

Options for generating indicators on informal employment using the labour force survey:

**Part Two: Proxy indicators for the informal sector utilizing
existing Labour Force Survey questionnaires
and micro data files**

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Options for generating indicators on informal employment using the labour force surveys - Part 2: Proxy indicators for the informal sector utilizing existing labour force survey questionnaires and micro data files
Port of Spain, International Labour Office, 2006

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1. Measuring the informal sector¹ using existing LFS

1.1. Measuring the informal sector

The informal sector is defined in the UN System of National Accounts (SNA) - Revision 1993, as part of the household sector. The 15th International Conference of Labour Statisticians (ICLS) recommended the use of “existing surveys of the economically-active population² and similar household surveys” to monitor (annually) the sector. For in-depth studies, it recommended specialized surveys at five-year intervals or longer; this includes household surveys, establishment surveys or mixed household and establishment surveys. Such specialized surveys or the inclusion of informal sector modules into the Labour Force Survey are mid- to long-term options which are dealt with in detail in Part one of these Guidelines. This section deals with producing estimates using existing (labour force) survey questionnaires in the Caribbean to produce estimates for the informal sector.

1.2. Using existing Labour Force Surveys³ (LFS) to estimate the informal sector

For a number of countries in the region the *informal economy*⁴ is a subject critical to their employment situation, and policies to address this must be based on empirical evidence. In the virtual absence of reliable quantitative information⁵ on this key policy issue, this paper aims to contribute to efforts of the national statistical offices (NSOs) to produce statistics on the informal sector. The paper provides information on conceptual and methodological issues and the two following options to produce estimates for informal employment:

1. **Part one: the use of an informal economy module to be attached to the existing LFS.** This is a longer term option. This option should be preferred since it will establish the capacity to produce reliable estimates for informal employment on a continuous basis and strengthen the capacity to design and implement specialized informal sector surveys. However, a time series can only be built from future survey reports.
2. **Part two: the use of existing micro-data files of the labour force or other household survey and additional estimates from other sources.** For most Caribbean countries this is the only option to get estimates for the informal sector⁶ in a short period of time. In addition, this option will provide a time series starting in the early and mid nineties, depending on when the LFS was established. The content of the existing LFS questionnaire, which was not designed to estimate the informal sector, is the main limitation of this option. As a result it will deliver at best only “proxy indicators” for the informal sector.

¹ For conceptual and methodological issues please see Part One of these guidelines.

² The population censuses and the LFS have been utilized to measure the informal sector.

³ These guidelines can also be applied to the Population Census questionnaires or databases. See also “Draft prepared for the UN/ILLO publication: Guide for the collection of economic characteristics. Part III of Handbook of population and housing censuses. Studies in Methods. Series F, No. 54 by. R. Gilbert; Statistics South Africa

⁴ See Part One of these guidelines for a brief introduction to the distinction between the informal sector and the informal economy.

⁵ Only Barbados and Jamaica have implemented specialized informal sector surveys (1998 and 2004). However, these surveys are not regular but ad hoc surveys. Some countries have some elements in their labour force survey that can be used to produce proxy indicators from the informal sector but the relevant tables are not produced as part of the normal survey reports.

⁶ Considering the international experience with measuring the informal economy and the state of measurement in the Caribbean, it does not make sense to make efforts to produce proxy estimates from existing LFS beyond the informal sector.

The content of an existing LFS or Population Census questionnaire will determine which proxy-indicators can be generated from it. In this paper the following issues are discussed:

1. Proxy-indicators for the informal sector from LFS or census questionnaires and related conceptual issues
2. A format for evaluating (labour force) questionnaires. This format specifies the items or questions relevant for informality that one should look for in the existing LFS questionnaire (see also Annex 1a)
3. A format for the design of proxy-indicators using items or questions relevant for informality.

1.3. Proxy indicators for the informal sector from LFS

The international standards adopted on employment in the informal sector at the 15th International Conference of Labour Statisticians define informal sector employment as all persons employed in informal sector (i) own-account units and (ii) units of informal employers. Utilizing these international standards, the following items in the existing LFS or census questionnaires can provide an indication of informality of either the persons employed or the units in which they are employed (see also diagram 1.1 on page 6).

1. Status in employment of the person employed. This is usually combined with information on occupational groups and ISIC branches with a high incidence of informality
2. Registration of the employed person or the economic unit
3. Size of the economic unit where the person is employed. Often the cut off point of less than five regular employees is adopted. However, if a limit must be set to complete this exercise it is recommended to set the cut off point below the criterion used for Value Added Tax (VAT) purposes. In the absence of such VAT regulation, the cut off point may be based on another relevant major registration or tax regulation that has a lower limit used for exempt enterprises from registration.
4. Business premises or the place where work is usually performed
5. Book keeping that does not allow identification of “any flows of income and capital”.
6. Type of economic activity.
7. Occupation

Using these indicators, NSOs can evaluate their LFS/Census/questionnaires and the micro data files can be updated with one or more fields indicating informality which can be combined with other variables to generate relevant cross tabulations. Diagram 1.1 provides an overview of issues relevant in the operationalization of these proxy-indicators for informality.

Most Caribbean LFS collect information on variables 1, 6 and 7. At least one country does so for item 3. In the various questionnaires used in the region “status in employment” is measured with different degrees of disaggregation and/or in combination with a broad indication of the sector of the economic activity. Only a very limited number of Caribbean countries collect information on variables 2, 3, 4 and 5.

Diagram 1.1 Determining informality of own account units and unincorporated¹⁰ enterprises

Type of unit	Registration	Size	Status in employment	Work premises ⁷	Book keeping	Occupation	Industry
Own account units	Factories or commercial acts, Tax or social security laws Professional groups' regulatory acts, or similar acts, laws Other regulations established by national legislative bodies	- No size consideration	- Own account workers - Contributing family workers	- In the home or separate workspace inside or attached to the home - Formal or informal market place - Side walk of the street, public space, or empty lot - Moving vendors - (Non-registered) taxi/bus driver	- No size consideration	Exclude occupations for which a formal authorisation is needed to practice	Exclude those engaged in: - agricultural or non-market production - Government or para-statal bodies - Banking and financial services
Units of informal employers		A cut off point for number of employed persons ⁸ specifying: - Employees on a continuous basis - Referring to national statistical and/or legal criteria - The criteria may differ by ISIC sector	- Employer - Own account workers - Contributing family workers - Employees - Apprentices		No accounting system ⁹ that registers and separates flows of income and capital of the economic unit and the owner(s)	Exclude occupations for which a formal authorisation is needed to practice	Exclude those engaged in: - agricultural or non-market production activities or as private household employees - Banking and financial services

⁷ The type of business premise is not listed as one of the criteria used to define the informal sector in the 15th ICLS resolution but it has been widely used as a proxy indicator for informality of production units. See guidelines for measuring the informal sector in Population Censuses: Draft prepared for the UN/ILO publication: Guide for the collection of economic characteristics. Part III of Handbook of population and housing censuses. Studies in Methods. Series F, No. 54 by R. Gilbert; Statistics South Africa

⁸ Note that the 15th ICLS resolution states that the size criterion should preferably be based on the number of employees. However, it acknowledges that the size criterion may also be based on the total number of persons employed.

⁹ Any economic unit that is not a corporation but that has a book keeping system that accounts such flows of income and capital is considered to be a “quasi-corporation” and is classified outside of the household sector. For operational purposes it should be noted that such book keeping includes a balance sheet that shows the values of its i) fixed assets (land, buildings, machinery and equipment, inventories used in production) and ii) financial assets and liabilities (bank deposits, overdrafts, trade credit and debits, other receivables or payables) economic unit and its owner. See also System of National Accounts 1993, paragraph 4.52.

¹⁰ This excludes quasi-corporate enterprises (SNA 93 and 15th ICLS resolution on the informal sector).

NSOs applying the module should evaluate the consistency of estimates based on these proxy indicators with other employment indicators and benchmark data from other sources. For reasons discussed above, estimates of the informal sector derived from proxy-indicators may not be complete and this should be stated in notes explaining inconsistencies with other employment statistics. Additional efforts may be undertaken to complement these estimates using other sources such as enterprise surveys in order to minimize these inconsistencies.

For illustrative purposes, a possible application of this method of proxy indicators is applied to the LFS questionnaires of Barbados and Trinidad and Tobago (see Annexes 1 and 2)

2. Evaluation and Recommendations for two countries

2.1. The basic scenario: Barbados and most other Caribbean LFSs

In the LFS of four countries, Barbados, Grenada, Jamaica and Saint Kitts and Nevis there is only limited information that could be used to generate proxy indicators for the informal sector. This allows only a basic scenario where only one proxy-indicator can be constructed from the LFS:

Employment in informal own account enterprises that is (i) the total number of own-account workers and (ii) contributing family workers in informal own - account enterprises).

This proxy indicator can be produced in most countries in the region using the LFS questionnaires: a score for informality for each employed person with this status in employment must be constructed using the LFS questions on Status in Employment, Industry and Occupation. Using this score, cross tabulations can be produced for informal own-account employment as needed.

It is obvious that the component of informal sector employment that is not covered by this proxy indicator is *employment in enterprises of informal employers; (i) employers, (ii) contributing family workers and (iii) employees in enterprises of informal employers*. If the objective is to generate estimates for the informal sector as a whole, the NSO must design a procedure to estimate *employment in enterprises of informal employers* utilizing other non-LFS sources¹¹. Because it is unavoidable to make assumptions when utilizing such “external information” this paper does not elaborate on these estimates. ILO technical support for such efforts will deal with the various issues involved on a case by case basis.

¹¹ Population censuses, enterprise surveys or administrative databases could be used as a source but these must invariably be introduced making many, often questionable assumptions.

2.2. The case of the Netherlands Antilles and Trinidad and Tobago

The LFS questionnaire of the Netherlands Antilles and Trinidad and Tobago contain more information on informality than those previously discussed. In addition to information on Status in Employment, Industry and Occupation, these questionnaires contain information¹² on the size of enterprises and the type of work premise. This allows one to produce three proxy indicators for informal sector employment:

- a) *Employment in informal own-account enterprises*: total number of own-account workers and contributing family workers in enterprises of informal sector own-account workers. Using the answers on questions on Status in Employment, Industry and Occupation, a score on informality is constructed for each employed person. Using this field, cross tabulations can be run for informal own-account employment as needed.
- b) *Enterprises of informal employers*: total number of employers and contributing family workers in enterprises of informal employers. A score for informality is constructed for each enterprise/employer in the micro data file using information from the questions on (1) status in employment and (2) type of economic activity (industry) of the employer, (3) the size of the enterprise (below the cut off point) and (4) Work premise (those classified as “informal” based on national circumstances). This will allow the identification of *enterprises of informal employers*. Using this field, cross tabulations can be run for informal employers and contributing family workers in enterprises of informal employers.
- c) *Paid employment in enterprises of informal employers*. Once the “*enterprises of informal employers*” are identified the question on the number of paid employees in the enterprises can be used to estimate the total number of informal employees.

¹² In the case of the Netherlands Antilles the LFS questionnaire was revised using the concept of the informal economy and it contains items needed to measure “informality of jobs”.

Annex 1a: Evaluation of the Barbados LFS questionnaire to identify proxy indicators for the informal sector

	Measurement using the enterprise method (Only employers/own account workers are asked about informality of their businesses/workers)				Measurement using the persons employed	
	Question to Own account		Question to Informal employers		Question to All persons employed	
	Q #	Wording of Question	Q #	Wording of Question	Q #	Wording of Question
Registration	No		No		No	
Factories or commercial acts						
Tax laws						
Tax or social security laws						
Professional groups' regulatory acts, or similar acts, laws						
Other regulations established by national legislative bodies						
Size	No		No		No	
Employees on a continuous or normal basis						
Total employment						
Status in employment	Yes	Criterion: The 'status in employment' = "own account workers" or "contributing family workers" in households of own account workers.	No		Yes	Criterion: The 'status in employment' = "own account workers" or "contributing family workers" in households of own account workers.
Status in employment						
Work premises						
Work premises						
Book keeping	No		No		No	
Accounting system	No		No		No	
Industry	Yes	Criterion: Non-Agricultural; Non-Government; other sectors known to have no or almost no informal sector enterprises	Yes	Criterion: Non-Agricultural; Non-Government; other sectors known to have no or almost no informal sector enterprises	Yes	Criterion: Non-Agricultural; Non-Government; other sectors known to have no or almost no informal sector enterprises

	Measurement using the enterprise method (Only employers/own account workers are asked about informality of their businesses/workers)				Measurement using the persons employed	
	Question to Own account		Question to Informal employers		Question to All persons employed	
	Q #	Wording of Question	Q #	Wording of Question	Q #	Wording of Question
Occupation	Yes	Criterion: Occupations that require formal registration or linked exclusively or almost exclusively to formal sector operations	Yes	Criterion: Occupations that require formal registration or linked exclusively or almost exclusively to formal sector operations	Yes	Criterion: Occupations that require formal registration or linked exclusively or almost exclusively to formal sector operations

Annex 1b. Proxy Indicators for the informal sector using the ICSE, ISCO, and the ISIC in the Barbados¹³ Labour Force Survey questionnaire

	Proxy indicator for	Basic approach	Operational definition	Questions used	Score on questions	Fields in data file
1.00	Employment in own account units	Own account workers excluding selected ICSE and ISIC groups	All units of own account workers that are: <ul style="list-style-type: none"> - Not in selected ISCO categories 0 and 1 (or others) - Not employed in ISIC sectors, Agriculture, Water, Gas and Electricity, Central Government, Semi-Government and International Organizations and Embassies 			
1.10	Total number of informal, own account enterprises		All units of own account workers that are:	Q36		
			- Not in selected ISCO categories 0 and 1 (or others)	Q37		
			- Not employed in ISIC sectors, Agriculture, Water, Gas and Electricity, Central Government, Semi-Government and International Organizations and Embassies	Q38		
1.11	Informal own account workers		The own account worker defined using the operational definition in 1.10	Q36 Q37 Q38		
1.12	Contributing family workers in informal own account enterprises		All contributing family workers in the household of the "informal own account worker"	Q36 Q37 Q38		

¹³ Because the procedures are similar for the LFS in Grenada, Jamaica and St Kitts and Nevis which are only the evaluation Barbados is presented.

	Proxy indicator for	Basic approach	Operational definition	Questions used	Score on questions	Fields in data file
2.00	Employment in enterprises of informal employers	Not Applicable	Not Applicable			
2.10	Total number of enterprises of informal employers	Not Applicable	Not Applicable			
2.11	Estimate of number of informal employers	Not Applicable	Not Applicable			
2.12	Contributing family workers in enterprises of informal employers	Not Applicable	Not Applicable			
2.13	Employees in enterprises of informal employers	Not Applicable	Not Applicable			
2.14	Apprentices in enterprises of informal employers	Not Applicable	Not Applicable			

Annex 2. IS Proxy Indicators for the ICSE, the ISCO, the ISIC, size of the enterprise and type of workplace for the Trinidad and Tobago Labour Force Survey questionnaire

	Proxy indicator	Basic approach	Operational definition	Quest used	Score on questions	Fields in data file
1.00	Employment in own account units	Own account workers and contributing family workers with type of work premises that are specified as “usual” for IS operators excluding specified ISIC and ISCO categories	Sum of 1.11 and 1.12	See 1.11		
1.10	Total number of informal, own account enterprises	The total number of informal own account workers is (assumed to be) equal to the total number of own account enterprises	Sum of own informal account workers as defined in 1.11			
1.11	Informal own account workers	Own account workers with type of work premises that are specified as “usual” for IS operators excluding specified ISIC and ISCO categories	Own account workers with type of work premises that are specified as “usual” for IS operators excluding i) professionals or assistant professionals or other occupations that require registering and ii) the ISIC categories, Agriculture, government, international organizations, or private households	Q28 Q32 Q29 Q30	Q28 = 6 Q32=1 or 3 Is NOT professionals or assistant professionals or other occupations that require registering Is NOT Agriculture, government, international organizations, or private households	
1.12	Contributing family workers in informal own account enterprises	Contributing family workers employed in enterprises of informal own account workers	Contributing family workers of own account as defined in 1.11	Q28 Q32	Q28 = 4 Q32=1 or 3	

Proxy indicator	Basic approach	Operational definition	Quest used	Score on questions	Fields in data file
			Q29	Is NOT professionals or assistant professionals or other occupations that require registering	
			Q30	Is NOT Agriculture, government, international organizations, or private households	
2.00	Employment in enterprises of informal employers	Employers in enterprises employing less than 5 persons operating their business from premises considered informal excluding specified ISIC and ISCO categories, and the contributing family workers and employees employed in those enterprises	Employers in enterprises employing less than 5 persons operating their business from premises considered informal excluding i) professionals or assistant professionals or other occupations that require registering and ii) the ISIC categories, Agriculture, government, international organizations, or private households and the contributing family workers and employees employed in those enterprises		
2.10	Total number of enterprises of informal employers	The total number of enterprises of informal employers is (assumed to be) equal to the total number of informal employers	Sum of informal as defined in 2.11		
2.11	Estimate of number of informal employers	Employers in enterprises employing less than 5 persons operating their business from premises considered informal excluding specified ISIC and ISCO categories	Employers in enterprises employing less than 5 persons operating their business from premises considered informal excluding professionals or assistant professionals or other occupations that require registering and the ISIC categories, Agriculture, government, international organizations, or private households	Q28 Q31 Q32 Q29 Q30	Q28 = 7 Q31 less than 5 Q32=1 or 3 Is NOT professionals or assistant professionals or other occupations that require registering Is NOT Agriculture, government, international organizations, or

	Proxy indicator	Basic approach	Operational definition	Quest used	Score on questions	Fields in data file
					private households	
2.12	Contributing family workers in enterprises of informal employers	Contributing family workers employed in enterprises of informal employers	Contributing family workers of informal employers as defined in 2.11	Q28 Q31 Q32 Q29	Q28 = 4 Q31 less than 5 Q32=1 or 3 Is NOT professionals or assistant professionals or other occupations that require registering	
				Q30	Is NOT Agriculture, government, international organizations, or private households	
2.13	Employees and apprentices in enterprises of informal employers	The estimate for total employees and apprentices in the enterprises of informal employers is the residual factor of: a) Total persons employed minus b) the employer and his/her contributing family workers.	The total number of employees and apprentices in enterprises of informal employers as identified in 2.11 and 2.12 is the residual factor of: a) Total persons employed minus b) the employer and his/her contributing family workers.	Q31	Total employment in the enterprise	
				Questions involved in 2.11 and 2.12	Sum 2.11 and 2.12 for each informal enterprise	
2.14	Apprentices in enterprises of informal employers	Not applicable				