Fifteenth International Conference of Labour Statisticians
Geneva, 19 - 28 January 1993

Report I

General Report
First item on the agenda
CONTENTS

CHAPTER I: WORK OF THE ILO BUREAU OF STATISTICS .................................. 1

   Introduction .................................................. 1
   The Bureau of Statistics (STAT) ................................ 1
   The work of STAT since the 14th ICLS .......................... 1
   Focus of work during the next five years ....................... 7

CHAPTER II: THE CONCEPT AND MEASUREMENT OF ABSENCE FROM WORK .............. 10

   Introduction .................................................. 10
   Uses and applications .......................................... 11
   A proposed definition .......................................... 11
   A classification of absences .................................. 14
   Measurement issues and methods .............................. 16
   Conclusions and points for discussion ....................... 19

CHAPTER III: INCOME FROM EMPLOYMENT ..................................................... 22

   Introduction .................................................. 22
   Objectives and uses of statistics of income from employment .......... 23
   Data requirements in relation to the objectives and uses .......... 24
   Concepts related to income from employment .................... 25
   Conclusions and points for discussion ........................ 36

CHAPTER IV: AN OUTLINE OF THE MAIN CONCEPTS AND PRINCIPLES OF A
   LABOUR ACCOUNTING SYSTEM ....................................... 39

   Introduction .................................................. 39
   User areas ..................................................... 39
   Periodicity and reference periods ................................ 40
   Units and other structural elements ........................... 41
   The measurement of quantities ................................ 43
   Classifications ................................................. 46
   Accounting relationships in the labour accounting system ........ 46
   Concluding remarks and points for discussion .................. 49

ANNEX 1: Databases .................................................. 53

ANNEX 2: ILO statistical publications of interest (since 1987) .................. 55

ANNEX 3: Articles published in the Bulletin of Labour Statistics ........... 56

ANNEX 4: Sources and Methods ........................................ 58

1920o(conv.)
CHARTS AND TABLES

Chart 1: A definition of "absence from work" ........................................... 12
Chart 2: A definition of "expected working periods" ............................... 13
Chart 3: Measurement of absence from work of an employed person in
household surveys .............................................................. 18
Chart 4: Simplified relationship between the wage measures
"earnings", "income from paid employment", "compensation of employees" and "labour cost" ......................... 30
Chart 5: Proposed components of "income from paid employment" ........... 31
Chart 6: Proposed components of "income from self-employment" .......... 35
Chart 7: Conceptual framework for a labour accounting system ............. 44
Table 1: A classification of absences ............................................... 15
Table 2: Distribution variables in the labour accounting system
by primary units ................................................................. 47
CHAPTER I

WORK OF THE ILO BUREAU OF STATISTICS

Introduction

1. This chapter provides a brief review of the major work activities of the Bureau of Statistics (STAT) since the last International Conference of Labour Statisticians (ICLS) in 1987 and includes, very briefly, descriptions of major publications since that time. The last section of the chapter contains a short outline of "new" statistical activities which STAT intends to undertake in the future, while continuing its regular work. This is done with the hope that this Conference will discuss these items and provide recommendations and guidance as to what the main focus of STAT's work programme should consist of during the next five years.

The Bureau of Statistics (STAT)

2. The ILO Bureau of Statistics (STAT) is one of three branches under the Department of Labour Information and Statistics. At its headquarters in Geneva there are 25 officials (including secretarial and one part-time support staff), 12 of whom are in the Professional category. Three regional advisers are currently based in the field - two of them in Africa and one in Asia and the Pacific. This total number of Professionals, which has not changed in the last few years, is lower than it has ever been since the 1960s. (In 1973, for example, there were some 40 officials at headquarters.) The reduction in staff in recent years is partly due to increased computerisation but primarily to a real reduction in the strength of STAT. This limits its capacity for dealing with all aspects of the numerous and wide-ranging subjects falling within the field of labour statistics in as much detail as would be desirable.

The work of STAT since the 14th ICLS

4. The bulk of the work of STAT is necessarily of a continuing nature, involving three broad areas: collection and dissemination of labour statistics worldwide; development of international standards on labour statistics; and assistance to countries in the organisation and improvement of their respective programme or system of labour data along international standards. A number of other activities are also carried out by STAT in the context of these three, as indicated later in the text.

Collection and dissemination of labour statistics

5. Since its inception more than 70 years ago, the ILO has been assembling, analysing, publishing and disseminating official labour data worldwide. Over these years STAT has not only been progressively expanding the coverage of the diverse topics within this field as well as the coverage of countries and territories, but it has also been improving the quantity and quality of the information collected and published. These tasks have been facilitated by the close cooperation of countries and territories in regularly supplying STAT with statistical data and methodological information, for which
the ILO is very grateful. Currently there are published and unpublished data of varying levels of demographic and socio-economic detail for about 200 countries and territories (ILO member and non-member States). Much of this information is stored in databases capable of electronic retrieval and dissemination of any part at any given time, as well as of updating and expanding the bases as fresh information becomes available.

5. The main database, LABORSTA, contains statistics covering most subjects for nearly 190 countries, starting from 1969 (on certain subjects from 1945). This database is used for publishing the Year Book and the Bulletin of Labour Statistics and for generating custom-made computer reports which are regularly distributed to the public, as well as inside the ILO (see Annex 1 for a list of the databases, including special databases). LABORSTA is undergoing continuous modernisation to make it more user friendly and more easily accessible, while decreasing relative costs. The databases, including those on special topics and all the relevant computer applications, are to be converted to the most recent version of the Statistical Analysis System (SAS). The expanded LABORSTA will eventually be used for storage and dissemination of the contents of all statistical publications of STAT, including the methodological series Sources and Methods. Below are very brief descriptions of STAT's main publications (regular and occasional, or ad hoc) relating to data dissemination. (These and other publications since the last ICLS are listed in Annex 2.)

6. The Year Book of Labour Statistics was introduced in 1935-36 and has been issued annually since then. Over the years the topics covered have increased in number and the presentation of the data has improved. The latest Year Book provides basic data on the majority of the topics from almost 190 countries. In order to enhance the usefulness of the Year Book, each issue is accompanied (beginning in 1992) by a methodological volume of the Sources and Methods series (see below). Further improvement of the Year Book is planned in the near future which will culminate in the presentation of the data by source rather than by subject, for better comparability of the data between related subjects and countries as well as at the regional and international levels.

7. A special edition entitled Year Book of Labour Statistics: Retrospective Edition on Population Censuses, 1945-89, issued in 1990, presents a combination of new data and of formerly published statistics of the Year Book. It also provides information on countries and territories with a population of fewer than 100,000 inhabitants which are not normally included in the annual series. This volume therefore provides a unique statistical basis for analysing trends in the participation of the population in the labour force over almost a 50-year span in virtually every country of the world.

8. The Bulletin of Labour Statistics and its Supplement are released on a quarterly basis and contain monthly and quarterly time series on employment, unemployment, hours of work, wages and consumer price indices. Each year a separate issue of the Bulletin is published which presents detailed results of the annual October Inquiry on occupational wages and hours of work and retail prices of selected food items. These Bulletins contain articles on concepts, definitions, methodologies, etc. and problems with respect to particular topics in the field of labour statistics. (Articles which appeared in this series since the last ICLS in 1987 are listed in Annex 3.)

9. The Sources and Methods series was introduced in 1987 for the purpose of providing detailed descriptions of the methodological practices and sources used by each country in the production of the national statistics published regularly in the Bulletin and Year Book of Labour Statistics. So
far, six volumes have been issued, each dealing with one or more topics. A seventh volume covering statistics of strikes and lock-outs is currently being finalised for release. A volume on occupational injuries is under preparation, as well as another covering the ILO October Inquiry on occupational wages and hours of work and retail food prices (see Annex 4 for volumes already published).

10. This series replaces the former ILO "Technical guides", whose coverage was by subject rather than by source. The new volumes are intended to accompany the different issues of the Bulletin and Year Book so as to assist the users of the national data in evaluating their quality and comparability. STAT's ultimate aim is to produce such series on all the subjects covered in the Year Book and the Bulletin. From time to time the individual volumes will be revised, and reprinted to reflect major modification and/or introduction of new methodologies and sources by the various countries.

11. STAT also disseminates labour data and related information through press releases and by means of its Newsletter. The Newsletter was introduced in October 1990 and appears in the spring and autumn of every year. It contains an overview of current statistical activities and outputs, a list of publications, articles, working papers, databases and ongoing technical cooperation projects, etc. It is distributed to approximately 1,000 users of ILO statistical publications.

Development of standards on labour statistics

12. The work in this area entails several activities whose overall aim is to provide guidance to countries for the development of their national statistical programme for the production and dissemination of data, primarily to satisfy their own national needs but also to facilitate comparability at regional and international levels. Since the 14th ICLS the subjects on which STAT undertook specific activities relating to the development of statistical standards and/or proposals for their revision included:

- strikes and lock-outs (industrial disputes);
- employment in the informal sector;
- status in employment;
- absence from work;
- income from employment;
- labour accounting system.

13. The present Conference will discuss in detail the reports and draft resolutions prepared on each of the first three topics, as indicated in the agenda. A brief report on each of the last three topics above is presented respectively in Chapters II, III and IV of the General Report, also for discussion by the Conference.

and reprinted in 1981. It presents the full texts of the Labour Statistics Convention, 1985 (No. 160), and Recommendation (No. 170) and contains the relevant ILO resolutions concerning labour statistics endorsed by the ICLS since its first meeting in 1923. The second document, ISCO-88, replaces the 1968 issue which was reprinted for the fifth time in 1986. It is a revision of its predecessor and is based on the decisions and recommendations of the 13th and 14th ICLS. Some 30 countries have already either established, or are in the process of creating, a national standard classification of occupations similar to ISCO-88. The Statistical Office of the European Communities (EUROSTAT) recently completed a regional standard classification (ISCO-88/C0M) which is based on the ILO's ISCO-88. The South Pacific Commission will shortly be producing a regional standard classification of occupations which is also an ISCO-88 variant.

15. Two major manuals have been published: Consumer price indices: An ILO manual (English 1989), and Surveys of economically active population, employment, unemployment and underemployment: An ILO manual on concepts and methods (English 1990, second printing 1992, French and Spanish 1992). These documents explain the content of the resolutions adopted by the ICLS concerning the respective subjects (on consumer price indices in 1987 and on the economically active population in 1982). In addition, both manuals discuss matters of detail which could not have been covered in such brief texts as the resolutions. The second manual in particular deals comprehensively with survey methodologies, including sampling, questionnaire design and related survey instruments, field operations, data processing, tabulation, evaluation, analysis and dissemination.

Advisory services and technical cooperation activities

16. Providing direct advisory services and supporting technical cooperation projects are an effective way of helping member States to apply international standards and produce useful, reliable and comparable labour statistics. These activities are carried out through missions, seminars, workshops and backstopping of labour statistics projects and programmes by headquarters staff and regional advisers, to assist, train and guide statisticians and to enhance and reinforce the statistical infrastructure in labour ministries, central statistical offices, employers' and workers' organisations and other national statistical institutions. On average about ten advisory missions from the Bureau's headquarters were undertaken annually in the past few years; regional advisers usually carry out between ten and 12 missions a year in their respective region. Continuous technical backstopping was provided to labour statistics projects in seven countries in 1992.

Other activities completed or in progress

17. STAT continues to examine and monitor the ratification by ILO member countries of the Labour Statistics Convention, 1985 (No. 160), and Recommendation (No. 170), as well as the earlier Convention concerning Statistics of Wages and Hours of Work, 1938 (No. 63). The new Convention covers the large majority (nine) of the labour statistics topics, with simple statements regarding general requirements, flexibility and gradualism. Recommendation No. 170 supplements the new Convention and sets out minimum requirements regarding periodicity and classification. STAT reviews the reports from governments on the interpretation and application of the provisions of the standards on each topic covered, and furnishes comparative analyses and technical comments for submission to the Committee of Experts on the Application of Conventions and Recommendations. So far, 25 countries and
territories have ratified Convention No. 160, and about 30 countries and territories are still applying Convention No. 63.

18. In 1987 STAT launched a work programme on ILO-comparable annual employment and unemployment estimates, with a view to developing internationally standardised labour force estimates for countries worldwide. This activity is complementary to three other major programmes on international comparisons of labour force statistics run by the OECD, EUROSTAT and the Bureau of Labor Statistics in Washington. The ILO-comparable statistical series for 26 countries from 1981-90 were developed and these data, along with an article on methodological aspects, have been published in the fourth issue of the Bulletin, beginning in 1990. The programme is now in its third phase, during which: (a) an in-depth study of the adjustment procedures will be carried out and tested; (b) more countries will be included in the programme; (c) the ILO-comparable estimates will be integrated into STAT's regular publications; and (d) these series will ultimately be merged with the ILO programme on estimates and projections of the economically active population for relevant countries.

19. The work relating to the fourth round of the ILO programme on economically active population estimates and projections is progressing. The results of the first three rounds of this project (published in 1971, 1977 and 1986 respectively) have been evaluated and new methodologies and new forms of data presentation, with a built-in updating system, are being studied for this purpose. As in the past, the data will be published in five volumes, with a sixth volume describing the methodology being used. The programme is part of a collective effort by several United Nations agencies (United Nations, UNESCO, FAO and the ILO) to prepare world estimates and projections on population-related topics.

20. Work is also progressing on the collection and compilation of data on household income and expenditure for comparative purposes, especially in relation to the ILO publication Statistics of household income and expenditure. The new edition will be based on the results of household surveys carried out in different countries since 1977 and is intended to bridge the gap since the last ILO publication on household income and expenditure statistics (1968-76), published in 1979. With a view to presenting data on a uniform basis and facilitating comparative analysis in this new edition, an ILO questionnaire on statistics of household income and expenditures has been prepared and sent out to countries. To date, 75 countries have responded.

21. The above document and the methodological volume Sources and Methods (Vol. 6) will be maintained and updated to reflect the most recent status of household income and expenditure surveys and their results. Also, the resolution adopted by the 12th ICLS in 1973 concerning this subject will be reviewed with a view to improving the survey methodologies in the light of the fundamental changes in data requirements over the past 20 years in the field of household income and expenditures.

22. Following the launching of three interdepartmental projects under the 1992-93 programme and budget of the ILO, STAT, in close collaboration with the other technical departments or branches concerned, has been involved in measuring: (i) wage differentials; (ii) job segregation; and (iii) child labour. The first two activities are being carried out in the context of the project on equality for women in employment and the third in connection with the project on the elimination of child labour.

23. In respect of the work on wage differentials, a report has been completed on the statistical measurement of gender wage differentials, 1920o(conv.)
describing the appropriate methodologies that could be used by national statisticians to measure the gap between male and female earnings that can be attributed to pay discrimination. This report is available to the Conference for comments and feedback. Following the reaction of the Conference, a technical manual will be prepared on the measurement of wage differentials and a regional training workshop will be held on the use of these methodologies.

24. As concerns measuring job segregation, data on occupational distribution of employed women and men have been compiled and analysed. A report on methodological aspects of measuring job segregation is being prepared for publication. Copies of the draft of this report are available to the Conference, and a technical manual taking into account reactions to the draft will be prepared on the analysis of occupational segregation. The regional training workshop mentioned above will also cover this topic.

25. In view of the limited data available in STAT on children in the labour force, questionnaires were designed and sent out to some 200 countries and territories in April 1992 requesting broad statistical information on the population under 15 years of age who are economically active. The immediate aim was to quickly improve STAT's database on this group rapidly for the interdepartmental project. The data thus collected, together with an article incorporating the results of STAT's own investigative work, was prepared for publication in the *Bulletin of Labour Statistics* 1992-4.

26. In addition, a specially designed survey was carried out towards the end of 1992 in two countries, for the purpose both of assembling more comprehensive socio-economic data on this group of workers and of testing the survey methodology itself. The statistical results of this experimental inquiry will be used for the interdepartmental project. An article will be published in the *International Labour Review* describing the methodology, etc. used in conducting the survey and the lessons learned from the exercise. STAT intends to continue improving its database on this group of workers.

27. STAT will also be participating in two other interdepartmental projects - one involving the informal sector and the other concerning migrant workers - which the ILO will be undertaking during the 1994-95 biennium. In both projects STAT's main responsibility revolves around data collection. It entails, among other things, designing a special survey methodology for each project and conducting the survey in six selected cities for the informal sector project and in 25 selected countries for the migrant workers' project.

28. STAT organised and carried out a six-week training course on selected labour statistics topics at the International Training Centre of the ILO in Turin (Italy) in early 1991 for 24 participants from 19 French-speaking countries (see STAT's *Newsletter* No. 2, May 1991, for details). This was the first time since 1967 that a comprehensive training programme was offered by the Organisation relating to statistics. A similar course on the same topics was carried out in English in March-April 1992 for candidates from Africa, Asia and the Pacific, Latin America and the Caribbean, and the Arab States. Given the usefulness of such a programme, STAT plans to develop and conduct annually a substantive training course on all topics of labour statistics and on computer applications in the future (see further under section below).

29. Every year STAT conducts a number of regional or country-level workshops and in-house seminars. It also continues to prepare technical contributions for the ILO's industrial committees and Maritime Conference, as well as for inter-agency and other international statistical meetings.
Focus of work during the next five years

30. Besides its ongoing tasks, the future work elements proposed in Chapters II, III and IV of this General Report, and the follow-up activities arising from decisions taken by the present Conference in respect of the topics covered by Reports II, III and IV, STAT would like to focus on the following subjects, mainly in preparation for the 16th ICLS. (The order of presentation of the subjects below does not reflect an order of importance.)

Use of administrative records for labour statistics

31. The main sources of labour statistics are households or individuals, enterprises or establishments, and administrative records. While at the international level much attention has been paid to the development of the first two sources, so far little effort has been devoted to developmental work in respect of administrative records. If properly designed and exploited, such records can provide relatively inexpensive current data on several labour statistics topics. Thus, these sources can be particularly useful for developing countries with limited resources and expertise for conducting regular surveys. STAT therefore intends to examine a wide range of labour-related administrative record systems of countries and prepare a report under the above title, for discussion at the next ICLS, which could adopt at the same time a recommendation for international use. This could be followed by a manual on how to develop and exploit administrative information systems for the production of labour statistics.

Measurement of underemployment

32. Experience has shown that in many countries the international standards on the measurement of underemployment in terms of the time worked (visible underemployment) are of limited relevance in describing the employment situation. The limitations of the concept of visible underemployment have become evident, for example, in situations where many persons receive low incomes although they are fully employed in terms of time worked (and sometimes are even working excessively long hours), or in situations where a large proportion of the labour force is self-employed and where a lack of demand for their products tends to result in low intensity of work and low income rather than a reduction in the time spent at the workplace. In the light of methods developed in some countries, STAT proposes to do more work on other forms of underemployment, concentrating in particular on the measurement of income from employment (including both paid employment and self-employment) and employment-related economic hardship or poverty. On the basis of this work, proposals could be submitted to a future ICLS for the amendment of the corresponding parts of the resolution concerning statistics of the economically active population, employment, unemployment and underemployment, adopted by the 13th ICLS in 1982.

Working time statistics

33. Work on "absence from work" (Chapter II) and on "income from employment" (Chapter III) has shown that these subjects and "working time" are interrelated concepts, particularly as existing international standards on wages and hours of work have proved to be inadequate in terms of worker coverage and flexibility. Working time concepts which are being measured by countries, but for which no international definition exists, were examined and integrated in what has been termed a "framework of working time statistics".

19200(conv.)
This framework covers concepts dealing with time spent "at work", time "resting" from work and time of "absence from work". (A working paper on this is available to the Conference in English.) Work in this area also brought about the need to improve the ILO database on hours of work and to create a new database on absence from work. (An article in the Bulletin of Labour Statistics 1990-3 describes its main characteristics.) The work so far carried out has therefore underlined the need to re-examine and revise the existing guidelines on working time concepts which may lead to the adoption of a new resolution in this area in the future.

Labour productivity

34. The last time the ILO produced any substantive work on this topic was more than 20 years ago when it published Measuring labour productivity (Geneva, 1969, in French and English). Following the Labour Statistics Recommendation, 1985 (No. 170) and the resolution concerning statistics of productivity, adopted by the International Labour Conference in 1985 and giving high priority to the work of productivity measurement problems, STAT has re-examined the availability, sources and methodology of productivity statistics in a small sample of countries and has investigated again the methodological problems. The results were briefly described in the General Report (Chapter I) to the 14th ICLS, for discussion by, and guidance from, that Conference on the future work on the topic. Since the output data required for the computation of the productivity indices went beyond the ILO's field of competence, the Conference agreed that STAT should endeavour to collect what was available from countries and publish descriptions of the sources and methods used in the Bulletin of Labour Statistics. It is proposed that this work be expanded to examine the practices of other countries and culminate in the formulation of guidelines concerning concepts, definitions and methodologies for the preparation of statistics of productivity which will be considered by future ICLS.

Measurement of poverty level

35. Action to reduce poverty at the national level is one of the major objectives of the ILO's Medium-Term Plan 1990-95 and has been recognised as a priority theme for 1994-95. While the measurement of poverty does not directly contribute to its eradication, it is an indispensable instrument (i) for monitoring the effects of policies (often difficult to detect simply by guessing), and (ii) for identifying the priority groups (which may not always be those that they are commonly thought to be). Drawing on STAT's work on household income and expenditure statistics, and on the new activity on measurement of income from employment, it is planned to have draft standards on techniques for setting poverty lines at the national level so as to assist national statistical offices in defining country-specific poverty lines and to compile poverty indicators for the world and its regions.

Statistics of occupational injuries and diseases

36. Experience has shown that the standards set out in the resolution concerning this subject adopted by the 13th ICLS in 1982 (replacing the former guidelines endorsed by the 10th ICLS in 1962) are not sufficient as guidelines for national statistics; in fact, many countries still follow the 1962 standards. Furthermore, organisations such as the OECD and EUROSTAT have highlighted the problems involved in using the existing data, particularly for international comparisons. Occupational injuries and diseases form one of the basic sets of labour statistics at the heart of the Labour Statistics
Convention, 1985 (No. 160). In the past two biennia STAT has been cooperating with the ILO's Occupational Safety and Health Branch on the proposed Code of Practice for the notification of occupational injuries which will be considered by a meeting of experts in 1994-95. The Code of Practice will influence the types of information available, and the statistical guidelines should take these into account. The present statistical guidelines will be re-examined with a view to making proposals for consideration by a future ICLS.

Development of a labour statistics training programme

37. It has long been recognised that an effective means of linking the international statistical standards and the ILO's technical cooperation activities is to conduct a regular training programme in the field of labour statistics. A formal evaluation of experimental training courses carried out recently (as documented in a report) has confirmed that it was a successful endeavour and that such a programme could fill a significant gap in this field for ILO constituents (see Newsletter No. 2, May 1992). Therefore, STAT is planning to develop and expand its capacity for establishing a progressively self-financing training programme in labour statistics and for conducting it annually, alternately in English and French. To this end, a training manual relating to all major subjects of labour statistics will be prepared and published, based on existing manuals as well as on lecture material which will be prepared for the courses. The courses will combine theories, case studies and examples and specifications of electronic data processing. They will also cover, for each subject, measurement objectives and uses, concepts and definitions, survey methodologies and questionnaire design, field operations and data collection, processing, estimation, evaluation and production.
1. The interest in developing statistics on "absence from work" has been increasing over the past years. Many countries are now producing data on the subject, and some international organisations have already collected data on absence for a group of countries. The ILO, in particular, has seen a growing demand both for statistical data and for conceptual guidelines. However, no international agreement regarding a definition of "absence from work" for statistical or other purposes has yet been reached.

2. In 1987 the 14th International Conference of Labour Statisticians (ICLS) explored the possibility of defining "absence from work". After discussing the various issues raised in the General Report to the Conference (Chapter III), agreement was reached on the importance of arriving at an international definition and the ILO Bureau of Statistics was asked to continue its work on the subject. In doing so, the Bureau was to take into consideration the following directives:

(a) practical measurement aspects should be emphasised;
(b) all methods of data collection should be possible;
(c) reference period and time unit should not be fixed because of differing methods of data collection and data applications;
(d) classification by reason of absence should serve only as a model for countries as details will depend on data collection methods;
(e) measurement of "absence from work" should relate to regular paid employees; the coverage of all workers might, however, also be interesting.

3. These recommendations were aimed at developing a flexible definition of "absence from work" which could provide a basis for any method of data collection, reference period or time unit and which could refer to all workers. While it is recognised that the origins, characteristics and effects of "absence from work" may differ between regular paid employees and other workers, total worker coverage is an objective which was set by the International Labour Conference in the resolution concerning self-employment promotion that it adopted in 1990. In line with these directives, this chapter revises and elaborates the definition discussed at the 14th ICLS, recognising that the use of different reference periods, time units, worker coverage and methods of data collection will yield information of different aspects and of different qualities for the same phenomenon. In consequence, the main aim in developing a definition of "absence from work" has been to provide a guide to countries wanting to produce statistics on absence according to their own particular needs and possibilities. International comparability may, nevertheless, be reached by standardising measurement methods for particular sources of data collection.
Uses and applications

4. Statistics on "absence from work" may serve governments as a tool for monitoring the health of the economy in general and the labour market in particular, designing and evaluating policies and assessing conditions of work and life. They may help establishments to supervise their own performance, and workers to evaluate their working conditions. For these purposes, "absence from work", which covers a wide and highly heterogeneous set of events, may need to be analysed separately by types of absences, because each type of absence may reflect a different underlying phenomenon that may require different measures to be directed towards different target groups. When the type of absence being analysed affects workers individually (e.g. absences due to study leave, sick leave and bearing and rearing of children), the focus may be on particular types of employees and their circumstances both at work and outside work. In contrast, when the reason of absence in question is related to establishments' functioning (e.g. absences due to short-time working schemes or to labour disputes), relevant characteristics of specific establishments may be the most appropriate factors to be considered.

5. Statistics on "absence from work" as a whole may be helpful to analyse variations in annual working time, on which they have an important influence. Data on "absence from work" may also be useful to explain variations in employment figures. As countries define "formal job attachment" in different ways, those presenting a more "relaxed" definition will include as absent workers persons who are not regarded as being in employment by other countries, resulting in higher levels of measured employment.

A proposed definition

6. Taking as a basis the definition presented to the 14th ICLS, and in line with the directives given by that Conference, a definition of "absence from work" for discussion in this meeting could be formulated as follows:

absence from work relates to the periods of time during a specified reference period when a person in employment normally expects or is expected to be at work but is not.

7. According to this definition, "absence from work" is to be measured only for persons in employment. Employed persons, during a short reference period, may be absent from work for part of the reference period (i.e. persons "at work") or may be absent during the whole reference period provided they maintain a formal job attachment (i.e. persons "not at work"). The formal job attachment criterion, necessary to classify absent workers in employment, plays thus a fundamental role in determining the boundary of "absence from work".

8. In the above definition, "absence from work" is limited to periods when workers expect or are expected to be at work on a normal basis (we may term them "expected working periods"), a concept which may be linked to "normal" and "usual" hours of work. This definition also requires that, during "expected working periods", absent workers should be away from work during part or all of the reference period, as opposed to "being at work". "Being at work" relates to periods when workers carry out the tasks and duties defined for their jobs, and may be linked to the "hours actually worked" concept (see chart 1). The remaining part of this section will discuss the
linkages between the above-mentioned concepts and the adjustments which they may require.

**Chart 1. A definition of "absence from work"**

<table>
<thead>
<tr>
<th>Is the person &quot;at work&quot; during the short reference period?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Does the person maintain a formal attachment to work?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Is the worker &quot;at work&quot; during all &quot;expected working periods&quot;?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The person is never &quot;at work&quot; during &quot;expected working periods&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not in employment</td>
</tr>
</tbody>
</table>

**Expected working periods**

9. Working contracts, when they exist, often stipulate the periods when paid workers are expected to be at work on a normal basis. A concept which reflects the hours of work as stipulated in working contracts is "normal hours", as defined in the resolution on the subject adopted by the 10th ICLS in 1962. Paid workers whose working schedules are determined by contracts can be said to be expected at work during "normal hours". For them, "absence from work" happens when they are away from the workplace during "normal hours".

10. However, "normal hours" only covers paid workers who possess a work contract while in reality workers may not possess a work contract (e.g. self-employed workers) and still expect or be expected at work during specific periods. Indeed, when these workers follow regular working schedules (i.e. they are at work during specific periods on a regular basis), "absence from work" affects them in a quantifiable way. While international standards do not cover such situations, these workers' "expected working periods" may be taken to refer to their most "common" or "usual" working schedule, i.e. the modal value of their hours of work per day, week or other reference period. Given that their working schedules do not vary much, an arithmetic mean may also be used. For these workers, "absence from work" happens when they are away from work during "usual hours".

11. Not all workers who do not have a working contract, however, expect or are expected to work during specific periods. Such is the case of those who follow irregular working schedules (i.e. who are at the place of work
different hours every day, week or other reference period). While their most "common" working schedule is in principle also the modal value of their hours of work, in practice it may be difficult to measure. These workers would be out of the measurement scope of "absence from work". "Expected working periods" are then reflected by two different concepts, "normal" and "usual" hours of work, depending on the type of worker they cover (see chart 2).

Chart 2. A definition of "expected working periods"

<table>
<thead>
<tr>
<th>Concept</th>
<th>Applies to</th>
<th>What it means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal hours</td>
<td>Workers who have working contracts</td>
<td>The hours stipulated in working contracts</td>
</tr>
<tr>
<td>Usual working schedules</td>
<td>Workers who do not have working contracts but follow regular schedules</td>
<td>Modal value of hours of work</td>
</tr>
</tbody>
</table>

Being away from work during expected working periods

12. "Absence from work" happens when workers are away from work, i.e. when they are not carrying out the tasks and duties defined for their jobs, during "expected working periods". The time spent carrying out the tasks and duties of a particular job is reflected by the "hours actually worked" concept defined by the 10th ICLS, which relates to the time spent on the tasks and duties of a typically manufacturing job. Given its focus towards manufacturing jobs, however, this concept leaves out activities which may constitute the tasks and duties of other types of jobs (e.g. professional training, work at home, attending meetings, travelling activities). As the inclusion or exclusion of these activities in "hours actually worked" will determine whether they are excluded or included in "absence from work", "hours actually worked" may need to be revised and expanded to take account of the tasks and duties of all types of jobs.

13. "Absence from work" then refers to all periods during "expected working periods" which are excluded from (the extended concept of) "hours actually worked". In practical terms, "absence from work" happens when the difference between "expected working periods" and "hours actually worked during expected working periods" (i.e excluding overtime) is positive. "Hours actually worked during expected working periods" would need to exclude overtime periods, which are additional to "expected working periods", because "absence from work" is limited to "expected working periods". Were "overtime" not excluded, the simple difference between "expected working periods" and "hours actually worked" would underestimate "absence from work" when workers are both absent and work overtime during the reference period (e.g. "hours actually worked" may be higher than equal to the "expected working periods" because of overtime).

Resting periods

14. In principle, workers (with working contracts or regular working schedules) do not expect nor are expected to work during resting periods taken
on a normal or regular basis: during weekends, during nightly rest, during lunch breaks, etc. "Expected working periods" will always exclude them. In contrast, they normally expect or are expected at work during resting periods taken on an irregular basis, even though they have the right not to be present: during holidays, vacations, periods of inactivity due to compensation or special work arrangements (e.g. flexitime, night or shift work). "Expected working periods" will include this "irregular" resting time and thus "absence from work" would include resting time taken during the reference period.

15. However, "resting periods" are intrinsically different from "absence from work" periods. "Resting periods" are the counterpart of working periods and constitute a worker's right to abstain from work. As with "normal hours" they are generally regulated by laws or collective agreements, apply to all workers, and are independent of other events. This contrasts with "absence from work" periods which may also be regulated by law but which do not necessarily apply to all workers (e.g. maternity leave) and/or are subject to particular events (e.g. sickness). "Resting periods" may therefore need to be measured as a separate concept, covering "irregular" and "regular" resting periods. "Resting periods" may nevertheless need to be measured and analysed in relation to periods of "absence from work", in particular because "resting periods" may be used as a substitute for sick leave (e.g. when sick or parental leave entitlements for a period have been exhausted) and vice versa.

The boundary of "absence from work"

16. The boundary of "absence from work" is determined by the employment definition, and more explicitly by the "formal job attachment" criterion, a criterion which is meant to ascertain whether absent workers continue to be part of the current supply of labour. In a resolution adopted at the 13th ICLS this criterion was defined for paid workers in terms of three criteria, the specific combination of which is left for countries to establish according to their own national circumstances. This flexibility has given way to significant differences in national definitions and implementations, generally reflecting the country's legislation rather than the actual attachment to the labour force. In consequence, variations in the levels of absence (and thus of employment) through time or between countries may be caused by differences in the way this criterion is defined and implemented rather than by differences in the absence (or employment) situation. The definition of formal job attachment may therefore need to be standardised and perhaps expanded to cover self-employed workers for a precise definition of "absence from work" to be arrived at. Given its complexity and importance, however, this subject may need to be analysed and discussed in more detail than is possible at the present Conference. This topic may be treated in future meetings.

A classification of absences

17. It is important to distinguish between types of absences, not only because of their diversity but also because of the different uses that are made of the data (cf. paragraph 4). One classification of absences can be found in the definition of employment given in the ICLS resolution referred to above, which lists the following reasons for being temporarily away from work: (a) illness or injury; (b) holiday or vacation; (c) strike or lockout; (d) educational or training leave; (e) maternity or parental leave; (f) reduction in economic activity, temporary disorganisation or
suspension of work due to such reasons as bad weather, mechanical or electrical breakdown, or shortage of raw materials or fuels; and (g) other temporary absence with or without leave. Two broad types of reasons may here be distinguished: those related to personal absences, which would group reasons (a), (d) and (e) and those related to the establishments' functioning, which would include reasons (c) and (f). Reason (b) refers to resting periods and may need to be considered separately (cf. paragraph 15). A classification of absences can be derived from these main reasons of absence (table 1). A review of national household surveys (the only source providing sufficient information) showed that most have used a classification comparable to the two-digit level.6

Table 1. A classification of absences

1. REASONS RELATED TO THE ESTABLISHMENTS' FUNCTIONING

1.1. Economical or technical reasons

1.1.1. Bad weather: rain, snow, earthquake, etc. impeding transportation to the place of work and work proper.

1.1.2. Mechanical or electrical breakdown: machine failure, breakdown of working instruments, failure of the establishments' electrical or hydraulic system.

1.1.3. Lack of materials or clients: raw materials, including fuel, water, electricity and financing, customers, contractors.

1.1.4. Short-time working: reduction of working hours to fewer than normal hours.

1.1.5. Lay-off: suspension of employment contract.

1.2. Occupational injury: personal injuries and diseases resulting from work accidents occurring at or in the course of work.7

1.3. Industrial Relations

1.3.1. Labour disputes: as will be defined by the 15th ICLS, including workers directly and indirectly involved.

1.3.2. Trade union and employers' organisation activities: performance of duties arising from the responsibilities of trade unions or employers' associations.

1.3.3. Suspension: action taken by establishments to penalise workers violating internal regulations.

2. PERSONAL REASONS

2.1. Social reasons

2.1.1. Family responsibilities: sickness of family members (i.e. persons under responsibility); care of elderly relatives; doctor's appointments, funerals, marriages, of family members.
2.1.2. **Parental leave**: pregnancy and child-bearing, including doctor's appointments, breast-feeding, infant care, etc.

2.1.3. **Military or related services**: obligation to report to military or related units, given a formal job attachment.

2.1.4. **Civil responsibilities**: jury service, other civic rights and duties, administrative formalities.

2.2. **Sickness**

2.2.1. **Personal sickness**: doctor's appointments (except pregnancy related), sickness, hospitalisation, operation, home rest, cure, incapacity to work.

2.2.2. **Personal injury**: not related to work, occurring outside the place of work, commuting accidents which occur to and from the place of work.

2.3. **Study leave**: time granted by the establishment for educational purposes outside the context of the establishment.

2.4. **Other**: attending funerals, marriages, etc., of non-family members, home move, leave for no specified reasons.

3. **RESTING PERIODS**

3.1. **Annual rest**: periods not worked by the community at large (i.e. public holidays) or by individual workers (i.e. vacations).

3.2. **Working time arrangements**: compensation rest, time not worked due to shift work, night work, entry to or exit from employment, etc.

**Measurement issues and methods**

18. To have a complete picture of the absence situation over the year, "absence from work" which happens with an irregular incidence over time should in principle be observed continuously. In order to cover these variations, the reference period should be long (i.e. one year) or, if short reference periods are used (i.e. of one week or one day), the observations should be frequent enough to guarantee continuity. The choice of a time unit to measure "absence from work" needs to consider that smaller time units provide more precise estimates but larger time units are applied more easily. Generally, the time unit used will depend on the detail with which data can be obtained with the particular methods of data collection. Whatever the time unit used (duration of) "absence from work" should be expressed in the same time unit in which it has been measured (or in a larger time unit). The use of one time unit to measure data on "absence from work" and a more detailed time unit to present the data would convey a level of preciseness which is illusory (as would survey results with error levels of ±1,000 which present data in units of single persons).

19. As when workers are classified by industry, occupation or status in employment, it is here proposed that the observation unit for measuring "absence from work" should be each of the jobs held by a worker. This is particularly relevant for multiple-job holders, who during the observation
period may be absent from one job and working in another. The main job
should, however, be used when consistency with employment data by occupation,
status and/or industry is required.

20. "Absence from work" may refer to (a) the number of absences, (b) the
number of absent workers and (c) the time of absence during a particular
reference period. These are the measurement variables. The "number of
absences" may be defined as the sum of all the separate absences experienced
by absent workers during the reference period, where an individual absence may
be delineated in relation to a specific job, a previous/subsequent period of
work/inactivity and a specific reason of absence. When an absence due to a
particular reason is separated by a short period of work, the absence may be
considered the same. The "number of absent workers" may be taken to refer to
all persons who during that reference period experienced at least one
absence. "Time of absence" may be calculated as the sum of the duration of
all absences and is to be expressed in terms of time units (cf. paragraph 18
above).

21. Data on "absence from work" can be obtained from household surveys
(or labour force sample surveys). These surveys obtain information directly
from workers (or from another member of their household) and can provide data
on "absence from work" for all jobs and all types of workers. They are
particularly useful to obtain a profile of absent workers and of types of
absences. To estimate "absence from work", household surveys need to request
information on (a) "normal hours" for workers who have working contracts, (b)
"usual hours" of workers who do not, (c) "hours actually worked", (d)
"overtime" and (e) all reasons for the difference between (a) or (b) and
(c)-(d). The estimation procedure is shown in chart 3. More than one reason
for the difference may be given. When this is the case, additional questions
to assess the time spent on each can be added or a rule to assign the time of
absence (or rest) to each reason should be established.

22. Many household surveys request similar information. However, many
request information on "usual hours" for all workers, even for those who
already possess a working contract, a measure which will not be able to
estimate total "absence from work". Indeed, when these workers work overtime
or are absent on a regular basis (e.g. for health reasons), their "usual
hours" are not equal to their "normal hours". "Usual hours" includes overtime
worked on a regular basis (i.e. usual overtime) and excludes time not spent at
the place of work on a usual basis (i.e. usual absence). "Absence from work"
for these workers, measured on the basis of their "usual hours", would reflect
"absence in addition to usual absence" and not "total absence from work".
Furthermore, workers who usually work overtime, but who during the reference
period do not, would be absent from work. This may be difficult to conceive
the more so when workers are not paid for absences during regular overtime
periods but are paid for absences happening during "normal" periods.

23. Many household surveys request information only on the main reason
for the difference between "usual" and "actual" hours, probably on the
assumption that the reference period is so short that it is difficult for a
worker to experience both overtime and absence from work during the same
period. However, when they do, "absence from work" may be underestimated (cf.
paragraph 13); and when workers experience more than one absence, time spent
on the main reason of absence may be overestimated and the "number of
absences" will be underestimated.
Chart 3. Measurement of absence from work of an employed person in household surveys

Normal hours/usual hours
- (Hours actually worked - overtime)

> 0

Reasons for the difference
Rest
Absence from work

Period of rest

Other

Period(s) of absence

No. of absences = No. of reasons given
No. of absent workers = One
Time of absence = Normal/usual hours
- (hours worked - overtime)

24. Some household surveys pose a direct question of the type: "(How long) was ... absent from work (for specific reasons)?". This approach may capture "absence" as understood by workers or which is recorded as such by their establishments, leaving out other types of absence, and may be difficult to answer when absence is not clearly defined by establishments (e.g. for workers in micro-enterprises). Other household surveys request data on the "main reason for working less than an established number of hours" (or the reason for not working more hours). "Absence from work" estimated on the basis of the "established number of hours" may underestimate "absence from work" when the "established number of hours" is below workers' "expected working periods".

25. The quality of the information obtained from household surveys greatly depends on the assessments of respondents who may either: (a) forget particular events; (b) not understand the questions; (c) purposely provide incorrect answers; or (d) when proxy respondents are used, be ignorant of the activities of other family members. To minimise errors of type (a) the reference period will usually be limited to one day or one week. Because the reference period is usually short, household surveys are able to use short time units (i.e. of one hour). They may, however, also use longer reference periods and time units. Errors of types (b), (c) and (d) may be reduced with a careful questionnaire design and training of interviewers.

26. More accurate information on "hours actually worked" and on "absence from work" may be obtained from households through the use of time-use surveys, which aim at accounting for the nature, duration and location of all 1921o(conv.)
activities carried out by respondents during a reference period. Time-use surveys may be used to obtain detailed information on work-related activities and may be included in ongoing household surveys. Responses do not depend on workers' own assessments of what constitutes an "absence", "overtime" or "work" in general. Evidence suggests that time-use surveys provide better estimates of "hours actually worked" than conventional labour force surveys, particularly for self-employed workers. This may also be the case of workers for whom the distinction between periods of presence and periods of absence may be unclear and easily interchanged (e.g. agriculture and other rural workers, outworkers).

27. Establishment surveys collect data from employers' records of attendance, allowing the calculation of "absence from work" directly from these records. However, attendance records are generally not kept for statistical purposes, but rather respond to establishments' administration needs. Indeed, establishments may not register all absences but only those which represent a significant economic loss (e.g. long sickness, strike activity), which are linked to disciplinary measures (e.g. lateness) or which are compensated (e.g. maternity leave, long sickness). Time units used may be variable even within one establishment, ranging from very short units when recording absences which represent an important economic loss, to longer units for other types of absences. As the recording of absences may be incomplete, "absence from work" may not reflect "total absence from work".

28. Establishments' recording policies are generally specific to each establishment and distinct between establishments. The types of absence covered may vary between establishments and the methodologies used for providing estimates may also be heterogeneous. Establishment surveys will also normally limit their coverage to paid workers in large establishments, a serious limitation in countries where an important share of the labour force is working in small-scale enterprises. Still, they are able to provide complete and reliable data for particular types of absences such as paid maternity leave and long sickness, which seem to represent the bulk of the absences in many countries. This might then be the purpose for which these surveys should be used.

29. Sources such as social security records may provide data on "absence from work" for specific reasons such as sickness, maternity leave or occupational injuries. As with establishment records, however, these data are not produced for statistical purposes but for legal or payment purposes. Thus, data may refer to absences which last for a minimum amount of days after which entitlement to benefit begins, rather than to total "absence from work". In contrast with establishment records, these registers are generally kept in accordance with needs specified by one agency or by various coordinated agencies, thus guaranteeing a common data collection methodology across workers and establishments. However, they only refer to workers covered by legislation, which may be a considerable handicap in countries where social security or legal coverage is limited. Still, these records should provide consistent and reliable data which may be used to assess the absence situation for specific types of absences and for the specific population covered.

Conclusions and points for discussion

30. This chapter has presented a definition of "absence from work" and discussed the various conceptual and measurement issues involved. Several principles have been outlined, such as that "absence from work" should be
measured only for persons in employment and that it depends on concepts of working time, on "normal hours" or "usual hours" (which reflects the "expected working periods") and on "hours actually worked" (which reflects periods spent at work). In analysing the relationship between these concepts, the chapter notes the need for their adjustment, revision or development. It expresses the view that such a revision should be done in an integrated and coordinated way with other working time concepts. Regarding the measurement of "absence from work", the discussion leads to the conclusion that household (or labour force) surveys are the only data collection method which obtains information on all types of "absence from work". To measure the concept, however, additional and/or different information to that obtained at present in most household surveys may be required. Given the response errors involved, more than one question or special measurement methods (e.g. time-use surveys) may be needed to ensure that "absence from work" is measured precisely. Data provided by establishment surveys and other administrative sources can be expected to give good estimates of specific types of absences for particular groups for workers.

31. It is hoped that the Conference will advise the ILO Bureau of Statistics on issues for future work. With this in mind, the following points may serve the participants to the 15th ICLS as a guide for discussing this chapter:

(a) Do you agree with the definition of "absence from work" presented in paragraphs 6 to 8 and chart 1?

(b) Are "normal hours" and "usual hours" suitable concepts to reflect the time when workers expect work or are expected to be at work (i.e. "expected working periods" in paragraphs 9 to 11 and chart 2)?

(c) Does "hours actually worked" need to exclude "overtime" periods when measuring "absence from work" (paragraph 13)?

(d) Should "resting periods" and "absence from work" be conceptually differentiated? Should "resting periods" be measured in conjunction with "absence from work" (paragraphs 14 and 15)?

(e) Do you think that the "formal job attachment" condition should be refined and/or expanded (paragraph 16)?

(f) Is the classification of absences acceptable (paragraph 17 and table 1)?

(g) Do you agree that "absence from work" should cover all jobs (paragraph 19)?

(h) What are your experiences regarding the improvement of household survey questionnaires for measuring "absence from work" (paragraphs 22 to 25)? Do you think that time-use surveys could be integrated in household surveys to improve the estimate of "absence from work" and "hours actually worked" (paragraph 26)?

(i) Should data from establishment surveys and other administrative records be used only for particular types of absences, account being taken of their limited worker coverage and selective coverage of types of absences (paragraphs 28 and 29)?

(j) Should an international definition of "usual hours" be developed? Should this be done on the lines presented in paragraph 10? Is it pertinent to expand "hours actually worked" in order to include working activities

192lo(conv.)
which are not considered at present (paragraph 12)? Should this be carried out in an integrated way with other working time concepts?

Notes


4 idem 3.

5 Resolution concerning the measurement of employment, unemployment and underemployment, in ILO "Current International Recommendations on Labour Statistics" (Geneva, 1988).


8 Statistics Canada: "Results from the absence from work surveys: 1978 to 1981", in the Labour Force (Nov. 1982).


1921o(conv.)
CHAPTER III

INCOME FROM EMPLOYMENT

Introduction

Each country should aim at developing a comprehensive system of statistics on the economic activity of the population, in order to provide an adequate statistical base for the various users of the statistics, taking account of the specific national needs and circumstances. In particular, the system should provide for needs in connection with ... the measurement of the relationships between employment, income and other social and economic characteristics ...

... Countries should develop programmes of data collection on employment and income that reveal related economic and social aspects. In particular, data should be compiled on employment, income from employment and household income for the purpose of (a) analysing the income-generating capacity of different economic activities and (b) identifying the number and characteristics of persons who are unable to maintain their economic well-being on the basis of the employment opportunities available to them. (Paragraphs 1 and 23 of the resolution concerning statistics of the economically active population, employment, unemployment and underemployment, 13th ICLS, 1982.)

1. The need for statistics on income from employment (a broader concept than wages) has long been recognised in the socio-economic and statistical literature. It has increased over the past decades, owing to the changes that have taken place in forms of employment and systems of remuneration of labour. In both industrialised and developing countries urban economies and labour markets, in particular, have undergone important structural changes; the security, if not the stability of regular wage employment, has declined and many people have had to find other types of income-earning activities, such as casual wage employment or self-employment in both the formal and the informal sectors of the economy. These situations are inadequately covered by, or absent from, the existing wages statistics which are mostly limited to regular paid employment.

2. Similarly, in spite of the fact that the majority of workers in the world are self-employed, regular statistics on income generated by self-employment are almost non-existent. This is particularly true for many developing countries where trends in labour income have to be inferred from changes in macroeconomic circumstances, productivity, employment and wages. Moreover, existing international standards of wages statistics do not provide guidelines for the compilation and production of statistics of income from self-employment.

3. Remuneration systems have broadened considerably during the past decades, mainly through two mechanisms: (i) the introduction, liberalisation and expansion of social security benefits, and (ii) the introduction of provisions or benefits, often acquired as a result of collective bargaining, which supplement regular earnings. In the current statistics "earnings" often represent only the remuneration regularly received for time worked or work performed, but not all wages supplements or benefits. Thus, they do not fully measure the income accruing to workers by virtue of their status as employees.

4. All these changes and developments call for further statistics on the income generated by employment for different categories of the labour
force, and for the development of appropriate statistical methods to measure it. They also require the adoption of an appropriate definition of the term "income from employment" which, for the purpose of the present chapter, is primarily meant to cover the receipts which accrue to workers as a result of their involvement in paid or self-employment activities and which are perceived as income by the recipients.

5. Various international statistical guidelines are available for certain specific aspects of income from employment. These include the System of National Accounts (SNA) adopted by the United Nations Statistical Commission in 1968, which identifies two measures of income arising from productive activity, namely compensation of employees and entrepreneurial income. The first draft of the revised SNA\(^2\) includes recommendations for measuring the net operating surplus of unincorporated enterprises. The United Nations Provisional Guidelines on Statistics of the Distribution of Income, Consumption and Accumulation of Households (referred to hereafter as Income Distribution Guidelines)\(^3\) provides a detailed framework which includes primary income, defined as the sum of compensation of employees, entrepreneurial income and income of members of producers' cooperatives.

6. A number of relevant standards have also been adopted by the International Conference of Labour Statisticians (ICLS): in 1973, the 12th ICLS adopted a resolution concerning an integrated system of wages statistics which incorporated the recommendations of earlier resolutions on hours of work (1962) and labour cost (1966); at the same time, it expressed interest in a proposal to develop a wage measure provisionally called "employee income". The 12th ICLS also adopted a resolution concerning household income and expenditure surveys. In 1982 the 13th ICLS adopted the resolution concerning statistics of the economically active population, employment, unemployment and underemployment, which introduced certain guidelines for analysing the relationships between employment and income.

7. The purpose of this chapter is to outline, and seek the advice of the Conference on, a framework for the development or extension of international standards on the measurement of income from paid and self-employment. This framework should incorporate the relevant international guidelines which are directly relevant to the measurement of income from employment. Specific issues submitted for discussion are presented in paragraph 45.

Objectives and uses of statistics of income from employment

8. Information about income from employment is required to meet various distinct objectives, some of which are summarised below:

(a) Data on income arising from productive activity are needed for national accounts purposes. National estimates of compensation of employees and entrepreneurial income throw light on the structure of the economy and on the relative importance of income from these factors and from property and transfers. Data on the volume of employment and related income also constitute two of the elements of the Labour Accounting System as outlined in Chapter IV of this report.

(b) Planners need detailed information on the structure and distribution of income for different socio-economic groups, in order to assess the relationship between income from employment and labour mobility (both geographically in terms of rural-urban migration, and economically in 1922o(conv.)
terms of returns to paid employment and self-employment), and to study differentials between industries, occupations, sexes, etc. Data on the employment situation and related income of individuals and households constitute an important variable in the assessment of levels of living and degree of poverty, as well as for evaluating the impact of structural adjustment programmes and policies.

(c) Socio-economic indicators are often limited to unemployment and visible underemployment. Another aspect of employment inadequacy is invisible underemployment, characterised, among other symptoms, by a low level of earnings or income. Statistics which provide insights into the income aspect of employment are important for employment policies which aim at creating and developing productive activities (including self-employment activities) that provide adequate income. Regular statistics are required on the levels and changes in employment and income in order to monitor the implementation and assess the value of these policies.

(d) Data on conditions of work and income accruing from productive activities in the informal sector are important for the analysis of the potential of this sector for employment and income generation, as well as for comparisons with the corresponding statistics in the formal sector (see Report III before the Conference).

(e) Statistics on income from employment are also required to formulate tax policies and estimate tax revenue, to assess the impact of social and fiscal measures, and to adjust income tax and social security contributions in order to redistribute income and means of consumption.

9. The recommendations of the 13th ICLS indicate the need to supplement statistics of employment, unemployment and underemployment with statistics that provide insight into the income aspects of employment, and include certain guidelines for analysing the relationship between employment and income. The Conference distinguished two objectives of this analysis (see introductory quotation). The first is to identify those economic activities (defined in terms of production of goods and services as set forth by the SNA) which, for equivalent inputs of labour, yield more income than others. The second is to identify vulnerable groups of workers experiencing employment-related economic hardship. These two objectives highlight both the economic and social aspects of the statistics of income from employment and encompass the various socio-economic uses mentioned above. It is therefore proposed to examine the concepts and measurement issues of income from employment along these lines.

Data requirements in relation to the objectives and uses

10. Three basic conditions should be fulfilled when measuring income from employment:

(i) the concept of income should be limited to income received or derived by virtue of involvement in an economic activity, i.e. income received from other sources such as property, social assistance, transfers, etc., not directly related to employment should be excluded, and when the income generated by an activity includes a return to capital only the component related to labour should be measured;
(ii) because of the differences in concepts, measurement methods, etc., information on employment and related income should be compiled separately for paid and self-employment; and

(iii) statistics of income from employment should be consistent with the framework of the statistics of the economically active population and with other bodies of statistics on the various aspects of wages and income.

11. If the objective is to measure the income-generating capacity of different economic activities, there should be consistency, in terms of coverage, reference period, etc., between the data on employment in a given economic activity and the data on income generated by that activity. Data are needed on (i) the characteristics of the economic activity (i.e. industry, occupation and the context in which it is performed, e.g. self-employment versus paid employment, individual ownership versus partnership), (ii) the volume of labour input (duration of employment and time worked) invested by each individual, and (iii) the amount of income generated by that activity.

12. If the purpose is to identify the number and characteristics of persons experiencing employment-related economic hardship, the basic interest is the link between the activity status of the persons (i.e. their employment history) during an appropriate reference period, and their level of economic well-being. Data are needed for each individual on (i) the characteristics of each main and secondary activity, from paid and self-employment, carried out either simultaneously or successively during a given reference period, (ii) the income derived from each of these activities, and (iii) any spells of unemployment or inactivity that an individual may experience during a given period.

13. The economic welfare of a person depends not only on personal characteristics and activity status but also on other factors such as the size and composition of the household, the number and characteristics of other income-earners, the availability of income from other sources (such as property and transfers), the cost of living, etc. Income from individual employment is an approximation of economic welfare, while household income is a more comprehensive measure for this purpose. The broader aspects of economic well-being and poverty, however, go beyond the purpose of the present paper.

Concepts related to income from employment

"Employee income" and "income from paid employment"

14. In 1968 the Meeting of Experts on Statistics of Wages and Employee Income expressed the need for a "better and more realistic measure of the level of remuneration of employees than earnings" and provided for a provisional definition of the concept of "employee income" which was examined by the 12th ICLS in 1973. "Employee income" was viewed as an extension of the notion of total employee remuneration which would take into account not only wages and related payments received from employers but also certain non-wage receipts that accrue to the employees by virtue of their status as employees, such as compensation for sickness, unemployment, etc., whether paid by employers, social security and insurance institutions or the State. This concept excluded other income received by the employee but not directly connected with his status as an employee, such as entrepreneurial income, property income, pension received for past employment, as well as family

19220(conv.)
allowances and other social security benefits or assistance when paid by the State irrespective of the status in employment.

15. Three criteria were proposed by the 1968 Meeting of Experts for determining the components of "employee income":

(i) "employee income" was provisionally defined as any benefit either in cash, kind or service received by the employee (including members of his/her family) by virtue of his/her current status as employee, from the employer, from social security or insurance schemes or from the State;

(ii) it was restricted to benefits which are received individually by employees and could be unambiguously allocated; and

(iii) it was restricted to benefits capable of being expressed in monetary terms and statistically measurable. 4

16. Two features could be used to distinguish "earnings" from "employee income": first, "earnings" are remuneration for time worked, work performed or time not worked but paid for, while "employee income" relates to all income due to status as an employee. Second, regularity of receipt is, in principle, a prerequisite for the inclusion of a component in "earnings", while the provisional concept of "employee income" does not contain this condition.

17. Bearing these in mind, the following paragraphs focus on those components that are excluded from the present concept of "earnings" but which could form part of the concept of "income from paid employment", and on their relation to the existing concepts of wages, in particular "compensation of employees" and "labour cost".

18. Developments in earnings. In the last few decades, new forms of remuneration have emerged, particularly in industrialised countries. Employers have designed compensation packages to meet particular needs, including recruitment strategy, control of labour costs, etc. Thus, flexible forms of compensation are applied which may replace wages and salaries or provide tax advantages. For example, non-wage cash payments include ad hoc bonuses or exceptional payments linked to the employer's profits, benefits tailored to individual workers' needs such as expatriate allowances or cost-of-living differentials, bonuses for innovation, educational allowances in respect of employees' children, subsidies for employees' meals, etc. When these forms of compensation do not meet the basic criteria of being earned and paid regularly each pay period, they are usually excluded from regular statistics of "earnings" (although some of them may be included in annual series). However, to the extent that they are sometimes substitutes for wages and salaries, their exclusion could lead to inappropriate conclusions concerning levels and trends of workers' income. It therefore seems appropriate to include them in the concept of "income from paid employment", either as direct wages and salaries or as bonuses and gratuities in cash, where relevant.

19. Severance and termination pay is not normally considered as "earnings", but forms part of "labour cost". It is suggested to include it in "income from paid employment", as it can be considered either as a payment for time not worked, since it is derived by virtue of terminating employment, or as a social security benefit, since it most often constitutes compensation for the loss of employment.

20. Remuneration in kind. It is common for employers to remunerate their employees partly in kind, particularly in agriculture. Some benefits
form part of regular "earnings in kind", when they accrue to the employee on an individual basis and are received at regular intervals (e.g. food, drink, fuel, free or subsidised housing and similar payments); they also form part of "compensation of employees" and "labour cost" and should be included in "income from paid employment".

21. Other benefits in kind consist of goods or services which are produced or sold by the enterprise and provided free or at cost or reduced price to its employees, at the discretion of the employer (e.g. railways or airlines tickets, perishable goods in retail shops, use of company cars, etc.). Although these benefits do not constitute an actual income, they are derived by virtue of a given job or activity and their imputed value increases the real income of the employee. They do not usually form part of "earnings"; when they do not entail an additional cost to the employer they are not included in "labour cost" either; however, they do form part of "wages and salaries in kind" according to the 1990 draft revised SNA. It may therefore be desirable to include the benefits in kind actually received by employees in the components of "income from paid employment". Their evaluation should be based, as for regular "earnings in kind", on the value accruing to the employee, i.e. at retail market prices.

22. Other elements of remuneration in kind take the form of services or facilities that are provided to and used collectively by employees. They include recreational, cultural or sporting facilities such as subsidised clubs, holiday sites, canteens, etc. These are excluded from "earnings" but the cost of their provision is included in "labour cost". As these benefits cannot be allocated unambiguously to individual employees (see paragraph 15(ii)), they should not form part of "income from paid employment". This is in line with the 1990 draft revised SNA.

23. Other benefits in kind may be considered as borderline cases, such as transportation allowances and the provision of free transportation of workers to and from work; loans provided by employer at zero or reduced nominal rates of interest; the provision of nurseries, crèches, etc., for the care of children of employees while they are at work, etc. In so far as these benefits meet the requirements of the criteria in paragraph 15, they should form part of "income from paid employment". This would also be in line with the draft revised SNA which includes them in "wages and salaries in kind".

24. Social security benefits. The provisional definition of "employee income" includes "net current benefits from social security and insurance schemes for employees" (i.e. after deduction of employees' contributions), whether paid by the employer, social security and insurance institutions or the State. It was considered by the 1968 Meeting of Experts that the inclusion of such elements would "throw light on the level and nature of certain social security benefits received by employees of different categories and industries and their changes over time". Social security schemes for which the status of employee is a necessary condition for membership may be grouped into two major categories.

25. The first category comprises schemes providing benefits to the employee while in employment or retaining the status of employee, i.e. either at work, or absent from work with a formal job attachment. These benefits may (i) supplement the income of employees, such as family or educational allowances, payment or reimbursement of expenses incurred for medical care and health services, etc., or (ii) compensate for loss of earnings in certain eventualities, such as sickness or maternity leave, occupational injury or disease, short-time work or temporary lay-off, etc. Such benefits paid directly by employers to employees form part of "labour cost" and it is suggested that they form part of "income from paid employment", since they are
often related to the economic activity or enterprise to which the employee belongs and may make up a substantial part of non-wage compensation. When received through social security schemes organised on behalf of employees these benefits could also be included in "income from paid employment" in so far as they are related to the workers' status in employment. The payment (by the employer or the State) of regular earnings or the payment of an allowance corresponding to all or part of earnings, during all or part of an absence from work, is clearly a replacement of income foregone and should also be included.

26. The second category comprises schemes providing deferred benefits paid to former employees by virtue of their previous status as employees. These cover primarily (a) unemployment compensation paid to persons wholly unemployed, and (b) pension or life insurance schemes. It can be argued that unemployment compensation should not be included in "income from paid employment" since the recipients are no longer in employment and do not have a formal job attachment with their previous job. However, there are several arguments in favour of its inclusion: (i) in countries where unemployment benefits are available protection against the financial consequences of unemployment is very often limited to persons who have lost their paid employment and are looking for another paid job; the payment of the benefits is therefore directly related to the previous employment status; (ii) the amount of benefits received is also generally influenced by the previous work experience and level of earnings; (iii) if unemployment benefits were not included, income from employment would relate only to workers who are assumed never to suffer unemployment. Such a hypothesis would not take into account the influence of certain seasonal fluctuations in business activity, nor the importance of involuntary casual or intermittent activities which may or may not, depending on national circumstances, give rise to an entitlement to unemployment compensation.

27. The provisional definition of "employee income" did not take into account the value of future pension and similar rights earned by employees, on the grounds that (a) these rights do not constitute current income but, instead, have a value which will be transformed into income at some future date and only under certain conditions; and (b) the assessment of the money value of pension rights raises very complex problems. "Employee income" also excluded current pension received for past employment.

28. The inclusion or exclusion of deferred benefits depends on the objectives of the statistics of income from paid employment. For determining the income-generating capacity of different economic activities, it is suggested that deferred benefits be left aside, since (i) this type of compensation seems linked more to the developments and coverage of the social security schemes and legislation than to the capacity of a given economic activity to generate an income, and (ii) it is not received by virtue of current employment status. On the other hand, when the objective is to identify groups of workers experiencing employment-related economic hardship, it may be desirable to include the actual benefits received by virtue of past employment (such as unemployment compensation and current pension for past employment) in income from paid employment. In that case, the measurement of income from paid employment would have to be based on the notion of usual status as an employee. In addition, considering the great importance generally attached to pension rights and the fact that these rights may be tied to a given job (i.e. non-transferable when the employee changes from one employer to another), it may be desirable to collect information on the development, trends and distribution of such benefits as a separate but related phenomenon.
29. From the standpoint of "income from paid employment", employers' contributions to social security and similar schemes do not constitute a measurable income for the employee and should not be considered as such. This would therefore signify a difference between the concept of "income from paid employment", on the one hand, and "compensation of employees" and "labour cost", on the other. "Income from paid employment" should be recorded gross, but social security benefits received by the employee should be recorded on a net basis after deduction of the employee's own contributions to the relevant schemes, thus avoiding double counting. One could derive "net disposable income from paid employment" by deducting direct taxes and employee's own contributions to pension funds and social security or insurance funds in respect of which no benefits have been received.

30. "Income from paid employment", as described above, is a broad measure of total employee remuneration. It could throw light on the differences which may exist, on the one hand, between regular/standard and casual/non-standard paid employment and the respective income and benefits these forms of employment entail and, on the other hand, between paid employment and self-employment income. Statistics of income from paid employment would also fill the gap between statistics of earnings and labour cost, as shown in chart 4. It should be noted that in the informal sector, where employees do not generally profit from fringe benefits or pension and social security receipts, the concepts of "earnings" and "income from paid employment" would be similar. The proposed components of "income from paid employment" are given in chart 5.

"Entrepreneurial income" and "income from self-employment"

31. Income from self-employment differs from paid employment income for two major reasons: (a) it is the result not just of labour input but of other factors of production, including land, building, implements and tools, capital materials, energy and other resources used in the generation of income of the enterprise; (b) the self-employed comprise various categories of workers — (i) employers, who work with the help of employees, (ii) own-account workers, who may work in an individual capacity or in partnership, with or without the help of unpaid family workers, (iii) members of producers' cooperatives, and (iv) unpaid family workers. A self-employed person may be the owner of a corporation or quasi-corporation, or head an unincorporated enterprise. In addition, unlike typical employees, most self-employed do not have fixed hours of work specified by a work contract or by custom, nor do they have contractually fixed incomes.

32. Income from self-employment is generally referred to as "entrepreneurial income", which is defined in both the SNA and the Income Distribution Guidelines (IDG). It consists of (a) the withdrawals of income by the owners of corporate and quasi-corporate enterprises (e.g. managers, directors), and (b) the profits of unincorporated enterprises. The income which accrues to owners of corporate and quasi-corporate enterprises is very similar to that accruing to employees, in that it represents the actual payments made to them out of the receipts of the enterprise, after a decision has been taken at the enterprise level as to the proportion of receipts that should be retained within the enterprise as savings.
Chart 4. Simplified relationship between the wage measures "earnings", "income from paid employment", "compensation of employees" and "labour cost":

- **EARNINGS**

  - plus Other elements of remuneration in cash and in kind
  
  - plus Net current, employment-related social security receipts from employer or State (after deduction of employees' contributions)

  
  - minus Net employment-related social security receipts from employer or State

  
  - plus Employers' actual and imputed contributions to social security funds

  
  - plus Employers' imputed contributions in respect of unfunded social security schemes

  
  - minus Employer's direct social security payments to employees

  
  - Employer's cost for welfare services

  
  - Employer's other labour cost

  
  - Taxes regarded as labour cost

**LABOUR COST**
Chart 5. Proposed components of "income from paid employment"

- **EARNINGS** in cash and in kind
  - plus
  - **Net employment-related social security benefits from employer, social security and insurance funds or State**

- **Other ad hoc, irregular or non-contractual payments in cash**
  - plus
  - **Current receipts while employee in employment (formal job attachment)**

- **Remuneration in respect of absence from work, where not included in earnings**
  - plus
  - **Deferred benefits and current benefits for past status as employee**

- **Severance and termination pay**

- **Benefits in kind received individually by employees**

**GROSS INCOME FROM PAID EMPLOYMENT**

- minus

**Employee's direct taxes and contributions to social security and insurance schemes in respect of which no benefits were received**

- plus

**DISPOSABLE INCOME FROM PAID EMPLOYMENT**
33. The concept and measurement of the income accruing to the owners of unincorporated enterprises, which is of interest here, presents more conceptual and practical difficulties, as it is not a sum of receipts but the residual funds that accrue to the self-employed after deduction of all operating costs and taxes on production from the output produced. Therefore, income from self-employment cannot be measured without knowing the main elements which enter into its formation, i.e. (a) gross output, defined as the value of all goods and services produced, including those retained for own consumption or provided free of charge or at reduced prices to hired labour (IDG); (b) operating expenses, which include the purchase, repair or maintenance of raw materials, tools, equipment, fuel, transport, etc., labour cost/compensation of employees (if any), and expenses such as business taxes, interests paid in connection with the business, rents paid for building and land used in the enterprise, etc.

34. The difference between gross output and operating expenses gives "gross entrepreneurial income", which is the return both to labour and to capital. In order to isolate the return to labour and arrive at the concept of "net entrepreneurial income" (or "net operating surplus"), the value of the productive assets consumed should be deducted.

35. In practice, it is often difficult for certain self-employment activities to make a clear distinction between the return to labour and the return to other factors of production. Depending on the type of activity and level of organisation, certain conceptual and practical considerations need to be kept in mind:

- in own-account enterprises, and more generally in unincorporated enterprises, there may be no clear line between capital and current business expenditures, or between business and individual/household expenditures or liabilities. For instance, capital goods such as buildings or vehicles may be used partly for business purposes and partly for own use; rents paid by shop-keepers, farm tenants, etc., may cover dwellings as well as buildings, land, equipment, etc., used for the business; when funds are borrowed by an own-account worker for investment in the business, the person is, in any case, liable in his/her personal capacity;

- a choice has to be made with regard to the treatment of the imputed rent of owner-occupied premises used for production and the rents received for buildings and equipments. While these form part of entrepreneurial income in the SNA, they are considered as property income in the IDG. It is suggested that these components of income be treated in line with the IDG recommendation, because they are income from property rather than employment-related income;

- income received by a self-employed worker may include the return to the labour input of unpaid workers (family and otherwise), which should be taken into account when estimating the corresponding volume of employment.

36. It may therefore be useful to establish a distinction between:

(i) the self-employed who produce goods or services similar to paid employees, whose activities involve little or no productive assets (such as those engaged in crafts or services, whether in the formal or informal sector). The income they receive is mostly a return to their labour input. Thus, "gross" entrepreneurial income is a close estimate of "net" entrepreneurial income; and
(ii) those whose activities involve a significant amount of capital for the production and generation of income; the gross income they earn is the return both to labour and to capital. In order to identify the former, data are needed on the amount of capital used for generating the income, or an estimate of the depreciation of productive assets at replacement cost. However, the self-employed engaged in household enterprises (individual ownerships or partnerships) may not be able to provide reliable data on depreciation of capital; in that case "net entrepreneurial income" may have to be derived by means of analytical methods.9

37. The above-mentioned approach used to measure "net entrepreneurial income" (or "net operating surplus") measures the income produced by a self-employment activity; it therefore reflects "income from self-employment" when viewed from the standpoint of the capacity of an activity to yield a certain income. However, a self-employed person may not receive this operating surplus in full: in fact, the actual income of the self-employed is often in the form of withdrawals made out of the business funds in order to provide for household needs, while part of entrepreneurial income is retained in the enterprise, for future investment or retained savings. From the individual's standpoint, "income from self-employment" may therefore be lower than the net entrepreneurial income of the business. If the aim is to measure the economic well-being of individuals, it may be preferable to measure the actual withdrawals of the entrepreneur, i.e. after deduction of that part of income retained in the enterprise for future investment or savings. It should be noted that, in practice, income from self-employment derived from unincorporated enterprises is usually conceived and measured in terms of "receipts" accruing to the self-employed as a result of their activity.

38. Income from self-employment cannot be measured without taking into consideration the volume of employment involved in the activity. Here again, a distinction may be made between two categories:

(i) the self-employed entrepreneurs (i.e. employers or own-account workers) who run their enterprises independently from other household members and receive income individually; and

(ii) own-account workers engaged in household enterprises (whether farm or non-farm), or more generally in self-employment activities jointly performed by several unpaid members of the household. Working household members contribute to the economic activity with varying durations and intensity of work. If the objective is to measure income generated by the activity, it may not be necessary to apportion the income among the individual working household members, but when compiling the corresponding employment data all labour input should be recorded. On the other hand, if the aim is to measure the economic well-being of individuals, income would have to be allocated among the individual working members of the household, possibly in proportion to the number of hours or days worked.10

39. The situation of the self-employed with regard to employment-related social security benefits differs from that of employees for various reasons:

(i) the self-employed do not receive any direct social security payments from their own enterprises;

(ii) since they have no employer to share the financing of employment-related social security schemes (apart from exceptional situations where an association, such as a cooperative, spreads the financing among its members), the self-employed benefit, where
relevant, from schemes financed mainly or solely by their own contributions;

(iii) even where state or social security schemes entitle them to benefits such as sickness and maternity payments, family allowances or old-age pensions, etc., many self-employed do not benefit from allowances designed to compensate for the loss of income in case of illness, occupational injury, etc. Similarly, when an activity ceases, a self-employed worker is generally not compensated by unemployment benefits.

40. If self-employed persons do receive social security benefits through schemes recognising the status in employment as a specific condition for membership, it may be desirable to include these benefits in the concept of "income from self-employment". Notwithstanding the limitations mentioned above, the rationale for the inclusion of employment-related social security benefits and pensions could follow the lines of the proposals made in paragraphs 25 to 28 above. This would throw light on the situation of various categories of self-employed workers vis-à-vis social security benefits, and allow for comparisons with the situation of workers in paid employment. The measurement of "income from self-employment" in unincorporated enterprises is summarised in chart 6.

"Household income" and "income from employment"

41. The concept of household income as such is not used in the SNA, which refers to revenues and receipts of the household sector as a whole. Household income was defined in the relevant resolution adopted by the 12th ICLS as the sum of money income and income in kind consisting of receipts which, as a rule, are of a recurrent nature and accrue to the household or to individual members of the household regularly at annual or at more frequent intervals.

42. The 12th ICLS proposed a list of the components of household income, but did not suggest any classification of these components. The IDG recommended the following classification:

(a) primary income, which originates directly from the involvement of the recipients (household members) in the production of economic activities and is the sum of compensation of employees, income of members from producers' cooperatives and gross entrepreneurial income;

(b) property income received, including the imputed rents of owner-occupied dwellings;

(c) current transfers and other benefits received (including social security benefits).

Total household income is the sum of primary income, property income and current transfers and other benefits received. The deduction of direct taxes and social security and pension fund contributions from total household income yields total available household income."
Chart 6. Proposed components of "income from self-employment" (unincorporated enterprises)

- Gross output
- minus
- Operating expenses
- minus
- Consumption of fixed assets/depreciation
- minus
- Income retained in enterprise for future investment/savings
- RECEIPTS ACCRUED TO THE SELF-EMPLOYED
  - plus
  - Net employment-related social security benefits from social security and insurance funds or State
- minus
- Direct taxes & contrib. to social security and insurance funds in respect of which no benefits were received
- DISPOSABLE INCOME FROM SELF-EMPLOYMENT

GROSS ENTREPRENEURIAL INCOME

NET ENTREPRENEURIAL INCOME

GROSS INCOME FROM SELF-EMPLOYMENT
43. Household income is a broader concept than income from employment. On the one hand, not all the components of household income are generated by employment; on the other, not all the elements of primary income are considered as income by the recipients (e.g. employers' contributions to social security and similar schemes, which form part of compensation of employees), while some of the components of social security receipts might be considered as employment-related. It is also a more comprehensive measure of economic well-being in that it takes account of all sources of income and of the characteristics of the household and therefore is appropriate for analysing the well-being of households. However, because of the reasons noted earlier and the way it is measured at present, it would not lend itself to the assessment of income from employment.

Conclusions and points for discussion

44. This chapter concentrates on the desirability of measuring income from employment, outlining the objectives and concepts as well as the various facets of the relationship between employment and income. Essential measurement issues, such as the choice of an appropriate reference period, the unit of observation and analysis, the sources and methods of data collection, etc., are not discussed here, so as to focus the discussion on the concepts and objectives. None the less, there is a high degree of correlation between these issues and the objectives and concepts, which should be covered in any future work the Bureau undertakes on this topic.

45. The advice of the Conference is therefore sought on the type of work to which the ILO Bureau of Statistics should give priority in the field of statistics of income from employment. Certain priority issues are submitted below for consideration:

(1) Should international standards be developed for measuring the new broad concept of "income from employment" and integrating statistics of income from employment into the regular national statistical programmes?

(2) If so, do you agree with the recommendation of the 13th ICLS which identifies two main objectives for the measurement of income from employment (see above, paragraph 9)? Should other objectives be fixed which might have implications on the concept and components of income from employment?

(3) Paragraphs 10 to 13 above review the types of data required in terms of the objectives. Do you agree with the three basic requirements mentioned in paragraph 10? Do you agree with the approach outlined in paragraphs 11 to 13, whereby different objectives require different types of data?

(4) Is the general approach proposed in 1968 to define "employee income" appropriate for the measurement of "income from paid employment" (paragraph 14)? Do you think that the three criteria proposed in paragraph 15 for determining the components of "employee income" may apply to the concept of "income from paid employment"? Should other criteria be added to identify elements of "income from paid employment"? In particular, should the notion of "current" status as an employee be used to determine which benefits should form part of the concept of income? (See also question 8 below.)
(5) As regards "income from self-employment", the focus is on the measurement of income accruing to the self-employed in unincorporated enterprises. Do you agree with this approach (paragraphs 31-32)? It is suggested that "income from self-employment" is made up of the residual funds that accrue to the self-employed workers as a result of their labour input in the production of economic goods or services (paragraphs 33-34). Should a distinction be made between the "net operating surplus" of unincorporated enterprises and the actual gross income received by the self-employed, i.e. should income from self-employment be viewed from the standpoint of "profits" of the enterprise, or "withdrawals" of the self-employed person (paragraph 37)?

(6) The compilation of data on the volume of labour involved in a self-employment activity jointly performed by entrepreneurs and partners raises some measurement problems. Do you agree with the approach suggested in paragraph 38?

(7) The core of income from paid and self-employment consists of the remuneration or profits/withdrawals derived from an economic activity. However, it is suggested that employment-related social security benefits form part of the components of income from paid employment (paragraph 24) and, where relevant, of income from self-employment (paragraph 39). Do you agree with this general principle?

(8) If so, should both direct payments made by employers to employees and current benefits received by employees and self-employed workers from social security or insurance schemes or from the State form part of income from paid and self-employment (paragraphs 25 and 40)? Should the notion of "formal job attachment" be used to determine which benefits should be included in income from paid employment (paragraph 25)? Should the concept of income from employment be extended to cover current receipts derived from past employment status (e.g. unemployment compensation or pension for past employment) when the objective is to analyse the economic well-being of workers (paragraphs 26-28)? If so, should similar benefits be included in income from self-employment? Considering the importance attached to pension rights, should it be recommended that regular information be collected on the development and distribution of such benefits?

(9) To help the Bureau of Statistics in its future work in this area, would it be useful to convene a meeting of experts and/or a working group which would consider not only the objectives and concepts but also the various measurement issues?

Notes

1 ILO: Trends in employment and labour incomes: Case studies on developing countries (Geneva, 1988).


3 idem: Provisional guidelines on statistics of the distribution of income, consumption and accumulation of households (IDG), Studies in Methods, Series M, No. 61 (New York, 1977).


1922o(conv.)
The three criteria of the formal job attachment were laid down by the 13th ICLS in the resolution concerning statistics of the economically active population, employment, unemployment and underemployment.


Notwithstanding the conclusions of the proposed revision of the International Classification of Status in Employment.

It should be noted that the 1990 revision of the SNA recommends that a distinction be made between the net operating surplus of owners of owner-occupied dwellings and that of own-account workers.


Compensation of employees may be restricted to wages and salaries, i.e. all payments that employees receive for their work, whether in cash or in kind (IDG, paras. 4.4 and 4.5).
CHAPTER IV

AN OUTLINE OF THE MAIN CONCEPTS AND PRINCIPLES OF A LABOUR ACCOUNTING SYSTEM

Introduction

1. This chapter presents the conceptual basis for a Labour Accounting System (LAS), as it has emerged from discussions organised jointly by the ILO Bureau of Statistics and the Statistical Division of the United Nations Economic Commission for Europe (ECE), following a EUROSTAT seminar in 1981. These discussions took place in an ECE/ILO meeting on manpower statistics in 1983 and in informal work sessions in 1986 and 1988. One aim has been to provide national statistical agencies with a useful basis for the preparation of actual "labour accounts", which in turn may lead to improvement and expansion of this conceptual framework. It is also hoped that an LAS can provide a framework for the ILO's own work in developing concepts and instruments for labour market statistics, i.e. statistics on the economically active population, employment, unemployment, underemployment, hours of work, absence from work, labour cost, wages and income from employment, as well as the associated definitions and classifications for occupations, informal sector and status in employment.

2. Paragraphs 3-5 outline some user areas of an LAS. Implications for reference periods and periodicity are outlined in paragraph 6. Paragraphs 7-16 present the main structural elements of the LAS as they were developed in the discussions referred to above. Then follow some reflections on measuring units to be used, in paragraphs 17-21. Paragraphs 22-23 identify the variables and classifications which have been suggested for use in an LAS with respect to the primary units. Paragraphs 24-29 briefly discuss the types of accounting relationships which may be found in an LAS, and paragraphs 30-31 contain some remarks on further work as well as a list of points for discussion.

User areas

3. In the discussion of an LAS one has to distinguish between two sets of issues: (1) those concerning the logical and definitional structure; and (2) those concerning the observation and estimation of the corresponding data (parameters). This distinction is necessary, as the issue of inconsistency in primary statistics has tended to get confused with that of ensuring logical consistency within the LAS. The problem of how best to use the primary statistics to estimate the "data cells" defined by the structure of an LAS is basically no different from that faced by national accountants and other secondary users of statistical data, and in seeking its solution one may, in the same way as the national accountants, benefit from the requirement that estimates be consistent within the logical framework of the LAS structure, and in particular from the "accounting relationships" in the system. Thus one basic use of the LAS is to provide a logical framework for obtaining internally consistent estimates of key labour market variables and their distribution over the population. Such consistent estimates are in turn necessary for the description and analysis of the state and dynamics of the labour market and its interaction with the rest of the economy. In addition to "accounting relationships", the logical framework will require the
consistent use of units of observation and measurement, time references, definitions and classifications.

4. More specifically, "description and analysis of the state and dynamics of the labour market and its interaction with the rest of the economy" refers to the following main areas for statistical description and analysis:

(i) obtaining an overall picture of the employment status of the population and its distribution over the various variables of interest for economic, labour market and educational policies and planning, as well as estimates of net changes which can be derived from successive situation descriptions;  

(ii) studies of the total amount of human resources, their change and allocation between different activities, including productivity studies which require consistency between labour input data, on the one hand, and production or national accounts data, on the other;  

(iii) studies of the relationship between the cost of labour and the demand for it, on the one hand, and the remuneration of labour and the supply of it, on the other;  

(iv) studies of "gross" changes ("flows") in the number of jobs and persons and in their activity situation.

5. There are very real differences in the requirements of these different user areas in terms of units of observation, units of measurement, reference period and periodicity - core elements of any LAS. User areas such as (i) and (iv) focus mainly on persons, both as units of observation and units of measurement, but will often differ with respect to desired periodicity and reference period. User areas such as (ii) and (iii) are mainly interested in the flow of productive services and how they are generated, allocated and rewarded, and may focus on hours as a unit of observation and some quality indicator (e.g. value or "money") as a unit of measurement, even if the reference period and the periodicity is the same as those for (i) or (iv).

**Periodicity and reference periods**

6. The reference periods required for user areas such as (ii) and (iii) will depend on the accounting periods used. A calendar year or a quarter are most frequently used. Productivity studies require data on the "amount" of productive services rendered by labour during the reference periods. User areas (i) and (iii) will be interested in certain stocks, such as:

(a) the average number of persons (or posts) that have had certain status characteristics during the reference period; or

(b) the number of persons with certain characteristics present at the end of the reference period;

or will focus on various changes, such as:

(c) the net changes in the number of persons in each status category;

(d) the total number of changes occurring in the reference period;

1919o/conv.
(e) the total number of persons who experience at least one change within a reference period; and/or

(f) the number of persons who have changed status from one period (or one reference date) to the next.

The numbers for (c)-(f) are equal only for very short reference periods – periods which are too short for a post or a person to experience more than one change. We must expect that in practice "labour accounts" will be mostly concerned with type (c) and (f) changes for reasons relating to the availability of data. However, data from administrative records may tend to be of type (d) while some users may prove to have a preference for type (e) data. (It may be worth noting that whereas changes of types (d) and (e) recorded for each of, for example, four quarters add up to the total which would be recorded if the reference period was one year, the adding up of quarterly changes to obtain changes over one year is not possible with type (c) and (f) data.)

**Units and other structural elements**

7. This section describes the basic units which serve as the building blocks of the logical LAS structure and how they are related. (Note that the use of a specific reference period is implicit in what follows.)

8. **Posts** and **persons** are the main objects (or units of observation) of an LAS because these are the units which are counted in (part of) the LAS as well as observed in much in the underlying statistics. When "persons" and "posts" are linked, there exists a **job** (and vice versa: it takes a "job" to link a "post" and a "person"):

(a) **a person** requires no further comment at this stage;

(b) **a post** should be defined as a set of tasks which are (designed to be) carried out by one "person";

(c) **a job** should be defined as an implicit or explicit contractual relationship between a specific "person" and a specific "post". Each "job" represents the link between an **employed person** and a **filled post**. (This includes the "self-employed" person who fills a "post" with himself/herself as "employer".)

9. The primary units "posts", "persons" and "jobs" are carriers of characteristics (variable values) which are of interest to the users of an LAS. Some of these characteristics are derived from other units of observation, i.e. employers and households:

(a) **a household** is an important part of the context for a person's participation in the labour market. Characteristics of households therefore are important in much analysis and description of labour supply;

(b) **an employer** may be a corporation, a government unit, a non-profit institution or a person in his/her capacity as owner of an unincorporated enterprise. Because some employed persons are self-employed, we must use the counter-intuitive convention that a person may have a "job" and a "post" with herself/himself as "employer". Logically this should not present any problems, nor should it be problematic from a data-collection point of view. In addition to being important in the definition of
"posts", "employers" are primary carriers of characteristics which are important when describing "posts" and, through them, also "jobs" and/or "persons".

10. In an LAS we want to distinguish between those characteristics of "posts" and "persons" which describe how they are related to the labour market, (i.e. those describing "activity situations"), and other characteristics ("distribution variables") which are used to describe the structure of the primary units in the different activity situations (paragraphs 22-23 below). The following activity situations seem most important:

(i) for posts:  
(a) filled posts  
(b) vacant posts

(ii) for persons:  
(a) employed persons  
(b) unemployed persons  
(c) persons outside the labour force

While initially the number of activity-descriptive classes can be limited to these three for "persons" and two for "posts", the number of classes can be expanded if required (paragraph 30 below).

11. The international recommendations as to the definition of activity situations for persons are presented in the resolution concerning statistics of the economically active population, employment, unemployment and underemployment, adopted by the 13th ICLS in 1982. Corresponding recommendations do not exist for "posts" or "jobs", but some elements of future definitions would seem to follow from the logic of their inclusion in the LAS:

(a) Since a "filled post" should correspond to (at least) one "employed person", there will be (at least) one "post" whenever we have an "employed person". As "employed persons" may be "temporarily absent from work" we may also have a "filled post temporarily inactive" because of such absence (however, since some workers can be engaged on a temporary basis as substitutes for some of the workers who are absent, there cannot be a one-to-one relationship between the number of "employed persons temporarily absent" and the number of "filled posts temporarily inactive");

(b) there has not been much international discussion of the concept and measurement of vacancies. However, it is suggested that it is fairly straightforward to develop a definition of a "vacant post" which parallels the definition of an "unemployed person":

A "vacant post" can be said to exist if an employer before or during the reference period has taken concrete steps to find a suitable person to carry out a specific set of tasks and would have taken on (entered into a job contract with) such a person if she/he had been available during the reference period.

Definitions which are close to this have been used as the basis for surveys, e.g. in Canada, Hong Kong, Netherlands, United States. The available experience does indicate, however, that it is virtually impossible to design surveys which can cover all "vacancies" to which "unemployed persons" may apply.
12. Chart 7 describes how the units discussed above are related. It has been drawn to emphasise the parallel between "persons" and "posts", representing the supply side and the demand side of the labour market respectively. However, this should not lead one to forget a fundamental difference between these two types of units: "persons" can exist independently of the labour market — thus the need for the category "persons outside the labour force" — while it has no meaning to speak of "posts outside the labour market". Consequently, "the total number of posts" cannot be defined independently of its components "filled posts" and "vacant posts".

13. In addition to making it possible to define "vacant posts", the term "designed to be" in the definition of "post" given in paragraph 8(b), will allow the definition of "posts" to cover the situations of the "shared post" (or "shared job" which is the more common expression). "Shared post" is the situation where a "post" has been designed by the employer to be filled by one "person" but, for various reasons, two or more "persons" have been engaged to carry out its tasks. In other words, one "post" can be linked to more than one "person". This parallels the situation of one "employed person" being linked to more than one "post". Difficulties which arise from this can probably best be dealt with through appropriate characteristics of "jobs", e.g. as "part-time/full-time", "principal/substitute", "shared/not shared" post.

14. One function of the "job" concept is to represent the link between one particular "filled post" and one particular "employed person". The "job" is the unit observed in most establishment-based employment statistics, and also the link which makes it possible to associate person-specific characteristics (e.g. age, sex, education, work-history) with "posts", and post-specific characteristics (e.g. the occupation and status-in-employment of the post as well as the industry of the employer) with "employed persons".

15. There is a clear parallel between "jobs" in an LAS and "transactions" in the national accounts. In fact, "jobs" should be seen as reflecting a specific sub-set of the transactions described by the national accounts. This provides the main basis for overlap between the two systems.

16. Chart 7 includes "hours actually worked" and "hours paid for" as two special sets of units linked to "jobs". Both types of unit are of central interest to users of an LAS, both in themselves and because they provide the basis for productivity calculations ("hours actually worked"), for definitional links with the SNA ("hours paid for") and for defining "accounting relationships" within the LAS (paragraphs 24-29).

The measurement of quantities

17. The main quantities asked for in an LAS will be:

(a) number of units, i.e. number of posts, jobs and persons;

(b) amount of productive services rendered by employed persons/used in filled posts;

(c) value of productive services rendered by employed persons/used in filled posts.
Chart 7. CONCEPTUAL FRAMEWORK FOR A LABOUR ACCOUNTING SYSTEM

"Hours means flow of hours paid for and/or hours actually worked. "Numbers means stock at a point of time or average over a period. "Pay" means flows of "labour cost" and/or its "total compensation" and "gross earnings" components.

Categorised by:
- institutional sector
- industry (ISIC)
- location

Institutional sector

Employers
Establishments, households which employ servants and self-employed persons

Categorised by:
- occupation; part-time or full-time; collective agreement; whether part of employment-creation scheme

Occupation

Posts
[Sets of tasks and terms of employment]

Categorised by:
- age, sex, nationality, ethnicity, union membership, education, past occupation, work desires, whether on unemployment register

Age, sex, etc.

Jobs
Implicit or explicit contractual relationships between persons and employers

Person

1 Hours actually worked
2 Hours paid for

Persons

Statistics of numbers
by employer and/or post categories

Employed persons

Statistics of numbers
by employer, post, household and/or person categories

Unemployed persons

Statistics of numbers, pay and hours
by household and/or person categories

Persons outside the labour force

Statistics of numbers
by household and/or person categories, and statistics of non-economic activities

Note: The statistics of total compensation by institutional sector and by industry also form part of the system of national accounts.

1919a/conv.
When describing the number of persons, it should be possible for the LAS to have direct links with the demographic accounts, including educational accounts, which are part of the Framework for Social and Demographic Statistics (FSDS), i.e. common conventions, definitions and classifications. Similarly, information on "hours actually worked" should be linked to a "time use" component of the FSDS. When describing the value of productive services it should be possible for the LAS to have direct links to the system of national accounts (SNA), particularly as one of the satellite tables to the national accounts is designed to display the amount of productive services provided by labour.

18. While standard conventions specify how to measure the number of persons and the value of labour services, no agreement has been reached concerning the measurement of the amount of services provided by labour. Four different measurement methods can be said to exist (or to have been proposed):

(i) number of "persons at work" (a sub-set of "persons employed");
(ii) number of "work-years" ("man-years");
(iii) number of "actual hours of work";
(iv) "value of wage bill at constant wages".

Measurement method (i) is generally thought to be too crude to be satisfactory, as differences in intensity of work during the reference period are not taken into account. Method (ii) is currently the most commonly used in the national accounts satellite tables mentioned above, and is often thought of as equivalent to "number of jobs on a full-time basis". It uses a reference to the "normal work-year" when converting from "persons employed" to "work-years", and the estimation is usually based on a classification of "persons employed" as either "full-time" or "part-time" workers. Several countries now seem to find that "normal work year" and "part-time work" are concepts which are too imprecise and variable, both over time and between industries, and they therefore would prefer to use measurement method (iii). Method (iv) has been proposed as the best method to make adjustments both for intensity of work during the reference period and for differences in the amount of productive services rendered by different types of labour due to differences in qualifications and other factors.

19. It seems likely that measurement methods (i) and (ii) will continue to be the most widely used in the near future, as they require less (or simpler) information than methods (iii) and (iv), which are preferable in principle. To collect good data which can serve as a basis for measurement methods (iii) and (iv) is not easy, and especially difficult for persons working for profit or family gain and not for pay.

20. A time-accounting approach to the measurement of time actually worked has been outlined which, based on later studies from Finland, for example, seems to give better estimates of hours worked by self-employed groups than the standard approach used in labour force surveys. If "hours of work" are obtained for quality-relevant categories of employed persons (as defined by e.g. occupation or education), then we can apply some weighting scheme to arrive at a quality-adjusted measure of "amount of services rendered". The difficulty, of course, is to determine the basis for such weights.

21. Most of the weighting systems which have been proposed are related either to the cost of increasing the quality and productivity of workers (e.g. years of schooling and special vocational preparation, costs of education and training) or to the results of their productive activity (e.g. relative wages). The problem with cost-related weights is that there is no way of knowing the degree to which the cost of training received is related to the

19190/conv.
resulting capacity to render productive services. (Available evidence seems to indicate that cross-section correlations are positive but weak, and that they probably are not stable over time.) One problem with result-related weights, such as wages, is that they only reflect results under rather strict assumptions about the markets in which they are determined. These assumptions are not satisfied in real labour or goods markets, and we have no way of knowing how important this is for the ability of, say, relative wages to reflect relative productivities. This problem is compounded when we remember that the remuneration of many employed persons is determined not directly in a labour market, but indirectly in goods and services markets with a combined remuneration of both labour and capital. Consequently, "wage bill at constant wages" is also a problematic basis for measuring the amount of productive services rendered, even if we do not take into account the difficulties of estimating a "wage equivalent" component of the incomes of "self-employed" persons.

Classifications

22. The "distribution variables" referred to in paragraph 10 above have two important functions in the LAS. The most obvious one is to describe important characteristics of the units "accounted for" by the LAS, i.e. the stock of persons and posts in the different activity situations, the changes in these stocks or the amount or value of services provided in/by the units during a reference period. Gross transition of "persons" or "posts" between classes in the "distribution variables" should not be seen as part of the LAS, but they may be included in other parts of a socio-demographic accounting system. The second function is related to the estimation of cells in the LAS tables. The data sources which can be used as a basis for LAS estimates will frequently be incomplete, in particular with respect to units covered, and different sources will be truncated differently. Identification of the holes in coverage of the different sources and their degree of overlap in terms of the distribution variables will provide a basis for making necessary estimates and/or improving the database.

23. It is useful - at least from a data collection point of view - to recognise the primary unit for each distribution variable. Other units may also be described by these variables, but only if they have a recognised relationship to the primary unit, i.e. they are sub-units or they are linked to the primary units through a "job". Table 2 indicates the main distribution variables of interest to users of LAS and how they are allocated among primary units. The table also indicates whether some type of international recommendation exists concerning the definition and classification (value set) of the variables.

Accounting relationships in the labour accounting system

24. "Accounting relationships" in an LAS will relate to stocks of "persons" (for the supply side) and "posts" (for the demand side), to changes in these units, and to flows of hours and income/costs. Wherever relevant the design of these accounts must be coordinated with corresponding parts of the System of National Accounts (SNA) and the Framework for Social and Demographic Statistics (FSDS).
Table 2. Distribution variables in the labour accounting system by primary units

1. Employers
   - Ownership
   - Industry*
   - Size
   - Location

2. Posts
   - Status in employment*
   - Occupation*
   - Shift system
   - Pay system
   - Collective agreement

3. Jobs
   - Income from employment*
   - Amount of labour costs*
   - Amount of compensation of employees*
   - Amount of net operating surplus for self-employed persons (of unincorporated enterprises)*
   - Normal or usual hours worked*
   - Hours paid for
   - Actual hours worked*

4. Persons
   - Sex
   - Age*
   - Nationality
   - Ethnic group
   - Union membership
   - Education obtained*
   - Past occupation (and other life history variables)
   - Work desires
   - Activities (other than those defining status)

5. Households
   - Domicile (location)
   - Type of household*

* Indicates that there exists some type of international recommendation concerning the definition and classification of this variable. They are not necessarily coordinated with each other or with the SNA recommendations.

25. Accounting for the stocks of persons should take the total population as the point of departure, making sure that in this context "total population" is delineated in a way which is consistent with the SNA guidelines for the delineation of the (national) production boundary, as well as the FSIDS guidelines. The most difficult issue, of importance only for some countries, will be the treatment of persons living in one country and working in another. Depending on the main uses of the data there will be a need to 1919o/conv.
account for the average number of persons in each of the groups defined by cross-classification of the activity variables and the distribution variables, as well as for the "closing stocks" at the end of each reference period. The former stock concept is the one most closely related to the flow accounts for hours and income (paragraphs 28 and 29). The latter stock concept is the one most directly relevant for the change accounts (paragraph 27). The basic relationship to be satisfied by these accounts are:

\[
\text{total population} = \text{employed persons} + \text{unemployed persons} + \text{persons outside the labour force}
\]

26. In paragraph 12 it is underlined that the total number of "posts" cannot be defined or observed independently of its components - "filled" and "vacant" "posts"; and in paragraph 11(b) the observation is made that in practice it is virtually impossible to observe all vacancies. Most accounts of the stock of "posts" will therefore be limited to "filled posts" and an observable sub-set of "vacant posts" with groups defined by distribution variables. Consistency issues with the SNA concern the delineation of activities which belong to the national economy. The same considerations as for "persons" will determine the choice of "average" or "closing" stock concept. The basic relationship to be satisfied by these accounts are:

\[
\text{total number of posts} = \text{filled posts} + \text{vacant posts}
\]

27. In previous discussions about an LÂS, a fair amount has been said about gross changes from one closing date to the next (paragraph 6(e)). Making sure that all possible forms of such changes have been identified and estimated, given the periodicity and reference periods, is one type of "accounting relationship" that is necessary within the LÂS. Such "change accounts" must account for, and therefore define, "births" and "deaths" of "posts" and "persons" respectively, in addition to the transfer from one activity situation to another. There is no problem in principle in defining "activity transfers" or "births" and "deaths" of persons (where the latter would cover migrants as well as real deaths and entries and exits to/from any lower and upper age limits), and such data will often be available and of interest. More problematic are the "status transfers", "births" and "deaths" of "posts", as they can only be defined in the context of actual search activities (i.e. "vacant posts") or observed "jobs" (i.e. "filled posts"). Most employers are likely to find it difficult to give information about activity changes of "posts", i.e. about whether a newly hired person has entered into a formerly "vacant post" or into a "new post", and whether the departure of a person has created a "vacant post" or has led to the loss ("death") of a "post". The latter distinction must be tied to a decision to replace the departed worker.

28. A complete "time accounting" system has been outlined which can serve as a basis for defining a third type of LÂS "accounting relationships" which will make use of the convention that "time used for work" by "employed persons" must be "absorbed" by "filled posts". Tying the two sides together are the "jobs", which can link information from employers and workers about "hours paid for", "hours actually worked" and "paid hours absent from work". To ensure equivalent coverage of the data sources used to estimate the two "sides" will, however, pose a major practical problem. The accounting for "hours actually worked" should be developed in a way which is consistent with the conventions developed for time use studies, which account for the total use of time over a short reference period, as well as with the development of yearly estimates of "hours actually worked" linked to the SNA. The basic relationship to be satisfied by these accounts are:

19190/conv.
total number of hours actually worked by employed persons = total hours paid for
- total hours of paid absence and resting time
+ total hours of unpaid work
= total hours used by filled posts.

29. The monetary accounts of the LAS should link together the income to employed persons and the cost of employing them. This is conceptually much easier to do for income and cost of "paid employment" (e.g. work of "employees") than for "self-employment". For the former the basic relationship to be satisfied by these accounts are:

total income from "paid employment" +/- various components = total cost of paid labour.

The starting point for further specifications should be the ICLS resolutions and SNA conventions regarding the corresponding income and cost concepts (Chapter III of this report).

Concluding remarks and points for discussion

30. A number of issues have not been addressed above, or have been addressed only in summary fashion. This is deliberate, because the purpose of this chapter is to spell out those elements of an LAS which seem to be basic and on which some type of agreement seems to have been reached in international discussions. Some of the neglected issues, such as possible solutions to estimation problems, would seem to be so specific to national data situations and user priorities that international exchange of information rather than agreement would seem most useful. On other issues, such as the definition of a core set of accounts for "stocks", "changes" and "flows" and the related links to the SNA and FSDS, it would seem useful to develop international guidelines. One may also like to reach agreement on certain extensions of the LAS framework outlined in this chapter. For example, "persons in training or education" is a so far unspecified sub-set of "persons outside the labour force". For manpower and educational planning it would probably be an advantage if the LAS specified that group as an activity status category. This can most easily be done by making a distinction between "persons in education" and "other persons outside the labour force", without creating parallels with "jobs" for the educational system - even though the latter solution would logically be neater and also necessary if we would like to link statistics on institutions and expenditures as well as on "hours of education or training" to statistics on persons undertaking education and training activities. With the simplest solution there will be conflicting interests among users about how to treat the persons who are both employed and undertaking education during the reference period.

31. The ILO Bureau of Statistics will welcome a presentation of national experiences relevant to the discussion in this chapter as well as the views of the participants at the 15th ICLS on the ideas outlined above. It is hoped that the Conference will give guidance on the type of work in this area which the Bureau of Statistics should try to give priority. In doing so the Conference may want to make sure that the following questions are addressed in the discussion:

1919o/conv.
(1) Is it useful to see "persons" and "posts" as the basic units in an LAS, with "jobs" as the main means of linking them (paragraphs 8-15)?

(2) Is it useful to make a distinction between "activity situations" and "distribution variables", in particular for the definition of LAS-relevant "changes"? Are the suggested "activity situations" appropriate? Is further work on "vacant" posts required (paragraphs 10, 11 and 27)?

(3) What type of further work is needed on "hours actually worked", "hours paid for" and the related links to the SNA (paragraph 16)?

(4) What are the most important quantities to be measured in the LAS? Should further work be carried out on the use of the different measurement methods for the amount of productive services rendered by employed persons? What are the problems of coordination with the SNA with respect to the measurement of the value of productive services (paragraphs 17-21)?

(5) What should be added to the list of distribution variables given in table 2? What should be deleted or can be given given low priority (paragraphs 22-23)?

(6) What type of further work is needed on the "accounting relationships" related to persons, posts, hours worked, hours paid for, income from employment and labour costs (paragraphs 24-29)?

(7) What should be the priorities in international work with the LAS:

- further work on the accounting relationships for the total population, the labour force and its components and the corresponding relationships with the SNA and/or FSDS;

- further work to achieve consistency between total employment, hours worked and production as a basis for statistics on productivity, as well as links to the relevant parts of the SNA;

- further work to achieve consistency between employment and income estimates, as well as links to the relevant parts of the SNA;

- further work on the accounting relationships for gross changes between one reference period and another;

- and/or other aspects (paragraphs 4-6).

Notes


2 EUROSTAT: "Seminar on the measurement of employment and unemployment", in EUROSTAT news, special number 1982.

labour utilization: Theory and measurement (University of Groningen, Groningen, 1983).

4 A. Harildstad: "Timewerks-og sysselsettingstall i nasjonalregnskapet" (Total hours of work and employment in the national accounts), in Økonomiske analyser (Central Bureau of Statistics of Norway), No. 7-1989.


6 Neubourg, op. cit.

7 These recommendations are further discussed in ILO: Surveys of economically active population, employment, unemployment and underemployment: An ILO manual on concepts and methods (Geneva, 1990).


12 idem. The development of integrated databases for social, economic and demographic statistics, op. cit. As "jobs" represent the link between "filled posts" and "employed persons", there is no need to have separate accounts for "jobs", even though they play an important conceptual role in the LAS. Also in this respect they can be seen as the parallel of "transactions" in the SNA.


1919o/conv.
ANNEX 1

Databases

LABORSTA: ILO database on labour statistics covering: economically active population (data since 1945), employment, unemployment, hours of work, wages, labour cost, consumer prices, occupational injuries and industrial disputes (data since 1969).

LABSSM: Textual database containing description of Sources and Methods. Currently available: Consumer price indices (Volume 1); Employment, wages, hours of work, establishment surveys (Volume 2); Economically active population, employment, unemployment, hours of work, household surveys (Volume 3); Employment, unemployment, wages, hours of work, administrative records (Volume 4); Total and economically active population, employment and unemployment, population censuses (Volume 5).

LABOCT: Database on ILO October Inquiry on wages and hours of work relating to 159 occupations in 49 industry groups and retail prices of 93 food items (wages and hours of work data since 1983, retail prices since 1985).

LABPROJ: ILO database on estimates and projections of the economically active population by sex, age group and industry, for all countries and territories with a population of over 300,000 in 1980. Database covers time span 1950-2025, with annual estimates for the years 1985-95 and every five years for the periods 1950-85 and 1995-2025.

WDEAP: World Demographic Estimates and Projections. This database is the result of a collective effort of several United Nations agencies; it contains estimates and projections of the total and urban-rural population, households (UN), economically active population (ILO), economically active population in agriculture (FAO), and school enrolment rates (UNESCO). WDEAP provides five-yearly estimates and projections for the period 1950-2025 for nearly 200 countries, areas and territories.


LABISCO: Database for occupational titles coded according to ISCO-88 and ISCO-68, corresponding to the index as published in ISCO-88. Available in English, French and Spanish.

LABCOMP: Database on ILO-comparable annual average estimates, currently covers 26 countries and contains comparable data for the time span 1981-90 on the total and civilian labour force, total employment by age group and industry (ISIC-68 major divisions), civilian employment and unemployment by age group. Except for industry data, all estimates are available by sex.

SEGREGAT: Database on employment (or labour force) by detailed occupational groups and sex, obtained from population censuses or labour force surveys for years near to 1970, 1980 and 1990. Over 30 countries covered.

1919o/conv.
ABS: Database on absence from work; contains information on number of persons absent and time of absence, classified by reason of absence. Data are obtained from national labour force surveys for the 1980s.

LABMINW: A special database on legal minimum wages was established in response to needs expressed by users both within and outside the ILO. It was developed mainly on the basis of information available in national publications; it covers at present some 35 countries and contains both wage rates, generally from 1980 onwards, and methodological notes on source, coverage, etc.

HIES: This new database created in 1992 on household income and expenditure statistics provides the main results of the most recent household income and expenditure surveys or similar household surveys conducted in various countries, areas and territories. The database contains five basic tables: Household income by source; Characteristics of household by income or expenditure classes; Distribution of consumption expenditure by income or expenditure classes; Distribution of household by expenditure classes and household size; and Distribution of households by income class and household size.
ILO statistical publications of interest (since 1987)


Current international recommendations on labour statistics (Geneva, 1988).


Articles published in the Bulletin of Labour Statistics (since 1987)

1987-1: Reduction of errors in a consumer price index.
1987-2: Prices indices below the basic aggregation level.
1987-3: The concept and boundary of economic activity for the measurement of the economically active population. The treatment of finance-related commodities in a consumer price index.
1988-1: Treatment of seasonal fresh fruit and vegetables in CPI.
1988-3: ILO comparable annual employment and unemployment estimates.
1988-4: Observation and recall method for collecting data on women's activities - An experiment in India.
1989-1: International standards on the measurement of economic activity, employment, unemployment and underemployment.
1989-2: Mobility in the labour market in Cyprus.
1989-4: Valuing domestic activities.
1990-2: What questions should be asked in household surveys to define and quantify informal employment? (Summary.) Informal sector studies: International experience and suggestions for Tanzania. Methodology of labour force surveys in 70 countries.
1990-3: On measuring absence from work.
1990-4: ILO-comparable annual employment and unemployment estimates: Results and short methodological presentation.
1991-2: The measurement of the level of education of the economically active population in household/labour force surveys (summary).

1919o/conv.
1991-3: The unemployed in administrative statistics and in the labour force survey in Finland. Registered unemployed and labour force survey unemployed: Comments and Danish experiences.


1992-1: Measuring the demand for labour.

Sources and Methods