

# RESOLUTION CONCERNING THE MEASUREMENT OF WORKING TIME

[DRAFT]

The Eighteenth International Conference of Labour Statisticians,

Having reviewed the Resolution Concerning Statistics of Hours of Work adopted by the Tenth International Conference of Labour Statisticians (October 1962), the relevant texts of the Resolution Concerning the Measurement of Employment-related Income and of the Resolution Concerning Statistics of Occupational Injuries, both adopted by the Sixteenth International Conference of Labour Statisticians (October 1998),

Recalling the requirements of the Labour Statistics Convention, 1985 (No. 160), and the accompanying Labour Statistics Recommendation, 1985 (No. 170),

Recognizing the need to revise the existing standard on Statistics of Hours of Work to reflect the working time of persons in all sectors of the economy and in all forms of productive activity,

Considering the importance of having guidelines on a larger number of measures than previously defined at the international level and on measurement issues, coherent with other international standards, thereby improving consistency and international comparability of the statistics, and

Acknowledging that the relevance of the various measures of working time in a given country depends on the nature of its work force, labour markets and user needs, and so the decision to implement any of these will be determined largely by national circumstances,

Adopts this ... day of ... 2008 the following Resolution in substitution for the Resolution Concerning Statistics of Hours of Work (1962) and paragraphs 46 to 48 of the Resolution Concerning the Measurement of Employment-related Income (1998).

## **Objectives**

1. Each country should aim to develop a comprehensive system of statistics of working time that can adequately account for labour inputs into all productive activities of all persons male and female, and complement the statistics of the economically active population and of the demand for labour in production. This system would aid the examination and monitoring of working conditions for all population groups and in formal and informal paid and self-employment, including issues relating to health, safety and gender equity. The system should also serve to produce indicators useful for economic and social analysis as well as for the design, implementation, monitoring and evaluation of economic and social policies, including labour market policies and policies aimed at a healthy balance between private and working life.
2. Statistics on working time should be developed in line with this Resolution to the extent possible, in order to promote international comparability.

## **Scope**

3. *Working time* covers both concepts connected to the number of hours that persons

spend towards productive activities that is the *Working hours* and the arrangement of these working hours over time as reflected in *Working time arrangements*. Working hour concepts and working time arrangements are defined in paragraphs 9 to 29 below.

4. Working time may comprise only the working hours in employment as currently defined in the Resolution Concerning Statistics of the Economically Active Population, Employment, Unemployment and Underemployment, adopted by the Thirteenth International Conference of Labour Statisticians (October 1982). In that definition of employment, productive activities are those defined to fall within the production boundary of the United Nations System of National Accounts. This concept of working time generally serves the purposes for which national production accounts are compiled. It also extends to the supply of labour in relation to the same productive activities as in employment and is useful for labour market analysis.

5. Working time may also refer to the working hours devoted to productive activities that are outside the production boundary of the System of National Accounts but are within its “general production boundary”. These activities comprise production of services for own final consumption within households, such as cleaning, cooking, repairs, transporting and care of dependent persons, as well as volunteer work producing services for households and non-profit institutions not operating in the market. The working hours devoted to these productive activities are hereafter referred to as working hours within “unpaid services”. It is recognised that this application of working time is required for a complete understanding of the labour market, for other social policies, and for the production of satellite accounts on household production and volunteer work.

6. Working time pertains to all productive activities performed in jobs, which may be carried out in a variety of (economic) units including households. A job is defined as a set of tasks and duties executed by one person as a contribution to production according to the International Standard Classification of Occupations. Jobs occur in paid and self-employment as defined in the International Classification of Status in Employment, and within unpaid services. In this Resolution, the job constitutes the basic unit for measurement, consistent with the principles for applying the international statistical classifications by industry, occupation and status in employment when producing statistics on employment.

7. Working time concepts may apply differently to jobs in paid and self-employment and to jobs within unpaid services. Working time may also refer to a filled or vacant job, or to a job sought; all are useful in their respective context. Information on working time in jobs is collected from persons and economic units. In some cases the economic unit, the job and the working person are the same entity. All three units, namely persons, jobs and economic units may be used as units of analysis for working time.

8. Working time can be measured for short reference periods, such as one day or one week, and for long reference periods, such as one month or one year. As indicated in paragraphs 4 and 5, it can be measured for activities both within the SNA production boundary and its general production boundary. All working time concepts and definitions in this Resolution (working hours and working time arrangements) apply to activities, irrespective of the legality of the activity, the contractual agreement or the age of the persons performing them.

## **Concepts and definitions**

### ***Hours actually worked***

9. The key concept and measure of working hours:

(1) *Hours actually worked* is the time persons spend in the performance of activities that contribute to the production of goods and services during a specified reference period.

(2) *Hours actually worked* occur under varying work and compensation arrangements, at all types of location. Within the SNA production boundary *Hours actually worked* applies to all jobs in paid and self-employment as defined in the International Classification of Status in Employment; for the activities specific to unpaid services, *Hours actually worked* applies to all jobs performed.

10. *Hours actually worked* **include**:

(1) “Direct hours” spent on the tasks and duties of the job. In unpaid service activities the direct hours will include time spent on food preparation, shopping, transporting or awaiting persons under one’s charge, coaching, etc.;

(2) “Related hours” (when these are not the “direct hours” in the job) to maintain, facilitate or enhance productive activities, such as time spent:

- a) To clean or care for, maintain, repair or prepare, design or administer instruments, processes, procedures or work location, and changing time;
- b) To purchase raw or basic materials, transporting or itinerant activities (bringing products to/from market or source, door-to door vending);
- c) Awaiting customers or business as part of working time arrangements and/or explicitly paid for;
- d) On-call duty at the work location (as in health and essential services) and away from the work location (as at home) when persons’ activities or movements are restricted;
- e) Connected to travel between work places, to reach field projects, fishing areas, assignments, meetings or clients, except during natural rest periods/personal repose;
- f) On training or skills enhancement for the economic unit, in or outside the work location (for persons in paid employment this applies if the training is provided directly or indirectly by the employer);

“Related hours” in unpaid services, in addition to the above, cover:

- g) Travel time connected to household charges or care tasks.

(3) “In-between time” that is unavoidable or inherent to the nature of the job or work process, spent on short stand-by for technical, economic or material reasons (such as work or machinery breakdown or accident, power or Internet access, lack of supplies) when persons continue to be available for work.

(4) “Rest periods” allowed for short rest or refreshment, including for tea, coffee, or prayer, generally authorised by custom or contract according to national circumstances.

11. Hours actually worked **exclude**:

(1) Time not worked even if paid for, such as annual leave, public holiday, sick leave, parental (maternity and paternity) leave, other absence or leave for personal or family reason or civic duty.

(2) Commuting time between work and home when no productive activities are performed, even if paid for by the employer.

(3) Time spent on training and skills for productive activities that can be referred to as education leave, when not primarily intended for the economic unit, even if authorised, paid for or provided by the employer in the case of paid employment.

(4) Longer breaks distinguished from short rest periods, such as for meals.

***Hours paid for***

12. (1) *Hours paid for* are all the hours for which persons in paid employment have received payment from their employer during a specified reference period, regardless of whether the hours were actually worked or not.

(2) *Hours paid for* may include time not worked due to leave entitlement periods such as vacation, holidays and certain absences related to administrative or regulatory practices for remuneration of hours in establishments, which may not directly correspond to productive activities.

(3) *Hours paid for* exclude *Absence hours* that are paid not by the employer but exclusively by government or through another national funding or social agency.

***Normal hours of work***

13. (1) *Normal hours of work* are the hours fixed by laws and regulations, collective agreements or arbitral awards to be performed in paid employment jobs over a specified reference period.

(2) *Normal hours of work* for persons in different groups of paid employment jobs may vary depending on the occupation or industry.

(3) *Normal hours of work* that are defined for paid employment may also apply to persons outside of paid employment such as the self-employed or persons in unpaid services, because they practice the same hours.

14. For countries where *Normal hours of work* is a widely used concept, it may serve to define full-time.

15. *Normal hours of work* refer to collective prevailing working hours in contrast to working hours expected by employment contract or practice to be performed in an individual job.

### ***Contractual hours of work***

16. (1) *Contractual hours of work* are the hours that persons in paid employment are expected to spend on productive activities as predetermined by individual (explicit or implicit) employment contract.

(2) The number of *Contractual hours of work* in a job may vary depending on the organisation and scheduling of the job and the length of the period to which it refers.

(3) *Contractual hours of work* may be equivalent to the prevailing *Normal hours of work*.

17. *Contractual hours of work* based on individual employment contractual relationships are distinct from the measure of collective significance *Normal hours of work*.

### ***Usual hours of work***

18. (1) *Usual hours of work* per week (or per another short period) are the typical working hours each week (plus any irregular *absence* less any irregular *overtime*) determined as the modal (or median when the mode does not exist) number over a longer observation period such as a month, quarter, season or year that comprises the reference period used to determine the employment or to measure unpaid services.

(2) *Usual hours of work* apply to all jobs and in particular to jobs where employment contracts stating *contractual hours* (the expected number of working hours) are uncommon or do not exist, such as self-employed jobs and some jobs in unpaid services.

19. (1) When the typical working hours each week vary in a certain pattern or from week to week, *Usual hours of work* per week are defined as the mean number of *hours actually worked* over the weeks during a past period, sufficiently long to cover most/all typical situations.

(2) *Usual hours of work* per week in cases of temporary absence from work of longer duration, are the typical number of working hours per week prior to the long absence.

(3) To determine *Usual hours of work* in the context of employment for a short reference period such as one week, this reference period should be included provided that persons were not absent from work, having zero hours.

### ***Overtime hours of work***

20. *Overtime hours of work* are paid or unpaid.

(1) *Paid overtime hours of work* are the hours that are generally specified or considered to be extra or overtime as predetermined in the employment contract or in excess of full-time hours in laws, regulations or agreements, and that are paid at a special rate.

(2) *Paid overtime hours* may be paid at the same rates as *Normal hours*, paid at higher rates or compensated with time off.

21. (1) *Actual overtime hours* in paid jobs are the *hours actually worked* in excess of *contractual* or *usual hours of work* during a specified reference period and, where relevant, the hours defined as overtime in an employment contract or considered regular overtime to the number of *usual hours of work* performed.

22. (2) *Overtime hours* in self-employment or in unpaid services are hours longer than the number of *usual hours of work* or hours considered *normal hours* (when *normal hours* have not been defined) in comparable paid employment jobs.

23. In relation to *usual* or *contractual hours* and depending on national circumstances or the flexible organisation and scheduling of jobs, additional working hours performed during the reference period might be described as overtime. The variations in working hours that produce additional hours due to flexi-time or to modifications permitted by arrangements of working time within rotation periods are not considered *Overtime hours of work*.

### ***Absence from work hours***

24. (1) *Absence from work hours* is the time during a specified reference period when persons not at work were expected to be, according to their *Contractual hours of work* or to their *Usual hours of work* or to relevant laws, regulations or agreements that are applicable.

(2) *Absence from work hours* applies to persons in self-employment jobs and in unpaid services in relation to their *Usual hours of work*.

25. *Absence from work hours* are limited to absences due to:

(1) Personal reasons, such as:

(i) Compensation for overtime hours (distinct from flexitime off), (ii) vacation, (iii) own illness or occupational injury, (iv) education leave, (v) to care for others, (vi) other personal absence (including compulsory military or civilian service);

(2) Economic units, such as:

(i) Technical or economic reasons affecting the employer or the place of work, (as breakdown, bad weather), (ii) industrial relations processes;

(3) Institutional factors, such as:

(i) Public holiday, (ii) other.

26. (1) *Absence from work hours* for periods of rest such as holiday, vacation or compensatory leave for overtime hours should be distinguished from *Absence from work hours* due to illness, strike or lock-out, work breakdown, etc.

27. For all persons and jobs, when periods of time not worked or reduced hours during the reference period in relation to usual or contractual hours occur as variations of working time due to shift-work or flexitime, they are to be distinguished from *Absence from work hours*.

### ***Working time arrangements***

28. (1) *Working time arrangements* describe the organisation of work and non-work periods that reflects combinations of a set of characteristics referring to the length, variation and scheduling (including flexibility) of working hours in jobs during a specified reference day, week or longer periods.

(2) *Working time arrangements* may be formalized explicitly in employment

contracts or implicitly in an informal understanding, such as an implied reference to conventional norms, collective agreements, rules or customs of establishments or the community.

(3) *Working time arrangements* apply to persons in self-employment and in unpaid services who may decide their own *Working time arrangement* because of contractual obligations with customers including fixed opening hours, other work requirements or personal and household preferences.

29. *Working time arrangements* may be determined or labelled differently according to national circumstances, practice and/or industrial relations processes. A descriptive list of types of *working time arrangement* is provided in the Annex that may be updated more frequently than the Resolution.

### ***Methods of data collection***

30. Statistical information about working hours and working time arrangements can be collected through statistical surveys and censuses including the population census or through access to administrative registers. The reporting unit in statistical surveys may be persons, households, establishments or enterprises. For administrative registers the primary reporting unit will generally be records from establishments.

31. Implications for the choice of data collection methods will arise from the availability of statistical sources, the influence of national policy issues, and possibly the production boundary applied to operationalize the measurement of working time. Comprehensive measurement of *Absence from work* requires specific approaches regarding reference period, survey question sequences and adjustments.

32. As collection instruments, household and establishment based surveys and administrative registers all have specific strengths and weaknesses regarding individual working time concepts, which may vary also according to national circumstances. For measurement purposes each working time concept may be related more inherently to one or another of the different statistical sources used in countries. To meet user requirements regarding working time statistics and to reduce response burden and costs, use of a combination of different, available data sources is preferable.

33. Countries should aim at consistency between the different statistics on working time, and with other labour market statistics, as well as coherence with the general statistical system. One implication of this objective concerns the availability of data for some working time concepts for different units: job, person and economic unit; for short and long reference periods; and with different coverage such as the resident population or domestic economic units. For labour market analysis of different working time concepts, the statistics must be cross-classified and connected to the characteristics of persons (sex, age, level of education, etc.). As a measure of labour input, working time statistics should use industry and sector classifications consistent with production statistics.

34. In principle, the basic unit of data collection for statistics of working time is the job although it is important that statistics of both jobs and persons be available.

35. The reference period often implemented for working time in relation to the *currently active population* implies use of a short reference period of one day or one week measured in terms of hours, in contrast to the *usually active population* and long reference period and measurement in units of weeks (or possibly days). For national account and production

statistics generally, a measure of *volume of work* is required for a period longer than one week, such as a month, quarter or year, and includes all persons employed and all working hours performed as in the concept of the currently active population.

### ***Household-based surveys***

36. Household surveys are well suited to collect most working time concepts for a short reference period such as a day or a week, for persons in all types of employment, for the population as a whole and for all jobs, including in informal employment and unpaid services. They may also be used for a longer reference period, such as a month or a year even though there are added difficulties to capture concepts in particular where the value normally varies considerably over the period, such as for *hours actually worked*. Their use in conjunction with a short reference period is preferable, where possible.

37. To measure labour input in production, household surveys normally do not meet exactly the coverage of national account and production statistics for all working hours performed in domestic economic units – comprising persons working in the country but not resident in it or living in resident institutional households habitually excluded from the scope of household-based surveys. An important concern regarding *hours actually worked* from household surveys used for national accounts is the quality of industry and sector classifications and coding.

38. A two step approach can combine regular (monthly or quarterly) surveys and a limited number of questions to provide basic estimates of working time in a timely manner, and more comprehensive surveys carried out less frequently. For persons with a *Working time arrangement* where the *Contractual* or *Usual hours of work* are not the same each week, it is important to collect data on both the median number per week and the number for the reference week. The average figure is relevant when describing the number of hours supplied for production. The number of hours in the reference week is relevant for identifying non-contractual/non-regular overtime and absence in the reference week.

39. In household-based surveys, *Absence from work hours* measured directly will give a broader description of absences than compiling the difference between *Contractual* or *Usual hours of work* and *Hours actually worked*. For users of absence statistics, a short reference period of one week may lead to under-estimation therefore be unsatisfactory. Questions on the duration of different absence reasons should improve the results.

40. Information on *Hours actually worked* is particularly prone to measurement errors due to recall problems of such small units. To capture seasonal variation and calendar effects on hours actually worked, the optimal solution, where possible, is to spread the sample over the year, rather than expanding the reference period, as the short reference period will minimise such measurement error.

### ***Time use surveys***

41. Diary-based time use surveys present advantages for capturing detailed information on all productive activities performed within a short period. When all activities are recorded they can provide a solid basis to collect information defining *Hours actually worked* as well as on some aspects of *Working time arrangements* and are best suited to provide good quality measures of *Absence from work hours*.

42. For persons in employment, the time diary collection method gives fewer

measurement errors for all *Hours actually worked*, in particular for those persons (often women) who tend to be omitted from the conventional employment count because their working hours may be considered atypical, highly irregular, less regulated or interchangeable during a 24-hour period with activities performed close to home, such as work in agriculture, and activities in the home that fall outside the labour force framework.

43. While time use surveys may collect information on working hours beyond employment (in unpaid service work), some of the components may be collected through specialised labour force surveys or modules. To facilitate measurement, new question sequences should be formulated separately for the self-employed and for problematic components of working time, such as overtime, work at home, short breaks or absence from work. Such questions can also indirectly improve the measures of working hours for certain groups of persons within employment.

44. There may be limitations to drawing on time use surveys as a single source for working time statistics, due to non-annual or irregular frequency, small sample size, high response burden and cost of data compilation. They are important for comparing and assessing data quality of hours actually worked from other household surveys, as well as for improving those survey questionnaires and for adjusting data for certain population groups.

45. Although conceptually more precise measures of working time may be obtained from the labour force or special household-based survey modules, the population census that has the advantage of providing estimates for small geographic areas and for small population groups may incorporate a single question on *Hours actually worked* or on *Contractual* or *Usual hours of work* during the reference period, for the main job or economic activity. Where that is the only available data source, its inclusion should be envisaged.

### ***Establishment-based surveys***

46. Establishment surveys are an appropriate method to obtain available data of good quality relating mainly to working time concepts linked to payments, to employment contracts or to some formalised working time arrangements. These are generally *Hours paid for*, including paid overtime and *Contractual hours*; also *Absence from work hours* not paid for or registered for other administrative purposes. Working time data from establishment surveys may also suffer from lack of information on sex, age, level of education or other variables that employers do not require for themselves.

47. Establishment survey working time data should be reported for jobs or as averages for groups of jobs at the economic unit, rather than for persons. For short-term statistics data on averages over groups of jobs will usually be acceptable.

48. *Contractual hours of work* may not be recorded by the establishment as exact hours, but as a per cent of a full-time job or in more aggregate groups. The establishment will usually know the number of full-time hours in different jobs, or the *Normal hours of work*. The questionnaire should give guidance on how to calculate contractual hours.

49. Anticipating that all *contractual hours* are paid if performed, *hours paid for* represent the number of *contractual hours*, plus *paid overtime hours* not in the contract, minus *unpaid absence hours*. Each element should be included in the questionnaire and reported, as a measurement quality check and so that they may be calculated by the producers of the statistics.

50. Establishments unable to report working hours for all groups of employees, such as managerial staff or non-hourly paid persons, should indicate this when providing data. These level figures will be biased but can usefully indicate changes.

51. Establishment surveys will not be able to capture working hours for some of the more 'atypical' forms of employment, such as casual workers. For full-population coverage, estimates for hours actually worked by persons outside the scope may come from household-based statistics and/or relevant administrative statistics.

### ***Administrative registers***

52. Administrative registers containing working time information are useful in particular for concepts linked to individuals, such as *Contractual hours*, and to *Normal hours of work* specified in collective agreements or legislation. Registers recording about filled jobs may contain more working time information than job vacancies and jobs searched for. To achieve the most efficient use of administrative information on working time for statistical purposes, coordination between the statistical and administrative authorities is strongly recommended.

53. The information on working time concepts reported to registers will usually be designed to serve the purpose of the agency responsible for the register, so that it is even more important that checks on data quality be made in the statistical agency.

54. Administrative register-based reports from establishments will usually be on contractual hours. The contractual hours may only be specified in groups of hours, as a per cent of *Normal hours of work* for full time, or as full-time/part-time units instead of number of hours. Pensions and social benefit agencies register contributions paid into the system that may reflect *normal hours of work* or *hours paid for* out of the system, or hours of certain absences, such as due to own illness. Income and tax registers generally do not contain information on working time concepts as such, although data on income from employment and income from benefits can be used in combination with survey data to calculate hours paid for and absence hours. Data from administrative records can also be used to verify and correct or adjust data from establishment or household-based surveys.

### ***Compiled measures***

#### ***Total hours actually worked***

55. (1) *Total hours actually worked* is the aggregate number of *Hours actually worked* by all persons in all jobs during a specified, short or long reference period. This derived measure is also known as the volume of work or labour input.

56. (1) In household-based surveys hours actually worked can be measured for a long reference period by conducting the survey on a weekly basis for all the weeks in the reference period, a continuous survey. Adding weekly weighted estimates of hours actually worked adjusted for weeks that include days outside the reference period, where relevant, produces total hours actually worked for the longer reference period.

(2) To target the required reference period implies, for non-continuous surveys, extrapolation to those periods within the reference period not directly covered by the survey. For surveys carried out only a few times during a long reference period and, if the reference week is chosen to avoid special weeks (of holidays etc.) the extrapolation should take account of possible calendar effects, regulations about working time specified in legislation, collective agreements and arbitration awards, as well as working hour data from other statistical sources.

(3) Household-based statistics need to be supplemented by estimates of *hours actually worked* by employed persons living abroad but working in domestic units. The hours of employed persons living in the country working in foreign units need to be excluded. If unpaid service work is included, estimates of working hours spent on such work need to be

added.

57. (1) For statistics based on establishment surveys or administrative registers, compiling *total hours actually worked* will generally start from *Hours paid for* or *Contractual* or *Usual hours of work* that must be transformed into *Hours actually worked*.

(2) To target the statistical concept, the computations will depend on available data elements:

(a)  $Total\ hours\ actually\ worked = Hours\ paid\ for + unpaid\ hours - Absence\ hours\ paid\ for$

(b)  $Total\ hours\ actually\ worked = Contractual\ hours + non-contractual\ Overtime\ hour - Absence\ hours$

(c)  $Total\ hours\ actually\ worked = Usual\ hours\ of\ work + irregular\ Overtime\ hours - Absence\ hours$

(3) Where the register or survey reference period is shorter than required, data from repeated observations (continuous collection) should be added if that is an option.

(4) If the data sources do not cover the required long reference period, extrapolation for any missing periods is required, and in principle for all elements used to derive *hours actually worked* from *paid* or *contractual hours*.

(5) To reach full population coverage, establishment-based statistics will need to be supplemented by estimates from out-of-scope units of the *hours actually worked* by employees in small establishments, agricultural or informal units, units within unpaid services, and of all the self-employed. In estimating totals for these units, it should be taken into account that their levels of working hours may be systematically different from survey units.

58. Limitations regarding the quality of the *hours actually worked* measure and more general quality aspects of the statistical source need to be accounted for and corrected where possible. The general limitations that concern working hour concepts will in principle also apply to other types of data from registers and establishment surveys, such as production data. To produce a coherent data set for the national accounts, where relevant, use of the same methods to overcome such limitations will be preferable.

### ***Annual hours actually worked***

59. (1) Annual hours actually worked are the average hours actually worked per [unit] in an annual period, that may be the calendar year. They are the input measure of labour into production and should be compiled in line with this Resolution. Since the methods are generally complicated, precise information about the method selected is particularly important.

60. The influence of factors, such as size of the population may be taken into account by compiling averages, depending on the available denominator, such as:

(1) The average number of employed persons per week, over the year. Use of total number of persons for whom the hours were counted as the denominator should be consistent with the numerator. If necessary, extrapolations to cover all weeks should be made and indicated.

(2) The average number of jobs over the year. Data on jobs will be more readily available for countries using establishment surveys as the basis. Jobs will give higher numbers

for the denominator than number of persons employed if calculated as weekly averages. Data from establishment surveys obtained for different reference periods disturb comparability if they cannot be converted to a common reference period.

(3) The average number of inhabitants in the population over the year. This figure is generally available in countries and differences in reference dates are not as important as for employment statistics for persons or jobs.

61. If the denominator is persons employed, the rate will be influenced by the number of *Contractual* or *Usual hours of work*, short and long-term *Absence hours* and *Overtime hours* among the average number of persons in employment per week. If using jobs as the denominator, as all jobs count with the same weight the rate will be influenced by the number of full and part-time jobs in the economy; the distinctive numbers of *contractual* versus *usual hours of work*; and short and long-term *absences* and *overtime hours* in those jobs. The choice of denominator depends on data availability, the analytical purpose and comparability between countries. All of these factors require assessment by the authority producing or publishing the statistics.

62. The complexity in achieving the number of annual hours actually worked can affect the quality of estimates and therefore also their international comparability, especially for level estimates. As changes in trends may be more comparable, countries should consider producing the data as indexes. It is therefore essential that any results be accompanied by precise descriptions of the statistical sources and methods of calculation used.

### ***Tabulation of data***

63. Statistics on working time for labour productivity need to be classified by industry for the computation of sector productivity. Statistics on working time for labour market analysis should be classified by sex; and to the extent possible by other significant demographic, social and economic characteristics important for users, such as age and level of education.

64. Classification by marital status, presence of dependent or accompanying persons (that is young children, the elderly and others requiring care) and by working hours of other/all household members, are essential to bring to light for public policy, gender-based inequalities as well as reconciliation of work and family life. Appropriate cross-classifications including regional distribution should be made with due regard for statistical significance and the need for confidentiality.

65. For cross-classifications by industry, occupation, institutional sector, status in employment, and informal sector or informal employment where relevant, the statistics may refer to the main job. This is understood to be the job having the longest average *Contractual* or *Usual hours of work*. Determination of the main job for persons temporarily absent from one job but at work in another job, and for the unemployed will need to be systematic in order to avoid major problems of comparisons with other labour force statistics.

66. Statistics on number of working hours for the purpose of describing all working hours should include the hours in all jobs held. To avoid double counting of the hours actually worked of persons performing more than one job simultaneously, and whether the “direct hours” produce two separate outputs or not, the working hours should be counted for the main job.

67. Working time measures using the job as the statistical unit for working hour concepts can be aggregated over jobs, persons, households and establishments. Working time

arrangements cannot be aggregated in the same way. Statistical units can be described according to the different characteristics of types of working time arrangement or by group of specific or combinations of arrangements.

68. For more comprehensive information on working time arrangements, statistics could relate to the number of jobs and/or establishments by type of arrangement as well as to the number of persons experiencing the various characteristics of arrangements; minimally for the main job in the case of multiple job holders. Countries may find it useful to provide statistics on other aspects or variables of national working time arrangements suitable for labour market analysis or to distinguish differences between arrangements in paid and self-employment settings or within unpaid services, such as the nature of their stipulation, the control of individuals and employers over them, or the type of location where they occur.

### ***International reporting***

69. To provide a fuller description of the input of labour into production, in addition to working hours by industry, institutional sector or status in employment, countries should make efforts to report working time statistics by level of education, occupation, and type of working time arrangement to indicate the link between labour composition and hours actually worked and to give insight into their organisation in connection with the production process.

70. For purposes of international comparisons, it is essential that countries measuring working time for activities within the SNA *system* boundary and for unpaid services should compile and report the resulting statistics separately or in such a way that a distinction is possible between them, as well as according to the minimal classification variables in paragraph 63 above. Where differences in total annual hours actually worked are significant between groups of persons, categories of workers or according to different working time arrangements, it is important that the statistics be presented separately.

71. For international reporting purposes the most commonly used denominator for annual hours actually worked will be the average number of hours actually worked per week of persons in employment. Countries should endeavour to report at least this one national estimate of annual hours.

72. International comparisons should also be made for working hour concepts that are more easily compiled and compared between countries, than annual hours actually worked. Hours actually worked per week, and contractual and usual hours of work are more readily comparable using data sets based on the same type of collection method, coverage of sectors, industries and groups of employed persons.

73. The distribution of working time statistics and number of hours actually worked should be presented by detailed hour bands, to the extent possible and depending on national thresholds and requirements. For international reporting purposes and to facilitate international comparisons, countries should be able at a minimum to provide statistics for a short reference period, for hour distributions starting with zero hours, for five-hour bands from one to five hours, six to ten hours, etc..., up to and including, 61 hours or more.

74. Statistics on absence from work should be classified according to reason for absence and by main reason and all reasons, according to type of absence as recommended in this Resolution in order to improve their international comparability.

75. Where national working time concepts and definitions differ from this Resolution,

inquiries should be undertaken periodically in order to determine and document the differences between the resulting statistics and those that would have been obtained if applying these international definitions. In particular, where the statistics on working hours collected correspond to the concept of *Hours paid for*, inquiries should be made to determine for each industry the ratio between the national concept and the number of *Hours actually worked* as defined in this Resolution.

76. In order to enhance comparability and transparency of any statistics reported internationally, countries are urged to compile and disseminate requisite information on their national concepts, definitions and methodology and any departures from these international standards. It is, however, recommended that countries design their data collection and processing procedures to enable them to fully document:

(1) Differences between the international and national statistical definition of working time, where relevant;

(2) Differences between the national statistical definitions compared with legal and administrative definitions in the country;

(3) The type of adjustments performed to arrive at estimates that correspond to the analytical and international statistical concepts.

77. All statistics on working time and accompanying methodological information should be compiled and produced in line with the need for confidentiality of persons and establishments, and the requirement of proper documentation and availability for all users, in accordance with the United Nations *Fundamental Principles of Official Statistics*.

### Working Time Arrangements

1. *Working time arrangement* is the term to denote a combination of measurable characteristics that refer to the organisation (comprising length or variation) and scheduling (including flexibility) of working hours over the day, week, or longer periods.
2. The characteristics of *working time arrangements* are a reflection of their:
  - (1) Organization that differs from a “norm” based on national circumstances, and the departures from this norm, such as – length (shorter or longer) daily or weekly working hours, fewer or more days worked per week from the norm for a short reference period, or part-year work for a long reference period of a year, and – variation that occurs daily, weekly and/or monthly or regarding entry and exit times that vary by day, week and/or month.
  - (2) Scheduling which is outside of core working hours or days, at night and/or on weekends, or only as required.
3. These characteristics also apply to ad hoc and unusual arrangements. The range of *working time arrangements* described in paragraph 9 below may be set up under formalised agreements or as implicit understandings.
4. *Working time arrangements* apply to persons in paid employment with an explicit or implicit employment contract that stipulates an arrangement, or who are covered by laws and regulations, collective agreements, or arbitral awards and practice an arrangement.
5. *Working time arrangements* apply to persons in self-employment and in unpaid services who establish their own arrangement based on work or personal requirements.
6. *Working time arrangements* vary according to national circumstances. Given differences in institutional conventions and organization, statistics of formalized *working time arrangements* are useful for national purposes although they may not be internationally comparable.
7. Statistics on formalized *working time arrangements* (excluding unusual or ad hoc arrangements) may be more relevant in countries where terminology and established practices are reasonably well regulated and/or standardized, and where the number of persons to whom such arrangements apply is numerically significant.
8. In order to have comprehensive information on *working time arrangements*, statistics should relate to: i) the number of persons employed and establishments by type of arrangement; and ii) the number of persons experiencing the various characteristics of arrangements. Countries may wish to establish among the various types of *working time arrangements* in their economy, for which types it is important and possible to produce separate statistics.
9. The following descriptive list of formalised *working time arrangements* according to the characteristics defined in this Resolution may serve for consultation, in particular for reporting purposes at the international level:

## ***Organization***

(1) *Annualised hours arrangements*, characterized by variations in daily, weekly and monthly working hours within a weekly or monthly average or an annual total, without any requirement that the employer pay overtime rates as long as annual hours actually worked stay below an agreed maximum. Under the annualised hours contract, the distribution of the number of working hours throughout the year is generally predetermined by the employer, depending on production or service needs; but employees may be allowed to negotiate the length of their daily and weekly working hours, so long as output targets can be met.

(2) *Compressed working week arrangements*, characterized by organizing the working hours over fewer days than what is considered the normal or standard working week; such as work on weekends giving rise to shorter working hours during the week.

(3) *Min-max arrangements*, characterized by a variable number of hours actually worked and paid for, depending on production or service needs, but with a guarantee of a minimum and maximum number of hours to be worked per reference period.

(4) *Part-time work arrangements*, characterized by normal hours of work which are less than those of comparable full-time workers, as established in ILO Convention No 175 concerning part-time work, 1994, that will vary according to national circumstances.

(5) *Regular overtime hours arrangements*, characterized by hours worked in addition to the contractual or normal hours of work that are compensated by the employer.

(6) *Staggered and block working arrangements*, characterized by different starting and finishing hours for individual persons in employment or groups of persons in employment, around compulsory “core hours”.

(7) *Working time banking arrangements*, characterized by the possibility to accumulate the hours worked, which can be taken off as extended leave in a subsequent period.

## ***Scheduling***

(8) *Flexible hour arrangements*, characterized by the possibility to schedule one’s daily and weekly working hours outside of “core” hours during which presence at the place of employment is compulsory. Hours worked in addition to contractual hours of work for the week (or month) may be taken as leave during subsequent weeks or months, often within a deadline and up to a maximum number of hours.

(9) *On-call work or zero hours arrangements*, characterized by no fixed schedule of contractual hours, but a requirement that persons be available to work when called with a specified notice period, to work for as many hours as the employer requires up to legally specified or contractual limits.

(10) *Shift-work arrangements*, characterized by successive daily periods of work, known as shifts, worked by teams of persons working one after the other at the establishment so that it can operate longer than the working hours of individuals. Depending on the establishment’s operating hours, persons may work a morning, evening, night or weekend shift. The shift may stay the same, but may also alternate with different types of shifts on a weekly or fortnightly basis, with a certain number of free days built into the programme; or consist of more than one work period on the same day, with a gap of several hours between each work episode - known as split shifts.