

Development of labour statistics systems

Robert J Pember, Senior Labour Statistician,
Bureau of Statistics, ILO Geneva
and
Honoré Djerma, Specialist in Labour Statistics,
ILO Dakar

Le présent papier définit les statistiques du travail, donne leur portée et indique leurs principales sources. Toutes les statistiques du travail ne sont pas collectées par les mêmes méthodes et cette note indique en outre les sources les plus appropriées pour la collecte des différents types de statistiques du travail, les forces et les limites de chacune d'elles.

Le développement des statistiques sectorielles sur le marché du travail et les questions d'emploi qui y sont liées exige des outils et des capacités statistiques appropriés dont certains d'entre eux sont mentionnés dans ce papier.

Enfin, la note décrit trois grandes phases ou étapes de développement dans un système des statistiques du travail (étape de base ou primaire, étape secondaire et étape avancée) et suggère des plans d'action d'amélioration et de renforcement de chacun des niveaux. Le document met l'accent sur le fait que le système des statistiques de travail doit être une partie intégrante du système national statistique. Les statistiques du travail peuvent devoir être utilisées conjointement avec les statistiques de population (statistiques démographiques), ou de l'éducation, de santé, de production industrielle, etc. Il est donc recommandé de veiller à la logique et cohérence des concepts, définitions, unités statistiques, classifications, etc.

Este documento resume el significado de las estadísticas del trabajo y identifica algunas de sus principales fuentes. No todas las estadísticas del trabajo pueden recopilarse utilizando los mismos métodos y este documento también indica las fuentes más apropiadas para recopilar diferentes tipos de estadísticas del trabajo, las fuerzas y límites de cada fuente.

El desarrollo de las estadísticas sectoriales sobre el mercado del trabajo y cuestiones del empleo relacionadas necesita instrumentos y capacidades estadísticas apropiadas. Algunos de ellos están mencionados en este documento.

Finalmente, el documento resume tres fases amplias o etapas de desarrollo en un sistema de las estadísticas del trabajo (básica, secundaria y adelantada) y sugiere planes de acción para un mejoramiento en cada etapa. A través del documento se reconoce que cualquier sistema de estadísticas del trabajo deberá ser visto como parte del proyecto estadístico nacional global. Las estadísticas del trabajo pueden necesitar de ser utilizadas en conjunto con las estadísticas de la población (estadísticas demográficas), o la educación, la salud, la producción industrial, etc. Y por lo tanto se recomiendan conceptos, definiciones, unidades estadísticas, clasificaciones, etc. coherentes y consecuentes.

Introduction¹

- 1 This paper outlines what is meant by labour statistics and identifies some of the main sources for them. Not all labour statistics can be collected using the same methods and this paper also indicates the most appropriate sources for collecting different types of labour statistics, and the strengths and limitations of each source.
- 2 The development of sectoral statistics for the labour market and related employment issues requires appropriate statistical tools and capacities. Some of these are mentioned in this paper.
- 3 Finally, the paper outlines three broad phases or stages of development in a labour statistics system (basic, secondary and advanced) and suggests action plans for further development at each stage. Throughout the document it is recognized that any system of labour statistics must be seen as part of the overall national statistical plan. Labour statistics may need to be used in conjunction with statistics of the population (demographic statistics), or education, health, industrial production, etc and therefore coherent and consistent concepts, definitions, statistical units, classifications, etc are recommended.

What are labour statistics?

- 4 Broadly speaking, labour statistics measure the number and characteristics of those in the labour force and relate to their rights at work, the conditions under which they work, their participation in decision-making in their places of work and in their communities, and the conditions in which they and their families live. Labour statistics also include statistics on labour cost, the demand for labour, and similar related topics. ILO's Convention (1985) No 160, Recommendation (1985) No 170 and various Resolutions of the International Conferences of Labour Statisticians give more complete details of these statistics.
- 5 Labour statistics include statistics on:
 - Number and characteristics of employed, unemployed and underemployed, including those in the informal economy and those relating to disabled workers
 - Income from employment, hours of work
 - Other conditions of work, access to social security
 - Number and characteristics of unfilled job vacancies
 - Number and characteristics of labour migrants
 - Details of training needs of the economically active population
 - Number and characteristics of students graduating from vocational training institutions.
- 6 They also include statistics on:
 - Social dialogue and industrial relations, including trade union membership, membership of employers' groups, collective agreements, industrial disputes
 - Breaches of labour law
 - Social security
 - Labour productivity, labour cost

¹ This paper was distributed at various PARIS21 meetings on National Strategies for Statistical Development in Africa in April and May 2005.

- Occupational injuries and diseases
 - Consumer prices, household expenditure.
- 7 Among the classifications that are used in analysis of labour statistics are classifications of:
- Industry
 - Occupation
 - Status in employment
 - Sex
 - Age
 - Education
 - Training level
 - Location (province, urban/rural)
- 8 Other classifications such as those relating to labour disputes and occupational injuries are also important.
- 9 This wide range of labour statistics is needed in order to:
- (a) Assess current situations of the labour market, decent work, labour migration, occupational safety and health, industrial relations, etc;
 - (b) Identify and quantify various phenomena in these areas so that policies and action plans can be formulated to meet various goals; and
 - (c) Monitor progress towards these goals.

Sources of labour statistics

- 10 The following methods² are used for collecting labour statistics:
- (a) Population censuses and household-based sample surveys (including labour force surveys)
 - (b) Establishment censuses and sample surveys
 - (c) Compiling statistics from administrative records.
- 11 Not all these sources can be used for all statistics. Some sources are more appropriate than others or are likely to provide better quality statistics than others. Potential sources for each type of statistics are listed in Annex A.
- 12 Each source has different strengths and limitations. Household surveys usually have an excellent and comprehensive coverage of the population and, if correctly designed, enable detailed questioning for the precise measurement of labour force concepts. However, household survey samples are not usually large enough to provide reliable estimates for small groups (for example, the unemployed in detailed occupational groups). Household surveys cannot provide all labour statistics (for example, households are unable to report on job vacancies or on the training needs of businesses, and are therefore not an appropriate source for estimates on these topics).
- 13 Surveys of establishments also have strengths and weaknesses. The coverage of these surveys depends on the quality of the population frame. This list of establishments should be well-

² The sources shown do not include some specialised data collection methods such as the compilation of statistics on job vacancies from newspaper clippings (see footnote to Annex A(g)).

maintained (up to date and checked for correctness) and its content should be clear. Lists of establishments (and hence the surveys drawn from them) often have comprehensive coverage of larger business but poor coverage of very small and unregistered businesses. A major advantage of these surveys is that the respondents have reliable records (their payroll records) upon which to base their response and hence these surveys usually provide excellent and reliable data for wages and paid employment. They are also a good source for data on unfilled job vacancies, on training needs, etc. Respondents in these surveys are usually literate and accustomed to completing government reporting forms. Therefore they may often be conducted by post, thereby reducing collection costs. However, as with labour surveys, the use of sampling prevents reliable estimates for small groups (for example, finely detailed industry groups). Establishment surveys should have few questions in order to ensure adequate response by the business community, and therefore these surveys usually cannot have many items or too much detail in their questionnaire. Specialised establishment surveys may concentrate on specific groups of units (for example, sectoral surveys focus on establishments in particular industries, or surveys of vocational training may be sent only to institutions engaged in this activity).

- 14 Administrative records are an excellent source of statistics in cases where the administrative system is well-organised, the quality of reporting is sound and coverage is reasonably complete (due to incentives for registration or correct reporting, major penalties for not reporting or registering, or a combination of both incentives and penalties). Unfortunately, this is often not the case; especially in less developed countries and in these, the coverage is usually very poor. The collection costs for these statistics are avoided, but there may be high processing costs to convert administrative records into useable forms (extra coding, data entry, etc). The data content is often rich, but regrettably insufficiently exploited for many reasons: (i) the concepts, the definitions and the classifications used are often different from those required to meet statistical user needs; (ii) the concepts, definitions and classifications used in the legislation or procedures of administrative system may not be consistent with national statistical standards; (iii) the data are not always entered into the administrative database in accordance with normal statistical standards of quality.
- 15 It is thus necessary: (i) To harmonize (to the extent that legislation and the administrative system allow) the concepts, the definitions and the classifications of the identified administrative systems with national statistical standards; (ii) To improve the value and accessibility of administrative sources as a statistical source by training and sensitizing producers of these data; (iii) To improve the technical support provided by national statistical offices to the agencies that operate the administrative systems to as to ensure adequate data recording and processing.
- 16 In summary therefore, all sources of statistics should be tapped and carefully assessed when developing a system of labour statistics. (Some of these sources will also be used in other components of the overall national system of statistics.) No single data source can meet all needs, and the national statistician must carefully choose the source(s) of statistics in the light of their strengths and limitations to develop a system of labour statistics that is as comprehensive and as statistically sound as possible. Users will need to relate statistics from different sources, so the statistics should as much as possible be coherent and consistent in regard to concepts, definitions, units, classifications, etc. Documentation of these metadata (as well as of the procedures used in deriving statistics) should be prepared and disseminated publicly and transparently in order to assist users in understanding the information that they use.

Some supporting tools and capacities

- 17 The development of a system of labour statistics requires not only the careful choice of data sources but also the capacity to create, maintain and use these data sources. In the following, a distinction is made between general capacities that are needed for all data sources and capacities that are specific to particular sources. Many of the points made in this section are relevant to other types of statistics and not only labour statistics.
- 18 Organisational issues need to be considered. Some countries operate centralised statistical systems with a single agency (national statistical office) being responsible for the coordination and operation of the national statistical system³. Other countries have decentralised systems in which sectoral ministries are responsible for a range of statistical services. In a decentralised system, the need for some agency or institution to carry out a coordination function is perhaps even greater in order to ensure that the statistical services of sectoral ministries are given adequate resources and receive the necessary technical or political support. On the other hand, in a centralised system there is a risk that some sectoral interests will not be adequately addressed.
- 19 For general applications, the following capacities are needed within the statistical agency (or available for the agency to draw upon):
- (a) Capacity to assess and anticipate user needs and to convert their requirements into workable collection instruments (questionnaires, forms, etc). This includes the ability to distil the essence of the user needs, eliminate unnecessary detail, convert the needs into statistical concepts and devise the questions that adequately measure the data without heavy burdens on respondents, processors and analysts;
 - (b) Capacity to design and select samples, including (if appropriate) sample rotation, sampling to measure change over time, etc;
 - (c) Capacity to process raw data, including the devising of edits, procedures and staff for resolving edit failures, the use and maintenance of national classifications (including the development and maintenance of alphabetic coding indexes where appropriate), technical capacities for the design and implementation of computerised statistical systems, access to appropriate hardware and software, etc;
 - (d) Capacity to store and readily access the statistical information for future use;
 - (e) Capacity to analyse statistics, including the ability to design table and graphs to meet known and anticipated user needs, writing textual analysis and preparing reports for publication;
 - (f) Capacity for wide and timely data dissemination, including (if appropriate) website and other electronic dissemination (including accessibility of results to the general public);
 - (g) A regular training programme for users on how statistics should be interpreted and used so that erroneous interpretations and misuse of statistics are minimized);
 - (h) Abilities to manage large projects, including the financial, staffing, task scheduling and other aspects of project management.

³ In some countries, statistical positions are out-posted in important ministries in order to ensure that their particular user needs are met.

- 20 Overall these capacities would imply the need for:
 - (a) A general cadre of statisticians, supported by a programme of professional training (both formal and on-the-job);
 - (b) The establishment and regular re-assessment of statistical priorities (preferably with the advice of a panel of major users);
 - (c) Political goodwill and support;
 - (d) Statistical laws providing authority for data collection, confidentiality of identifiable data, etc.
- 21 For household survey applications, the following survey-specific capacities are needed:
 - (a) Capacity to develop and maintain a population frame (for example, of census enumeration areas) for use in sampling for household surveys;
 - (b) Capacity to organise household survey field operations, including training, preparation and updating of manuals, field supervision, and adequate working conditions for field staff.
- 22 For establishment survey applications, the capacity to prepare and maintain a population frame of enterprises and associated establishments is needed. In the development of questionnaires for such surveys, access to and dialogue with representatives of the business community is important to ensure that the requested data are available (or available without high cost to the business) and to encourage their cooperation with the survey.
- 23 In order to compile statistics from administrative records, the following capacities are needed:
 - (a) Capacity to analyse an administrative system to determine its content, coverage, procedures, etc in detail and hence determine the quality of statistics that might be generated from the system;
 - (b) Capacity to detect areas that might be improved to provide better quality statistics;
 - (c) Capacity to work collaboratively with system administrators to implement these changes (if any) and to extract and disseminate statistics from the system; and
 - (d) Access (with confidentiality constraints) to the administrative records in order to extract and compile the required statistics.

Who are the actors in this statistical system?

- 24 Each country is responsible for the development of their national statistical systems. The main actors in a system of labour statistics are the national statistical office and ministry responsible for labour matters (which hold a central place in planning and implementing). Other important actors are:
 - (a) Public agencies, including the ministry responsible for economic planning and development, and other government ministries, especially the sectoral ministries;
 - (b) Private sector enterprises;
 - (c) Social partners (employers' groups, unions);
 - (d) International and national agencies engaged in development; and
 - (e) Civil society, university researchers, general public.

Characteristics of systems of labour statistics in countries at different stages of statistical development

- 25 It may be useful to review the characteristics of systems of labour statistics in countries at different stages of statistical development and to suggest possible action to be taken for further development. Countries may wish to assess their own situation and identify areas of improvement based on the following. Clearly the situation in each country is different and there are exceptions to most generalisations. For the purposes of presentation, we might distinguish three broad stages of statistical development – basic, secondary and advanced.
- 26 The common situation in countries at a *basic* level of statistical development may be summarised as follows:
- a) These countries usually have some labour force statistics (including statistics on supply of trained labour). These are mostly from:
 - i) 10-yearly population censuses, and/or
 - ii) one-off multi-purpose household surveys;
 - b) These countries may have some statistics on paid employment and wages from a one-off census (or survey) of formal sector establishments and mainly intended to measure industrial production. Such business censuses/surveys are usually restricted to establishments classified as manufacturing sector, but may also include establishments classified as mining/quarrying and to electricity/gas generation. In many cases, the population frame of establishments is poorly maintained and therefore the statistics have poor coverage of the true population and non-response (due to businesses having ceased operation) may be high.
 - c) These countries usually have some selected statistics of low quality from administrative records, relating to:
 - i) Registered job-seekers (from the employment service or agency⁴)
 - ii) Occupational injuries (from national compensation schemes, the ministry of labour, or national medical information centres if they exist)
 - iii) Output of training and educational institutions (from the ministry of labour or of education).
 - d) These countries have few other labour statistics, and have limited statistical capacities.
- 27 What needs to be done for countries at this *basic* stage of development? The ILO would normally recommend that:
- a) Highest priority should be given to introduce at least one national household survey with detailed labour force questions (preferably a labour force survey), and subsequently to introduce a regular programme of labour force surveys. At early stages of development in a country with limited resources and capacities, the ILO might recommend that the labour force survey programme comprises annual surveys of urban areas and 5-yearly (intercensal) surveys with national coverage. Informal employment should be measured in these labour force surveys.

⁴ Private employment agencies are usually not included for countries with basic levels of statistical development.

- b) Second priority would be given to improving the collection of statistics of paid employment and wages. This would require that:
 - i) The population frame of establishments was improved with regular updating and adequate coverage of industrial groups, and of all establishments in these groups;
 - ii) At a minimum, arrangements should be made to ensure that data on paid employment and wages (by sex and perhaps distinguishing foreign/nationals) are collected in annual surveys of industrial production;
 - iii) The possibility of introducing a regular programme of business surveys specifically concentrating on employment and wages topics might be explored.
- c) Equal second priority (but not as high as the need for a labour force survey) should be given to building capacities within government ministries (especially in ministries responsible for labour, social security, education, vocational training and occupational health) to generate quality statistics from administrative records. In order to build this capacity, it might be useful to choose to develop statistics from only one simple system initially (such as reports of labour disputes or registered job-seekers) in order to build confidence and the skills of the ministry's statistical staff;
- d) In all cases, the ILO would encourage collaboration between ministries, other statistical producers/users and the national statistical office.

28 Countries at a *secondary* stage of statistical development often:

- a) Have regular labour force statistics (including statistics on supply of trained labour) from:
 - i) 10-yearly population censuses, and
 - ii) Annual household labour force surveys;
- b) Conduct ad hoc specialised household surveys on topics of labour interest (child labour, informal sector, household budget surveys, etc);
- c) Have annual statistics on paid employment and wages from a regular survey programme of formal sector establishments, but these may still have limited industry scope;
- d) Have adequate statistics from administrative records but quality varies (for example, the records may not include important data, or may not cover all events of interest). Systems covered usually include:
 - Registered job-seekers (from the national employment service or agency, and occasionally even private agencies);
 - Occupational injuries (from national compensation schemes, etc);
 - Output of training and educational institutions.
- e) Have adequate technical capacities, but may not have regular maintenance or wide coverage in their establishment population frame, or high level skills in computing or in analysis/report writing.

29 Proposed development action for countries at a *secondary* stage of development would include:

- a) Introduction of monthly or quarterly national labour force surveys;
- b) Introduction of regular modules on special topics as part of regular labour force survey programme. (These modules might relate to accidents at work, details of training, work history, travel to/from work, labour migration, and so on.)
- c) Introduction of a regular programme of specialised household surveys (child labour, informal sector, household budget);
- d) Improvements in statistics from business surveys:
 - i) Conducting separate surveys of establishments on employment topics;

- ii) Extending these surveys to include data on labour turnover and unfilled job vacancies;
 - iii) Extending industrial coverage of these surveys to all sectors.
 - e) Improvements in the statistics from administrative records:
 - i) Further improvements in data quality by improving the content, coverage, frequency, reporting accuracy, etc of the systems already covered;
 - ii) Compiling statistics from as yet untapped administrative records such social security records, industrial relations reports and registrations, public sector records, etc.
- 30 For countries at an *advanced* level of statistical development, these usually have:
- a) Monthly/quarterly labour force statistics from household labour force surveys;
 - b) Annual (or even more frequent) statistics on paid employment and wages from surveys of formal sector establishments, often with economy-wide coverage;
 - c) Regular and reliable statistics from administrative records covering all events of interest;
 - d) Regular programmes of Household Budget Surveys;
 - e) Sound technical capacities and often assist other countries in their statistical programmes.
- 31 Proposed development action for countries at an *advanced* stage of development might include:
- a) Introducing 5-yearly surveys of occupational wages, wage distributions, wage structures, training needs and conditions of work based on employee sub-sampling;
 - b) Conducting developmental studies to advance statistical knowledge and methods.

Labour statistics as part of the overall national statistical plan

- 32 The ILO recommends to Governments that the national system of labour statistics should be seen as part of the overall national statistical system. The classifications, concepts and definitions, units, etc used in the system of labour statistics should be related to, and consistent with, those used in the statistical systems for education, health, demography/population, industrial production, agriculture, national accounts, etc.
- 33 Each country should develop national standards on these matters and encourage their use in all sectoral statistical systems. These national statistical standards should, to the extent possible, be consistent with international standards for ease of international comparability.
- 34 Labour statistics systems should build on existing systems, for example by:
- a) Ensuring that labour force questions are included in all household surveys since labour force status is often an explanatory variable for the topics covered in these surveys; and
 - b) Ensuring that statistics on paid employment and wages are included in establishment-based industrial production surveys in order to allow measures of labour productivity.

What does the ILO propose?

- 35 The ILO proposes that countries should consider developments on three strategic dimensions, all of which should be integrated into the overall National Strategies for the Development of Statistics (NSDS). For more statistically developed countries, many of these activities should already have been addressed, but some aspects may still need attention:

(a) First dimension: Reorganising and strengthening the statistical service, the employment exchanges and agencies responsible for vocational training –

The reorganisation and strengthening of labour statistics sends a strong signal that the country has a commitment to improving their statistical system. The country should ensure appropriate wages and working conditions for statistical staff (including field data collection staff), an attractive career structure to ensure that they have an incentive to remain in the statistical service and to build experience and capacity for the agency, and adequate training in statistical methods. Statistical legislation, computer facilities, transport for field work, etc are also required. Strengthening of vocational training and employment service facilities require similar support.

(b) Second dimension: Initiating or refreshing the production, dissemination and analysis of labour market statistics and of vocational training –

The national statistical institute, labour statistical services and agencies engaged in employment services and professional training have to work together to maintain the regular production of labour market information. Statistical priorities must be determined on the basis of national priorities and needs, and should be followed. Data collection systems need to be established and maintained. The labour statistics generated have to be adequately disseminated and staff should be trained and guided in the analysis and use of this information. This also may involve efforts to advocate and popularize labour statistics, especially with decision-makers and politicians.

(c) Third dimension: Re-invigorating statistical coordination and strengthening the cooperation of assistance by sub-regional organisations and other development partners –

A committee of users and producers of labour statistics (or similar advisory body) should be established to provide advice on statistical priorities and on the coordination of statistical activities. Statistical coordination will be facilitated if appropriate statistical legislation exists. Communication between the various players is essential to improve coordination and data usage. Consideration needs to be given to the relative merits of a centralised versus a decentralised statistics system.

36 The ILO and other development partners will collaborate with each country in addressing each of these dimensions. They will provide training and technical advice for statistical development. The ILO will support requests for donor funding to improve specific aspects of the labour statistics system.

Conclusion

37 This paper has shown that there are many types of labour statistics and that these can be generated using different sources. Comparability between sources (and with other sectoral statistics) is made easier by using national standard classifications, units, concepts and definitions wherever possible.

38 Users should be aware that each source has differing strengths and limitations and that those different sources can (validly) provide differing estimates. The use of many sources can help in considering different facets of an analytical problem.

- 39 Each country needs a labour market information system with different components (sources) and using standard classifications, units, definitions and concepts.
- 40 As countries develop statistically, one may expect the quality of range of labour statistics to improve and the ILO is available to assist countries in further developing their national systems of labour statistics.

Geneva,
June 2005

Annex A

Potential sources for labour statistics

- (a) Statistics on total employment: These are usually best obtained from labour force surveys and population censuses;
- (b) Paid employment statistics: These may be obtained from:
 - i. business surveys (normally only relating to the formal sector),
 - ii. social security records (although these may not have full coverage of all paid employment because selected groups such as low wage groups, temporary workers and juniors may be excluded), and also
 - iii. labour force surveys and population censuses
- (c) Underemployment statistics: Labour force surveys permit the detailed questioning that is necessary to adequately measure this topic.
- (d) Informal sector employment: These are best obtained from special informal sector surveys, but some very useful data may be gathered in labour force surveys, and even from population censuses if the necessary questions are asked.
- (e) Unemployment statistics: Labour force surveys provide the most comprehensive coverage of the unemployed population and also permit the detailed questioning needed to identify the correct concept. However, statistics on registered jobseekers (a concept that is not the same as the unemployed) may be obtained from employment exchange records (and have the benefit of low cost, detailed classification and high frequency);
- (f) Wage statistics:
 - i. Wage levels are best gathered in business surveys (of the formal sector) since the reported data are extracted from business payroll records. Establishment surveys (for example with employee sub-sampling) can provide statistics on the structure of income from employment and on distributions.
 - ii. Wage statistics (levels and distributions) may also be compiled from social security records (although there may be problems with coverage – see (b)(ii) above – and maybe even problems in reporting if the contributions by employers are related to the wages paid).
 - iii. Household surveys are also used as data sources for wage statistics and are best for statistics on wage distributions, but it should be recalled that self-reported income is often subject to reporting errors.
- (g) Vacancy statistics: These are best obtained from business surveys (formal sector) and from employment exchange records (if notified to the exchange)⁵;
- (h) Hours of work statistics:
 - *Actual and usual hours worked, all workers*: Best from labour force surveys
 - *Hours paid for, paid employees*: Best from business surveys (formal sector).
- (i) Household income and expenditure: Specialised household budget surveys (household income and expenditure surveys) provide the best source for these statistics, but statistics of limited quality are also obtained from multi-purpose surveys such as Livings Standards Measurement

⁵ Some countries attempt to compile statistics on job vacancies from newspaper clippings, but these are inadequate because it is difficult to control duplication (advertisements repeated daily or weekly or in several newspapers) and because enterprises in most developing countries may not advertise in newspapers.

Surveys. Statistics on a limited range of commodities (especially food, groceries, clothing, household durables, cars) may be obtained by analysis of retail sales.

- (j) Training (supply of trained labour): Statistics on the supply of trained labour are gathered from labour force surveys/ censuses, and from statistics compiled from reports by vocational training institutions, schools, etc.
- (k) Training (demand for trained labour): Statistics on training needs and the demand for training are available from businesses in establishment or enterprise based surveys, but may also (indirectly) be deduced from statistics on job vacancies – see (g) above.
- (l) Occupational safety and health: Statistics on occupational safety and health matters may be obtained from administrative reports of accidents and from workers' compensation claims, as well as from special modules of household surveys.
- (m) Strikes, lockouts, grievances: These may be compiled from reports of disputes resolutions.
- (n) Trade union membership: These may be compiled from registrations of unions at the ministry of labour, and some countries have also used household surveys to measure this topic.
- (o) Statistics on collective agreements: These may be compiled from registrations at the ministry of labour.
- (p) Breaches of labour law: These may be compiled from reports of labour inspections.
- (q) Public sector employment and wages: These may be compiled from public sector payroll records.
- (r) Consumer prices and price indexes: These are usually compiled from special collections of prices by field agents.

Summary matrix

XX indicates best source

X indicates acceptable source

Topic	Source			
	Population censuses	Household surveys	Establishment surveys	Administrative records
Total employment	XX	XX		
Paid employment	XX	XX	XX	X
Underemployment		XX		
Informal sector employment	XX(a)	XX		
Unemployment	XX	XX		X
Wage levels		X	XX	X
Wage distributions		XX	X(b)	X
Vacancies			XX	X
Hours of work, actual and usual (all employed)		XX		
Hours paid for, paid employees			XX	
Household income and expenditure		XX		X
Supply of trained labour	XX	XX		XX
Demand for trained labour			XX	X
Occupational safety and health Strikes, lockouts, grievances		XX		XX

Trade union membership		X		XX
Collective agreements				XX
Breaches of labour law				XX
Public sector employment	X	X		XX
Public sector wages				XX
Consumer prices/ price indices	Special collection			

- (a) If the necessary questions are asked in the census.
(b) For example, based on employee sub-samples.