaffected.
- 89.** *Voluntary in-kind transfers:* Whilst at the macro level (i.e. for the national accounts) all current transfers are considered as income, micro-analysts sometimes make exceptions. The Canberra Report includes compulsory transfers and voluntary cash transfers that are "regular, and/or expected and relied on by the recipient" as income. Other voluntary transfers, especially transfers-in-kind, are not considered as income (Canberra Group, 2001, pages 20 ff, paragraph 2.4.2.5). Their argument for excluding all voluntary in-kind transfers, such as "presents exchanged between households, and clothing, etc. donated to charities and then distributed to beneficiaries", and some voluntary cash transfers, was that these are possibly sporadic transfers which are usually relatively insignificant. They are therefore better regarded as transfers of expenditure. That is as part of non-consumption expenditure of the donor unit but of actual final consumption of the receiving unit. This way they do not feature in the income measurement of either unit or in their consumption expenditure. It is a conceptually neat approach.
- 90.** However, in some economies, in-kind transfers between households are even more important than cash transfers. For example, goods transferred to rural households may not be available locally. Parents may directly acquire accommodation for their children studying away from home. Thus, if income statistics were used for welfare analysis, ignoring such in-kind transfers could distort the analysis. For example, in surveys between 1988 and 1994 in Côte d'Ivoire, Ghana and Peru, over 30 per cent, 60 per cent and 38 per cent, respectively, of total income were inter-household transfers for households in the first decile of the income distribution (World Bank, 2000, Volume 1, page 275, box 11.1).
- 91.** Participants at the Meeting of Experts were generally in favour of including income in-kind and transfers in kind arguing that they were not always insignificant. (An Employer participant stated that it accounted for 10 per cent of rural household's income in that person's country.) A Worker participant pointed out that, as social security regimes were changing in the face of the current economic crises, this type of transfer was becoming increasingly important for student households and households of young professionals. Also, the distinction between voluntary cash transfers that are regular and relied on by the recipient and others is a fine one which may be difficult to apply in practice. The recommendation to the Conference is therefore to consider all regular current transfers in cash and as goods as income for the receiving household with the proviso that the value of transfers received as goods should be recorded separately.

(Paragraph 18 of the draft resolution)

Current transfers received (services)

- 92.** *Social transfers in kind (STIK)* come from government-provided services to individual households such as education, health, social welfare, transport and cultural services (when most funding comes from government). These are called individual services, as

distinct from collective services such as security (law and order), defence and public administration.

93. They affect groups differently across time, space and the spectrum of the income distribution. Thus, comparisons between groups would be affected by their exclusion. Their aggregate value can be determined for national accounts purposes but valuation at the household level could be problematic. Although some valuation methods are under consideration, they are not yet fully developed (see Chapter 8 below). The Canberra Report accepts that STIK should in principle be part of the definition of income but because of the valuation difficulties recommends that it should not be part of the practical definition of income (Canberra Group, 2001, pages 22 ff).
94. *Services transferred from other households:* Similarly, the estimated value of services transferred from other households, such as grandparents taking care of grandchildren after school hours, should be included as income of the recipient household, i.e. that of the parents in this example. Important as this kind of transfer is becoming, there are again the same difficult valuation issues as for own-produced services.
95. The view of the Meeting of Experts was that these transfers of services, especially social transfers in kind, were important for welfare analysis, but their regular inclusion in an income measure would be difficult. A Government participant informed the Meeting that STIK were in fact valued from time to time in that person's country. The recommendation to the Conference is that social transfers in kind and transfers of services from other households be excluded for now from the operational definition of income but countries should value STIK from time to time because of their importance for welfare analysis.

(Paragraph 19 of the draft resolution)

Holding gains

96. Changes in the value of financial and non-financial assets and liabilities over a reference period may occur without any direct action of the owner, for example, changes in the value of stocks and shares. These are referred to as nominal holding gains or losses. A holding gain, the result of an increase in assets or a reduction in liability, increases the net worth of the owner's assets while a loss has the opposite effect. Nominal holding gains or losses may be realized (if the owner sells the asset) or remain unrealized. They are real holding gains or losses when account is taken of inflation.
97. It could be argued that a real holding gain, accruing over the reference period of interest, is available for consumption, especially if realized, and does not reduce real net worth over this period. It should therefore be considered as income according to the conceptual definition of income. Some countries, such as Finland, Norway and Sweden include realized holding gains in their definition of income (EU-SILC, 2002, page 25).
98. The treatment of holding gains in other standards is essentially to exclude them from income, at least from the operational definition of income (SNA, 1993; Canberra Group, 2001, page 17, section 2.3.2; EU-SILC, 2002, page 26; ABS, 1995). The measurement of holding gains, especially unrealized holding gains, could be problematic in practice. Even when this is possible, there could be difficulties in deciding which change in the value of the asset should be included in the income measurement, as illustrated in an example in the Canberra Report (Canberra Group, 2001, page 29).

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99. There were conflicting views in the Meeting of Experts over this item. One expert argued for the inclusion of realized holding gains on the grounds that they provide a means for households to consume. Unrealized gains should, however, be excluded as this assertion does not hold for them. Others rejected this differential treatment of realized and unrealized holding gains because the realization of holding gains can be significantly affected by factors such as tax regimes, market conditions and business cycles. Moreover, the resulting volatility could be translated into the measurement of income and so into the income distribution.

(Paragraph 20 of the draft resolution)

Exclusions

100. Receipts that are not to be considered as income on the basis of their irregularity or non-recurrence include lottery prizes, gambling winnings, non-life insurance claims, inheritances, lump-sum retirement payments, life insurance claims (except annuities), windfall gains, legal/injury compensation claims (except those in lieu of foregone earnings) and loan repayments.

(Paragraph 21 of the draft resolution)

101. Some of these receipts have their counterparts in consumption expenditure. The treatment here therefore has to be consistent with the recommendations made later. An example is the exclusion of non-life insurance claims that would then have to be deducted from non-life insurance premiums i.e. treated as negative consumption expenditure. This is consistent with the recommendations of the Canberra Report (Canberra Group, 2001, page 28, section 2.5.2.2).

102. Others that are excluded on the grounds that they represent a running down of assets are receipts from the sale of assets, withdrawals from savings and loans obtained.

(Paragraph 22 of the draft resolution)

103. The recommendation in the draft resolution is that these receipts are to be excluded from the conceptual definition of income. Nevertheless, as they are important for the analysis of the financing of consumption expenditure, they should, as much as possible, be collected along with the income receipts.

(Paragraph 23 of the draft resolution)

Aggregation

104. The various components discussed above can be aggregated in a hierarchy to come up with various measures of income for analytical purposes.

105. As indicated above, the sum of employee income and income from self-employment is “**income from employment**”. When this is added to income from household production of services, the aggregate is referred to as “**income from production**”. The sum of income from production and property income is called “**primary income**”. “**Total income**” is the sum of this income and transfer income.

106. Income from employment is useful for analysis of the relationship between employment status and income while income from production reflects the income coming from

production activities. Primary income, an SNA aggregate, is used for analysis of the income available for secondary distribution in national accounts. Total income is the aggregate measure in the existing ICLS resolution (paragraph 14). The Canberra Report also refers to it as the “first measure of aggregate income” (Canberra Group, 2001). The usefulness of total income in analytical studies is that it is unaffected by changes in institutional arrangements with respect to tax laws and social security contributions across countries and time. However, the inclusion of both social security contributions and benefits as well as the treatment of inter-household transfers such as family support payments may lead to double counting when this measure is aggregated across groups.

- 107. “Disposable income”** is calculated as total income less direct taxes (net of refunds), compulsory fees and fines. If social security contributions are included in total income, then they are also deducted in computing disposable income (EU-HBS, 1997). In the definition adopted in the Canberra Report some voluntary transfers paid are also deducted. The EUROSTAT draft manual on income measurement recommends using the two criteria of compulsory (or quasi-compulsory) and regular to identify those transfers that are to be deducted to get disposable (or net) income. A transfer is quasi-compulsory if the donor household considers that it reduces their ability to consume/save and that the household is under some non-formal obligation or moral commitment to make it, e.g. family support payments (EU-SILC, 2002, page 29, section 2.1.3).
- 108.** Disposable income is the preferred analytical income measure for many forms of income distribution analysis as it is close to the maximum available to the household for consumption expenditure during the accounting period. At the Meeting of Experts some concern was expressed about the difficulty of evaluating taxes for individual households as well as about the recommendation of the Canberra Report to deduct some family support payments that are voluntary in nature.
- 109.** Another aggregate is “**adjusted disposable income**”, which is the sum of disposable income and social transfers in kind (SNA, 1993, section 8.26). It represents the maximum amount that a household has available to consume during the reference period without reducing its assets or increasing its liabilities. Important as this aggregate is for welfare analysis, the difficulties of evaluating social transfers in kind referred to above limit the extent and frequency with which it could be computed.

(Paragraph 24 of the draft resolution)

Annex 1

Components of household income and relationship to ICLS income-related resolutions

	Components	Income aggregates	Resolution
	Direct wages and salaries for normal time worked or work done ^(a) Overtime payments Remuneration for time not worked Regular cash bonuses and gratuities, including year-end and seasonal bonuses, allowances, premiums, etc.) Profit-sharing bonuses Estimated payments in kind	Gross cash earnings Payments-in-kind (Individuals)	WS (1973)
+	Commissions and tips ^(a) Fees paid to directors of incorporated enterprises ^(a) Severance and termination pay ^(a) Profit or loss from own unincorporated enterprise ^(b) Employment-related pensions and benefits from government sponsored social insurance schemes; pensions and benefits from employer-sponsored social insurance schemes ^(c)	Income from paid employment Income from self-employment Gross and net of taxes (Individuals)	ERI (1998)
+	Imputed value of own-produced goods and goods for barter less cost of inputs ^(b) Pensions and benefits from government social insurance schemes not related to employment ^(c) Social assistance benefits Transfers from NPISHs and other households in cash and goods Property income ^(d) Estimated value of owner-occupied dwelling ^(e)	Income from production Property income Primary income Total income (Individuals and households)	HIES (2003)

^(a) Employee income. ^(b) Income from self employment. ^(c) Transfers received. ^(d) Property income.
^(e) Income from own production of services for own consumption.

WS: 12th ICLS resolution concerning an integrated system of wages statistics.

ERI: 16th ICLS resolution concerning the measurement of employment-related income.

HIES: Proposed guidelines concerning household income and expenditure statistics.

Annex 2

Components of household income according to the draft proposals (column 1) and relationship to non-ILO international guidelines

HIES: Draft guidelines on household income and expenditure statistics

CG: Final report of Canberra Group on household income statistics

EM: Eurostat manual on income measurement

SNA: System of national accounts

+ = Included; - = Excluded; +/- = Not clearly specified;

Present proposals (HIES)	Principles	CG	EM	SNA
1. Income from employment				
<i>Employee income</i>				
Direct wages and salaries for normal time worked or work done		+	+	+
Remuneration for overtime		+	+	+
Remuneration for time not worked		+	+	+
Regular cash bonuses and gratuities, including once-a-year and seasonal bonuses, premiums and allowances		+ ²	+	+
Commissions and tips		+ ²	+	+
Profit-sharing bonuses, etc.		+ ²	+	+
Fees paid to directors of incorporated enterprises		+	+	+/-
Severance and termination pay	No regularity	+ ²	+	+
Estimated value of free or subsidized goods and services from employer ¹		+ ²	+ ⁰⁰⁰	+
Employers' social insurance contributions ³	No access	+ ²	+ ⁴	+
<i>Income from self-employment</i>				
Profit or loss from own unincorporated enterprise		+	+	+
Expected value of own-produced goods less cost of inputs: for barter and/or for own consumption		+	+ ²	+
2. Property income				
Interest, dividends, profits from capital investments in unincorporated enterprises		+	+	+
Rent from produced assets (rentals) net of expenses		+ ^{SC}	+ ^{IS}	+ ^{IS}
Rent from unproduced assets net of expenses		+ ²	+	+
Royalties		+ ^{2 IS}	+ ^{IS}	+ ^{IS}
3. Income from own production of services for own consumption				
Net value of flow of services from owner-occupied dwelling =		+ ^{2 IS}	+ ^{SC}	+ ^{IS}
■ Estimated rental equivalence (primary and other residences) less expenses on maintenance, repair and other such paid by a landlord; property taxes; property and liability insurance; mortgage interest				
Net value of home produced services ² =		-	-	-
■ Estimated value of services less expenses incurred in production				
Net value of services from other consumer durables ² =		-	-	-
■ Estimated value of services less expenses for repairs				

Present proposals (HIES)	Principles	CG	EM	SNA
4. Transfers received in cash and goods			00	
<i>Government-sponsored social insurance schemes</i>				
State pensions	Reduces net worth	+ **	+ ** SC	+ **
Family-related allowances		+ **	+ ** SC	+ **
Unemployment benefits, etc.		+ **	+ ** SC	+ **
Government non-monetary transfers provided under social security schemes (housing, health, recreation and culture, education, social protection, etc.)		+ **	+ ** SC	-
<i>Private employer-sponsored social insurance schemes</i>				
Pensions paid as part of				
■ Funded schemes	Reduces net worth	+ **	+ ** SC	+
■ Unfunded schemes	Reduces net worth	+ **	+ ** SC	+
Benefits (as above for government-sponsored schemes)		+ **	+ ** SC	+
Non-monetary transfers provided under social insurance schemes (housing, health, recreation and culture, education, etc.)		+ **	+ ** SC	-
<i>Social assistance benefits from government (universal and means-tested)</i>				
Monetary: Private pensions and annuities				
		+ **	+ ** SC	+ **
Non-monetary benefits (free/subsidized housing, food, transportation, clothing, etc.)				
		+ **	+ ** SC	+ **
<i>Current transfers from NPISHs</i>				
Monetary: Regular cash support, scholarships, strike pay, etc.				
		+ 2 **	+ **	+ **
Non-monetary (goods): Free/subsidized housing, health, food, etc.				
		+ 2 **	+ **	+ **
<i>Current transfers from other households</i>				
Monetary: Alimony, child support, parental support, etc.				
		+	+ **	-
Non-monetary (goods): Regular gifts (free/subsidized housing, food, etc.) – home-produced and not home-produced				
		+ **	+ *** SC	-
Regular receipts from inheritances, etc.				
		+/-	+ **	-
5. Transfers received in services ²				
Estimated value of social transfers in kind (from government and NPISHs, e.g. health, education, transportation, etc.) ²				
		-	+ ***	-
Estimated value of services transferred from other households (home-produced and not home-produced) ²				
		-	-	-
6. Total income (1 + 2 + 3 + 4 + 5 ²)				
<i>Minus</i>				
7. Taxes and compulsory transfers				
Direct taxes on income less refunds				
		+	-	+
Direct taxes on wealth less refunds				
		+	+	+
Compulsory fees				
		+ 2	-	+
Interest paid on business loans (excluded)				
		+ *	+ 0	-
Interest paid on mortgages (excluded)				
		+ *	+ 0	-
Interest paid on consumer credit (excluded)				
		+ *	+ 0	-
<i>Minus</i>				
8. Compulsory social security contributions				
Employee social security contributions				
		+	+	+
Employer social insurance contributions ³				
		+ 2	+	+
<i>Minus</i>				

Present proposals (HIES)	Principles	CG	EM	SNA
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9. Inter-household family support paid

Alimony, child support and other compulsory payments		+ ²	+	-
Regular involuntary (quasi-compulsory) transfers paid		+ ²	+	-

Equals

10. Disposable income (6 – 7 – 8 –9)

1 = Not including "imposed payments in kind". 2 = Exclude from operational definition of income. 3 = Not required to compute disposable income. 4 = When feasible. SC = Separately in a new category. IS = Income from self-employment. * = Deducted from interest received. ** = Cash or near-cash only. *** = Cash and dwellings only. o = Presented and then deducted from total to get gross. oo = Classified by risk/need. ooo = Car and dwelling (SC), others (4).

4. Household consumption expenditure

Basic concepts and definitions

- 110.** Households have personal needs and wants that are directly satisfied through consumption of goods and services resulting from activities that are productive in an economic sense (SNA, 1993, 6.6, page 121). These goods and services are referred to as **consumer goods and services** and their individual value is defined as the **consumption expenditure** on these goods or services.
- 111. Household consumption expenditure (HCE)** is the value of consumer goods and services that were acquired (used or paid for) by a household for the direct satisfaction of the needs and wants of its members:
- (a) through direct monetary purchases in the market;
 - (b) through the market-place but without using any money as means of payment (barter, income in kind); or
 - (c) from production within the household (own-account production).
- 112.** This definition of HCE is consistent with that of the SNA, except for the latter's limitation of own-account production to only goods, housing services and paid domestic services (SNA, 1993, paragraph 9.45, page 208). The EUROSTAT HBS manual (EU-HBS, 1997) and the existing Fourteenth ICLS resolution on household income and expenditure surveys use the same definition as that of the SNA. The ABS framework publication restricts the definition of HCE to only monetary purchases of services and non-durable goods (ABS, 1995).
- (Paragraph 25 of the draft resolution)*
- 113.** Households also acquire (or use) consumer goods and services that satisfy the needs and wants of its members through social transfers in kind from government and non-profit institutions or through transfers from other households. The sum of HCE and the value of these transfers is referred to as **actual final consumption (AFC)** of the household. This is the total value of consumer goods and services available to the household for satisfying the needs and wants of the household members. The same aggregate is used in the SNA (SNA, 1993, section 9.72, page. 212), except for transfers from other households, and in the EUROSTAT HBS manual (EU-HBS, 1997). The ABS framework publication (ABS, 1995) includes services from unpaid household work in its own definition of AFC.
- 114.** Household consumption expenditure (by type of expenditure) is the most appropriate aggregate for the estimation of weights for CPI, especially the monetary components of HCE. Actual final consumption is a more appropriate aggregate for welfare analysis as it takes into consideration all consumer goods and services available to a household for the satisfaction of its needs and wants.
- 115.** The existing resolution on household income and expenditure surveys does not include any reference to AFC. The Meeting of Experts, however, agreed that both aggregates were useful and should be covered by the guidelines, although an Employer participant had some misgivings about the inclusion of in-kind consumption expenditure in the aggregates.

(Paragraph 26 of the draft resolution)

- 116.** Households also incur expenditures that do not result in the acquisition of any goods or services for the direct satisfaction of its own needs, such as compulsory and quasi-compulsory transfers made to government, non-profit institutions and other households. These are referred to as the non-consumption expenditure of households. **Household expenditure (HE)** is the sum of household consumption expenditure and the non-consumption expenditures of the household. HE is a measure of the total outlays of a household on its own consumption expenditure and on compulsory payments. The existing resolution includes a reference to this aggregate and defines it in the same way.

(Paragraph 27 of the draft resolution)

Timing of consumption

- 117.** The registration of expenditures on consumer goods and services may be based on whether these are acquired, used or paid for during a given reference period, to wit:
- (a) acquired during the reference period irrespective of when they were wholly paid for or used;
 - (b) used during the reference period irrespective of when they were acquired or wholly paid for; or
 - (c) paid for during the reference period irrespective of when they were acquired or used.

Often all three events occur during the same reference period, especially for non-durable goods and if the reference period is long, in which case these distinctions do not really matter.

- 118.** It is assumed that services are consumed on acquisition. The choice therefore is between registering expenditures on services that are consumed (or acquired) during a reference period and those that are paid for in this period. In general, consumption expenditure on services should be recorded on the basis of their acquisition.
- 119.** Households acquire goods when they become their legal or de facto owners. Acquisition of goods is often at the same time as or closely after payment, and then there is not much difference between when goods are acquired and when they are paid for. Although for credit purchases, acquisition takes place before payment or before the completion of payment, the purchaser does exercise full control over the use of the item on acquisition even though not yet necessarily being the legal owner. In any event, there is already a liability to pay on acquisition. Thus, the two events can be taken as simultaneous and so the registration could be based on either. The proposal is to base it on acquisition. This is consistent with the position in SNA (1993) and EUROSTAT HBS manual (EU-HBS, 1995).
- 120.** The choice for registering consumption expenditure on goods is therefore between acquisition and use. Even goods such as food items may not necessarily be consumed or wholly consumed during the reference period when they were acquired. The proposal to the Conference is that the choice should depend on the purpose of the consumption expenditure aggregate. For own-produced goods, especially food items, the recommendation to the Meeting of Experts was that use was preferable. Acquisition takes place when the items are added to stock and households might not know in advance how much of a stocked product they would finally consume and how much they would sell.

Indeed, for food consumption studies, actual food consumption is of particular interest. The Meeting, however, rejected this approach in favour of acquisition on the grounds that this was easier to measure.

121. When the main use of the statistics on HCE is for the estimation of CPI weights, the method used for determining the timing of consumption should be the same as that used in the CPI compilation.

(Paragraph 28 of the draft resolution)

Consumption expenditure

122. The measurement of consumption expenditure on goods and services depends on the decisions taken about the timing of the registration of their expenditures.

123. When the timing of registration is on the basis of those goods and services paid for in a reference period, consumption expenditure is the amount paid (or obligated to be paid) for these goods and services. This is referred to as the “**expenditure basis**” for estimating consumption expenditure (Garner and Short, 2002, page 16). It can be in terms of either the purchase value of the goods and services (**acquisition approach**) or the cash outflows made towards liquidating the corresponding payment liability (**payments approach**), i.e. the out-of-pocket expenditures. It is worth noting that with the payments approach, HCE will exclude any goods and services acquired through transfers or from production within the household.

124. If the timing of registration is based on those goods and services used during the reference period, then consumption expenditure is measured on the “**consumption costs**” basis, that is in terms of the estimated values of the service flows from the goods used by the household and the value of the direct services consumed.

(Paragraph 29 of the draft resolution)

125. For goods and services acquired during the reference period, consumption expenditure can be determined on the expenditure basis, extended to include the estimated values of in-kind goods and services, or on the consumption costs basis.

126. Some consumer goods can be consumed (and disappear) immediately upon purchase and some others can be consumed partly on several occasions during the reference period or even later (bulk purchase). Other consumer goods can be used many times over a period much longer than the reference period without reducing their capacity to satisfy needs and wants. The former two types of goods are usually referred to as **non-durable goods**, while the latter are called either semi-durable goods (shorter expected lifetime) or **durable goods**. Although the usual practice is to regard services as consumed on delivery, i.e. immediately, there are also services, e.g. education and health, that are consumed several times, if not continuously, over a very long period. These should then properly be considered as durable services. We, however, continue with the conventional treatment of regarding all services as consumed on delivery.

(Paragraph 30 of the draft resolution)

127. For non-durable goods (e.g. food) and services (e.g. utilities), expenditures are regarded as good approximations for consumption costs. So consumption expenditure on non-durable goods and services can be measured using the acquisitions approach, where this

approach is extended to include the estimated value of goods that are own produced, received in kind or through barter (World Bank, 2000, Volume 1, page 103).

(Paragraph 31 of the draft resolution)

- 128.** Due to the very nature of durable goods and owner-occupied dwellings, households continue to benefit from a flow of services from them long after the reference period of their initial purchase. Thus, there could be substantial differences between expenditures and actual consumption costs during the reference period. Choosing between these two approaches for measuring consumption expenditure on durable goods and owner-occupied dwellings provoked much discussion at the Meeting of Experts, particularly with respect to durable goods.

Consumption expenditure on durable goods and owner-occupied housing

Acquisition approach

- 129.** This approach evaluates consumption expenditure for durable goods on the expenditure basis, extended to include the estimated value of own-account production of durable goods and those received as income in kind or as transfers in kind.
- 130.** A problem with this approach is that it gives a misleading picture of year-to-year consumption by the household of long-lived durable goods, which could impact adversely on welfare analysis. One of the main reasons usually advanced for using consumption expenditure in preference to income for poverty and inequality analysis is that households tend to smooth out their consumption over time. Thus, consumption expenditure is less subject to seasonal or cyclical shocks than income. However, acquisition of long-lived durable goods is liable to fluctuate while the use of existing stocks of these goods is likely to be fairly stable. Registering sudden peaks in consumption expenditure when a household buys a car, for example, would not reflect such smoothing, especially if some panel sample design is being used to compare changes in consumption expenditure for households over time.
- 131.** This notwithstanding, the acquisition approach is the method commonly used by countries for measuring consumption expenditure on durable goods and this is also the method recommended for use in national accounts estimates (SNA, 1993), except for owner-occupied dwellings and valuables. Statistical offices normally use it for durable goods such as hi-fi equipment, cookers, refrigerators, washing machines, vehicles and clothing. When the main purpose of collecting expenditure statistics is to compile weights for a CPI to be used to monitor inflation, this method would be appropriate even for housing (based on acquisitions of new dwellings), especially when restricted only to monetary expenditures.

Payments approach

- 132.** In this approach, consumption expenditure on durable goods and owner-occupied dwelling (OOD) is measured using the out-of-pocket expenditures (monetary outlays) that owners incur as the result of acquiring and owning durable goods, i.e. for their maintenance, upgrading and protection or for liquidation of the associated payment liability, if any. In the case of owner-occupied dwellings these outlays could include initial cash outlay for purchasing the house, mortgage repayment, mortgage interest payment, insurance, maintenance and repairs, conversion and extension, property taxes,

transaction costs and any other payment related to the dwelling. Expenditures such as mortgage repayments could be omitted if it is considered that investment is the main reason for households purchasing their dwellings. Similar expenditures can be identified for some durable goods but not for those from own-account production and in-kind receipts.

- 133.** There is, however, some conceptual difficulties in using monetary outlays for consumption expenditure as illustrated in the case of owner-occupied dwellings. This approach does not account for housing equity, that is the opportunity cost of holding equity in the dwelling (Diewert, 2001). It could thus distort welfare analysis as homeowners with the same consumption costs for housing services could end up having lower or higher consumption expenditures than renters depending on the history of their mortgages, i.e. older, non-existent, or newer mortgages (Garner and Short, 2002). Other reasons include the dependence of mortgage interest on financing arrangements, which are largely personal (Goodhart, 2001), and on taxation policies and decisions on refinancing. Also, it ignores depreciation and the unrealized capital gains that compensate for high interest rates during recession periods.
- 134.** The advantages of this approach, however, are that it is easy to explain to users and, as it is based on the actual payments made by households, considered as objective. It is possibly suitable for CPI weights when the intention is to use CPI for income compensation. It could also be useful for the study of inflows and outflows of funds from households.

Consumption approach

- 135.** An alternative approach is to treat all durable goods as fixed assets producing non-financial services that are then consumed by households during the reference period. So consumption expenditure of durable goods is evaluated in terms of the cost of acquisition of their services. This approach is consistent with economic consumption theory from the point of view that many durable goods do not in themselves produce utility directly, that is no benefit or welfare is derived from their direct use. This is the approach recommended in the ABS framework publication (1995) and in Johnson et al. (1990).
- 136.** The SNA recommends this approach for owner-occupied dwellings on the grounds that dwellings are capital purchases providing services to the owners during the reference period (SNA, 1993, section 9.58, page 211). So it is the estimated value of these services that is taken as their consumption expenditure. It is also the approach taken in the EUROSTAT manual (EU-HBS, 1997, section 5.4, page 49), implicitly in the existing ICLS resolution (paragraph 15) and used in many countries, especially when the main purpose of the statistics is for compilation of CPI.
- 137.** For durable goods, the SNA recommends using the acquisition approach for HCE although these goods are treated as fixed assets, in the same way as OOD, in the capital account of enterprises (SNA, 1993, section 10.7, page 218). Several reasons are usually advanced for the different treatment of dwellings and durable goods in the SNA (Franz et al., 1998, section 2.1.11, page 30; CPI, 2003, Chapter 14, box 14.3). Most households perceive ownership of dwellings as an investment, unlike durable goods owned. Also, much fewer households purchase their dwellings directly from out of their pockets compared to those who do so for durable goods. Some financing scheme is usually necessary for the former. Moreover, the form of access to occupied dwellings (ownership, renting, etc.) varies across countries and time, a variation that is relatively unique compared to access to most durable goods. The other reasons given, i.e. longer lifetime and much higher costs, are, however, weaker than the previous ones. For while they may

be valid for many types of durable goods, there are some that also have a long life and are not cheap, e.g. a vehicle. Also, some durable goods are partly used in household production activities where they are considered as capital items and not treated as part of current expenditure, e.g. cookers, washing machines, refrigerators, freezers.

- 138.** This SNA recommendation to treat owner-occupied dwellings differently from durable goods in HCE is seemingly inconsistent but there may be practical reasons for accepting it. When households own a large number of relatively cheap durable goods, as in some countries, a lot of effort would be required to assess the services flowing from all of them. Thus, though theoretically possible, the computation of their use values could pose considerable difficulties in practice. Besides, it is considered undesirable to have too large a proportion of household consumption expenditure derived from imputations.
- 139.** However, it is worth noting that the vast majority of durable goods are short-lived (less than five years) and not very expensive. For these, Diewert (2001, page 64) has demonstrated that the value of their capital services would not be very different from their purchase values. Thus, in reality the number of imputations required for the remaining durable goods would not necessarily be large. This point supports the proposal in the World Bank publication on household survey questionnaires (World Bank, 2000) to limit the use of this approach to only major durable goods and owner-occupied dwellings. The meaning of “major durable goods” is to be determined in relation not only to a lifetime beyond several years but also their value relative to the household’s living standards (e.g. a car but not a shirt).
- 140.** The value of consumption expenditure estimates based on a consumption approach will usually be higher than that from the acquisition approach (Diewert 2002, page 64). Since the distribution of ownership of some types of durable goods may be lop-sided towards certain “rich” households, welfare analysis could be affected by the approach used. Those owning such durable goods would be considered to have even higher aggregate consumption expenditure than if the acquisition approach had been used. Thus the rich would be measured as being relatively richer with the former approach. The same argument would also apply to cross-country comparisons and, if there is a relative shift to a bigger bundle of such durable goods over time, to analysis over time.
- 141.** When the consumption expenditure aggregate is to be used in welfare analysis or to compile weights for a CPI to be used as a cost-of-living index, the consumption approach is conceptually preferable. However, if the approach were to be adopted, then it would be necessary to also include corresponding estimated values in the income or resources measurement. Expenditure surveys carried out by most countries do not use this approach except sometimes for owner-occupied dwellings.

Conclusion

- 142.** The choice between the acquisition and consumption approaches should depend on the use to which the consumption expenditure statistics are to be put. The consumption approach is appropriate for welfare analysis and the computation of cost-of-living indices while, for CPI used as an index to monitor inflation or as a compensation index and for national accounts, it is probably the acquisition approach that is more appropriate.

(Paragraph 32 of the draft resolution)

- 143.** For consistency with SNA (i.e. for macro analysis such as national accounts and CPI), flow of services should be used for expenditure on OOD while acquisition costs are used for expenditures on durable goods, non-durable goods and services. This seemingly

inconsistent SNA mixture of these approaches is the one followed by most countries for CPI and national accounts. Its special treatment of dwellings could be justified on the grounds of the prevalent method of financing their purchase, the spatial and temporal variation in their ownership and the fact that, unlike durable goods, their value often appreciates.

(Paragraph 33 of the draft resolution)

- 144.** Statistics offices should, however, collect information that could be used to value flow of services for major durable goods (defined in terms of expected lifetime or cost). These could then be used to produce consumption expenditure aggregates for welfare analysis and other analytical purposes.

(Paragraph 34 of the draft resolution)

- 145.** Whichever method is adopted for measuring consumption expenditure, the corresponding method should be used for measuring household income when both income and expenditure statistics are to be used in combination.

(Paragraph 35 of the draft resolution)

Operational definitions

- 146.** The operational definitions of HCE and AFC exclude expenditures on certain goods and services as well as transfers made even though they are included in their conceptual definitions. Also, the actual measurement of expenditures on certain goods and services as well as on transfers made by the household raises special issues. These are best described in terms of the sources of goods and services, the destination of transfers and the purposes of other expenditures (Annex 3).

Goods acquired from the market, own produced or received as income in-kind

- 147.** *Non-durable goods:* Expenditure on these is taken as the cost of their acquisition. It is measured in terms of either their purchase value or the estimated value of those received as income in kind, through barter, from own production or from stocks of enterprises owned by the household. These goods include food items, personal care items (toiletries, perfumes and other make-up products, medication, etc.), fuel (heating oil, coal, firewood), educational and entertainment items (newspapers, magazines, books, etc.) household items (cleaning products, etc.) and so on.

(Paragraph 36 of the draft resolution)

- 148.** *Durable goods* include household kitchen appliances (cookers, refrigerators, dishwashers, microwave ovens, etc.), household information and entertainment appliances (hi-fi equipment, radios, televisions, cameras, musical instruments, etc.), other household appliances (washing machines, dryers, etc.), household transportation equipment (cars, bicycles, etc.), other household items (furniture, soft furnishings, etc.), clothing items, utensils, and so on. When the acquisition approach is used, expenditure on these goods is in terms of the cost of their acquisition, in the same way as for non-durable goods.

(Paragraph 37 of the draft resolution)

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- 149.** *Second-hand goods* are usually treated the same way as new goods, that is, their purchase values are included as household consumption expenditure (EU-HBS, 1997). For consistency with the conventions of SNA and for estimating weights for CPI, these values should be measured net of sales, with the possibility of negative expenditure at the household level if purchases are less than sales or if there are no purchases (SNA, 1993, section 9.31, page 207). This is the approach adopted in many countries (ABS, 2000, page 5; ONS, 2000, page 180). It is also preferable when consumption expenditure statistics and income statistics are analysed jointly. However for some other types of analysis of households' welfare and behaviour, purchases recorded gross may be preferable. Thus the recommendation is that purchases and sales of second-hand goods should be recorded separately so that HCE could be computed net or gross of sales.

(Paragraph 38 of the draft resolution)

Goods received as transfers from outside the household

- 150.** *Non-monetary gifts* should be treated as income for the recipient household according to the recommendation in Chapter 3. They should therefore also be taken as part of household consumption expenditure for these households. This is the approach taken in surveys in some countries (STATIN, 1999, page 34), the one proposed by the World Bank (World Bank, 2000, Volume 1, pages 117 and 284), implied in the existing ICLS resolution and in the United Nations recommendations (UN, 1989, paragraph 4.92, page 134). The proposal is, however, not entirely satisfactory given the conceptual definition of HCE. Both monetary and non-monetary gifts donated should be registered and treated as non-consumption expenditure of the donor household.
- 151.** The EUROSTAT manual (EU-HBS, 1997) considers that the value of these gifts are more easily known to the donor household than to the recipient household. Their proposal, which is in line with common practice in the European Union, Canada (STATCAN, 2000) and the United States (BLS, 2001), is that these gifts are to be recorded as expenditure for the households making the gift and ignored for those receiving them. Estimating the value of the gift for the recipient household is, however, not such a major problem as market prices could be used. It should be noted that not to record them for recipient households could distort the analysis of living standards if the contribution of these gifts to actual final consumption is significant.
- 152.** The proposal of the Canberra Report is to treat expenditures on these goods as transfers of expenditures (Canberra Group, 2001, pages 20 ff, paragraph 2.4.2.5). Thus, they are recorded as actual final consumption of the recipient household but not as part of its household consumption expenditure. For the donor household, these expenditures are recorded as non-consumption expenditure. Thus, they are not considered as HCE neither for the donor household nor for the recipient household.
- 153.** *Transfers from government and NPISHs* should be treated in the same way as non-monetary gifts from other households, i.e. in principle as AFC but in practice as HCE of the recipient household.

(Paragraph 39 of the draft resolution)

Services acquired from the market

- 154.** In general, consumption expenditure on services is measured as the amount paid for the services acquired. This decision could, however, pose a problem for consumption

expenditure on services provided by utilities as bills may arrive much later than consumption and in some instances bills reflect estimated and not actual consumption. Therefore, the proposal to the Meeting of Experts was that consumption expenditure on services provided by utilities should be recorded on the basis of those paid for. This was, however, rejected by the Meeting. It is worth noting that if this proposal were adopted, a decision should also be made about the treatment of reimbursed over-payments that may occur. The recommendation is that these should be treated as negative expenditures.

(Paragraph 40 of the draft resolution)

- 155.** *Financial services:* These are accounting fees, bank service charges and credit card service fees. They should be included in household consumption expenditure as they are charges for consumption of services. In theory all such charges should be included but in practice it is sometimes difficult to identify them, for example those in connection with the purchase of foreign currency for private use from some non-formal institutions. Also, the SNA refers to an implicit service component for financial intermediary services, which is the difference between the interest paid by households as borrowers and that received by households for deposits with banking institutions. This is, however, difficult to measure at the household level.

(Paragraph 41 of the Draft Resolution)

- 156.** *Interest payments:* These can be separated into interest on business loans, mortgage interest and interest on consumer credit. Consistent with the recommended treatment for income statistics, interest on business loans is to be excluded from HCE, as it would have been subtracted in arriving at mixed income. Mortgage interest is also to be excluded since it is implicitly covered by the value of the flow of services of OOD.
- 157.** Some component of consumer credit interest is a charge for services, in which case that part should be included as consumption expenditure. Some other component is taken as transfer payment, that is as compensation to the original owner of the borrowed money (Astin, 1999, pages 2-3), and so considered as non-consumption expenditure (compulsory transfers to the original owners of the borrowed funds). As it is very difficult to measure these components directly, countries differ in their treatment of interest payments. The practice in some countries is to record all interest paid by a household as consumption expenditure. Such a practice is consistent with the assumption that the greater part of interest is a charge for services provided by the financial intermediaries. Some countries, however, treat interest paid as non-consumption household expenditure, consistent with the assumption that the greater part is a cost for borrowed money, a situation that arises in particular in inflationary circumstances.
- 158.** Interest payments provoked much discussion at the Meeting of Experts. There was recognition that only that part that is a service charge should be considered as consumption, though this is difficult to measure at the household level. The inclusion of total payment could, on the other hand, be inconsistent with CPI measurement and should depend on the item for which the interest is paid. One Government participant indicated that in their country mortgage interest is included as consumption expenditure but credit card interest is not included for the compilation of CPI. In EUROSTAT, all interest payments are considered as non-consumption expenditure and deducted from total income to arrive at disposable income. The Meeting's attention was drawn to the increasingly prevalent practice of financial institutions to consolidate all kind of debts into encompassing loans. It could therefore be difficult in these circumstances to separate out those that are consumption-related from the rest.

(Paragraph 42 of the draft resolution)

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- 159.** *Insurance premiums:* They are of two types, life and non-life. The latter includes insurance with respect to risks such as fire, theft and water damage as well as health insurance (sickness and accident), transport (personal transport, travel and luggage) and others such as civil liability (e.g. third-party insurance). It excludes those paid-for insurance services purchased by unincorporated household enterprises. Countries differ in the types of insurance premiums included in HCE. Some include all premiums; some others include only non-life premiums while others treat all premiums as non-consumption expenditure. Almost always, however, life insurance premiums are excluded on the grounds that these are investment payments. The ABS framework publication (ABS, 1995), the EUROSTAT manual (EU-HBS, 1997) and the existing ICLS resolution recommend the inclusion of only non-life insurance premiums. This is the proposal being recommended to the Conference.
- 160.** The payment of insurance premiums can give rise to insurance claims, e.g. for loss of property, or to reimbursements of expenditures, e.g. repayment for purchased medication. In the case of the latter, the reimbursement can be partial or complete and it can be a direct payment to the insured or indirect, when paid by the insurers directly to the providers. The treatment of insurance claims and reimbursements is an issue for both welfare analysis (based on consumption expenditures) and the compilation of CPI when the household or consumer pays at least part of the insurance premium. The proposal in the Canberra Report, is to treat them as negative expenditures (Canberra Group, 2001, page 28, section 2.5.2.2). Other alternatives are to consider these payments as income, as an increase in net worth or as a special memorandum item.
- 161.** Insurance premiums consist of a part, which pays for the costs incurred by the insurers for operating the insurance scheme, and a part, which goes toward the payments made for the incurred risks. The first part is a service charge to households and, conceptually, only that part should be included as household consumption expenditure. This is the approach taken in the SNA for both life and non-life insurance and is preferred when estimating weights for CPI (CPI, 2003, Chapter 10, section H.2). The separation of premium paid into service charge and “technical reserve”, the term used in the SNA for the second part, cannot however be done at the household level. So the choice is either to consider the entire premium as consumption expenditure, or to exclude all of it. The inclusion of the “technical reserve” part as consumption expenditure could lead to double counting when expenditure statistics are aggregated across households since some of the claims received (i.e. paid out of this reserve) could also have been used to finance expenditures in the same period. Treating reimbursements as negative expenditures would address this problem. There would still be a conceptual issue for the CPI being produced of whether the expenditures are being netted out of the premiums paid or out of the expenditures made (Turvey et al., 1989, pages 11-13). It is also important to consider if the entire premium is being taken into account or only that part paid by the household.
- 162.** For welfare analysis also, it could be useful to treat reimbursements as negative expenditures since the estimated HCE would then be reflecting only the costs actually payable by the household (ABS, 2000, page 5). On practical grounds, the insured may not know the value of the reimbursements if the insurers pay these directly to the providers. So the only information available to the insured may be the non-reimbursed part of the expenditure that was directly paid by that person. When compared to another insured, who has the option of paying the full costs and then later claiming reimbursement, the consumption expenditure of the former would seem to be less unless the reimbursement is deducted from the full cost for this second person.
- 163.** In order to have flexibility for aggregating consumption expenditures in different ways, insurance premiums should be recorded gross while insurance claims and reimbursements

should be recorded separately. When claims and reimbursements have not being paid, self-estimates could be used.

(Paragraph 43 of the draft resolution)

- 164.** *Gambling expenditures:* (lottery tickets and bets) They are specifically excluded in the existing ICLS resolution and some countries have adopted a similar approach in their surveys. There are, however, some others who treat these expenditures differently. The EUROSTAT manual (EU-HBS, 1997) recommends that the stakes should be recorded gross as consumption expenditure since these payments are voluntary and are made not only to governments but also to private institutions. Gambling windfalls, however, are not correspondingly considered as income nor deducted from losses (ONS, 2000). The treatment in the United States consumer expenditure survey is that net losses (stakes less winnings) are treated as consumption expenditures but only the stakes are recorded if there is a net gain. In the latter instance, the winnings are recorded in a special income category for balancing purposes. SNA treats stakes as consisting of a service charge paid to those operating the gambling, which is therefore consumption expenditure, and an element used for paying out winnings, which is an inter-household transfer payment. So only the former should be included as consumption expenditure. This is the treatment recommended in the draft revised CPI manual of the Inter-Secretariat Working Group on Prices Statistics (CPI, 2003). Again, as for insurance premiums, such a distinction would be difficult to implement at the micro level but at the aggregate level it is estimated as the difference between payables (stakes) and receivables (winnings).
- 165.** The recommendation in the Canberra Report is that gambling expenditures less winnings should be treated as consumption expenditure (Canberra Group, 2001, page 27, section 2.5.2.2). One advantage in this recommendation is that, when consumption statistics are aggregated across households, the estimated consumption value on gambling would be a good estimate of the service component required for CPI and national accounts. The second is that large winnings would then not seriously distort the distribution of income, as they would be recorded as negative expenditures with only a resultant increase in savings. Although there would be a risk of distorting the distribution of consumption expenditure, the effect would be minimal. Large winnings are rare and affect only the upper end of the distribution, which is not usually of much interest in poverty analysis. However, regular small expenditures on stakes would be adequately reflected in household consumption expenditure. Most participants at the Meeting of Experts endorsed this approach after some discussion.

(Paragraph 44 of the draft resolution)

- 166.** *Housing decorations, repairs and maintenance:* These are considered as consumption expenditures in the SNA provided they are similar to those carried out by tenants. Major repairs and home improvements (extensions, modernization, rebuilding) are, however, capital expenditures and should be excluded. This is the practice followed by most countries. It was, however, pointed out at the Meeting of Experts that there were country differences in the legal obligations of tenants that could adversely affect cross-country comparisons.

(Paragraph 45 of the draft resolution)

- 167.** *Contributions to NPISHs* (subscriptions and donations): They are generally excluded from household consumption expenditure (EUROSTAT, 1997; ABS, 1995) and treated as non-consumption expenditure. The SNA considers them compulsory transfers to these institutions while the Canberra Report proposes taking them as transfers of expenditure (Canberra Group, 2001, page 27, section 2.5.2.2). However payment of regular subscriptions (e.g. membership dues) to religious bodies, charities, trade unions, political parties, etc. are considered to have a direct link to the acquisition of goods and services

such as private non-profit schooling, counselling, etc. They thus satisfy the condition to be included as consumption expenditure.

- 168.** The proposal to the Meeting of Experts had applied this consideration to all regular, small donations. However, financing practices in some of these institutions are changing from specifying a fixed levy for members (i.e. subscription) to requesting a pledge for a regular donation, the amount of which could vary depending on the member. Thus, given the difficulty of defining small, the proposal to the Conference is to include all regular donations, with emphasis on regularity.

(Paragraph 46 of the draft resolution)

- 169.** *Licences and fees* paid to government units generate a quid pro quo in some instances, that is, the delivery of goods and services that benefit directly the paying household. These include fees for testing, inspecting and licensing the use of certain equipment (TVs, radios, firearms, etc.); for providing passports, court services, access to museums, garbage collection, driving or piloting licences; etc. These should be treated as household consumption expenditures. Some others, such as licences to own or use a vehicle, boat or aircraft, can be consumption expenditures, depending on the particular circumstances of the country. The SNA, however, treats those in the second group as non-consumption expenditures following the conventions adopted for taxation statistics.¹ Other fees and licences, such as fees to hunt, fish, shoot, etc., are de facto taxes that are unavoidable and compulsory. In most cases, no direct or specific services or goods are provided to the paying household as a result. These are therefore non-consumption expenditures.

(Paragraph 47 of the draft resolution)

Own production of services

- 170.** These consist of services from owner-occupied dwellings (OOD), stocks of durable goods and unpaid household work. Expenditure on OOD is measured as the service flow from these dwellings and included in HCE. This should extend to all dwellings owned including vacation and weekend homes.

(Paragraph 48 of the draft resolution)

- 171.** As recommended in the discussion on the measurement of expenditure on durable goods in the above section on concepts, the service flow from stocks of these goods, especially major goods could be included in the operational definition of HCE. This should, however, be in lieu of the purchase value of new durable goods or the estimated value of those acquired in kind.

- 172.** A useful consequence of this treatment of the stock of durable goods is that the expenditure value can then be apportioned to different uses of the goods, if necessary. An example of this is splitting the expenditure between personal use of goods (consumption expenditure) and its use as input into production for an unincorporated enterprise (intermediate consumption). Another is differentiating between the use of such goods, e.g. cars, purely for tourism purposes (actual final tourism consumption) and other uses (Pérez Mira, 2002, page 7).

(Paragraph 49 of the draft resolution)

- 173.** Although services from unpaid household work are included in the conceptual definition of AFC, there are as yet no agreed principles for their valuation. The recommendation is

¹ The conventions are listed in the IMF's *Government Finance Statistics*.

that they should be excluded from the operational definition of AFC. However, it is worth noting that time use data could provide a useful basis for valuing these services and so countries may wish to consider doing so from time to time.

Services received as transfers from other households, NPISHs and government

174. The valuation of social transfers in kind and of in-kind services received from other households has so far proved difficult to operationalize. Thus, it was recommended that these be excluded from the operational definition of income, and the recommendation here is to also exclude them from the operational definition of AFC. Social transfers in kind are of particular importance for welfare analysis as noted earlier. Efforts should therefore be made from time-to-time to value them. At the Meeting of Experts, the EUROSTAT observer stated that they have a project in operation to investigate the possibility of including these transfers in their consumption expenditure aggregate.

(Paragraph 50 of the draft resolution)

Other issues

175. *Illegal, undesirable and luxury goods and services:* To the extent that households acquire these goods and services to satisfy the personal needs and wants of their members, they should be included as consumption expenditures irrespective of their nature and the methods used to produce, distribute or consume them. As this characterization of these goods and services tends to be subjective and/or depends on legislation and accepted national practices, excluding them could affect comparisons of consumption expenditure across space and time. However, information on them could be unreliable or non-existent in which case they would be excluded in practice. Also, choices made on the population coverage for the data collection exercise could effectively exclude some of these values.

(Paragraph 51 of the draft resolution)

Household expenditure

176. Household expenditure is the sum of household consumption expenditure and the non-consumption expenditures of households on:

- current transfers made in the form of goods and services to outside units such as other households and NPISHs for their own consumption including gifts, remittances, alimony, child support, irregular contributions to NPISHs and other quasi-compulsory transfers;
- compulsory transfers to governments such as income and other direct taxes (e.g. wealth taxes), compulsory fees and fines;
- pension and social security contributions.

(Paragraph 52 of the draft resolution)

Exclusions

Business expenditures

- 177.** Goods and services acquired for the use of unincorporated enterprises should be excluded from household expenditure, as these are intermediate expenditures for these enterprises. Also occupational expenditures (i.e. directly work-related expenditures) incurred by employees, such as for travel to work, special clothes and tools should in principle be excluded from HE. It is, however, usually difficult to distinguish between the use of these goods and services for business purposes and their use for personal or household consumption.

Investment expenditures

- 178.** Valuables (works of art, gold, jewellery, etc.) are excluded altogether from household expenditure as they are more often regarded as repositories of savings rather than expenditure items “used up” in the same way as other such items. They are defined as goods of relative considerable value, the main purposes of which are neither for use in production nor for consumption but as stores of value over time (SNA, 1993, section 10.7, page 218). Their actual identification would depend on national circumstances.
- 179.** Other capital expenditures such as savings, reduction of liabilities, amounts loaned, purchase of financial assets (e.g. bonds, shares), life insurance premiums, etc. are also excluded from household expenditures.

(Paragraph 53 of the draft resolution)

Annex 3

Operational and conceptual treatment of expenditure items

No.	Item	Conceptual approach	Operational treatment
1.0	Goods acquired from the market		
1.1	Non-durable goods	Acquisition costs	Acquisition costs
1.2	Durable goods (newly acquired)	Acquisition costs	Acquisition costs (net of sales for second hand)
2.0	Own produced goods or income in kind (newly acquired)	Acquisition costs (imputed)	Acquisition costs (imputed)
3.0	Goods received from outside the household		
3.1	Non-monetary gifts from other households	Acquisition costs (imputed) for AFC	Acquisition costs (imputed) for HCE
3.2	Transfers from government and NPISHs	Acquisition costs (imputed) for AFC	Acquisition costs (imputed) for HCE
4.0	Services acquired from the market		
4.1	Financial services (accounting, bank and credit card services)	Acquisition costs	Acquisition costs
4.2	Interest payments (consumer credit)	Service charge only	Full payment OR exclude from all (HCE, HE and AFC)
4.3	Non-life insurance premiums (health, property, household goods, travel, third party, etc.)	Service charge only	Full premium less claims (except possibly for health)
4.4	Gambling expenditures	Service charge	Acquisition costs net winnings
4.5	Housing decorations, repairs and maintenance	Acquisition costs	Acquisition costs (record separately)
4.6	Regular cash contributions for direct services from NPISHs (unions, religious bodies, etc.)	Acquisition costs	Acquisition costs
4.7	Licences and fees for direct services from government (TV, firearms; access to museums; garbage removal, etc.)	Acquisition costs	Acquisition costs

No.	Item	Conceptual approach	Operational treatment
5.0	Own production of services		
5.1	Owner-occupied dwelling	Service flow	Service flow
5.2	Durable goods – newly acquired and stocks (Alternative treatment: In lieu of 1.2 and parts of 2.0 and 3.0)	Service flow	Service flow (limit to major goods?)
5.3	Unpaid Household Work (housekeeping, cooking, repairs, etc.)	Acquisition costs (imputed value)	Exclude due valuation issues
6.0	1.0+2.0+3.0+4.0+5.0 (except possibly 5.2)	Household consumption expenditure (except for 3.2)	Household consumption expenditure
7.0	Services received as transfers (STIK and from other households)	Acquisition costs (imputed value) for AFC	Exclude due valuation issues
8.0	6.0 + 7.0	Actual final consumption	Actual final consumption
9.0	Compulsory and quasi-compulsory transfers to outside units		
9.1	Compulsory transfers to government (income and other direct taxes, compulsory fees and fines)	Actual payment	Actual payment
9.2	Compulsory and quasi-compulsory transfers to other households (alimony, child support, gifts donated, etc.)	Actual payment	Actual payment
9.3	Irregular contributions to NPISHs	Actual payment	Actual payment
9.4	Pension and social security contributions	Actual payment	Actual payment
10.0	6.0 + 9.0	Household expenditure	Household expenditure
11.0	EXCLUSIONS		
11.1	Investment expenditures (Life insurance premiums, valuables, savings, purchase of financial assets such as bonds and shares, reduction in liabilities, loans made, etc.)	Exclude from all	Exclude from all
11.2	Occupational expenditures of employees (clothes, special tools, etc. for use in work related activities)	Exclude from all	Include as HCE due difficulties separating out from personal use.
11.3	Other business expenditures (goods and services for use in unincorporated enterprises)	Exclude from all	Exclude from all but difficult to separate from personal use.

Notes: **HCE** = Household consumption expenditure. **AFC** = Actual final consumption. **HE** = Household expenditure

5. Measurement issues

Statistical unit

180. Amongst the units for the collection, presentation and analysis of statistics on income and expenditure are individual, family, household/consumer unit and income unit.

Household

181. The household is the one most commonly used not only for analysis but also as the sampling unit in surveys and as the unit of data collection. The household is sometimes defined as all persons living together in a housing unit (UNSD, 1998) – the dwelling unit concept. This is the unit recommended for use in the analysis of income distribution in the Canberra Report (Canberra Group, 2001, pages 38-39). A more common definition is based on the housekeeping concept. It is the one recommended for use in the 2000 round of population censuses (UNSD, 1998, section 1.324, page 50), and defines a household as follows:

A household is classified as either:

- (a) a one-person household, that is to say, a person who makes provision for his or her own food or other essentials for living without combining with any other person to form part of a multi-person household; or
- (b) a multi-person household, that is to say, a group of two or more persons living together who make common provision for food or other essentials for living. The persons in the group may pool their incomes and may, to a greater or lesser extent, have a common budget; they may be related or unrelated persons or constitute a combination of persons both related and unrelated.

(Paragraph 54(a) of the draft resolution)

182. This definition, in slightly different variations, is the one mostly adopted for the household: (SNA, 1993) (Franz et al., 1998), expenditure surveys in Australia (ABS, 2000), United Kingdom (ONS, 2000), etc. The notions of shared expenditure and shared residence are also the basis of the recommended definition of a household in the recommendations for the 2000 round of population censuses (UNECE and EUROSTAT, 1998) and in the EUROSTAT manual on budget surveys (EU-HBS, 1997). However, the definition of one-person households in the former explicitly includes lodgers who, as subtenants, have hired part of the housing unit for their exclusive use. These are unlike boarders who are defined as persons who take meals with households and usually use all available household facilities and are thus not separate from these households.
183. The consumer expenditure surveys of the United States use a definition of **consumer unit**, which though seemingly similar to the above definition of a household, is different in one important respect (BLS, 2001). The emphasis for distinguishing between one-person and multi-person households is that of the degree of independent financial responsibility for any two out of these three types of items: food, housing and other expenditures. Thus boarders would be considered independent consumer units since they are financially responsible, at least, for their food and housing even though these are shared with other members of the household.

184. The existing resolution on household income and expenditures introduces the idea of the existence of common housekeeping arrangements as a general criterion for identifying persons belonging to a multi-person household (ILO, 2000, page 57, section 12). The EUROSTAT draft manual considers sharing in housing facilities, i.e. benefiting “from housing costs paid by others” or contributing to “housing costs from own income” as the defining criterion (EU-SILC, 2002, section 4.1.3, page 66). It goes on to mention “sharing at least one meal each week” as an indicator used by some countries.

(Paragraph 55 of the draft resolution)

185. According to the above population census recommendations a household can be located in a housing unit or a set of collective living quarters or the household can be homeless.

Family

186. The family definition recommended for use as a derived unit in population censuses (UNSD, 1998, section 2.63, page 65) states that: “The family within the household, a concept of particular interest, is defined as those members of the household who are related, to a specified degree, through blood, adoption or marriage.”

187. Thus, a multi-person household can contain one or more families living with or without unrelated individuals, but a family cannot be in more than one households. Also, a one-person household is not a family. Apart from recommending that couples living in consensual unions should be regarded as married, no further prescriptions are given about the required degree of the relationship. There are some difficulties in applying even this wider concept of a family in polygamous situations with wives in the same or different dwelling units (Lefranc, 1997). Some countries have adopted a narrow definition of family restricting the relationship only to married couples, cohabiting partners or parents and children (UNECE and EUROSTAT, 1998). The treatment of foster children with regard to the family is a particular challenge. The proposal is to include them in the family if they are so regarded for purposes of social benefits and taxation.

(Paragraph 54(b) of the draft resolution)

188. A concept of “income unit” consisting of a subset of a family with shared command over income or a one-person household is introduced in the ABS provisional framework publication (ABS, 1995). The Canberra Report similarly defines the income unit as “one person or group of related persons, within a household, whose command over income is shared” (Canberra Group 2001, page 38, section 3.3.4). The EUROSTAT manual on income measurement opts for a more inclusive definition that would allow for the possibility that a group of individuals may share income even though they are not related (EU-SILC, 2002, page 65, section 4.1.3). Thus, it defines an income unit as “someone living alone or a group of people who live together and pool their income”. The income unit is regarded as the best unit for analysis of economic well-being using income data.

(Paragraph 54(c) of the draft resolution)

Hierarchy of units

189. The population census definitions create a hierarchy of statistical units as follows:

- (1) individual within a family within a household within a dwelling unit (or set of living quarters or homeless); or

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- (2) individual outside a family but within a household within a dwelling unit (or set of living quarters or homeless).

This ordering of dwelling, household and family/non-family units is basically accepted practice. The placing of the income unit however varies as noted above.

- 190.** The recommendation in all is that the household should be the unit of enumeration (data collection) although some components of income and consumption expenditures could be collected at the individual level. The units of analysis below the household level can be derived from the information collected. The dwelling unit or household is usually the sampling unit when data are collected through surveys. Some components of income and consumption expenditures can be collected through administrative sources, sometimes at the individual level (e.g. from tax records) and sometimes at the household level (e.g. from social assistance records).
- 191.** Paragraph 12 of the existing ICLS resolution defines a household in almost exactly the same way as the above population census definition, but the family definition given excludes the possibility of more than one family in a household.
- 192.** The Meeting of Experts agreed that the household should be the preferred unit of sampling, enumeration and analysis. However, for analysing income distribution, it may be useful to constitute an income unit based on the notion of shared command over income resources. The individual is a useful unit when using administrative registers. Participants, however, felt that the family was becoming less used as a unit.

(Paragraphs 56 and 57 of the draft resolution)

Coverage

- 193.** In general, only the population living in private households in a country is covered by income and expenditure statistics collected at the micro level. Thus, people living in collective households like boarding houses, hotels, etc. (for example tourists), or in institutions like military installations, school dormitories, university housing, hospitals, penal institutions, religious institutions, retirement homes and so on, are usually excluded from coverage.
- 194.** There are some borderline cases like students sharing accommodation, a large number of lodgers in a private house, etc., which could be classified as collective households. Also, in some private collective institutions such as for students or the elderly, residents may have considerable leeway in what they consume. Decisions on these borderline cases depend on national circumstances. Exclusions from coverage, especially of households of students and the elderly, could affect the distribution of income, as a high proportion of them are usually poor households.
- 195.** The Meeting of Experts agreed with the proposal that all private households should be covered, including students sharing accommodation, lodgers (below some nationally specified maximum) and households of living-in workers of institutions. For CPI purposes the coverage should be as wide as possible but collective households should be omitted unless the members are involved in the taking of joint decisions about consumption expenditures.

(Paragraph 58 of the draft resolution)

Household characterization

Household membership

- 196.** Assigning individuals to households can be done in one of three ways. Individuals who were present in the living quarters at the time of data collection (de facto), individuals who are legally recognized as residing at the living quarters (de jure) or individuals who usually reside at the living quarters. The choice is really between the de facto and the usual residence approaches. The de facto approach can misrepresent the economic well-being of a household with a short-term guest whose income is not in any way shared with the rest of the household. The decision can be crucial with respect to assessing the economic well-being of one-person households, e.g. students, persons temporarily away from their usual residence for reasons of work.
- 197.** The recommendation in the “Principles and recommendations for the population and housing censuses”, which is the same as that of the Canberra Report (Canberra Group, 2001), is to use the usual residence criterion. The difficulty in this is specifying what is meant by usual. What should be the maximum period for an individual to be absent and under what circumstances will that person be considered to be no longer usually resident in the household? Conversely, what should be the minimum period for an individual to reside in a household before being considered as usually resident there? Also, as households may change in composition over the reference period, data collection for some usual members who have left the household could prove problematic.
- 198.** The recommendation to the Meeting of Experts was to collect and record separately information for: (a) those usually resident and present at the time of data collection; (b) those usually resident but temporarily absent at the time of data collection (along with details about the period of absence); and (c) those present in the household at the time of data collection but who usually reside elsewhere (along with details on the period of stay in the household). Then, depending on the context of the analysis, the unit of analysis could be variously constituted. The criteria for deciding usual residence would depend on national circumstances.
- 199.** The Meeting rejected this proposal as too impractical. It preferred the use of the criterion of usual residence with countries given the option to decide on how best to define “usual”. The Office was requested to carry out further work to determine how various countries define “usual residence” in the interest of comparability. The results of this study are available in the room document on practices of member States.
- 200.** The EUROSTAT manual on income measurement recommends the use of six months as the criterion for usual residence provided the person does not have “a permanent address elsewhere (that is, another address where potentially they could be enumerated)”. It identifies the groups on the borderline as students, those working away from home, live-in domestic workers, boarders, lodgers, tenants and visitors (EU-SILC, 2002, page 69, section 4.2.1). The use of the residence criterion poses a particular problem for tourism statistics, as information relative to same-day visitors are then not provided (Pérez Mira, 2001, page 3).
- 201.** It should be noted that the shorter the cut-off period for qualification as a usual resident, that is the more inclusive the definition, the larger households would tend to be in size and this itself would result in a higher mean household income (fewer households for the same total income) and less-dispersed income distribution.

(Paragraph 59 of the draft resolution)

Head or reference person

202. A household may be described for analytical purposes in terms of the characteristics of all its members combined in appropriate ways. Some combinations may require information on the relationships between members, for which information needs to be obtained at the stage of data collection. One way of doing this operationally is to identify a unique member of the household relative to whom the relationships of other members are established. It is important to choose such a person carefully to optimize the use of these relationships for analytical purposes. However, the identification criteria should also be easy to implement accurately during data collection.
203. Amongst the criteria that have been used are:
- person acknowledged as head or one of joint heads;
 - person owning, renting or responsible for housing unit; or
 - person taking important decisions;
 - oldest male or any adult person to facilitate determination of family relationships; or
 - person selected on basis of some other criteria, etc.
204. If it were possible to collect information on the pair-wise relationships between all household members, there would be no need to identify a unique person. This is, however, not easy to implement in a data collection exercise.
205. The Meeting of Experts recommended that a list of possible criteria be given but with the choice left to countries. For reasons of comparability, the Meeting however requested the Office to come up with some consensus based on the prevalent country practices. The room document provides the details obtained by the Office.

(Paragraph 60 of the draft resolution)

206. It is also sometimes necessary to characterize a household based on one or more of the features of a household member for analytical purposes, i.e. a **reference person**. For example, the socio-economic grouping of a household can be determined in terms of the characteristics of an identified reference person in the household. The traditional approach has been to use the person recognized by the household as the “head of household”. However, this has turned out to be male-biased and so could distort analysis with respect to gender. In this context it would be preferable to use some form of objective criteria to identify the relevant person. One example is the head, spouse or oldest adult, depending on whoever is economically active, in that order of priority. Another is the principal earner or main contributor to the household’s income/budget. In other situations the nature of the analysis would dictate the persons from which to choose, e.g. pensioner households.

(Paragraph 61 of the draft resolution)

Reference period

207. Several time periods feature in the production of statistics on household income and household expenditures. The time-duration to which these statistics relate is sometimes referred to as the **accounting period** (Cannberra Group, page 31, section 3.2) but also at times as the reference period for aggregated data (EU-HBS, page 37, section 3.6.3). It is particularly important for the analysis and use of these statistics. The time-duration during the accounting period to which a particular item of information, or data item, relates is referred to as the **reference period** for data collection for that item (EU-HBS, page 36,

§3.6). This duration could be the same as the accounting period or less than it depending on the item. Its usefulness is in data collection. The period over which the data as a whole are collected or compiled is called the **survey period**. When income and expenditure statistics are to be analysed together, they should be based on the same accounting periods.

- 208.** A short accounting period, such as a month, produces current statistics, for example current income. This type of statistics is volatile due to irregular receipts, such as self-employment income, or infrequent expenditures, such as those on durables. At the other extreme, a very long accounting period leading to lifetime statistics such as lifetime income not only has measurement difficulties (since it is based on past experience and future expectations), but also would not reflect the current economic well-being of the recipient. The choice of 12 months for the accounting period for income and for expenditure statistics is a happy medium between these two extremes; more stable than current but not as much as lifelong. This is the widely used accounting period for these statistics and the one recommended in the existing resolution. For compilation of CPI, the accounting period should be a normal year, i.e. one characterized by stability of social and economic factors.
- 209.** The accounting period can be fixed in duration and timing, that is, a given calendar period (referred to as a fixed reference period), e.g. a given year. Administrative sources such as tax records are usually based on a fixed calendar period. If this is a year, their direct use or their use by respondents as a reference source would be easier for a fixed reference period. A second advantage in using a fixed reference period is that data are recorded for the same period for all respondents. However, unless the survey period is short and not long after the accounting period, a fixed reference period increases the likelihood of recall errors. Those households from which information are sought towards the end of the survey period would be required to remember their receipts and expenditures from a very long time ago. Also, as the composition of the household could have changed over such a long period, the statistics obtained may not relate to the actual characteristics of the survey household.
- 210.** Alternatively, the accounting period can be fixed in duration but with variation in timing (referred to as a moving reference period), e.g. a 12-month moving reference period. While a moving reference period minimizes recall errors and difficulties in relating the actual characteristics of the survey household with the data on income and expenditures, it complicates the use of administrative sources. Another disadvantage is that when the survey period is long, data on income and expenditures from different households relate to different time periods. So when aggregating them to produce statistics across households or using them to construct a distribution of income or expenditures, adjustments may be required to take account of possible changes in the levels and patterns of income and expenditures, for example, by adjusting for inflation.

(Paragraph 62 of the draft resolution)

- 211.** Some components of income or expenditure are best collected using a reference period equal to the accounting period of 12 months. For some income components, one reason for a 12-month reference period is because they are known only annually. For example, self-employment income in the formal sector is derived as profit or loss from annual accounts. Wage and salary income from income tax records are also available only annually. Dividends, interests, bonuses, etc., are sometimes paid once a year. Another reason is that some components have an annual cycle, i.e. seasonal, or occur infrequently. Examples are agricultural income, income from tourism and purchases of some expensive durable goods.

(Paragraph 63 of the draft resolution)

- 212.** Other components of income or expenditure statistics are collected with a shorter reference period than the accounting period of 12 months. The advantages in this are improved

quality of the data and less burden on respondents as the information is requested in the form easiest for the respondent to remember without the need to carry out any computation. For example, wages and regular receipts are received sometimes monthly, weekly, daily, etc., and these may be the best periods to use when collecting them through household surveys. Also, there are expenditures made on goods and services consumed daily, weekly or acquired monthly and so on, and these may be their best recording periods. Other advantages in using a short reference period are that the statistics give a better picture of current economic well-being and the possibility of associating the data with other current variables. One disadvantage is that the shorter reference periods introduce some instability, which could translate into a more unequal distribution.

(Paragraph 64 of the draft resolution)

- 213.** The choice of appropriate reference periods should be made on the basis of careful experimentation and past experience.

(Paragraph 65 of the draft resolution)

- 214.** Thus, income and expenditure components can have a variety of reference periods that then need to be standardized to obtain the required estimates for the accounting period. They are standardized by using a suitable temporal scaling factor. It should be noted that the standardization process introduces non-comparability into the aggregates and relies on the assumption, sometimes false, that the non-observed periods are similar to those observed.

(Paragraph 66 of the draft resolution)

6. Sources of household income and expenditure statistics

215. Data on household income and household expenditures are usually collected through household surveys, including household income surveys (HIS), household expenditure surveys (HES), household income and expenditure surveys (HIES) as well as from one or more modules of general multi-topic household surveys. HIES is also referred to as household budget survey. Income data are sometimes collected in labour force surveys and population censuses. Some components of income and a few components of expenditure may be available from administrative sources such as income tax records and social benefits records.

Surveys of income and of expenditure statistics

Data collection methods

216. Data are collected using interviews or self-completion of questionnaires and/or diary (or account-keeping). In general, the first two methods are used to collect retrospective information and will be referred to as the retrospective methods. Most HES and HIES use a mixture of these methods.

217. For the retrospective methods, receipts and expenditures on specific items are recorded retrospectively for specified reference periods varying from one month to a whole year. The recording is sometimes done through an interview by an enumerator, who pays one or several visits to the household or solicits answers over the telephone. On occasions it can be done through self-reporting by respondents (e.g. self-completion of mail questionnaires by the household). Retrospective methods give a better coverage of households, leading to higher overall response, than the diary method. When done through enumerators, their probing can increase accuracy and completeness (item response). Responses are also consistent because of the training received by the enumerators. However, the number of interviewers' visits is often restricted due to costs.

218. Diaries are mailed or delivered by enumerators on one or more visits depending on the organization of the survey. Households are required to record all purchases made and sometimes receipts of income during a period referred to as the **recording** or **reporting period**. The recording should be regular, usually daily, and sometimes covers all purchases and receipts. The common practice, however, is to limit it to only specified categories of expenditures and receipts. Usually, only one diary is filled in for the entire household. In some instances, however, household members above a certain age can be requested to maintain individual diaries. This is especially useful to fully account for items that are consumed outside the house, e.g. lunchtime meals. At the Meeting of Experts, some participants stated that younger household members also complete simplified diaries, sometimes with the help or supervision of interviewers. However, care has to be taken to avoid double counting when multiple diaries are used. Even with this use of multiple diaries, there are still some risks of omission of purchases of very small items such as cups of coffee, newspapers, etc.

(Paragraph 67 of the draft resolution)

Choice of methods

- 219.** Both these methods have risks of **recall errors**, i.e. omitted expenditures, and of **telescoping errors**, i.e. the inclusion of expenditures made outside the reference period. The former error leads to a downward bias in total expenditure or income while the latter causes an upward bias. The time between the start of the reference period for data collection and the interview is called the **recall period**. The longer the recall period, the more likely the risk of recall errors and the less likely that of telescoping errors, and vice versa (World Bank, 2000, Chapter 5, page 110).
- 220.** Major expenditures and receipts are less subject to recall errors and more to telescoping errors, and vice versa for more frequent or smaller expenditures and regular receipts. Therefore, a reasonable procedure is to use long reference periods for major expenditures/receipts and short recall periods for more frequent or smaller expenditures and regular receipts. An added advantage in using a long reference period for infrequent items is that it increases the likelihood of a larger number of observations for these items and so lower variance for the estimated expenditure/income. The duration of a long reference period depends on the number of repeat interviews of the same household during the accounting period. For example, it should be one year for a single interview but could be three months for repeat quarterly interviews and, for monthly interviews, would be one month.
- 221.** Clearly, diary-keeping is a demanding activity on households and so the recording period for use of the diary is usually short, from a day to at most a few months. The commonly used period is one to two weeks. Some countries use two consecutive one-week diaries. A longer period could lead to bias and inaccuracy, as families may not fill in the diaries regularly. Too short a period may increase the risk of zero purchases especially of food items. It is therefore preferable to limit the use of this method to only those items that are frequently purchased (e.g. food, personal care and household supplies) and to those receipts that are regular (e.g. weekly wages). Such items are also less subject to telescoping errors, which constitute the major risk in using short recording periods.
- 222.** The use of diaries reduces recall errors and maximizes the coverage of expenditure items and receipts during the recording period. Diaries cause less inconvenience to households than interviews by enumerators as the information can be filled in at any time. Also, the facility it gives households to search for documentary information can improve the accuracy of the result. When properly filled in, diaries are ideal as they eliminate recall and telescoping errors. In practice, however, there is still a risk of possible recall bias, as households do not always follow instructions to fill in the diaries daily. Another possible source of bias is that households, which refuse to fill in diaries or drop out later, may be of a particular type. Dropping out is not uncommon, with households initially enthusiastic in the first week of using the diary losing interest in the second and subsequent weeks. Bias is also possible from the effect filling in the diary may have on the consumption behaviour of the household, especially when this is done over a long period.
- 223.** The retrospective method, with relatively long reference and recall periods, is best suited for large infrequent or irregular purchases, especially of durable goods, and for regular expenditures such as rent, utility bills, etc. Income data are mostly collected using the retrospective methods but with varying reference periods for different items. Diaries are preferable for those items that are frequently purchased such as food, personal care products and household supplies. The relative advantages of using the retrospective method, or the diary method, or a combination of the two, in the particular circumstances of the inquiry should be carefully investigated. Different methods of collection may be used for different components to obtain results of optimum quality. Useful information to

guide these choices, including the various recall/reference periods to use for the various components, may be obtained from past experience, experimentation and cognitive testing.

(Paragraph 68 of the draft resolution)

Choice of respondents

- 224.** Components of income that accrue to the household as a unit, for example the profits from an unincorporated household enterprise, should be collected from one designated respondent such as the head of the household or the reference person. For those components that accrue directly to individuals, it is best to collect them at the level of the individual. Experience has shown that as income is a sensitive variable, no single household member – not even the head of the household or reference person – usually knows the individual income of all other household members.
- 225.** For expenditure data, the respondent is usually the person recognized as the most knowledgeable about the consumption expenditures of the household. This may be the head/reference person, that person's spouse or any adult met at the start of the interview. The same person may also be responsible for filling in the diary. If the respondent is illiterate, any other person who is literate, even a child, may do so. If no one is literate, then households can be assisted by daily visits of field enumerators (Blaizeau, 1999). In some instances, it may be useful to have different respondents for different items, for example, one for food, one for utilities and each person for out-of-house consumption. This is difficult to manage and so could increase the risk of non-response. Whenever different respondents are used to fill in sections of the diary or questionnaire, a record should be kept of these persons and the responses for which they were responsible.

(Paragraph 69 of the draft resolution)

Recording of data

- 226.** Questionnaires for collecting expenditure and income data are usually detailed and structured. One form of questioning is to ask respondents for the receipts obtained and expenditures incurred during the given reference period. When a short reference period is used for wage and salary data or for some consumption expenditures, it is necessary to decide if the value collected should be the actual value (current income/expenditure) or the usual value. If the data are actual value, it is useful to determine whether they are typical. In all instances, the frequency of receipt of the actual or usual value during the accounting period should be determined. It is, however, likely that this type of "usual value" question may not be reliable. An alternative form of questioning is the "last payment/purchase" question. Data are collected on the amount last received, for example, the wage received on the most recent pay day, and the duration covered by this amount. For expenditure data, the most recent expenditure on an item and its value is recorded. This is useful for very infrequent items and those that are difficult to obtain due to the unwillingness or inability of the respondent to give accurate responses. A variant of this, used in designs that have multiple visits, is to ask for the expenditure made on the item since the last visit.
- 227.** There is increasing use of computer-assisted personal interviewing (CAPI) and electronic data collection (e.g. e-questionnaires) in place of paper questionnaires. When direct income data are not known, the use of income brackets is gaining increasing acceptance (EV-HBS, 1997). In some instances global estimates of total expenditure on one or more of the items covered in the diary are sometimes requested in the questionnaire.

228. Diaries can be structured with pre-coded lists of items or they can be open-ended, the latter being more difficult to process. They should have as full a list of goods and services as possible or at least of major items, even when open-ended, to minimize the risk of omission of items. There are as yet no clear recommendations as to how best to organize such lists, with choices being: by botanical similarity for food items (similar caloric content), by purpose or by point of purchase. One suggestion is to go hierarchically from broad group to more detailed level in the questioning of respondents (World Bank, 2001, Chapter 5). A useful cueing technique is to include the day of the week and the time of the day in the diary. It is also important that diaries look attractive.

229. It is worth noting that having a large number of items and/or too detailed instructions can lead to inconsistent responses, falsification and non-response. A short list reduces cost and the time spent by households completing the diaries. It could, however, adversely affect accuracy through excessive aggregation or omission of important items. Similar considerations apply to the length of questionnaires.

(Paragraph 70 of the draft resolution)

Supplementary methods

230. Participants at the Meeting of Experts mentioned some supplementary methods used to facilitate data collection, minimize respondent burden and increase the accuracy of the data. They include collecting itemized shop receipts and detailed bills (e.g. for telecommunications) along with diaries or questionnaires. It was also mentioned that in some industrialized countries more advanced tools are being envisaged to record expenditures which could complement traditional methods, such as the use of the Internet to collect data, printouts from outlets (provided the link can be established between the purchases and the buyers), etc. A suggestion was made that it might be useful to give respondents hand-held radio cassette tapes, electronic scanners or mobile telephones to record expenditures even as they are being made.

(Paragraph 71 of the draft resolution)

Scope

231. In general, detailed information on consumption expenditure, other household expenditures (direct taxes, compulsory and quasi-compulsory transfers paid, social contributions, etc.) and income is collected. In order to fully account for receipts and expenditures, the scope of these surveys should as much as possible include all types of receipts and expenditures at the lowest possible disaggregated level, as recommended in Chapters 3 and 4. It is, however, important to bear in mind the need to balance out survey and processing costs and data accuracy, which tend respectively to increase and decrease with the number of items and level of aggregation. Sometimes, especially in HIES, income is collected only as a classificatory variable for analysing consumption expenditure. In this case data on income are collected to a less detailed level of aggregation.

(Paragraph 72 of the draft resolution)

232. The measurement of self-employment income poses a major challenge for most surveys. There is a high rate of non-response, item non-response and underreporting of self-employment income. In one of the waves of the European Community household panel survey, for example, self-employment income was missing for over 60 per cent of the cases and as much as 55 per cent of the reported value of self-employment income were imputed (EU-SILC, 2002, pages 83 and 84).

233. HIS and HIES should therefore be designed to increase the response rates and improve the accuracy of the data on self-employment income. Amongst the measures that can be taken are those based on the results of the research done in the United Kingdom (Martin et al., 1996). That is, questions should be tailored to fit the circumstances of the self-employed. Those who maintain accounts for taxation purposes should be asked for data leading to the assessment of profits. They should be encouraged to reference relevant documentation to respond to the questions. Those who do not have such accounts should be questioned in the same way as employees. Also, either for use in imputation or as an alternative to profits, data should be collected on withdrawals from the business for own use and, for some categories of self-employed such as those in the informal sector, on expenditures. The recommendation in the EUROSTAT draft manual on income measurement is to collect data on both mixed income and withdrawals so that if mixed income is unavailable withdrawals can be used to impute it (EU-SILC, 2002, section 5.3.1, page 84).

(Paragraph 73 of the draft resolution)

234. Data are required to value non-monetary receipts and expenditures such as the flow of services from OOD, goods and services received as income in kind and goods received as transfers from own production. It is also advisable to collect data to permit the valuation of the flow of services from major durable goods, even though the Meeting of Experts had insisted that the acquisition approach is preferable for these goods. The data items required are identified under the section on valuation in Chapter 7 below.

235. Data on quantity for all expenditure items could be useful for producing unit values that could then be used for local price indices, which are particularly important for welfare analysis. Moreover, quantity data on food items are useful for nutritional analysis or studying the elasticity of quantities to changes in policies. However, quantity data are difficult to collect, due to problems in defining the quantities, and to standardize, due to the different types of units possible. Some participants at the Meeting of Experts indicated that food quantities are collected in their surveys but that it was not always easy to convert these to standard units of measurement. Data on quality of OODs, and, where necessary, major durable goods are needed to value them appropriately.

(Paragraph 74 of the draft resolution)

236. Data on the characteristics of household members (e.g. social, demographic, labour force and employment variables, health information, educational variables and other aspects of the situation of the household and its mode of living) are essential for the analysis of income and expenditure statistics. The same holds for data on the characteristics of the household (e.g. size and composition, regional location, level of urbanization).

(Paragraph 75 of the draft resolution)

237. Also, to the extent possible, data should be collected on the take up of STIK and on the incidences of receipt and provision of services, respectively, from and to other households.

(Paragraph 76(a) of the draft resolution)

238. Participants at the Meeting of Experts drew attention to the importance of information on outlays for investments and net changes in assets and liabilities, which are necessary for a proper understanding of changes in expenditures. It recommended that wherever it is both feasible and convenient to do so, information on these items, particularly savings and liabilities, should be collected from households. It was, however, acknowledged that the estimation of savings and liabilities from household expenditure surveys, even if possible, would be unreliable for many reasons. Therefore, special data collection mechanisms other

than those used for household expenditure statistics would be required to ensure good quality data for these items.

(Paragraph 76(b) of the draft resolution)

- 239.** As much as possible, other disbursements by the household that are not part of household consumption expenditure should also be collected but identified separately. Countries differ in the aggregate income reported in a way that affects international comparability. Some countries report income net of taxes and/or net of social contributions and transfers paid, that is to say disposable income, while others do so gross, that is total income. In order to facilitate international comparisons, information on direct taxes, social contributions and transfers paid should be collected or modelled.

(Paragraph 76(c) of the draft resolution)

- 240.** The recommendation for the population coverage of these statistics implies that only the expenditures of residents in the country or economic territory are to be collected. This, however, still leaves the key issue of the inclusion of their expenditures while on trips within the country (domestic tourism) or outside the country (outbound tourism). For welfare analysis the answer is clear; all expenditures should be included no matter where they occur. For the compilation of CPI, the question extends to which prices to use or what assumption should be made about these prices (CPI, 2003, Chapter 4). If it is decided to use a different set of prices, then these expenditures should be separately identified from the others (the local ones made while at the usual residence). To do so, it would be necessary to collect data on place of acquisition (in local area, elsewhere within the country, outside the country) for those who have made such trips.

- 241.** The importance of identifying these expenditures also arises with tourism statistics where it is recognized that to quantify the economic impacts of tourism “it is necessary to quantify domestic tourism” (Massieu, 2002, page 3, section 2.3). Massieu argues that while statistics on outbound tourism can be obtained from other sources such as statistical operations at border-crossings, those for domestic tourism can only come from household surveys such as household expenditure surveys or similar surveys. Some countries have mounted special surveys (Ecuador, India, European Union countries), some others have used a sub-sample of their household budget surveys to do so (Switzerland) while others include certain questions on tourism expenditures in their budget surveys (Colombia, Spain and the United States). In the Netherlands, a special holiday diary is maintained for a year. At the Meeting of Experts, some participants also indicated that expenditures abroad were covered by their surveys, although data collection was in general more difficult and less detailed than those of in-country purchases. While accepting the importance of collecting expenditures on trips, the proposal is to do so through special modules and/or through sub-sampling to reduce the burden on the survey instrument.

(Paragraph 76(d) of the draft resolution)

Survey designs

- 242.** Two main decisions are required in designing household expenditure/income surveys (Barnett, 1991, section 3.3, page 70). Is each household to be considered once within a fixed period in order to collect the required information from it through interview, self-reporting or both, i.e. a cross-sectional design? Or are similar inquiries to be made from the same household repeatedly over a period of time, i.e. a panel design? The second decision is whether or not the sample of households should be divided into independently representative sub-samples with inquiries made from each sub-sample at different periods,

preferably evenly spread out across the survey period, e.g. a calendar year. Taken together this means there are four basic designs, although in practice there could be many variants of each of them:

- (a) single sample in a cross-sectional design;
- (b) sub-samples in a series of cross-sectional designs, for example, at quarterly intervals over the year;
- (c) single sample in a panel design, for example, repeated each quarter;
- (d) sub-samples in a panel design, for example, repeated every second quarter.

243. In design (a), total expenditure for each household is computed over the accounting period of one year. Also, annual consumption expenditure by item and annual income can be estimated. The design is simple to construct and implement. Its disadvantages are possible seasonal bias and bias in annual estimates. The long recall period required in the retrospective method for some items could jeopardize accuracy. The estimates derived from the diaries, and sometimes from interviews, may be influenced by seasonal factors depending on the timing of the survey. Also, the single measures of consumption expenditures from the diaries may not accurately reflect annual flows at the household level and may lead to low annual estimates. For example, a low consumption expenditure value for a given item in a particular household over the previous week may not reflect that household's normal annual consumption expenditure on that item and could lead to a low annual total expenditure for that household. Thus, the distribution of consumption expenditure across households will be adversely affected (Demery et al., 1992). The variant of this design used in the World Bank's living standards and monitoring surveys in which the data are collected both in terms of actual income/expenditures and usual income/expenditures would avoid this risk, though the use of usual income/expenditure is unreliable in other ways.

244. In the second design, that is (b), total household expenditure (or income) is available for the particular period covered, for example, quarterly expenditures (income). Annual expenditure by item can be estimated by aggregating period estimates for the sub-samples, which is suitable for the compilation of CPI. The risk of recall errors is lower as shorter periods are used and seasonal estimates for different items can be generated. Also, the design is simple to derive and not too complex to implement. However, annual income/expenditures at the household level cannot be determined, although estimates for groups of similar households from different sub-samples can be used to derive an annual estimate at group level. Also, households can in addition be asked direct questions on annual income/expenditures so as to produce annual estimates at the household level. These estimates would then, however, be exposed to the same recall problems as for design (a). The Meeting of Experts recognized this as the most suitable design for expenditure data in terms of its simplicity and costs. Even then attention should be paid to changes that could occur in the sampling frame and the sample over the survey period. It is the design mostly used by countries in the European Union (EU-HBS, 1997, Chapter 3, page 29) and also in Lao People's Democratic Republic, Namibia, Lesotho, etc.

245. The third design, (c), has several advantages. Both seasonal and annual estimates at household level can be obtained and the risk of recall errors is lower. Also, the existence of multiple measures of consumption expenditures has additional advantages. Total expenditure at the household level is estimated with lower variance compared to single visits. The inter-visit correlation, which is useful for correcting estimates of measures of

dispersion such as the variance, can be estimated (Scott et al., 2000).¹ This compares to estimates of dispersion of household expenditure from design (b), which have an upward bias (Gibson et al., 2003, pages 54 ff). Finally, if the visits are sufficiently spaced out change estimates can be obtained which are not overwhelmed by measurement errors. The major disadvantage of this design, which was stressed by the Meeting of Experts, is the risk of sample attrition and resistance to completion of repetitive diaries leading to possible reporting bias and lower response rates. The design is also costly to implement. Moreover, over time, there are bound to be changes in the availability of these households or in their compositions. There are, however, methods for producing longitudinal weights which minimize the effect of these disadvantages. The above cross-sectional advantages presuppose that the repeated interviews are within the survey period. If not, which is possible in a continuous survey, the design has the same disadvantages like design (a) with respect to having annual household consumption expenditure.

- 246.** The fourth design, (d), is the most efficient design. It has the advantages of design (c) but has less risk of attrition since the same household is not used every time, and even better still if sub-samples are replaced from time to time. It is however a complex design that is even more difficult to implement than (c) but it has been used in Ethiopia, Jamaica, the United States, etc.

(Paragraph 77 of the draft resolution)

- 247.** Several ideas were put forward at the Meeting of Experts. One participant pointed out the importance of longitudinal, panel-type studies, which could be used to monitor the evolution of certain population groups over time in terms of income and expenditure, based on the socio-economic characteristics of the groups. Several participants stressed the difficulties raised by such longitudinal surveys: family units, as well as socio-economic characteristics, tend to be unstable and existing longitudinal surveys are usually based on the individual rather than the family or the household. Although there are some surveys of this type on the labour market and income aspects of individuals, very few include expenditures.

Sample design

- 248.** In choosing a sample design, the objective is to ensure good representation in terms of the size and composition of households and income/expenditure classes. In some instances it is also important to have adequate representation of particular groups of interest, especially when these are small in size. Most surveys use stratification and probability sampling to achieve this.
- 249.** At the Meeting of Experts it was indicated that the sample design of income and expenditure surveys could differ from that of other surveys conducted in a given country. Research had to be done to choose the best stratification method, which could have an impact on the accuracy of the estimates. It was recognized that the sample design depended on the country's economic situation, size and demographic composition (ethnicity, household structure, etc.). Several participants insisted on the need to ensure proper

¹ The essential point made by these authors is that the observed variation of annual expenditures among households estimated from monthly data consists of both variation between households' monthly expenditures (i.e. of different households each month), and variation between monthly household expenditures (i.e. of the same household over 12 months). Therefore, to obtain the former, for use in estimating annual variation, the observed monthly variation needs to be corrected for the latter. One way of doing this is through the use of repeated measures.

coverage of both urban and rural areas, applying, where necessary, different sample designs and, sometimes, different questionnaire designs and data collection methods.

(Paragraph 78 of the draft resolution)

250. In principle, the sample size should be determined on the basis of the accuracy required, that is, the magnitude of the acceptable level of the sampling error for key estimates, and the resources available. However, in large countries reliable estimates may be required at domain levels such as regions, major cities, selected population groups, etc. and this has to be taken into consideration in determining the sample size. Another element that is sometimes factored into this decision is the over-sampling of certain groups (or at certain periods) to pre-empt expected high non-response. Relatively smaller samples are required for aggregate statistics as compared to distributions.

(Paragraph 79 of the draft resolution)

251. Due to the complexity of these surveys, especially the use of diaries, lengthy questionnaires and repeated sampling, response rates tend to be poor. As low response rates may affect the representativeness of the survey, it is recommended that countries make every effort to improve them. In some instances incentives in the form of payment of a token amount or of gifts, e.g. in the form of lottery tickets, are used. Some countries allow the use of substitution to replace non-responding households, but doing this indiscriminately could negate the probability sampling.

252. There were some other suggestions by participants at the Meeting of Experts for improving response rates. They include the use of incentives in the form of free calculators, scales or other useful items; small books of postage stamps, which create some kind of moral obligation to participate. Introductory letters, sometimes directly handed to the selected households, were also important. Also relevant were the need to inform the selected households of the importance of the results of the planned survey for improving their own living conditions and the provision of details concerning their population group derived from previous surveys.

253. Discipline had to be exercised over the survey contents in order to reduce the response burden: this required discussing with focus groups of users about their survey requirements; identifying with the interviewers the types of questions which raised difficulties, etc. Reviewing operational procedures could also be helpful. Pre-testing of questionnaire design was a means of reducing costs in the long run. The training of interviewers in approach and communication techniques and their supervision were also essential elements, as was the timing of interviews (avoiding busy late afternoon periods), the commitment of interviewers and the degree of confidence they could raise from households.

254. Non-sampling errors may arise from the survey design, the training of survey personnel, the pre-field work, fieldwork, and data-processing stages. The sensitivity of income and expenditure data is also another cause of these errors. These could bias the estimates in different directions. Apart from those already discussed, there may be reporting errors from complicated or overlong instruments; conditioning effects on respondents from their participation in the survey; incomplete coverage from poor sampling frames; interviewer effects on respondents; errors introduced by data editing, data entry and other data processing errors such as imputation for missing data, inflation/deflation of estimates using other sources; etc. Possible actions to minimize these errors include good survey design, well-designed instruments, refreshing the sample in continuous or panel surveys, continual updating of the sampling frame, good training of interviewers and other survey personnel,

effective implementation with proper supervision of the field work and data-processing activities, recording all instances of changes made to the original data, etc.

(Paragraph 80 of the draft resolution)

Frequency

- 255.** Whichever design is used, the complexity of HIES is such that they tend to be costly and onerous and so less frequent than HIS. The existing ICLS resolution (paragraph 4) recommends that HIES should be carried out at least every ten years with a higher frequency where economic, social and political conditions are changing more quickly. Most developed statistical systems, in fact, conduct these surveys more frequently, with a periodicity of between one and five years, and some have continuous survey operations. Higher frequency than every ten years is especially important for the compilation of CPI for which it is now acknowledged that the basket of items and weights need frequent updating to minimize the risk of bias in the index. It is, however, also important for the measurement of living standards in order to monitor policy and programmes for the reduction of poverty, inequality and social exclusion.
- 256.** The secretariat had proposed to the Meeting of Experts that HIES be conducted at least every five years. The Meeting recommended that greater flexibility be applied, which would take into account countries' resources and national requirements. One country, which had adopted a five-year periodicity for many years, intended to reduce the frequency to every six years. EUROSTAT informed the participants that most EU countries, except five, will carry out annual HIES, using two-week diaries and with data collection spread over the year across all households.
- 257.** In highly monetized economies in which most of income is monetary, HIS are conducted relatively frequently, usually annually. However, as stand-alone surveys they are as yet not much used in many other countries, probably because of the demands on estimating the non-monetary components of income. If so, it may be worthwhile to consider carrying out frequent light versions of these surveys, possibly restricted to only monetary income components, in between their major surveys. The non-monetary components could in these instances be modelled. This way income statistics could be derived relatively frequently for monitoring changes in welfare such as poverty and social exclusion.

(Paragraph 81 of the draft resolution)

- 258.** The disadvantage in infrequent surveys is that they could happen to occur at an abnormal year and so not be representative. On the other hand, frequent surveys are beyond the resources of some countries given the cost of these expenditure surveys. Some countries use a mixture of large-scale but infrequent surveys and less detailed but frequent surveys in-between rounds of the former. In certain circumstances, a continuing survey with a smaller annual sample but covering the full scope of a major survey may be undertaken.

(Paragraphs 82 and 83 of the draft resolution)

Other household survey sources

- 259.** Income statistics are also collected using modules or questions in other types of household surveys such as labour force surveys, informal sector surveys, etc. Many countries are, in fact, moving from dedicated income surveys to combining income and labour force surveys. There is some risk of increased non-response or reduced accuracy for the labour

force data due to the sensitive nature of income data. However, income statistics can then be directly associated with the various labour force characteristics of the household members. (See ILO (1997) for a detailed discussion of this issue.)

Establishment/enterprise surveys

- 260.** Some components of income statistics, particularly those derived from paid employment activities, can be collected through surveys of establishments or enterprises (ILO, 1997). In situations where income from paid employment constitutes a very large proportion of total household income for the vast majority of households, such data may provide very useful information about households' living standards. This would, however, be limited according to the extent of coverage of the survey. Also information on key demographic variables and characteristics of households would not be available.

Administrative sources

- 261.** Income statistics, and to a very limited extent expenditure statistics, can be produced on the basis of administrative sources such as tax records, records of social security schemes, and so on. These data are usually of good quality for the units and types of income they cover, but there can be some difficulties in using them. One such is recombining the individuals into the required unit of analysis such as household, family or income unit. Coverage could also be a problem: for example, the possible exclusion of low-income earners, unregistered enterprises or persons, income from secondary activities, etc. The use of different definitions of income, taxable income as against total or disposable income, can also be an issue. Some of these can be addressed through combining different sources, for example, income tax records and social benefits records, to improve on coverage. To do so, all such sources must use some form of common personal identifier of individuals, such as social security number, to ensure the correct matching of their records. As access and matching of this nature raise issues of privacy and confidentiality, permission of the individual is usually required. Not many countries use administrative sources to produce their income statistics.

(Paragraph 84 of the draft resolution)

Combination of sources

- 262.** Some countries have used a combination of household survey and income tax records. The household members are first identified through the household survey and, with their permission, the income data are then obtained from the tax authorities. This is particularly useful for those self-employed that may not know their income at the time of the survey. The Meeting of Experts agreed that this type of combination of sources is optimal in terms of the uses and reliability of the data. Otherwise, income surveys are preferable to other sources due to their wide scope and coverage, their flexibility in the definitions and techniques used and the possibility of collecting relevant associated information.

(Paragraph 85 of the draft resolution)

7. Classification, estimation, analysis and dissemination

Classification

263. For descriptive and analytical purposes, it is necessary to group the data collected on various variables into classes in some meaningful way. Factors that need to be taken into consideration include economic reality, users' needs and a grouping structure such that items within groups are more similar, in some sense, than items between groups, and the groups are mutually exclusive and exhaustive.

264. At present, there is no internationally accepted classification of types of income. Most countries, however, report their income statistics by sources of income at various levels of details with the highest aggregated group level given as paid employment, self-employment, property, transfer and other income. Another classification is by means of payment in terms of cash or non-cash (valued, imputed). The Canberra Report (Canberra Report, 2001, Appendix 1) identifies nine groups for total income – based on source as first level and means of payment (cash, non-cash) as second level. A task force set up by EUROSTAT in 1998 proposed seven groups for total income, and 11 for disposable income distinguishing different sources of income. ABS (1995) recommends a classification of income by source (at various levels of details) and then by means of payment (cash, in-kind), by type of employee, etc. It is also possible to report income according to the institutional sector from which it is generated, to wit: corporations, government, NPISHs and households. Column 1 in Annex 2 of Chapter 3 is an example of categorization of income by source with ten groups for total income and 13 for disposable income.

(Paragraph 86 of the draft resolution)

265. The United Nations Statistical Commission has adopted the latest revision of the Classification of Individual Consumption According to Purpose (COICOP) for use with the SNA (UNSD, 1999). This classification system is a functional classification of expenditures by the purposes or objectives for which these expenditures occurred. It consists of 12 divisions, 47 groups and 114 classes of goods and services with the classes further distinguished into durable goods (D), semi-durable goods (SD), non-durable goods (ND) and services (S). The divisions are categories of purposes such as for nourishing the body, prevention and curing of illness, acquiring knowledge, travelling, etc. Below them, the groups and classes are product types. Some organizations, e.g. EUROSTAT, and some national statistical offices, e.g. the Bureau of Labor Statistics of the United States, have developed their own systems that have greater detailed levels than COICOP. Expenditures at the detailed level can be mapped in a compatible way to what is referred to as COICOP HBS (EU-HBS, 1997, page 3).

266. There are some issues with using COICOP. These stem mainly from multi-purpose items (e.g. sportswear could be used for both recreation and clothing) and bundled purchases (holiday packages include transportation, accommodation and catering) (UNSD, 1999). Moreover, the data are collected by type of product and not by purpose. So the classification by purpose requires the adoption of some general rules, especially for dealing with ambiguous cases (INSEE, 1999, page 32). For example, bicycles are classified under transportation or under leisure depending on their main use in the country where bicycles are predominantly used.

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- 267.** Other classifications exist. For example, classification may be by type of product based on one of (a) physical properties of the goods and nature of the services; (b) the economic activity from which the product originated; (c) the production process; and (d) how the goods and services were obtained (purchases, own production, from own enterprise, from an employer, from a charity, etc.).
- 268.** When the main purpose for expenditure statistics is estimating CPI weights, CPI and consumption expenditures statistics should use compatible classifications. If not, documentation should be provided so that the data sets can be made compatible. Compatibility with the classification scheme used in national accounts is also important.
- 269.** The Meeting of Experts accepted the recommendation that, to facilitate international comparability, national classification systems of consumption expenditures should as much as possible be compatible with COICOP, at least at the division level. The information required for regrouping expenditures into the relevant COICOP categories (i.e. a concordance file) should be available to users. For those countries updating their coding system or creating new ones, it would be preferable to incorporate COICOP digits, at least at the three-digit level, into the coding indices for their system. In particular, data on multi-purpose items, e.g. bicycles, should be available in such a way that users could classify them differently if so required.

(Paragraph 87 of the draft resolution)

Valuation methods

Income in kind (goods and services), transfers and own production (goods)

- 270.** Goods and services received as income in kind and goods received as transfers are valued at market prices for equivalent goods and services. That is in terms of how much it would have cost the household to acquire the same goods and services in the market. This is important for the analysis of welfare, as total consumption expenditure is then unaffected by a household changing the proportions of quantities that are purchased in the market relative to those received as income or transfers in kind. When goods and services are provided in lieu of monetary employee income additional issues arise regarding valuation. The employer may have acquired the goods and services from a market different from the retail market. If the employee has no choice about receiving these goods and services as income (no fungibility), the question is which market prices should be used. Should it be the costs or equivalent value to the enterprise that is providing these goods and services to the employees?
- 271.** Also, when market values are used, the implication is that the goods and services received are supposedly of the same quality as those sold in the market. This is not always the case as employers sometimes pay off their workers with unwanted surpluses that they cannot sell: for example, paying vineyard workers with poor quality wine or factory workers with machine parts when their market is already glutted. In these cases, the value assigned should be zero or that assessed by the employee (ILO, 1997).
- 272.** The value of consumption expenditure of goods that are own-produced also has to be estimated. Some surveys use self-evaluation: respondents are asked to give a value to these goods. Others collect physical quantity data for the goods, which are then valued using some pricing mechanism. The common choice is to use market prices of equivalent items, if they exist (SNA, 1993, section 9.52, page 210). Often, however, their market equivalents

are likely to be of a higher quality. It should be noted that in some instances even quantity data are difficult to collect. So self-evaluation may be the only option.

273. Market prices include elements such as transportation and marketing costs, taxes and subsidies. For estimating the corresponding value of income from these goods, in theory these costs should be deducted from the estimated market value. In short, instead of market prices, producer prices (market prices less transportation and value added tax) or basic prices (producer prices less all other production taxes but plus subsidies) should be used. The SNA gives preference to basic prices when evaluating output produced for own final use (SNA, 1993, section 6.219, page 152). Obtaining these prices could, however, be difficult relative to market prices.

274. The data requirements for valuing in-kind income and transfer of goods are the quantities and qualities of the goods and services provided and appropriate market prices or self-estimates.

(Paragraph 88 of the draft resolution)

Owner-occupied dwelling

275. The valuation of owner-occupied dwellings is necessary when the consumption costs approach is used. As explained in Chapter 4, there are three basic alternatives: rental equivalence, user costs and out-of-pocket payments. The first is the value of the flow of services from an OOD and used in the SNA for estimating personal consumption expenditures and in the income accounts (net of expenses). The second, user costs, is based on a capital investment approach. Under certain restrictions, it has been shown that the first two methods produce the same results, i.e. rental equivalence equals user costs (Dougherty and Van Order, 1982, pages 154-164; Gillingham, 1983, pages 254-265). The third option, out-of-pocket expenditures, is an accounting approach. Whichever approach is taken, when income is used as a classificatory variable to present expenditures results, definitions of income consistent with the expenditure definition are necessary.

Rental equivalence

276. Rental equivalence is the value of the flow of services from an owner-occupied dwelling. The owner occupant is both a consumer and producer of these services. As services that are consumed, the full rental equivalence is counted in consumption expenditures. As a producer service that generates income, only the net rent (rental equivalence minus expenses) is counted as income. Expenses that are deducted include maintenance and repair expenditures and related costs paid by landlords, property and liability insurance, property taxes, and mortgage interest. The last two may have to be adjusted depending on the taxation system in operation. It should be noted that this does not take into account any return due to the capital appreciation of the dwelling as holding gains were excluded from the operational definition of income in Chapter 3.

277. Different approaches are used to determine rental equivalence. First, the owner could be requested to provide an estimate of how much that person thinks the rent would be for the housing services provided by the owned unit. Second, an interviewer or a housing expert could assign a value. The third and fourth options, statistical in nature, are based on the characteristics of owned dwellings matched with those of rented dwellings and their rental values. In the third, rental equivalence values are estimated as mean rents for rented dwellings in the same strata as OODs where stratification of all dwellings is based on their characteristics (favoured by EUROSTAT; see EU-SILC, 2002, page 88, section 5.4). The fourth option uses these same characteristics in a hedonic regression framework. Actual rents paid by renters are regressed on the characteristics of their rented dwellings. The

estimated coefficients are then applied to the characteristics of owned dwellings to produce predicted values of the rental equivalence of these dwellings. The characteristics of the dwellings would include size, types of construction, location, age, number of bedrooms, number of baths, etc. For these last two options, the survey should be so designed that enough rented dwellings are included in the sample to produce reliable rental estimates. Otherwise, data from a rental survey or data from real estate agents could be used.

- 278.** An issue that is sometimes raised in connection with the use of rental equivalence is that market rents could include cost elements related to the “marketing” operation such as the costs of administration, management and profit over and above the true value of the housing services provided. These are costs that owner-occupiers do not face or at the least not to the same extent as renters. It is thus argued that rental equivalence overestimates the value of housing services. However, it could be countered that these are costs that go into producing these services, and so their inclusion in the value of housing services to the owner as consumer of these services is justified. For computing income they would be netted out of the rental equivalence along with the other costs mentioned earlier.
- 279.** A second issue is that market rents can be distorted by legislation, i.e. some form of rent control. This distortion can be market-wide or affect only a section of the market. The question then is which price to use to assess the value of the flow of services. The response could be to use whatever market exists in which owners would have had to operate, even if it is distorted. A third issue is the implicit assumption that there is no inherent difference between the sample of rented properties used as comparators and the stock of OOD. (Though the statistical approaches make explicit use of comparator rents, the other approaches also do so implicitly.) Preferably the comparator rents should be taken from the same locality as the OOD, but when this is not possible, rents from other “similar” areas could be used. This could arise, for example, in countries where OODs are mostly in suburbia or rural areas while rented dwellings are located inner-city. Even when in the same locality, there are various other reasons why the stock of rented dwellings could be different from that of OODs.
- 280.** A major difficulty with the rental equivalence method, particularly for the statistical approaches, is that there may be no rental market. This condition is particularly important in rural areas of some developing countries where all dwellings are owner-occupied and in other countries in which housing is also mostly owned. The choice is to use one of the other methods, which do not require a rental market, or to omit expenditures on OODs and rentals from estimates of consumption expenditures.
- 281.** Another difficulty is that the treatment of housing costs associated with rental equivalence can be affected by the institutional arrangements in the country in which they are paid. The housing costs that could be affected by institutional arrangements in a country include those for community taxes, services, utilities, costs of repairs and maintenance. If landlords of rented properties in a country pay these costs, the latter would be deducted from the estimated rental equivalence for owner-occupants in order to derive implicit net rental income for the household. As noted earlier, these expenses would not be deducted from rental equivalence in consumption expenditures nor would they be included elsewhere in total consumption expenditures as they are implicitly already counted in rental equivalence. If landlords do not pay these expenses, then they would not be deducted from landlord rents to derive net rental income. They would, however, be counted as expenditures elsewhere in consumption expenditures.
- 282.** The Meeting of Experts recommended that the rental equivalence approach should be adopted despite its shortcomings since it was easier to use, compared to the user costs approach, and its use ensured consistency with SNA.

(Paragraphs 89 and 91 of the draft resolution)

User costs and out-of pocket approaches

283. The user costs approach estimates the value of OOD for consumption expenditures on the basis of the current market value of the dwelling (or price of new housing of the same type) adjusted for: (a) real interest rate (or opportunity cost of equity); (b) depreciation rate; (c) property tax; (d) property insurance; and (e) cost of maintenance and repairs. (Detailed guidelines for making these estimates are available: Diewert (2002); Gillingham (1983); Dougherty and Van Order (1982); Jorgensen (1981); De Leeuw and Struyk (1975)).

284. Its simplest formulation, when it is assumed that there is no income tax and no inflation, is given by:

$$C = V(r + T + m + p + d - a),$$

where

C = real annual user costs of housing consumption with a dwelling market value of V;

r = real rate of interest or the mortgage interest rate under no inflation;

m = annual maintenance (to maintain the capital as is) cost as a fraction of the value of the dwelling;

p = property insurance as a fraction of the value of the dwelling;

d = physical deterioration as a fraction of the value of the dwelling;

T = property tax rate of the dwelling;

a = real rate of expected appreciation in the value of the dwelling.

In a world of no personal income taxes and no inflation, C is the cost of owner-occupied dwelling based on the market value of the dwelling. Otherwise, the tax, interest and appreciation rates have to be adjusted to take inflation and personal income tax rates into consideration.

285. The difficulty in applying this method in practice is that of obtaining estimates for the depreciation and interest rates. Information on property tax rates are also required. Data are required on the current value of the dwelling or on the physical characteristics (i.e. price-determining characteristics) of the dwelling to be able to identify an equivalent new dwelling. Also data on costs of minor repairs would be needed from the household. A criticism of this approach is that, when adjusted to account for income tax and inflation, the costs could be negative during periods of high inflation and under certain circumstances.

286. The traditional accounting approach of spreading out the initial cost over the lifetime of the dwelling is a variant of the user cost approach. It uses a series of conventional depreciation rates and takes account of the opportunity loss of the capital that is tied up by using mortgage interest rates. These rates can be adjusted for inflation.

287. When the user costs approach is used for consumption expenditure of OOD, household income from OOD is the implicit return from owning the home that is owner-occupied. It is the return-to-home equity plus appreciation, as follows:

Implicit income from owner-occupied dwelling = $(V-D)i + aV$, where:

V = the market value of the dwelling;

D = the outstanding debt owned on dwelling;

i = real rate of interest; and

a = real annual rate of expected appreciation.

Thus, the implicit household income is the implicit interest income return based on the value of home equity and appreciation or unrealized capital gains. However, the latter term should be excluded as proposed in Chapter 3. Thus, for this estimation, data would be needed on the market value of the owned dwelling, the debt outstanding, if any, and the interest rate.

- 288.** The third approach to account for owner-occupied dwelling in publications of household expenditure data is the out-of-pocket approach or cash flow method. As described in Chapter 4, the goal is to identify those expenditures associated with owning the dwelling, the expenditures that are outflows from the household. As pointed out in that chapter, expenditures counted include not only those considered consumption expenditure but also allocations to capital. Thus the resulting definition is not consumption expenditure. Also, once a dwelling is owned, out-of-pocket expenditures will fall; this is not consistent with cost-of-living theory. When this definition is used, there would be *no additions* to household income as there would be no money flowing implicitly into the household from the owner occupied dwelling. Even with these limitations, when the housing market is non-existent or limited, this approach is preferable to that proposed to and accepted by the Meeting of Experts. This was to leave out both expenditures on OODs and rents paid by tenants out of the consumption expenditure aggregate.

(Paragraphs 90 and 91 of the draft resolution)

Other issues

- 289.** The treatment of subsidized rents in theory should be the same as for any other subsidized good. That is the difference between the market value for an equivalent dwelling and the rent actually paid should be included in consumption expenditure as transfer or income in kind. In practice, households do not always know that their rents are subsidized. Also, the use of market value could be inappropriate, as renters do not always attach this value to the housing services they are receiving.
- 290.** Expenditure on second homes (i.e. holiday and weekend homes) is particularly important for measuring the actual tourism consumption of visitors (Pérez Mira, 2002, page 6). If a rental-equivalence approach is used for the flow of services from these second homes, then only that proportion corresponding to the days when the dwelling is occupied should be included in the estimate of consumption expenditure. This proportion less housing costs for the full period will be the value of net implicit rent for the estimation of household income. It should be noted that this value could be negative. If the user costs approach is used, the full costs would be included as consumption expenditure while the equity interest would be included as household income, since appreciation is not considered as income. Many countries do not, however, as yet include estimated value of such housing as consumption expenditure due to the difficulties inherent in its estimation (EU-HBS, 1997, page 49, section 5.4.1 and EU-SILC, 2002, page 89, section 5.4). The data required are the same as for OOD plus data on duration of use.
- 291.** In determining a consumption expenditure aggregate, only one of the above methods should be used consistently for all OODs. Also, whichever one is adopted, the

corresponding estimate should be used for the household income aggregate whenever income is serving as a classificatory variable for consumption expenditure statistics.

Durable goods

292. In theory, similar methods to those used for owner-occupied housing can be applied for services from major durable goods (e.g. vehicles), where relevant. If there is a rental market for a major durable, its rented or lease value could be used in a rental-equivalence approach. However, as for second homes, it may be necessary to take into account the intensity of use of the durable good. Rental equivalence net of maintenance and repair expenditures, insurance costs, etc. would then be used for household income. If no rental market exists, the user-costs approach could be used for consumption expenditures with the corresponding estimation of household income (essentially equity interest as these goods do not usually appreciate). The easiest option is the accounting approach based on the value of conventional depreciation (i.e. original value depreciated over the relevant period less expenses plus claims). An inventory of these items and their relevant characteristics would be required.

(Paragraph 92 of the draft resolution)

Social transfers in kind

293. The valuation of social transfers in kind, when required, can be at cost to the provider (government or NPISH). The total aggregate value for the service is then available from national accounts. For micro-analysis, this total has to be distributed to households according to some mechanism, since the value cannot be directly determined at this level. The choice for this allocation mechanism is using entitlement to the service or the take-up, i.e. actual use or receipt, of the service (Walton, 1999).

294. Allocation according to take-up distributes the total cost of the service, possibly less administrative costs, to all those households who made use of or received the service during the reference or accounting period. This could be done at the total level or at sub-class levels relative to location, type of service, etc. depending on the availability of sub-class totals. Data required at the household level are the intensity of use or receipt of the service by members of the household. The difficulty with the method is that it seems somewhat unfair to increase the income of the elderly by adding such transfers, simply because they use the health service more intensely, for example.

295. The alternative allocation mechanism is an insurance type approach in which the total cost of the service, possibly less administrative costs, is distributed to all those entitled to use it irrespective of whether they do so or not. The entitlement itself depends on the characteristics of households but even amongst those households that are entitled, the value attributed can be made to depend on their characteristics. For example, only households with children are entitled to school education services but then the value attributed to a particular household can be made to depend on the number of children in the household, even on their ages. At the household level, the method requires data only on household characteristics.

296. In some instances countries use a mixture of these approaches, using take-up for some service, e.g. education, and insurance for others, e.g. health. A major issue with both approaches is that the household may not put the same value on the service as the cost to the provider. This was the view expressed at the Meeting of Experts. An alternative method therefore sometimes proposed is the “willingness to pay” approach, which is the cash equivalent that a household would be willing to accept in lieu of the service (or pay

for the service). There is as yet no clear agreement by statisticians which of these methods to use in the valuation and distribution to individual households.

(Paragraph 93 of the draft resolution)

Estimation

297. Published estimates are usually in the form of averages, totals, counts or distributions. In computing averages, the total of the reported expenditures (income) for households, including zero or negative values, is divided by the total number of households, including those that made no purchases (received no income or had negative income). Zero and negative values can arise from the use of mixed income and the possibility of negative expenditures for some components. The Meeting of Experts supported this approach.

(Paragraph 94 of the draft resolution)

298. In order to facilitate the analysis, efforts should be made to impute for missing values of variables (item non-response) provided the number of these is not unduly large and there is a reasonable basis for making the imputations. One common technique for doing this is the deterministic method in which the average value for this variable amongst households with “similar” characteristics to those of the household where the observation is missing (donor households) is used. The stochastic method is similar but one of the donor households is randomly selected and its value used. It is also possible to use some regression estimate. Imputations should be done collectively for all missing values, as these values are not independent of each other.

299. The Meeting of Experts felt that imputations by statistical agencies should be kept to a minimum. Where imputations were made for missing items and/or non-response, an indication of the extent of imputation should also be made available. One participant pointed out that the deterministic method to impute for missing values could affect the distribution and tend to reduce the standard errors of estimates. Consequently, the participant favoured stochastic methods. Whichever method is used, it should be clearly documented and the imputed values should be flagged in any micro-data sets distributed.

(Paragraph 95 of the draft resolution)

300. As discussed in Chapter 5, when a moving accounting reference period is used the estimation of aggregated values may need to take into account possible differences in expenditure patterns arising from differences in prices and/or volumes over the joint period. The simpler choice is to ignore the possible differences and use the values as collected. Another is to adjust them by deflating with some suitable price indices to take account of the differences. In periods of hyperinflation, the latter is more appropriate.

(Paragraph 96 of the draft resolution)

301. Appropriate weights should be used to reflect selection probabilities, non-response (assuming this is related to the factors used for probability sampling) and possibly benchmarking. The objective of the last of these is to ensure consistency between survey results – with respect to the distribution of demographic, geographic and employment characteristics – and those from the population census, labour force survey or registers.

(Paragraph 97 of the draft resolution)

Analysis

- 302.** One common source of underestimation of consumption expenditures is due to underreporting of purchases of items that are considered socially less acceptable or are illegal (e.g. alcohol, tobacco, condoms and gambling losses). As much as possible, the possible existence and extent of these should be analysed. One method would be to compare the values obtained with those from other sources such as national accounts, import records, trade statistics, etc. Income may be underestimated due to: (a) the inability to correctly estimate both self-employment income and the income of households at the lower end of the income distribution; and (b) the underreporting of property income, should also be investigated. When the grossing up of survey data is possible, national accounts data could be used to study the possibility of this. A comparative source in some instances is income tax records.
- 303.** Several participants at the Meeting of Experts opted for disseminating survey results based on the raw data without any adjustments for over- or underreporting, provided that confidentiality of households was preserved. However, information on the possible existence and extent of underestimation or overestimation for any component should be made available in the survey reports. Any adjustments for possible underestimation that may be required for estimating weights for CPI should be left to the subject matter specialists. It was also suggested that several types of tabulations could be prepared, with and without adjustments. In all cases explanations were to be provided to the users along with the resulting statistics.

(Paragraph 98 of the draft resolution)

- 304.** Sampling errors should be computed for estimates of parameters for key variables and important sub-groups, preferably using a formula appropriate to the sampling and weighting schemes used for the survey. As noted earlier, variation in monthly expenditures consists of both within-month variation of expenditures of different households and between-months variation of expenditures of a given household (Scott et al., 2000). Thus, whilst appreciating the need for simplicity, variation in estimates of annual expenditures based on monthly data should take into account the between-month variation of household expenditures.

(Paragraph 99 of the draft resolution)

- 305.** The practice of balancing the household account, i.e. comparing income with expenditure data, as a check on the accuracy of the reported values, should take into account the fact that expenditure is also financed by drawing down on savings, disposing of assets and incurring liabilities. Thus, a mismatch is not unexpected and can only be resolved if reliable information on savings and dis-savings are available. Some participants at the Meeting of Experts considered that the practice is still useful in some cases and for some designs as a check on the quality of the data.
- 306.** Household income and household consumption expenditure are affected by the size of the household and its composition (e.g. age, sex, type of marital status, etc.). So any analysis of household income or consumption expenditure statistics should take into account these differential effects both in terms of household needs and economies of scale. The preferred method is to use equivalence scales, the simplest of which is the per capita scale in which the household income (expenditure) is divided by the size of the household. The analysis should test for the sensitivity of the results to the choice of equivalence scale.
- 307.** For distributional analysis, the equivalence scale could be applied to both income and expenditure statistics. If however, for example, income is to be used as a classificatory

variable for analysing consumption expenditures the scale should be applied only to the latter variable. Several scales have been used and none has been generally accepted as the best. There is need to address this issue especially when household goods like housing and utilities account for large shares of household consumption expenditure. Also important is addressing the issue of intra-household allocation of resources and consumption.

(Paragraph 100 of the draft resolution)

- 308.** The analysis of expenditure (income) statistics can be in the form of tables containing summary statistics such as counts of persons or households, averages (means and medians), totals and ratios of expenditure (income) and their standard errors.

(Paragraph 101 of the draft resolution)

- 309.** The tables should include:

- (a) cross-tabulation of the level and structure (component shares) of consumption expenditure by:
 - (1) income quantiles such as deciles, quintiles and percentiles;
 - (2) principal sources of income;
 - (3) household characteristics (size; composition i.e. age and sex; typology, i.e. marital status, number of children, etc.; ownership of major durables; dependency ratio, i.e. ratio of those outside the working age population to those within; number of income earners/children/elderly; etc.);
 - (4) characteristics of household members (e.g. demographic, educational, socio-economic status of head or reference person; employment characteristics);
 - (5) housing characteristics (age; tenure; occupancy rate – number of persons per room; geographical location; etc.);
- (b) where appropriate, the tables in (3) to (5) should be repeated for the level of household income.

(Paragraph 102 of the draft resolution)

- 310.** Basic tables describing the situation of households are useful for the analysis of expenditure or income statistics. These tables contain counts of households according to household characteristics (e.g. size, type, characteristics of the head or reference person, etc.), income sources, expenditure and income groups. Tables describing household members by their characteristics should also be useful.

(Paragraph 103 of the draft resolution)

- 311.** Income components can vary in terms of means of payment – cash and non-cash (some prefer the terms monetary and non-monetary). Cash receipts are fungible, i.e. the option exists to consume and/or save all or part of them. Non-cash income, on the other hand, is presumably consumed on receipt with no option to save and so no effect on savings. Non-cash income is important for time and space comparisons as the mix of cash/non-cash can vary across time and space. Moreover, non-cash income is crucial for many developing countries where it forms a substantial proportion of total income. Some countries exclude income components that are difficult to measure, in particular those that require imputation, such as income in kind, consumption of own production, etc. So only cash

(i.e. monetary) income, including cash transfers, is collected. In order to facilitate international comparisons, as much as possible, monetary values should be tabulated separately from non-monetary values (in kind estimates).

- 312.** The treatment of zero expenditure is crucial. The number or proportion of households with zero expenditure on tabulated components should always be reported.

(Paragraph 104 of the draft resolution)

- 313.** Different types of analysis could also look at issues such as indebtedness, housing, health, education, tourism, income and expenditure distributions, measures of poverty, inequality and social exclusion, etc.

(Paragraph 105 of the draft resolution)

- 314.** As much as possible, estimates of social transfers in kind should be taken into consideration in the analysis. These estimates should, however, be separately reported with full details of the methods used. At the least, information should be provided on the extent of take up of the different types of services by various household groups.

- 315.** Due to differences in definitions, varying time periods used, etc. the data on income and expenditure should not be used to construct household accounts in the form of household income-expenditure balance sheets. The difference between income and expenditure may not be a reliable measure of savings nor of dis-savings. Some countries have in fact made changes to their expenditure surveys in the light of this. Among the fraternity of European Union countries and their affiliates, Denmark has removed questions on assets and debts, as the results were not encouraging. Greece and Iceland also do not consider the results reliable. Switzerland and Ireland find it difficult to collect the information due to the reluctance of respondents.¹ The United Kingdom collects the information on savings and dis-savings through a special survey. The United States, however, still collects this information through interviews in their regular consumption expenditure surveys.

(Paragraph 106 of the draft resolution)

- 316.** In comparing national accounts data with data from micro sources, it should be borne in mind that the former have been constructed on the basis of statistics from several sources. Their objective is to measure the economic well-being of the nation as a whole through flows such as production, income, consumption expenditures, investment, savings, etc.; while micro-level analysis is concerned with the well-being of individual households. There are also conceptual and measurement differences for some of the components (Tanner, 1998, section 3.3.4, page 80). Nevertheless, it may still be useful to compare income and expenditure statistics measured from a micro perspective with macro aggregates from national accounts. The reasons include: (a) mutual checking of the results from both sources; (b) as a service to users; (c) possible multiple use of the same data sets; and (d) reconciliation of differences or at least explanations for discrepancies. In this process, however, it must not be assumed that the national accounts statistics are “more correct” than those from micro sources.

(Paragraph 107 of the draft resolution)

¹ Oral contributions in a “tour de table” discussion at the Meeting of the Working Party (Income, Poverty and Social Exclusion, 24-25 April 2002, reported in Minutes of the Meeting, EUROSTAT, Luxembourg.

Dissemination

317. The main survey report should be confined to producing basic tables and aggregates, while more detailed data should be made available to analysts and others for in-depth studies. Some details on the methodology used (quality of the data, sampling and non-sampling errors, non-response rates, etc.) and any major issues relating to the statistics produced should also be included in the main survey report. From time to time, but especially when major changes in data collection are introduced, countries should produce a major study on data quality. When the calendar period mentioned in the title of the report (**referral or publication period**) is different from the accounting period, this should be noted in the report.

318. Sampling errors should be reported for estimates of major items. In this regard, it should be noted that infrequent items have a larger variance due to the smaller number of observations from the few households making such purchases. Non-response rates should also be produced, to the extent possible, both at the overall level and for major items.

(Paragraph 108 of the draft resolution)

319. Countries should, as much as possible, produce public-use files (anonymized micro-data files) for use by analysts. Full documentation of all aspects of the survey, including procedures, lessons, conclusions, etc. from pre-test of questionnaires, fieldwork, data processing and reporting is also important. Some countries also use top-coding (restricting the maximum value used for a variable) when disseminating results to maintain confidentiality. Such an approach needs careful analysis and control. Details regarding the rules used should be documented and flags used in micro-data files to identify such values.

320. The issue of costs was raised by a number of participants at the Meeting of Experts. Experience has shown that the availability of free data on web sites did not reduce the sales of publications. It was felt that data collected by government should be a public good, and public-use files should be made available free or at marginal cost to non-commercial institutions and agencies. However, most participants did not favour the inclusion of guidelines on cost policies.

(Paragraph 109 of the draft resolution)

321. The results should be disseminated widely through survey reports, bulletins, conferences, meetings, methodological reports, focused reports, analytical papers, public-use files, popular articles and press releases. This should be done through paper publications, diskettes, tapes, CD-ROMs and the Internet. It should also be possible to produce special tables on demand. All these must, however, fully respect the confidentiality of the information provided by respondents.

(Paragraph 110 of the draft resolution)

322. An internal detailed methodological report containing full details of the procedures used, lessons learned and conclusions reached is an essential element of the knowledge base of statistical offices. It is a source of institutional memory that would be useful for future exercises and to respond to inquiries about the exercise.

(Paragraph 111 of the draft resolution)

323. One participant mentioned the issue of timeliness of dissemination and another one drew the Meeting's attention to the dissemination standards provided by the IMF. Participants were reminded that the UN Statistical Commission had provided guidelines on the

fundamental principles of official statistics (UNSD, 1994), and that the Sixteenth ICLS had adopted guidelines concerning dissemination practices for labour statistics in 1998 (ILO, 2000, page 89).

(Paragraph 112 of the draft resolution)

8. Further work

- 324.** The ILO should provide assistance to countries in establishing their programmes for collecting, compiling, and disseminating the statistics covered in the resolution on household income and expenditure statistics. To do this effectively and as a training tool, a technical guide could be prepared in collaboration with other interested institutions to give detailed guidance on the implementation of the guidelines in the resolution.
- 325.** There is, however, a need for targeted research in some important areas relating to the resolution which could best be carried out under the auspices of a city group on household expenditure statistics. The topics that could be considered by this Group include:
- (a) owner-occupied dwellings, including vacation and weekend homes as well as time-sharing arrangements, and especially when the housing market is limited;
 - (b) durable goods;
 - (c) difficult service items;
 - (d) valuation of transfer of services from governments, NPISHs and other households;
 - (e) valuation of own-produced services for own consumption;
 - (f) instrument design: global questions, use of brackets for income, long versus short;
 - (g) international classification schemes appropriate for household income and expenditures; and so on.
- 326.** The ILO invites national statistics offices to set up such a city group and agrees to play its part in the functioning of the group.
- 327.** Countries are encouraged to continue sending summary statistics and methods to the ILO either in response to inquiries or as part of their normal dissemination process.
- 328.** It may be useful to have an international repository of micro-data (public use files) in some archiving system similar to that of the Luxembourg Income Study Group. Participants are invited to comment on the merits of setting up such a system, especially for expenditure statistics.

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Appendix

Draft proposals for resolution concerning household income and expenditure statistics, adopted by the Seventeenth International Conference of Labour Statisticians (December 2003)

The Seventeenth International Conference of Labour Statisticians,
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Recognizing the need to revise and supplement the recommendations concerning household income and expenditure surveys contained in the resolution of the Twelfth International Conference of Labour Statisticians (1973),

Wishing to promote the development and use of household income and household expenditure statistics along sound lines and also to promote consistency in their measurement as well as improvement in their quality and international comparability,

Recalling the resolutions concerning (a) an integrated system of wages statistics, and (b) the measurement of employment-related income, adopted respectively by the Twelfth and Sixteenth International Conferences of Labour Statisticians (1973 and 1998),

Recognizing also that, in the interests of promoting the coordination and integration of international statistical standards, new recommendations concerning household income and expenditure statistics should be consistent, so far as possible, with relevant existing standards of statistics, including those within the System of National Accounts;

Adopts this 3rd day of December 2003 the following resolution:

Objectives and uses

1. Household income and expenditure statistics serve as a basis for the description and analysis of a wide range of economic, social and other issues including:
 - (a) to determine baskets of goods and services as well as to obtain weights and other useful information for the compilation of consumer price indices, cost of living indices, indices of comparative costliness, etc.;
 - (b) to assess the level, structure and trends of the economic well-being of households in terms of the distribution of income/consumption expenditure across households for various population subgroups of interest;
 - (c) to compile some components of national accounts, to check the quality of estimates produced from other sources, and to reconcile national account estimates with micro-level data;
 - (d) to formulate, implement, monitor and evaluate social and economic policies;
 - (e) to carry out studies of the relationship between income and expenditure statistics and various socio-economic characteristics of individuals and households;
 - (f) to study consumer behaviour among socio-economic groups;
 - (g) to develop and monitor policies relating to tourism, nutrition, housing, migration and health.
2. These various uses may not all be served equally well from a single source and, in some instances, it will be necessary to combine statistics and information from different sources through statistical matching or modelling.
3. Household income and expenditure statistics should be produced in such a way as to enhance their international comparability and consistency with other statistics on income and expenditure and related economic and social statistics. Therefore, to the extent possible, the collection of income and

expenditure data should be such that income and expenditure aggregates consistent with all international guidelines may be derived.

Income

Concept and definition

4. **Household income** consists of all receipts in cash, in kind or in services that are received by the household or by individual members of the household at annual or more frequent intervals, but excludes windfall gains and other such irregular and typically one-time receipts. Household income receipts are available for current consumption and, except for those in paragraph 18 below, do not reduce the net worth of the household through a reduction of its cash, the disposal of its other financial or non-financial assets or an increase in its liabilities.
5. Household income may be defined operationally in terms of: (i) income from employment (both paid and self-employment); (ii) property income; (iii) income from the production of household services for own consumption; and (iv) transfers received.

Income from employment

6. Income from employment comprises receipts for participation in economic activities in a strictly employment-related capacity, as defined in the resolution adopted by the Thirteenth International Conference of Labour Statisticians (1982) concerning statistics of the economically active population, employment, unemployment and underemployment. It consists of: (a) employee income, and (b) income from self-employment.
7. **Employee income** comprises direct wages and salaries for time worked and work done, cash bonuses and gratuities, commissions and tips, directors' fees, profit-sharing bonuses and other forms of profit-related pay, remuneration for time not worked as well as free or subsidized goods and services from an employer. It includes severance and termination pay as well as employers' social insurance contributions. The definition of these terms is consistent with their use in the resolution concerning statistics of employment-related income adopted by the Sixteenth International Conference of Labour Statisticians (1998).
8. Employee income may be received in cash (monetary) or in kind as goods or services. Those receipts in kind that are outputs of the employer's production process should be included only in so far as they are in line with the recommendations contained in the Protection of Wages Convention, 1949 (No. 95), of the International Labour Organization. Otherwise, they are imposed payments in kind that should be excluded from employee income or valued at zero.
9. **Income from self-employment** is income received by individuals, over a given reference period, as a result of their involvement in self-employment jobs as defined in the resolution concerning the International Classification of Status in Employment adopted by the Fifteenth International Conference of Labour Statisticians (1993). In particular, income from self-employment concerns primarily owners of unincorporated enterprises who work in these enterprises. It excludes profits from capital investment of partners who do not work in these enterprises ("sleeping partners"), dividends and directors' fees paid to owners of incorporated enterprises. Income from self-employment includes the estimated value of goods and services produced for barter as well as goods produced for own consumption, less expenses.
10. The basis for the measurement of income from self-employment is the concept of mixed income defined by the System of National Accounts. Mixed income consists of the value of gross output less operating costs and after adjustment for depreciation of assets used in production, where these terms are as defined in the resolution concerning the measurement of employment-related income adopted by the Sixteenth International Conference of Labour Statisticians (1998).

Property income

11. Property income is defined as receipts that arise from the ownership of assets (return for use of assets) that are provided to others for their use. These are returns, usually monetary, from financial assets (interests, dividends), from non-financial assets (rents) and from royalties (return for services of patented or copyright material).

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12. Interest receipts are payments received from accounts with banks, building societies, credit unions and other financial institutions, certificates of deposit, government bonds/loans and securities, debentures and loans to non-household members.
 13. Dividends are receipts from investment in an enterprise in which the investor does not work. Pensions and annuities in the form of dividends from voluntary private insurance schemes are also included.
 14. Rents are payments received for the use of both unproduced assets (i.e. natural resources), such as land, and for produced assets, such as houses. Rents should be recorded net of expenses.
 15. Royalties are receipts from writings, right to make use of inventions, etc. (i.e. patented or copyright materials).

Income from household production of services for own consumption

16. Income from household production of services for own consumption consists of the net estimated value of housing services provided by owner-occupied dwellings, of unpaid domestic services and of services from household consumer durables. The operational definition of this component should be clearly described when estimates for it are presented or included in estimates of the total income of households. The net estimated values of housing services from owner-occupied dwellings should be presented separately from the estimates for other services. Estimates of the values of these services should be made in a consistent manner in producing household income and household expenditure statistics when these are to be analysed jointly.

Transfer incomes

17. Transfers are receipts for which the recipient does not give anything to the donor in direct return for the receipts. Transfers can consist of cash (in the monetary sense), of goods or of services. Current transfers are those that usually recur regularly (relative to the reference period used for income), tend to be small and are also mostly available for use during the reference period.
18. Regarded as income are all current transfers received in cash and as goods as follows:
 - (a) social security pensions, insurance benefits and allowances generated from government-sponsored social insurance schemes (compulsory/legal schemes) such as pensions (including military and overseas pensions), unemployment benefits, sickness benefits;
 - (b) pensions and other insurance benefits from employer-sponsored social insurance schemes not covered by social security legislation (both funded and unfunded) such as education allowance, medical expenses;
 - (c) social assistance benefits from governments (universal or means-tested) which provide the same benefits as social security schemes but which are not provided for under such schemes;
 - (d) current transfers from non-profit institutions (e.g. charities, trade unions, religious bodies) in the form of regular gifts and financial support such as scholarships, union strike pay, union's sickness benefits, relief payments;
 - (e) current transfers from other households in the form of family support payments (such as alimony, child and parental support), regular receipts from inheritances and trust funds, regular gifts or financial support.
19. Although income includes current transfers received in the form of services from governments and non-profit institutions (social transfers in kind) and from other households, the operational definition of income should exclude such transfers until methods exist for valuing them that are widely acceptable.

Exclusions

20. Holding gains, resulting from increases in the value of financial and non-financial assets and liabilities, should be excluded from the operational definition of income. Holding losses are excluded by definition from income since they reduce net worth.

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21. All irregular, non-recurring receipts are excluded from the definition of income. They include lottery prizes, gambling winnings, non-life insurance claims, inheritances, lump-sum retirement benefits, life insurance claims (except annuities), windfall gains, legal/injury compensation (except those in lieu of foregone earnings) and loan repayments.
 22. Other receipts that result from a reduction in net worth are excluded from income. These include sale of assets, withdrawals from savings and loans obtained.
 23. For analytical purposes, data should be collected wherever possible on receipts that are excluded from the concept of income as well as from the operational definition of income.

Aggregation

24. The sum of income from employment and income from household production of services for own consumption is referred to as **income from production**. When this is added to property income and transfer income, the sum is **total income**. **Disposable income** is total income less direct taxes (net of refunds), compulsory fees and fines as well as compulsory and quasi-compulsory inter-household transfers paid. Whenever it is possible to also compute social transfers in kind, the sum of these receipts and disposable income constitutes **adjusted disposable income**.

Expenditure

Concepts and basic definitions

25. **Consumer goods and services** are those used by a household to directly satisfy the personal needs and wants of its members. **Household consumption expenditure** is the value of consumer goods and services acquired, used or paid for by a household through direct monetary purchases, own-account production, barter or as income in-kind for the satisfaction of the needs and wants of its members.
26. The **actual final consumption** of a household is the sum of its household consumption expenditure and the value of consumer goods and services acquired or used by the household through transfers from government, non-profit institutions or other households. This is the most appropriate concept for welfare analysis as it takes into account all consumer goods and services available to a household for the satisfaction of the needs and wants of its members.
27. **Household expenditure** is defined as the sum of household consumption expenditure and the **non-consumption expenditures** of the household. The latter are those expenditures incurred by a household that relate to compulsory and quasi-compulsory transfers made to government, non-profit institutions and other households, without acquiring any goods or services in return for the satisfaction of the needs of its members. Household expenditure represents the total outlay that a household has to make to satisfy its needs and meet its “legal” commitments.

Measurement

28. For purposes of registering their expenditures, services may be regarded as consumed at the time of acquisition or at the time of payment. For goods, the choice is between the time of acquisition and the time of use. The decision depends on the main purpose for compiling the consumption expenditure aggregate. In particular, if it is intended for the estimation of weights for consumer price indices, the choices made should be the same in producing the aggregate and compiling the consumer price indices.
29. Consumption expenditure may be measured in terms of:
 - (a) the purchase values of the goods and services (referred to as the acquisition approach);
 - (b) the cash outflows resulting from ownership of the goods or benefiting from the services (referred to as the payment approach); or
 - (c) the estimated values of the service flow from the goods and the values of the actual services (referred to as the consumption costs approach).

The first two approaches are jointly referred to as the **expenditure basis** for measuring consumption expenditure while the last is the **consumption costs basis**.

30. Consumer goods that are completely consumed on acquisition or gradually consumed over a period of time after acquisition (including bulk purchases) are referred to as **non-durable goods**. Consumer goods that are used many times over a long period of time without reducing their capacity to satisfy needs and wants are referred to as **durable goods**. In some instances, the notion of semi-durable goods (relatively shorter expected lifetime) may also be useful.
31. For services and non-durable goods, consumption expenditure measured on an expenditure basis is a good approximation for measurement on a consumption costs basis. Consumption expenditure on services and non-durable goods may therefore be measured using the acquisition approach, where this approach is extended to include the estimated values of own production of non-durable goods and those received as income in kind or through barter.
32. Consumption expenditure on durable goods when estimated using the acquisition approach, is in general different from the value obtained using the consumption costs approach. For use in the compilation of weights for a consumer price index to be used to monitor inflation, the acquisition approach is more appropriate, especially when restricted only to monetary purchases. When the purpose is for use in welfare analysis or to compile weights for a cost-of-living index, the consumption approach is conceptually preferable.
33. These different approaches may be combined for computing consumption expenditure on goods by using one or other for different expenditure items. In particular, to be consistent with the conventions of the System of National Accounts, consumption expenditure on owner-occupied dwelling may be valued on the consumption costs basis while the acquisitions approach is used for durable goods, non-durable goods and services.
34. The consumption costs approach may also be used for durable goods for the purpose of welfare analysis and the production of tourism statistics. This use may be limited to major durable goods, since the consumption costs of other durable goods do not differ greatly from their acquisition costs. For this purpose, major durable goods may be defined in terms of a long expected lifetime, such as beyond five years, combined with a relatively high value (e.g. a car or bicycle but not socks or a hammer).
35. Whichever of the above approaches is adopted for estimating consumption expenditure for durable goods and owner-occupied dwellings, it should be consistent with that used for estimating their contribution to household income whenever these statistics are to be analysed jointly.

Operational definitions

36. Expenditure on non-durable goods is measured as the purchase value of these goods or the estimated value of those received as income in kind, through barter, from own production, from stocks of household enterprises and from transfers from outside the household. Typical examples of non-durable goods include food items, personal care items (toiletries, make-up and medical products, etc.), fuel (firewood, heating oil, coal), education and entertainment (newspapers, books, etc.), household items (cleaning products, etc.).
37. Expenditure on durable goods is assessed in the same way as for non-durable goods under the acquisitions approach. Typical examples of durable goods are household kitchen appliances (cookers, refrigerators, dishwashers, microwave ovens, etc.), household entertainment appliances (Hi-fi equipment, televisions, cameras, etc.), other household appliances (washing machines, vacuum cleaners, dryers, etc.), household transportation equipment (cars, bicycles, etc.), other household items (furniture, soft furnishings, etc.), clothing, utensils, etc.
38. The purchase value of second-hand goods should be recorded in the same way as for new goods. The value of any direct sales of used goods or their indirect sales (“trade-ins”) should also be recorded separately. Consumption expenditure on second-hand goods may then be computed net or gross of these sales to satisfy the requirements of both compilation of consumer price indices (or national accounts) and analysis of households’ welfare and behaviour.
39. In principle, expenditure on non-monetary gifts should be recorded as part of actual final consumption for the recipient household. However, in practice, for consistency with the above recommendation to include them as income for the recipient household, they should be treated as

part of household consumption expenditure for this household. They should be recorded as non-consumption expenditure of the donor household in either case.

40. Consumption expenditure on services is measured as the amount paid for the services acquired. However, in some circumstances, for example in the case of utilities, it may be necessary for practical reasons to use payments made for the services irrespective of when they were acquired. Any reimbursement for overpayment should then be treated as negative consumption expenditure.
41. Financial services such as accounting fees, bank service charges and credit card service fees should be included in household consumption expenditure as payment for services.
42. Interest payments on consumer credit should in principle be included as household consumption expenditure consistent with the assumption that the greater part of interest is a charge for the services in administering the credit scheme. However, particularly in inflationary circumstances, these interest payments may be considered as non-consumption expenditures on the grounds that the greater part of interest is compensation to the original owner of the borrowed money.
43. Non-life insurance premiums are those taken out against property risks such as fire, theft and water damage; health risks such as accident and sickness; risks in transportation such as personal transport, travel and luggage; and others such as civil liability. Premiums should be recorded gross as household consumption expenditure. Reimbursements and claims arising out of any such insurance should be recorded separately so that aggregate consumption expenditure could be computed gross or net of them to satisfy the needs of both compilation of consumer price indices and the analysis of households' welfare and behaviour.
44. Expenditures on gambling should be recorded as consumption expenditure. Any winnings should be separately recorded so that household consumption expenditure can be computed gross or net of winnings to satisfy various analytical demands. For compilation of consumer price indices, use in national accounts and for joint analysis of consumption expenditure and household income, computing this expenditure net may be preferable.
45. Housing decoration, repairs and maintenance normally carried out by tenants should be recorded as consumption expenditures by tenants as well as by owner-occupiers. Other major repairs and home improvements should be regarded as capital expenditures. Since there are differences between countries in the legal obligations of tenants in this respect, expenditures on these items should be recorded separately to allow for flexibility in their treatment in cross-country analysis.
46. Regular donations (e.g. subscriptions) to non-profit institutions such as religious bodies, trade unions and political parties should be recorded as consumption expenditure to the extent that they are linked to the provisions of goods and services acquired by households.
47. Licenses and fees paid to governments that generate the delivery of specific individual services to households should be treated as consumption expenditures. Examples include testing, inspecting and licensing the use of certain equipment (TVs, radios, firearms, etc.); providing passports, court services, access to museums, garbage collection, driving or piloting licences; and so on. In those instances where payments for licences to own or use a vehicle, boat or aircraft go towards providing for or enhancing their use (e.g. maintaining roads), they should also be included as consumption expenditure.
48. Consumption expenditure on services from owner-occupied dwellings should be assessed as the gross estimated value of the flow of services from these dwellings. This should extend to all dwellings owned including vacation and weekend homes.
49. When the consumption costs approach is used for stocks of any category of durable goods, their consumption expenditure is assessed as the estimated value of their service flow. In these instances the purchase value or estimated value of acquiring this category of goods should not be included in any previous or current estimate of household consumption expenditure. This treatment of the stocks of durable goods facilitates apportioning expenditure when goods have multiple uses.
50. Services from unpaid household work, social transfers in-kind and transfers of in-kind services from other households should be excluded from household consumption expenditure and from actual final consumption until such time when the valuation of these services is based on agreed principles.
51. In principle all goods and services that households acquire to satisfy the needs and wants of their members, even those that may be illegal or considered undesirable or luxury items, should be

included in the measurement of household consumption expenditure. However, the extent to which this can be done in practice is limited by the data that can be collected.

Household expenditure

52. The non-consumption expenditures of households include current transfers of cash, goods and services to other households such as gifts donated, remittances, alimony, child support, etc. Other items included are irregular contributions to non-profit institutions; compulsory transfers to governments such as income and other direct taxes (e.g. wealth taxes), compulsory fees and fines; and pension and social security contributions.
53. Expenditures on goods and services for use in the operation of unincorporated enterprises as well as the occupational expenses of employees are excluded from the measurement of household expenditure. In addition, capital expenditures such as savings, reduction of liabilities, amounts loaned, purchase of financial assets, life insurance premiums are excluded. Expenditures on valuables (works of art, jewellery, gemstones, etc.) are also excluded from household expenditure. The identification of goods to be treated as valuables depends on national circumstances. However, they are generally defined as goods of relative high value, the main purpose of which is to serve as a form of savings and not for use in production or for consumption.

Measurement issues

Statistical units

54. The statistical units for the collection and analysis of statistics on income and on expenditures are defined as follows:
 - (a) *Household*: The concept of household should be consistent with the one adopted in the latest version of the *Principles and recommendations for population and housing censuses of the United Nations*.

A household may be either:

 - a one-person household, i.e. a person who makes provision for his or her own food or other essentials for living without combining with any other person, or
 - a multi-person household, that is to say, a group of two or more persons living together who make some common provision for food or other essentials for living. The persons in the group may pool their incomes and may, to a greater or lesser extent, have a common budget; they may be related or unrelated persons or a combination of both.
 - (b) *Family*: A family within a household is defined as those members of the household who are related, to a specified degree, through blood, adoption, marriage or other legal arrangements (including cohabiting partners of the same or different sex).
 - (c) *Income unit*: An income unit consists of a subset of a multi-person household with shared command over income or a one-person household.
55. Members of a multi-person household may be identified based on any of the following criteria:
 - (a) sharing in housing facilities (either contributing to housing costs or benefiting from costs paid by others);
 - (b) sharing of at least one meal each week; or
 - (c) financially dependent for at least two out of these three types of items: food, housing or other expenditures.
56. The household is the basic sampling unit and unit of enumeration. The dwelling unit, that is, all persons living together in a housing unit or a set of collective living quarters, may, however, be used as the sampling unit, as may the postal or physical address.
57. From the standpoint of statistics on consumption expenditures, the household is the appropriate unit of analysis while, for income statistics, the income unit may be used as a unit for further analysis. For policy analysis focused on the family, a unit for further analysis may be the family.

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58. Household income and household expenditure statistics should cover all persons living in private households in a country, including students sharing accommodation, lodgers and living-in workers of institutions. Collective households like boarding houses, hotels, etc. should be excluded unless the members are involved in decision-making about their consumption. Institutions such as military installations, hospitals, penal institutions, university/school accommodation, and so on should also be excluded from the coverage of these statistics.

Household characterization

59. The membership of a household consists of all persons usually resident in the household, where usual residence should be defined in a manner consistent with the provisions in the latest version of the *Principles and recommendations for population and housing censuses of the United Nations*. A minimum duration of 6 months may be used as one of the criteria for determining usual residence.
60. In order to identify relationships between household members at the data collection stage, an easy-to-use criterion may be applied to select a unique person against whom these relationships could be established. Examples include the person recognized as head, the person taking important decisions, the oldest adult present, etc. Alternatively, all pair-wise relationships between members of the household may be identified at the data collection stage, thereby eliminating the need to have a unique person.
61. For analytical purposes, it may be necessary to describe a household in terms of the characteristics of one of its members, i.e. a reference person. The choice of a reference person would depend on the purpose of the analysis. Criteria linked to employment status, economic activity, demographic factors, and so on may be used.

Reference period

62. Household income and household expenditure statistics should relate to a full-year **accounting period** to take into account seasonal variations in incomes and expenditures. For the purpose of compiling consumer price indices, the accounting period should as much as possible be a normal year with respect to economic and social factors. When data for these statistics are collected or compiled based on administrative sources and/or when the survey period is short and occurs not long after the accounting period, a fixed accounting period should be used. (The **survey period** is the period over which the data as a whole are collected or compiled.) Otherwise, the accounting period should be a 12-month moving reference period relative to the survey period. A moving reference period reduces the risk of recall errors, especially when the survey period is also long.
63. The **reference period** for collecting data for components of income and expenditure that are available only annually, for example annual dividends, mixed income, etc., should be the full 12-month accounting period. The same period should also be used for data relating to components that have an annual cycle, that is seasonal, or occur infrequently.
64. To assure good quality data and minimize recall errors, the reference period for data relating to some components of income and expenditure should be based on a duration that makes less demand on the memory of respondents and avoids unnecessary computations. For example, information about weekly wages and consumption expenditure on some food items and personal care products should be collected using a short reference period. However, the use of short reference periods may introduce instability into the statistics, leading to greater observed inequality in the distributions of income and expenditures between households than with the use of longer reference periods.
65. The choice of appropriate reference periods should be made on the basis of careful experimentation in the practical application of the concepts and definitions and investigation of respondents' ability to provide the information. Analysis of data derived in past household surveys will frequently assist in determining the optimum reference periods.
66. Data collected using a short reference period should be adjusted to obtain estimates for the full accounting period. This should be done using a suitable temporal scaling factor. It should be noted, however, that such an adjustment introduces some non-comparability into the aggregates, and assumes that the data collected are typical for all non-observed periods during the accounting period.

Surveys of income and of expenditure statistics

Data collection

67. Data on household income and expenditures may be collected using income surveys or household income and expenditure surveys. These surveys may be conducted through interviews and/or completion of questionnaires by households (the retrospective method). They may also be implemented using the diary method, in which households are requested to regularly enter into a diary all or some of their receipts and expenditures for a given period.
68. The retrospective method, with relatively long reference and recall periods, is best suited for large infrequent or irregular purchases, especially of durable goods, and for regular expenditures such as rent, utility bills, etc. Diaries are preferable for those items that are frequently purchased such as food, personal care products and household supplies. Income data are mostly collected using the retrospective method with varying reference periods. The relative advantages of using the retrospective method, or the diary method, or a combination of the two, in the particular circumstances of the inquiry should be carefully investigated. Different methods of collection may be used for different components to obtain results of optimum quality. Useful information to guide these choices, including the various recall/reference periods to use for the various components, may be obtained from past experience, experimentation and cognitive testing.
69. Income data should be collected directly from each relevant household member and separately for each type of income at a level that is as disaggregated as possible. Expenditure data should be collected at the household level from a person knowledgeable about the household's expenditures and capable of completing the instruments. However, some items, especially those collected using diaries, may be collected from different household members. In this case a record should be kept about these persons and the responses for which they were responsible.
70. When a short reference period is used, a decision should be made as to whether to collect the actual value of the income/expenditure item or its usual value. Alternatively, the "last payment/purchase" approach may be used. For income data, the amount received most recently is recorded along with the period that the payment covers. For expenditure data, the most recent expenditure made on an item is recorded. The frequency of these receipts/expenditures during the accounting period should also be determined.
71. Supplementary methods that may facilitate data collection include the use of the Internet, receipts from outlets and electronic equipment (hand-held radio cassette tapes or mobile telephones) for real-time recording of expenditures.

Scope

72. The scope of these surveys should, as much as possible, include all types of specified receipts and outgoings, as detailed as possible, including separate identification of all components of household income and expenditure. When income is to be used as a classificatory variable for analysing expenditure statistics, income data may be collected at an aggregated level.
73. Data should be collected to estimate the income of the self-employed as mixed income. However, for certain categories of self-employed such as own-account artisans, their income may be more appropriately determined by requesting from them the same data as for employees. When direct reliable estimates of mixed income are not available or are inappropriate, data on the drawings from the enterprise of the self-employed or the value of the consumption expenditure of their households may be used to impute values for their income. When using this method, one should be aware of the shortcomings in directly using drawings or consumption expenditure as the income measurement.
74. For non-monetary receipts and expenditures, relevant information should be collected to enable their valuation as specified below. To the extent possible, quantity data on all expenditure items should be collected, especially for food items.
75. Information on the membership of the household (socio-demographic and employment characteristics) and on the household characteristics (geographical location, level of urbanization, distance to various types of services) should be collected. Other variables such as health situation and educational attainment may be collected for analytical purposes.

76. To the extent possible, data should be collected in such a way that various aggregates of household consumption expenditure, household expenditure, actual final consumption and household income may be computed to satisfy users' needs for national account estimates, compilation of consumer price indices, welfare analysis and other analytical contexts. In particular, to the extent possible, data should be obtained from households or from other sources on:

- (a) the consumption of social transfers in kind and other in-kind services;
- (b) outlays for investments, net changes over the reference period in savings (including valuables) and in household or personal liabilities and other such disbursements;
- (c) direct taxes, social contributions and transfers paid;
- (d) the place of acquisition (e.g. location, type), for expenditures incurred away from home.

To ensure the quality and usefulness of the data, special data collection mechanisms may need to be adopted other than those used for household expenditure statistics.

Survey design

77. Income surveys and household income and expenditure surveys should use a design that produces reliable and valid estimates at reasonable cost and that is easy to implement. The designs may be cross-sectional, in which inquiries are made to each household in the sample only once through interviews, diaries or both methods. They may also be panel designs in which inquiries are made to each household more than once. Cross-sectional and panel designs may be used with a single sample of households. It is also possible to have a series of cross-sectional or panel designs applied to representative and independent sub-samples staggered over the survey period.

Sample design

78. The design of the sample and the selection of sample households should be made in accordance with appropriate sampling techniques in order to obtain results that are as precise as possible with the resources available, taking into account circumstances such as availability of suitable sampling frames. As far as possible, the sampling method employed should permit the calculation of sampling errors. Thorough research should be carried out to find and clearly identify the most suitable sampling frame, to determine the number of stages, the optimum stratification and other salient features of the sample to be used, as well as the best procedures for selection of the sample units.

79. The sample size should be determined on the basis of the accuracy required, i.e. the magnitude of the acceptable level of the sampling error for key estimates, and the resources available. It should be sufficient to ensure adequate representation of households of different sizes and compositions, income classes, demographic and socio-economic groups, as well as urban and rural areas and, where relevant, different climatic zones within the country.

80. Effort should be made to identify the main sources of non-sampling errors in the surveys and to determine through experimental studies how best to minimize these errors. It is particularly important in the case of low response rates, which may adversely affect the representativeness of the survey.

Frequency

81. National programmes may consist of continuing surveys with or without infrequent large-scale surveys. As a minimum, a major sample survey of household expenditures, so far as possible representing all private households in the country, should be undertaken at intervals not exceeding five years. Under conditions of fast-changing socio-economic and political situations, lifestyles of the population and availability of different types of goods and services, the surveys should be undertaken more frequently. Where monetary income constitutes most of total household income, surveys may be as frequent as annual.

82. Smaller-scale surveys should be undertaken during the interval between two large-scale surveys to provide a basis for estimating changes in important aggregates.

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83. In certain circumstances, a continuing survey with a smaller annual sample but covering the full scope of a major survey may be undertaken. The average of its results over several successive years may provide a satisfactory substitute for a large-scale survey. While this approach may reduce the volume of work compared to large-scale surveys, it may have implications for the statistical infrastructure, particularly the need to have a permanent field structure.

Other sources of income statistics

84. Some components of income may be collected through establishment surveys or from administrative systems. These data are usually of good quality for the units and types of income covered. Issues of coverage of households as well as types of income, reference periods, timeliness, definitions and units of analysis should, however, be considered when using such sources.
85. Wherever possible, a combination of sources including an income survey and relevant administrative records, such as tax records and social security records is recommended to ensure optimal coverage, completeness and accuracy of the data.

Classification, valuation, estimation, analysis and dissemination

Classification

86. Income should be classified by types of source, at as detailed a level as relevant and, to the extent possible, by means of payment so that users would have the option of including or excluding in-kind receipts, e.g. to facilitate international comparisons.
87. Household expenditures should be reported in such a way as to permit their classification in various ways to meet different analytical and descriptive purposes. They should be classified in a way that is meaningful for analysis at national level, especially for purposes of compiling consumer price indices. However, to enhance international comparability, national classification systems of household expenditures should, as much as possible, be compatible with the Classification of Individual Consumption according to Purpose (COICOP), at least at the division level. Wherever possible, information should be available for regrouping expenditures into relevant COICOP categories at least at the group (three-digit) level.

Valuation

88. Income in kind (goods and services) and other goods received as transfers in kind should be valued at market prices for equivalent goods and services. Own-produced goods for own consumption should be valued at market prices for equivalent goods when estimating consumption expenditure, and at producer or basic prices when estimating household income. Where this is not possible or not advisable, self-evaluation by the respondent may be used in both instances. Data should be collected on the quantities acquired and the relevant prices, unless self-evaluation is being used.
89. For consistency with the System of National Accounts, the services of owner-occupied dwellings should be valued as the rental equivalence when estimating consumption expenditure. For the estimation of household income, those housing costs normally paid by landlords should be deducted from the rental equivalence. These costs may include property taxes, property and liability insurance, mortgage interest, water and sewerage charges, repairs and maintenance of the dwelling. Details of the costs should be made available to facilitate different analytical and descriptive needs, e.g. international comparability.
90. Depending on national circumstances, the user costs approach may be adopted for consumption expenditure of owner-occupied dwellings and the interest on home equity may be used for the corresponding measurement of household income. In particular, if rental markets are limited or do not exist, this approach or the out-of-pocket expenditures of owner-occupiers may be used. In the case of the latter, it should be noted that the estimated housing expenditure derived includes some non-consumption costs and that there are no corresponding additions to household income.
91. To estimate consumption expenditure of owner-occupied dwellings, data should be collected on:

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- (a) housing characteristics (age, size, type of construction and facilities, maintenance and repair costs, status of neighbourhood);
 - (b) rents for rented dwellings (from the survey or from other sources) and market value of dwellings;
 - (c) housing costs normally paid by landlords for all dwellings;
 - (d) duration of use for vacation and weekend homes; and
 - (e) the owner's assessment of the rental value for owner-occupied dwellings, where relevant.
92. When the flow of services from (major) durable goods is used, the value should be determined as indicated above for owner-occupied dwellings for estimating both consumption expenditure and household income. Data on the initial purchase price, age and other important characteristics of these durable goods should be collected.
93. Social transfers in kind should be valued from time to time because of their importance for welfare analysis using a suitable methodology. Data should be collected regularly from the surveys on the take up of the different services while data on the total cost to the providers and number of beneficiaries should be obtained from other sources.

Estimation

94. Zeros and negative values for income or expenditures are legitimate values and should be used in computing household income or household expenditure. Households reporting such values should be included in the total number of households when computing means and other such statistics.
95. In order to facilitate the analysis of the statistics, efforts should be made to impute missing values of variables (item non-response) for individual households, provided the number of these is not unduly large and there is a reasonable basis for making the imputations.
96. When a moving accounting reference period is used, in circumstances such as periods of high inflation, the estimation of aggregated values may need to take into account possible differences in expenditure patterns arising from differences in prices and/or volumes over the full survey and accounting periods.
97. Appropriate weights may be used to adjust for selection probabilities, non-response (assuming this is related to the factors used for probability sampling) and benchmarking with respect to the distribution of demographic, geographic and employment characteristics.

Analysis

98. The possible existence and extent of bias due to: (a) underreporting of purchases of certain types of products such as alcohol; (b) over-reporting of purchases of luxury goods; (c) under-reporting of income; and (d) unsatisfactory estimation of self-employment income or the income of poor households, should be investigated.
99. Sampling errors should be computed and reported for estimates of parameters for key variables and important sub-groups using a formula appropriate to the sampling and weighting schemes used for the survey.
100. In analysing the data, the effects of the size and composition of households should be taken into consideration through separate analysis of households with different compositions and/or through the use of an appropriate equivalence scale. In the case of the latter, this should be used with either the income or the expenditure estimates but not both when they are being analysed jointly.
101. The summary statistics presented in basic tables should include, as appropriate:
- (a) counts (persons or households);
 - (b) averages (means and medians), totals and ratios relating to income and expenditure statistics, and, where possible, their standard errors.
102. Basic tables should be produced relating to the level and structure (component shares) of consumption expenditures of households (total and sub-groups of major items):
- (a) by household income group/income quantiles (e.g. quintiles and deciles);

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- (b) by principal sources of income;
 - (c) by household characteristics such as size, composition (age and sex), typology (e.g. employee households);
 - (d) by characteristics of household members (demographic, educational, socio-economic status, employment status, etc.); and
 - (e) by housing characteristics (age, tenure, occupancy rate, etc.).

Where appropriate, the tables from (c) to (e) should also be produced for the level of household income.

- 103. In addition, basic tables describing the situation of households may be useful. These may include tables relating the number of households (or household members) to the characteristics of household members, characteristics of the household, principal sources of income as well as income and expenditure groups.
- 104. As far as possible, these basic tables should also be presented by geographical location, level of urbanization and sex of the reference person or head (where applicable) and, if possible, separately for monetary and non-monetary (estimated) values. The number or proportion of households with zero expenditure on tabulated components should also be reported.
- 105. The analysis of distributions of income and/or consumption expenditure, including measuring poverty, inequality and social exclusion, may be carried out for the whole population as well as for key sub-groups. Other types of analysis may be made of indebtedness, housing, health, education, tourism, etc.
- 106. To the extent possible, the analysis should reflect the extent to which the various strata of the population access the different services provided through social transfers in kind and received free from other households. Savings and liabilities should also be taken into account when analysing expenditure statistics.
- 107. When comparing income and expenditure statistics from micro sources with macro aggregates from national accounts based on other sources, account should be taken of the different objectives of the sources and the conceptual and measurement differences of some of their components. Such comparisons may be useful for mutual checking between these sources, as a service to users and as an attempt to identify and explain discrepancies, provided no one source is considered necessarily more accurate than the other.

Dissemination

- 108. The main statistical report should contain basic tables and aggregates. It should include a summary presentation of the methodology used, including basic concepts and definitions, the sample and survey design as well as details on data collection and data processing. An assessment of the quality of the data, sampling and non-sampling errors, non-response rates and any other major issues relating to the statistics should also be provided. An indication of the extent of and the method used for the imputations should also be made available when the statistics are published, and imputed values should be identified when micro-data sets are distributed.
- 109. As much as possible and without breaching the confidentiality of the information collected, public-use files (anonymised micro-data sets) should be made available to analysts and other interested users. They should always be accompanied by clear and comprehensive documentation of all aspects of the data collection process. In particular, if top-coding (restricting the maximum value disseminated for a variable) is used to protect the confidentiality of information, the details should be documented and the values should be identified. As data collected by government are a public good, public-use files should be made available free or at marginal cost to non-commercial institutions, agencies and researchers.
- 110. In addition to the dissemination of the statistical report and possible distribution of public-use files, the main results from the survey should be publicized through conferences, seminars, the media (interviews, popular articles and press releases), etc. Focused, in-depth reports and analytical papers should be produced for policy-makers. All outputs should be made available in paper publications, and in electronic formats such as diskettes, tapes, CD-ROMs and the Internet.

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111. As a source of institutional memory for future exercises and for consultation by others who would need such information, a detailed methodological report should be prepared including full details of the procedures used as well as lessons learned and conclusions reached from the whole exercise.
 112. The dissemination of these statistics should adhere to the Fundamental Principles of Official Statistics adopted by the Special Session of the United Nations Statistical Commission (1994) and the guidelines concerning dissemination practices for labour statistics adopted by the Sixteenth International Conference of Labour Statisticians (1998).