
INTERNATIONAL LABOUR ORGANIZATION

Report of the Meetings of Experts
on Labour Statistics

**I. Household income and expenditure
statistics**

II. Consumer Price Indices

Meeting of Experts on Labour Statistics

Geneva, 22-31 October 2001



INTERNATIONAL LABOUR OFFICE GENEVA

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Report

1. At its 277th Session (March 2000), the Governing Body of the International Labour Office decided to convene a Meeting of Experts on Labour Statistics. The Meeting was held in Geneva from 22 to 31 October 2001.

Agenda of the Meeting

2. The agenda of the Meeting was the following:
 - I. Household income and expenditure statistics;
 - II. Consumer price indices.
3. The first item on the agenda was discussed from 22 to 25 October and the second from 26 to 31 October 2001.

Participants

4. Twenty-eight experts were invited to the Meeting, 14 following consultation with Governments, seven nominated by the Employers' group and seven nominated (six attended) by the Workers' group of the Governing Body. Four observers and seven representatives of intergovernmental organizations also attended the Meeting. The list of participants is annexed to the report.

Report I – Household income and expenditure statistics (22-25 October 2001)

Opening address

5. The Meeting was opened by Mr. Gerry Rodgers, Cabinet of the Director-General of the ILO. He reminded the participants that the ILO has been concerned with statistics on the living standards of workers and their families since its foundation. He stressed the relevance of the Meeting to the ILO's work, especially its Decent Work Agenda and the need for policy integration to achieve the objectives of fundamental rights, employment, social protection and social dialogue. He pointed out some of the specific issues which might influence priorities and provide legitimation to the work of the Meeting, such as better measurement of progress in reducing poverty, the introduction of gender considerations, the link between statistics of income and expenditure and the other indicators of well-being, and the enhancement of legitimacy of the statistics through social dialogue. The report of the Meeting would contribute to the Office's preparation for revising the international standards on household income and expenditure statistics.
6. The secretariat informed participants that there were no formal rules of procedures for the Meeting and this should facilitate a free exchange of views between them. They were participating as individual experts, not necessarily representing views of their respective governments or organizations. The Meeting was expected to provide guidance on the various proposals of the report and, in particular, whether the existing resolution should be revised or simply supplemented by guidelines.

Election of the Chairperson

7. The Meeting elected Mr. R. Gudnason, the Government expert from Iceland, as Chairperson of the Meeting for agenda item I. The provisional agenda for item I was then adopted without change.

Introduction of the report

8. In presenting the report, the secretariat gave a brief sketch of the types of international statistical standards and the various stages that are involved in establishing these standards through the ILO. The Meeting of Experts, the report in front of the Meeting and the activities that will follow the Meeting were all cited in this process. The need to revise the international standards in household income and expenditure statistics (HIES) arose from the historical and continuing importance to the ILO of this topic, the ongoing activity to revise the consumer price index (CPI) resolution and the ILO's CPI manual as well as the many recent developments in this topic at the international, regional and national levels.

Objectives and uses

9. The Meeting's attention was drawn to two main objectives and uses of HIES of direct interest to the ILO: identification of the basket and computing the weights in the compilation of CPI and analysis of economic well-being. Other uses mentioned included assessing the impact of government policies and compilation of national accounts.
10. In their contributions, participants gave further examples of ways in which CPI could be used including indexation of contracts and loans, formulating of monetary policies (e.g. liquidity, credit grants, assets, etc.). HIES are also used for studying the dynamics of the distribution of CPI weights in different commodity groups, for example, telecommunications. They could be combined with population census data to produce more detailed estimates using synthetic methods. It was pointed out that the possible use of these statistics for generating information on saving behaviour of individuals in different types of households should be given greater prominence than at present.

Conceptual framework of income

11. Three issues were highlighted as influencing the choice of an income concept: the regularity and recurrence of receipts; their potential availability for current consumption; and that they should not reduce net worth. These were examined against the following existing frameworks: the Hicksian concept, that of Haig-Simons, the concept in the System of National Accounts (SNA), that of the ICLS Employment-related Income resolution of 1998 and the existing HIES resolution of 1973. A proposal was put to the Meeting that receipts should be usually regular and recurring, potentially available for current consumption and should not as a rule reduce net worth.
12. It was felt that the regularity and recurrence criteria narrowed the concept of income, especially for measuring structural poverty. Sometimes in economic crunches spouses get engaged in sporadic activities which generate income and these receipts should be included even though they are not regular and may not recur. The inclusion of "usually" is not sufficient in introducing the desired flexibility. One suggestion was to replace it with "usually but not necessarily". After much discussion, it was suggested that the regularity and recurrence criteria be replaced by "... **all** receipts in cash, in kind or in services, **but excluding windfall gains**, that are received by ..." in paragraph 45 of the report.

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13. The issue of not reducing net worth also raised a lot of discussion. Some participants felt that the notion of net worth was difficult to define and measure at the household level. The case of pensions for retiree households which is a reduction in net worth but clearly should be part of income was mentioned. Some others argued that net worth can change due to external factors such as smuggling, slump in world economy, etc., which have nothing to do with the household's direct actions. Others indicated that the proposal should clearly state that taking loans, i.e. increasing liabilities, was not part of income. It was suggested that the replacement of the words "as a rule", which qualified the clause on reduction of net worth, by "**except in certain well-defined circumstances**" would ensure greater flexibility.
 14. Some participants pointed out that "potentially" in "potentially available" was redundant. Also, some income receipts such as the employer's social security contribution should be included as income even though they may not be available for current consumption. If such contributions were not made, a prudent employee would have to spend out of that person's income to provide for retirement income. It was however acknowledged that there may be practical measurement reasons to exclude such contributions.
 15. Another issue that came up in connection with the proposal in paragraph 45 was that in-kind income has some element of forced consumption as such receipts are not fungible; also they are difficult to measure. It was also felt that the distinction between income as receipts to employees and income as costs to employers, that between total and disposable income and the link between the conceptual and operational definitions should be made more explicit in the report.
 16. A fourth issue raised by the secretariat was whether income should be recorded as receipts or as accruals. The Meeting did not reflect any preference nor oppose the proposal to use receipts.

Operational definition of income

17. A description of employee income, as part of the income from employment component of this definition, was made to the Meeting. Some issues that were highlighted for guidance by the Meeting were profit-sharing bonuses, exceptional payments and termination and redundancy payments. While the general consensus was that the first two should be included, there was much debate about severance and termination pay.
18. Some participants considered these as capital transfers as they tend to be large, sometimes covering over six months of pay, and paid in a lump sum. Some others regarded them as returns to the investment of the employee of his working time in the enterprise and so should not be considered as employee income. It was also stated that, as it is usually unexpected and one cannot plan for its use, it should be excluded. They are also neither regular nor recurrent. On the other hand, it was argued that these receipts are related to employment and cannot be considered as windfall payments. So on the basis of the conceptual definition they should be included. One Government participant informed the Meeting that some component of these receipts is treated as property income in their surveys. It was suggested that, as there are arguments both ways, the treatment of this type of receipt should be left open in any guidelines. The secretariat responded that as a previous ICLS had included it as employment-related income, the option should be left to the next ICLS to reconsider the initial decision.
19. The Meeting was also requested to express its views on the inclusion of employers' social security contributions as these were not available to the worker for current consumption. There is also the possibility of double counting when income is aggregated across

households as pensions are also included as income. A Government participant pointed out that the element of these contributions that is a return to investment would however not be counted double. A Worker participant agreed that this contribution should be excluded as it is not income for the worker. The secretariat stated that there is also the issue of entitlement as certain conditions have to be met before a worker is guaranteed the eventual receipt of this deferred benefit.

20. In describing income from self-employment, the other part of income from employment, some issues relating to the use of mixed income as the measure of this income were raised. Some participants mentioned the difficulty of measuring this type of income, especially the valuation of own-consumed goods and goods and services for barter. An Employer participant went further by explaining that up to one-third of personal income is unknown and unrecorded in that person's country. A Government participant expressed some unease in calling mixed income, which includes return to investment as well as labour, income from self-employment. It was however agreed that the proposal to use mixed income in paragraph 54 of the report to the Meeting should be accepted.
21. There was some discussion of the issue raised in paragraph 54 with respect to the treatment of the income of owner-managers of incorporated enterprises and of outworkers. A Government participant drew attention to the need to clearly recognize the difference between owner-managers of incorporated and of unincorporated enterprises. For the former, directors' fees are classified as wages while dividends go into property income. It was also felt that a definition of outworkers should have been included in the report. One Government participant felt that their income should be treated as self-employment income.
22. The observer from EUROSTAT informed the Meeting of their work in progress to produce a manual on income statistics based on the recommendations from the Canberra Group. For them it is important to distinguish between gross and net income. Their target is disposable income derived from different sources, including imputed rents.

Property income

23. This was categorized as interests and dividends, rents (for all assets) and royalties. An Employer participant disagreed with this treatment of royalties as they are a return on human capital and should therefore be considered as income from employment. This was disputed by another Employer participant who argued that royalties may go to someone other than the original producer through inheritance, for example. So it should be considered as property income. A Government participant, on the basis of a need for consistency between international organizations in the recommendations they make, argued that the recommendations should follow those of the SNA and the Canberra Group by classifying royalties as self-employment income.

Current transfers

24. The secretariat presented various forms of current transfers that should be treated as income. Pensions are included even though they are a drawing down on assets, and in-kind transfers from other households and non-profit institutions serving households (NPISHs) should also be included even though the Canberra Group excludes them. An Employer participant pointed out the risk of double counting when transfers in cash from other households are included. Participants were in agreement that regular in-kind transfers should be included as they are not always insignificant. An Employer participant stated that these transfers accounted for 10 per cent of rural households' income in that person's

country. A Worker participant also pointed out that, as social security regimes are changing in the face of the current economic crisis, this type of transfer is becoming increasingly important for student households.

Other income from within the household

25. These were presented as services from owner-occupied dwellings, from other consumer durables and from home production. An Employer participant was of the view that services from owner-occupied dwellings should not be considered as income. It is not CPI-related and changes in value do not change an owner's living standards. Many other participants expressed a contrary view but some argued that it should in fact be classified as property income. One Government participant mentioned an alternative treatment in which housing costs are excluded from the income of those renting their dwellings, allowing a rent-free income to be used for certain types of analysis. A Worker participant had some misgivings on considering these receipts as income due to their unrealized nature. A Government participant reminded the Meeting that it should take into account consistency in treatment between income and consumption when these decisions are being taken.
26. There was general agreement that services from other consumer durables should not be included operationally but the grounds should be the difficulty in valuing these services and not their insignificance. With respect to home production of services, it was appreciated that this is an important component that affects the living standards of households and has policy implications. It was agreed however that it should be excluded because of valuation difficulties.

Other income from outside the household

27. The view of the Meeting was that social transfers in kind are important, especially for welfare analysis, but their regular inclusion in an income measure would be difficult. A Government participant informed the Meeting that these are in fact evaluated from time to time in that person's country. The guidelines should therefore encourage countries to do so as much as possible.
28. An Employer participant argued for the inclusion of realized holding gains as income since it provides a means for households to consume. The same cannot however be said of unrealized gains. This was disputed by a Government participant who argued that realization of gains can significantly be affected by factors such as tax regimes and so could mislead analysis of income distribution across time and space. In support, an Employer participant stated that, if they are to be included, both realized and unrealized gains must be included. The participant however drew attention to the impact of market conditions on these items and the difficulty of assessment.

Aggregation

29. The secretariat presented total income and disposable income as two useful aggregates of income for cross-country comparisons and welfare analysis respectively. The Meeting was in agreement with these proposals. It was however pointed out by a Worker participant that disposable income raises problems of evaluating taxes. A Government participant questioned the subtraction of some family support payments that are voluntary in nature. Another Government participant argued for also including adjusted disposable income, which is the sum of disposable income and social transfers in kind, as another income aggregate of interest.

Conceptual framework of consumption

30. The Meeting, after much discussion on the correct conceptual approach to the consumption of durable goods, agreed that at the very beginning the alternative notions of consumption as acquisition and as the physical using up of goods and services should be explicitly stated. The former, it was argued, is the way in which consumption is understood in modern economics, while the latter is useful in measuring value added and net production. It was also argued that the two concepts were inconsistent and contradictory and could not be used in the same framework. It was however decided to accept the proposal to the Meeting to have both notions as alternatives in the conceptual definition of the consumption of goods and services. In the statement of the proposal the words “all goods” should always be replaced with “all goods acquired”.
31. The two consumption aggregates of household consumption expenditure and actual household consumption proposed to the Meeting were found acceptable. For CPI compilation the former is appropriate, while the latter is relevant to welfare analysis. Some misgiving was expressed by an Employer participant about the inclusion of in-kind consumption in these aggregates. It was however noted by a Government participant that this type of consumption could represent a substantial part of total consumption.

Operational definition of consumption

32. Participants felt that the wording of the proposal in the report was too complex and should be redrafted to be in line with the slides used during the presentation. It was also suggested that part 1 of the relevant paragraph should specify that “income in kind” is “employee income in kind and through barter”.
33. An Employer participant drew the attention of the Meeting to the inconsistent treatment between the decision taken earlier to exclude from income the flow of service from durables other than owner-occupied dwellings and the present proposal to include this service flow as consumption. It was pointed out that this was to achieve consistency with the earlier agreement to include the alternative notions of consumption in the conceptual definition and to accommodate the recommendation in the World Bank’s manual quoted in the report. The Meeting agreed that there is a need to discuss this issue at a wider forum, such as the ICLS.
34. The treatment of in-kind goods from other households as consumption of the receiving household in the proposal on actual household consumption was questioned by a Government participant. The practice in that person’s country was to treat them as consumption expenditure of the household making the transfer. Some other participants concurred with this view and this practice. It was however argued by the secretariat that, although this practice was consistent with the CPI objective and was easier from a measurement standpoint, such transfers were a major contribution to the living standards of the receiving households in many developing and transition countries, especially in the rural areas and for poorer households. Government participants from some of these countries supported this point, adding that it was also relevant for elderly households during periods of crisis.
35. The EUROSTAT observer described their practice as including in consumption all monetary expenditure, goods and services in kind from employers, own consumption of goods, and the service flow from owner-occupied housing. There is however a project in operation to investigate the possibility of having two series, one with and the other without social transfers in kind.

Timing of consumption

36. The Meeting supported the view that the timing of consumption of own production should be on an acquisition and not actual consumption basis as this was easier to measure. There may be some difficulty in using acquisition for the consumption of utilities as actual consumption usually precedes the receipt of bills. The suggestion was to use payment in these circumstances. This was however rejected by the Meeting.

Exclusions

37. Some of the excluded expenditures are major outgoings of the household that are useful for analysis. It was therefore suggested that, wherever it is both feasible and convenient to do so, information on those items may be collected from households for use in making estimates for national accounts or for other special purposes.
38. There was general agreement that some of the investment-related expenditures, especially savings, are important for the analysis of welfare and so should be explicitly measured. Some Government participants pointed out however that the estimation of savings from household expenditure surveys, even if possible, would be unreliable for many reasons. Special surveys are better suited to this purpose.

Special items

39. Non-life insurance premiums: A Government participant offered an alternative solution in which gross premium is recorded and then claims are subtracted from expenditures on replacements. It could however be a problem if no replacement item is purchased.
40. Health and education expenditures: It was suggested that the timing problem (delay between payment and reimbursement from insurance) could be solved by asking households to subtract self-estimates of expected reimbursements from actual expenditures.
41. Interest payments: This provoked much discussion. 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 cause some problems for 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 but credit card interest is not included for the compilation of CPI. In EUROSTAT, interest is treated as one of the components 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 is therefore difficult to separate out those that are consumption related.
42. Housing decorations, etc.: It was pointed out that only minor repairs and maintenance as done by tenants should be included. There were however country differences in the legal obligations of tenants in this respect.
43. Gambling: Most participants agreed with the approach proposed. One Government participant described their own treatment of gambling as follows: include gambling expenditures net of winnings if positive. Otherwise include only gross gambling expenditures and record winnings in a special income category for balancing purposes.

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44. The room document table showing operational and conceptual scope of expenditure by item should be part of the report as it is very useful in explaining the different approaches proposed. It was however necessary to amend the table to make it more complete and self-explanatory.

Statistical unit

45. The Meeting agreed that the household is the preferred unit of sampling, enumeration and analysis. It acknowledged that, for analysing income distribution, it may be useful to constitute some form of income unit based on the notion of shared income such as the benefit unit of the United Kingdom and the income unit of Australia. There may however be some problems in using such a unit in practice because of the possible requirement to assess intra-household transfers of income. The individual could be a useful unit when using administrative registers but the concept of family unit is becoming less used in some countries.

Coverage

46. There was general agreement 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.

Household characterization

47. The proposal of the Office on the definition of household membership (paragraph 165 of the report to the Meeting) was regarded as impractical for household income and expenditure statistics. The criterion should be “usual” residence with countries left to decide on how to define “usual”. In the interest of comparability, the Office proposed to carry out further work on how various countries define “usual” residence.
48. In respect to the identification of a reference person, the view of the Meeting was that, contrary to the proposal of the Office (paragraph 170 of the report to the Meeting), it was important to make a recommendation. A list of possible criteria for the identification of this person, such as income, financial responsibility for housing unit, age, or person taking important decisions, could be given with the choice left to countries. An alternative approach is not to decide a priori but to use whichever social or economic criterion is pertinent to the analysis being performed; for example analysis of pensioner households when that is the subject of interest. The Office should do more work on this to come up with some consensus.
49. The Meeting agreed on the importance of taking household size and composition into account when analysing income or expenditure data. Equivalence scales could be used, but not for both aggregates simultaneously. There is however a problem when the unit of analysis is a subset of a household as all known equivalence scales are at the household level and since housing is the aspect for which there are the greatest economies of scale.

Reference period

50. It was decided that the proposal in paragraph 177 of the report to the Meeting be amended to read “Surveys should normally be conducted to represent a full year of household accounts when aggregated over all households”. For CPI purposes the survey period chosen should be a normal year characterized by stability of structural relationship between the components of domestic demand and any dramatic change of aggregate demand. It was pointed out that if it is a continuous survey this problem could be more easily overcome.
51. There was some support for the proposal to use the term “referral period” for the calendar period to which the statistics are supposed to refer so as to reserve the term “reference period” for the data collection period.

Sources of income statistics

52. In discussing the relative importance of different sources for income statistics, the Meeting agreed that the optimal position was to combine data from income surveys with those from administrative sources to the extent possible. Although administrative sources may produce the best quality data, not all components are available from this source and it is not always possible to reconstitute households from it. Obtaining income estimates from other surveys could reduce the quality of the income data relative to doing so from household income and expenditure surveys.
53. The Meeting accepted the recommendations of the Office on an annual reference period for income data and that individual income should be collected from each relevant household member at the lowest level of disaggregation possible.
54. It was decided that zero and negative values which may arise from the use of mixed income for self-employment income were legitimate. Otherwise there could be problems of consistency with macroeconomic totals. Withdrawals should only be considered when mixed income is not available.
55. The proposal to collect total income was considered by some participants as problematic as households do not always know the deductions made from their income. In these circumstances it was preferable to collect net income and then determine gross by using other sources during estimation.
56. The collection of background information as proposed in paragraph 191 of the report to the Meeting was important but for some items, such as assets and liabilities, this should be done from sources other than income and expenditure surveys.

Sources of household consumption expenditure statistics

57. These statistics are usually collected through household surveys which can take various forms, such as household income and expenditure surveys, household budget surveys, household/family expenditure surveys, household economic surveys, etc. The secretariat presented the two main methods of data collection, namely the interview method and the diary method, which can be used alternatively or simultaneously, and emphasized the respective advantages and limitations of both methods. In accepting the proposals of the secretariat, the participants shared their experiences in this field, confirming that in many instances a mixture of diaries and interviews was used and emphasizing the methods used

to reduce the main risks of recall and telescoping errors. In one instance it was discovered that recall errors over 12 months were larger than telescoping errors over three months, so the recall period was changed to three months without any adverse effects on the quality of the estimates for infrequent purchases.

58. Diaries are normally used for frequent purchases and usually relate to a one or two-week period. It was noted that an additional week may reduce the risk of zero purchases, especially in the case of food items. In some countries with high illiteracy rates, however, using diaries for any period longer than one week could be problematic. The use of diaries could also influence the consumption behaviour of households.
59. Some countries use structured or semi-structured diaries, while others use freestyle diaries, both methods having their advantages and disadvantages (especially the risk of limiting the recording to the items listed, or the risk of forgetting to record others). One of the issues discussed was the timing of diaries which may affect the recording of income and expenditure. When the sample design permits, diaries are spread at equal intervals throughout the month or the year, and the results averaged out.
60. Diaries are generally filled in either by one or all adults knowledgeable about the consumption expenditures of the household. Some Government participants indicated that simplified diaries were also completed by younger household members, sometimes with the help or supervision of interviewers.
61. Interviews are generally used for infrequent or seasonal purchases (such as travelling abroad) and durables, and/or to check the diaries with the respondent households. The role of the interviewers was recognized as important: to provide explanations to the households, check diaries, encourage household members, and build up confidence through regular contacts and interviews. Their training was essential, as well as their capacity to deal with various population groups, languages, etc. Interviewers are also essential in areas where a significant percentage of the population is illiterate. However, the number of interviewers' visits is often restricted for reasons of costs. Attractive methods may be adopted to help respondents record all items purchased, such as small pocketbooks or similar "memory ticklers".
62. Other means of recording consumption, used in association with surveys, were reported as facilitating data collection, minimizing respondent burden and increasing the accuracy of the data. They include the use of itemized shop receipts and detailed bills (as for telecommunications). 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 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 try hand-held cassette tapes to record expenditures even as they are being made.

Scope of surveys

63. Ideally, all items of income and expenditure should be covered, including in-country disbursements, which are relevant to CPI, and expenditures abroad, which are useful for welfare and other analyses. The secretariat had also recommended that complementary data be collected on major durables, quantities of food items and characteristics of dwellings and household members. The Meeting generally agreed to these proposals.
64. A number of participants indicated that expenditures abroad were covered by the survey, although data collection is in general more difficult and less detailed than in the case of in-

country purchases. A Government participant indicated that expenditures abroad were estimated by the national accounts in their country. There are some countries which conduct special surveys on expenditures abroad.

65. Several participants confirmed that inventories of major durables were included in the survey questionnaire or obtained through interviewers. One participant expressed concern about the imputations of service flow from all these durables, favouring instead the use of their acquisition value. In response it was indicated that values were imputed only for dwellings and, in at least one country, for vehicles.
66. Some participants indicated that data were collected on the quantities of food consumption through these surveys; however it was sometimes difficult to convert the information into physical units of measurement.
67. 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. There are a few surveys of this type on the labour market and income aspects of individuals, but very few try to cover expenditures and consumption.
68. The participant from EUROSTAT indicated that the existing European Community Household Panel survey did not cover expenditures at all. The forthcoming survey will cover income and living conditions, also excluding expenditures, based on existing national sources, including administrative sources as in Nordic countries.
69. It was also indicated that when independent samples are used for each survey round, a limited number of analyses could be carried out on the evolution of certain socio-economic groups (distributions) in terms of stocks of information, and that another possibility could be to use the same original sample a few years later to carry out the same types of analyses.
70. A Government participant stressed the importance of collecting information on assets and liabilities to get a better understanding of changes in expenditures. Special surveys are best suited to this purpose.

Special issues

71. The attention of the participants was called to the survey design, sample design (including methods to reduce low response rates), non-sampling errors and survey frequency.
72. As regards the survey design, doubts were expressed about the choice of rotation or multiple-visits surveys as the most commonly used design, even if it is the most efficient one. Some participants indicated that the main risks of multiple visits were attrition and resistance to the completion of repetitive diaries leading to a lower response rate. The use of several sub-samples enumerated once only at different periods over a whole year appeared to be preferable, the design being more simple and the survey less costly. However, even in that case, attention had to be paid to the changes which could occur in the sampling frame and the sample over the year.
73. It was also 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. Stratified two-stage probability sampling was often applied, but it was recognized that the sample design depended on the country's economic situation and size. Several participants insisted on the need to ensure proper coverage of both urban and rural areas, applying, where necessary, different sample designs and sometimes different questionnaire designs and data collection methods.

- 74.** The secretariat informed the Meeting that further work would be done on the types of survey design most commonly followed by countries all over the world.
- 75.** Several participants indicated that various methods had been tested to improve the response rate. They included the use of incentives in the form of money, free calculators, scales or other useful items; introductory letters, sometimes directly handed to the selected households; or advance incentives, such as small books of postage stamps, which create some kind of moral obligation to participate. 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. 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.
- 76.** As regards the frequency of survey, the secretariat had recommended that household income and expenditure surveys 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. It was however noted that a higher frequency was required for the compilation and monitoring of CPI. When separate surveys are used to collect data on income and expenditure, their periodicity may also differ.
- 77.** EUROSTAT informed the participants that the methodologies of the national Household Budget Surveys had changed over the years. Under the forthcoming survey design, countries will use their own methodology and EUROSTAT will publish harmonized results according to the EU recommendations. Most EU countries, except five, will carry out annual surveys or inquiries, will use two-week diaries and spread data collection over the year. Methodological information will be published by EUROSTAT in 2002.

Valuation methods

- 78.** The Meeting was invited to discuss the different valuation methods which should best apply to a number of income and expenditure components, including income in kind and consumption of own-produced goods, owner-occupied dwellings, and major durables.
- 79.** As regards the first two items, there appeared to be a consensus on the proposed methods, namely, evaluation of income in kind and own-consumed goods at market prices and, in the latter case, at producer prices or through the respondents' self-evaluation where market prices were not available. One participant, however, pointed out that for purposes of CPI compilation, producer prices should be the preferred method during periods of economic

crisis. Consumers are over-cautious and may therefore not be influenced by price and quantity.

80. Most of the debate related to the valuation of owner-occupied dwellings. Some participants were in favour of using the rental equivalents to estimate the economic concept of using up the services of the dwellings which probably is the easiest way. However, this valuation method was not fully appropriate in reflecting the economic situation of owners. On the income side, this situation is influenced by their level of investment, mortgage, indebtedness, etc. and complementary information was required on these expenditures, their consumption patterns and their cash flow situation.
81. It was also pointed out that from the income aspect, services of owner-occupied dwellings should be evaluated as rental equivalent net of housing costs, while from the expenditure side, the rental equivalent gross of housing costs should be used. The converse of this (rental gross of housing costs on the income side and rental net of housing costs on the expenditure side) is also possible depending on the institutional arrangements for paying these costs in different countries.
82. It was also recognized that in certain countries or remote areas, rental equivalents do not exist at all. It was therefore suggested that in such cases the best approach would be to leave out consumption of owner-occupied dwellings and also to omit rents paid by tenants from their consumption expenditures.
83. It was suggested that the secretariat carry out further studies on the actual methods of evaluation most commonly adopted by countries.
84. With respect to major durables, it was felt that depreciation, plus the return to capital and the costs of maintenance, etc., should be used. Alternatively, rental equivalent could also be used as for owner-occupied dwellings.
85. As regards the valuation of social transfers in kind, the proposed valuation at cost to the provider (government or NPISH) may not be justified in terms of the services provided.

Classifications

86. The Meeting did not comment on the proposal that income be classified by source to as detailed a level as possible, as well as by means of payment.
87. For the classification of consumption expenditures, the Meeting recognized that COICOP, or national/regional adaptations of this classification, were widely used in household budget surveys and for CPI purposes. The issues of bundled purchases and multi-purpose items should not raise specific problems. However, for CPI purposes, more detailed product groups were often required and countries adapted their national classification to these requirements by adding extra levels. In any event, whatever classification is used, it should be compatible with COICOP.

Estimation

88. The issues brought to the attention of the participants included the implications of the inclusion of zero or negative income in the computation of averages, the imputation for missing items and non-response, the required adjustments for under- and over-reporting, benchmarking, computation of sampling errors, etc.

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89. There was agreement on the inclusion of zero or negative income in the computation of estimates. Several participants were in favour of disseminating the raw survey results without adjustments for over- and under-reporting, provided explanations were made available in the survey reports and that confidentiality of households was preserved. Complementary information should be provided on possible underestimation and any adjustments required for CPI compilation purposes could then be made by 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 together with the aggregate data.
 90. Where imputations were made for missing items and/or non-response, an indication of the amount 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. In general, however, the Meeting recommended that imputations and adjustments by the statistical agency should be kept to a minimum.
 91. Some participants did not agree with the statement contained in the report, that “balancing the household account was no longer regarded as useful or cost-effective”. It is cost-effective and useful in some cases and for some designs but not for others.
 92. As regards weighting methods used to reflect selection probabilities and non-response, it was suggested that the results of population censuses could be used to match responding and non-responding records and so appropriate weights could be derived. No recommendation was made on the use of top-coding (that is restricting the maximum value permitted for a variable). One participant suggested that another way to decrease the impact of outliers on the distribution of income and expenditure was to winsorize.

Analysis

93. The proposed set of cross-tabulations of level and structure of income and consumption expenditure was considered a minimum set of tables. It was suggested to add another set of tables according to income and expenditure of socio-economic groups such as employee households.
94. A participant favoured a recommendation that when computing income quantiles, equivalence scales should be used. Other participants felt that although equivalized income was useful in analyses of income distribution, other types of estimates could be compiled, such as gross or net income per capita, per household size, or per household composition.

Dissemination

95. The Meeting agreed that the results should be accessible and reliable. Various dissemination methods could be used, including paper publications, special press releases, CD-ROMs, Internet, public-use files, special tabulation services, etc. Methodological information should be made available along with the relevant data. This information should include details on the quality of the data, including sampling and non-sampling errors, sampling variance and non-response rates.
96. The issue of costs was raised by a number of participants. Experience showed 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, the inclusion of guidelines on cost policies was not favoured by the majority of participants.

97. One participant raised the issue of timeliness of dissemination and another one drew the Meeting's attention to the dissemination standards provided by the IMF. The secretariat pointed out that timeliness of dissemination was often outside the control of statistical institutions. It also reminded the participants that the IMF concentrates on financial statistics, that guidelines have been provided by the UN Statistical Commission on the Fundamental Principles of Official Statistics, and that the 16th ICLS had adopted guidelines concerning dissemination practices for labour statistics in 1998.

Conclusion and recommendation

98. At the request of the participants, the secretariat explained that several alternative recommendations were possible:

- a set of guidelines, based on the existing resolution, which would expand on, or clarify, certain paragraphs; this was possible provided the structure of the present resolution could be followed; otherwise these guidelines would have to be very detailed;
- a draft revision of the 1973 resolution, to be submitted to the 17th ICLS in 2003;
- a report to the 17th ICLS for discussion in a working group with a draft resolution presented to the 18th ICLS in some seven years' time;

In addition, the guidelines or the revised resolution could either concentrate on household income and expenditures surveys, as the existing resolution, or encompass all household income statistics and household expenditure statistics derived from various sources, including administrative sources. The primary objective of a new resolution would be to set minimum standards, while international comparability would be a secondary objective.

99. No other international guidelines exist at present which cover both income and expenditure statistics apart from the 1973 ICLS resolution. The Canberra Group concentrated on the income aspect. The creation of a City Group which would focus on expenditure statistics could be considered. It was pointed out however that such city groups usually have an audience generally limited to OECD countries, for reasons of costs and resources, and that the ICLS has a wider participation in terms of countries, as well as in terms of tripartite constituency.
100. Another practical aspect had to be taken into consideration: the possibility of presenting another resolution to the 17th ICLS on labour indicators. In this case priority would be given to the revised CPI resolution and to the new resolution on labour indicators, and consequently a revised resolution on HIES would not be submitted.
101. The participants considered that a certain amount of work had already been done with a view to revising the guidelines on household income and expenditure statistics. One Government participant suggested that some further work could be done on the major uses of such data and the consistency between the various resolutions dealing with income and expenditure, CPI and employment-related income, with a view to harmonizing them.
102. The Meeting agreed that the Office should examine all the suggestions above and, if possible, try to present a revised resolution to the 17th ICLS.

Report II – Consumer price indices

(26-31 October 2001)

Opening address

- 103.** The second part of the Meeting was opened by Mr. A.S. Young, Director of the ILO Bureau of Statistics. He welcomed the participants, and reminded them of the overall objectives of the Meeting. It had been considered important to establish whether the CPI guidelines provided in the 14th ICLS resolution (1987) should be updated to reflect recent changes in index concepts, definitions and methodology. The report, which formed the basis for the Meeting's discussions, built on the work that had resulted from discussions and methodological work in a number of countries as well as in international forums.
- 104.** It was explained that the main purpose of the Meeting was to obtain the views of the experts on the substance of the draft resolution presented in the report, and not to examine the precise wording. The legal status of an ICLS resolution was also clarified.
- 105.** Following his address, the secretariat informed participants about the organization of the Meeting.

Election of the Chairperson

- 106.** Mr. Paul Cheung, the Government expert from Singapore, was elected Chairperson for this part of the Meeting. In his opening statement, he stressed the importance of the CPI to all countries throughout the world. The proposed resolution reflected developments in work with CPI made in recent years, particularly in developed countries. He stressed that it was important to establish to what extent the issues addressed by the report were relevant for developing countries. The history of CPI estimates in many countries was very long and it may therefore be difficult for some of them to accept substantial changes unless there was a compelling case. The draft resolution should address issues common to countries at all levels of development.

Introduction of the report

- 107.** The secretariat's presentation of the report covered recent developments in the area of CPI theory and practices and the reasons for revising the 1987 CPI resolution. The historical background of the international standards and the procedures for developing and adopting the resolution were also described.
- 108.** It was indicated that the proposed draft resolution was built on work undertaken in a number of countries and by a Technical Expert Group on CPI (TEG-CPI).¹

¹ The Inter-Secretariat Working Group on Price Statistics (IWGPS) was established at the end of 1998 to develop and document best practice guidelines on concepts and methods of price statistics and indicators consistent with the established international standards on the subject. The Technical Expert Group (TEG-CPI) was established to provide IWGPS with technical advice on revision of the 1989 ILO Manual on CPI. The IWGPS is composed of participants from the Economic Commission for Europe, the International Labour Office, the International Monetary Fund, the

109. The content of the draft proposal for new international standards was described and the major differences between it and the ICLS resolution adopted in 1987 were highlighted.

110. It was proposed to review the following elements of importance for the quality of the CPI:

- nature of CPI;
- the formulae utilized for computing elementary and upper level indices;
- the frequency of weight updates;
- the procedures for quality adjustment, introduction of new goods and new outlets;
- the usage of probability sampling methods;
- the frequency of publishing data, etc.

General discussion

111. The Meeting identified several areas of the CPI construction that were not addressed in the draft resolution:

- construction of CPI for rural areas;
- treatment of seasonal items;
- treatment of consumption from own production;
- treatment of second-hand goods.

In addition, these and other issues, such as the handling of informal markets and negotiated prices, needed to be addressed with particular concern for the context of developing countries.

112. Some concern was expressed that, although the draft resolution mentioned the problem of owner-occupied housing, no explicit recommendation was made for its treatment.

113. It was suggested that the population scope might be defined separately for an inflation index and for a compensation index.

114. Several participants felt that the section on quality adjustment was overemphasized and too influenced by particular developments in certain countries. It was noted that quality changes could result not only in the overestimation of price change but also in underestimation when there had been a decline in quality. This could be particularly relevant for the prices for services.

115. Another area that was identified as important for more comprehensive treatment in the future was the presentation of changes for the index when the basket changes, and the dissemination of information explaining the nature and consequences of such changes.

Organization for Economic Cooperation and Development and the Statistical Office of the European Communities (EUROSTAT).

Objectives of the resolution

116. The objectives of the resolution were discussed at some length. The Meeting agreed that the primary objective was to provide *guidelines of best practice* to countries when developing or revising their CPIs. A secondary objective was to promote the *international comparability* of the national CPIs. It was felt that this often follows directly from the first objective: applying best practice automatically promotes international comparability. It was pointed out that international comparability was very important for inflation indices and desirable for indices used for real wage trends, but for comparing compensation indices it was not feasible.
117. Promoting *consistency* with other statistical series was identified as a lower level priority although it was desirable to have CPI series that could be meaningfully used together with other statistical series, for example on household income and consumption.
118. Several participants felt that consistency should not be overemphasized as an objective, because it could lead to an incorrect impression that the CPI should be more closely based on other statistical frameworks such as that underlying national accounts. Accordingly, the draft resolution should emphasize the need to be able to reconcile and explain differences between major data sets.
119. Another objective of the draft resolution mentioned by employer and worker representatives was to promote better *understanding of the index by the users and to ensure confidence* in the index. Consultations with employers' and workers' representatives when an index was being revised could improve their confidence in the index.
120. The need to *ensure the independence* of the institution compiling the CPI should be included in the draft resolution, according to a number of participants.
121. The need to provide as accurate *an estimate* of CPI as possible was also emphasized as one of the objectives of the resolution.

Terminology

122. At the suggestion of the Chairperson, the Meeting decided to deal with the terminology issues as they arose under the different topics for discussion.

Nature of CPI

123. The secretariat proposed to distinguish a CPI intended to measure the price changes of a fixed basket of goods and services of constant quantity and quality (pure price index) from a CPI intended to measure the change in the cost of maintaining a certain standard of living (cost of living index – COLI).
124. The discussion highlighted that, while an index designed to estimate price changes for a fixed basket of goods and services should conceptually differ from a COLI in many important aspects, in practice a COLI must be estimated on the basis of the information available about consumption patterns. This would often be the same information used to determine the weights for an index designed to measure price changes for a fixed basket of goods and services. Thus, in practice, the differences in price changes measured according to the two types of indices may not be very significant, and the former may be used as an approximation for the latter.

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125. It was suggested that concerns and solutions of relevance to both types of indices should be reflected throughout the text of the resolution.
 126. The Meeting concluded that there was no contradiction between the two concepts. The COLI should be regarded as a theoretical framework, an ideal target for the CPI, while a fixed basket may be regarded as an operational concept, as an approximation of the COLI. This was the case in many countries.
 127. However, bearing in mind that a new ICLS resolution would need to stand for a long time, and that new methods, data and tools for producing a COLI may become available, national statistical offices may be in a better position to move towards COLI and produce both indices at some time in the future.

Uses of CPI

128. The secretariat drew attention to what it saw as the two principal uses commonly made of the CPI: to adjust wages and social security benefits to compensate for changes in the cost of living and to measure the inflation experienced by households. A third use in its view related to the deflation of components of total household consumption expenditure in national accounts. In the draft resolution, it was proposed that different price indices may need to be constructed to meet the different purposes, but that only one index should be referred to as the official CPI. If only one CPI was produced, the underlying concept should correspond to the most important purpose, and this should be explained to users so that they would be aware of the limitations of the index. It was suggested that this aspect should be reflected in the new guidelines.
129. One participant proposed that the neutral terminology of the 1987 ICLS resolution regarding the uses of the CPI should be adopted for the redrafted resolution.
130. It was felt that the three uses of CPI noted in the report were the most common uses, rather than the “principal” ones. It was generally recognized that no single index could meet all users’ needs, so that, where resources permitted, it was often necessary to produce different indices for different purposes. In some countries, these were independent indices constructed for distinct purposes. In others, the various indices were often different subsets of components intended for different uses. For example, in the European Union, Member States produced CPIs for their own national purposes, as well as the Harmonized Index of Consumer Prices (HICP) for inter-country comparisons within the area. Some participants found the existence of different indices confusing, leading to questions as to which was the “best” index. It was suggested that the problem of confusion could be overcome by clearly naming each different index, and providing users with adequate explanations of their meaning. Several participants noted that this was the practice in their countries, and users did not appear to have any difficulty in understanding the differences. One observer proposed that the new guidelines should include a paragraph providing a list of the different purposes for which CPI could be used, and an indication of the type and scope of index that would suit each purpose.
131. One participant drew attention to the importance of the CPI being produced by an impartial government agency, so that all parties using the index could have confidence in its independence and accuracy, particularly for purposes of wage negotiation and measuring inflation. Other organizations could produce other indices, but these would never be accorded the same level of confidence.

Scope of the index

- 132.** In the introduction to this topic, the secretariat raised the question as to whether the scope of the index should be defined for each use. In response, the view was expressed by many participants that, as far as possible, one of the indexes should have the broadest possible scope in terms of types of households, outlets and items, as well as in terms of geographic coverage. However, it was recognized that it may be necessary to limit this scope for a number of cost and operational considerations, including: out-of-scope expenditure should be low; and the resulting index estimates should correspond as closely as possible to the needs of the main identified uses. Thus, for example if the major objective of the CPI were to make cost-of-living adjustments for middle-class urban wage and salary earners, the scope requirements would be quite different from those of a CPI whose major objective was to monitor general price developments of the consumption of all households.
- 133.** Strong support was voiced for the point that no goods or services should be excluded from the CPI scope on moral or social grounds, such as cigarettes, because they are detrimental to health. One participant stated that even those goods and services considered to be illegal, such as drugs and prostitution should be included, but this view was not shared by all participants. Another participant suggested that an operational guideline could be that items “not legally available” should be excluded from the scope due to the difficulties of obtaining reliable estimates for their weights and prices.
- 134.** The link between the intended use of an index and its scope was underlined by several participants, and there was considerable discussion regarding the inclusion or exclusion of expenditure and prices abroad. Several participants described the procedures adopted in their countries, which depended on the use for which the CPI was constructed. For example, it was not appropriate to include external expenditure and prices for an index intended to measure domestic inflation. On the other hand, external expenditure and prices were included in the CPI in some countries where this was an important component of expenditure and where appropriate tools and methods of measurement were available. When the objective was to make international comparisons of changes in prices among a group of countries, it could be relevant to exclude from the scope items for which the institutional arrangements in the countries made comparability difficult or impossible, such as health and education services. When considering an aggregate index for several countries, it would be necessary to adjust the scope to avoid double counting with regard to out-of-area purchases, while ensuring the coverage of all relevant consumption expenditures undertaken by households anywhere in the participating countries.
- 135.** The Meeting recognized that the data collected for producing a CPI, whether for the estimation of weights or for the observation of price changes, would also be important as a basis for estimating total consumption for a country’s national accounts and its components, as well as for the associated deflation of price changes. However, it was agreed that the coverage of total consumption in the national accounts may differ in some respects from the scope of a CPI, and that it therefore would be inappropriate to give primary importance to national accounts coverage when determining the scope of a CPI.
- 136.** Many participants reported that in their countries, particularly in the statistically more advanced ones, more than one CPI was routinely published and that this in practice did not seem to cause much confusion among users. However, the importance of providing clear documentation about the scope of a CPI and giving the different CPI names that could help users to understand the differences in their scopes was stressed. Such documentation and labelling would be the best tools to prevent the inappropriate use of a particular index, for example as a guide for monetary policy by a central bank, or as a trigger for adjustments to commercial or employment contracts.

Acquisition, use and payment

137. The acquisition, use and payment approaches as the basis for CPI weights were described by the secretariat. Attention was drawn to the difficulties and controversies involved in the treatment of owner-occupied housing, which was a central issue in the CPI debate.
138. In the discussion that followed, it was suggested that the three approaches should be further developed in the guidelines, as there was some confusion between them.
139. Regarding acquisition, one participant noted that, while this word implied possession, the issue was really about making a contract, whether implicit or explicit. Several participants voiced their support for this approach, in which the price could be taken as the one quoted or accepted at the time when agreement was reached, for example when holidays are booked several months in advance or a newspaper subscription is taken out, whether or not money changed hands or consumption began at that point. Another participant described the concept decided on for the European Union HICP with respect to services, in which the point in time when consumption could begin was used.
140. Another viewpoint that was supported by several participants was that, in addition to durable goods, there could be durable services, such as dental treatment, which could benefit the consumer for a long time. These should ideally be treated in the same way as durable goods.
141. The Meeting noted that the issue of owner-occupied housing was a well-debated problem, one of the biggest faced in CPI construction. It was suggested that its treatment in CPI was not statistical but an issue of purpose, to be decided by the users of the CPI, such as governments and policy-makers, rather than the statisticians who produced the CPI. As such, the guidelines should merely indicate the differences in the CPI constructed to serve the different purposes. Another proposal was that purchases of new houses should be dealt with in the same way as other durable assets and services.

The compilation of a CPI

142. The proposals contained in the report to the Meeting included the classification scheme, the construction of weights, sampling methods and the calculation of a CPI. All these issues were discussed at length.

Classification

143. It was recommended that, for the purposes of international comparison, it was desirable that the national classification schemes of goods and services should conform to or be reconcilable with the standard international Classification of Individual Consumption according to Purpose (COICOP), adopted by the UN Statistical Commission in 1999, at least at its division level. Several participants strongly supported the secretariat's recommendation, indicating that the use of this classification would enhance harmonization of price indices (for instance, among the MERCOSUR countries). One participant noted that, since the introduction of this classification was quite recent, its application in the CPI would have to follow the next round of household expenditure surveys.

Basket and weights

144. One participant recommended that, when defining the composition of the basket, descriptions of products be broad enough so that prices for all important products could be obtained, be representative in terms of turnover, and be collected each period. If descriptions of items were broad enough, lower-level substitution bias could be reduced, and upper-level substitution bias would automatically be lowered.
145. The issue of the representativeness of weights was considered very important, from the point of view not only of a COLI approach concerned with substitution bias, but also of a pure price index concerned with the representativeness of the sample. The draft resolution should focus not only on the representativeness of weights and the frequency of weight updates, but it should also contain a similar recommendation regarding the sample of items being priced, as well as a recommendation on the representativeness of the reference period.
146. It was also pointed out that countries may not have a choice of source for the weights, for example because household expenditure surveys may not be frequent, and national accounts estimates may not be sufficiently disaggregated. A mixture of different sources might be required. In the updating of weights, some recognition should be given not only to the commodity dimension, but also to other dimensions such as geography (in large countries) and type of outlet. In the absence of geographically differentiated retail sales data, it was proposed that population data could be used. Some countries may also collect data on regional expenditures, in terms of items purchased, types of outlets, cities, etc.
147. With regard to the price updating of weights to bring them in line with the index base period, some type of balance needed to be introduced between the changes in expenditure due to changes in prices and those due to changes in quantities or volume. Several participants indicated that price updated weights may sometimes be unrealistic and that the recommendation on this issue should be less firm.
148. Some participants observed that the price and weight reference periods were very important, but disagreed with the secretariat's proposal that statistical agencies should ensure that the index and the weights have the same base period. Since current weights were not available, many countries price updated the weights from the weight reference year to the price reference month. Retrospective investigations and ex-post tests should be carried out to determine whether price updated weights could provide better estimates of unknown current weights. One participant suggested that consistency be maintained between the report on HIES and that on CPI: the same type of terminology should be used, e.g. the differentiation between the reference period and the referral period. Another participant indicated that the term "index base period" appeared ambiguous and argued that a distinction should be made between the "weights reference period" and the "index reference period".
149. On the updating of weights, the draft resolution proposed that they should be reviewed at least once every five years (paragraph 19) to reduce upper-level substitution bias, but it also supported annual updating (paragraph 18). The Meeting felt that these statements were not necessarily justified. Upper-level substitution bias would not necessarily be reduced by the frequent updating, and lower-level bias effect was more important. Several participants favoured the recommended five-yearly periodicity, as a means of enhancing representativeness, and to help convince national authorities of the merits of frequent updating, although others indicated that this was difficult because of the costs involved. There was no general agreement on an annual updating. Some recommended the use of an annual moving average of expenditure weights over two to three years. The impact of bias depended on the details of the construction of the index, on the formula used and on the

month in which chain linking took place. The wording of the draft resolution should be softened, and the term “will” should be changed to “may”.

150. With regard to the review of the sample of goods and services in the basket, it was noted that a distinction was made between “new” products such as new models or varieties and “completely new” products, and that the draft resolution would need clearer definitions and a distinction between these two forms of change.
151. It was observed that an indication of measurement errors and their size would be useful to users.

Sampling

152. The secretariat introduced this section by presenting the various sampling methods which could be used to construct CPI estimates, including the issues related to sample maintenance and quality adjustments required to maintain sample comparability over time.
153. One participant proposed to reintroduce the notion of “sampling bias” in this context, as purposive selection could produce biased estimates, while random sampling tended to produce unbiased ones, provided the sampling frame was unbiased. The Chairperson pointed out that a balance needed to be established between scientific and practical considerations: many countries did not use random sampling for price collection, although they were aware of the potential bias this involved. It was also noted that often a mixture of random and purposive sampling was necessary for practical reasons, and the estimation of the variance of the index was then difficult.
154. The issue of cut-off sampling was raised. It was pointed out that if proper ranking of sales by size in all sampling units could be done, then the data would allow the use of sampling using probability proportional to size. Purposive sampling of the few most-sold items could, however, be regarded as an approximation of cut-off sampling.
155. It was not sufficient for the sample of outlets to be reviewed periodically for every price observation to be representative in the index; the largest-volume selling items had to be covered. Descriptions should not be too specific. There was a need for quality assurance procedures to ensure that price collectors collected the correct prices. One participant also noted that random sampling of regions, areas, etc., could be a problem of cost for developing countries.
156. It was pointed out that the accuracy of a CPI was more sensitive to the sampling of items and outlets than to the weights used, but there were no minimum standards for the updating of item and outlet samples. There should be guidelines on the frequency of review of the sample items and varieties, which could be more important than the updating of weights, and less costly. One participant was concerned about the costs involved in the annual review of the samples of items and outlets. It was also pointed out that a trade-off could be necessary between the frequency of review of product selection to ensure representativeness of the sample and the resulting number of forced replacements. This should also be included in the guidelines.
157. The European Union standards for the HICP were that, if a newly significant category of items had reached a weight of at least one in 1,000, it should be included in the index. However, some participants expressed doubts about including a recommendation on a given percentage for compulsory inclusion of an item. One participant pointed out that statisticians should not be afraid of replacements, which measured shifts in markets and consumption, and should try to determine whether replacements affected the general price

level. Finally, it was noted that, while the replacement of outlets was not a real problem, the issue was more complex in the case of products. It was concluded that the new guidelines needed to be sensitive to country experiences and capacities with regard to the updating of items and outlets.

- 158.** It was suggested that the guidelines should follow the presentation in Report II, starting with what would be the ideal sampling method, followed by the reasons for a necessary departure from the ideal and adoption of a more pragmatic approach. Inconsistencies regarding the coverage of resident households needed correction. Other aspects that should be covered in this section included the notion that elementary aggregates were the lower level of weighting, and that the term “item”, used with regard both to sampling and to the basket of goods and services, should be changed to “product or variety observed”.

Elementary aggregates and elementary aggregate indices

- 159.** The secretariat drew attention to the proposed definition of elementary aggregates and the different formulas proposed that could be used for different elementary aggregates, the appropriate choice depending on the degree of homogeneity within the elementary aggregates, elasticity of demand and variation in prices, among other things.
- 160.** Several participants noted that statisticians in developing countries in particular were not always aware of the different formulae available and their different uses. Guidance on the rationale for the choice of method to be applied would however be useful, as the advantages of using the geometric mean of price relatives over the arithmetic mean of prices were not immediately obvious for all elementary aggregates.
- 161.** The general view was that, because the appropriate weights would not be available, the arithmetic mean of price relatives should be avoided when calculating elementary aggregates.
- 162.** The Meeting noted that there was a need to distinguish between issues relating to the conceptual background and those relating to the calculation of means. There was no ideal solution for the choice of a single formula for all elementary aggregates. Several suggestions were made in this connection for issues that should be addressed in the guidelines, such as the influence on the formula used of sample design and of the way elementary aggregates were defined.
- 163.** One participant pointed out that not all indices at the lowest level of aggregation were elementary aggregate indices. Also, reliable weights were not always available, and that the priced items in an elementary aggregate were not always close substitutes.
- 164.** A question of terminology was raised later, regarding the use of the term “item”. It was suggested that this should be replaced, possibly by “product or variety observed”.

Upper-level indices

- 165.** In the introduction to this topic, the Laspeyres index was recommended as the only practical option for producing a timely index. In addition it was proposed that the Fisher index be produced retrospectively once the weights for the current period become available. Other alternatives for superlative indices resulting from recent developments in index number theory were the weighted geometric mean and constant elasticity of substitution (CES) approach.

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- 166.** A number of participants drew attention to the fact that, although the weighted geometric mean was feasible, it was experimental, and that the CES was principally a theoretical approach. Some countries were carrying out research, but these approaches could not yet be considered appropriate to include in the CPI guidelines. However, it was generally felt that, since a new resolution would be expected to provide guidance for many years, these possible methods should not necessarily be ignored. They could instead be mentioned as theoretical approaches for computing upper-level indices.
- 167.** While the Meeting also felt that no general recommendation should be made to compute a Fisher index, it was suggested that it could be computed as a year-on-year index, once the annual weights were available. However, several participants pointed out the difficulties involved in obtaining weights annually, particularly in the developing countries where household expenditure surveys were not always carried out even at the ten-yearly intervals currently recommended.
- 168.** While some participants recognized that the retrospective computation of superlative CPI could be useful for central banks and economists, others noted that it could also cause confusion, particularly where the CPI was used for adjusting wages and other compensation. Such index computation would be more useful for the producers of statistics, as a means of identifying procedures that might result in the closest approximation of the optimal index.
- 169.** The need to be able to decompose an upper-level index was raised by one participant, to indicate how much of a change in the index was due to changes in prices of a particular group.
- 170.** The use of chain indices was also raised by one participant as important for the construction of upper-level indices. It was proposed to include guidelines in this connection, and to clarify the distinction between a Laspeyres fixed-weight index and one with chained weights.
- 171.** The need for more guidance on the treatment of seasonal items was also emphasized by several participants. Two alternatives were mentioned in this connection: one using variable monthly weights, which may not be feasible in many countries; the other involving the carrying forward of the last observed price, which was considered as possibly less wrong than other feasible alternatives.

Price collection

- 172.** Following the introduction to this topic, the secretariat sought the Meeting's advice regarding the criteria to be used for selecting replacements, among other issues.
- 173.** There was considerable discussion regarding the choice of replacements, for which several possibilities had been proposed: selecting the most similar product avoided quality adjustment but reduced comparability of the sample; selecting the most popular product maintained the representativity of the index; while selecting the product most likely to be available in the future would avoid future forced replacements but was difficult to determine. It was suggested that the first approach was appropriate if sampling of products was revised annually. Anticipating future availability was hazardous. The "popular replacement" approach was therefore preferable for countries that were not updating their samples annually, as the aim was to obtain prices for items that were the most representative for the reference population. This could be dealt with in the instructions provided to price collectors.

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174. Concerning product specifications, it was suggested that they should be broad enough so that priced items could always be found on the market.
 175. The use of scanner or “electronic point of sale” data in price collection from supermarkets and other outlets was of growing importance in many countries, although it was not suitable for all types of transaction. Prices posted on the Internet were also an important source for certain items, although participants from developing countries noted that such prices might not be representative, as the use of the Internet for purchasing was not yet common, and often discount prices were offered to attract consumers. The scanner data were used to identify new products and varieties, and could provide considerable information on item characteristics that were missing from ordinary shop prices. However, the Meeting noted that the skills for using scanner data varied between countries, and the methods were still experimental in some. The problem of the coverage of scanner data was also mentioned. In addition, one participant observed that, because of the huge volumes of data involved, scanner data were costly to process. They were useful, however, for constructing baskets of goods for particular outlets.
 176. Additional sources of data for collecting prices and for selecting samples included catalogues. These could also provide useful information on the characteristics of items.
 177. Several other issues were raised regarding the choice of outlet, including the use of central price collection, for example from large chains of shops with standard pricing policy. It was noted that, while this may be advantageous in cost terms, it could be difficult to manage quality issues with this method.
 178. The possibility of collecting price data from households was also raised, but it was felt that it might be difficult to do this on a regular basis, because of the burden on the panel of households.
 179. Attention was also drawn to the lack of information in the report about computer-assisted telephone interviews for collecting data, especially on rents for dwelling, which was becoming common in certain countries.
 180. Several participants agreed that sales prices should be covered if they were available to all customers. However, the items were often end-of-series items and may not necessarily be considered as representative of consumption, and were therefore not included in some countries. In other countries, discount prices were available to particular groups of consumers, such as club members, and these prices were included. Imperfect goods should be dealt with as issues of quality adjustment, rather than price collection.
 181. Regarding the frequency of price collection, some items did not need to be collected frequently, as their prices may only change once a year. Decisions would need to be based on a knowledge of the frequency of price adjustments. For example, if prices changed at particular points during the day, they should be collected at the relevant times.
 182. Several other price collection issues were mentioned. One difficulty faced was the reluctance of outlets to provide the correct price data when supervisors accompanied or followed price collectors, as they were often mistaken for tax officials. One participant asked about educational requirements for price collectors.
 183. Although not applied at present, the use of detailed receipts from supermarkets and other outlets was raised as a possible means of collecting price data from households directly or through household budget surveys. One participant pointed out that collecting price data from households for a CPI may not be practical, because of the large number of respondents potentially involved. Relevant information could be sought from the provider

side, for certain services such as mobile telephone services. The use of telephone surveys was noted by another participant for dental and other services where the providers were reluctant to cooperate in personal interviews.

- 184.** One participant pointed out that it was not correct to refer to “unexplained” price changes in paragraph 43 of the draft resolution; these were in fact either unusual or unexpected price changes.

Quality changes

- 185.** The presentation of this section covered the definition of quality changes and factors that should be considered when deciding whether there is a quality difference or not in the items for which prices are collected, reasons for quality adjustments, and methods that could be applied to adjust for quality difference.
- 186.** It was agreed that this section was needed in the resolution to inform users about the importance of quality differences and the problems involved in making adjustments for such differences. Even though it would never be possible to fully adjust CPI estimates for quality differences, the resolution should encourage CPI producers to make such adjustments as far as possible when they were warranted.
- 187.** It was stressed that difference in quality in principle should be valued from the viewpoint of the consumers. Three methods could be imagined for measuring the extent of quality changes, although none of these was feasible in practice: conjoint analysis as used by market researchers, revealed preferences and commodity experts’ opinions. Feasible but imperfect methods based on market valuations included direct methods such as the hedonic and option methods, as well as indirect methods such as the overlap method and others, of which the overlap method was operationally the most convenient. The use of “consumer panels” was also indicated as a method for quality adjustment.
- 188.** “Essentially equivalent” and “quantity adjustment” were listed as quality adjustment methods. Adjustments for different quantities of standard pre-packed items could be treated as a simple mathematical operation for rescaling the unit price when the differences were less than pre-defined upper limits, and quantity differences above this level should be treated as representing different qualities. “Essentially equivalent” should be separated from other methods on the basis that it assumes there are no quality differences, only differences in price.
- 189.** The suggestion was made that the direct methods did not necessarily produce better results than indirect methods. Therefore, the resolution should not state that the indirect methods were less desirable and that direct methods would be more accurate. It was pointed out that the relative merits of the different methods always would depend on whether the information required would be available, and on whether they were correctly applied. Several participants supported the view of the secretariat that the direct methods were generally superior.
- 190.** One participant proposed that the methods should be listed according to their level of operational simplicity. Another proposal made was to include only a general presentation of the methods in the new resolution, and to present detailed descriptions of quality adjustment methods in an annex, without giving preference to one method. One participant stressed that the resolution should not go into too much detail in this connection.
- 191.** The need also to reflect the problem of treating quantity and quality reductions was stressed by several participants. It was indicated that producers may reduce the quantities

given in the standard packaging of pre-packed items as well as other quality aspects. Without proper adjustments this will lead to underestimation of price changes. It was suggested that the issues of quality reduction are particularly relevant for services and in developing countries. It was also seen as particularly important for poverty analysis.

- 192.** It was stressed by one participant that only observable quality differences could be measured, and that the perspectives of a COLI and a “pure price index” on the adjustments to be made would be different. It was suggested by another participant that, with the former perspective, there was an attempt to estimate or adjust for changes in utility; with the latter there was an attempt to eliminate the differences in quality. The methods used for adjustment would be the same, however. Several participants disagreed with this interpretation of the quality change from the COLI and the “pure price index” perspectives.
- 193.** It was agreed that only characteristics that could be regarded as price relevant should be considered when deciding whether there were quality differences.
- 194.** The need for more self-explanatory terms in the new resolution was also raised. Terms such as “subjective method” could be replaced by “judgemental method”, “option cost method” by “option price method”, and “characteristics” by “relevant characteristics”. To avoid confusion, it might be preferable to avoid the use of synonyms.
- 195.** It was suggested that the timing of the quality adjustments could usefully be addressed in the new resolution.

Accuracy: Errors and bias

- 196.** Issues relating to CPI accuracy and procedures to minimize bias were introduced briefly, followed by extensive discussion of the issue of bias and the categories described in the draft resolution.
- 197.** Attention was drawn to the use of the term “bias” in ILO guidelines, which would be read not just by specialists but also by users who did not necessarily understand all the statistical and measurement issues involved. Several participants observed that too much emphasis on bias in the draft resolution could affect the credibility of a CPI. It was a statistical concept, but could easily be misinterpreted by non-specialists. As a result, redrafting of the first sentence of paragraph 50 of the draft resolution was suggested, along the following lines: “the CPI, like any statistic, may be subject to potential errors and bias”. It was suggested by one participant that the last sentence of paragraph 50 of the draft resolution should be deleted as it was not relevant for countries that were using non-probability sampling methods.
- 198.** One participant considered that the descriptions of different sources of bias included in the draft resolution were too detailed to be understood by general users and not sufficiently detailed to be useful to the CPI producers. There was a general agreement that users should be informed and aware of the sources of possible bias and errors in the index.
- 199.** Another suggestion was for the different types of bias described in paragraph 51 to be grouped into three categories: bias in the statistical sense; bias in the economic sense, i.e. upper-level Laspeyres bias; and bias due to practical constraints specific to the CPI, such as the substitution of goods and new products. It was also proposed that the resolution could describe the broad underlying causes of bias, and leave details to the technical manual.

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- 200.** It was noted by several participants that bias could be considered as the difference between an ideal index, i.e. as it was defined, and the actual index, i.e. as it was measured.
- 201.** In the discussion about the different types of possible bias, it was agreed that upper-level bias could not be measured perfectly as the difference between Laspeyres and superlative indices, and that both lower- and upper-level substitution bias may be relevant for both COLI and pure price indices. However, the nature and interpretation of these two types of bias would be different. In a COLI, it would be related to a substitution taking place in the consumption pattern, while in the “pure price index” it was related to representativity. The Meeting considered that further elaboration on this would be required to avoid misunderstanding.
- 202.** One participant indicated that outlet substitution bias might not be regarded as conceptually identical to new goods bias, but could be treated in the same manner as a quality change of items already available.

Dissemination

- 203.** Following the introduction by the secretariat, strong support was expressed for the recommendation that a CPI should be computed and publicly released as soon as possible after the period to which it refers. Clearly described procedures should be established for releasing the CPI results, including the fixing and announcing of the release date. There was a general agreement that it would be preferable for all users to receive the results at the same time. However, there were circumstances under which certain users might be given the results ahead of other users, for example to prepare for questions by the media, and these should be clearly specified.
- 204.** The Meeting observed that most national CPIs were produced and released monthly, but it was recognized that the capacity of the responsible agency or national requirements in some countries could lead to less frequent compilation and release, such as quarterly. It was suggested that the needs of users for more frequent CPI data might be influenced by the rate of inflation. This view was challenged by one participant, who noted that in his country there had been no demand for a more frequent release of CPI results than every three months, even during periods of relatively high inflation.
- 205.** The need for transparency in the process of producing the CPI was emphasized, for which detailed descriptions should be prepared and disseminated. Some participants stressed that different audiences might need different forms of documentation, tailored to their concerns and degree of understanding of technical details. If both transparency and documentation were correctly targeted, they would enhance the confidence of users in the reliability of the CPI results.
- 206.** The issue of confidentiality was raised in relation to the release of information. Care was needed to avoid the possibility of identifying the specific outlets and items selected for price observations, otherwise there was a risk that prices could be manipulated, and that outlets could refuse to cooperate.
- 207.** When changes were made to scope, weights and other important elements of the CPI or the procedures for its production, it was important to inform users sufficiently ahead of the introduction of the changes, and to provide them with adequate information about the changes.
- 208.** The production of sub-indices both for different categories of items and for different regions and socio-economic groups could be useful. However, one participant noted that

the data required for estimating weights or price movements of these sub-indices might not be available or provide adequate reliability of the sub-index. The draft resolution should avoid referring to possible sub-indices for which the construction might introduce new methodological problems. The production of average prices or price ranges for reasonably homogeneous items should only be for the purposes of research and analysis, and not for general dissemination to the public, because of the problems involved in the interpretation of the results.

- 209.** The Meeting stressed the importance of acknowledging and correcting errors in CPI data as soon as possible after they had been detected, so as not to harm the confidence of users in the CPI and the agency responsible for it. The correction procedures should be designed to minimize inconvenience to users.
- 210.** The discussion returned to the issue of the classification of items and the use of COICOP. The importance of COICOP was stressed, both as a basis for developing an appropriate national classification and as a tool for ensuring a reasonable degree of international comparability between national CPIs and sub-indices for groups of items. Some concern was expressed, however, about the lack of guidance material and training provided with respect to its conceptual basis and its adaptation to national circumstances. The need for consistency between the classifications used for household expenditure statistics and the CPI was stressed.
- 211.** The Meeting's attention was drawn to the need for the agency responsible for the CPI to be independent, to have professional competence and sufficient resources to produce a high-quality CPI. Many participants supported this point concerning integrity and independence for inclusion in the new resolution. It was felt to be of such importance that it should be inserted at the beginning of the resolution. Reference could be made to the various international standards in this connection, including the *Fundamental Principles of Official Statistics* adopted by the UN Economic and Social Council in 1994, and the *Guidelines concerning dissemination practices for labour statistics* endorsed by the 16th International Conference of Labour Statisticians in 1998.
- 212.** The need for effective mechanisms for consultation with the social partners and other users was stressed. Such consultations were particularly important during the preparations for changes to the CPI.
- 213.** Support was expressed for the suggestion that comparability between national CPIs would be enhanced if, in addition to the all-items index, indices were compiled without certain items such as "shelter", whose treatment varied considerably from one country to another. For this, however, clearer definitions of the items to be excluded were needed with reference to COICOP groups.
- 214.** It was also proposed that "comparable" national indices should be collected by the international agencies to supplement their collection of the regular national CPI estimates. These international statistical repositories were used as a source both for the regular statistics for individual countries and for comparable statistics.

Other issues

- 215.** Following the discussion of the different sections of the draft resolution and the corresponding paragraphs of Report II, the Meeting discussed a number of issues not addressed or not sufficiently covered earlier. Among the issues mentioned and suggestions made were the following.

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- 216.** The section on terminology could be moved to an annex. Another annex could be added, giving the full COICOP, as this classification was not always easily available. It would be useful if the future HIES guidelines could also have such an annex.
- 217.** It was suggested that estimating the aggregate effects of any quality adjustments made during the compilation of national CPIs would enhance the transparency of their compilation as well as their comparability.
- 218.** There was support for the proposal by one participant that the new resolution should deal in more detail with a number of issues that were relevant for all countries but particularly important for developing ones. Among those mentioned were: the inclusion of rural areas in the CPI scope; the treatment of prices of second-hand goods; and methods for seasonal adjustments. It was pointed out to the Meeting that it would be useful if participants with relevant experience would make this available to the ILO, as well as to the Technical Expert Group for the manual on CPI.
- 219.** It was suggested that the manual on CPI should be referred to in the new resolution, for practical solutions to problems raised.
- 220.** It was suggested that the ILO should have special responsibility as a repository for national CPI estimates and the relevant documentation produced for international comparisons. It may be seen as neutral in relation to other international organizations such as the IMF and World Bank, for which national CPI estimates are important in formulating economic policy recommendations.
- 221.** It was noted that the proposals under discussion and the Meeting's recommendations might be seen as shifting the CPI focus from that of a tool for measuring the changes of the prices of a basket of goods to that of an estimate of changes in the costs of living. The two perspectives led to different choices with respect to a number of practical issues. The formulae used for calculating the CPI could in practice be the same in each case because of the limited choices available for the time being. As a consequence, the resulting CPI estimates would not differ much as a function of the perspective chosen. It was felt that it would be advantageous to have both perspectives represented in the new resolution, although care would need to be taken to avoid confusion.
- 222.** In several contexts, attention was drawn to need for the new resolution to avoid the impression that all the recommendations made would be universally valid or that issues identified would be equally important for all countries. It was pointed out that, while the role of the resolution would be to provide guidance for CPI producers, it would draw also the attention of non-specialists to issues that were important and recognized to represent best practices. However, much of the technical detail on specific issues should be covered in the CPI manual.

Adoption of the report

- 223.** The participants examined the draft report, containing a summary of the Meeting's discussions and conclusions, during two sessions on 25 and 31 October 2001. Following the introduction of a few amendments, the report was adopted.
- 224.** The final report will be presented to the Governing Body at its March 2002 session.

Annex
Annexe
Anexo

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Liste des participants
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Ms. V. Stoevska, Statistician
Ms. K. Taswell, Senior Statistician
Ms. J. Païta, Administrative Assistant
Ms. C. Gondrand, Statistical Assistant
Ms. L.A. Hua, Statistical Assistant
Ms. A. Laurie, Secretary
Ms. Y. Mehellou, Secretary
Ms. M. Tokgoz, Secretary
Ms. L. Sediri, Statistical Clerk
Mr. T. Grange, Computer support

Bureau for Employers' Activities (ACT/EMP)

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Mr. Frank HOFFER