Measuring informality: A statistical manual

on the informal sector and informal employment

International Labour Organization

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A statistical manual on the informal sector and informal employment

International Labour Office Geneva

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First published 2013

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Measuring informality: a statistical manual on the informal sector and informal employment/ International Labour Office. - Geneva: ILO, 2013

ISBN 9789221273882; 9789221273899 (web pdf)

International Labour Office

informal employment / informal economy / data collecting / survey / measurement / methodology / definition

13.01.3

ILO Cataloguing in Publication Data

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Design and printing by the International Training Centre of the ILO, Turin – Italy

Preface

This manual is intended as a technical guide for national statistical offices and other producers of statistics on the informal sector and informal employment. It presents the current international standards on employment in the informal sector that were adopted by the 15th International Conference of Labour Statisticians (ICLS) in 1993, as well as the guidelines on informal employment adopted by the 17th ICLS in 2003. It also provides practical guidance on implementing the standards, by presenting alternative measurement methodologies along with examples based on national experience, and includes guidelines for the dissemination of statistics on the informal sector and informal employment.

The manual was prepared in response to the 15th ICLS *Resolution concerning statistics of employment in the informal sector*, which called upon the ILO to prepare a manual with technical guidelines on the contents of the resolution based on lessons learned from country experiences. Since the adoption of this resolution the ILO, in collaboration with the Delhi Group, as the Expert Group on Informal Sector Statistics is known, has been closely involved in supporting national efforts to design and implement surveys on informal employment and the informal sector, and in disseminating and evaluating information about the lessons learned from the experience. This has resulted in recommendations for improving the quality and comparability of informal sector and informal employment statistics. The accumulated experience relating to the measurement of the informal sector and informal employment is consolidated in this manual.

The manual is a collaborative effort of the Delhi Group, the global networking Women in Informal Employment: Globalizing and Organizing (WIEGO) and the ILO Department of Statistics. It was written by national and international experts. Adriana Mata Greenwood, senior statistician of the ILO Department of Statistics, was responsible for bringing the manual to completion.

The International Labour Organization wishes to acknowledge the contributions of the following individuals who played a significant role in the preparation of this manual: Ralf Hussmanns (former official of the ILO), who initiated the project and contributed substantially to its contents, Elisa Benes (ILO), Jacques Charmes (IRD), Eivind Hoffmann (former official of the ILO), Rodrigo Negrete Prieto (INEGI,

Mexico), François Roubaud (DIAL, France), Nittala S. Sastry (former Director General, NSSO, India), Gulab Singh (UNSD), Joann Vanek (WIEGO), and Vijay K. Verma (University of Siena, Italy). Contributions were also made by Carol Carson (formerly of the IMF), Meera Ganoo (CSO, Mauritius), Margarita Guerrero (SIAP) and Yandiswa Mpetsheni (Statistics South Africa).

Last but not least, the International Labour Office wishes to recognize all national statistical offices, Ministries of Labour and workers' and employers' organizations, as well as the entire international statistical community for having been so supportive in advancing the measurement of such a complex component of economic and labour markets as informality. In particular, the ILO acknowledges the valuable financial contribution of the Government of India to the preparation of the manual. We hope that this will be a useful starting point towards further refinements in the quantification of informality.

Rafael Diez de Medina

ILO Department of Statistics

Contents

Preface iii

Abbreviations and acronyms xiii

CHAPTER 1.
Introduction 1

Purpose of the manual 1
Importance of the informal sector and informal employment 3
Relevant International statistical standards 5
Measurement objectives 6
Macro-economic and related development policies 7
Small enterprise development 8
Poverty reduction 9
Labour regulations 9
Data collection programme 9
Identifying the data requirements of major users 11
Contents 12

CHAPTER 2.
Concepts, definitions and sub-classifications of informal sector and informal employment 13

Introduction 13
The informal sector 14
International statistical definition of the informal sector (15th ICLS resolution) 17
Informal own-account enterprises 18
Enterprises of informal employers 19
Scope of informal sector surveys and treatment of special cases 24
Productive activities outside the SNA production boundary 24
Production for own final use 24
Agricultural activities 25
Rural areas 26
Professional and technical services 26
Outworkers (Homeworkers) 26
Paid domestic workers 27
Comparability problems of national definitions 28
Recommendations of the Delhi Group to enhance the international comparability of informal sector statistics 30
Definition of employment in the informal sector 32
Informal employment 33

International statistical definition of informal employment (17th ICLS guidelines) 36
Related issues 43
Jobs on the borderline of status-in-employment categories 43
Statistics on informal employment in the absence of data on informal sector employment 43
Informal jobs in agriculture 43
Non-use of 'informal economy' as a statistical term 44
Production units (17th ICLS Guidelines) and institutional sectors (SNA) 44
Links between the concepts of informal sector, informal employment and non-observed economy 45
Sub-classifications 49
Informal sector enterprises 49
Employment in the informal sector 49
Informal employment 49

CHAPTER 3.
Measurement objectives and methods of data collection 51

Introduction 51
Data requirements 52
Statistical units 55
Household surveys 55
Establishment surveys and censuses 62
Mixed household and enterprise surveys 68
Mixed modular surveys 70
Mixed independent surveys 72
Methods of indirect estimation 72
Residual balance techniques 73
Macro-economic estimation techniques 74
Summary 75

CHAPTER 4.
Household surveys on informal sector employment and other types of informal employment 79

Introduction 79
Questionnaire design 80
Questions on activity status 82
Questions to identify informal sector employment 82
Mexico – Encuesta Nacional de Ocupación y Empleo (ENOE) 85
United Republic of Tanzania – Integrated labour force survey, 2005/2006 88
Ecuador – Encuesta de empleo, desempleo y subempleo 89

Mali – Enquête permanente d'emploi auprès des ménages, 2004 90
Republic of Moldova – Continuous labour force survey 91
South Africa – Quarterly labour force survey (QLFS) 92
Questions to identify outworkers (homeworkers) 93
Questions to identify informal employment outside the informal sector 94
Questions related to type of work contract 98
Treatment of agriculture 98
Secondary jobs 102
Data processing 105
Other considerations for survey design 108
Effect on main objectives and operations of the survey 109

CHAPTER 5.
Establishment surveys and censuses 111

Introduction 111
Establishment censuses 113
Establishment surveys 115
Planning and design 117
Statistical units 118
Sample design 118
Reference period 124
Data collection strategy 125
Data items 126
Questionnaire design 127
Industry-specific establishment surveys 128
Establishment surveys and censuses in the world 129
Afghanistan – Integrated business enterprise survey, 2009 129
Benin – Census and survey of establishments, 1992 130
Colombia – General census, 2005 134
Colombia – National survey of micro-establishments 134
Egypt – Economic census, 2006 136
Ethiopia – Census of economic establishments, 2004 137
India – Economic census, 2005 138
India – Survey of unorganized manufacturing enterprises, 2000-01 139
India – Survey of unorganized enterprises in the service sector, 2001-2002 145
Indonesia – Economic census, 2006 146
Mauritius – Census of economic activities, 2007-2009 148
Mexico – Economic census, 2009 151
Panama – Censuses on manufacturing, trade and services, 1983 152
Tunisia – National survey of economic activities, 2007 153

CHAPTER 6.
Mixed surveys 157

Introduction 157
Mixed modular informal sector surveys 161
Choice of 'base' survey 163
Link between workers, jobs and economic units 164
Sample design 166
Mixed independent informal sector surveys 167
Sample of PSU (first survey phase) 168
Sampling frame 168
Area units 170
Stratification of area units 171
Selection of area units with probabilities proportional to size 172
Low-density areas 173
Sample size and allocation 173
Listing operation 175
Second-phase operations 177
Last stage of sampling 177
Coverage of different kinds of economic activity 178
Confining samples to a small number of cities 180
The dual household/establishment frame approach 181
Planning and design 185
Seasonal and other aspects of variation in time 185
Implementation of the sample of informal sector entrepreneurs 188
Place of interview 189
Respondent 190
Time between phases 190
Reference period 191
Weighting and estimation 191
Basic requirements 191
Systematic approach to weighting 192
Trimming of extreme weights 194
Units requiring special treatment 194
Several informal sector entrepreneurs (units) in the same household 194
Units with several kinds of economic activity 195
Changes in kind of economic activity and other characteristics of the units 195
Units with partners in different households 195
Mixed surveys in the world 196
The 1-2-3 survey 196
1-2-3 surveys in Africa 201

1-2-3 surveys in Latin America 202
1-2-3 surveys in Asia 204
Mexico – National micro-establishment survey (ENAMIN) 205
The LSMS experience in measuring the informal sector 208
Brazil – Mixed independent informal survey 210
Turkey – Urban small unincorporated enterprises survey, 2000 211
Palestine – Independent informal sector survey, 2003 212

CHAPTER 7.
Tabulation, reporting and dissemination 215

Introduction 215
Items of data collection 217
Selected derived variables and indicators 221
Employment in the informal sector and informal employment 222
Informal sector units 223
Tabulations 228
Proposed tabulations 229
GROUP A: Tabulations for the total population 229
GROUP B: Tabulations for employed persons 229
GROUP C: Tabulations for employees 231
GROUP D: Tabulations for persons in informal employment 231
GROUP E: Tabulations for persons employed in the informal sector 232
GROUP F: Tabulations for informal sector units 233
GROUP G: Tabulations for informal sector entrepreneurs 234
GROUP H: Tabulations for members of households of informal sector entrepreneurs 235
Metadata 235
Dissemination in Reports 236
Advance release of results 237
Administrative/technical report 237
Detailed survey reports 237
Computer-based Products 238
Promotional efforts 240

CHAPTER 8.
Use of statistics on informal sector and informal employment for national accounts ..243

Introduction 243
Need to improve the identification of activities of informal sector units 245
Exhaustive coverage of the GDP 245
Designing measures to balance supply and use of goods and services 246

Informal sector and informal employment in the 2008 SNA 247
Informal sector in the 2008 SNA 249
Informal sector as a subset of the household sector 251
Contribution of informal employment 252
Statistics on the informal sector for national accounts 252
Direct estimates 253
Indirect estimates 255
Labour input matrix 256
Data sources for compiling labour input matrices 257
Estimating informal employment 259
Productivity coefficients 262
Use of informal sector survey statistics for estimating national accounts aggregates 262
Production account 262
Value added 263
The generation of income accounts 264
Illustrative country experiences in quantifying the contribution of the informal sector in national accounts 265

References 267

Appendices 277

Appendices A1 and A2 – International resolution and guidelines on informality, adopted by the International Conference of Labour Statisticians 277
APPENDIX A1 – Resolution concerning statistics of employment in the informal sector, adopted by the 15th International Conference of Labour Statisticians, 1995 278
APPENDIX A2 – Guidelines concerning a statistical definition of informal employment, endorsed by the 17th International Conference of Labour Statisticians, 2003 292
Appendices B1 and B2 – Proposed layout and tabulation variables and categories 297
APPENDIX B1 – Proposed layout for tabulations 298
APPENDIX B2 – Proposed tabulation variables and categories 319
Appendices C1 to C9 (in the CD)
Appendices D1 to D11 (in the CD)
Appendices E1 to E9 (in the CD)

Tables

Table 2.1. Classification of household unincorporated enterprises (15th ICLS resolution) 17

Table 2.2. Criteria for defining informal sector enterprises (15th ICLS Resolution) 22

Table 2.3. Definitions of informal sector enterprises used by selected countries/organizations 23

Table 2.4. Household producers by product destination 25

Table 2.5. Classification of the employed population in the informal sector 33

Table 2.6. Informal employment, employment in the informal sector and informal employment outside the informal sector, as a percentage of total non-agricultural employment in selected countries by sex ...35

Table 2.7. Conceptual framework for informal employment (17th ICLS guidelines) 37

Table 2.8. Definition of informal jobs of employees used by selected countries 41

Table 2.9. Institutional units (SNA) and production units (ICLS) 45

Table 2.10. Production units and production activities 47

Table 3.1. Survey methods and statistical units 76

Table 3.2 Relation between measurement objectives and alternative survey methods 77

Table 6.1. Type of informal sector activity in a PSU 182

Table 7.1. Main derived variables on employment 222

Table 7.2. Template used by the ILO to compile and disseminate statistics on employment in the informal sector and informal employment (extract) 226

Table 8.1. Comparison between the use of terms in the SNA and in ICLS/ILO 248

Table 8.2. Informal sector units within the framework of the SNA 251

Table 8.3. Minimum and desirable data on the informal sector and informal employment to be collected and reported for national accounting purposes 254

Table 8.4. Sources used for building a labour input matrix. 260

Table 8.5. Production accounts for informal sector enterprises. 263

Table 8.6. Generation of income accounts 264

Figures

Figure 2.1. Components of informal employment (17th ICLS guidelines) 40
Figure 2.2. Production units, production activities and jobs 48
Figure 4.1. Flowchart to identify workers in the informal sector, based on an ILO model questionnaire 85
Figure 4.2. Questionnaire flowchart to determine whether a worker is to be classified in the informal sector, Mexico (ENOE) 87
Figure 4.3. Two-track approach to identifing persons employed in the informal sector (Quarterly labour force survey, South Africa) 92
Figure 4.4. Flowchart to identify informal employment, based on an ILO model questionnaire 96
Figure 4.5. Informal sector employment and informal employment: Step-by-step identification process 106
Figure 5.1. FIRST methodology 117
Figure 6.1. Design characteristics of mixed household and enterprise surveys of the informal sector 159
Figure 6.2. Design differences between mixed independent surveys and area-based establishment surveys 161
Figure 6.3. Alternative sampling strategies for measuring the informal sector ...162
Figure 6.4. Building the implicit population of individuals , jobs and economic units 165
Figure 6.5. Mixed survey design with dual frames 184
Figure 6.6. Basic scheme of the 1-2-3 survey 197

Boxes

Box 3.1. Use of household master samples 57
Box 3.2. Alternative strategies to reduce misclassification in informal sector or informal employment 61
Box 4.1. Relevant information for measuring informal sector employment and informal employment through household surveys 81
Box 7.1. List of indicators on employment in the informal sector and informal employment 224
Box 8.1. Steps to be followed in preparing a labour input matrix 261

Abbreviations and acronyms

ADB	Asian Development Bank
CIS STAT	Interstate Statistical Committee of the Commonwealth of Independent States
DIAL	Développement, institutions et mondialisation, France
EA	Enumeration area
FIRST	Fully Integrated Rational Survey Technique
Delhi Group	Expert Group on Informal Sector Statistics
GDP	Gross domestic product
GVA	Gross value added
HIES	Household income and expenditure survey
HS	Household survey (with an employment component)
HUEM	Household unincorporated enterprises with at least some market production
ICLS	International Conference of Labour Statisticians
ICSE	International Classification of Status in Employment
ILC	International Labour Conference
IMF	International Monetary Fund
IRD	Institut de recherche pour le développement, France
ISCO	International Standard Classification of Occupations
ISIC	International Standard Industrial Classification of All Economic Activities
LFS	Labour force survey
LSMS	Living Standard Measurement Study
OECD	Organisation for Economic Co-operation and Development
PARIS21	Partnership in Statistics for Development in the 21st Century
PPS	Probability proportional to size
PSU	Primary sampling unit
SIAP	Statistical Institute for Asia and the Pacific
SNA	System of National Accounts
UNSD	United Nations Statistics Division
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific

WIEGO	Women in Informal Employment: Globalizing and Organizing
15th ICLS resolution	Resolution concerning statistics of employment in the informal sector, adopted by the 15th International Conference of Labour Statisticians in January 1993
17th ICLS Guidelines	Guidelines concerning a statistical definition of informal employment, endorsed by the 17th International Conference of Labour Statisticians in December 2003

Chapter 1.
Introduction

Purpose of the manual

1.1. This manual has been prepared with two primary objectives. The first objective is to assist countries planning to produce statistics on the informal sector and informal employment to undertake a review and analysis of their options. The second objective is to provide practical guidance on the technical issues involved in the development and administration of the surveys used to collect the relevant information, as well as in the compilation, tabulation and dissemination of the resulting statistics.

1.2. The first objective is concerned with the early stage of survey planning, when overall objectives, costs and constraints are considered. For this purpose, the manual presents the two internationally agreed concepts of informal sector and informal employment, as defined, for statistical purposes, in the *Resolution concerning statistics of employment in the informal sector*, adopted by the 15th International Conference of Labour Statisticians (ICLS)[1] in 1993, and in the *Guidelines concerning a statistical definition of informal employment*, adopted by the 17th ICLS in 2003. The manual also presents several options for the type of surveys that can be used to collect the necessary data, together with the strengths and limitations of each.

1.3. The second objective concerns the production of statistics, for which the manual provides practical guidance on the survey process. This comprises a range of activities, including planning, sampling, questionnaire design, tabulation, reporting and dissemination.

1.4. The manual focuses on technical issues that are specific to the production of statistics on informal employment and the informal sector. It is not a comprehensive guide to labour force or other household surveys, or of enterprise surveys. For general methodological guidance on labour force surveys and other household surveys, reference is made to the *Surveys of economically active population, employment, unemployment and underemployment: An ILO manual on concepts and methods* (ILO, 1990), as well as the United Nations publications *Designing household survey samples: Practical guidelines* (United Nations, 2008a), *Household sample surveys in developing and transition countries* (United Nations, 2008b), *Handbook of household surveys* (United Nations, 1984) and the series published as part of the National Household Survey Capability Programme (NHSCP). For methodological information on enterprise or establishment surveys, the reader is directed to the United Nations publications *International Recommendations for Industrial Statistics* (United Nations, 2009a) and *International Recommendations for Distributive Trade Statistics 2008* (United Nations, 2009b).

1.5. This manual is aimed primarily at national statisticians responsible for designing and administering survey programmes for labour and economic statistics. It can be used in training courses on these topics. The manual is also designed to serve as a basis for communication and dialogue between producers and users of statistics. The manual can thus give users a better understanding of the concepts underlying the statistics, as well as of the constraints statisticians face in supplying the statistics needed.

[1] The International Conference of Labour Statisticians adopts resolutions and guidelines on selected topics of labour statistics, which are then approved by the Governing Body of the International Labour Organization before becoming part of the set of international standards on labour statistics. These standards usually relate to concepts, definitions, classifications and other methodological procedures which are agreed as representing 'best practice' in the respective areas and which, when used by national producers, increase the possibility of having internationally comparable labour statistics both internationally and over time within a country.

Importance of the informal sector and informal employment

1.6. For many years governments and economists assumed that, with the right mix of economic policies and resources, poor, traditional economies would be transformed into dynamic modern economies. In the process the traditional or informal sector was expected to disappear as the modern or formal sector grew and absorbed more labour. However, contrary to expectations, the informal sector and informal employment continue to be substantial. Many countries have not been able to develop a modern economy capable of providing adequate employment opportunities for their rapidly growing population. The informal sector remains a major if not *the* major source of employment in many countries, where it is made up of own-account or small enterprises, with little or no formalized organization or capital, and of casual employment. In countries of Eastern Europe and Central Asia, the informal sector is an important part of the economy.

1.7. In both developing and developed countries the modern or formal sector is being transformed by global integration and shifts in economic policies. Some forms of production are moving out of large, registered factories and are being reorganized into more decentralized, flexible and specialized units. Non-standard contractual arrangements or informal jobs are replacing full-time employment. Examples of the emerging forms of employment include part-time or part-year employment, fixed-term employment contracts, jobs arranged by temporary help agencies or contract firms, casual employment, contract labour, and outwork or home work. Not only does there continue to be substantial employment in the informal sector and in informal jobs outside the informal sector but contractual and working-time arrangements are becoming more complex.

1.8. Typical informal sector activities (unpaid work in a family enterprise, casual wage labour, home-based work, street vending) provide the only opportunity for many poor people to secure their basic needs for survival. In countries without unemployment insurance or other kinds of social benefits, the only alternative to being unemployed is engaging in informal sector employment. Other informal sector employment (as employers in informal manufacturing establishments or as skilled self-employed workers in small businesses) may sometimes provide better pay. These workers may even earn more than regular employees working in formal jobs (Chen et al, 2005, pp. 47-49). But even for these better-off workers informal sector employment rather than formal sector employment is often the only option.

1.9. The informal sector is important not just as a source of employment but also for the production of goods and services. In many countries the contribution of informal enterprises to gross value added (GVA) is substantial. Estimates of the average (unweighted) share of the informal sector in non-agricultural GVA vary from a low of 14 per cent in Eastern European and Central Asian countries to a high of 50 per cent in sub-Saharan Africa (ILO and WIEGO, 2012, Table 2.9).

That a large number of countries in sub-Saharan Africa prepare such estimates reflects the importance of the informal sector in their total GVA. The goods and services produced in the informal sector contribute substantially to what is consumed by poor as well as more affluent households.

1.10. As the main – and often the only – source of income for the poor, employment in the informal sector plays a key role in poverty reduction. However, many of those engaged in the informal sector are not able to work their way out of poverty; in fact for many the conditions under which they work serve to perpetuate their disadvantaged position and the poverty in which they live.

1.11. Informal employment accounts for a substantial portion of employment today. It encompasses persons in employment who, by law or in practice, are not subject to national labour legislation and income tax or entitled to social protection and employment benefits. Informal employment can exist in both the informal and the formal sector of the economy. In most developing countries informal employment is a larger component of the workforce than formal employment. Estimates show that it comprises more than half of non-agricultural employment in most developing countries: 82 per cent in South Asia, 66 per cent in sub-Saharan Africa, 65 per cent in East and Southeast Asia (excluding China) and 51 per cent in Latin America. In the Middle East and North Africa, while the average is 45 per cent, the range is from 31 per cent in Turkey to 57 per cent in the West Bank and Gaza. In addition, statistics from six cities in urban China show that 36 per cent of non-agricultural employment is informal (ILO and WIEGO, 2012, Table 2.1). If informal employment in agriculture were included, the proportion of the labour force in informal employment would increase greatly in many countries, especially in South Asia, sub-Saharan Africa and East and Southeast Asia, where informal employment is already high. In developed countries an increasing share of the labour force works under part-time, temporary work and own-account employment arrangements that offer limited benefits or social protection. Many though not all people working under such arrangements in developing countries would most likely be identified as having informal jobs (ILO and WIEGO, 2012, Chapter 3).

1.12. Informal employment encompasses workers in all employment status categories: employers, employees, own-account workers, contributing (unpaid) family workers and members of producers' cooperatives. Although the employment relationship of workers in informal employment is very heterogeneous, they share a basic vulnerability, namely, their need to be self-supporting and to rely on 'informal' arrangements (ILO, 1991, pp.5-6). For example, workers in informal employment lack access to modern capital markets, to formal training and to official social security systems. In addition, by definition, they receive little or no legal protection. It is these characteristics that are responsible for the low-quality and precarious nature of informal employment and for the fact that it remains outside the legal and institutional structures of the modern economy.

1.13. The informal sector and informal employment interact closely with the formal sector. As noted above, the modern globalized economy depends increasingly on informal employment, in such forms as subcontracting, home-based work, agency work and other types of flexible or temporary employment. More broadly, formal sector establishments may depend on the informal sector and informal employment to ensure flexibility and lower costs and generate more income for their owners. The informal sector does not exist separately from the formal sector; rather it produces for, trades with, distributes for and provides services to the formal sector (Chen et al, 2002, p.20).

Relevant international statistical standards

1.14. The international standard definition of the informal sector was adopted by the Fifteenth International Conference of Labour Statisticians (ICLS) in 1993 (ILO, 1993a). The *Resolution concerning statistics of employment in the informal sector* (hereafter referred to as the 15th ICLS resolution) provided guidelines not only for defining the informal sector but also on the classification of employed persons in the informal sector, on measurement methodologies and on statistical outputs. The resolution is reproduced in Appendix A1. Subsequently, the definition was adopted for the revised international System of National Accounts 1993 (UN et al., 1993). This definition is based on the characteristics of the production units in which the activities take place (the enterprise approach) rather than on the characteristics of the persons involved or of their jobs (the labour approach). The enterprise approach to defining the informal sector was seen as useful and acceptable for a description and analysis of both labour markets and national economies.

1.15. It was clear from the start, however, that the definition adopted in the 15th ICLS resolution did not capture the full extent of informal employment. In particular, it did not include non-standard, atypical, alternative, irregular or precarious types of employment in the formal sector. Statisticians, researchers and activists therefore worked with ILO to broaden the concept. In 2001 the Expert Group on Informal Sector Statistics (known as the Delhi Group)[2] recommended that "the definition and measurement of employment in the informal sector need to be complemented with a definition and measurement of informal employment" (CSO, 2001).

1.16. Responding to this recommendation, the ILO developed a conceptual framework for a broader measurement of informal employment to complement measures of employment in the informal sector. The 17th ICLS reviewed this

[2] The Delhi Group on Informal Sector Statistics was set up in 1997 as an international forum to exchange experience in the measurement of the informal sector, to document data collection practices of member countries, including their definitions and survey methodologies, and to recommend measures for improving the quality and comparability of informal sector statistics. See http://unstats.un.org/unsd/methods/citygroup/delhi.htm

framework and adopted appropriate guidelines in 2003 (reproduced in Appendix A2). Those guidelines, along with this manual, are also a response to the request made by the International Labour Conference in 2002 that the ILO should assist countries in the collection, analysis and dissemination of statistics on the informal economy (ILO, 2002b).

Measurement objectives

1.17. A comprehensive system of statistics on employment in the informal sector and on informal employment that includes quantitative information on the size and contribution of the informal sector and informal employment will improve labour statistics and national accounts as an information base for:

(a) macroeconomic analysis, planning, policy formulation and evaluation, as well as the integration of the informal sector into the development process and its institutionalization;

(b) the formulation and implementation of policies for economic and social development, including employment creation, production, income generation, human capital formation and the mobilization of financial resources;

(c) the design, implementation and monitoring of specific support policies and assistance programmes for the informal sector as a whole or in part and for those working in the sector, with a view to increasing the productive potential and the employment and income-generating capability of informal sector units, improving working conditions and social protection for the workers, developing an appropriate regulatory framework, promoting the organization of these workers in order to assist their transition to the formal sector, and analysing the economic and social situation of particular categories of workers – for example, women, children and rural-urban migrants (ILO, 1993a, paragraph 1).

1.18. These objectives, cited in the 15th ICLS resolution, are perhaps just as relevant today, as globalization has continued to transform national economies and the nature of employment. The assessment of the impact of economic policies calls for more disaggregated statistics on employment in order to distinguish informal employment and employment in the informal sector from other forms of employment. These statistics are essential for formulating and assessing macro-economic and socio-economic policies as well as for designing, implementing and monitoring specific support and assistance programmes. Some of the key issues whose formulation can be greatly assisted by access to these statistics are described in the sections that follow.

Macro-economic and related development policies

1.19. One of the main purposes of producing statistics on the informal sector is to provide information for implementing, monitoring and analysing macro-economic and related development policies. Statistics on the informal sector offer more exhaustive and accurate estimates of the size of the informal sector within the gross domestic product (GDP). They also serve to analyse the sources of GDP growth and the relative susceptibility of the informal sector to economic policies. This objective is highlighted in the 1993 System of National Accounts (1993 SNA), which states that for purposes of economic analysis and policy-making "it is particularly important for many developing countries to be able to distinguish between the formal and informal sectors of the economy" (UN et al., 1993, paragraph 4.159). The 2008 SNA further stresses the importance of statistics on the informal sector and informal employment by devoting a chapter to the topic, specifically Chapter 25 on "Informal aspects of the economy" (UN et al., 2009). This chapter sets out the conceptual groundwork for preparing two supplementary national accounts tables presenting data on the informal sector and informal employment, one on production and income generation and the other on employment.

1.20. For developing countries, statistics on changes in informal employment and the informal sector are especially relevant to an understanding of the structure of the labour market and the quality of employment, in a way that the unemployment rate probably never was. In developed countries the unemployment rate is becoming increasingly inadequate to a proper understanding of labour imbalances and conditions in recent decades.

1.21. Statistics on informal sector employment and on informal employment outside the informal sector are also important for designing and evaluating government policies and programmes aimed at promoting and creating employment. These include training programmes, schemes to help people start or return to work, wage subsidies, tax exemptions and other incentives to generate employment, and monitoring the working conditions and social and legal protection of informal workers inside and outside the informal sector. In addition, the role of informal employment as a source of employment for women, young people and migrants should be considered in the development and evaluation of policies on employment creation, gender equality, youth employment and rural development. Such policies need to be based on a comprehensive set of employment and demographic statistics on the total or on the working-age population. The relevant statistics include a cross classification of formal and informal employment, type of production unit (formal sector enterprise, informal sector enterprise, household), industry and employment status and the basic demographic variables (sex, age and rural/urban residence).

1.22. The distinction between formal and informal employment is of particular importance for policy-oriented monitoring of gender issues. Informal employment is a major source of employment for women. Given the multi-segmented nature of the labour market, a reliable picture of the progress being made towards the goal of women's equality in employment requires a cross-classification of status in employment, employment in agriculture and non-agricultural sectors and formal and informal employment. The Gender Indicators Sub-group of the Inter-Agency and Expert Group on MDG Indicators recommended that this complete set of statistics be used rather than a single indicator to monitor progress on gender equality and women's empowerment at the national level (UN, 2005b).

1.23. Statistics on informal employment are also one of the main indicators for monitoring progress towards the attainment of decent work at the national level. The ILO Declaration on Social Justice for a Fair Globalization summarizes the Decent Work Agenda as having four equally important strategic objectives: promoting employment, social protection, social dialogue and tripartism, and fundamental principles and rights at work – with gender equality and non-discrimination as cross-cutting issues (ILO, 2008a). Informal employment is one of four core indicators recommended for the measurement of employment opportunities (ILO, 2008b).

Small enterprise development

1.24. Small and micro-enterprises are a focus of attention for policy-makers because they are seen as having great potential for job creation and income generation. Statistics on the characteristics of the economic units that comprise the informal sector are needed for designing and implementing programmes aimed at increasing the potential of informal enterprises. Informal sector surveys can provide information on production or output as well as on size and number of workers, age of unit, characteristics of the entrepreneur or owner of the economic unit, capital and equipment, the constraints under which the units operate, they way they are organized and their relationship with the formal sector and public authorities. These statistics provide essential information for efforts to create incentives and simplify registration procedures for entrepreneurs, as well as for necessary support services such as microfinance, business development and infrastructure investment. The statistics may also be of use in improving the conditions of workers, by persuading employers to provide more benefits and better protection. The statistics may, moreover, be used to identify the special problems encountered by women entrepreneurs and to design forms of intervention to improve their access to assets and their competitiveness.

Poverty reduction

1.25. Programmes that seek to improve the economic well-being of the poor need to be backed by statistics on informal employment. Not only are many of the working poor employed in informal employment but informal employment can be the most effective means for them to rise out of poverty. More broadly, since the main source of income for most people is employment, employment-related income statistics for detailed categories of informal and formal employment are essential for designing, implementing and evaluating government policies on income generation, poverty alleviation and income redistribution. In addition, the joint measurement and analysis of employment and household income is relevant to understanding the relationship between being poor and working in informal employment. These statistics are especially important in exploring the links between gender, work and poverty (Chen et al., 2005, pp 50-54).

Labour regulations

1.26. Statistics on the number and characteristics of workers in informal employment may be useful both for advocating and for developing labour standards. They may help to focus public attention on issues of social concern, such as child labour and racial or gender-based discrimination. They may also shed light on the situation of workers in specific types of informal employment such as homeworkers, street vendors and day labourers. Statistics on employment-related income, hours of work, the stability and security of work and social protection for particular categories of workers – for example, those engaged in certain types of informal employment and socio-demographic categories such as children, women and racial and ethnic groups – are useful in designing forms of intervention to improve working conditions and in developing an appropriate regulatory framework.

Data collection programme

1.27. In order to fulfil these measurement objectives a coherent data collection programme needs to be developed. This programme should be based on surveys that measure the informal sector and informal employment directly, thus avoiding indirect estimation methods as much as possible. A now disproved view in the development field was that the informal economy would disappear. It was also commonly believed that activities that took place in the informal economy were too small and hidden to be measured. However, since many countries have successfully conducted surveys to produce statistics on employment in the informal sector and on informal jobs outside the informal sector, the feasibility of data collection on these topics has become clear. Given the nature and importance of the policy issues involved, it has been recognized that statistics obtained from indirect methods of estimation are too imprecise and uncertain.

Not only are the estimates based on hypothetical assumptions but they are also highly aggregated and fail to provide information either on the composition of the informal economy or on the way it functions. It is now recognized that comprehensive, reliable and detailed information on activities in the informal economy can be obtained only by means of direct measurement through surveys.

1.28. Statistics on the informal sector and on informal employment need to be given high priority in national statistical policy, and the production of statistics on these topics should be integrated into the regular national statistical system (ILO, 1993a, paragraph 21(1)). Strategies and programmes for the regular collection of statistics on the informal sector and on informal employment should form an integral part of every national plan for statistical development.[3] The design of a data collection programme on the informal sector and on informal employment should facilitate (i) the monitoring of changes in employment in the informal sector and in informal employment outside the informal sector, and (ii) an in-depth analysis of the number, characteristics and functioning of informal sector units as well as an analysis of employment and enterprise data in conjunction with other characteristics of households and workers. Data for monitoring employment should be collected at regular intervals, if possible every year; the data for an in-depth analysis of economic units, which often calls for more specialized and costly surveys, can be collected at less frequent intervals. Informal sector and informal employment statistics should be compatible and, to the extent possible, linked with related economic and social statistics and with national accounts. Joint analysis is facilitated if the different sets of statistics correspond in terms of reference periods, coverage, definitions and classification (ILO, 1993a, paragraphs 3-4).

1.29. The production of statistics on the informal sector and on informal employment marks an important step towards the overall improvement of labour statistics, economic statistics and national accounts. In every country the appropriate methodology for the statistical measurement of the informal sector and of informal employment will depend on the users' requirements and measurement objectives, the organization of the national statistical system and the resources available. Possible approaches to such measurement include household surveys that comprise a labour force component (particularly labour force surveys), establishment surveys that measure production, and mixed household and enterprise surveys. These methods will be considered in Chapters 3 to 6.

[3] These include the National Strategies for the Development of Statistics (NSDS), promoted by PARIS21 within the framework of the 2004 Marrakech Action Plan for Statistics to encourage low-income countries to define a medium- and long-term strategy and development plan for their national statistical systems. For more details, see http://paris21.org/NSDS

Identifying the data requirements of major users

1.30. Once the decision is made to undertake surveys to collect data on informal employment and/or the informal sector, statisticians need to work with users on detailed planning. The starting point of the planning process is to identify the type of statistics required by major users, as the uses they have for the statistics define the requirements that need to be addressed by the data collection programme. It should, however, be recognized that users' demand for statistics is bound to evolve with their experience of the policies pursued and with their having access to statistics. Such evolving needs should as far as possible be anticipated.

1.31. Users can be grouped under the following broad headings (OECD et al, 2002, Chapter 6):

(a) the national statistical office, which responds to and anticipates the statistics that are needed for planning, implementing and evaluating policies and for public debate – including labour statistics and national accounts;

(b) the national government, which needs statistics for the planning, implementation and evaluation of policies, i.e., the national bank and the ministries dealing with economic affairs, finance, industry, trade, employment, women and young people;

(c) regional and local governments, which need statistics for their role in planning, implementing and reporting on policies;

(d) the business community, which needs statistics to plan recruitment, production and marketing – both large individual businesses and business associations;

(e) trade unions and non-governmental organizations, which need statistics to understand the reality behind their activities;

(f) academic and research institutions, which need statistics to carry out research, monitor developments and evaluate policy;

(g) the media and general public, which need statistics to understand realities, monitor developments and participate in the policy discussion;

(h) international organizations, which need reasonably comparable national statistics to facilitate the analysis and monitoring of developments both regionally and globally –including the monitoring of developments in respect of the Millennium Development Goals, the ILO's Decent Work Agenda and the preparation of national poverty reduction strategy programmes (PRSPs).

Consultations with this wide range of potential users will contribute to building support for data collection and provide a basis for establishing priorities as to what data are to be collected.

Contents

1.32. The present manual is a technical and operational guide for national statisticians interested in the production of statistics on employment and production in the informal sector and on informal employment outside the informal sector. This introductory chapter is the first of eight chapters. The second chapter describes in greater detail the concepts, definitions and sub-classifications that have been introduced above. Chapter 3 considers the measurement objectives and data collection strategies that are needed for producing statistics on informal employment and production and on employment in the informal sector and provides an overview of the main alternative sources of data, namely, household surveys (particularly labour force surveys), enterprise surveys and mixed household and enterprise surveys. Chapter 4 describes the collection and processing of data for the production of statistics on informal employment and on the informal sector through household surveys. Chapters 5 and 6 focus on methods of collecting data on enterprises in the informal sector: Chapter 5 on establishment surveys and censuses, and Chapter 6 on mixed surveys of informal sector enterprises. The last two chapters focus on how to use the statistics obtained: Chapter 7 deals with tabulation, reporting and dissemination issues, while Chapter 8 describes the use of statistics for national accounts purposes.

Chapter 2.
Concepts, definitions and sub-classifications of informal sector and informal employment

Introduction

2.1. In January 1993, the Fifteenth International Conference of Labour Statisticians (15th ICLS), adopted a *Resolution concerning statistics of employment in the informal sector* (ILO, 1993a) (hereinafter referred to as the 15th ICLS Resolution), to assist national statistical offices in developing definitions, classifications and methods of data collection for the informal sector.

The 15th ICLS Resolution covers issues relating to the definition of the informal sector as such and the design, content and conduct of informal sector surveys. It represents the first – and so far the only – international statistical standards on the topic. It is reproduced in Appendix A1. Following suggestions by the Expert Group on Informal Sector Statistics (Delhi Group) and others, in November-December 2003 the Seventeenth International Conference of Labour Statisticians (17th ICLS) endorsed *Guidelines concerning a statistical definition of informal employment* (hereinafter referred to as the 17th ICLS Guidelines), which complement the 15th ICLS Resolution. These guidelines are reproduced in Appendix A2.

2.2. This chapter is organized as follows: the next two sections summarize and explain the international statistical definitions of informal sector enterprises, employment in the informal sector and informal employment that were adopted by the 15th and 17th International Conferences of Labour Statisticians. The sections that follow deal with a number of related issues, including the link between the concept of informal sector and informal employment and that of the non-observed economy and of the 'informal economy', as well as with important sub-classifications of informal sector enterprises, employment in the informal sector and informal employment.

The informal sector

2.3. Since it was first coined in the early 1970s, the term 'informal' has been used with different meanings for different purposes. Originally, it referred to a concept for analysis and policy-making. Today it is sometimes used in a much broader sense, to refer to a concept that defines activities not covered by the existing, conventional sources of statistics. In line with the original notion, the starting point of the 15th ICLS resolution in defining the informal sector was an informal sector perceived as an analytical/political concept rather than as a statistical concept. Paragraph 5 (1) of the 15th ICLS resolution states:

> "The informal sector may be broadly characterized as consisting of units engaged in the production of goods or services with the primary objective of generating employment and incomes to the persons concerned. These units typically operate at a low level of organization, with little or no division between labour and capital as factors of production and on a small scale. Labour relations – where they exist – are based mostly on casual employment, kinship or personal and social relations rather than contractual arrangements with formal guarantees."

2.4. The resolution carefully ensured that the activities included in the informal sector definition were as homogeneous as possible with respect to their economic objectives and behaviour and the requirements of data analysis. For practical purposes, a related consideration in the resolution was the need for, and usefulness of, the inclusion of enterprises through informal sector surveys.

2.5. The 15th ICLS resolution tried as far as possible to accommodate the notion of the informal sector as a statistical concept by extending its scope to as large a universe of non-observed activities as seemed practically feasible and conceptually justifiable, but it rejected its interpretation as a 'catch-all' concept. Thus, the definition adopted does not lead to segmentation of the economy or of the employed population according to a formal/informal sector dichotomy. The resolution recognized that activities excluded from the scope of the informal sector definition were not necessarily formal. Examples include the household production of goods exclusively for own final use, small-scale agriculture, paid domestic service and activities currently falling outside the SNA production boundary, such as domestic or personal services provided by unpaid household members for their own or another household. It was recommended that such activities be identified as belonging to separate categories outside the formal/informal sector distinction (see paragraph 20 of the 15th ICLS resolution).

2.6. The definition had to be acceptable to countries from different parts of the world whose economic, social and institutional situations differed widely. It thus had to be broad enough to encompass the different manifestations of the informal sector in different countries. And it had to be sufficiently flexible to adapt to national circumstances, even though such flexibility might adversely affect the international comparability of the statistics for certain descriptive and analytical purposes.

2.7. Finally, the 15th ICLS resolution defined the informal sector in such a way that the definition could be used by the UN System of National Accounts (SNA). The international statistical definition of the informal sector adopted by the 15th ICLS was in fact used in the 1993 version of the SNA (1993 SNA), although Chapter IV of the 1993 SNA reproduced only its main parts (UN et al., 1993). The 2008 SNA provides more detail, as it includes a full chapter on 'Informal aspects of the economy' (UN et al., 2009, Chapter 25). Identification of the activities undertaken by informal sector enterprises within the national accounts makes it possible to quantify the contribution of the informal sector to the national economy, which is an urgent need for many countries and affords recognition of the persons employed in the informal sector. However, this requirement has certain implications.

2.8. As noted in Chapter 1, in order to obtain an internationally agreed definition of the informal sector that was acceptable for labour statistics as well as for the national accounts, the informal sector had to be defined in terms of the characteristics of the production units (enterprises) in which the activities took place (enterprise approach), rather than in terms of the characteristics of the persons involved or of their jobs (labour approach). As a result, persons are classified as being employed in the informal sector if they work in enterprises with characteristics corresponding to the definition of that sector.

2.9. Persons employed in production units outside the informal sector are excluded from the international definition of the informal sector, no matter how

precarious their employment situation may be. Thus, the concept of employment in the informal sector is different from the concept of informal employment, i.e., persons employed in informal jobs. The 15th ICLS was aware of the need for statistics not only on employment in the informal sector but also on employment in informal jobs. Paragraph 22 (4) of the 15th ICLS resolution suggests, in the case of measurement through household surveys, that "depending on national circumstances and data needs, information on various forms of atypical or precarious employment outside the informal sector may be obtained along with data on the different forms of employment in the informal sector". However, it was not until ten years later, in 2003, that the 17th ICLS guidelines recommended an international statistical definition of informal employment to complement the informal sector definition (see ILO, 2003, paragraph 2.67, and Appendix A2).

2.10. The 15th ICLS resolution defined the informal sector as a sub-group of production units included in the households institutional sector of the SNA. In other words, informal sector enterprises were defined as a subset of household unincorporated enterprises. In contrast to corporations and quasi-corporations, a household unincorporated enterprise is a producing unit that is not constituted as a separate legal entity independently of the household member or members who own it. It has no complete set of accounts that would provide a means of identifying flows of income and capital between the enterprise and the owner(s). Household unincorporated enterprises include unincorporated enterprises owned and operated by individual household members or by several members of the same household, as well as unincorporated partnerships formed by members of different households that do not maintain a complete set of accounts (ILO, 1993a, paragraph 7, and UN et al., paragraphs 4.155 and 4.156).

2.11. The term 'enterprise' is to be understood in a broad sense as referring to any unit engaged in the production of goods or services for sale or barter. It covers not only production units that employ workers or purchase services from other units, but also those that are owned and operated by single individuals working for their own account as self-employed persons, either alone or with the help of unpaid family members. The production activities may be undertaken inside or outside the business owner's home, and they may be carried out in identifiable premises, unidentifiable premises or without a fixed location. Independent street vendors, taxi drivers, home-based workers, etc. are thus all considered to be enterprises. Because the conventional understanding of the term 'enterprise' is generally restricted to units in fixed visible premises away from dwellings, the manual uses the term 'economic unit' instead.

2.12. The meaning of the term 'sector' follows the SNA, so that the definition of the informal sector refers only to the productive activities of households that are within the SNA production boundary. For national accounting purposes, a sector (institutional sector) is not the same as a kind of economic activity (industry).

It consists of units that are similar in terms of their principal functions, behaviour and objectives but do not necessarily constitute a homogeneous set of production units in terms of other criteria, such as type of product produced or serviced provided.

2.13. Paragraph 5 (2) of the 15th ICLS resolution recognises that the characteristic features of household unincorporated enterprises described in the SNA correspond well to the concept of the informal sector as commonly understood. The fixed assets and other capital used belong to the owners of the enterprises. The enterprises as such cannot engage in transactions or enter into contracts with other units or incur liabilities on their own behalf. The owners have to raise the necessary finance at their own risk and are personally liable, without limit, for any debts or obligations incurred in the production process. Expenditure for production is often indistinguishable from household expenditure, and capital equipment such as buildings or vehicles may be used indistinguishably for business and for household purposes.

International statistical definition of the informal sector (15th ICLS resolution)

2.14. The first three criteria of the definition of informal sector enterprises in the 15th ICLS resolution refer to the legal organization of the enterprises, their ownership and the type of accounts kept for them. These three criteria are all embodied in the concept of household unincorporated enterprises as described above. However, while all informal sector enterprises can be regarded as household unincorporated enterprises, not all household unincorporated enterprises belong to the informal sector. In defining the additional criteria to distinguish informal sector enterprises from other household unincorporated enterprises, the 15th ICLS resolution adopted a modular approach, as illustrated in Table 2.1 below.

Table 2.1.
Classification of household unincorporated enterprises (15th ICLS resolution)

Type of enterprise	All household unincorporated enterprises	
	Informal sector enterprises	Other household unincorporated enterprises
Own-account enterprises	**Informal own-account enterprises**	Other own-account enterprises
Enterprises of employers	**Enterprises of informal employers**	Other enterprises of employers

2.15. Within household unincorporated enterprises a distinction was made between ‘enterprises of employers’ and ‘own-account enterprises’. In accordance with the definitions of employers and own-account workers in the 1993

International Classification of Status in Employment (ICSE-93) (ILO, 1993b, paragraphs 9-19), this distinction was based on whether or not an enterprise employs at least one employee on a continuous basis (as distinct from the employment of employees on an occasional basis or employment of contributing family workers). Compared with own-account enterprises, enterprises of employers necessarily have a higher degree of formality in their operations and therefore require additional criteria to be classified in the informal sector. The distinction between these two groups of enterprises was considered useful for the purposes of description and analysis, as well as for policy-making and the stratification of samples for informal sector surveys. Accordingly, the informal sector was defined as comprising informal own-account enterprises and enterprises of informal employers, for which the separate criteria described below were specified.

2.16. There are basically two different but interrelated ways of viewing and defining the informal sector. One approach views enterprises in relation to the legal and administrative framework in force and defines the informal sector as being made up of enterprises that do not conform to this framework in some way. It assumes an intrinsic relation between non-registration and informality. The second approach views the informal sector as constituting a particular form of production, in terms of the way the enterprises are organized and carry out their activities. Supporters of the second approach maintain that the informal sector is not identical to the unregistered sector. They stress the need for a clear conceptual basis in defining the sector and point to the problems that a criterion based on registration may pose for the comparability of informal sector statistics between countries, between different areas within a country and over time. They also cite practical difficulties in obtaining information about the registration of enterprises, as the registers may not be updated, their owners may be reluctant to provide information about non-registration, and other respondents (e.g., employees) may be unable to do so. They view non-registration as a characteristic of the informal sector rather than as a criterion for defining it. If viewed from this perspective, there may be informal sector units that *are* registered, and therefore such lack of registration is neither a necessary nor a sufficient criterion for classifying them in the informal sector.

2.17. There was no agreement at the 15th ICLS as to which of the two approaches was preferable. The definition in the 15th ICLS resolution therefore incorporated both approaches, in the sense that it allows non-registration and/or employment size to be used as a criterion in distinguishing informal sector enterprises from other household unincorporated enterprises.

Informal own-account enterprises

2.18. Paragraph 8 of the 15th ICLS resolution specified that, depending on national circumstances, either all own-account enterprises or else only those that are not registered under specific forms of national legislation should be considered informal. The legislation referenced includes factories' acts, commercial acts, tax

and social security laws, professional groups' regulatory acts, and similar acts, laws or regulations established by national legislative bodies. Regulations enacted by local authorities for those who need to obtain a trade licence or a permit to operate a business are excluded since, being governed by administrative regulations and enforcement regimes that may vary considerably from one country to another and, within the same country, over time or between different regions, they are not considered to be relevant. Moreover, they are not thought to have much effect on the way the enterprises are organized and operated or on their economic objectives and behaviour. Homogeneity of economic objectives and behaviour is the guiding principle for distinguishing between the various institutional sectors and sub-sectors in the SNA. It should be noted that in many countries the criterion of non-registration, if properly defined, covers both the lack of legal identity and lack of a complete set of accounts.

2.19. The 15th ICLS resolution did not include any size criterion in the definition of informal own-account enterprises. This criterion was considered unnecessary, as by their very nature virtually all own-account enterprises are small.

Enterprises of informal employers

2.20. Paragraph 9 of the 15th ICLS resolution specified that enterprises of informal employers should be defined in terms of one or more of the following three criteria:

- small size of the enterprise in terms of employment;
- non-registration of the enterprise (defined as for informal own-account enterprises);
- non-registration of its employees.

2.21. According to the 15th ICLS resolution, the criterion of employment size can be formulated in terms of:

- the number of employees employed by the enterprise on a continuous basis, or
- the total number of employees (including employees employed on an occasional basis), or
- the total number of persons engaged during a specific reference period (including the entrepreneur or owner, business partners and contributing family workers in addition to the employees).

2.22. The first of these is considered to be the ideal measure from the conceptual perspective as it best matches the definition of informal own-account enterprises, which does not take account of the number of enterprise owners, business_partners, contributing family workers and casual employees working in the enterprise. In practice, however, information on the number of all employees

or on the total number of persons engaged is more easily obtained from survey respondents than is information on the number of employees employed on a continuous basis, and it may correspond more closely to the criterion used in practice to define the lower size cut-off point for surveys of formal sector enterprises or establishments.

2.23. In the case of enterprises comprising more than one establishment,[4] the 15th ICLS resolution recommended using the establishment rather than the enterprise as the unit to which the size criterion refers. It specified that an enterprise composed of more than one establishment should be considered informal if none of its establishments exceeds the size limit. For many countries the use of the establishment rather than the enterprise as the unit for the size criterion ensures compatibility with the criterion determining coverage of formal sector establishment surveys. Thus, informal and formal sector statistics can complement each other. It also becomes possible in this way to capture the development of informal sector enterprises, which for various reasons tend to grow through the creation of additional small establishments rather than through an expansion of employment in the original establishment.

2.24. A major advantage of the size criterion in defining the informal sector is that size can be measured relatively easily by all relevant surveys. In addition, there is usually a correlation between small size and other aspects of informality. For example:

- Small enterprises can remain unidentified by the authorities more easily than larger enterprises.
- Governments with limited administrative resources tend to focus on large enterprises when trying to collect taxes or enforce labour legislation.
- Unions tend to concentrate on large enterprises, which can be reached more easily so that their efforts can have maximum impact.
- Small enterprises tend to use more traditional production methods.

On the other hand, proponents of non-registration as the informal sector criterion note that small size, unless used in combination with other criteria, is not sufficient to define the informal sector and that the choice of the size limit is more or less arbitrary.

2.25. The size limit for enterprises of informal employers was not specified by the 15th ICLS resolution, so it can be varied according to the needs of countries and even between the kinds of economic activity within a country. In order to avoid an overlap with formal sector surveys, it was recommended that the choice of the size limit take account of the coverage of enterprise/establishment surveys of the larger units in the relevant kind of economic activity, where such surveys

[4] For a detailed discussion of enterprises and establishments, see UN et al., 2009, Chapter 5.

exist. Some national statistical offices prefer to have a certain overlap in coverage because this will ensure a better total coverage and better data quality for small units. This overlap should be described.

2.26. During the 15th ICLS consideration was given to defining the informal sector residually as comprising all units that are not covered in existing enterprise/establishment surveys. It was decided, however, that such a definition would not be appropriate for data analysis and policy-making as it would tend to be unstable over time; in other words, the informal sector would expand or contract if the coverage of the existing surveys were changed because of variations in the capacity of the National Statistical Office and in the quality of registers, for instance). It would also introduce substantial differences between countries according to the coverage of their surveys. Furthermore, it was recommended that, where the existing cut-off point used for formal sector surveys seemed too high to be useful as the size limit for the informal sector, an effort should be made to extend formal sector survey coverage by lowering the cut-off point, thereby closing the gap from both ends. Where this is not possible, it may be preferable to recognize the existence of an intermediate segment and to cover it by a separate survey, rather than to include it in the scope of informal sector surveys, because the survey method used for collecting data on informal sector enterprises may not be as well suited to medium-sized enterprises.

2.27. The criterion of non-registration of the employees of the enterprise reflects the fact that the conditions of employment in the informal sector are different from those considered normal in formal sector establishments. This difference may take the form of an absence of employment or apprenticeship contracts which commit the employer to pay the relevant taxes and social security contributions on behalf of the employees or which make the employment relationship subject to standard labour legislation. According to this criterion, an enterprise is informal if none of its employees are registered with the relevant authorities for tax or social security purposes. The criterion is especially useful in countries where the registration of workers entails the registration of the enterprises employing them with the social security institutions, etc. In other countries the registration of workers is likely to be a more useful criterion to define informal jobs of employees than to define units in the informal sector.

2.28. Table 2.2 summarizes the criteria of the 15th ICLS resolution's definition of informal sector enterprises.

Table 2.2.
Criteria for defining informal sector enterprises (15th ICLS resolution)

Criterion	Purpose
1. Legal organization: enterprise not constituted as a legal entity separate from its owner(s)	Identification of unincorporated enterprises
2. Ownership: enterprise owned and controlled by member(s) of household(s)	Identification of household unincorporated enterprises
3. Type of accounts: no complete set of accounts, including balance sheets	Exclusion of quasi-corporations from household unincorporated enterprises
4. Product destination: at least some market output	Identification of household unincorporated enterprises with at least some market production; exclusion of household unincorporated enterprises producing goods exclusively for own final use by the household
5. Kind of economic activity	Exclusion of households employing paid domestic workers; possible exclusion of enterprises engaged in agricultural and related activities
6.1 Number of persons engaged/employees/employees employed on a continuous basis: fewer than 'n'. and/or 6.2 Non-registration of the enterprise, and/or 6.3 Non-registration of the employees of the enterprise	Identification of informal sector enterprises as a subset of household unincorporated enterprises with at least some market production

Table 2.3 provides examples of definitions of informal sector enterprises used in national household-based surveys that are based on the international definition. Some of these surveys are described further in Chapter 4.

Table 2.3.
Definitions of informal sector enterprises used by selected countries/organizations

Country/ Organization	Source	Definition
Brazil	Urban informal economy survey	Household unincorporated enterprises with fewer than six employees and without a complete set of accounts (agriculture excluded)
Mexico	National survey of occupations and employment	Household unincorporated enterprises that have no complete set of accounts and are not registered (agriculture excluded)
Panama	Household survey	Household unincorporated enterprises with fewer than five employees (agriculture excluded)
AFRISTAT	1-2-3 surveys	Household unincorporated enterprises that are not registered with the national statistical institute or other administrations, and/or that do not have formal written accounts according to the standard plan (agriculture excluded)
Ethiopia	Urban employment/unemp loyment survey	Household unincorporated enterprises without an accounts book that have fewer than 11 employees or no licence (agriculture included)
Mali	Labour force survey, 2007	Private enterprises with fewer than 11 persons engaged that are not registered with the National Institute for Social Protection and do not have accounts (agriculture excluded)
United Republic of Tanzania	Integrated labour force survey	Household unincorporated enterprises with fewer than 10 employees and without a complete set of accounts (agriculture excluded)
Republic of Moldova	Labour force survey	Household unincorporated enterprises that are not registered (agriculture included)
Russian Federation	Population survey on employment problems	Household unincorporated enterprises that are not registered as a legal entity or have no legal status (agriculture included)
Turkey	Household labour force survey	Household unincorporated enterprises paying a lump-sum tax or not paying any tax, and with fewer than 10 persons engaged (agriculture excluded)
India	National sample survey, 61st Round (2004-2005)	Household unincorporated enterprises with fewer than 10 persons engaged (agriculture excluded)
Pakistan	Labour force survey	Household unincorporated enterprises owned and operated by (a) own-account workers or (b) employers with fewer than 10 persons engaged (agriculture excluded)

Source: ILO Department of Statistics

Scope of informal sector surveys and treatment of special cases

2.29. To supplement its definition of the informal sector, the 15th ICLS resolution adopted a number of additional recommendations regarding the scope of informal sector surveys and the statistical treatment of borderline cases between the informal sector and other sectors (see paragraphs 14-19 of the 15th ICLS resolution).

Productive activities outside the SNA production boundary

2.30. The scope of the informal sector is restricted to activities within the production boundary as defined in the latest version of the SNA. This restriction was considered necessary to ensure that employment, production and income generation in the informal sector can be measured as a share of total employment, total sector product, gross domestic product and national income. Domestic and personal services provided by unpaid household members to their own or another household are excluded.

2.31. It should be noted that the SNA production boundary also includes illegal and underground production activities. In principle, such activities fall within the scope of the informal sector if they are undertaken by units meeting the criteria of the informal sector definition (see paragraphs 2.93 to 2.101 below). In practice, however, many such activities are likely to go unreported in statistical surveys of the informal sector.

Production for own final use

2.32. According to the 15th ICLS resolution, households that are exclusively engaged in the production of goods or services for own final consumption or own fixed capital formation by the same household (e.g., subsistence farming, construction of own dwellings, manufacture of wearing apparel, furniture, water and fuel collection, etc., when none of the production is sold to others) are excluded from the informal sector, with the possible exception of households employing paid domestic workers (as noted below). This recommendation was based on two considerations:

- Units exclusively engaged in production for own final use differ in their economic objectives and behaviour from informal sector enterprises, which are typically operated for the purpose of earning a living or obtaining an additional income through the production of goods and services for sale to others or for barter. Thus, they should not be merged with informal sector enterprises.
- It was noted that it is difficult to determine the value of goods produced for own final use unless the same units also produce some of their goods for sale to others.

2.33. The 15th ICLS resolution's distinction between units exclusively engaged in production for own final use and other units does not match precisely the 2008 SNA's distinction between households as market producers and households as producers for own final use. The SNA considers as market producers only those enterprises where most or all of their output is marketed, and as producers for own final use all those units where most or all of their output is intended for own final use (UN et al., 2009, paragraph 25.51). The 15th ICLS resolution chose a wider concept of market producers (i.e., household unincorporated enterprises with at least some market production) and a narrower concept of producers for own final use (i.e., household unincorporated enterprises not marketing any of their production), because the Conference realized the practical difficulties involved in determining the interpretation of 'most' and, in the context of informal sector measurement, felt the need to take all market activities into account. These conceptual relations are shown in Table 2.4 and are also discussed in paragraph 2.92 below.

Table 2.4.
Household producers by product destination

<table>
<tr><td colspan="3">Households as producers
Household unincorporated enterprises (2008 SNA)</td></tr>
<tr><td>Producers of goods and services for sale or barter in the market
Household unincorporated market enterprises (2008 SNA)</td><td colspan="2">Producers of goods mainly for own final use</td></tr>
<tr><td>Selling all or most production</td><td>Selling some production</td><td rowspan="2">Not selling any production</td></tr>
<tr><td colspan="2">Household unincorporated enterprises with at least some market production (as defined by the 15th ICLS resolution)</td></tr>
</table>

Agricultural activities

2.34. Many countries exclude agricultural and related activities (ISIC, rev. 4, Section A; see UN, 2008c) from the scope of statistics on the informal sector, but some include them. The 15th ICLS resolution recognized that, from a conceptual standpoint, agricultural and related activities would be included in the scope of the informal sector if they are carried out by household unincorporated enterprises and if they meet the criteria of the informal sector definition. For practical data collection purposes, however, the 15th ICLS resolution (ILO, 1993a, paragraphs 16 and 20) provided the option to exclude agricultural and related activities from the scope of informal sector surveys and to measure them separately. The reasoning was that many developing countries have a large agricultural sector, mainly composed of small, unregistered household unincorporated enterprises, and that the inclusion of such enterprises in informal sector surveys would lead to_a considerable expansion of survey operations and increase in costs. Moreover, many national statistical offices already have an established system of agricultural

surveys whose coverage includes (or can be extended to include) household unincorporated enterprises engaged in agricultural and related activities. In terms of concepts, definitions, classifications, survey content, questionnaire design, reference periods, sampling frames and procedures, organization of field work, etc., agricultural surveys could be well suited to meeting the particular requirements for measuring informal units carrying out agricultural and related activities. Another reason for excluding agriculture from the scope of the informal sector may be that in national accounting statistics on agricultural production one cannot always distinguish between market production and production for own final use. When the objective is only to measure employment, this manual recommends using household surveys and covering all kinds of economic activity, including agriculture, as discussed in paragraphs 4.44 to 4.56.

2.35. Regardless of whether agricultural activities are excluded, the 15th ICLS resolution recommended that non-agricultural activities of household unincorporated enterprises mainly engaged in the agricultural sector should be included in the informal sector if they meet the other criteria for inclusion. Experience has shown that such non-agricultural activities are frequently undertaken as secondary activities of farm households or during the agricultural slack season, and therefore measurement of secondary activities is an important requirement.

Rural areas

2.36. Recognizing the large number of informal sector activities in the rural areas of many countries and their similarity with urban informal sector activities, the 15th ICLS resolution recommended that, in principle, the informal sector should include enterprises located in rural areas as well as enterprises located in urban areas. However, countries conducting their first informal sector surveys were given the option of confining data collection initially to urban areas, until resources and appropriate sampling frames become available to cover the whole national territory.

Professional and technical services

2.37. In the past it had been suggested that enterprises engaged in the production of professional or technical services rendered by self-employed doctors, lawyers, accountants, architects, engineers, etc. should be excluded from the informal sector because of the high level of skills and other characteristics involved. However, the 15th ICLS resolution recommended that there should be no special treatment of such enterprises, i.e., that they should be included or excluded on the same basis as other enterprises.

Outworkers (Homeworkers)

2.38. Outworkers (homeworkers) are defined in the International Classification of Status in Employment (ICSE-93) as persons who agree to work for a particular enterprise, or to supply a certain quantity of goods or services to a particular

enterprise, by prior arrangement or contract with that enterprise, but whose place of work is not within any of the establishments that make up that enterprise (ILO, 1993b, paragraph 14(h) and UN et al., 2009, paragraph 7.34). These workers may be paid employees or self-employed workers, depending on the terms of their contract.[5] The identification of outworkers in household or establishment surveys can be complex, because they are at the borderline between self-employment and paid employment. Some workers may appear to be dependent outworkers but in fact have a contract with the enterprise they work for that makes them self-employed. Others may have a clear dependent employment relationship but hire employees or work with contributing family workers. The treatment of outworkers in household surveys is discussed further in paragraphs 4.30 to 4.33. The 15th ICLS resolution recommended that only the self-employed outworkers be included among informal sector enterprises, if their enterprises meet the criteria of the informal sector definition.

2.39. Criteria for distinguishing self-employed outworkers from employee outworkers include:

- the basis of remuneration (income received as a function of the value of output produced as against payment related to the amount of labour input provided);
- employment of paid workers by the outworker;
- non-existence of an employment contract with the enterprise receiving the goods or services produced by the outworker;
- decision-making on markets, scale of operations and finance; and
- ownership of machinery or equipment.

In situations where the number of outworkers is significant or where outworkers constitute a group of particular concern for the users of the statistics, the 15th ICLS resolution recommended that self-employed outworkers be identified as a separate sub-category of informal sector enterprises (ILO, 1993a, paragraph 18(3)).

Paid domestic workers

2.40. There was no agreement at the 15th ICLS regarding how paid domestic workers employed by households (domestic cleaners, child care workers, laundry workers, guards, drivers, gardeners, etc.) should be treated with respect to the informal sector. It was pointed out that in many situations it is virtually impossible to distinguish paid domestic workers who are self-employed (i.e., who are owners of household unincorporated enterprises producing services for sale on the market) from those who are employees of the households employing them (i.e., who are employees of household unincorporated 'enterprises' producing services for their own final consumption). Moreover, statistics on paid domestic workers and their

[5] The ILO's Home Work Convention (No. 177) uses a slightly different definition of home-work and considers all homeworkers as employees.

remuneration are often available from other sources, such as labour force or household income-expenditure surveys, so there may be no need to cover such workers in an informal sector survey.

2.41. For these reasons the 15th ICLS resolution left the issue of whether or not paid domestic workers should be included in the informal sector to be determined by the countries themselves, depending upon their national circumstances and the intended use of the statistics. However, it was recommended that, if paid domestic workers are included in the informal sector, they should be identified as a separate sub-category in order to enhance the international comparability of the statistics.

2.42. It was only at the 17th ICLS that more progress on this matter was achieved. The 17th ICLS guidelines make it clear that households that employ paid domestic workers as employees should be excluded from the informal sector (see paragraph 2.74 below). The exclusion follows a recommendation made by the Delhi Group at its third meeting (see paragraph 2.55 below). It does not concern self-employed persons who own household unincorporated enterprises producing domestic services for sale or the persons employed by them.

Comparability problems of national definitions

2.43. The *ILO Compendium of official statistics on employment in the informal sector* (ILO, 2002d) describes the comparability problems of currently used national definitions of the informal sector. Since the adoption of the 15th ICLS resolution in 1993 many national statistical offices have made a major effort to develop or improve official statistics on the informal sector, often in spite of having limited resources for producing statistics in general and informal sector statistics in particular. As some of the available statistics are based on national definitions of the informal sector developed prior to 1993, they are not always fully in line with the international statistical definition adopted in the 15th ICLS resolution. Even when based on the 15th ICLS resolution definition, statistics are sometimes not strictly comparable from one country to another because the international definitions have been adapted to national circumstances. It is hoped that this manual will contribute to enhancing the international comparability of future informal sector statistics or at least to achieving conceptual commonality.

2.44. Current data comparability problems result especially from the following factors:

- differences in the concepts on which the statistics are based;
- differences in the kinds of economic activity covered, particularly the inclusion or exclusion of agricultural activities;
- differences in the criteria used to define the informal sector, for example, employment size of the enterprise or establishment as against non-registration of the enterprise;

- use of different cut-off points for the employment size criterion;
- the inclusion or exclusion of paid domestic workers employed by households, or of producers of goods exclusively for own final use by their household;
- inclusion or exclusion of persons with a secondary job in the informal sector; and
- inclusion or exclusion of persons engaged in professional or technical activities.

2.45. A major deviation from the international definition is that some countries do not yet use the criterion of legal organization of the enterprise (household unincorporated enterprises) nor the criterion of a lack of a complete set of accounts in their national statistical definitions of the informal sector, especially when the number of quasi-corporations is known or expected to be small. Instead, the statistics sometimes refer to small or micro-enterprises, including small corporations and quasi-corporations, which leads to an overestimation of the size of the informal sector.

2.46. Of equal importance is the fact that some countries include small-scale or unregistered agricultural activities in their definition of the informal sector, while others do not. Since the vast majority of agricultural activities in most countries are undertaken in rural areas, such differences have a larger effect on the international comparability of data for rural areas than for urban areas.

2.47. Many of the countries for which statistics are available use the criterion of non-registration of the enterprise, either alone or in combination with other criteria such as small size or type of workplace, to define the informal sector. In most cases the criterion refers to the non-registration of the enterprise as a corporation, or to its non-registration with the tax authorities or for statistical purposes. Many other countries use small size as a criterion to define the informal sector, either alone or in combination with criteria such as the non-registration of the enterprise or the type of workplace. The criterion of non-registration of the employees of the enterprise is mainly used to define informal employment.

2.48. The cut-off point for the size criterion varies from country to country. However, there is a clear preference for 'fewer than five', 'five or fewer', 'fewer than ten' or 'ten or fewer'. While most countries use the same size limit for all kinds of economic activity, some use different limits for different kinds of economic activity. Differences among countries also exist according to whether the size criterion is applied to the enterprise as a whole or to each of its establishments (if more than one), and whether it refers to the total number of persons engaged or to the number of employees.

2.49. National practice with respect to the treatment of paid domestic workers employed by households differs among countries and data sources, as they do with

respect to the treatment of producers of goods exclusively for own final use by their household. The international comparability of data for women is more affected by differences in the treatment of these groups of persons than it is for men.

2.50. National statistics on persons employed in the informal sector often refer only to those whose main or only job/activity is in the informal sector and exclude those with a secondary job/activity in the informal sector, such as farmers or government employees. As the number of persons with a secondary job/activity in the informal sector can be quite large, statistics that exclude persons with a secondary job/activity in the informal sector should be considered as a lower-bound estimate of total employment in the informal sector.

2.51. Another deviation from the international definition of the informal sector is found among countries that exclude from the statistics all own-account workers engaged in professional and technical occupations, irrespective of the characteristics of their enterprises.

2.52. The differences in scope of the definitions reviewed above may affect the comparability among countries of statistics on the level or prevalence of employment in the informal sector. However, it may still be possible to distinguish countries where there has been a significant change in the prevalence of informal sector employment (in either direction) from those where little change has taken place, even if their statistics do not provide comparable estimates of levels.

Recommendations of the Delhi Group to enhance the international comparability of informal sector statistics

2.53. The 15th ICLS resolution provided countries with considerable flexibility in defining and measuring the informal sector. Some element of flexibility was desired because the 15th ICLS resolution was the first international recommendation ever adopted on the topic and it needed to gain a wide range of experience in its implementation, and because its main purpose was to provide technical guidelines for the development of informal sector statistics in countries so as to satisfy the information requirements of national users of the statistics. Other elements of flexibility arose from the failure to reach agreement on more precise recommendations in the 15th ICLS resolution.

2.54. However, flexibility can also reduce international comparability. To address this problem the Expert Group on Informal Sector Statistics (the Delhi Group), which was constituted in 1997 as one of the city groups reporting to the UN Statistical Commission, has sought to harmonize national definitions of the informal sector on the basis of the framework set by the international definition. While members of the Delhi Group recognized that there were limits to the degree of harmonization that was possible, the Group was able to identify a subset of the

informal sector that could be defined uniformly and for which countries could make statistics available that were reasonably comparable internationally. Accordingly, the Delhi Group adopted the following text:

> "Since the informal sector manifests itself in different ways in different countries, national definitions of the informal sector cannot be fully harmonized at present. International agencies should disseminate informal sector data according to the national definitions used. In order to enhance the international comparability of informal sector statistics, they should also disseminate data for the subset of the informal sector, which can be defined uniformly." (Central Statistical Organization, 1999)

2.55. To arrive at this subset the Delhi Group adopted the following recommendations:

1. All countries should use the criteria of legal organization (unincorporated enterprises), of type of accounts (no complete set of accounts) and of product destination (at least some market output).
2. Specification of the employment size limit of the enterprise in the national definition of the informal sector is left to the country's discretion. For international reporting, however, countries should provide figures separately for enterprises with fewer than five employees.[6] In the case of multiple-establishment enterprises, the size limit should apply to the largest establishment.
3. Countries using the employment size criterion should provide disaggregated figures for enterprises which are not registered, as well as for enterprises which are registered.
4. Countries using the criterion of non-registration should provide disaggregated figures for enterprises with fewer than five employees as well as for enterprises with five and more employees.
5. Countries that include agricultural activities should provide figures separately for agricultural and non-agricultural activities.
6. Countries should include persons engaged in professional or technical activities if they meet the criteria of the informal sector definition.
7. Countries should include paid domestic services unless these are provided by employees.
8. Countries should follow paragraph 18 of the 15th ICLS resolution regarding the treatment of outworkers/homeworkers. Countries should provide figures separately for outworkers/homeworkers included in the informal sector.

[6] As defined in the International Classification of Status in Employment (ICSE-93) (ILO, 1993b)

9. Countries covering urban as well as rural areas should provide figures separately for both urban and rural areas.

10. Countries using household surveys or mixed surveys should make an effort to cover not only persons whose main job is in the informal sector, but also those whose main job is in another sector and who have a secondary activity in the informal sector.

In most countries the subset thus defined is likely to cover only a relatively small part of the informal sector as observed on the basis of national adaptations of the 15th ICLS resolution. The Delhi Group therefore recognized that further efforts were needed to enlarge the subset in the future.

Definition of employment in the informal sector

2.56. Paragraph 11 of the 15th ICLS resolution defined the 'population employed in the informal sector' as comprising all persons who, during a given reference period, are employed in at least one informal sector enterprise, irrespective of their status in employment and whether it is their main or a secondary job.

2.57. Persons may have two or more jobs during a given reference period, and all, some or none of these jobs may be undertaken in informal sector enterprises. The above definition of the population employed in the informal sector stresses the distinction between *employed persons* and *jobs*. Though formulated in terms of employed persons, the definition refers in fact to jobs in informal sector enterprises.

2.58. The 15th ICLS resolution recommended that, where possible, the population employed in the informal sector should be sub-classified into two categories: persons exclusively employed in the informal sector, and persons employed both in and outside the informal sector. The latter category should be further divided into two sub-categories: persons whose main job is in the informal sector, and persons with one or more secondary jobs in the informal sector. Thus, the following classification of persons employed in the informal sector is suggested:

1. Persons exclusively employed in the informal sector

2. Persons employed both in and outside the informal sector
   2.1 Persons whose main job is in the informal sector
   2.2 Persons with one or more secondary jobs in the informal sector

2.59. If the total employed population is to be classified into mutually exclusive categories of persons employed in and outside the informal sector, persons employed both in and outside the informal sector should be classified as a separate category. Another possibility is to establish criteria to determine the main job, for example, on the basis of self-assessment, time spent at work in the different jobs during the reference period, or on a usual basis (see Table 2.5).

Table 2.5.
Classification of the employed population in the informal sector

Based on main and secondary jobs	Based on the main job only
Employed persons whose main *and* secondary jobs are in the informal sector	Employed persons whose main job is *in* the informal sector
plus employed persons whose main *or* secondary job is in the informal sector	
plus employed persons whose main and secondary jobs are *outside* the informal sector	plus employed persons whose main job is *outside* the informal sector
= Total employed persons	

Informal employment

2.60. A criticism sometimes made of the informal sector definition adopted by the 15th ICLS is that persons engaged in very small-scale or casual self-employment activities may not report in statistical surveys that they are self-employed, or employed at all, although their activity falls within the enterprise-based definition. Another criticism is that informal sector statistics may be affected by errors in classifying certain groups of employed persons by status in employment, such as outworkers, subcontractors, free-lancers or other workers whose activity is on the borderline between self-employment and wage employment. Women are more likely than men to be engaged in such activities. Yet another criticism is that an enterprise-based definition of the informal sector is unable to capture all aspects of the increasing 'informalization' of employment, which has led to a rise in various forms of informal or non-standard, atypical, alternative, irregular, precarious, etc. – employment, parallel to the growth of the informal sector that can be observed in many countries. However, it had from the very beginning been clear that the informal sector definition adopted by the 15th ICLS was not meant for this purpose, which goes far beyond the measurement of employment in the informal sector.

2.61. For all these the Delhi Group joined WIEGO and other statistics users in concluding that "the definition and measurement of employment in the informal sector need to be complemented with a definition and measurement of informal employment" (CSO, 2001).

2.62. 'Employment in the informal sector' and 'informal employment' are concepts which refer to different aspects of the 'informalization' of employment and to different targets for policy-making. The two concepts are not interchangeable, but they are both useful for descriptive and analytical purposes and hence complement each other. They need to be defined and measured in a coherent and consistent manner, so that each is clearly distinguished from the other. Statistics users tend to confuse the two, because they are unaware of the different observation units involved: enterprises on the one hand, and jobs on the other.

2.63. Table 2.6 below illustrates for a sample of countries how statistics differ for the two concepts. The difference between informal employment and employment in the informal sector is a consequence of the existence of informal employment outside the informal sector (shown in the last three columns of the table) and of formal employment in the informal sector (not shown in the table because of its low numbers).

2.64. At its 90th Session (2002) the International Labour Conference (ILC) discussed the Director General's Report *Decent work and the informal economy* and repeatedly stressed the need for more and better statistics on working conditions in the informal economy (ILO, 2002b). It requested the ILO to assist member States in the collection, analysis and dissemination of consistent, disaggregated statistics on the size, composition and contribution of the informal economy. However, to collect statistics on the informal economy one first needs a definition of this part of the national economy. The ILC used the term 'informal economy' as referring to "all economic activities by workers and economic units that are – in law or in practice – not covered or insufficiently covered by formal arrangements" (ILO, 2002b). The Director-General's report described employment in the informal economy as comprising two components: (a) employment in the informal sector as defined by the 15th ICLS resolution, and (b) informal employment outside the informal sector (ILO, 2002c).

2.65. As part of the Report the ILO developed a conceptual framework for employment in the informal economy. The framework lends itself to statistical measurement as it builds upon internationally agreed statistical definitions, which are used because of their consistency and coherence. It thus enables measures of employment in the informal sector to be complemented with broader measures of informal employment (Hussmanns 2001; 2002). Prior to its development in the ILO Director General's Report, a draft of the framework had been presented to the Delhi Group at its fifth meeting in September 2001. The Delhi Group endorsed the framework and recommended it to countries for testing (CSO, 2001). Subsequently, several countries (Brazil, Georgia, India, Mexico and the Republic of Moldova) tested the framework and produced reliable estimates.

2.66. The conceptual framework developed by the ILO was submitted to the 17th ICLS in 2003 for discussion. The 17th ICLS unanimously agreed that international guidelines would be useful in assisting countries to develop national definitions of informal employment and in enhancing the international comparability of the resulting statistics. It also realized that such guidelines were needed in support of the request from the ILC in 2002 that the ILO assist countries in the collection, analysis and dissemination of statistics on the informal economy.

2.67. The concept of informal employment is considered to be relevant not only for developing and transition countries but also for developed countries. Although in many developed countries the concept of the informal sector is considered of

Table 2.6.
Informal employment, employment in the informal sector and informal employment outside the informal sector, as a percentage of total non-agricultural employment in selected countries by sex

Country	Year	Informal employment			Employment in the informal sector			Informal employment outside the informal sector		
		Both sexes	Men	Women	Both sexes	Men	Women	Both sexes	Men	Women
		as a percentage of total (male/female) non-agricultural employment								
Brazil (urban)	2003	51.1	50.2	52.3	37.4	41,9	31.5	17.1	11.5	24.4
Ecuador (urban)	2004	74.9	73.2	76.9	40.0	36.5	44.2	35.1	36.8	32.9
Mexico	1st quarter2005	50.1	47.8	54.0	33.1	35.2	30.0	17.5	13.3	24.0
Mali	2004	81.8	74.2	89.2	71.4	62.9	79.6	11.3	12.6	10.1
South Africa	2nd quarter2009	32.2	24.5	37.7	16.7	16.6	16.8	15.6	11.1	20.9
Uganda	2010	69.4	67.5	71.9	59.8	57.9	62.2	13.7	14.9	12.2
Armenia	2009	19.8	24.8	12.7	10.2	13.7	5.2	9.6	11.1	7.5
Macedonia, FYR of	2010	12.6	15.4	8.1	7.6	10.3	2.5	5.2	5.0	5.6
Moldova, Rep. of	2004	21.5	25.0	18.4	7.5	10.7	4.6	14.0	14.3	13.7
India	2004-05	85.1	84.2	88.3	75.6	76.7	71.5	10.9	9.0	18.0
Philippines	2008	70.1	69.9	70.2	72.5	76.4	67.8	11.5	7.1	16.9
Vietnam	2009	68.2	69.4	66.8	43.5	43.3	43.7	25.0	26.4	23.4

Notes:

(1) Brazil: ILO estimates based on official data from various sources.

(2) Mali: ILO estimates computed from labour force survey microdata.

(3) Other countries: labour force or other household survey data.

(4) Due to the existence of formal jobs in the informal sector, the percentages for 'employment in the informal sector' and 'informal employment outside the informal sector' may not add up to the percentages for 'informal employment'.

Source: ILO Department of Statistics.

limited relevance, the 17th ICLS acknowledged that the relevance and meaning of informal employment varied from country to country and that a decision to collect statistics on the subject therefore should therefore depend on national circumstances and priorities.

2.68. The Conference examined the framework, made some minor amendments to it, and adopted guidelines endorsing it as an international statistical standard (ILO, 2003). These guidelines complement the 15th ICLS resolution. The work by the Delhi Group and its members was essential to the development and adoption of the guidelines.

2.69. During the ILC discussions on terminology, some participants considered the term 'informal employment' to be too positive and thus potentially misleading for policy purposes. Others feared that users of statistics might have difficulty understanding the difference between 'informal employment' and 'employment in the informal sector' and confuse the two. Nevertheless, the term 'informal employment' was retained by the 17th ICLS because of its broadness of scope and because there was no agreement regarding the use of an alternative term such as 'unprotected employment'.

2.70. From 8 to 10 September 2008 a Tripartite Meeting of Experts on the Measurement of Decent Work was convened by the ILO in Geneva, where it approved a list of statistical indicators for the measurement of decent work. Informal employment was included as one of four main indicators of the dimension 'employment opportunities' (ILO, 2008b).

International statistical definition of informal employment (17th ICLS guidelines)

2.71. The conceptual framework in the 17th ICLS guidelines links the enterprise-based concept of employment in the informal sector in a coherent and consistent manner with a broader, job-based concept of informal employment.

2.72. A person can simultaneously have two or more formal and/or informal jobs. Given the existence of such multiple job-holding, jobs rather than employed persons are taken as the observation unit for employment. Employed persons hold jobs that can be described by various job-related characteristics, and these jobs are undertaken in production units (enterprises) that can be described by various enterprise-related characteristics.

2.73. Thus, using a building-block approach, the framework disaggregates total employment according to two dimensions: type of production unit, and type of job. In Table 2.7 below type of production unit (rows in the table) is defined in terms of legal organization and other enterprise-related characteristics, while type of job (columns) is defined in terms of status in employment and other job-related characteristics.

Table 2.7.
Conceptual framework for informal employment[(a)] (17th ICLS guidelines)

Production units by type	Jobs by status in employment								
	Own-account workers		Employers		Contributing family workers	Employees		Members of producers' cooperatives	
	Informal	Formal	Informal	Formal	Informal	Informal	Formal	Informal	Formal
Formal sector enterprises					1	2			
Informal sector enterprises[(b)]	3		4		5	6	7	8	
Households[(c)]	9					10			

Notes

(a) Cells shaded in dark grey refer to jobs, which by definition do not exist in the type of production unit in question. Cells shaded in light grey refer to formal jobs. Unshaded cells represent the various types of informal jobs.

(b) As defined by the 15th ICLS resolution (excluding households employing paid domestic workers).

(c) Households producing goods exclusively for their own final use and households employing paid domestic workers.

Informal employment: Cells 1to 6 and 8 to 10.

Employment in the informal sector: Cells 3 to 8.

Informal employment outside the informal sector: Cells 1, 2, 9 and 10.

2.74. 'Production units' are classified into three groups: formal sector enterprises, informal sector enterprises, and households. 'Formal sector enterprises' comprise corporations (including quasi-corporate enterprises), non-profit institutions, unincorporated enterprises owned by government units, and those private unincorporated enterprises producing goods or services for sale or barter that do not form part of the informal sector. The definition of 'informal sector enterprises' has already been given in paragraphs 2.18 to 2.27 above. 'Households' as production units are defined here as including households producing goods exclusively for their own final use (e.g., subsistence farming, do-it-yourself construction of own dwellings, manufacture of wearing apparel, furniture, water and fuel collection, etc.), as well as households employing paid domestic workers (domestic cleaners, child care workers, laundry workers, guards, gardeners, drivers, etc.)[7]. Households producing *unpaid* domestic or personal services (e.g., housework, caring for family members) for their own final consumption are excluded, as such activities fall outside the SNA production boundary (although they are included in the SNA's 'general' production boundary) and engaging in them is not considered 'employment'.

[7] The 15th ICLS definition of the informal sector excludes households producing goods exclusively for their own final use, but provides an option to include households employing paid domestic workers. The framework adopted by the 17th ICLS and presented in this chapter does not use this option and, hence, excludes households employing paid domestic workers from the informal sector. The exclusion follows a recommendation made by the Delhi Group at its third meeting (CSO, 1999).

2.75. A category of unpaid workers not explicitly mentioned in the 17th ICLS guidelines relates to 'volunteer workers'. Most volunteer workers qualify for inclusion in employment, understood as the supply of labour for the production of goods and services within the SNA production boundary (ILO, 2011, Appendix IV). The current international operational definition of employment does not mention this group of workers as such, however, but the United Nations 2010 Recommendations for Population and Housing Censuses explicitly included them within employment (UN, 2008d, paragraph 2.268). If national statistics of employment include these workers, then they qualify for inclusion in informal employment as a sub-group of employees with informal jobs, provided they meet the criteria of the definition of informal employee jobs.

2.76. *Jobs* are distinguished according to status-in-employment categories and according to their formal or informal nature. For status in employment, the following five ICSE-93 groups are used: own-account workers; employers; contributing family workers; employees; and members of producers' cooperatives. The breakdown by status in employment was needed for definitional reasons, but it was also considered useful for descriptive and analytical and policy-making purposes.

2.77. There are three different types of cells in Table 2.7. The cells shaded in dark grey refer to jobs which, by definition, do not exist in the type of production unit in question. For example, there cannot be contributing family workers in households units producing exclusively for own final use. Cells shaded in light grey refer to formal jobs. Examples are own-account workers and employers owning formal sector enterprises, employees holding formal jobs in formal sector enterprises, or members of formally established producers' cooperatives. The remaining, unshaded cells represent the various types of informal jobs.

2.78. Paragraph 3 of the 17th ICLS guidelines defined 'informal employment' as the total number of informal jobs, whether carried out in formal sector enterprises, informal sector enterprises or households, during a given reference period. It comprises:

(a) *Own-account workers and employers employed in their own informal sector enterprises* (Cells 3 and 4). The employment situation of own-account workers and employers can hardly be separated from the type of enterprise, which they own. The informal nature of their jobs thus follows directly from the characteristics of the enterprise.

(b) *Contributing family workers, irrespective of whether they work in formal or informal sector enterprises* (Cells 1 and 5). The informal nature of their jobs is due to the fact that contributing family workers usually do not have explicit, written contracts of employment, and that their employment is usually not subject to labour legislation, social security regulations, collective agreements, etc.[8]

[8] Family workers with a contract of employment and/or wage would be considered employees.

(c) *Employees holding informal jobs, whether employed by formal sector enterprises, by informal sector enterprises, or as domestic workers employed by households* (Cells 2, 6 and 10). According to paragraph 3(5) of the 17th ICLS guidelines, employees are considered to have informal jobs if their employment relationship is, in law or in practice, not subject to national labour legislation, income taxation, social protection or entitlement to certain employment benefits (advance notice of dismissal, severance pay, paid annual or sick leave, etc.) for reasons such as: the jobs or the employees are not declared to the relevant authorities; the jobs are casual or of a limited duration (e.g., through on-call arrangements); the hours of work or wages are below a specified threshold (e.g., below that qualifying for social security contributions); the workers are employed by unincorporated enterprises or by persons in households; the employee's place of work is outside the premises of the employer's enterprise (e.g., outworkers without an employment contract); or regulations are not applied, not enforced or not complied with for any reason.[9]

(d) *Members of informal producers' cooperatives* (Cell 8). The informal nature of their jobs follows directly from the characteristics of the cooperative of which they are members.[10]

(e) *Own-account workers engaged in the production of goods exclusively for own final use by their household* (Cell 9), such as subsistence farming, construction of own dwellings, manufacture of wearing apparel, furniture, water and fuel collection, etc., if considered employed according to the 13th ICLS definition of employment (ILO, 1982, paragraph 9(6)).[11].

2.79. Cell 7 refers to *employees holding formal jobs in informal sector enterprises*. Such cases, which are included in employment in the informal sector but excluded from informal employment, refer to employees in the informal sector who are subject to national labour legislation and income tax and are entitled to social protection and employment benefits. In most countries they are likely to be few in number. Where the number is significant, it is important to determine whether this reflects the reality in the country or is a question of definition – for example, because the informal sector has been defined on the basis of size as the only criterion, or because there is no administrative link between the registration of employees and the registration of their employers. To avoid such situations

9 The definition corresponds to the definition of unregistered employees as specified in paragraph 9(6) of the resolution adopted by the 15th ICLS. It encompasses the ICSE-93 definitions of non-regular employees, workers in precarious employment (casual workers, short-term workers, seasonal workers, etc.) and contractors.

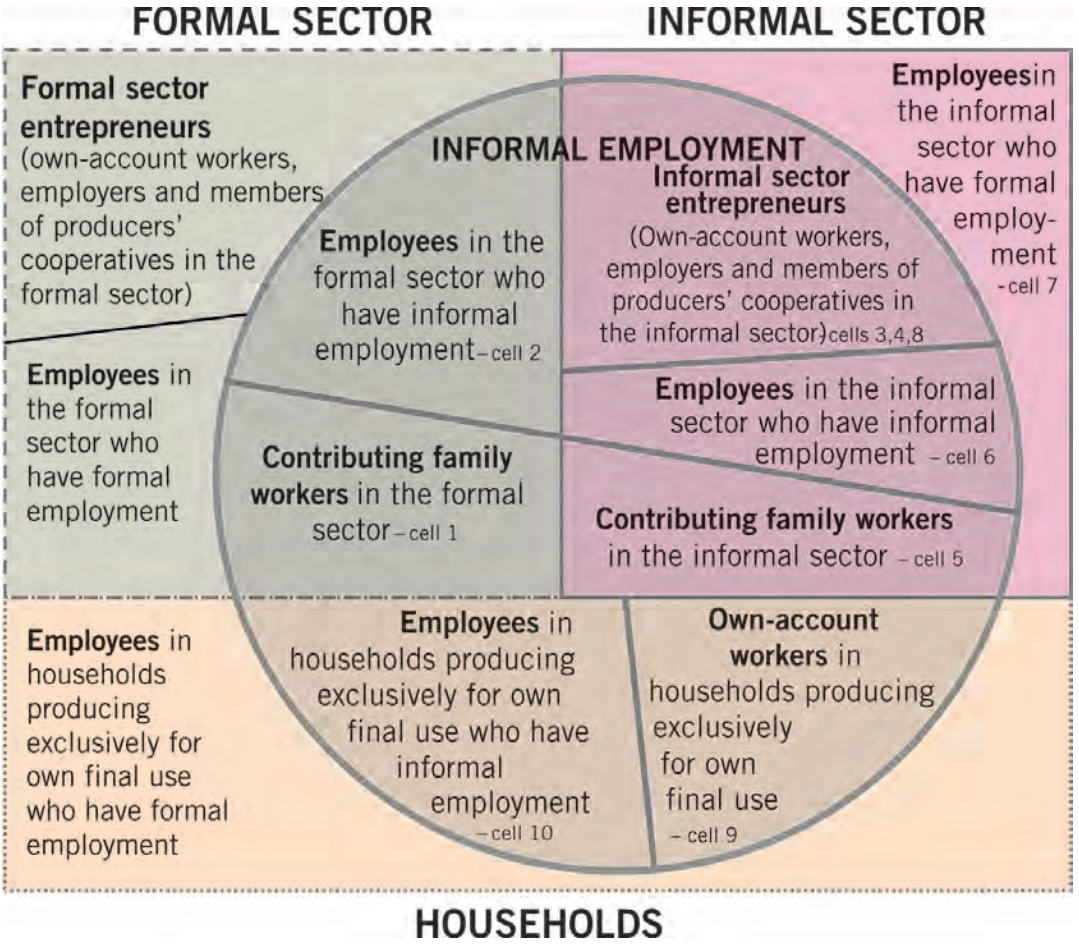
10 Producers' cooperatives, which are formally established as legal entities, are incorporated enterprises and hence part of the formal sector. Members of formally established producers' cooperatives are considered as having formal jobs. Producers' cooperatives, when not formally established as legal entities, are treated as private unincorporated enterprises owned by members of several households. They are part of the informal sector if they also meet the other criteria of the definition.

11 The definition specifies that persons engaged in household production for own final use should be considered as employed if their production makes an important contribution to the total consumption of the household.

Argentina has defined the informal sector as excluding enterprises employing formal employees (Pok 1992). This is in line with the 15th ICLS resolution, which includes the non-registration of employees of an enterprise among the criteria for defining the informal sector (ILO, 1993a).

2.80. The components of informal employment are summarised in Figure 2.1 below.

Figure 2.1.
Components of informal employment (17th ICLS guidelines)



Note: References to "cells" direct to cells defined in Table 2.7.

2.81. The major new element introduced by the 17th ICLS was the above definition of informal jobs of employees. However, given the large diversity of informal employment situations found in different countries, the 17th ICLS guidelines left the operational criteria for defining informal jobs of employees to be determined in accordance with national circumstances and with the possibility of actually collecting

relevant information. The possible impact of this on the international comparability of the resulting statistics was recognized by the 17th ICLS. Examples of the definition of informal jobs of employees currently used in national household-based surveys are given in Table 2.8. (Some of these surveys are discussed further in Chapter 4.)

Table 2.8.
Definition of informal jobs of employees used by selected countries

Country	Source	Definition
Brazil	National household sample survey	Employees without a formal contract (*carteira assinada*)
Mexico	National survey of occupations and employment	Employees without access to public or private health services by virtue of their job
Panama	Household survey	Employees without employment contract, plus employees with employment contract who are not covered by social security as directly insured persons (excluding employees, who as retired persons or pensioners do not have to contribute any more to social security)
Mali	Labour force survey 2007	Employees, for whom the employer does not pay social contributions, and who are not entitled to paid annual and sick leave
South Africa	Quarterly labour force survey	Employees without written an employment contract, or for whom the employer does not contribute to the pension/retirement fund or to medical aid benefits
Zambia	Labour force survey 2008	Employees not entitled to paid annual leave, or for whom the employer does not contribute to any social security scheme
Moldova, Rep. of	Labour force survey	Employees for whom the employer does not pay social contributions, or who do not benefit from paid annual leave (or financial compensation for untaken leave), or who will not be given paid sick leave in the event of illness or injury
Russian Federation	Population survey of employment problems	Employees without a labour contract
Turkey	Household labour force survey	Employees without any social security registration
India	National sample survey, 61st Round (2004-2005)	Employees not entitled to social security benefits or paid sick or annual leave (agriculture excluded)
Sri Lanka	Labour force survey	Employees not covered by a pension or provident fund
Vietnam	Labour force survey 2009	Employees without a written employment contract, or not covered by social insurance, or not entitled to paid annual leave/public holidays

Source: ILO Department of Statistics

2.82. An important definitional issue is the possible discrepancy between the formality of an employment situation and the reality. Sometimes employees, although in theory protected by labour legislation, covered by social security, entitled to employment benefits, etc., are in practice not in a position to claim their rights because mechanisms to enforce the existing regulations are lacking or deficient. The regulations are also not applied when the employees agree to waive their rights, because they prefer to receive higher take-home pay instead of legal and social protection. For these reasons the definition of informal jobs of employees in the 17th ICLS guidelines covers not only employment situations that are informal *de jure* ("in law") but also those that are informal *de facto* ("in practice").

2.83. In summary, informal employment is defined as comprising:

(a) own-account workers and employers employed in their own informal sector enterprises (household unincorporated enterprises with at least some market production that are unregistered or small in terms of the number of employed persons (e.g., fewer than five employees);

(b) all contributing family workers;

(c) employees holding informal jobs, i.e., employees not covered by legal protection or social security as employed persons, or not entitled to other employment benefits such as paid annual or sick leave;

(d) members of informal producers' cooperatives (not established as legal entities); and

(e) own-account workers producing goods exclusively for own final use by their household (if considered employed).

'Employment in the informal sector' encompasses the sum of Cells 3 to 8 in Table 2.7. 'Informal employment' encompasses the sum of Cells 1 to 6 and 8 to 10. The sum of Cells 1, 2, 9 and 10 is called 'informal employment outside the informal sector'.

2.84. According to paragraph 5 of the 17th ICLS guidelines, informal employment outside the informal sector comprises the following types of job:

- employees holding informal jobs in formal sector enterprises (Cell 2) or as informal paid domestic workers employed by households (Cell 10);
- contributing family workers working in formal sector enterprises (Cell 1);
- own-account workers engaged in the production of goods exclusively for own final use by their household, if considered employed according to the 13th ICLS definition of employment (Cell 9).

Of these, Cell 2 (employees holding informal jobs in formal sector enterprises) tends to generate the largest interest among researchers, social partners and policy-makers.

Related issues

Jobs on the borderline of status-in-employment categories

2.85. It is widely recognized that certain types of job are difficult to classify by status in employment because they are on the borderline of two or more of the ICSE-93 groups, especially between own-account workers and employees. One example is outworkers (homeworkers). The framework of the 17th ICLS guidelines presented in this chapter makes it possible to classify all outworkers in informal employment, irrespective of their classification by status in employment. Outworkers are included in Cells 3 or 4 of Table 2.7 if they are deemed to constitute enterprises of their own as self-employed persons and if these enterprises meet the criteria of the informal sector definition. Persons working for such informal outworking enterprises as contributing family workers are included in Cell 5, and persons working for them as employees in Cells 6 or 7. Outworkers working as employees for formal sector enterprises are included in Cell 2 if they have informal jobs, and in the light grey cell next to Cell 2 if they have formal jobs.

2.86. Thus, problems in assigning jobs to status-in-employment categories affect the statistics on informal employment using the labour approach to a lesser extent than they affect statistics on employment in the informal sector using the enterprise approach, since they would lead to classification errors rather than coverage errors. However, further work is needed to develop data collection methods that reduce such classification errors.

Statistics on informal employment in the absence of data on informal sector employment

2.87. Some countries may wish to develop statistics on informal employment, although they do not have statistics on employment in the informal sector. Other countries may wish to develop statistics on informal employment, but find that a classification of employment by type of production unit does not really meet their requirements. Unless such countries want to limit the measurement of informal employment to employee jobs, they need to develop appropriate definitions of informal jobs of own-account workers, employers and members of producers' cooperatives, which do not explicitly use the informal sector concept (see paragraph 6 of the 17th ICLS guidelines).

Informal jobs in agriculture

2.88. In the statistical treatment of persons engaged in agricultural activities a similar issue arises for countries which, in line with paragraph 16 of the 15th ICLS

resolution, exclude agriculture from the scope of their informal sector statistics. In order to be able to classify all jobs (including agricultural jobs) as formal or informal, these countries have to develop suitable definitions of informal jobs in agriculture other than jobs held by persons engaged in subsistence farming (Cell 9 in Table 2.7). This applies in particular to jobs held in agriculture by own-account workers, employers and members of producers' cooperatives (paragraph 7 of the 17th ICLS guidelines). For the definition of informal employee jobs in agriculture, it is most likely that the same criteria can be used as for the definition of informal employee jobs in other activities.[12]

Non-use of 'informal economy' as a statistical term

2.89. It should be noted that the 17th ICLS was opposed to the use of the term 'employment in the informal economy', which had been used in the ILO report *Decent work and the informal economy* (ILO, 2002c) to refer to the sum of employment in the informal sector and informal employment outside the informal sector (Cells 1 to 10 in Table 2.7). The 17th ICLS agreed that, for statistical purposes, it would be better to present statistics on the informal sector and on informal employment separately. However, the informal sector concept, as defined by the 15th ICLS resolution, needed to be retained because it had become part of the SNA and because a large number of countries were collecting statistics on that basis (ILO, 2002d).

2.90. Accordingly, while other ILO publications and some documents published by other organizations use the term 'informal economy', this manual prefers to use the terms 'informal sector' and 'informal employment'.

Production units (17th ICLS Guidelines) and institutional sectors (SNA)

2.91. The classification of production units by type advocated in the 17th ICLS guidelines is different from – but consistent with - the 2008 SNA classification of institutional units by sector. The relationship between the two classifications is shown in Table 2.9 below.

[12] These issues are discussed for Mexico in Negrete (2002). See also the discussion in paragraphs 4.45 to 4.57.

Table 2.9.
Institutional units (SNA) and production units (ICLS)

<table>
<tr><th colspan="2">2008 SNA:
Institutional units by sector</th><th colspan="2">17th ICLS guidelines:
Production units by type</th></tr>
<tr><td colspan="2">Non-financial and financial corporations</td><td colspan="2" rowspan="3">Formal sector enterprises</td></tr>
<tr><td colspan="2">General government</td></tr>
<tr><td colspan="2">Non-profit institutions serving households</td></tr>
<tr><td rowspan="3">Households (as producers)</td><td>Household unincorporated enterprises with at least some market production</td><td colspan="2">Informal sector enterprises</td></tr>
<tr><td rowspan="2">Households producing only for own final use</td><td rowspan="2">Households</td><td>Producers of goods for own final use</td></tr>
<tr><td>Employers of paid domestic workers</td></tr>
</table>

2.92. According to the 17th ICLS guidelines all production units included in the SNA institutional sectors 'non-financial corporations', 'financial corporations', 'general government' and 'non-profit institutions serving households' are considered formal sector enterprises. Depending upon their characteristics, household unincorporated enterprises with at least some market production are either formal sector enterprises or informal sector enterprises. Thus, formal sector enterprises may be found in any of the five SNA institutional sectors, including the 'households' sector. By contrast, all informal sector enterprises fall within the households sector, as the informal sector is defined as a subset of household unincorporated enterprises with at least some market production. The 17th ICLS definition of households as production units corresponds to the SNA definition of households producing exclusively for own final use. However, owner-occupiers of dwellings producing housing services for their own final consumption are excluded from the 17th ICLS definition but included in the SNA, as there are no labour inputs involved in the production of such services.

Links between the concepts of informal sector, informal employment and non-observed economy

2.93. The 17th ICLS requested that the links between the concepts of informal sector, informal employment and the non-observed economy be indicated. In the preamble to its guidelines it therefore observed that an international conceptual framework for measuring the non-observed economy had already been developed in a handbook published in 2002 by the OECD, IMF, ILO and CIS STAT as a supplement to the 1993 SNA (OECD et. al., 2002). The handbook places the informal sector in the broader context of the non-observed economy and relates it

to four other concepts with which it is often confused: underground production, illegal production, household production for own final use, and production missed due to deficiencies in data collection programmes (statistical underground).[13]

2.94. The 2008 SNA defines 'illegal production' as comprising (a) the production of goods or services whose sale, distribution or possession is forbidden by law, and (b) production activities that are usually legal but become illegal when carried out by unauthorized producers (UN et al., 2009, paragraph 6.43). Examples are drug trafficking and illegal medical treatment (such as abortions in some countries and illegal harvesting of organs).

2.95. 'Concealed (or underground) production' is defined in the 2008 SNA as production activities that are legal when performed in compliance with relevant standards or regulations but are deliberately concealed from public authorities to avoid paying income, value added or other taxes, paying social security contributions, having to meet legal standards such as minimum wages, maximum hours, safety or health regulations, etc. or complying with administrative procedures such as completing statistical questionnaires, tax returns or other administrative forms (UN et al., 2009, paragraph 6.40). An example is the sale of legal goods or services without declaring the value added tax.

2.96. The 2008 SNA acknowledged that it might not always be easy in practice to draw a clear line between underground production and illegal production. For the purposes of this manual, however, the definitions given above can be used to distinguish three types of production activity: (a) activities which are legal and not underground; (b) activities which are legal but underground; and (c) activities which are illegal.

2.97. As indicated in Table 2.10, any type of production unit (formal sector enterprises, informal sector enterprises, households) can be engaged in activities which are legal and not underground, or legal and underground, or illegal. This manual aims at measuring all activities undertaken by informal sector enterprises, including underground or illegal activities. Nevertheless, in developing and transition countries most informal sector activities are neither underground nor illegal but simply a survival strategy for the persons involved in them and for their households. This greatly facilitates the conduct of surveys to obtain the basis for statistics on the informal sector.

[13] The need to distinguish the concept of informal sector from that of the hidden or underground economy had already been recognized in paragraph 5 (3) of the 15th ICLS resolution.

Table 2.10.
Production units and production activities

Production units	Production activities		
	Legal		Illegal
	Not underground	Underground	
Formal sector enterprises			
Informal sector enterprises (a)			
Households (b)			

(a) As defined by the 15th ICLS resolution (excluding households employing paid domestic workers).

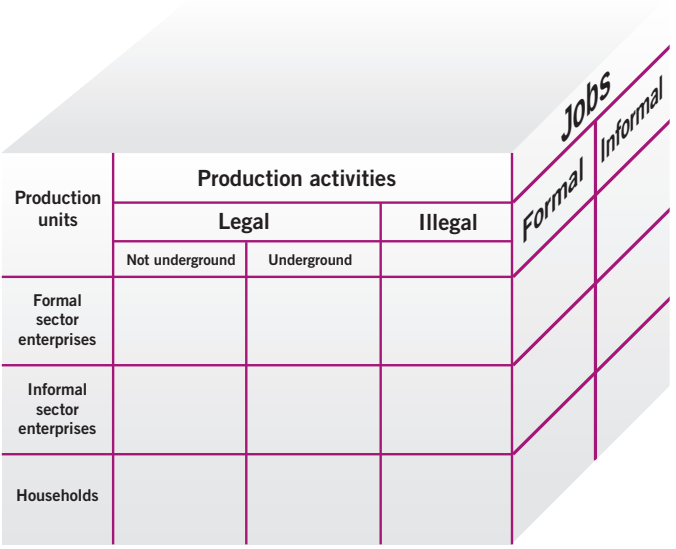
(a) Households producing goods exclusively for their own final use and households employing paid domestic workers.

2.98. The vast majority of informal sector activities provide goods and services whose production and distribution are perfectly legal. This is in contrast to illegal production. There is also a clear distinction between the informal sector and underground production. Informal sector activities are not necessarily performed with the deliberate intention of evading the payment of taxes or social security contributions or of infringing labour legislation or other regulations. Certainly, some informal sector enterprises prefer to remain unregistered or unlicensed in order to avoid complying with some or all regulations and thereby reduce production costs. A distinction should, however, be made between those whose business revenue is high enough to bear the cost of regulations and those who do not afford comply with existing regulations because their income is too low and irregular, because certain laws and regulations are quite irrelevant to their needs and conditions, or because the State is virtually non-existent in their lives and lacks the means to enforce the regulations it has enacted. In some countries at least, a sizeable proportion of informal sector enterprises are actually registered in some way or pay taxes, even though they may not be in a position to comply with all legal and administrative requirements. Moreover, substantial segments of underground production originate from enterprises belonging to the formal sector. Examples include the production of goods and services 'off the books', undeclared financial transactions or property income, overstatement of tax-deductible expenses, employment of clandestine workers, and unreported wages and overtime work of declared employees. In summary, although informal sector and underground activities may overlap, the concept of the informal sector needs to be clearly distinguished from that of underground production.

2.99. Activities carried out by production units involve persons employed in formal jobs or in informal jobs. This conceptual link is shown in Figure 2.2 below, which combines Table 2.10 with a simplified version of the Table 2.7.

The result is a three-dimensional cube composed of 18 smaller cubes (or 45 even smaller cubes, if the full version of the matrix is used). Each of the smaller cubes stands for a specific combination of type of production unit, kind of economic activity and type of job. Each of the smaller cubes can be defined, and examples can be given for the employment situations represented by it. This, it is hoped, will help to resolve the widespread confusion concerning the use of the terms 'informal sector', 'informal employment' and 'underground or illegal production' that still exists.

Figure 2.2.
Production units, production activities and jobs



2.100. As mentioned earlier in this chapter, 'household production exclusively for own final use by the same household' is excluded from the definition of the informal sector. However, if workers engaged in these activities are considered as employed, they are included in the definition of informal employment, and so are paid domestic workers if their jobs meet the criteria of the informal employment definition.

2.101. Non-inclusion, under-coverage, non-response or under-reporting in statistical surveys result in many informal activities being missed due to deficiencies in the data collection programmes. Thus, the aim of this manual is to reduce such deficiencies, to move the informal sector and informal employment out of the statistical no man's land and to help make informal production units and jobs and the persons engaged in them statistically visible.

Sub-classifications

Informal sector enterprises

2.102. Sub-classifications of informal sector enterprises are needed to provide information on the composition of the informal sector and to identify more homogeneous groups for analytical purposes, as targets for social and economic policies and informal sector support programmes and as a basis for comparison of statistics over time and between countries. According to the 15th ICLS resolution the number of informal sector enterprises should at least be broken down by kind of economic activity (as classified by the ISIC or similar classification) and by type of informal sector enterprise (informal own-account enterprises or enterprises of informal employers). Other useful sub-classifications of informal sector enterprises include distinctions according to the following variables: type of workplace (home of enterprise owner, other fixed location, no fixed place); location (urban or rural); number of persons engaged; type of ownership (individual ownership, household ownership, business partnership with members of other households); relation with other enterprises (independent producers or producers working under subcontracting arrangements for other enterprises). In addition, it may be useful to classify informal own-account enterprises further according to the composition of their workforce, distinguishing single-person units from multiple-person units and, among the latter, users of occasional hired labour from non-users of such labour.

Employment in the informal sector

2.103. The 15th ICLS resolution stipulates that, as a minimum, statistics on persons employed in the informal sector should be broken down by status in employment and by kind of economic activity, as classified by the ISIC or similar classification. In addition, the resolution cites a number of other variables as being useful for the sub-classification of persons employed in the informal sector. These include: sex; age; marital status; relationship to the household reference person; migration characteristics; educational attainment; reason for working in the informal sector; occupation; hours of work; other jobs currently held in or outside the informal sector (see paragraphs 2.56 to 2.59 above); nature of employment (permanent, temporary, seasonal, casual); amount of income; etc.

Informal employment

2.104. In line with the conceptual framework for measuring informal employment, informal jobs should be sub-classified by status in employment of the job and by the type of production unit in which the job is undertaken (formal sector enterprise, informal sector enterprise, household). The 17th ICLS guidelines recognized that for purposes of description, analysis and policy-making, it might

be useful to disaggregate the different types of informal jobs further, especially those held by employees. Paragraph 3 (6) of the 17th ICLS guidelines suggests that such a typology and the corresponding definitions should be developed as part of further work on classifications by status in employment at the international and national level. A strategy has in fact been outlined (Mata Greenwood and Hoffmann, 2002) for developing a typology of atypical forms of employment, based on the International Classification of Status in Employment (ICSE-93).

Chapter 3.
Measurement objectives and methods of data collection

Introduction

3.1. This chapter describes a number of data collection methods for statistics on the size and characteristics of the informal sector and informal employment, and their evolution over time. The use of these methods should form an integral part of a country's national plan for regular statistics.[14]

[14] See, for example, the National Strategies for the Development of Statistics (NSDS) promoted by the Partnership in Statistics for Development in the 21st Century (PARIS21), within the framework of the 2004 Marrakech Action Plan for Statistics. The Action Plan was developed to encourage low-income countries to define a medium- and long-term strategy and development plan for the national statistical system.

3.2. Countries can choose to use labour force and other household surveys, establishment surveys and censuses, and mixed surveys (which combine features of both household and establishment surveys). Growing experience with the measurement of the informal sector and of informal employment using the various survey approaches has yielded valuable information about their relative strengths, limitations and potential synergies. No one single approach can be recommended as being the most appropriate for all countries. Although there are substantive and technical requirements that point to particular methodologies, the overall suitability of a data collection approach for a particular country ultimately depends on a cost-benefit analysis that takes into consideration the main measurement objectives identified at the national level, the capability and organization of the national statistical system, the existing survey programmes and their sampling frames, and the financial, technical and human resources available.

3.3. The various methods of data collection are not mutually exclusive, and a combination of methods can be useful for developing a comprehensive data collection programme for informal sector and informal employment statistics. The implications of each method or combination of methods for data quality and resource requirements should be thoroughly assessed and clearly understood. This includes assessing the extent to which the possible data collection methods facilitate the integration of statistics on the informal sector and informal employment with related economic and social statistics. Statistics on the informal sector and informal employment need to be consistent with other economic, labour and social statistics.

3.4. This chapter discusses the main issues to be considered in developing a programme for the regular production of statistics on the informal sector and informal employment as part of an integrated system of social and economic statistics. It begins with a review of the key measurement objectives and the corresponding statistical units. The various possible data collection and estimation methods are introduced next, with their comparative advantages and limitations. The chapter ends with a short discussion of indirect methods of estimation.

Data requirements

3.5. A comprehensive programme of statistics on the informal sector and on informal employment should respond to the descriptive and analytical needs of a range of users. The main users of the statistics should therefore be consulted on the information to be collected, the different types of statistical presentation to be produced regularly and how the collected information can best be made available to users for further processing. User-producer consultations are necessary not only to ensure the relevance of the statistics, but also to determine the frequency with which they are needed and the precision required to measure differences between groups and over time, as well as to build support for the programme, to promote the appropriate use of the statistics and even to improve their quality over time (see paragraphs 1.30 and 1.31).

3.6. The 15th ICLS resolution and the 17th ICLS guidelines on statistics of employment in the informal sector and informal employment may serve as a starting point to guide the user-producer consultations. These international instruments can serve as a framework to identify the main statistical requirements and the priorities among competing demands, one important advantage being that such a framework helps to ensure that the statistics produced are coherent with other economic, social and labour statistics and that they are reasonably comparable internationally.

3.7. The 15th ICLS resolution recommended the production of informal sector statistics once a year to monitor the evolution of employment in the informal sector. It also recommended, if possible, a more in-depth examination every five years of the numbers and characteristics of informal sector units, their organization and functioning, their production activities and level of income generation, and their constraints and potential (ILO, 1993a, paragraph 21).

3.8. The 17th ICLS guidelines did not indicate explicitly the frequency for informal employment statistics (ILO, 2003). However, their frequency can be the same as it is for statistics of the labour force, of which they constitute one sub-group. Statistics once a year can monitor the evolution of informal employment inside and outside the informal sector, making it possible to observe changes in its size and major components. The characteristics and employment conditions of informal workers may not need such frequent measurement.

3.9. The type of information recommended for the informal sector in the 15th ICLS resolution (ILO, 1993a, paragraph 2) includes:

(a) *total employment in informal sector units,* classified by socio-demographic and other characteristics (sex, age group, level of educational attainment, etc.) and by the characteristics of their employment and working conditions (kind of economic activity, occupation, status in employment, size of the unit, type of workplace, hours of work, duration of employment, type of contract, income related to employment);

(b) *the total number of informal sector units*, classified by various structural characteristics so as to provide information on the composition of the informal sector and to identify particular segments;

(c) *production and incomes* generated through informal sector activities, derived where possible from data on output, inputs and related transactions; and

(d) other characteristics pertaining to conditions under which informal sector units are created and carry out their activities, including their *relationships with other units* within the same enterprise, if relevant, and with other enterprises inside and outside the informal sector and with the public authorities. While not mentioned in the resolution, it is important in assessing the importance of

the informal sector to have information about the share of the total demand of households for goods and services that are produced in the informal sector.

3.10. Similarly, the types of statistics about informal employment that can be produced include:

(a) the *total number of persons in informal employment*, classified by personal socio-demographic and other characteristics (sex, age group, urban/rural location, educational attainment, type of training received, etc.) and by characteristics and working conditions associated with their main job (kind of economic activity, occupation, status in employment, institutional sector, main/secondary job status, type of workplace, hours of work, duration of employment, employment-related income); and

(b) the *total number of informal jobs held by persons during the reference period*, classified by various job characteristics (main or secondary job, kind of economic activity, occupation, status in employment, institutional sector).

3.11. These data requirements are meant to serve as recommendations for the kind of statistics to be produced regularly under the national data collection programme. Depending on national circumstances, countries may identify a narrower or broader, and more or less detailed set of measurement objectives and statistical needs. The national data collection strategy may propose to meet certain needs for statistics in the initial phases of the programme implementation and gradually expand the programme over time.

3.12. The minimum set of statistics that a data collection programme should strive to produce, in the case of the informal sector, includes:

(a) *the number of persons engaged in informal sector units* by status in employment and kind of economic activity; and, if possible

(b) *the number of informal sector enterprises* by kind of economic activity and by type (informal own-account enterprises, enterprises of informal employers) (ILO, 1993a, paragraph 34).

3.13. In the case of informal employment, minimum requirements may include statistics on:

(a) *the total number of persons employed in informal jobs* by sex, status in employment and type of production unit, as defined in paragraph 2.74. (formal sector enterprises, informal sector enterprises, households); and, if possible

(b) *the total number of informal jobs*, similarly classified by kind of economic activity (industry), occupation, status in employment and type of production unit.

Statistical units

3.14. Statistical units are the elements on which information is collected (the 'observation units') and for which the statistics are produced (the 'analytical units'). When sample surveys are carried out, the units that are selected for the sample are called 'sampling units' and the units providing the information (for example, by responding to a questionnaire) 'reporting units'.

3.15. In general, the production of statistics on the informal sector and on informal employment is based on two main 'analytical' units: the informal sector enterprise or unit, on the one hand (together with the informal sector entrepreneur or owner), and the persons employed (the workers), on the other. The concept of the informal sector refers to informal sector units as analytical units, while the concepts of informal employment and employment in the informal sector refer to persons as analytical units, because what is required are statistics of the total number of persons employed (workers) in the informal sector and in informal employment, respectively.

3.16. Each data collection methodology calls for different sample, observation and reporting units. Their suitability for producing the required estimates for the desired analytical units should determine the data collection method. The type and range of information that can be collected and their overall quality, particularly in terms of coverage and accuracy, are also important. As the analytical unit and the observation unit are not necessarily the same, the data collection method has to link the observations for the observation unit to the analytical unit. The next sections introduce briefly the various survey approaches when collecting information for statistics on the informal sector and on informal employment, their statistical units and other characteristics, and review in more detail the main advantages and limitations of each. The survey approaches are:

(a) household-based surveys with a labour force component, notably labour force surveys;

(b) establishment-based surveys and censuses of production, and

(c) mixed surveys, including modular and stand-alone approaches.

Household surveys

3.17. Labour force surveys (LFS) collect, through a standard questionnaire, detailed information about the labour force characteristics of individuals in a sample of households (or, in some cases, a sample of individual household members). While labour force surveys are particularly suited to measuring employment in the informal sector and informal employment, because they are designed to measure participation in the labour market, other more general household surveys can also

be used when they include a labour force module or component. Household income and expenditure surveys, in particular, are a potential source of statistics on the demand for goods and services produced in the informal sector, as they identify informal points of purchase separately from formal points (for further details, see the discussion on phase 3 of the 1-2-3 surveys in paragraphs 6.132 and 6.133.). For ease of reference, this manual considers all household surveys (HS) that contain a labour force component in conjunction with labour force surveys.

3.18. In household surveys the sample units are dwellings or households (or more rarely, individuals) and the reporting units are one or more household members in the household.

3.19. When household surveys use a sampling frame with an appropriate design and size and include the required questions in the survey questionnaire, they can provide statistics on the following data items:

(a) the number of workers in the informal sector and characteristics relating to their work, their person and their household;

(b) the number and characteristics of the owners of informal sector units; and

(c) the number of workers in informal employment and the characteristics related to their work, their person and their household.

3.20. To provide useful statistics, household surveys need to meet a number of requirements, including a sound sample design that provides enough observations (units) of the target population, the inclusion of relevant questions in the standard questionnaire, and the coverage of all relevant jobs held by workers.

3.21. The sample design of the household survey must take into consideration the need for statistics on the informal sector and informal employment, on the same basis as traditional topics such as unemployment. This is necessary to ensure the quality of the estimates, especially in industries and regions where informal sector employment is not common. A sample design such as this accommodates the topics of informal sector and informal employment as additional measurement objectives. The sample allocation and selection then normally has to include a larger number of households with informal sector entrepreneurs or informal employment in order to enhance the representation of the various types of informal activity in the sample. This is likely to have implications for the design of a master sample in countries that use one as a basis for their household survey programme (see Box 3.1.). The following points should be noted:

(a) Relevant questions to be included in the standard questionnaire depend on the definitions used for informal sector and informal employment and typically include questions on registration, bookkeeping practices and size of the enterprise, on social security coverage of workers and on their entitlement to holidays.

Box 3.1.
Use of household master samples

A household survey programme allows for the integration of survey design and operations in several ways, and the same concepts and definitions can be used for variables occurring in several surveys. Sharing of survey personnel and facilities among the surveys will secure effective use of staff and facilities. The integration may also include the use of common sampling frames and samples for various surveys in the survey programme. The development of a master sampling frame and a master sample for the surveys is often an important part of an integrated household or mixed household and enterprise survey programme.

The use of a common master sampling frame of area units for the first stage of sampling improves the cost-efficiency of the surveys in a survey programme. The cost of developing a good sampling frame is usually high, and the establishment of a continuous survey programme makes it possible for a national statistical office to spread the expense of constructing and maintaining a sampling frame over several surveys (labour force, household income and expenditure, mixed household and enterprise surveys on the informal sector, etc).

Cost-sharing can be taken a step further if the samples selected for the various surveys are subsamples of a common master sample selected from the master frame. The use of a master sample for all or most of the surveys will reduce the costs of sample selection and preparation of sampling frames in the second and subsequent stages of selection for each survey. These cost advantages also apply to unanticipated ad hoc surveys undertaken during the survey programme period and, indeed, in cases where no formal survey programme exists at the national statistical office.

The main purpose of a master sample is to provide for the household surveys in the continuous survey programme (and any ad hoc survey that fits into the master sample design). The sample will thus be primarily designed to serve a basic set of household surveys such as labour force surveys and household income and expenditure surveys. It will generally not be efficient for sampling other types of unit. In some situations, however, it may be possible to use the master sample of households for a mixed household and enterprise survey of the informal sector – for example, for studying the characteristics of economic units owned by self-employed workers (such as household enterprises and own-account businesses).

In most developing countries a large proportion of the production units are owned by the self-employed. These units are generally quite numerous, small in size and widely spread throughout the population. A master sample of households can be used to identify the owners of unincorporated units in the first phase. Apart from cost savings, using a master sample for different surveys makes it possible to have overlapping samples in two or more surveys, thereby enabling integration of data and joint analysis of data from those surveys.

More details on master sampling frames and master samples can be found in United Nations, 2005a.

(b) Questions about the informal sector and informal employment should cover all jobs held by workers; often, workers engage in the informal sector or in informal employment in their secondary jobs only, and if jobs other than the primary job are not covered the effect will be to underestimate the extent of informal employment and employment in the informal sector.

(c) In order to capture seasonal and sporadic activities, which are very common among workers in the informal sector and in informal employment, household surveys need to be designed to cover all the seasons of the year. This can be achieved by collecting information continuously, with reference periods in each week or in each month, or at least in all four quarters of the year. The use of long reference periods, which would also allow the whole year to be covered, is not recommended in household surveys, given the significant recall errors when reference periods are too long. The 15th ICLS resolution recommends that, in order to monitor trends, questions on employment in the informal sector should be included at least once a year in existing LFS or similar household surveys that are annual or more frequent (ILO, 1993a, paragraph 22(5)).[15]

3.22. There are many advantages to including the measurement of both informal employment and employment in the informal sector in a labour force survey or a household survey that includes the labour force as a topic. These include the relative ease with which the topics can be added to an existing survey, cost-effectiveness, conceptual coherence with other labour force statistics, and the analytical possibilities offered by the collected information:

(a) Incorporating both informal sector employment and informal employment in an HS will in many countries take advantage of the existing survey infrastructure and thematic and geographical coverage. Labour force surveys are regarded as a core statistical activity to be conducted at regular intervals. In addition, these surveys tend to be national in coverage and to have budgets to ensure their continuity and a permanent staff with the relevant experience. As a result, it is relatively easy to generate quality statistics with national coverage in a regular and timely fashion. In general, all that is required is to add a few questions to the standard questionnaire in order to distinguish, among the employed, those who operate or hold jobs in informal sector enterprises and those whose jobs would qualify as informal regardless of the type of production unit in which they are undertaken. It may also be necessary to review the sampling plan and operational procedures for the survey to ensure satisfactory coverage of geographical areas and activities where informal activities and/or informal employment are prevalent. The economies of scale achieved by incorporating questions on employment in the informal sector and informal employment in labour force surveys make it one of the most cost-effective alternatives for establishing a regular statistical programme to address these particular measurement objectives.

(b) A major methodological advantage of using household-based surveys to measure informal sector employment and informal employment is that they can be designed to cover all types of jobs comprehensively, whether the jobs

[15] In the case of surveys conducted at less frequent intervals (e.g., once every year or every five years) the 15th ICLS recommended including questions on employment in the informal sector in every survey round.

are permanent, temporary or casual, principal or secondary, home-based or street-based, with or without fixed business premises, paid or unpaid, etc. The coverage of agricultural activities removes a traditional obstacle to the measurement of informal sector employment in this type of economy activity. As will be discussed in Chapter 4, despite the measurement challenges there are strong reasons to extend the concept of informal sector employment to rural areas, particularly in developing countries (ILO, 1993a, para.15).

(c) An additional advantage of an HS is that it ensures the collection of statistics on employment in the informal sector and informal employment as an integral part of labour force statistics. The concepts of informal employment and employment in the informal sector are embedded in the labour force framework and are, thus, essential components of the labour force. Their inclusion in an HS makes possible the classification of persons employed by status in employment, the informal or formal nature of their jobs, and the type of production units (formal sector enterprises, informal sector enterprises, households) in which the activities are undertaken, as well as by type of work (occupation), hours worked and other characteristics of interest. Thus the joint collection of standard labour force statistics and statistics on employment in the informal sector and informal employment from one single source opens important opportunities for analysis and policy-making. It makes it possible, for example, to estimate the share of total employment that is unprotected, generates low-income, etc. and how it is distributed between formal sector enterprises, informal sector enterprises and households. It also allows the regular production of indicators on informality that can be used to supplement the unemployment rate. This is particularly important in countries where, owing to the lack of public unemployment insurance schemes, many persons cannot afford to be unemployed, but rather stay employed with lower working conditions (INEGI 2002). In such settings the proportion of the population in informal or unprotected jobs is a necessary supplement to the unemployment rate as an indicator of the labour market situation. Similarly, it facilitates the study of linkages between informality and the segmentation of the labour market, which is a key issue underlying the policy debate about the effect of labour reforms on informal employment. If the household is also a unit of observation, statistics may be produced not only for the individual but for the household as well. It is then also possible to examine the characteristics of the households of informal sector entrepreneurs and the division of risks among household members.

(d) Household surveys are the only source that can produce statistics on all forms of informal employment, including domestic workers and producers of goods exclusively for own final use or volunteer workers,[16] if relevant questions to identify those activities are included in the questionnaire.

[16] If included in employment, see paragraphs 2.76 and 2.100.

(e) Most household-based surveys are carried out frequently and can thus be used to capture seasonal and business variations. Although not all household surveys are conducted on a continuous basis, many already are and more are expected to be conducted in this way in the future. This provides the HS with another important advantage over enterprise surveys, where each round tends to be conducted during a specific period of the year. When the HS is conducted on a quarterly or monthly basis, it is possible to monitor seasonal variation in informal activities as well as to produce seasonally adjusted series (provided that sufficiently long time series are available). Because labour force or similar household surveys are often conducted at a greater frequency than specialized informal sector surveys, the statistics obtained on the evolution of labour inputs in the informal sector can also be used to extrapolate other characteristics (e.g., value added) of the informal sector. Many of these features depend, however, on whether the household survey programme has been designed to provide good estimates of changes over time as well as of the employment structure at a particular point in time.

3.23. At the same time, there are challenges and limitations that arise when using a household survey to produce statistics on employment in the informal sector and informal employment, and these need to be addressed (ILO, 1993a, paragraph 22):

(a) Since there is not a one-to-one correspondence between informal sector enterprises and their owners, the statistics from LFS and other household surveys do not directly estimate the total number of informal sector enterprises or their characteristics (such as the production, income generation and fixed capital associated with them). Household surveys can provide statistics for the total number of informal sector entrepreneurs (and their characteristics), but this number does not necessarily coincide with the total number of informal sector units because they may be owned by two or more business partners. Even if information about partners is requested in the survey questionnaire to correct for this disparity, the quality of the information may be poor, given that household survey questionnaires often have to be answered by proxy respondents. This limits the amount of information that can be obtained on many of the characteristics of these units.

(b) Response errors may result in the incorrect classification of workers in the informal sector and informal employment. A common concern with the use of labour force surveys to identify persons employed in informal sector enterprises is that employees, contributing family workers and proxy respondents may find it difficult to respond correctly to some of the questions designed to determine whether the criteria used to define the informal sector are satisfied, especially questions seeking to ascertain the legal organization, bookkeeping practices and registration of the enterprises for which they work.

Proxy responses are also a major source of error in measuring informal employment, as they may lead to a significant misclassification of workers in the informal sector and in informal employment. Nevertheless, given the options available (see Box 3.2.), the best solution is to collect information about the economic units where they work from all employed persons. Indeed, a household survey is the only source from which information can be obtained directly from employees and contributing family workers without passing through the employer. This is an important consideration in collecting data on working conditions in the informal sector and informal employment, and one which makes it necessary to ascertain that questions are formulated to maximize the probability that respondents will provide relevant information. Questions and response categories should be designed to correspond to the language and terms used by respondents and interviewers, rather than to the language and terminology of statisticians and legal regulations.

Box 3.2.
Alternative strategies to reduce misclassification in informal sector or informal employment

There are two ways to reduce misclassification of informal sector or informal employment workers because of response errors. One possibility is to obtain an estimate of the total number of persons employed in the informal sector using only information on the characteristics of their enterprise (including the number of persons employed in them) that is provided by respondents identified as employers or own-account workers, i.e., entrepreneurs. While it can be assumed that most owners of informal sector units have full information on the characteristics of the economic unit and of the persons employed there regularly (if not during a particular reference period, unless it is short and recent), the informal nature of the unit may lead the respondent to deliberately distort the information provided. If a sufficient number of respondents do this in the same direction (e.g., by reporting fewer than the actual number of workers engaged), then this will introduce a systematic bias in the statistics.

The other possibility is to base the estimate on all respondents and to formulate the questions for employees in ways that are more directly linked to their situation, such as whether the employers deduct income tax contributions from their salary (see paragraph 4.12 and Figure 4.1). This will reduce the likelihood of non-response for lack of knowledge. Proxy responses and issues of data quality associated with them will normally have to be accepted, given the limited available time and resources to conduct the survey.

(c) If the statistics are not produced frequently, they will not capture important informal sector activities. Where the survey is implemented only during one particular period of the year, or where the relevant questions refer to only one particular period of the year, the information collected using a short reference period is unlikely to be representative of the whole year or to reflect the variations that take place during the year. To improve the statistics in these respects, it may be necessary to consider adapting the sample design and field

operations of the HS to cover the whole year, or including a longer reference period for information about informal employment and employment in informal sector activities.

(d) If the sample has not been designed to accommodate informal sector or informal employment estimates, the survey may not produce reliable statistics in that respect. Usually, the sample size of an HS is determined by the need to maintain a good level of statistical precision for basic indicators such as the unemployment rate. This, however, does not necessarily guarantee that the sample size will be sufficiently large to allow for detailed disaggregation of informal employment inside and outside the informal sector, by kind of economic activity and other characteristics. To ensure that the survey can indeed yield statistics with the detailed distribution requested by the users, care should be taken in the sample design to include an adequate number of sample areas where informal workers live, and to select an adequate number of households per sample area. This may mean modifying the existing stratification strategies for the sample.

Establishment surveys and censuses

3.24. Establishment-based censuses or surveys collect information about the economic activities of informal sector units through one or more standard questionnaires. When they obtain information about the sales, expenditure, production and assets of establishments they are often designated as economic or business surveys. In this manual reference is made mainly to this type of survey, as opposed to surveys that obtain information only about employees, their hours of work and their earnings, or other specialized establishment surveys. The information required for the statistics is collected either from all establishments or from a sample. In this type of instrument, the sample and observation units are the establishments, and the reporting units can be the manager, the owner or another person responding on behalf of the establishment, such as an accountant. Establishment surveys that produce statistics about the informal sector can be part of larger surveys that target all establishments in a country, or be specifically designed to cover the informal sector or all units excluded from establishments in the business register. The latter surveys are known as micro establishment or informal sector surveys, or as surveys of the unincorporated sector. For statistics on informal sector units, the analysis unit should ideally be the enterprise or informal sector unit. While most informal sector units operate in a single location, carry out one main activity and are therefore enterprises with a single establishment, there may be instances of units carrying out their activities in more than one local unit, or carrying out more than one kind of economic activity within

the same local unit, resulting in complex enterprises.[17] In order to produce statistics for enterprises in the informal sector, establishment-based censuses and surveys need to identify the enterprise to which those establishments belong. Establishment censuses could reconstruct enterprises on the basis of this information, but establishment surveys need to apply special procedures to obtain information about enterprises, as they are not designed to obtain information about local units that are not included in the sample selected. For example, establishment surveys can be designed to obtain information about enterprises from establishments in the sample which are the main local unit in complex units (see paragraphs 5.28 and 5.43).

3.25. Establishment surveys that target small units can also obtain information on individual workers engaged by the units but, as the same worker may be engaged in more than one unit, the observation unit will be the job and not the worker. The analytical unit for statistics of employment in the informal sector or informal employment, however, is the worker.

3.26. When establishment surveys and censuses are properly designed to cover the informal sector, they are able to measure:

(a) the number of informal sector establishments and their characteristics, including: their production activities, income generated, expenditure and type and amount of fixed capital; the conditions and constraints under which they operate; their organization and relationships with the formal sector and the public authorities, etc.;

(b) the number and personal characteristics of the owners of informal sector establishments;

(c) the number and characteristics of jobs in informal sector establishments; and

(d) the number and characteristics of informal jobs within the informal sector.

3.27. To produce these statistics establishment censuses and surveys need to fulfil a number of requirements, which include a complete coverage of all types of informal sector establishment, a sound sample design, the use of coherent concepts and classification systems, and the inclusion of relevant questions in the standard questionnaires. The following points are to be noted:

[17] An informal sector unit has more than one establishment when the same household member owns more than one local unit or carries out more than one kind of economic activity. According to the 15th ICLS resolution, establishments owned by the same household member are considered to be part of the same informal unit. However, establishments owned by different household members are not part of the same economic unit (ILO, 1993a, paragraph12). This definition differs from the definition of enterprises in the SNA, where production units owned by members of the same household are seen as belonging to the same enterprise (UN et al., 2009, paras.4.5 and 24.30).

(a) The frame used to select the survey sample will determine whether there will be full coverage of establishments. To cover the informal sector, two types of sample frames are possible

- *list frames*, which list each establishment in the country, providing a limited set of information for each establishment (identification number, address, kind of economic activity (industry), approximate number of workers, legal status of the establishment, etc.), and
- *area frames*, which divide the country into areas of homogeneous size and provide a limited set of data for each area (number of dwellings, population, employment by status in employment and industry, number of establishments by industry, etc.).

The only frames that guarantee a good coverage of informal sector establishments, including household-based establishments, are area frames (see paragraphs 5.38 to 5.47).

(b) The full coverage of informal sector establishments also implies that all industries have to be covered. The 15th ICLS resolution mentions that it is generally preferable to cover all relevant kinds of economic activity in a single informal sector enterprise survey (ILO, 1993a, paragraph 22(4)). The conduct of activity-specific informal sector surveys is not recommended as a main data collection strategy unless the measurement objectives have been limited to particular kinds of economic activity or where the scale and cost of a single survey are deemed too large or unmanageable. In activity-specific surveys coverage errors are likely to occur, given the complexity of identifying, during the listing operation, only those informal sector units that fall within the scope of the survey. In addition, rules would need to be established for informal sector units engaged in two or more kind of economic activity, particularly if some of them fall outside the scope of the survey. This is important, as multiple activities are widespread among informal sector units.

(c) Good coverage of informal sector establishments can also be guaranteed with an establishment census. Economic censuses can be a useful source of statistics on the informal sector if household-based and mobile activities are covered. However, these censuses are not sufficiently frequent to be recommended as the only source for statistics on the informal sector. A special census of informal sector establishments alone should be avoided because of its human and financial resource implications, and because the informal sector definition is too complex to be used to delineate the scope of an establishment census during field operations.

(d) When area frames are used, a sound sample design should be similar to the sample design for households in a household survey. The first stage entails selecting enumeration areas – or primary sampling units (PSUs) – based on

expected differences in the density of informal sector units. The second stage involves constructing or updating the list of establishments within each sample area by identifying all establishments in the selected PSUs, including those without fixed location and those operating in the owner's home, and obtaining the information necessary to determine whether or not they belong to the informal sector. This implies listing not only all visible establishment premises but also all the households in the PSUs, and identifying those where home-based economic activities are carried out and those from which household members engage in mobile activities. The selection of the sample establishments (ultimate sampling units) is then carried out on the basis of this new or updated list.

(e) It is also important to use concepts, definitions and classification systems that are consistent with those used in other regular establishment surveys and censuses. This is necessary to produce statistics on formal and informal sector establishments which are consistent. Ideally, such harmonization requires joint planning of the economic census and of regular establishment surveys and establishment surveys covering the informal sector.

3.28. There are a number of advantages to measuring both informal employment and the informal sector by means of establishment-based surveys. These include their reliance on self-reporting, their ability to measure the characteristics of the informal sector units as well as employment in these units, their potential for complete coverage when area sampling is used and, when combined with general establishment surveys, their ability to compare formal and informal sector units. Again, a number of points should be noted:

(a) Establishment surveys generally do not rely on proxy response but obtain the information from the owner, manager or another person in charge of the establishment, are well placed to generate reliable information about the characteristics of the establishment (notably their industry and output) and the working conditions of the workers (notably their wages).

(b) Properly designed establishment-based surveys can be used to produce estimates of the number and characteristics of establishments in the informal sector, as well as of the number and characteristics of the workers in the informal sector. This allows production of coherent statistics of workers' conditions of work and of establishments' operations, which is crucial to understanding the informal sector.

(c) When area sampling is used, establishment surveys guarantee a good coverage of informal sector establishments.

(d) When the establishment survey covers all economic units in the country, including both formal and informal sector units, it can be used to produce economic statistics about establishments in the informal sector that can be

compared with similar statistics for formal sector establishments, thus making it possible to obtain economic statistics for the whole economy, to analyse the differences between types of unit and to provide policy-makers with the information they require.

3.29. At the same time there can be serious disadvantages to using establishment surveys, such as the difficulty of producing statistics on enterprises, the lack of full coverage when list frames are used, possible response errors related to the identification of informal employment in establishments outside the informal sector, and the relatively high cost of the listing operations when area-based sampling is used. Thus:

(a) Because the observation unit in establishment surveys covering the informal sector is the establishment but the analysis unit is the enterprise, these surveys need to reconstitute informal sector enterprises that have multiple establishments engaged in two or more different activities or in two or more locations. It is possible to ask the owner or manager about the other establishments belonging to the same owner. However, these may be located in separate PSUs. As the sample is not designed to produce estimates about units that are outside the randomly selected PSUs, information about these other establishments cannot be incorporated into the survey estimates. Therefore, it is not possible to produce statistics at the enterprise level but only at the establishment level, even though information about the linkages between several informal sector activities undertaken by the same individuals can be obtained. This limitation may, however, not be serious, given that the number of enterprises consisting of more than one establishment will most certainly be insignificant. A vast majority of businesses are made up of only one establishment, especially small and medium enterprises (Eurostat and OECD, 2007, page 12) and, since informal sector businesses are by definition small units, it can be expected that most will have only one establishment.

(b) Similarly, it is not possible to produce statistics from establishment censuses and surveys about persons employed in the informal sector, only about jobs in the informal sector. As a person may work in more than one establishment, using the number of jobs as a proxy for the number of persons employed may result in overestimation, to the extent that multiple job-holding is common for the informal job-holders. This is quite likely as such jobs can be low-paid and casual.

(c) Some establishment surveys may cover only specific kinds of economic activity (for example, manufacturing, trade, transport and other services, etc.). In such surveys the data collection programme should be designed to ensure comprehensive coverage of informal sector units without omissions or duplication from one survey to another. Double-counting of activities may occur where, for example, some members of a household produce goods in a

small workshop or at home and other members of the same household sell these goods in a fixed market or street stall. Another important issue arises when several activity-specific surveys are spread over longer periods of time, with one survey following the other. In such cases, time-consistent informal sector statistics for these kinds of economic activity cannot be produced.

(d) Coverage of informal sector establishments will always be incomplete when list frames are used to select the sample of units in establishment surveys. Even when they are based on a recent establishment census that has managed to cover the informal sector, a list-based sample frame will exclude new units, and this may bias the resulting statistics.

(e) Even with area frames the listing operation may not be exhaustive. When a simple set of questions is used during the listing operation to identify household-based and mobile establishments, a complete coverage and accurate identification of the owners of informal sector enterprises, or even only of those who are household-based, cannot be guaranteed (see paragraphs 5.43 and 5.44).

(f) In the listing phase of area-based establishment surveys, information about household-based informal sector units often has to be obtained from household members other than the enterprise owners themselves, and the informant may not know the particularities of the units owned by other members of the household. Such response errors and the resulting errors in the sampling frame for the second phase can be serious when the first phase is only a listing of households, and where the questions used to identify informal sector entrepreneurs are few and basic. For this reason, to ensure good coverage of informal sector owners, this manual recommends identifying a broader group of workers during the listing phase, such as small entrepreneurs or household unincorporated enterprises with at least some market production, so as to identify entrepreneurs that may belong to the informal sector. Use of a broader concept also enhances flexibility when analysing the resulting statistics, as it becomes possible in this way to make use of different definitions according to the needs of different statistics users. Only at the second stage, when entrepreneurs are interviewed directly, may classification errors be detected and a correct count of informal sector units and jobs be obtained.

(g) While establishment surveys may not contain response errors deriving from proxy responses to the same extent as household surveys, they do suffer from other reporting errors. Even if it can be expected that owners or managers of an establishment (informal or not) have full information on the characteristics of the economic unit to distinguish between formal and informal, it is possible that the entrepreneur may give distorted information on sensitive issues, such as the workers' social security coverage. This will introduce bias into the statistics if such distortions are systematic. Establishment surveys of

registered formal sector units may not be the best source for information about informal employment, if workers are not employed legally, taxes or social security payments are avoided and/or workers are hired as self-employed outworkers and not as employees. In addition, information about the workers' personal characteristics may not be of good quality, and the measurement of complicated response items such as sales, investment or fixed capital may be poor for informal sector units, as entrepreneurs generally do not keep the necessary records and may have reason to underestimate the figures.

(h) Even if both formal and informal establishments are covered, establishment surveys will generally not cover all informal employment. Informal workers may also work in households that do not produce for sale on the market – for example as domestic employees and producers of goods exclusively for own final use.

(i) A major limitation of area establishment surveys for statistics on the informal sector is the high cost of the listing operation, once the PSUs are selected.

(j) Establishment surveys that are based on incomplete frames or which use non-random samples of establishments will not provide unbiased estimates of the informal sector. This type of establishment survey is carried out in situations where neither a list nor an area frame is possible or practical. Such surveys may be carried out in particular towns or regions and, within these, in areas where major informal sector activity has been identified by local experts as occurring daily or on particular weekdays, for example in markets or specific streets in urban areas,. These areas are then selected deliberately or randomly, and establishments are selected using systematic or other form of selection.

Mixed household and enterprise surveys

3.30. Mixed household and enterprise surveys have a household survey component and an enterprise survey component (ILO, 1993a, paragraphs 25 to 32). It is possible in this way to collect information on both informal employment and employment in the informal sector, as well as on characteristics of informal units. These surveys are usually conducted in two phases. In the first phase a household listing operation or a household survey is carried out in the selected sample areas (PSUs). During this phase informal sector entrepreneurs (own-account workers and employers of units qualifying for inclusion in the informal sector) or households with informal sector entrepreneurs are identified; they make up the sampling frame for the second phase, the enterprise survey. In the second phase all or a sample of informal sector entrepreneurs (or of households with informal sector entrepreneurs) are interviewed to obtain detailed information on the characteristics of the owners of informal sector units, of their enterprises and of the persons working with them, if any.

3.31. Mixed surveys are similar to area-based establishment surveys but differ in the sampling units used. The 'sample units' in the first phase of a mixed survey are households, as in household-based surveys, and the sample units in the second phase are informal sector entrepreneurs (or households with informal sector entrepreneurs). By contrast, the sampling unit in an establishment survey is the informal sector economic unit (see paragraph 6.8 and Figure 6.2). The 'reporting units' will be the same as in a household and in an establishment-based survey, i.e., one or more household members in the household component and the informal sector unit entrepreneur in the enterprise component.

3.32. Mixed surveys can be conceived either as modules attached to an existing labour force or other household survey (mixed modular surveys) or as stand-alone surveys (mixed independent surveys). The basic difference between a modular and a mixed independent survey is that the household component in the modular survey is an existing (base) survey while the independent survey conducts an independent listing operation of households and can use an independent sample design.

3.33. Mixed surveys can produce statistics on:

(a) the number and characteristics of informal sector enterprises or units, including: their production, income generated, expenditure and fixed capital; the conditions and constraints under which they operate; their organization and relationships with the formal sector and the public authorities; characteristics of the informal sector unit owners, etc.;

(b) the number and characteristics of the informal sector entrepreneurs;

(c) the number and work, personal and household characteristics of workers in informal sector units; and

(d) the number and employment, personal and household characteristics of workers in informal employment within and beyond the informal sector.

3.34. In addition to all the advantages of household surveys and establishment surveys, mixed surveys offer some additional benefits:

(a) The most important feature of the mixed survey is that it makes it possible to analyse jointly, at the enterprise and household level, the various types of informal sector activity undertaken by individuals and their households. This is because the sample unit of the second phase of the mixed survey is the informal sector entrepreneur in the sample areas, and not the establishment. Owners are requested to provide information on all their establishments, and all of them fall within the sample design. This kind of survey is well suited to producing statistics on employment in the informal sector as a whole, regardless of the size of the enterprise, the kind of economic activity

performed and the type of workplace used, and irrespective of whether the activities are performed as main or secondary jobs and undertaken inside the entrepreneur's home or without a fixed location. Only informal sector activities of homeless persons are not covered.

(b) Mixed surveys make it possible to analyse statistics on the characteristics of the informal sector activities and enterprise owners together with those of the owners' households, obtained from the same survey. This is important for assessing the contribution of other household members to the household income and for analysing the impact of the household situation on the activities of women and children working as informal sector entrepreneurs.

3.35. The main disadvantage of mixed surveys is their reliance on proxy response in the first phase. It is shared with the listing operation of area-based establishment surveys covering the informal sector.

Mixed modular surveys

3.36. When a module is attached to an existing labour force survey (or other household survey that includes questions on employment) addressing all or a sample of informal sector owners identified in the household survey, the informal sector survey sample is obtained as a subsample of the base (or filter) household survey sample.

3.37. In order to produce relevant statistics on the informal sector and on informal employment, mixed modular surveys need to fulfil a number of requirements in addition to the standard requirements of household and establishment surveys:

(a) The informal sector survey may be conducted simultaneously with or shortly after the base survey. To conduct it shortly after is preferable in most cases, as it facilitates the management and co-ordination of the two surveys, ensures that the survey operations for the base survey can proceed smoothly, is unlikely to have a negative impact on the quality of the base survey data, provides better control over the identification and selection of the subsample for the informal sector survey, and enables the informal sector survey interviews to be conducted by specialized field staff.

(b) In order to guarantee a sufficient number of informal sector units to produce reliable estimates, the household survey sample should be designed and selected to produce reliable estimates of the informal sector. When it does, the survey is known as an 'integrated survey', in the sense that it is designed to meet several measurement objectives at the same time, including the production of statistics on the informal sector and on other topics, such as labour force, household income, expenditure, etc. Such surveys are especially useful in countries that do not have a regular household survey to which an

informal sector module can be attached, or which need to collect data for statistics on a range of topics without having the resources necessary for separate surveys. Integrated surveys incorporate the need for good estimates of the informal sector when selecting PSUs and sample households within selected PSUs, in order to control the size of the sample of informal sector units and its distribution by kind of economic activity. Properly designed, the resulting sample includes more households with informal sector entrepreneurs than does a sample that does not have this factor to consider, and it improves the representation of the various types of informal sector activity. This makes it easier to obtain reliable estimates separately for each type of informal sector activity for which such estimates are desirable with the required degree of precision (e.g., estimates by kind of economic activity). This is particularly important in countries where the informal sector tends to cluster geographically or in other ways that the sampling plan can take into account. The 1-2-3 surveys described in paragraphs 6.120 to 6.143 can be considered as an example of integrated surveys. It should be noted, however, that a sampling plan designed to capture and produce good estimates for clustered phenomena may not be optimal for statistics on phenomena that are not clustered in the same manner.

(c) Another way to guarantee an adequate sample of informal sector units, if resources permit, is to increase the sample size of the base (household) survey sample by adding households to it, either from the same or from other sample areas. If the base survey is of a continuing nature, subsamples of informal sector units can be cumulated over several survey rounds. Alternatively, if the information required for identifying the units eligible for the informal sector survey is obtained during the listing operation for the base survey, the informal sector survey sample can be selected on the basis of all households in the PSUs, rather than only those selected for the base survey sample. This design concerns stand-alone mixed surveys as described in paragraphs 3.40 to 3.43 and in Chapter 6, as at the household selection stage the two surveys will have different samples (although they will share a common sample of areas).

3.38. Compared to mixed independent surveys mixed modular surveys have the advantage of being less complex and less expensive. Mixed modular surveys use the same sampling weights as the base household survey for informal sector owners and their enterprises, and this facilitates the estimation of statistics from the survey. Information collected during the household survey provides the basis for identifying and selecting the subsample of persons for the survey of informal sector units, and no special household listing or interviewing is required. Consequently, it has more potential for being used for regular data collection. If the household survey is conducted regularly, and if a module for informal sector units is attached to it at sufficiently frequent intervals, then it can facilitate the monitoring of changes over time in employment in the informal sector and in

informal employment. Note, however, the need for overlapping samples between rounds to obtain reasonably precise estimates of such changes.

3.39. However, the samples of mixed modular surveys may not be selected in such a way as to produce good estimates of the informal sector or of informal employment. Sample designs of ongoing labour force surveys or any other survey incorporate the surveys' main objectives and may not allow the incorporation of other critical variables.

Mixed independent surveys

3.40. In the stand-alone approach the selection of PSUs for the first phase always takes into consideration any known concentration of informal sector entrepreneurs in certain areas. Within selected PSUs the household phase is a listing operation of all households. In some cases, a dual sample may be selected, one sample for informal sector units with fixed premises and another for household-based units and mobile activities, given that their geographical distribution may be different.

3.41. The objective of the first phase is to identify potential informal sector entrepreneurs and construct a list of households with such entrepreneurs, from which a stratified sample is selected. The second phase consists of the informal sector survey, based on a questionnaire submitted to a sample of informal sector entrepreneurs. While the first phase is a listing operation, the informal sector survey may contain a labour force survey component for obtaining information about the labour force characteristics and demographics of the informal sector owners and their households.

3.42. The main advantage of stand-alone surveys is that they always have a sound sample design, because the sample is designed to meet the measurement requirements of producing estimates of a specified precision. For example, precise statistics may be required for each kind of economic activity, or to support analysis of the differences between various informal sector segments with respect to their income-generating potential, constraints and other characteristics.

3.43. However, the most important limitation of independent surveys is the high cost of the listing operation in the first survey phase, though this can be significantly reduced if it is combined with a household listing for another survey.

Methods of indirect estimation

3.44. Prior to the direct measurement of informal sector and informal employment, the use of indirect methods of estimation based on statistics from related sources was common practice. Among these the most widely used were those based on residual balance techniques and macro-economic estimation

techniques, including the GDP approach, employment approach, physical input approach, monetary methods, and multiple-indicator multiple-cause (MIMIC) model (Perry, et al., 2007).

Residual balance techniques

3.45. Indirect methods based on residual balance techniques have been primarily used to estimate employment in the informal sector and informal employment, but they can also be used for estimating the contribution of the informal sector to the GDP.

3.46. Residual balance techniques are able to produce estimates for the following data items:

(a) size of employment in the informal sector; and

(b) size of informal employment.

3.47. They do so by comparing labour force statistics produced through a population census, a labour force survey or another household survey covering employment with statistics on 'formal' employment from establishment censuses or surveys, social insurance registrations or fiscal records. The first type of source, also referred to as the 'exhaustive' source, is assumed to capture all forms of employment (formal and informal) from which statistics based on the second type of source, providing statistics on 'registered' or 'formal' employment, can be subtracted. The estimates from the population census or labour force survey are always larger than those from the economic census, establishment survey or administrative records, because the latter do not capture employment outside formal establishments. However, they tend to produce statistics on jobs, not on persons employed. Thus, depending on the extent of multiple job-holding and the sub-categories of workers compared, the residual balance obtained is used as a proxy of total informal employment or of employment in the informal sector.

3.48. Residual balance techniques require two sets of statistics:

(a) statistics on employment by industry (or, in some cases, occupation) from the population census or labour force survey, cross-classified by status in employment and sex; and

(b) statistics on 'registered' employment for at least one of the criteria used for defining the informal sector, preferably the legal status of the firm or, if not, registration or employment size.

3.49. Because the various sources of information on 'registered' employment are able to provide information for different definition criteria, the estimates of employment in the informal sector and informal employment will vary according to the criterion used to infer the informal sector.

3.50. An application of this methodology using the legal status of the firm as a criterion is presented in an ILO study (ILO, 2002a) in which the residual balance technique was applied to produce estimates of informal employment (excluding agriculture) and its main components for 25 countries, as follows:[18]

(a) First, the size of the total non-agricultural workforce was estimated on the basis of statistics by industry drawn from a population census or labour force survey.

(b) Second, the number of formal employees in the non-agricultural workforce was estimated on the basis of statistics from an establishment survey, an economic census, or administrative sources that included a data item on the legal status of firms. Paid workers employed in corporations, quasi-corporations or other legally registered firms were classified as formal employees, and estimates of civil servants and members of the armed forces (who were often excluded from economic censuses or surveys) were obtained from other sources and also regarded as formal employees.

(c) Third, the number of formal employees (step 2) was subtracted from the total non-agricultural workforce (step 1). This difference provided a residual estimate of total informal employment (excluding agriculture).

(d) Fourth, the total non-agricultural workforce was divided into paid employees and self-employed persons. An estimate was then prepared for (a) paid employees and (b) the self-employed (employers, own-account workers and contributing family workers) in the non-agricultural workforce. The self-employed so derived included some high-end professionals and employers in registered enterprises, who were not considered to be informally employed. However, these categories are assumed to be few worldwide, and fewer in developing countries than in developed countries.

(e) Fifth, an estimate of informal paid employment (outside agriculture) was derived by subtracting the number of self-employed persons (step 4) from total informal employment (step 3). The estimate refers to employees with informal jobs but may exclude some subcontracted paid workers who declare themselves as self-employed.

Macro-economic estimation techniques

3.51. Indirect macro-economic estimation techniques have been primarily used in national accounts to produce estimates of the size of the informal sector and of its contribution to the economy (value added). The most common indirect methods of macro-economic estimation have been described in detail elsewhere (see Thomas, 1993).

[18] The study also presents a second indirect calculation approach to measure informal employment based on the residual balance technique for cases where a direct measure of employment in the informal sector is available from mixed surveys or informal sector enterprise surveys.

3.52. These techniques produce estimates for:

(a) the number of informal sector units, and

(b) their production or contribution to the economy.

They do so by combining various related aggregate economic variables according to a set of assumptions.

3.53. These techniques have been frequently criticized as being too approximate and hypothetical, as they depend heavily on the assumptions made and on the coverage and quality of the statistics used. Moreover, they yield highly aggregated macro-economic estimates that do not provide information about the composition of the informal sector or about the way it functions. Such disaggregated information is needed for policy purposes and programme formulation, however. In fact, indirect macro-economic estimation techniques often include components beyond the informal sector, such as the non-observed activities of other units of production (including formal sector enterprises). Thus, though still popular for some purposes, these methods are slowly being phased out as more and more countries start to collect the necessary data for direct measurement on a regular basis.

Summary

3.54. The data collection methods reviewed in this chapter, each based on different statistical units (observation, analysis, sample and reporting units), are summarized in Table 3.1 below.

3.55. Each data collection method produces different types of statistics of the informal sector and of informal employment. Table 3.2 shows, in stylized form, the general correspondence between the main data items and the main alternative survey method. The relations presented in Table 3.2 assume that each method uses an appropriate sample frame, size and design, and that the required questions for identifying informal sector enterprises and/or persons employed in informal jobs, whether in their main or secondary job, have been included in the survey questionnaire.

3.56. When the main objective is to measure total employment in the informal sector (A.1) and/or total informal employment (B.1 and B.2), the best approach is to use the household survey or mixed survey approach. Where the main objective is to measure the number, characteristics and functioning of informal sector establishments (A.2.1, A.2.2), the data collection programme should be based on an establishment survey or mixed survey approach. If the main objective is to measure the number of informal sector enterprises (A.2.3, A.2.4), then mixed surveys should be used.

Table 3.1.
Survey methods and statistical units

Unit	Household surveys	Establishment surveys	Mixed surveys
Sample unit	Household	Establishment	Households (first phase);informal sector entrepreneurs (second phase)
Observation unit	Jobs, persons and owners of informal sector units	Establishments, jobs	Jobs, workers, and owners of informal sector unit (first phase); informal sector units (second phase)
Reporting unit	One or more members of the household	Owner or manager of establishment	One or more members of the household (first phase); owner of the informal sector unit (second phase)
Analytical unit for employment	Jobs and persons, owners of informal sector units	Jobs	*Household component:* jobs, persons and owners of informal sector units *Informal sector survey:* jobs, owners
Analytical unit for informal sector units		Establishments	Informal sector units, establishments

3.57. In cases where the measurement objectives call for the production of statistics on both employment in the informal sector (A.1) and informal employment (B.1), as well as on the number of informal sector units and their characteristics (A.2.3, A.2.4), and resource constraints require the production of these statistics from a single source, the most suitable data collection method would be a mixed survey approach.

Table 3.2.
Relation between measurement objectives and alternative survey methods

Measurement objective	Suitable survey approaches			
	House-hold survey	Establish-ment survey	Mixed modular survey	Mixed in-dependent survey
A. Informal sector				
1. Employment in the informal sector				
1.1 Total population employed in the informal sector	✓		✓	✓
1.2 Employment and working conditions of informal sector workers	✓		✓	✓
1.3 Number of informal sector jobs and their job characteristics	✓	✓	✓	✓
1.4 Demographic and household characteristics of informal sector workers	✓		✓	✓
2. Informal sector enterprises and establishments				
2.1 Total number of informal sector establishments		✓	✓	✓
2.2 Characteristics of informal sector establishments		✓	✓	✓
2.3 Total number of informal sector enterprises			✓	✓
2.4 Characteristics of informal sector enterprises			✓	✓
2.3 Characteristics of informal sector unit owners	✓	✓	✓	✓
2.4 Characteristics of households of informal sector unit owners	✓		✓	✓
B. Informal employment				
1. Total number of informal jobs and their characteristics	✓	(✓)	✓	✓
1.1 Total number of informal self-employment jobs	✓	✓	✓	✓
1.2 Total number of informal wage employment jobs	✓	(✓)	✓	✓
2. Persons employed in informal employment and their characteristics	✓		✓	✓
2.1 Persons in informal self-employment	✓		✓	✓
2.2 Persons in informal wage employment	✓		✓	✓

Note: (✓) indicates significant under-reporting

Chapter 4.
Household surveys on informal sector employment and other types of informal employment

Introduction

4.1. Household-based surveys that include a labour force component, here referred to generically as household surveys (HS), are among the most important and widespread statistical inquiries conducted in countries on a regular basis. The principal and original aim of labour force surveys (LFS) is to identify and measure the size and characteristics of the labour force, particularly employment and unemployment. Over time, the use and purposes of LFS have widened to

incorporate more topics and to capture wider details about the labour force. The objective of the present chapter is to describe how LFS and other household surveys can be used to collect data on employment in the informal sector and informal employment. In particular, the chapter provides a review of aspects of the planning, design and implementation of labour force surveys, as well as of data processing, that need to be taken into account. Throughout, examples from countries are used to illustrate some of the challenges and design demands that need to be considered and how they are being addressed. The discussion here applies not just to LFS but more broadly to multi-purpose household surveys in which the labour force is a topic and the dwelling is the final sampling selection unit.

4.2. There are many advantages to using household surveys to collect information on employment in the informal sector and informal employment (paragraph 3.22). Given the principal aim of HS and the conceptual coherence of informal sector employment and informal employment with the labour force framework, incorporating their measurement in this data collection tool is a cost-effective strategy to improve the availability of data on these topics and at the same time expand the depth and scope of labour force statistics in general. There are, of course, several questionnaire design issues, including content, timing and placement of questions that need to be considered to ensure proper measurement of these topics. These issues are discussed in the first section of this chapter. Another section addresses the conceptual and operational challenges of collecting data on informal employment in agriculture. Another focuses on secondary jobs, and specifically their relevance to conducting a comprehensive measurement and the challenge of collecting these data. A third section looks at data processing, including coding, consistency checks and the treatment of non-response, while a fourth examines the link between time references and quantitative items of information relevant to the identification of informal employment both inside and outside the informal sector. The final section considers the effect that the inclusion of employment in the informal sector and informal employment may have on the overall objectives of an HS, its implementation and operation.

Questionnaire design

4.3. The design of a questionnaire involves translating complex concepts into operative, communicable questions placed in the best context and sequence to follow the logic of an interview. Failure to achieve this is the main source of *variable errors*, i.e., errors which occur when questions are not understood in the manner intended by respondents because of their context or wording or the way the interviewer presents them. Further, if each interviewer introduces his or her personal approach into the process, additional response errors will occur. The aim of questionnaire design and interviewer training is to avoid or minimize such errors.

4.4. Different types of questions are required to measure employment in the informal sector and informal employment, whether through a regular HS or as a separate survey:

(a) Core questions are used to identify all employed persons in the reference week, including those engaged in economic activities which may otherwise go unreported.

(b) Questions related to contextual information can be used at the data processing stage in cases where responses to key questions are ambiguous or not clear.

(c) Key questions are designed to establish the criteria used for defining the informal sector and informal employment.

(d) Questions are included for their descriptive and analytical value (see Box 4.1).

Box 4.1.
Relevant information for measuring informal sector employment and informal employment through LFS

(a) *Core information needed in any LFS:* (a) activity status, i.e., if the person is in the labour force and, if so, whether the person is employed or unemployed; (b) basic employment characteristics, such as occupation, status in employment, kind of activity, etc.

(b) *Contextual/circumstantial information to assist in the decision process at the data processing stage:* (a) type of workplace or operational conditions under which the activity is conducted (for information that facilitate the identification of home-based workers, street vendors, persons providing services at the client's dwelling, etc.); (b) a recognizable trade name; (c) type of informal employment contract (written or oral).

(c) *Key information to identify the informal sector:* (a) registration; (b) legal organization and ownership of the enterprise; (c) type of accounts; (d) product destination; (e) size of the economic unit, i.e. the number of persons employed by type of worker (contributing family workers, employees, employer), if this is considered as a criterion to define the informal sector; otherwise, this information can be considered as contextual/circumstantial. *Information to identify informal employment:* (a) contribution by employer to pension funds/retirement scheme; (b) de facto employment-based coverage of social security, health care or any other private or public protection scheme.

(d) *Descriptive and analytical information:* for example, information connected with concepts relating (a) to self-employed workers (e.g., if they are suppliers to other entrepreneurs, to detect if there is any kind of outsourcing relationship; if they operate either more than one type of business or more than one economic unit within one business – with the self-employed worker/entrepreneur being the head of a network consisting of many outlets – or if they operate in a stand-alone manner; when the business started and if it operates all year); or (b) to any type of worker in paid employment or in self-employment (e.g., if the worker is trying to shift to another activity or remain in the current one; if the worker's former job or activity was similar to or quite different from what he/she is doing now).

4.5. There is a well established structural sequence of questions on employment in the informal sector and, to a lesser extent, on informal employment. It is recommended that questions concerning (a), (b) and (c) in Box 4.1 be asked in that order, i.e., first ask the questions used to determine whether the persons are currently employed, their kind of occupation, status in employment, etc., then go to questions that will establish important contextual characteristics relating both to their status in employment and to the activity/economic unit they are engaged in; finally, move on to the key question(s) of type (c). Type (d) questions (those with descriptive and analytical value) may be relevant only to some status-in-employment categories (for instance, questions about the economic unit are relevant only to entrepreneurs) or may be 'universal' and concern any kind of worker or situation (e.g., when and how the current activity started, antecedents, hours worked, etc.).

Questions on activity status

4.6. The measurement of persons employed in the informal sector and informal employment depends in the first place on their correct identification as 'employed'. For this, special probes may be included at the start of the interview for activities or jobs constituting 'employment' that may otherwise go unreported, such as unpaid work performed by contributing family workers in small family enterprises, market activities carried out by women on their own account at or from home, casual or atypical work and activities geared towards the production of goods for own final use by households (if this is considered as employment at the national level). Many countries already include such probes in their HS questionnaires to improve the measurement of employment in general. The inclusion of special probes is particularly important for employment in the informal sector and informal employment, as the bulk of activities that go unreported tend to be informal.

4.7. The probes can be presented as a series of questions requiring a yes/no response, or as an 'activity list' in the questionnaire or on a prompt card. An example of the first approach is the question used by South Africa in its Quarterly Labour Force Survey (see question Q2.4 in Appendix C7). An example of the second was used by Mali in its 2004 LFS (see question QEA3 in Appendix C5).

Questions to identify informal sector employment

4.8. A main challenge in a household survey that includes employment in the informal sector as a topic is to gather information on the nature of the economic unit where the individual works. Various approaches can be used to introduce into an HS questionnaire questions designed to identify informal sector units. The choice will depend on a series of considerations as to how best to gather the necessary information for defining the informal sector, the wording of the

questions and response options, their relative ordering and placement, the need for screening questions or filters, etc. To a large extent the approach will depend on the institutional and administrative context, as well as on the impact of the key questions (on registration and type of accounts) on the respondent and on the interview as a whole. If the relevant information is not known by a respondent or if certain questions risk causing the interviewee unnecessary stress, then additional or alternative questions and filters may be needed. This will depend on the kind of information that has been obtained earlier in the interview, as well as on how much contextual information is needed for both the interview process and the descriptive and analytical uses of the information gathered.

4.9. Individual questions related to each and every criterion may not be necessary or even appropriate in many settings. For example, in countries where household production for own consumption is not considered as employment, questions to establish the product destination (at least some market output) are not needed. At the same time, although the criteria that define the informal sector according to the 15th ICLS resolution overlap in some ways, collection of information on one criterion alone is usually not sufficient. For example, although non-registration in fiscal terms implies that the unit is an unincorporated enterprise of the household sector, the reverse is not true, i.e., registration does not exclude inclusion in the household sector. Similarly, the fact that a complete set of accounts is not kept confirms the unincorporated nature of the economic unit (and serves to exclude quasi-corporations) but will not necessarily exclude registration. In many countries small production units are not required to have a balance of accounts in order to be registered. An example is Mexico, whose tax legislation allows micro-businesses to register without a complete set of accounts. More than seven million people— a fifth of non-agricultural employed persons in Mexico — work in unincorporated enterprises in the household sector that are registered with the tax authorities. For this reason it is important that the questionnaire design take into account the national context, include key questions that help make the necessary distinctions, and leave the final decision regarding which activities should be classified as belonging to the informal sector to be made at the data processing stage.

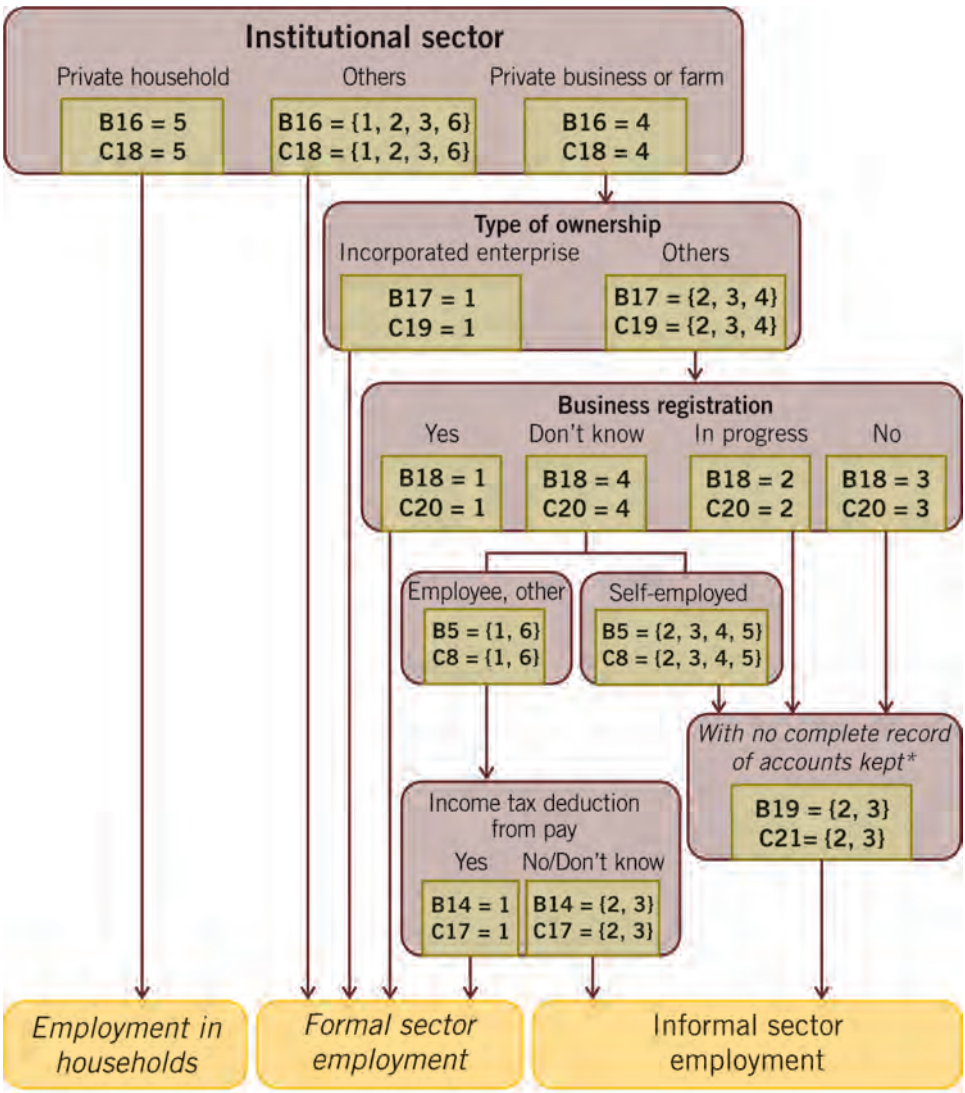
4.10. Leaving the final classification of informal sector units to the data processing stage is useful because it allows for a more detailed analysis of the data collected, particularly in ambiguous cases or where the respondent is not able to provide the requisite information during the interview. It is therefore important that contextual questions such as place of work be asked of all respondents likely to be employed in informal sector units, and that 'don't know' answers to crucial questions such as type of accounts or registration are not used as filters to exclude respondents from subsequent questions that could yield useful information on the nature of the economic unit.

4.11. To ensure the complete measurement of informal sector employment, key questions to identify informal sector units should be asked of persons in all status-in-employment categories (employers, own-account workers, employees, contributing family workers and, where relevant, members of producers' cooperatives). These questions should be asked of both their main and their secondary jobs (see paragraphs 4.57 to 4.64.). However, the answers to questions that call for detailed knowledge of the economic unit, such as registration and type of accounts, may not be known by respondents (e.g., contributing family workers or paid employees) if they are not the owners of the units. One possibility may be to formulate question-and-answer categories so that they can be understood and answered by most respondents, regardless of their status in employment and whether they are self-respondents or proxy respondents.

4.12. Another possibility is to use different questions for each status-in-employment category, as illustrated in a model questionnaire prepared by the ILO (see Appendix C1). For self-employed workers, it is designed to obtain information about the institutional sector — government, private business, private household, etc. — (question B17), about registration (B18) and about bookkeeping (B19). For employees, it seeks information also about payment of contributions to social security (B19), leave taken (B20), paid sick leave (B21) and deductions for income tax (B22). The identification of workers in the informal sector based on this set of questions is presented in Figure 4.1. A similar approach is used in South Africa (see paragraphs 4.27 to 4.29). Although the size of the economic unit is a criterion adopted in the 15th ICLS resolution to define the informal sector, it is now considered to be a proxy criterion to registration and bookkeeping; it is therefore not included as a key criterion unless the other items are not applicable, which may be the case for secondary jobs or in rural areas (see paragraphs 4.44 to 4.64).

4.13. There are various ways of incorporating questions in an HS that are relevant to the identification of persons employed in informal sector enterprises. The choice of questions depends to a large extent on the national context. Thorough testing of questions should therefore be conducted prior to final selection of a design approach. The testing should focus not only on the understanding of questions and response categories but also on the extent to which filtering permits or prevents a more detailed assessment of ambiguous cases during the data processing stage. The impact of the proposed design on respondents and on the interviews as a whole must also be assessed. The examples below show approaches that are being used in various countries to include questions aimed at identifying informal sector units in labour force surveys.

Figure 4.1.
Flowchart to identify workers in the informal sector, based on an ILO model questionnaire



Mexico – Encuesta Nacional de Ocupación y Empleo (ENOE)

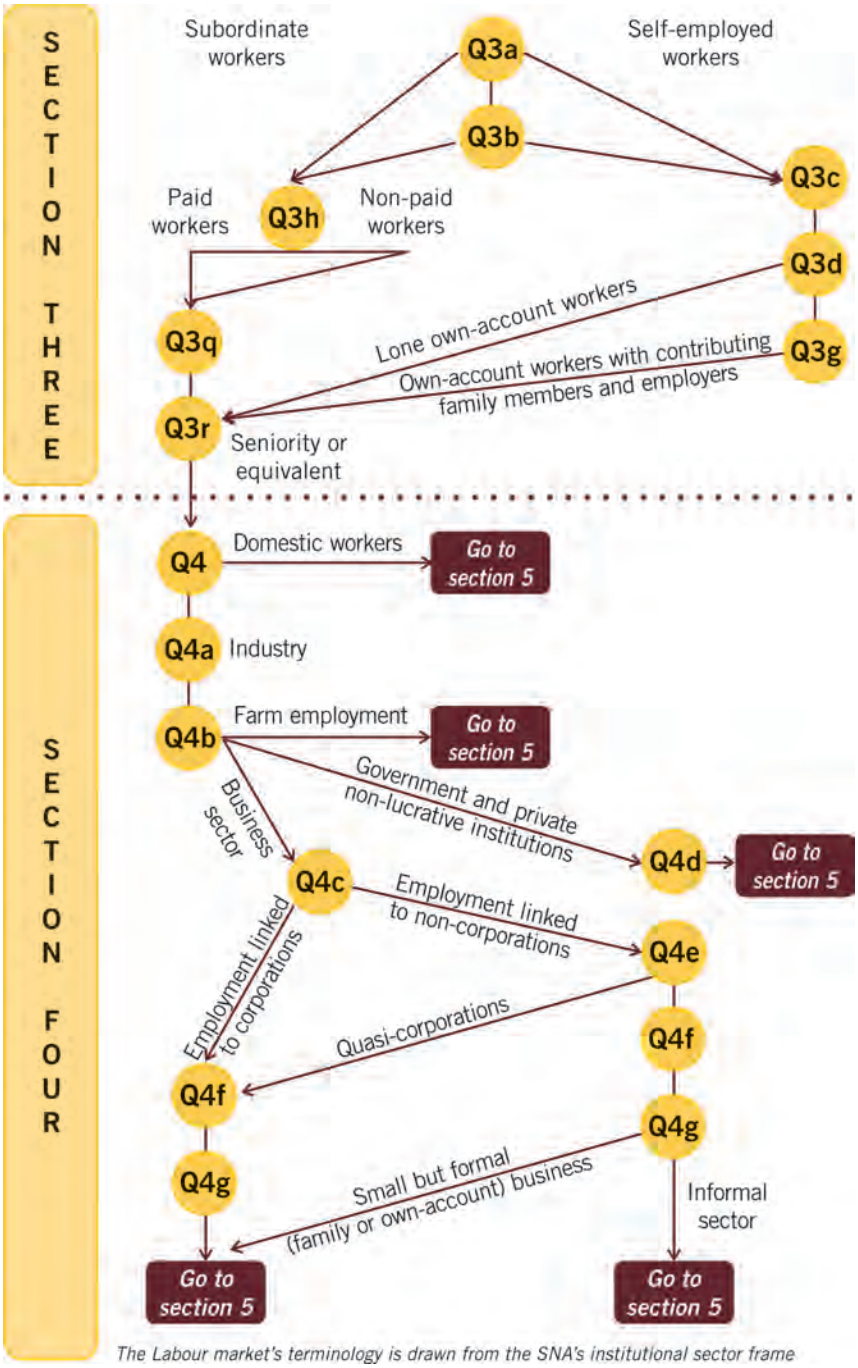
4.14. The ENOE uses a building block approach to the key questions for identifying the nature of the economic unit in which persons work. In the ENOE the informal sector is defined as all household unincorporated enterprises that do not have a complete set of accounts and are not registered. The questionnaire design strategy

followed is to place the key questions (on lack of accounts or lack of written accounts) at the end, so that important and sensitive contextual information is not jeopardized.

4.15. Like many other LFS questionnaires, the ENOE is divided into sections. Sections 1 and 2 are used to determine if the person is in the labour force and, if so, whether employed or unemployed. Section 3 identifies the status-in-employment category of the main job and has two trajectories, one for persons in paid employment and the other for self-employed persons. The first three sections contain most of the strategic, key information in the survey. Section 3 also contains the information needed to identify the informal sector, such as the size of the unit, the status-in-employment category (contributing family members or salaried workers) and partnerships. Section 4 introduces a set of questions to identify employment in the informal sector for the main job only (see Figure 4.2). For example, the first question (question 4) requests the name of the enterprise, in order to determine if the business is a unit producing services for own final use. If the person works for such a unit, for example as a domestic worker, he or she is excluded from the informal sector. The second question (question 4a) requests information about the economic activity of the business. Agricultural activities, as well as activities of the government, can therefore be distinguished. When it is a private business, further probing is carried out (question 4c) to distinguish incorporated businesses from independent, personal or family businesses. These are further distinguished by means of a separate question (question 4e), according to whether or not they have fixed visible premises: if the economic unit has both fixed visible premises and offices, then it is considered to be a quasi-corporation; units that do not have fixed visible premise are further identified (question 4f) by type of workplace (whether the person works in the open, moves from door to door or works in the street, at no fixed place, in a vehicle, within the living quarters, in the living quarters of an employer, etc.). Finally, for all persons who work in businesses that only have premises without an office, or have an office without premises, or have no premises at all, a question is asked about bookkeeping practices (question 4g), which in Mexico is the key question in defining the informal sector. Those that do not keep any type of bookkeeping are included in the informal sector. Because this question has been placed at the end of the filtering process, some key features of the activity are already known. For example, it is clear that activities such as street vending are part of the informal sector before arriving at this question; the strategic role of the question is to identify the less obvious activities that are conducted with some resources, fixed visible premises and/or vehicles, and even those that involve a one-person office. The precise wording of question 4g and its pre-codified response options can be seen in Appendix C2.[19]

[19] In the ENOE design, letters in bold refer to what is communicated by the interviewer to the informant; what is not in bold is for the interviewer only. The text that is not in bold anticipates the kind of responses the interviewer may receive and assists him/her in deciding how to handle them. During the processing phase some of these response options are considered to be equivalent. For example, options 1 and 3 in question 4g are interpreted as a clear signal of the existence of 'a complete set of accounts' and that the activity therefore does not belong to the informal sector. Option 3 is not read aloud because in Mexico any explicit mention by the interviewer of tax payment procedures/tax authorities could be intimidating; it therefore applies only if the respondent mentions it spontaneously.

Figure 4.2.
Questionnaire flowchart to determine whether a worker is to be classified in the informal sector, Mexico (ENOE)



The Labour market's terminology is drawn from the SNA's institutional sector frame

4.16. The size criterion is not applied in Mexico as part of the filtering process. It is instead associated with the qualitative/contextual information used to identify the informal sector, as it is preferable not to prejudge whether the unit is informal on the basis of size alone. This is particularly useful in the treatment of street vendors, who tend to organize themselves in hierarchical extended networks, thereby making it difficult in practice to apply the rule of number of employees to the main economic unit, whose boundaries in such situations are somewhat amorphous and ambiguous.

4.17 During the ENOE questionnaire design process, intense discussions took place as to whether the question on accounting practices should be asked only of self-employed workers or of all workers. The latter was selected for statistical reasons. From Section 3 onwards, the number of workers who are self-employed is already known. However, this information cannot be used to obtain a total because the weighting factor for the number of workers reported by the entrepreneur is necessarily the same as the weighting factor of the entrepreneur's household. It is therefore better to focus on workers who are part of the sample so that each worker in it is linked to the weighting factor of his or her household, in order to obtain an aggregate figure for total employment in the informal sector. For this reason, respondents in all status-in-employment categories, who are candidates for identification as working in an informal sector unit, need to be channelled towards the core of Section 4 and questioned about the economic unit (question 4g). As will be explained in Chapter 6, the information on the number of workers in informal sector units is obtained from the entrepreneur in the modular approach, and the statistics thus produced will differ from those obtained from LFS, where each worker has his/her own expansion factor. This creates an integration problem in the mapping of the whole labour force shown in Table 2.7.

United Republic of Tanzania – Integrated labour force survey, 2005/2006

4.18 The United Republic of Tanzania's integrated labour force survey defines informal sector units as household unincorporated enterprises if they have fewer than ten employees and no complete set of accounts. The key questions to identify informal sector units are included in Section D concerning the characteristics of the main (only) economic activity (see Appendix C3). The questionnaire uses a filtering approach to exclude progressively the people who, in the sequence identifying informal sector enterprises, are identified as being outside the scope of the informal sector in their main job. The first filter question (question 18(a)) asks the respondent about his/her status in employment and identifies those working in agriculture as self-employed persons or contributing family members. Persons in the two latter groups are asked an additional question regarding their main activity and are then removed from the sequence of questions on the informal sector. The next filter (question 22) combines features related to the legal organization, ownership and, to some extent, registration of the economic unit. The question

serves to filter out from the sequence those persons who are working in units that are clearly outside the scope of the informal sector (in government or parastatal bodies, political parties, registered partnerships, non-governmental organizations, registered cooperatives, international and regional organizations, and household production units for own consumption).

4.19. Next, a question about the size of the enterprise (question 23) is asked to remove from the sequence those working in enterprises with ten or more employees. Those remaining in the sequence are then asked two questions to establish accounting practices. The first (question 24) is similar to those used by the surveys of Ecuador, India, Mexico and Venezuela in that it is focuses on whether the economic unit keeps written accounts. A second question (question 25) goes deeper, and asks whether the accounts include balance sheets specifying assets, liabilities and investment withdrawals. Those who answer 'I don't know' or 'No' to the first question and those who answer 'No' or 'Don't know' to the second question are considered to be in the informal sector and are channelled to Section E or F, where they are asked detailed contextual and analytically questions about the informal sector unit. This sequence of questions is asked of persons with regard to their main job and their secondary activities.

4.20. The sequence used by the United Republic of Tanzania identifies the people employed in the informal sector in their main and secondary activities through the use of filter questions as described above. Question 22 provides a fairly comprehensive classification of economic units from an institutional perspective. However, given its structure and range of response categories, it is a complex question. The inclusion of such questions calls for extensive training in conducting the interview. The questionnaire uses a similarly comprehensive approach to establishing the type of accounts. This is a somewhat rigorous way of identifying household unincorporated enterprises, and its proper application again depends on thorough training of interviewers and careful probing during the interviews to ensure that respondents provide the correct response. Because the informal sector units are identified through the interview process, proper use of the filtering questions is particularly important. 'Don't know' responses are treated as belonging to the informal sector, pending their possible reclassification at the processing stage following careful analysis of the contextual information.

Ecuador – Encuesta de empleo, desempleo y subempleo

4.21. The labour force survey of Ecuador (ENEMDU) also uses a filtering approach to questions aimed at identifying persons employed in the informal sector in their main and secondary jobs (see Appendix C4). The definition of informal sector enterprises used is based on size, type of accounts and registration. Like the Mexican survey, the ENEMDU places a series of key questions on the characteristics of the interviewee's main activity at the end of the

section on characteristics of the main activity, within the block of questions specifically designed to collect information on the establishment (Section 2).

4.22. The filtering approach used is much simpler, however. Unlike Mexico or the United Republic of Tanzania, Ecuador does not attempt to identify household unincorporated enterprises through questions on their legal organization or on the institutional sector. Instead it uses the questions on status in employment (questions 40 and 52 for main and secondary jobs, respectively) and on the size of the establishment (questions 47 and 54) as filters. These serve to exclude from the questions on type of accounts and registration any government employees and domestic workers employed by households, as well as those employed in establishments with 100 or more employed persons. Although size is thus used as a filter, the upper threshold is set high, leaving the final identification of informal sector units to be decided at the processing stage. For people working in establishments with fewer than 100 employed persons, an additional open-ended question is asked on the actual number of persons employed. Given the importance of this question for identifying informal sector enterprises, it may be preferable to use narrow size ranges as response categories, particularly for micro-enterprises, in order to reduce the likelihood of reporting errors. Countries using ranges as response categories to questions on the size of the enterprise include Mali, Mexico, Republic of Moldova, South Africa and the United Republic of Tanzania.

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4.23. The questions on type of accounts (questions 48 and 55), as in Mexico's survey, have simple response options to distinguish between those with a complete set of accounts, those with accounts kept in notebooks and those with no registration of accounts. Unlike Mexico and the United Republic of Tanzania, Ecuador includes two final questions (questions 49 and 56) to identify registration with tax authorities, thereby gaining an additional conceptual option for the identification of informal sector enterprises. Overall, the filtering process used by Ecuador is not as selective as those used by Mexico and the United Republic of Tanzania and, as a result, a larger group of workers employed in units not likely to be informal are asked the questions on type of accounts and registration. The approach, however, is simple and less dependent on the training of interviewer.

Mali – Enquête permanente d'emploi auprès des ménages, 2004

4.24. Mali's LFS also includes an explicit question on registration as part of its sequence of questions to identify people employed in informal sector enterprises in their main and secondary jobs. The survey defines informal sector enterprises as private enterprises engaging fewer than 11 persons, which are not registered with the National Institute for Social Protection (INPS) and do not have accounts. The approach is similar to that of Ecuador and the United Republic of Tanzania in that a simple filter is used to channel people likely to work in informal sector units to the corresponding key questions. The filter question is about the institutional

sector to which the unit belongs (see Appendix C5, AP4). Depending on their answer to this question, people employed in public administration, public enterprises, parastatal bodies and international organizations may be excluded from the sequence of questions used to identify the informal sector. Persons employed in private enterprises, in non-governmental organizations and in associations (cooperatives, unions, churches, etc.) and persons employed by households are kept in the sequence. This is consistent with the national context, where the boundaries between such institutions and businesses are sometimes blurred.

4.25. For those remaining in the sequence, a question on the size of the enterprise is then asked (AP5), followed by the question on registration of the enterprise (AP6). The respondents are asked about specific types of registration. Although only non-registration with the INPS is used to identify informal sector units, all respondents regardless of the answer provided remain in the sequence of questions identifying informal sector units. The question on registration is followed by a question on place of work (AP7). A last key question (AP8c) about the type of accounts has just 'Yes', 'No', and 'Don't know' as response options. Identifying informal sector enterprises is not done during the interview process but at the processing stage.

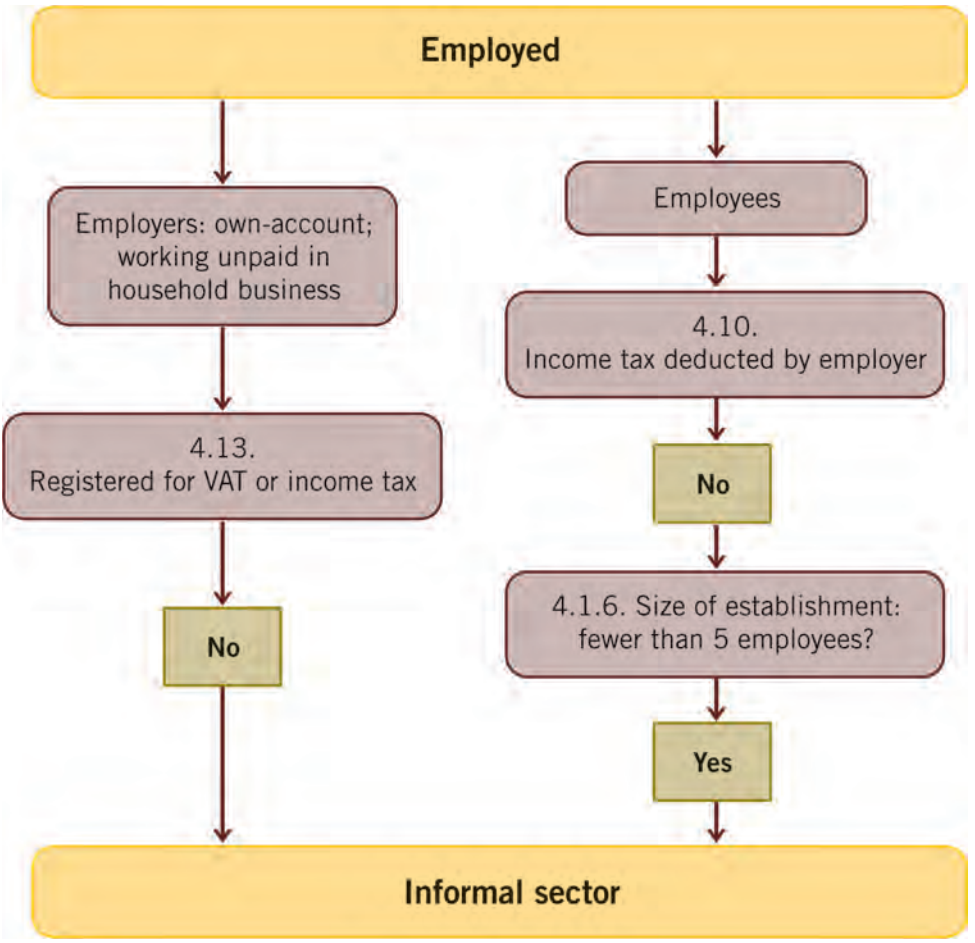
Republic of Moldova – Continuous labour force survey

4.26. A relatively simple approach to identifying main and secondary jobs in informal sector units is used by the Republic of Moldova in its continuous LFS. The survey defines informal sector units as household unincorporated enterprises that are not registered, including units in agriculture. Household unincorporated enterprises are identified through a question on the institutional sector where an activity is carried out (see Appendix C6, question 24). The first two categories ('enterprise, organization, institution (as a legal entity)' and 'private agricultural enterprise (farm)') are recognized as legal entities. The next two categories ('private enterprise, private notaries' or lawyers' office, partnership (without the right of a legal entity)' and 'individual work activity') are considered as household unincorporated enterprises not constituted as a legal entity separate from their owners. The option 'auxiliary household' refers to the household production of agricultural goods for own consumption. This is the only response option that is removed from the sequence that takes respondents to the question on registration of the enterprise (question 25). This is a simple, direct question, with response options 'Yes', 'Is being registered', 'No' and 'I don't' know.' In the case of self-employed persons the last three responses identify informal sector enterprises, while in the case of employees only the second and third options are used. The Republic of Moldova uses a very limited filtering approach in order to be able to cross-classify as many variables as possible for consistency checks at the data processing stage.

South Africa – Quarterly labour force survey (QLFS)

4.27. The South African QLFS uses a somewhat different approach from those described above to identify persons employed in informal sector units in their main job. According to the definition used in the quarterly survey the informal sector comprises: employers, own-account workers and contributing family members employed in household unincorporated enterprises not registered for VAT or income tax; and employees not registered by their employers for income tax and working in establishments with fewer than five employees. A major feature of this approach is the use of two tracks based on status in employment to channel employees, on the one hand, and the self-employed, on the other, towards parallel questions on registration (see Figure 4.3).

Figure 4.3.
Two-track approach to identifying persons employed in the informal sector (quarterly labour force survey, South Africa)



4.28. South Africa's approach has been developed over years of fielding different types of question to identify informal sector units. From this experience it was found that a single question on registration did not work, because employees in particular did not know if the businesses they were employed in were registered. It was therefore decided that a parallel question on whether tax and social security payments were deducted from pay would be more appropriate, as it captured information on the registration of the enterprise that employees were likely to know about. Experience also showed that it was necessary to specify the type of registration that was conceptually relevant. VAT registration and income tax registration were thus chosen as concrete forms of registration that are consistent with the establishment register in South Africa.

4.29. The current question addressed to employees on registration asks whether the employer deducts income tax from their salary/wage (see Appendix C7, question 4.10). Employers, own-account workers and contributing family members are asked two questions related to registration: whether the business is registered for VAT, and whether it is registered for income tax. Once these parallel questions are asked, the respondents are asked a common sequence of questions on place of work (question 4.15) and number of employees (question 4.16). Thus, crucial information for identifying informal sector units is collected for all persons in employment.

Questions to identify outworkers (homeworkers)

4.30. Outworkers comprise self-employed persons and paid employees (ILO, 1993b, paragraph 14 (h)). The 15th ICLS resolution recommended that outworkers be included among informal sector enterprises if they constitute enterprises on their own as self-employed persons and if they meet the criteria of the informal sector definition (see paragraph 2.38). Employment relationships involving outsourcing are often complex, and so outworkers tend to be on the borderline between self-employment and paid employment. A labour force survey must therefore be designed to cover cases that are on the borderline of status-in-employment categories within the conceptual framework.

4.31. In both the 55th round of India's socio-economic survey and the Mexican ENOE, outworkers are considered to be self-employed if (a) they are not supervised in their daily production activities, (b) they incur some economic risk or have to meet certain costs (for example, actual or imputed rent on the buildings in which they work as well as the cost of lighting/power, storage or transportation, etc.) and (c) they receive a fee or remuneration consisting of two intermingled parts: remuneration for work done and profits from the activity according to the SNA concept of mixed income. Both India's and Mexico's surveys take the position that, where there is operational autonomy, the relationship that is established is supplier-client rather than employee-employer, even if only one client exists. This

does not preclude inquiring how much flexibility the supplier has in maintaining an outsourcing relationship.

4.32. By contrast, the Encuesta Permanente de Hogares (EPH) of Argentina (see Appendix C8), which uses perhaps one of the most comprehensive approaches to outsourced outworkers,[20] considers that a worker who has an outsourcing relationship with only one establishment is an employee (INDEC, 2003, p.9). The implication for measurement purposes is that in India and Mexico such workers are counted within the informal sector whereas in Argentina they are not. Nevertheless, to the extent that these workers are not able to exercise any labour rights, they are still included in informal employment.

4.33. The treatment as salaried employees of outworkers with only one client becomes problematic in the case of outworkers who themselves hire salaried employees, while maintaining the salaried relationship with the sole establishment involved in the outsourcing. In that case there are two dependency relationships, one above the home-based workers (the outsourcing) and another below them (hired workers). A choice needs to be made as to which criteria should prevail. In Argentina the hiring of paid workers immediately changes the status in employment of outworkers, even those with only one client, to that of employers. Thus, outworkers who hire employees can be included in the informal sector if their work activity satisfies the criteria for inclusion, but outworkers who do not hire employees are excluded, even if they otherwise satisfy the criteria for inclusion.

Questions to identify informal employment outside the informal sector

4.34. Informal employment outside the informal sector includes informal paid domestic workers and persons engaged in unpaid production of goods exclusively for own final use and volunteer workers, if included in employment.[21] It also includes informal employees working for formal sector enterprises. In other words, informal employment outside the informal sector includes the phenomenon of informalization of labour relationships. Concern is focused on the flexibility and unprotected nature of the employment contract rather than on the type of activity or economic unit.

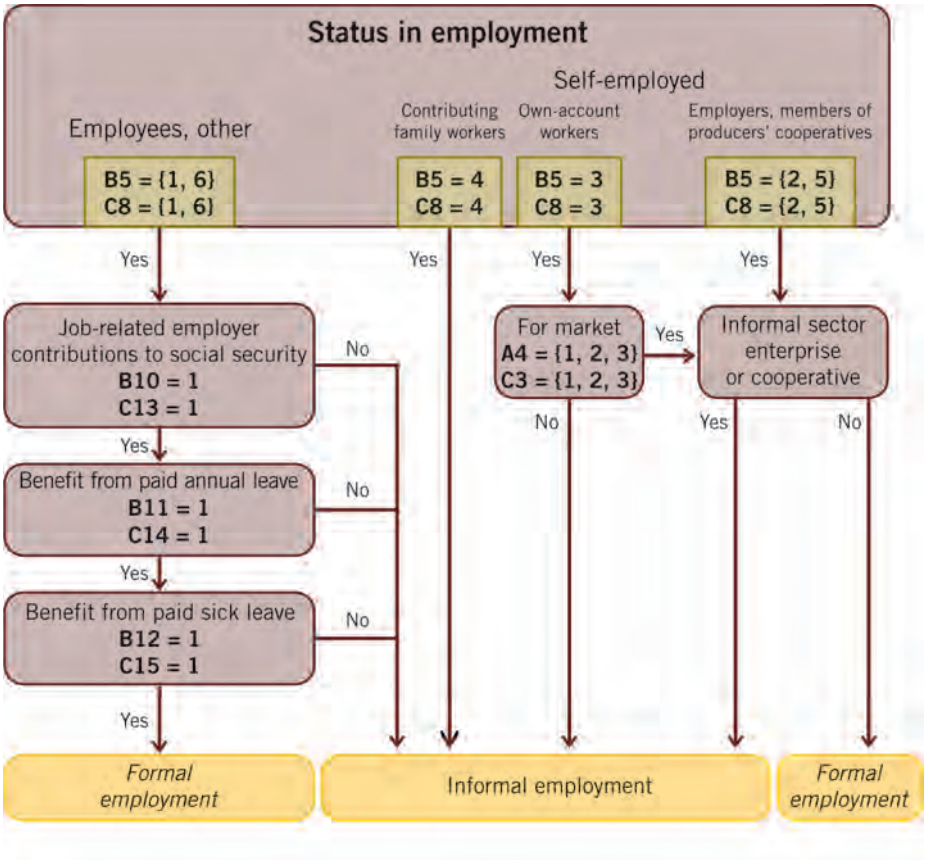
[20] The EPH also obtains information on how many clients the activity has and the nature of the activity (as in Mexico), as well as on raw materials, equipment and vehicles (owned, rented, lent).

[21] The informal sector includes the production of goods mainly for own final use if some of it is sold or bartered. This can occur in agriculture, manufacturing, construction and transport of fuel and water (see paragraphs 2.32. and 2.33). Issues specific to the treatment of agriculture and unpaid activities for own final use are discussed in paragraphs 4.45 to 4.57.

4.35. To identify workers in informal employment their classification by status in employment is important, as is the nature of the job in terms of their entitlement, de jure and de facto, to social protection and other employment benefits determined by national labour legislation, and whether the employer contributes to them (i.e., whether they are related to employment or universal rights). The introduction of schemes to protect persons rather than workers, with the aim of achieving universal coverage of basic aspects of social security irrespective of employment, is a recent trend in social policy. In other words, an informal worker may have some protection but it is not necessarily a form of protection that derives from his/her work. This poses a challenge in terms of questionnaire design and staff training, and it is necessary to be very clear when questioning people about whether their benefits are job-related. The distinction is in line with the 16th ICLS *Resolution on the measurement of employment-related income,* which recommends that universal coverage schemes are not to be considered as employment-related benefits (ILO, 1998, paragraphs14 and 25). To identify persons in informal employment outside the informal sector, it is essential (a) to ensure proper identification of status in employment among employed persons, and b) to identify among these situations those that are devoid of any social protection attached to the job.

4.36. There are two major considerations for the proper identification of paid salaried workers. First, it is important that status in employment not be confused with payment modalities. Non-fixed payment arrangements are common and may exist among both salaried workers and the self-employed. Thus, by itself, the regularity of payment is not conclusive in establishing a person's employment status. The other consideration is whether a person is accountable to an authority figure in conducting her/his work. This, more than any other feature, determines if the person is a salaried worker. A salaried worker may thus be paid under a wide range of pay modalities and working conditions. The ILO model questionnaire (Appendix C1) provides the necessary elements to classify workers in informal employment, as illustrated in Figure 4.4 below.

Figure 4.4.
Flowchart to identify informal employment, based on an ILO model questionnaire



4.37. Mexico's ENOE explicitly identifies individuals who are paid salaried workers at the start of Section 3, questions 3a to 3h (see Appendix C2). Questions are also included on union membership (question 3i), the existence of a written contract and its duration (questions 3j and 3k). Employment benefits are covered by questions 3l and 3m. All workers are asked about access to health care access provided by employment-related contributions to the social security system (question 6d); this is used to identify informal jobs, and it reflects the importance of knowing whether own-account workers and employers (besides contributing family workers) are part of non-protected employment, even though their classification in formal or informal employment might be decided merely on the grounds of the formal or informal situation of their enterprises (Hussmanns, 2004b). Identifying owners of unincorporated enterprises who belong to the formal sector but are nevertheless not covered by health care schemes is useful for assessing the coverage of the social security system. While not the best indicator for this purpose, it can provide evidence that, while the definition assigns them

automatically to formal employment, they are in fact in an employment situation that could correspond to informal employment.[22]

4.38. India's approach to this issue is illustrated by the national sample survey (NSS 61st round, 2004-2005), in which paid salaried workers were asked questions about their type of job contract, whether they were eligible for paid leave and whether social security benefits were available. The survey defines employees in informal jobs as those not entitled to social security benefits or to paid sick or annual leave. An important feature of India's NSS 61st round (Schedule 10, Block 5.1), is the central importance of provident funds among social security benefits. In both India and Mexico, if an employee operates in an individual capacity with no contribution on the part of the employer either to a provident fund or to a health care scheme, then this cannot be considered a job-related benefit.

4.39. Turkey's monthly household labour force survey emphasizes the need to distinguish between universal social security and employment-related social security by linking registration for social security explicitly to the person's job and by highlighting this feature of the question (see Appendix C9, question 43). Turkey defines informal jobs of employees as those without any social security registration related to the job. As in the case of Mexico, the question is asked of all workers regardless of status in employment. A similar question asked only of employees occurs in South Africa's quarterly labour force survey (see Appendix C9, question 4.10).

4.40. The Republic of Moldova uses a broader definition which considers employees in informal jobs as those for whom the employer does not pay social contributions, or who do not benefit from paid annual leave (or financial compensation for untaken leave), or who do not receive paid sick leave in the case of illness or injury (see Appendix C6, questions 18 to 20). In the case of paid annual leave and paid sick leave or compensation for unused leave, the question avoids using terms such as 'entitled to...' and instead asks if the person 'benefits from...', in order to capture the de facto situation.

4.41. The extent to which a survey questionnaire needs to emphasize or probe for de facto access to employment-related benefits is determined by national circumstances. Where labour legislation is generally enforced in the country, such probing may not be necessary. However, where the de jure and de facto situations differ significantly, it is important to take this into account in designing the questions.

[22] Social security coverage is probably not the best indicator to reflect informality among the self-employed, as they cannot demand it to others, only to themselves. However, it does point to the social security system's lack of infrastructure for self-employed workers. Other indicators reflecting precariousness or lack of formal coverage would be more appropriate and may need to be developed in the future.

Questions related to type of work contract

4.42. Questions on the type of work contract are a useful analytical tool for any survey of informal employment. This is not, however, a defining variable in informal jobs. Although the non-existence of a written work contract is likely to imply that a person does not have access to employment-related benefits or employers' social contributions, the reverse is not necessarily the case (i.e., having a written contract does not necessarily mean having such access). For this reason it is important that specific questions on employers' social contributions and employment-related benefits, as discussed in the previous section, be included in the questionnaire.

4.43. A detailed approach to collecting information on work contracts is shown in the LFS of the Republic of Moldova, where the questions on contracts are split into two clearly differentiated parts covering the type of contract (Appendix C6, questions 13 and 14) and its duration (questions 15 and 17). This approach makes it possible to capture the wide range of work contracts that exist: apprenticeship, probation, seasonal work, replacement work, public employment programme, specific service or task, etc. In particular, the questions serve to collect information so as to distinguish whether an informal employee operating outside the informal sector is working on the basis of a personal agreement without a written contract, under a contract of limited duration, or on the basis of some other arrangement.

Treatment of agriculture

4.44. The challenge that the collection of data on agricultural activities poses is both conceptual and operational. What works or is well understood and communicated through survey questions in urban areas does not necessarily work in rural areas. Rural labour markets have their own logic and rural survival strategies that cannot be easily described by standard categories and definitions. Time references can be equivocal and more flexible approaches may be needed. These significant differences should be considered in designing HS questionnaires and in survey operations in order to obtain sound and relevant responses from respondents in rural areas.

4.45. In developing countries modern and clear-cut entrepreneurial forms of agricultural production coexist with traditional forms and with combinations of the two extremes. They include economic units that are analogous to quasi-corporations and therefore the equivalent of corporations (see paragraph 2.10), households whose engagement in agriculture is consistent with informal sector activities, and households engaged in subsistence agriculture that produce exclusively for own final use or sell part of what they produce.

4.46. The 15th ICLS resolution recognized that the concept of informal sector should encompass agricultural activities and unpaid production of agricultural goods mainly for own final use (i.e., subsistence agriculture), if some of its production is marketed.[23] However, given the sampling demands and operational complexity of surveys of agricultural activities, the resolution proposed that data collection should initially focus on urban areas and only later include rural non-agricultural activities (ILO, 1993a para.15). The approach it envisaged meant that agricultural censuses or surveys already available could be adjusted to include the informal sector as a topic. At the 15th ICLS the prevailing notion was that data collection on the informal sector required specialized surveys and that it would be difficult and costly for them to integrate agricultural activities. This note of caution applies if the main objective is to obtain statistics for national accounting, where the focus is on the flow of goods and services generated by economic units. It is less valid, however, when statistics on employment are the main objective. If the object is to measure informal employment inside and outside the informal sector and a national HS exists with coverage of both urban and rural areas, the opportunity to extend the survey to cover agriculture should be seriously considered.

4.47. Experience has shown that replicating a survey that works reasonably well with non-agricultural employment may not work well with persons primarily engaged in agriculture. Trial rounds prior to the implementation of the final version of Mexico's ENOE, for instance, showed that questions on how accounts were kept were difficult to answer for a proxy respondent in rural areas and increased the non-response rate to well over 15 per cent. Similarly, other approaches in the trial interviews failed to yield results that were helpful in understanding the accounts issue. Even if the core conceptual issue of accounting practices is understood, the challenge is to differentiate informal, formal and subsistence agriculture activities. Additional elements in the questionnaire are needed to do this.

4.48. As noted, only those subsistence units that are exclusively engaged in production for own final use are excluded from the informal sector. On the other hand, households that sell part of what they produce may be included as informal. In order to distinguish between subsistence and market-oriented agricultural activities in these households, it is important to devise questions that any household member can understand and answer – for example, whether crops are sold, consumed, or both, and if the activity is conducted with the contribution of family members alone or if it also involves paying non-family members in cash or in kind or contracting companies for specific tasks. In addition, it is very helpful to inquire about the specific kind of economic activity that is engaged in, in order to determine whether or not the production and type of work concern typical

[23] Only when a household produces goods exclusively for own final use is it excluded from the scope of the informal sector.

subsistence crops; people involved in coffee plantations, for instance cannot be part of subsistence agriculture, as coffee is definitely a marketed crop.[24]

4.49. Subsistence activities can be identified by the following key operational characteristics: (a) the activity does not coexist with other activities that are commercial in nature; (b) most of the production is consumed by the household, even if some might be sold; (c) only household members are involved and no paid workers is engaged even irregularly.[25] If one of these criteria cannot be confirmed, it is helpful to verify at least that the activity is conducted on a small scale (e.g., that no more than five persons are involved in the production process, as discussed in paragraph 2.55 above).

4.50. Households that engage in 'backyard' agriculture or gardening, where what is produced is marginal to the household's consumption, are excluded from the current international definition of employment and thus from informal sector employment and from informal employment. Otherwise almost everyone of working age in rural areas, and in many urban areas, would be classified being in employment and this would distort the meaning of employment statistics for most descriptive and analytical purposes.

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4.51. However, when the production of 'backyard' agriculture is significant to the household's consumption, persons engaged in it are in employment. If they do not sell any product, they are excluded from the informal sector but included in informal employment.

4.52. The next and perhaps most important step is to identify criteria for classifying agricultural activities other than subsistence that meet the requirements for inclusion in informal sector employment. In India the key issue in identifying informal sector units concerns regulation by labour laws. All agricultural units not regulated by labour laws under the Plantation Act or not operated by the corporate or governmental sectors are classified as informal units in the agricultural sector. Regulation by labour law is often linked to registration of the unit. However, in some countries the criteria of registration may not be relevant, especially where land reform has taken place, as every land endowment is registered in some way. Non-registration may also be equated with

[24] A farmer's production unit may be devoted to a mixture of crops, with some intended for own consumption and others grown to be exchanged either for money or commodities. Classifications should consider these situations and provide criteria to guide coding on which set of activities has priority. A practical approach to classifying the unit, when there is a mix of own-consumption and market-oriented crops, is to give priority to those grown for sale. This implies that a commercial crop code places the activity outside subsistence agriculture. Raising animals complicates the picture. Animals may be raised for own-consumption or for sale, but in the latter case it is important to know if they are sold as part of an ongoing production activity or as an asset (i.e., when some contingencies or circumstances compel owners to do so to pay debts or because the regular crops have failed). In dealing with many aspects of agricultural activities, interviewers need to frame questions in terms of what people usually do rather than in terms of fixed reference periods (see paragraphs 4.70 to 4.72 below).

[25] Crops that have a clear commercial orientation involve paid workers or hired self-employed persons, even if household members also play a role in producing them.

illegal occupation. Asking farmers whether their land is registered may be so sensitive that any inquiry in isolated locations would endanger the survey operations, if not the survey personnel. Further, the criterion of keeping a 'complete set of accounts' is not relevant in rural areas, because even formal sector farmers do not hire a bookkeeper or accountant. Asking farmers whether their unit keeps accounts is so alien to their way of life that they may say 'no' simply because they do not understand the meaning of the question. If farming activities are to be included in the scope of the informal sector, therefore, criteria other than registration and type of accounts need to be used.

4.53. The criteria can be linked to the market orientation of the activity and to the role of household members. In order to distinguish informal sector agriculture from the rest of market-oriented agriculture, they may be linked to the mixture of labour inputs (paid and unpaid), so that the informal sector includes those units where the main share of the labour inputs comes from the owner and contributing family members,[26] or those that use five or fewer paid workers, as in the Delhi Group recommendations. Determining which approach is better is more a matter of operational convenience than of conceptual coherence. While it may seem preferable to decide on the basis of the kind of workforce that is predominant, it may be misleading to equate paid labour inputs with the labour inputs provided by contributing family members. For this reason, the use of the size criterion (number of persons engaged) in rural areas may have more relevance than in urban areas, where household members may have other employment opportunities and therefore contribute fewer hours.

4.54. In keeping with the approach discussed above, the criteria used in Mexico's ENOE to separate employment in the informal sector from employment in other agricultural unincorporated enterprises and quasi-corporations are the following (see Appendix C2):

Q3: Identification of the type of crops and activities the worker is engaged in by adapting the International Standard Classification of Occupations to national circumstances (ILO, 2012).

Q3c: Output destination of the economic unit (self-consumption, market destination, both).

Q3d: The activity is conducted only by self-employed workers or with the assistance of employees.

[26] This raises another technical issue, as classifying persons in the informal sector on the basis of their labour inputs would be more accurate than on the basis of their simple participation, since the intensity of paid work may be different from that of unpaid work. But in an LFS this involves asking not only the hours worked by the worker concerned but also about those of the other workers in the unit. This may be solved either by a modular approach or by a mixed survey if agricultural activities are included in the survey's scope, and by asking the employer to provide information on the hours worked by all workers in the informal sector unit.

Q3g: For self-employed workers only: the number of workers by type (paid, unpaid, partners)

Q3q: For salaried workers only: the number of workers in the economic unit where she/he works.[27]

Q4: Identification of the economic unit as an enterprise (corporation) or not (option one).

Q4a: Identification of the combination of activities that take place in the economic unit by using an economic activity classification, such as the International Standard Industrial Classification (see UN, 2008c).

4.55. In working towards an improved classification of informal sector and informal employment in agriculture, Mexico's practice in this respect deserves recognition. Mexico does not yet include agriculture as a part of the informal sector and only considers it as a part of informal employment in general if the criteria related to labour conditions are met. At the same time, all elements necessary to make the distinction between employment in the informal sector and informal employment in general are included in the survey. Moreover, it distinguishes subsistence agriculture in which some of the produce is sold as a specific category of informal employment. The argument is that this is more a survival activity than a market-oriented activity and not equivalent to an informal sector unit. Still, this is a large category of workers – 1.9 million of Mexico's 6 million agricultural workers and largely an indigenous population.

4.56. In addition to what is needed in survey design, the nature of agricultural activities requires that the resulting statistics be presented and disseminated in separate tabulations from those of other activities.

Secondary jobs

4.57 It is important that HS collect data on all economic activities, for both main and secondary jobs. Secondary activities are also important for national accounts statistics. However, covering secondary jobs introduces further complexity if the unit of analysis is the individual rather than the job. In preparing a labour matrix or statistical table, individuals who have two jobs or more are subject to double-counting. This is one reason why most countries classify

[27] It is desirable to include a second question to distinguish the composition of the workforce (paid, unpaid), especially once a small-scale operation is detected. Question 3q is comparable to the question addressed to self-employed workers (question 3g). Experience and trial rounds have shown that in agricultural activities salaried workers usually report only other salaried workers. However if they are asked directly about contributing family members of the employer, they often respond in terms of the total number of family members. An independent worker (e.g., an employer) is probably able to provide more accurate information, and this has implications for the quality of the resulting statistics.

individuals by the characteristics of the main job only, and statistics for individuals with multiple jobs are disseminated in separate templates or tables that are not integrated in the same presentation. This approach, however, makes the data much less useful for economic statistics, because jobs rather than persons are the unit of reference in the national accounts systems and because many labour studies focus on labour inputs and productivity.[28] Thus, total labour input may be underestimated for activities in which a large proportion of workers participate in a secondary job.

4.58. HS results tend to underestimate secondary jobs. There are several reasons for this. A minor factor may be the respondent's interest in concealing anything other than the main job. A more important factor is that both the respondent and the interviewer may be interested in speeding up the interview. For example, in HS that use rotating samples a dwelling is visited 'n' times before leaving the sample. At the start a very-time consuming questionnaire may be filled in diligently, but not when it is repeated again and again. In some HS, where the main objective is to determine the employment status of the respondent, the underestimation of secondary jobs may also stem from the questionnaire's design. A question on other economic activities may often be understood or even phrased in terms of wage/salary jobs, thus completely overlooking any independent/own-account secondary activities. This happens because there is also some resistance by HS designers to duplicate questions devoted to the main activity in the section on possible secondary activities, given its implications for the length and cost of each interview.[29] Of course, there are countries where the HS duplicates for secondary activities what was asked for the main activity. For example, Venezuela's LFS formulates each question for both main and secondary activities in parallel, instead of in a sequential format. Nevertheless, concern about cost is warranted, particularly where a new topic is being introduced. Balancing desirable modifications to a questionnaire against the time and cost of interviews raises the question of how to do so and when a proxy such as size of the economic unit should be used.

4.59. The first problem is to identify properly the secondary activities that workers can hold. It is essential that the question used explore explicitly not just forms of paid wage or salaried employment but any kind of economic activity. In the Mexican LFS this is handled by asking just one carefully formulated question

[28] This underlies the idea behind the concept of full-time equivalent as opposed to simple head count of employed persons, if such estimates are based on statistics for both primary and secondary jobs (see OECD, 2001, Chapter 4).

[29] In terms of the cost of field operations, the possibility of duplicating whole sections of a questionnaire requires more paper and ink (for paper questionnaires) and more work for the interviewers. If the number of dwellings assigned to each interviewer is the same, a longer questionnaire will reduce the number they process, which may discourage the interviewer from spending too much time on requesting information about more than one economic activity per person.

designed to prompt for self-employment activities that might otherwise be overlooked (see Appendix C2, question 7).[30]

4.60. Any strategy to improve the identification of secondary activities (in parallel or in sequence) within the relevant reference period is useless if clear criteria have not been established to determine if the activity is different or if it is simply some aspect or variation of the main activity. It is clear that activities are different in cases where the status in employment changes, for example when the worker is a salaried employee in the main job and self-employed in the secondary activity, or when the occupation or the industry changes. However, especially among the self-employed, it may be possible that the reported secondary activity is an extension of the main activity. In service activities, for instance, each client may be taken as a different job, which would yield an overestimation of secondary activities. Similarly, if the self-employed person owns many businesses offering the same kind of goods or services, each could be considered as a different activity and the overestimation may be substantial. It is therefore very important to ascertain whether or not business owners offer the same kind of goods or services and, if these are to be considered as separate jobs or activities, to devise a set of questions and train interviewers accordingly.

4

4.61. Questions 3e and 3f of the ENOE questionnaire (see Appendix C2) were designed to detect such situations and to distinguish people who own a network of outlets consisting basically of the same type of business from people operating not only many outlets but outlets which are different in kind. Once this information has been obtained, the interviewer can decide whether the entrepreneur actually runs more than one economic activity and proceed to Section 7 of the questionnaire, on secondary activities. A good guideline for establishing if a self-employed person has a secondary job is whether the activities in the coding process are classified as belonging to different kinds of economic activity in the ISIC.

4.62. For salaried workers attention should be given to the kind of employment or economic unit in which they are engaged. If the employment is linked to a different economic unit from the one declared as the main activity, then it is a secondary job, even though the task performed by the individual in terms of the ISCO may be the same. An implication of the economic unit criterion is that, even though the kind of economic activity may be the same, the fact that the respondent works for two different businesses or enterprises (i.e., the respondent's answers to Q4 and Q7b are different) establishes that there are two different labour relationships and thus two separate jobs.

[30] To make these distinctions the Mexican LFS would need to introduce the same questions as for the main activity, with all the resources that this would require. By adopting the shorter approach to questions on secondary activities, the decision was made consciously by the LFS designers to focus primarily on correcting any underestimation and, only as a secondary objective, to classify secondary activities by status.

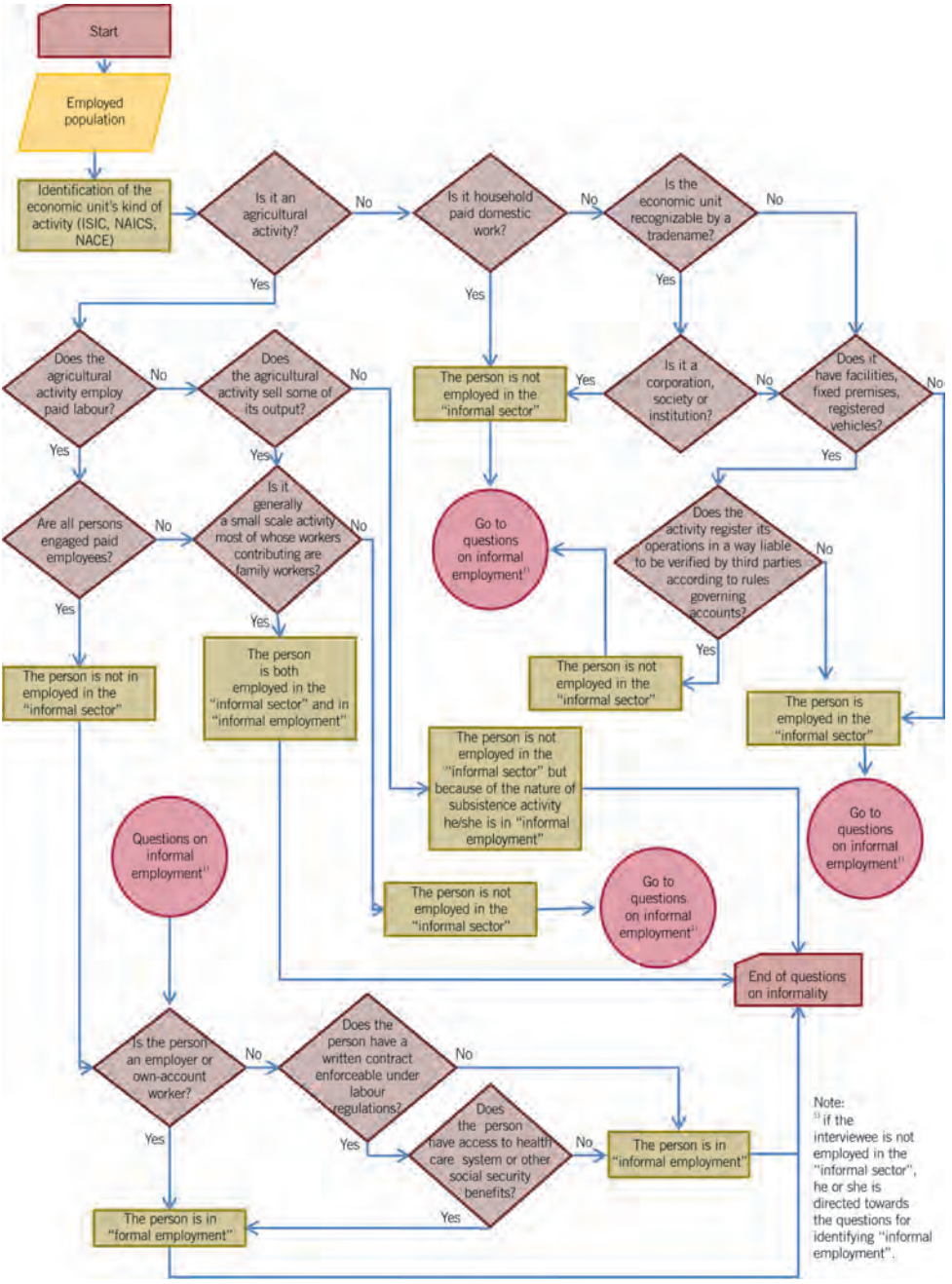
4.63. It might be argued that the criterion suggested is not the same for self-employed persons and for salaried workers. However, the difference is only apparent, for the real reference here is the employment/economic unit. In this approach, if a self-employed person manages a network of businesses of the same type - even though they may be located in different places - it is the same economic unit. If the salaried worker is also working for the same network he/she is working for the same economic unit as well. Furthermore, to be engaged in another business means for both self-employed and salaried workers that they are in different economic units and thus have secondary jobs. The kind of economic activity is not the key conceptual criterion but an operational criterion of secondary importance to the identification of another economic unit.

4.64. The key to designing questions for the section on secondary jobs is to adopt an overall approach to whether the full set of key questions and filters are needed to identify those belonging to the informal sector or whether proxy questions are to be used. The decision depends on the importance of secondary activities as a survival strategy in the country. If the phenomenon is widespread and already well measured (for example, by HS field verifications or by comparison with other surveys on the issue such as household income and expenditure surveys), the cost of duplicating questions for a detailed inquiry on secondary jobs is justified. When countries still need to determine the extent of underestimation, as in the case of Mexico, or if secondary jobs are not widespread in the country, a more cautious approach might be adopted involving the use of proxy questions, such as size of establishment.

Data processing

4.65. At the data processing stage it is important to understand the logic of the questionnaire as well as the approach outlined in this manual. Most of what has been discussed in this chapter is summarized in the flow diagram shown in Figure 4.5 below. The flow diagram is of particular interest because it shows how employment in the informal sector and informal employment are identified at both the questionnaire design stage and the data processing stage, in a step-by-step approach. The general direction of the flow is to identify which part of the employed population is directly engaged in the informal sector and from there to direct questions at the remaining persons employed under informal employment conditions, even though they may not be linked to informal sector economic units. The overall picture tells us that identifying the informal sector is a strategic part of the identification of the broader concept (informal employment) as a whole. The left side of the diagram deals specifically with agricultural employment in an approach involving proxy or circumstantial information. It is this information that is the basis for making more reasoned decisions at the data processing stage.

Figure 4.5.
Informal sector employment and informal employment: Step-by-step identification process



4.66. As with all models, this diagram simplifies a complex reality in order to show the process used to identify informal sector and informal employment. Although the model reduces everything to a 'yes' or 'no' kind of decision, the answers must include the possibility of a 'Don't know' response or non-response. Open questions (as opposed to pre-coded questions) are those where the interviewer writes down the description provided by the respondent and are used, for example, in collecting information on type of occupation and kind of economic activity. The answer provides a resource in dealing with problematic cases. The information gained by open questions is an asset in so far as the national adaptation of these classifications contains separate descriptions and thus specific codes for activities which by their very nature are informal.

4.67. If at any key juncture the sequence shown in the diagram encounters a non-response, these codes provide an alternative platform for reaching a decision. Of course, this approach carries its own provisos and difficulties. Either interviewers are trained in mastering the classifications used in data processing or other steps must be taken to ensure that they understand what is essential in the description provided by the respondents. Generally, open questions entail the interviewer following up with a cluster of probes to guide the respondent towards the core issue. Clearly, the quality of response to such questions depends heavily on the skill and experience of the interviewer and will not be uniform in any national survey operation. Accurate coding also requires good coding tools (coding indexes and instruction on their use), as well as an edit check system and routines to detect a conflict between coding and the flow of the interview. These should be built into the data processing operation. Consistency checks need to be put in place once the skip checks are made. In addition, specific instructions on the procedure for integrating the individual observations into a data base need to be prepared for those responsible for questionnaire analysis and editing. Inasmuch as coding guidelines are included as part of a broad data processing scheme, many situations can be solved in a satisfactory manner (for more resources on coding, see UN and ILO, 2010.)

4.68. However, information about economic activities cannot be used to distinguish informal sector activities from formal sector activities, because such a distinction is not part of the conceptual framework or codes of standard industry classifications. For this reason the steps indicated in the diagram above need to be followed whatever its shortcomings might be. If an ambiguous response or a non-response occurs at any juncture of the sequence or flow, then there has to be a strategy for dealing with the situation. Activities should be classified in the informal sector only if the evidence is compelling. It is preferable to err on the side of *not* including in the informal sector an activity that in fact *is* part of it than to include an activity that actually is *not* part of the informal sector. This also means that it is better to decide on an honest figure for non-respondents than to try to force a value. In theory binary classification errors in an aggregate scale

(informal as opposed to not informal) should compensate each other in a probabilistic survey if the sample is sufficiently large. Consequently, it is better not to introduce a systematic error or bias through imputation.

Other considerations for survey design

4.69. As discussed above, an HS that includes the identification of both informal sector employment and informal employment as a whole needs to rely to some extent on proxy respondents. The demand for precision from these respondents should not be overplayed. Questions requesting quantitative information may elicit substantial inaccuracies, since this is seldom well known by the proxy respondent. While the structure of Figure 4.5 deals mainly with categorical items, some information on numerical variables is also needed for context, consistency and analysis. For example, information on the number of persons employed by an economic unit is necessary to determine its size. In dealing with small-scale operations it would certainly not be too difficult or challenging to obtain this information from proxy respondents, but this can become more problematic than appears at first sight.

4

4.70. Since many informal sector activities are seasonal in nature, the number of people engaged in such units tends to vary with the time of year when the survey is conducted. If agricultural activities are incorporated in the concept of the informal sector, capturing seasonal activities is particularly important. The economic unit may hire workers during planting or harvesting periods and have no employees during the rest of the year. As seen in paragraphs 4.44 to 4.56, the issue depends very much on the nature of these activities, and so more contextual information is needed. Clearly a respondent cannot be classified as informal during one part of the year, when the number of workers in the unit equals or is less than the national definition for an informal sector unit, and formal during the rest of the year once the number of workers happens to be higher than the reference already set. In such cases, a question may be formulated that asks about the minimum or maximum workforce engaged in the activity over a longer period.

4.71. This leads to the more general topic of time reference in questions on the number of persons employed and the market orientation of an activity used to identify informal sector activities. When an HS is not conducted on a continuing basis, especially, the snapshots provided may be incomplete and thus misleading as a representation of the total employment situation for a year, for instance. For this reason, it is important to address these issues over a wider time span, even longer than the season of the year that corresponds to the interview. This may minimize any bias that arises from a short reference period.

4.72. However, for some items precise estimates of time are important. It is analytically relevant to know how long the respondent has been operating or managing her/his current economic unit (see Q3r and Q3s in the ENOE questionnaire; the issue is also addressed in Argentina's EPH and the Republic of Moldova's LFS). It is useful to know something about the past, such as if the person lost a previous job and, if so, whether it happened recently (this implies some precision in specifying when it occurred). In rotating samples it is possible to obtain information on such issues by means of a longitudinal analysis of households during the time they are in the sample, particularly if questions are asked about events or episodes that occurred since the previous interview. This kind of analysis is difficult to conduct and many provisos need to be made, given changes in respondents from one period to another as well as attrition – which in turn requires adjustments in weighting and other factors. An alternative is to gather some information by means of the questionnaire itself (ENOE, Section 9).

Effect on main objectives and operations of the survey

4.73. A final discussion is needed on the overall impact that the introduction of questions on informal sector and informal employment has on the duration of the interview and on the willingness of the public to participate in and to complete the entire survey. To include questions designed to identify and describe informal sector and informal employment may go far beyond the original objectives and design of a survey, involve broader survey planning and influence the reliability of the survey results and the confidence that the public has in a country's national statistical office. Proper planning and the retention of public confidence require the investment of resources. As a rule, a new survey or the redesign of an earlier survey needs to be tested before full implementation. Testing helps to ensure that accurate and non-speculative answers can be obtained from the questionnaire and survey operations and to understand better their effect on the duration of the interview and the non-response rates. In the case of Mexico's LFS, parallel rounds were conducted[31] in order to compare the results from the previous LFS with the new ENOE. The comparison showed that total non-response rates did not increase in a statistically significant way after the introduction of new topics and a longer interview. Moreover, although the introduction of new topics may not have helped to improve the partial non-response on sensitive issues such as earnings, it did not worsen them either.

4.74. The inclusion of the new items in the LFS increased the average duration of each interview by roughly 20 to 25 per cent. This required an increase in field staff in order to reduce the number of dwellings per interviewer and maintain the time invested per assignment at a constant level. It also increased the time

[31] ENOE operations began in January 2005; in 2003 and in 2004, it was conducted at the same time as the earlier survey known as ENE.

required for supervision of interviewers. In particular, additional technical and logistical resources were provided for operational staff to conduct quality controls in the subsampling of households selected in order to verify if the interview was actually conducted and conducted properly.

4.75. The perception of the public with regard to this kind of operation needs to be addressed in a practical way. It is not sufficient to train the field staff simply by telling them how to present the importance and objectives of the survey to respondents. The field staff must also be provided with material that conveys in plain and convincing language the meaning of national legislation and the guarantees they affords people who cooperate in data collection and why the information they provide is important to its success.

4.76. To sum up, although introducing new topics and concepts into an HS is certainly not a cost-free exercise, such reforms may trigger (or at least justify) an investment in improving the quality of field operations and systems and ensure that the benefits spread to the whole HS.

Chapter 5.
Establishment surveys and censuses

Introduction

5.1. Establishment surveys and censuses are the most common data collection instruments for statistics that describe the activities of economic units (UN, 2008c). In fact, they were also the standard instruments for producing statistics on the informal sector before 1993, when the 15th International Conference of Labour Statisticians adopted the *Resolution concerning statistics of employment in the informal sector* (i.e., the 15th ICLS resolution).

5.2. Depending on their design and coverage, establishment surveys and censuses provide statistics on the number and characteristics of all economic units in a country, whether medium-sized and large enterprises or small and micro-enterprises. For them to be useful for informal sector statistics, these sources need to cover all economic units, including small units employing only one person, and not only those that have fixed premises but those that are carried out within dwellings or with no fixed location as well.

5.3. As with other sources aiming to capture information about the informal sector, establishment surveys and censuses should include items in their questionnaires that concern the keeping of accounts, registration with government authorities and the registration of workers with social security schemes. When such data items are included in addition to the standard questions on production and costs, statistics on value added can be produced for the informal sector and for the rest of the economy, by type of industry as well as under other headings, thus providing statistics on the structure of a country's economy and establishing the statistical foundation for continuing economic analysis.

5.4. Establishment-based censuses produce basic economic statistics for detailed industries and geographical areas, while establishment surveys based on samples provide more frequent statistics on a broader range of topics for more aggregated levels of the industrial classification. Economic statistics generated from establishment surveys are used inter alia for compiling the gross domestic product in national accounts statistics, whereas benchmark and key ratios used to arrive at these estimates in national accounts are provided by the statistics obtained from economic censuses.

5.5. Economic censuses are large-scale and costly forms of data collection. Because of resource constraints, the budget for regular statistical programmes in less developed and developing countries may not be sufficient to conducting a census that covers the informal sector, even infrequently. Establishment surveys covering the informal sector are less costly than censuses, but they are still not inexpensive as they entail labour-intensive field work.

5.6. Many establishment surveys and censuses therefore exclude small units (among them, informal sector units) from their scope. Even those that attempt to cover small economic units tend to leave out informal sector businesses operating inside the home of the business owner (e.g., tailoring, food processing) as well as businesses that have no fixed location (e.g., construction, transport, ambulant trade). For this reason these surveys have been criticized for covering at best only the segment of the informal sector that comprises small and micro-enterprises performing their economic activities in identifiable non-domestic premises. Yet what is left out can constitute an important part, perhaps even the most important part, of the informal sector.

5.7. For all their limitations, establishment surveys and censuses can be effective instruments for collecting data on the informal sector when the objective is to produce statistics that can be useful for planning and formulating development programmes or estimating the sector's contribution to gross domestic product. Establishment surveys and censuses with limited informal sector coverage can be useful, for example, for users who consider that the establishments covered have a higher potential for growth than the informal sector units that are excluded and should therefore be the main target for programmes aimed at the development of small and micro-enterprises. With experience these censuses and surveys can improve the quality of their statistics over time if good sampling and non-sampling procedures are used. However, while statistics from establishment surveys and censuses that cover part of the informal sector may be useful for policy formulation and implementation, only those that actually address the whole informal sector can produce statistics that render full justice to this sector and be used to develop and monitor policies for the entire sector. Establishment surveys and censuses covering all or part of the informal sector have been undertaken in a number of countries, such as Afghanistan, Colombia, Egypt, India and Indonesia (see paragraphs 5.69 et seq).

5.8. This chapter reviews the most common practices adopted in establishment surveys and censuses that include the informal sector units within their scope. It will first describe establishment censuses, then establishment surveys, before it goes on to discuss common planning and design issues. In the final section it presents some examples of national establishment surveys and censuses.

Establishment censuses

5.9. An establishment census is the process of collecting data separately about each economic unit in a country or in a well delimited part of a country, during a specific reference period, and of compiling, evaluating, analysing and disseminating relevant statistics about these units.[32] Establishment censuses are also known as economic or business censuses. The geographical area targeted by an establishment census is normally the whole country, but it can be restricted to urban areas, main cities or other well delimited areas.

5.10. Given the large scale of an establishment census, the set of data items included are normally limited and include only such items as the name of the economic unit, the address, the kind of economic activity and the legal and ownership status. Some may also include limited information on the number of workers engaged, the volume of sales or production, and the value of expenditures,

[32] Similarly, a 'population census is the total process of collecting, compiling, evaluating, analysing and publishing or otherwise disseminating demographic, economic and social data pertaining, at a specified time, to all persons in a country or in a well delimited part of a country', UNSD, 2008d, paragraph 1.4).

for all or for a sample of the economic units. All these data items need to be based on standard concepts and methods, so that statistics from censuses are comparable over time with statistics from other sources within the country, as well as between countries.

5.11. When establishment censuses obtain information about production and expenditure, they generally use a reference period of a year. However, for economic units belonging to the informal sector whose owners do not keep written records of sales or purchases, the reference period may need to be shorter, for example a month (see paragraphs 5.51 to 5.53).

5.12. Establishment censuses are generally very costly and require large inputs of manpower and time, which tends to restrict them to one or two per decade. Information gathered at such long intervals is useful for statistics on structures and for benchmarking and to observe long-term trends, but it is not much use for short-term planning, for monitoring business cycles or for producing annual estimates for national accounts.

5.13. In practice, many establishment censuses are limited to units above a certain size (UNSC, 2007), and small and micro-units are covered through sample surveys and household surveys. Even when they are designed to cover all units, they generally do not include activities conducted inside the home of the business owner (e.g., tailoring, food processing) or activities carried out without fixed premises (e.g., construction, transport, ambulant trade), because these units lack recognizable business premises and are difficult to locate.

5.14. Establishment censuses that aim to cover all economic units, including informal sector units, need to canvass all buildings, whether business premises or living quarters, to establish whether there is an economic unit operating there or from there. It is important that enumerators investigate not only all business premises, but also all dwellings, as economic activity may be carried out inside or from dwellings. Economic activities carried out within dwellings are household-based production activities when they sell the products in the market. Some economic activities carried out from dwellings relate to ambulant activities, carried out without a fixed location. Enumerating every building and dwelling in an area is a labour-intensive activity, and establishment censuses that include units in the informal sector are therefore very costly and complex to organize and implement.

5.15. In order to reduce costs while guaranteeing full coverage of economic activities, an establishment census can be conducted concurrently with the house-listing operation for a population and housing census. Pairing the two census listing operations can help improve the coverage of informal sector units without fixed or recognizable premises provided that special probes for their identification are included in the house-listing schedule. This approach has been adopted in India since their second establishment census in 1980, in Egypt since 1976, and in

Colombia since 2005. A somewhat similar approach has been followed in conjunction with the 1990 population census of Indonesia; along with the house listing operation information was obtained on the number of establishments with fixed premises (whether located inside or outside private households) by kind of economic activity, while the actual establishment census was to be conducted later. One of the explicit objectives of this undertaking in Indonesia was to create a frame for surveys of household and small establishments, in order to reduce costs while guaranteeing full coverage of economic activities by the population and housing census. This has proved to be an efficient and cost-effective option to generate statistics on household-based economic activities, and therefore on the informal sector, because resources are shared between two large-scale statistical operations.

5.16. In order to reduce costs further, data collection can combine direct interviews for some units with self-completion for other units. Economic units that keep records of sales and expenditure can be asked to fill in the questionnaire without the help of an interviewer. These are usually medium to large units, often registered in government bodies and listed in the business register. For these units the questionnaire may be designed for self-completion, while the smaller units may call for an interview. A more detailed discussion on data collection strategies is found in paragraphs 5.54 to 5.58.

5.17. In many countries the establishment census is used to prepare a register of businesses. A by-product of the establishment census is a list of economic units with information regarding their name, address, kind of economic activity and number of workers engaged. The census information can also be used to prepare a sampling frame of enumeration areas showing the concentration of units in various industries (see paragraphs 5.36 and 5.37 below).

Establishment surveys

5.18. Establishment surveys (also known as economic or production surveys) collect data on a sample of economic units in a well delimited geographical area during a specific reference period. They are less costly than establishment censuses and can therefore be carried out more frequently. When the sample is randomly selected, it is possible to produce statistics that are representative of the geographical area.

5.19. The 15th ICLS resolution considered establishment surveys as one source for collecting data on informal sector units depending on the measurement objectives, the intended uses of the statistics, the calendar and structure of the national statistical system, and the availability of sampling frames and resources (ILO, 1993a, paragraph23). Such surveys can be carried out in conjunction with establishment censuses (ILO, 1993a, paragraph24). The resolution also mentions that it is generally preferable to cover all relevant kinds of economic activity in a single informal sector enterprise survey (ILO, 1993a, paragraph 24(4)).

5.20. The scope of an establishment survey depends to a large extent on the sample frame used. If the sample frame is exhaustive, i.e., includes all economic units in a country (even micro units carrying out their economic activities within people's living quarters), then the survey can produce representative statistics for the economy as a whole, as well as for the informal sector in particular.

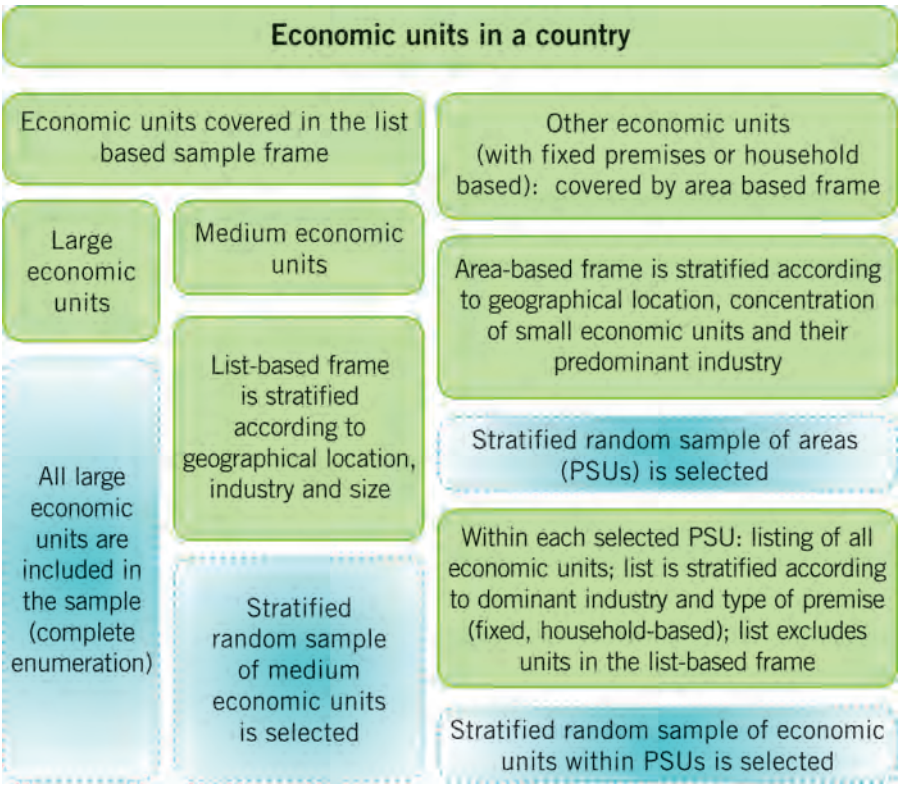
5.21. The majority of establishment surveys use list-based sample frames, constructed on the basis of administrative registers or a previous establishment census. However, a list-based frame tends to exclude all or a large share of informal sector units (and of small units in general). This is because small and informal sector units experience a higher turnover rate, more seasonal activity and more mobility than larger units. The high rate of formation and closure of individual informal sector units can seriously erode the completeness of any list frame. As a consequence, surveys based on list frames cover at best only that part of the informal sector that comprises the more stable, larger units.

5.22. In order to cover the informal sector completely, the sample for an establishment survey needs to be selected from an area-based frame. These surveys are more expensive than list-based surveys, however, and require a larger sample to achieve similar precision in the estimates.

5.23. To produce statistics on all economic units in a country, a methodology has been developed that combines list and area sampling. It is intended in particular for developing countries with a large informal sector comprising small economic units (UN, 1994). This methodology is called the Fully Integrated Rational Survey Technique (FIRST) and is designed to capture information reflecting the activities of all economic units operating within a country. It divides the statistical universe of establishments into two frames (see Figure 5.1.): a list frame of large and medium registered units included in a business register, which is clearly defined, and an area frame including all other units including small-scale units that are not registered. By definition, the informal sector units are found within the second frame.

5.24. A sample of registered units can follow a typical list-based sample design, i.e., it can include all large economic units and a random sample of medium units. A sample from an area frame can follow a two-stage design, typical of area-based sampling (see paragraphs 5.39 to 5.46). The final sample can therefore include a census of large economic units, a sample of medium economic units selected from a list-based sample frame, and a sample of small economic units selected from an area-based sample frame. This approach maximizes the efficiency of the list-based survey for units that it can cover with confidence, and allows for smaller units to be included as well. It also reduces costs, as the larger economic units can be given a questionnaire for self-completion while smaller units are interviewed directly. The FIRST methodology enables classification of the contribution of the informal sector to gross domestic product for each aggregated kind of economic activity, provided the informal and formal production units are appropriately defined and used in the sampling and estimation procedures.

Figure 5.1.
FIRST methodology



5.25. If it covers a small range of data items a list-based sample survey component can be carried out fairly frequently, for example once a month or quarter. This can be supplemented by a more in-depth annual survey covering a wider range of data items in greater detail. By contrast, an area-based sample survey component is a high-cost operation and is less efficient, as a larger sample is required to achieve the same degree of precision. It can therefore only be carried out less frequently, for example, annually or every three to five years.

Planning and design

5.26. A variety of designs and arrangements are possible in establishment surveys and censuses. The basic elements of survey design are the statistical units, the data collection strategy, the sample frame available, the reference period used and the data collection instrument.

Statistical units

5.27. According to the 2008 SNA the most suitable statistical unit for which production statistics are to be compiled is the establishment (UN et al., 2009, paragraph 5.16). In establishment surveys and censuses, therefore, the economic unit for which data are collected should ideally be the establishment. This is an issue only for businesses that consist of more than one establishment, as they need to provide information about each establishment separately. Although the vast majority of units (and even more so of informal sector establishments) in any country consist of just one establishment (Eurostat and OECD, 2007), for the few enterprises with multiple establishments the delineation of each establishment may be difficult to determine precisely. This is because the type of accounts kept by an enterprise may not allow for separate production and expenditure data for each establishment (c.f. UN, 2008c). In multi-establishment enterprises, management of the business's financial affairs of may be conducted at a higher organizational level than the individual establishments, and if the accounting system reflects the management structure, as it usually does, data may not be available for each establishment separately, especially data on investment. Consequently, the economic unit for which data is collected may often be the enterprise.

5.28. The correct identification of establishments is an important issue in producing statistics on the informal sector. Even though informal sector units are small in terms of their production and the number of workers engaged, informal sector enterprises may be made up of more than one establishment. In the 15th ICLS resolution an enterprise is included in the informal sector if none of its establishments exceeds the size limit set at the country level (see ILO, 1993a paragraph 9(5)). An enterprise may thus be quite large and still be included in the informal sector if all other criteria are also met. The resolution also states that all the businesses owned by the same person are considered as belonging to the same enterprise (see paragraph 12(2) of ILO, 1993a). In countries where only units above a specified size have to be registered and comply with labour laws and/or tax laws, informal sector entrepreneurs may prefer to keep many small economic units rather than one larger unit, in order to avoid having to register and to pay taxes. The 1982 establishment survey in Tunisia, for example, revealed that many small-scale establishments employing fewer than ten persons were part of intermediate enterprises employing 10 to 50 persons, thereby demonstrating the dynamism of the informal sector and its potential for accretion (Charmes, 1996).

Sample design

5.29. In selecting the sample design for an establishment survey, the trade-off between overall cost and the degree of precision required in the data collected is a fundamental consideration. Greater precision carries higher costs. Unlike a census, sample surveys reduce the level of detail at which reliable estimates can

be obtained when the units are classified by size, by kind of economic activity or by geographical location. This limitation can be overcome by increasing the sampling fraction selectively for cells where a lower sampling variance is required for a specific descriptive or analytical use of the statistics.

5.30. The basis for selecting a sample is the sample frame. A sample frame is a list that includes every unit in the population from which a sample is to be selected. Ideally, the units in a sample frame should be the same as the statistical units for which information is to be obtained. When a complete and up-to-date list of these units is not available, the sample frame can be composed of a list of areas containing the units and their delineation on accompanying maps.

5.31. For establishment surveys there are essentially two types of sample frame. The first and most common is a list or directory of economic units in the country (or a specific part of the country) and will be referred to here as *list-based frame*s or *business registers.* The second type of frame is a list or map of geographical areas of the country with identifiable boundaries, known as *area-based frame*s.[33]

5.32. List-based frames are the most common frames used in establishment surveys that measure production or employment and wages. They are generally organized in homogeneous strata, based on geographical location, the kind of economic activity and/or establishment size categories. Sampling designs usually use only one stage of selection, as economic units are generally selected directly from each stratum separately.

5.33. A list-based frame contains, as a minimum, a list of all economic units in the target geographical area with information on their address, main economic activity and size, in terms either of the number of workers engaged or the level of production. It should also ideally contain information about whether the economic unit is part of a larger enterprise, and about the institutional characteristics of the unit (for example, whether it is a private corporation, a government unit, central government, a non-profit institution or an unincorporated enterprise). Economic units should ideally be establishments, but for some units information may be available only at the enterprise level.[34]

5.34. List-based frames can be constructed from a series of registers kept by government agencies responsible for providing permits or collecting taxes and social security contributions, such as the social security register, tax registers or industrial registers. They may also be based on or updated from information collected in the most recent establishment census. In countries where government registers are incomplete, the last establishment census tends to be used as the main source to construct a list-based frame.

[33] Area-based frames of households are commonly used in household-based surveys to draw samples of households. Using a similar approach, an area-based frame of establishments can be used to draw samples of economic units.

[34] For more on business registers, see Eurostat 2010.

5.35. The use of registers as the basis for constructing a list-based frame has the advantage of allowing ongoing updating of the frame with very little additional cost. However, registers by definition only cover economic units that in one way or another are registered or pay taxes, and this excludes most informal sector units. Therefore, list frames based on registers are not suitable for drawing samples that include units in the informal sector.

5.36. List-based frames based on the last establishment census may be useful to draw samples that cover the informal sector if at least two conditions are met. The first condition is *complete unit coverage*. The establishment census must cover all economic units in their scope, including those that are not 'visible' or 'identifiable' from the street. The second condition is a *short time lag* between the establishment census and the establishment survey. The sample should be drawn very quickly after the establishment census because there is a high birth and death rate among informal sector units and these rates tend to be higher the smaller the economic unit. In addition, it can reasonably be expected that the longer the period between the establishment census and the selection of the sample, the less representative the sample will be. It is possible that many of the units selected will not exist by the time the survey is carried out and this risk increases with time. This sample, too, will fail to include new units that started to operate after the establishment census was carried out. A list-based frame using information from an establishment census soon becomes outdated and loses its usefulness as a regular sample frame of informal sector units.

5.37. A list-based establishment survey using information from an establishment census should be undertaken within a short time after the establishment census. This places demands on available financial and human resources, as well as in terms of field logistics and operations. Countries planning to use this approach to cover the informal sector in their regular programme of economic statistics exhaustively need to consider early on how it can be fitted into the overall data collection schedule and how it can respond to the broader data needs defined in the national plan for statistical development.

5.38. The requirements of completeness, accuracy and timeliness are a great challenge for list-based frames when establishment surveys aim to cover the informal sector. On the other hand, these factors do not usually affect the overall pattern of concentration of industries on which an area frame is based. That is why area-based frames are considered more robust than list frames for samples that are to cover the informal sector.

5.39. An *area-based frame* divides the target geographical area into smaller geographical areas, usually the enumeration areas (EAs).[35] For each of these

[35] An enumeration area (EA) is a small area in a country used by national statistical offices to assign workloads to census enumerators and distribute census questionnaires to observation units (either households or business premises). Typically, an enumeration area is canvassed by one census enumerator or interviewer

smaller areas, the frame should provide information about the number of economic units, the dominant economic activity and the size in terms of employment or production. Area frames are generally used when a complete and updated list frame of establishments is not easily available.

5.40. When an area frame is used as the basis for a sample survey of establishments covering the informal sector, the primary task is to organize the area units into different strata, or homogeneous groups according to the density of informal sector units, if possible by the dominant informal sector kind of economic activity, in order to reduce the uneven and sparse distribution of small economic units geographically as well as industry-wise. A stratified sample is more efficient as it will produce more precise estimates for the same sample size. Because of the need for area stratification, every effort should be made to compile the best possible information on the concentration of the activities at the level of the area units proposed for sampling. Strata in area-based frames are organized according to geographical location, dominant activity and/or density of the small or informal economic units. These strata are clearly less homogeneous than strata constructed from list-based frames, given that areas contain units engaged in activities other than the dominant one. An area which is predominantly composed of manufacturing units, for example, also contains units engaged in trade or repair. As a result, when compared with samples based on list frames, a larger sample is necessary to achieve a similar level of precision.

5.41. Area-based sampling assumes that the pattern of geographical concentration of informal sector units of different types remains relatively stable between the time of the establishment census and the survey, although the individual informal sector units may change. The validity of this assumption tends to decrease with the time elapsed between the listing of PSUs and the survey operations.

5.42. Samples of economic units based on area frames are selected in several stages. At the first stage the list of areas, which constitute the primary selection units (PSUs), can be selected with a probability proportional to the area size (i.e., the expected number of economic units and/or number of entrepreneurs). After the PSUs have been selected, a complete listing of the units of enquiry within these area units is prepared, to provide a frame for selecting the ultimate sampling units. This is done by canvassing the whole area of the selected PSUs, in the same way as would be done during an establishment census, and asking whether economic activities are carried out in all the premises in the area (including dwellings). As dwellings are also targeted, all home-based and mobile activities are included within the scope of the frame. Itinerant activities such as transport services and ambulant trading are recorded as being carried out from the worker's home.

5.43. During the listing operation interviewers need to be well trained to identify these activities, and in particular two types of situation. The first concerns workers who engage in either home-based or mobile activities and who, in addition, have fixed premises (outside or within the PSU) – for example, a person who manufactures goods at home and then sells them from a fixed stall. In this case, the activities carried out in or from the dwelling (in this case the manufacturing) are in principle conducted from a different establishment from the activities carried out in the fixed premises (the selling), but both activities are part of the same enterprise. This has important consequences during the listing process, because in principle the activities should be listed separately as they take place in two locations and are different from the perspective of the standard activities classifications (ISIC, for example). However, in practice it may be difficult to make this distinction, and therefore this manual recommends, for simplicity's sake, that they be considered within the same economic unit but be listed only at the location where the main activity is conducted. In the above example, the main activity would be the manufacturing of goods and the location would be the dwelling (for guidelines on determining the main activity, see UN, 2008c). The second situation relates to workers who carry out their economic activities in fixed premises but who stock part of the raw materials or products in their dwelling. While the stocking of materials is a separate economic activity from the activities carried out in fixed premises, again for the sake of simplicity this manual recommends that they be considered as ancillary activities to the main activity and that the unit be recorded as being located at the fixed premises.

5.44. During the listing operation information should be collected on the name and physical location of the unit, the kind of economic activity carried out (description and code) and the number of persons engaged. There is no need to obtain information on registration or account keeping, which are necessary to identify informal sector units, because area-based establishment surveys generally cover more units than those belonging to the informal sector (usually all those economic units not covered by a list-based survey). Informal sector units can be identified at a later stage, when the area-based establishment survey is carried out. What is important is that the survey questionnaire include these data items so as to identify, within all establishments selected, those that belong to the informal sector.

5.45. Interviewers should compare the information collected with the information already provided to them in maps and lists, and update them accordingly. Once the list of all economic units in the PSUs is finalized, the relevant economic units can be identified. A list of such units is then constructed to constitute the sample frame for the selection of economic units. This sample frame can be stratified according to kind of economic activity and other criteria, such as type of premises (fixed, within dwellings, itinerant), the sex of the entrepreneur, etc. The second stage of selection consists of randomly selecting a sample of potential ultimate economic units (USUs) from within each selected

PSU, based on the updated list of economic units, generally using systematic sampling. If the number of establishments in each kind of economic activity is not unduly large, all of them may be surveyed for data collection. If, on the other hand, it is very large in a particular activity, as is likely for trading in heavily populated areas, further stratification based on size of establishment may be carried out and the listed units can be surveyed on a sample basis.

5.46. Area-based establishment surveys involve the following steps:

(a) selection of areas of establishments (EAs) as primary sampling units (PSUs);

(b) listing of all buildings, including dwellings, to obtain information on economic activities carried out within; comparison with existing maps and other material and updating of the material;

(c) identification of relevant economic units, i.e., units that have the characteristics of the informal sector (small enterprises, household unincorporated enterprises with at least some market production, etc.);

(d) construction of a list of relevant economic units for each PSU (sample frame for the selection of economic units);

(e) selection of sample of economic units as ultimate sampling units; and

(f) submission of a questionnaire to the sample of economic units to obtain relevant information.

5.47. The advantage of area-based frames for covering the informal sector is that they do not need to be updated fully to select a representative sample of units, and they are the only means of guaranteeing that the sample is representative of all economic units in a country. However, given the higher cost of data collection, area-based frames are still not common for selecting samples of establishments. Such frames have been used in Colombia and India (see paragraphs 5.90 and 5.110) and, as the need to cover small units becomes more pressing, it is expected that area-based sampling frames will become more common, even in highly industrialized nations; this is already the case in Japan, which conducts area-based surveys of unincorporated enterprises on an quarterly basis (Ishida, Y., 2002).

5.48 This manual recommends the Fully Integrated Rational Survey Technique (FIRST) which combines the list-based and area-based sample frames. Larger economic units are sampled using a list-based frame, and smaller units using an area frame. The area sampling of PSUs needs to take into consideration the density of small units, and, during the listing and updating operation in the selected PSUs, enumerators need to verify that units appearing in the list-based frame are excluded from the second phase of selection, in order to avoid double-counting of units. This approach has been successfully used in Afghanistan (see paragraph 5.71).

5.49. Two main sources can be used to construct an area-based frame for establishment surveys. The preferred source is the last establishment census, because it can provide information on the economic units in each area, their industry, size and whether they keep written accounts and are part of a larger economic unit. Establishment censuses are the best source of information on the concentration of industries, which they obtain directly from the unit. The area frame prepared from such lists will include national or regional maps identifying area units by their geographical boundaries and details of the number of establishments classified by kind of economic activity and size. The information culled from such area frames can be used for allocating the sample of enumeration areas to different geographical strata, for stratifying enumeration areas according to the concentration of economic activities and for selecting PSUs with probability proportional to size (number of establishments).

5.50. When no establishment census has been carried out recently, a country's last *population census* can be used as an alternative point of departure. Population censuses are often the main source for an area-based frame for selecting households, and they can also be used for selecting small unincorporated economic units (including informal sector units). For this purpose, the frame has to contain the list of areas and, in each case, information about the number of entrepreneurs (employers and own-account workers) residing in the area, the economic activity of their economic unit and the size of the unit (in terms of employment). An area frame based on a population census cannot provide information about the economic units in the area, but only on the number of employers and own-account workers who reside in the area. Therefore, for it to be used as a frame to select economic units, it is necessary to assume that the number of entrepreneurs is a reasonable proxy for the number of unincorporated economic units within each PSU. In countries where neither an establishment census nor a population census with the necessary information has been carried out fairly recently, whole villages or city blocks can be used as areas, as was done in Afghanistan's business survey (see paragraph 5.69).

Reference period

5.51. A basic aspect of survey planning is the reference period or periods used for the collection of the information. To be useful for national accounts the reference period for the statistics needs to be the calendar year, which most establishment censuses that seek information about income and expenses use. The reference period in establishment surveys will depend on the survey frequency: monthly surveys can use a short reference period of a month, quarterly surveys may use a reference periods of three months or less, and annual surveys will tend to use the year as the reference period.

5.52. An establishment census or survey that covers the informal sector needs to take into account that managers of informal sector units are generally not able to provide information for a calendar year because they do not keep records and their replies have to rely on recall. For these units, regardless of the survey frequency, the reference period should be short, for example, one month or a week (UN, 1994); for agricultural units, the previous six months has also been used (ADB, 2011).

5.53. A flexible reference period during which respondents are allowed to provide information for any period they can (a day, a week, a month) could be envisaged, as was done for the 1-2-3 mixed survey (see paragraph 6.128). This is quite demanding from the data-processing standpoint, but it ensures the reliability of the information collected. In all cases, additional information needs to be collected about activity during the year in order to take into account the very seasonal nature of informal sector units. The questionnaire can, for example, include an item requesting approximate information about how typical the reference period was relative to the whole year, and about the rhythm of activity over the previous year, using very broad answer categories (higher activity than the reference period, lower activity, no activity). It is also possible to distribute the sample over the reference period for which one wants to estimate statistics, but this complicates field operations.

Data collection strategy

5.54. An establishment census or survey can collect information directly from persons representing the economic units, can extract it from one or more administrative registers (social security register, value added tax register, etc.) or can combine information from both sources.

5.55. When information is collected directly from persons representing the economic units, a standard questionnaire or set of questionnaires is used. These questionnaires can be sent to the economic units by mail or electronically for self-completion or can be used by trained interviewers to request information on the economic units directly, either face to face or by telephone conversation with the unit's representative. The first approach is known as the *self-completion method* and is less costly, but it can be used only for units where the owner, manager or other responsible person has the knowledge and ability to answer the questionnaire and has access to the relevant records.

5.56. The second method is known as the *canvasser method***.** It involves face to face interviewing by trained enumerators and is the preferred approach where business owners are not sufficiently literate to complete a questionnaire and where good records and accounts or complete lists of economic units do not exist. In an establishment census or survey, this method ensures that the information collected is as correct as possible. It will also ensure that even small economic

units are covered, because the interviewers go from door to door in their assigned area to find out whether there is an economic unit operating there. In order to guarantee that all economic units are covered, including all informal sector units, enumerators need to canvass not only all commercial premises but all dwellings, as economic activities may be carried out both within and from dwellings. Economic activities conducted from dwellings include all ambulant activities carried out without a fixed location. The canvassing method is a labour-intensive activity and therefore very costly and complicated to organize and monitor. Establishment censuses in most countries still need to use the canvassing method, however, at least for smaller units, thus raising their cost.

5.57. As stated above, this manual recommends a combination of both data collection methods when a list-based frame of economic units is complete only for a subset of economic units – for example, for large formal sector units. In this situation, questionnaires can be sent by mail or electronically to larger units for self-completion while enumerating the smaller units directly.

5.58. When the establishment census or survey can extract relevant and reliable information about economic units from existing registers, the cost of the process is considerably lower. The quality requirements are important, however: the organization responsible for the establishment census must have access to relevant information in the registers, and the registers need to record the birth and death of even the smallest units; the registers also have to keep the characteristics of the economic units up to date and clearly dated (number of workers engaged, their main economic activity, revenue and expenditure, etc.) and ensure that these data are based on definitions and classifications that are consistent with the statistical requirements. In addition, as it is often necessary to extract information from different registers, the registers need, at the very least, to have a common identifier number for the economic units included. Currently, however, very few countries are able to extract information from existing registers with a reasonably high unit coverage and data quality.

Data items

5.59. The 15th ICLS resolution recommends a long list of data items that can be included in establishment surveys and censuses (ILO, 1993a, paragraphs 34-35). They include the conditions of business operation, workers' conditions of employment, production (value of outputs produced, amount of sales and expenditure), characteristics of owners of informal sector units and characteristics of the households of informal sector owners.

5.60. Generally speaking, establishment censuses at least include items related to the characteristics of the establishment, and some also include workers and production. Establishment surveys tend to cover all three sets of items and may also include items related to the conditions in which the business operates. Data

on production provide the necessary elements for estimating gross output, value added and mixed income as defined in the 2008 SNA.

5.61. In establishment censuses or surveys covering the informal sector, it is essential that information be collected on whether the economic unit is registered, on whether it keeps written accounts, on the status in employment of workers (for example, contributing family workers, employees), and on whether the workers engaged have social security coverage, an entitlement to holidays and similar matters. This information will allow the identification of informal sector units and of informal employment from among all establishments covered in the survey. Other essential information concerns the environment in which informal units operate, their links with the formal sector, their access to credit and the role of credit unions, their relationship with the government, whether they belong to a producer or consumer cooperative, etc. It is also essential to collect information on whether the economic unit belongs to a larger enterprise. These data items will be discussed further in Chapter 7.

Questionnaire design

5.62. In establishment surveys and censuses, information is obtained through a standard questionnaire, though national statistical offices may choose to produce variants for different industries. Such industry-specific questionnaires may help reduce uncertainty and misinterpretation among respondents by focusing on the specific features of each industry, while at the same time allowing the inclusion of more detailed questions that respond better to users' need for statistics on specific industries. Industry-specific questionnaires tend to be shorter and simpler than the general questionnaire, as questions that are not applicable to an industry are excluded. For example, agricultural units can be asked for information about the size of the cultivated land or the number of heads of cattle, a manufacturing unit may be asked for information about their products, their sales and their expenses, while a retail trade unit will be questioned about purchases and sales but not about production. In addition, the instructions are better targeted and more concise in tailored questionnaires, which tends to reduce response errors due to misinterpretation. On the other hand, the design of industry-specific questionnaires requires more staff and time resources than a single questionnaire, and the organization of the data collection operation and processing is more complicated.

5.63. Ultimately, the choice of using one standard questionnaire or industry-specific variants of it depends on the level of detail required and on the country's data collection capability. An industry-specific questionnaire is more easily managed and more reliable when questionnaires can be sent by mail to establishments engaging in a known kinds of economic activity than when interviewers canvass respondents directly in the field.

5.64. Conventional questionnaires in establishment surveys and censuses are generally designed on the assumption that economic units base their answers on written records of production, accounting and payroll that are kept for the management of their business. In censuses and surveys covering the informal sector response errors are a primary concern, as owners of informal sector establishments do not keep accounts or records and may have difficulty separating their operating expenses from their household expenses. The level of detail and the precision of the information that they provide on expenses and receipts will most likely be lower than if they could rely on written records, as their responses will mostly rely on their powers of recall. A less demanding approach to data collection needs to be used for these units to obtain useful information[36] The very simple questionnaire used in Colombia is an example that can be followed by other countries (see Appendix D5). This type of questionnaire typically includes fewer data items, requests less detail and uses shorter reference periods than questionnaires presented to larger establishments. The use of technical terms should be avoided, and explanations that may be given to larger economic units should be transformed into questions that are appropriate for smaller units. In all cases, data collection from informal sector units should give higher priority to the training of investigators and supervisors so as to elicit quality data through probing questions.

Industry-specific establishment surveys

5.65. Sometimes, the scale and cost of a single survey is deemed too large or unmanageable for a country's statistical capability. An alternative in such cases can be to conduct a series of industry-specific surveys. International recommendations consider that it is generally preferable to cover all types of informal sector activity through a single survey, but an industry-specific survey (for manufacturing activities, trade, etc.) or a series of such surveys may be conducted if the measurement priorities are limited to particular types of informal sector activity or if the scale of a single survey is too large to be manageable (see ILO, 1993a, paragraph 24(4)). In an industry-specific survey the listing operation should be such as to identify all informal sector units that fall within the scope of the survey. Informal units that are not covered may be noted, and rules should be established for those that are engaged in activities both within and outside the scope of the survey.

5.66. When the intention is to cover all types of informal sector activity through a series of industry-specific surveys rather than a single survey operation, the data collection programme should be designed to ensure a comprehensive coverage of

[36] Even in establishment surveys aimed at formal sector units, a simpler questionnaire is often applied to the smaller units. This practice is much appreciated by managers of small units, who do not keep the detailed records needed to reply to a standard establishment surveys. It improves the response rate and has little effect on the estimated aggregate production figures in industries where small units have only a small share in total production.

informal sector units without omission or duplication among surveys. The timing of the surveys and the methodology to obtain overall aggregates should be carefully planned. The unorganized sector enterprise surveys in India are an example of this type of survey (see paragraphs 5.108 to 5.136).

5.67. This manual does not recommend industry-specific surveys as a main collection strategy. This is because in industry-specific surveys it is very difficult to avoid coverage errors, given the complexity during the listing operation of identifying all and only informal sector units that fall within the scope of the survey. This is important, as multiple activities are widespread among informal sector units and it is not always easy to determine the main activity. Note that this issue arises in each round of an activity-specific survey and compounds the problem of new units emerging between rounds and of units changing their main economic activity. If such issues have been addressed satisfactorily, the resulting observations can be used to produce basic activity-specific estimates. In addition, industry-specific surveys do not make it possible to prepare statistics reflecting different informal sector activities that are undertaken by the same individuals, households or enterprises. Industry-specific establishment surveys increase the likelihood of double-counting economic activities unless the investigators and supervisors engaged in field data collection are properly trained. If industry-specific establishment surveys are spread over several years, it is impossible to have comprehensive data on all industry groups in the informal sector for the same year, and this may make it difficult to estimate the sector's overall contribution to the gross domestic product in national account statistics.

Establishment surveys and censuses in the world

5.68. A number of countries have conducted economic or establishment censuses and establishment surveys that cover the informal sector. The experiences in some of these countries are presented briefly below.

Afghanistan – Integrated business enterprise survey, 2009

5.69. The integrated business enterprise survey carried out in Afghanistan was the first survey of its type in the country. It covered all non-agricultural economic units in all urban and most rural areas and accounted for about 81 per cent of the total rural population. As it lacked a complete up-to-date sample frame for all units in the country, it used a dual sample frame. A list-based frame was used for large establishments (generally with 20 or more workers) and an area frame for villages in rural areas and 'controller' (or enumeration) areas in urban areas. The area frame was constructed using the 2004 population census list of villages and 'controller' areas. The population censuses did not provide information on the concentration of establishments or their industries, so this information could not be used to create strata. Areas in urban and rural areas were therefore stratified

only by province; in urban areas 'controller' areas were also stratified according to the concentration of establishments, with areas with markets or a high concentration of enterprises forming one stratum separate from other areas.

5.70. All large enterprises in the list-based frame were included in the sample. The sample based on the area frame was selected in two stages. In the first stage 150 villages in rural areas were selected using systematic sampling with probabilities proportional to population. In urban areas 150 'controller' areas were selected also with systematic sampling but with equal probability. Each 'controller' area was divided into around five smaller segments, from which two were selected, one with the highest concentration of units and another at random.

5.71. In the second phase all economic units within the selected villages and segments were listed. The listing included all units operating in fixed premises, with the exclusion of those already in the list-based frame, as well as all household-based and itinerant activities. This was achieved by inquiring in each dwelling whether some economic activity was being carried out there or was based there. Activities carried out within the dwelling were included in the list, as well as activities of household members that were carried out in no fixed premises. Activities carried out by household members in fixed premises outside the dwelling were not included in the area frame, as they were listed at the village or 'controller' area in which the activity was carried out.

5.72. The list of establishments was stratified by broad industry group. In rural areas 12 units were selected from each village. In urban areas, 12 units were selected from each of the selected segment, or 24 in each 'controller' area.

5.73. The survey used a standard establishment survey questionnaire that obtained information on the establishments characteristics, on workers and on production (see Appendix D1). In addition, it obtained information on type of location (fixed, mobile), whether it was registered and kept accounts, whether it received any assistance from government and the type of problems the unit faced (CSO, 2008).

Benin – Census and survey of establishments, 1992

5.74. Benin's census of economic activities of the manufacturing sector, construction, trade and services was conducted in January 1992 in nine towns: Abomey, Bohicon, Cotonou, Djougou, Kandi, Lokossa, Parakou, Porto-Novo and Natitingou. The census covered all establishments engaged in market activities in the formal and informal sectors.

5.75. There were three census questionnaires (see Appendix D2): for fixed activities, for fixed and mobile activities and for itinerant and mobile activities. The questionnaires differed in the number of items included, as some items, such as bookkeeping practices, registration, characteristics of premises or information

about employees, were not considered relevant to mobile and itinerant activities. The questionnaire for fixed establishments included the following:

(a) *characteristics of the unit*: kind of economic activity, type of goods sold (for trade activity), year of start of present activity, location of unit (town, district, block, plot), whether it had electrical or motorized machines, ownership (whether it belonged to an individual proprietor and his family, partnership, cooperative or company), address or contact address of establishment and construction site, whether the unit was inside or outside a market, type of workplace (concrete building, barrack, veranda, yard, closed land, construction site, etc.), name of entrepreneur or respondent, and demographic details of entrepreneur or respondent (sex, age, educational attainment, etc.).

(b) *information about workers*: number of persons working by type (manager, associates, apprentices, family workers, permanent paid employees, casual workers);

(c) *informal sector items*: bookkeeping practices (purchases and sales book, complete set of accounts, no accounts at all), whether the unit was in the trade register, whether it was registered at the Social Security Office in Benin, whether the owner had any other income-generating activity and, if so, which other activity (as paid employee in public or private sector, as self-employed in manufacturing or trading or services or agriculture, animal rearing, having property or transfer income, other income source)

5.76. Prior to the census, a pilot study was carried out in the town of Ouidah from 29 November to 5 December 1991. The census itself was carried out from 3 to 30 January 1992. The pilot study made it possible to improve the questionnaires and test the census methodology and procedures. The main methodological documents were the census questionnaires and the training manual for the enumerators, which provided the concepts, methodology and techniques of data collection from establishments in urban areas. The manual included sections describing the objectives and activities of the project and the statistical concepts of establishment, informal sector and mobility, the economic and geographical scope and the method of enumeration. It also described the structure of the three census questionnaires, how they were to be administered, and the manner of recording information relating to each question. The role and obligations of enumerators, controllers and supervisors were also covered. The technical appendices provided two classifications: economic activities classified by industry group (4 digits) according to the ISIC, and trading goods on the street, classified according to codes for the retail trade.

5.77. The census operation encountered various difficulties, including time constraints, insufficient motivation and lack of co-operation of the targeted population, inadequate logistical support owing to limited funds and technical and

institutional constraints. In spite of these difficulties, the census of economic activities in urban areas proved to be effective from both the technical and the institutional standpoint. On the technical side the data provided an important source of information to construct a frame for sample surveys. In addition, an important part of the national statistical system was improved and updated by adapting the methodology and data collection instruments to local conditions (Maldonado, C., 1998a).

5.78. Immediately after the census an establishment survey was carried out from 19 to 31 October 1992 in six towns: Cotonou, Oporto-Novo, Abomey, Bohicon, Parakou and Djougou. The survey was preceded by a pilot study in Ouidah in August 1992 to test the survey instruments and their adequacy to meet the programme's objectives.

5.79. The survey covered economic units operating in the informal sector. Three kinds of activity-specific questionnaires were designed (see Appendix D3), for manufacturing and services, trade activities and transport activities. The distinction made at the time of the census between fixed, fixed/mobile and mobile/itinerant activities was not retained for the survey, but all were represented in the sample. Each questionnaire was divided into several parts:

(a) general characteristics of the unit: identification, location, ownership and kind of economic activity carried out;

(b) employment situation: professional background of the owner, composition, characteristics and remuneration of workers;

(c) goods manufactured and services provided, cost structure, seasonal patterns in activities;

(d) management and marketing strategies: search for customers, fixing of prices, competition and measures taken, business administration;

(e) changes brought about in the establishment since it started operating;

(f) credit problems: difficulties in obtaining credit and use of the loans secured;

(g) main problems of the entrepreneur and support needed;

(h) attempts of the owner to become a member of a professional association or 'self-help' group for support;

(i) information on the size of the owner's household and on the number of income earners therein.

5.80. The sampling frame was the list of all enumerated economic units provided by the census. The survey frame comprised all economic units that did not have a set of accounts, or were not listed on the business register or were not

registered at the Benin Social Security Office (OBSS). These criteria were applied to establishments with fixed premises; 21,661 such fixed establishments were considered for all the towns. All the fixed/mobile economic units and mobile/itinerant units were considered to be in the informal sector. The overall frame for the towns comprised 127,796 economic units.

5.81. The number of establishments in each town and their distribution by industry group were considered in drawing the sample. For Cotonou and Porto-Novo the sampling rates were as follows: 5 per cent for fixed establishments, 1 per cent for fixed/mobile units and 1 per cent for mobile/itinerant activities. In the other towns the rates were: 10 per cent for fixed establishments, 2 per cent for fixed/mobile units and 2 per cent for mobile activities.

5.82. The overall sample size was 2,587 units, which was determined by the available financial and technical resources. The sample was then divided into three groups: manufacturing and services (including restaurants), trade activities and transport services.

5.83. The sample was drawn by town and type of establishment (fixed, fixed/mobile and mobile/itinerant). A systematic sampling method stratified by industry group was used. For the fixed establishments, 20 per cent of the sample was assigned to trade activities and the remaining 80 per cent was distributed proportionally among the other industry groups according to their relative importance. For the fixed/mobile units, 10 per cent of the sample was allocated to trade and 90 per cent distributed among the other industry groups. For mobile/itinerant activities, 20 per cent of the sample was assigned to trade, 20 per cent to restaurants and the remaining 60 per cent to transport services. To facilitate replacement of establishments that had closed down or left the selected areas, some extra establishments were sampled in each town.

5.84. It was not possible to survey all sampled establishments in the four towns owing to their high mobility, absences and closures, but only a few could not be replaced. Cotonou and Abomey had a larger number of questionnaires than expected as the establishments were over-sampled because of the poor quality of the information collected. All the completed questionnaires were processed. The reasons for mobility were: demolition of the establishment, closure of the workplace by the owner, flood and other causes, but the main reason was that that the owner was looking for a more appropriate place to carry out the activity. The absences are explained by illnesses, travel related to the business, family responsibilities and social obligations. The closure of a unit could be because the entrepreneur had ceased the activity or had died. Altogether 113 establishments had closed down or left Cotonou, corresponding to an annual rate of 12.8 per cent. High rates of mobility and closure were observed mainly in the manufacture of clothing, the retail trade and construction. Over-sampled units were used to replace them. In Cotonou, a second sample had to be prepared because of the large number of replacements.

5.85. Refusal to answer mainly concerned questions on receipts, expenditure, investment, remuneration of workers and other figures that might be subject to control by tax officers or labour inspectors. In Cotonou a low refusal rate of 3 per cent (35 cases) was recorded. In addition to the above, some units were marked as 'not found' – generally because the information provided on the census questionnaire (nature of the activity, name of the owner, identification number of the plot, block or district where the establishment was located) was incorrect or imprecise (Maldonado, C., 1998b).

Colombia – General census, 2005

5.86. Colombia carried out a general census in 2005 in which population, dwelling, agriculture and establishment censuses were integrated into one. It targeted all buildings, whether they were used exclusively as economic units, as living quarters or as both living quarters and economic units. Information was obtained using a single questionnaire organized around six modules: identification, dwelling, household, individual household members, economic unit and agricultural unit. When living quarters were collective, another questionnaire was used that was also divided into modules.

5.87. With this approach, it was possible to identify all economic units with fixed visible premises as well as economic units located in living quarters. This made it possible to construct a complete sampling frame. In order to capture economic activities in buildings used for living quarters, a specific question was used in household module B, (question CTL7; see Appendix D4) to establish whether any member regularly carried out an economic activity within the dwelling for sale in the market. When a positive reply was given, the interviewer asked the relevant questions in module D relating to the economic unit.

5.88. The questionnaire sought basic information on all household-based economic units, and included the following items:

(a) characteristics of the unit: name, legal status, telephone number; whether it was part of a larger enterprise; kind of economic activity (9 questions in all);

(b) workers: average number of workers during the previous month (DANE, 2005)

Colombia – National survey of micro-establishments

5.89. Since 2000 Colombia has been carrying out an annual survey of micro-enterprises that covers all establishments with fewer than 10 workers in urban areas, other than mobile activities. The survey obtains monthly data on the evolution of the units and yearly data on structural items.

5.90. The current sample frame of economic areas was enhanced with information from the general census of 2005 for economic units operating from

dwellings. The sample was selected in three stages: municipalities or metropolitan areas, sections and establishments. In the first stage municipalities or metropolitan areas were stratified by degree of urbanization. Within each selected municipality sections were stratified by density of manufacturing or services units, and a sample of sections was selected. Within each selected section, all establishments were listed by interviewers. Care was taken to inquire within households as well, in order to identify household-based establishments. The third stage consisted of randomly selecting economic units within each selected section. In low-density sections, all economic units were selected.

5.91. The information collected at the listing stage includes: the name of the establishment, address, the kind of economic activity, whether it is active, closed, rejected (i.e., that refused the interview) or vacant, whether it sells products to the public, whether the unit is part of an enterprise and, if so, the number of establishments that are part of the larger enterprise, the number of workers employed, whether the unit is in the list-based sample frame, and whether it is visible from the street.

5.92. Information is collected through personal interviews using reference periods of a month and a year. Data items include (see Appendix D5):

(a) Characteristics of the unit: name, address, telephone number, whether it is registered, whether the premises are fixed or household-based, legal status, number of years in operation, bookkeeping practices, and whether it is part of a larger enterprise; the main kind of economic activity is obtained by a set of 11 questions.

(b) Workers employed:

- reference period of a month: number of workers during the reference month by type of workers (partners, family workers, casual, permanent) and by sex;
- reference period of a year: average number of workers during the year, by type of workers and sex, earnings, social benefits and employers' contributions to social security.

(c) Income:

- reference period of a month: value of production or sales in the reference month;
- reference period of a year: in order to have an estimate of total activity during the year, respondents were asked to classify the level of production or sales, month by month during the reference year, into three categories (high, normal, low) and then to provide estimates for the month of highest activity, normal activity and lowest activity for the following items: value of sales or production, and cost of raw materials

and merchandise bought; in addition, respondents were questioned on expenditure during the year on specific items, such as electricity, telephone, transport, value of fixed assets (buildings, machines, equipment, etc.).

(d) Business environment: size of the premises, number of computers, percentage of workers who used computers, Internet access and use, whether the unit exported its products (DANE, 2009)

Egypt – Economic census, 2006

5.93. The Central Agency for Public Mobilization and Statistics (CAPMAS) carries out a general population, housing and establishment census (known as the general census) followed by an economic census. The latest in the series was conducted in 2006. Egypt is one of the few countries to have carried out both types of census simultaneously and on a regular basis.

5.94. The establishment census segment of the general census provides the frame of establishments for conducting the economic census. In the general census the following information is collected:

(a) For all establishments: the address and location of the establishment, description of the premises occupied, by establishment, activity status (working, temporarily closed, closed), sector (governmental, public and public business, private);

(b) For working and temporarily closed establishments: establishment trade name, owner's or manager's name, owner's nationality, main economic activity (in detail), number and kinds of economic activity, total number of workers in the establishment divided into paid and unpaid employers (male and female) and paid and unpaid employees (male and female).

The general census was very important in conducting the economic census and provided the link between the two.

5.95. The economic census provided a comprehensive and detailed picture of the working establishments belonging to the various economic sectors (governmental, public business, formal private, informal private and investment). Two methods of data collection were used, depending on whether the economic unit was in the formal or the informal sector. The informal private sector was defined on the basis of the number of workers employed, which varied by kind of economic activity. All informal sector units were directly interviewed by an enumerator. Nine activity-specific questionnaires were used: mining and quarrying establishments in the private sector employing nine or fewer workers; manufacturing establishments in the private sector employing nine or fewer workers; repairing carriages with motors; retail trade for establishments employing

four or fewer workers; restaurants, cafes and beverage stores; transport and communication; services; private sector school institutes and colleges; and agricultural activities inside establishments.

5.96. Data items included:

(a) total number of workers in the establishment, divided into paid and unpaid employers (male and female) and paid and unpaid employees (male and female), by occupation, education level and age group;

(b) wages and salaries for paid workers, nature of work (regular, temporary, seasonal, etc);

(c) inputs and output (see Appendix D6).

5.97. Comparisons between population and establishment censuses provide useful insights into the relative size of home-based work, outwork and enterprises operating in domestic premises. Comparisons between the two sources facilitate the estimation of informal sector employment; they are particularly useful as they reveal the importance of work in domestic premises and help to refine assumptions concerning the proportion of this type of worker in total employment. Respondents in the population census were asked whether homes or dwelling places were used for economic activities; in the establishment census they were asked whether the economic activity was performed in domestic premises. By differentiation, it was then possible to measure the size of the labour force in large, medium and small establishments (in the establishment census) and, for these three categories but mainly for the last, the proportion of jobs performed in dwellings. Because the total jobs declared in households included jobs not captured in establishments, it was possible to evaluate the concealed segment of the labour force (or informal employment). Of course, this method is only reliable when the comparisons are conducted at the micro level (see El Desoky, M., 2006). Examples of such comparisons using both the population census and the economic census for Cairo can be found in Charmes, 1988.

Ethiopia – Census of economic establishments, 2004

5.98. The first census of economic establishments in Ethiopia was carried out by the Central Statistical Agency (CSA) in February-March of 2004. The census covered all urban establishments that were set up with the aim of making profits and covered both public and private establishments. The census included units that sold or produced in open markets or in a fixed location and mobile businesses in all sectors, with no limitation as to the number of persons engaged and the amount of income. However, it excluded civil service institutions and defence and other non-profit-making government and non-governmental organizations. The census was used to create a business register system and to obtain statistics on

the number and distribution of economic establishments by industrial category, region and persons engaged, as well as production statistics for national accounts.

5.99. Data items included information about type of ownership, number of persons engaged, bookkeeping practices and licences, initial capital and revenue.

5.100. The fieldwork for the census was carried out without many problems. However, the census of economic establishments was found to be a huge undertaking, and the reporting quality of some data items, particularly those on capital and revenue, was considered to be unreliable. In addition, the country's capability to set up a database of such a magnitude was weak.

5.101. The CSA's major emphasis on economic statistics has therefore been to establish a reliable frame or business register system by conducting well-designed censuses of economic establishments and enterprises in the future, and at the same time to use administrative data for establishing and maintaining such a business register (Mossa, Y. 2009).

India – Economic census, 2005

5.102. India's fifth economic census in 2005 was a good example of how to identify both formal and informal sector enterprises. All kinds of economic activity (except crop production and plantations) were covered in the census, and all units engaged in the production or distribution of goods or services other than for the sole purpose of own consumption were counted. The census covered businesses with or without employees and also government-owned enterprises. There were two reporting forms: a house list schedule, and an enterprise schedule. For enterprises with ten or more workers, details of their address and phone and fax numbers were collected through an address slip. Key data variables collected in the house list were: house category (residential only, residential-cum-enterprise unit, enterprise unit only, others including vacant units), entrepreneurial unit number, household number, name of the enterprise and head of household, whether any member of the household was engaged in any entrepreneurial activity on the premises or outside the premises without a fixed structure (yes or no), number of enterprises within the household/unit, number of enterprises outside the household/unit without any structure and without a fixed location or with a fixed location, and type of structure occupied by the household/unit (*pucca* house, *kutcha* house, semi-*pucca* house, other).

5.103. Based on the house listing exercise, the census recorded about 7.91 million household-based enterprises (constituting 18.8 per cent of the total number of enterprises) that did not have any premises for carrying out economic activities. All these enterprises were listed at the household of the enterprise owner. The census was able to capture these enterprises thanks only to the listing procedure it adopted.

5.104. The key data variables collected in the enterprise schedule were: enterprise premises status (with premises or without), description of the economic activity of enterprise, major activity or subsidiary activity, national industrial classification code (to be entered at the supervisory level only), classification of the enterprise as agricultural or non-agricultural, perennial or non-perennial operation code , ownership of enterprise (government or public sector, private-non-profit institution, unincorporated proprietary, unincorporated partnership, corporate non-financial, corporate financial, cooperative), social group of owner of a private enterprise, type of power used (none, electricity, coal/soft coke, petrol/diesel/kerosene, LPG/natural gas, firewood, animal power, non-conventional energy, other), registration (not registered, registered or recognized by specified agencies), number of persons usually employed (adult male, adult female, children male, children female, total), number of unpaid or non-hired persons usually employed (adult male, adult female, children male, children female, total), and source of finance (self-financing, assistance from government sources, borrowing from financial institutions, borrowing from money lenders other than institutions, other sources such as NGOs, voluntary organizations).

5.105. The reference period for recording entries in the enterprise schedule was the last calendar year for perennial enterprises and the last working season for non-perennial enterprises. For enterprises that started up only recently the characteristics were recorded as on the date of census.

5.106. The census data were used (a) for economic analysis of key variables, and (b) for the preparation of area sampling frames for unorganized or informal sector enterprises.

5.107. The fifth economic census was conducted in 2005, following an earlier census in 1998. The basic structure of the fourth and fifth censuses was the same, but the 2005 census also collected various useful characteristics for classifying an enterprise as an informal sector enterprise. As in the fourth census, area sampling frames were prepared for unorganized sector enterprises. In India the definition of the unorganized sector is broader than that of the informal sector, which comprises a substantial part of the unorganized sector (Ministry of Statistics and Programme Implementation, 2008).

India – Survey of unorganized manufacturing enterprises, 2000-01

5.108. India's National Sample Survey Organization (NSSO) has been conducting unorganized sector enterprise surveys since 1978-79. In its survey of the unorganized manufacturing sector it has been classifying all manufacturing units not covered by the Factories Act, 1948 as unorganized manufacturing enterprises. In the case of services (Ravendraan et al., 2006, Section 2), the NSSO survey of the unorganized services sector treats enterprises that are neither run by the Government nor included in the public sector as unorganized sector services enterprises. The NSSO conducted

its first ever survey of informal sector non-agricultural enterprises along with the household survey on employment and unemployment (a kind of mixed household and enterprise survey) during the 55th round (1999-2000). In this informal sector survey all unincorporated proprietary and partnership enterprises engaged in non-agricultural activities were defined as informal sector enterprises. This definition of the informal sector differs from the concept of unorganized sector used in unorganized sector enterprise surveys conducted by the NSSO. The informal sector defined by the NSSO can be considered as a subset of the unorganized sector in the NSSO's surveys of unorganized sector enterprises.

5.109. As a follow-up to the fourth economic census in 1998, a sample survey of unorganized manufacturing enterprises was conducted by the NSSO in 2000-01. Excluded from this survey were organized manufacturing enterprises employing ten or more people and using power and those employing 20 or more people without using power, registered under Factories Act 1948 and covered separately under the annual survey of industries on the basis of the available list frame.

5.110. In a stratified two-stage sample, villages in rural areas and urban frame blocks in urban areas were the primary sampling units (PSUs), and manufacturing enterprises in the unorganized sector were the ultimate sampling units (USUs). The fourth economic census's enterprise data on PSUs was taken as the sampling frame for the first -stage. Three types of enterprise were defined. An own-account enterprise is an undertaking run by household labour, usually without hiring anyone on a regular basis. Enterprises that have employed at least one employee on a regular basis are called establishments. An establishment employing one to five people (household members and employees) is termed a non-directory establishment, while a directory establishment is an establishment that has employed six or more people.

5.111. In rural areas each geographical district was treated as a stratum, which was further divided into three sub-strata: sub-stratum 1 consisted of PSUs with no unorganized manufacturing enterprise according to the 1998 census, sub-stratum 2 comprised PSUs with at least one directory establishment in the unorganized manufacturing sector, and sub-stratum 3 comprised the remaining PSUs. In urban areas, in each geographical region of the national sample survey within a state, towns were first stratified according to their population size in the 1991 population census, and then, within each stratum, three sub-strata were formed with the same criteria as for rural sub-strata.

5.112. The sample PSUs were allocated between rural and urban area in proportion to the number of persons employed in unorganized non-agricultural enterprises as per the 1998 census, with a urban/rural ratio of 1 to 1.5. Allocation to strata and sub-strata in both rural and urban areas was in proportion to the number of persons employed in non-agricultural enterprises in the unorganized sector according to the 1998 economic census.

5.113. For sub-stratum 1 in rural/urban areas, PSUs were selected with equal probability and without replacement. For all other sub-strata in both rural and urban areas, PSUs were selected with probability proportional to size (PPS), size being the number of persons employed in manufacturing enterprises in the unorganized sector as per the 1998 census. This procedure for selecting the PSUs was adopted to ensure better representation in the sample of the areas in which unorganized manufacturing activity was concentrated. Samples were drawn separately in the form of two independent subsamples for rural and urban areas. For uniform spread of data collection over the survey period of 12 months, the sample PSUs were arranged in four sub-rounds, each of which was covered in three months in order to account for seasonal effects.

5.114. A team of two or three investigators and one supervisor collected data in each selected PSU. In order to control the workload at the household/enterprise listing stage, hamlet groups (in rural areas) and sub-blocks (in urban areas) were formed in a large PSU by considering the approximate current population and/or current number of non-agricultural enterprises found to exist in the sample PSU. Hamlet groups and sub-blocks were formed by more or less equalizing the relevant population. Three hamlet groups/sub-blocks were selected. One with the maximum number of manufacturing enterprises was always selected and termed segment 1; two others were selected by systematic circular sampling with equal probability and combined to form segment 2. Segments 1 and 2 were listed separately6. If there was no hamlet group/sub-block selection, the listing was done in respect of the whole village/block in segment 1.

5.115. When listing a house investigators first ascertained how many households resided there. From each household the details were collected of all non-agricultural enterprises operated for at least one day by its members during the 365 days preceding the date of the survey (in case the enterprise was not in operation on the date of listing). These details included: description of activity, 2-digit 1998 national industrial classification code, ownership code (male/female proprietor, partnership with members of the same household or with members not all of whom were from the same household, cooperative society, etc.). Enterprises operated by the household and located in the house where the household lived, along with those without any fixed premises, were listed one after another for that household, but enterprises operated by the same household and located at other fixed premises were listed at their actual location to avoid double-counting. After recording information about the resident households and all the different types of non-agricultural enterprise, as described here, the investigator listed all other such enterprises, if any, that were located in that house and operated either by households staying in other dwellings (either within or outside the selected PSU or hamlet group/sub-block) or by an institutional body. After this, the investigator proceeded to the next house.

5.116. An enterprise pursuing multiple or mixed activities was listed separately under each activity if separate details on employment etc. were available. Otherwise, it was listed as one enterprise corresponding to the major activity. A listed non-agricultural enterprise, according to the national industrial classification, was identified as being engaged or not engaged in manufacturing. In the case of manufacturing enterprises, additional details were collected in the listing schedule. These included: registration to identify whether it belonged to the organized sector and should therefore excluded from the survey on unorganized manufacturing; broad manufacturing group code (1 to 6); total number of people usually employed on a working day during the reference year for perennial and casual enterprises, and during the last working season of the reference year for seasonal enterprises; the number of hired persons usually employed on a fairly regular basis; and the eligibility code (code 1 if during the reference year the enterprise operated for at least 30 days in the case of perennial and casual enterprises and 15 days in the case of seasonal enterprises, and code 2 otherwise). Based on these details, unorganized manufacturing enterprises that were eligible for detailed survey (with eligibility code 1) could be identified and classified into own-account manufacturing enterprises, non-directory manufacturing establishments and directory manufacturing establishments, according to their broad manufacturing group.

5.117. Attention was devoted to the training of investigators and supervisors to ensure that the listing exercise would be done (a) without double-counting enterprises at more than one location and (b) with proper identification of the industry code of the listed enterprise.

5.118. For each sample PSU or segment three second-stage strata were formed for (a) directory manufacturing establishments, (b) non-directory manufacturing establishments and (c) own-account manufacturing enterprises by grouping all the eligible enterprises listed. At most 16 enterprises were selected and surveyed in each PSU. If the second-stage frame contained 16 or fewer such enterprises, all the available enterprises were surveyed. If the frame was found to contain more than 16 eligible unorganized manufacturing enterprises, however, 16 enterprises were selected using the systematic circular method with equal probability, after arranging the frame enterprises according to their broad manufacturing group, in such a way that eight directory manufacturing establishments, four non-directory manufacturing establishments and four own-account manufacturing enterprises were selected from the respective second-stage strata. Since fresh listing of all eligible enterprises for the survey was done in each selected PSU and a sample of enterprises for the collection of detailed data was selected from these lists, currently relevant and valid multipliers (or blowing-up factors) for use in the estimation procedure at the second stage were available from within the survey itself.

5.119. The enterprise schedule was canvassed in each sample enterprise selected for collecting basic information such as employment, fixed assets, borrowings, inputs, output and value added of the enterprise. The previous month was used as the reference period to collect most of the information. Information on receipts and expenses, employment, emoluments, rent, interest, net surplus and value added for the enterprises was collected for the previous month only. For some of the items (value of fixed assets, the amount of loans outstanding, etc.) the reference period was 'as on the date of survey'. For other items (net additions to fixed assets, number of months in operation, number of other economic activities taken up, etc.,) the reference period was the '365 days preceding the date of survey'.

5.120. The schedule (questionnaire) consisted of 17 blocks. Blocks 0 and 1 were for recording the identification particulars of the enterprise; Blocks 12 to 14 were for reporting particulars of the field operation, remarks by the investigator and comments by the supervisory officer(s). In Blocks 2 to 10 data were collected from the enterprises; Block 11 was for the recording of the investigator's perception about the reported net surplus information.

5.121. The information collected in Block 2 of the schedule concerned the characteristics that allow an unorganized manufacturing enterprise to be classified in the informal sector. These characteristics included:

- nature of the operation (perennial, seasonal, casual);
- type of ownership (proprietary male, proprietary female, partnership with members of the same household, partnership among members who are not all from the same household, cooperative society, private limited company, other);
- whether accounts are kept (yes or no);
- location of the enterprise (within household premises, outside household premise, with fixed premises and with permanent structure, with fixed premises and with temporary structure/kiosk/stall, with fixed premises but without any structure, mobile market, without fixed premises such as street vendors, etc.);
- registered under any act or authority (yes or no);
- if registered, agencies under which the enterprise is registered (maximum of three specified agencies);
- whether the enterprise undertakes any work on a contract basis (yes or no);
- if work on contract basis is undertaken, type of contract (working solely for enterprise/contractor, mainly on contract but also for other customers, mainly for customers but also on contract, solely for customers), equipment supplied (by the master unit/contractor, self-procured, both), raw materials supplied (by the master

unit/contractor, self-procured, both), design specified by contractor (yes or no);
- whether mixed activity (yes or no);
- number of other economic activities undertaken during previous 365 days, and
- number of months operated during the previous 365 days.

Information on contract work was useful to identify homeworkers.

5.122. Blocks 3, 3.1, 4 and 4.1 were the schedule's main blocks for recording operating expenses and the enterprise's various receipts. Blocks 3 and 4 recorded the principal expenses and receipts, while Blocks 3.1 and 4.1 recorded other expenses and receipts. The schedule was designed in such a way that the different types of receipts and expenses for mixed activity of enterprises could also be accommodated within the framework of Blocks 3 and 4. To meet these objectives, each of these two blocks was divided into two sub-blocks. The first sub-block was for recording the manufacturing activity and the second sub-block for recording other activities, if any, including the purchase or sale of goods without any transformation. Sub-blocks 3.1 and 4.1 were for all activities. For an enterprise that operated a mixed activity, both sub-blocks of Blocks 3 and 4 might have entries.

5.123. Operating expenses included: (a) value of raw materials consumed in the manufacturing activity; (b) value of commodities purchased or items consumed in trading and other activities, and (c) other overall expenses of the enterprise (electricity charges, value of fuel and lubricants consumed, value of raw materials for own construction of buildings, furniture and fixtures, including labour costs, rent payable on machinery and equipment, service charges for work done by other units, travelling, freight and transport expenses, communication expenses, value of consumable stores and packing materials, paper, printing and stationery expenses, local taxes payable, and any other expenses relating to the operation of the enterprise).

5.124. Receipts included (a) gross sale/market value of products and by-products manufactured; (b) value of change in stocks of semi-finished goods; (c) value of commodities sold and change in stocks of trading goods; (d) receipts from other activities; and (e) overall receipts (receipts from services provided to others including commission charges, market value of own construction of buildings, furniture and fixtures, value of consumption of goods/services produced or traded for own use of the owner and employees of the enterprise, rent receivable on plant and machinery and other fixed assets, funding and donations received, and other receipts).

5.125. Block 5 was kept for calculating the gross value added, i.e., the difference between total receipts and the sum of total expenditure and distribution expenses,

if any. The employment particulars of the enterprise were recorded in Block 6 by collecting information on the number of male and female full-time and part-time employed persons, such as a working owner, hired employees and other helpers. Blocks 7, 8 and 9 collected information on emoluments, fixed assets and the loan position of the enterprise, respectively. Factor income of the enterprise was recorded in Block 10 (Ministry of Statistics and Program Implementation, 2002).

India – Survey of unorganized enterprises in the service sector, 2001-2002

5.126. A survey on unorganized enterprises in the service sectors (covering hotels and restaurants, transport, storage and communication, real estate, renting and business activities, education, health and social work and other community, social and personal services) was conducted by India's NSSO during 2001-2002 using the economic census 1998 sampling frame. The survey was similar to the 2000-2001 survey on unorganized enterprises in manufacturing sector described above. The main aim of the survey of the service sectors was to estimate their size in terms of the total number of unorganized enterprises, employment, fixed assets, operating expenses, receipts, value added, loans, etc. Information on other attributes such as type of ownership, type of operation, number of months of operation, whether engaged in a mixed or multiple activity, whether accounts are maintained, etc., was also collected (see Appendix D7).

5.127. To estimate the contribution of unorganized sector enterprises to gross domestic product, the recommended method is to multiply the estimated labour input in each industry group by the corresponding gross value added per unit of labour input. The use of this method depends on the availability of reliable statistics on employment and gross value added per unit of labour input for all industry groups in the unorganized sector of the economy at regular intervals of time. In India the estimates of labour input obtained from unorganized sector enterprise surveys were felt to be understated owing to possible under-reporting of employment numbers in the enterprises by the enterprises' owners/employers. This conclusion was reached by comparing the estimates with the corresponding employment estimates derived from labour force surveys conducted by the NSSO in the 55th (1999-2000) and 61st (2004-05) rounds. The estimation of gross value added per unit of labour input is difficult because not all industrial groups in the economy are covered in the same year by the unorganized sector enterprise surveys conducted in India. For example, the trade group of enterprises was not covered in the 2000-01 and 2001-02 surveys of unorganized sector enterprises described above, because of the unsatisfactory experience of earlier surveys whose estimates of gross value added per unit of labour input were unusable. There is thus considerable scope for improving the data quality and timing of the unorganized sector enterprise surveys in India (Ministry of Statistics and Program Implementation, 2003).

Indonesia – Economic census, 2006

5.128. The Indonesian economic census is carried out by the Indonesia statistical institute *Badan Pusat Statistik* (BPS) every ten years. It is used as the basis for an establishment survey of the informal sector. It covered both economic units with legal status (formal/large and medium-scale establishments) and those without legal status (informal/small and micro-units). The census also collected information about output and input and the owners' opinions about their prospects and constraints.

5.129. The 2006 economic census was Indonesia's third. It excluded agriculture but covered all other units regardless of size and structure, including those with no fixed premises. The census was carried out in two phases: a listing activity, and a detailed enumeration of a sample of units.

5.130. The listing activity was carried out during the first quarter of 2007 and generated a description of the economic units by industry at each administrative level (sub-district, district, regency, municipality and province). For the listing operation, villages and census blocks were stratified. Villages were stratified according to the concentration of non-residential buildings in the 2000 population census, i.e., that were neither dwellings used purely for living or dwellings where some economic activity was carried out. Two strata were created: '*non-concentration*' villages, if the number of non-dwelling buildings in the village was below 150, and '*concentration*' villages, otherwise. Every stratum was differentiated into urban and rural area. Within villages, census blocks (or enumeration areas) were stratified into two groups according to the number of non-dwelling buildings in the block – '*concentration'* census blocks if the number of non-dwelling buildings the block was above a cut-off point established by the BPS, and '*non-concentration'* census block otherwise.

5.131. Two methods of enumeration were adopted according to the type of census block:

(a) The 'door to door' method was applied for all census blocks in the *'concentration'* villages or in *'concentration'* census blocks in *'non-concentration'* villages. In this way the enumerators visited all buildings to record the establishments and businesses that were located in and around them. Traditional businesses outside a building (like street vendors) were listed at their fixed locations, while mobile units such as vendors, taxi drivers, etc. going from place to place to conduct their economic activities were listed in their homes.

(b) The 'snowball' method was used for *'non-concentration'* census blocks in *'non-concentration'* villages and involved obtaining information on establishment units from a resource person (such as a chief or other person in a neighbourhood or administrative unit). It was the first time that this method

was used in a survey or census activity in Indonesia to reduce the cost of field work costs, and its success depended on the perseverance of the enumerators and on the choice of resource person as well as the on the accuracy of the information provided. The weakness of this method was the difficulty of capturing hidden economic activities, such as those carried out in dwellings.

5.132. The information collected in the census' establishment listing included (see Appendix D8):

(a) information on the establishment or enterprise: name, address, legal status, industrial sector and category of the main activity , operating time ; networks ;

(b) information on the workers: number of workers by sex, months worked, average days worked in a month, average hours worked per day;

(c) information on production: production, turnover, income.

5.133. The second phase of the census, which enumerated a sample of economic units, covered micro, small, medium and large establishments. It was carried out in 2007 and the first quarter of 2008. Establishments were grouped into two sets: medium and large establishments (around 200,000 units) and micro and small establishments (around 22.5 million units). All medium and large establishments were covered in the second phase, and around 5 per cent of all small and micro establishments were enumerated (around 1.2 million units).

5.134. The *sampling frame* used as the base for selecting the sample of micro and small establishments was the list of businesses/establishments by name, address and industrial sector or category, the number of workers, and the production/turnover/output derived from the listing phase. Before sample selection the units were stratified. Mobile units were stratified according to the kind of economic activity (whether carried out in an alley or corridor, whether it used a side-street vendor, mobile vendor and motorcycle transportation), the scale of the business (micro or small), and the industry and district/municipality concerned. Units with fixed premises were stratified by the scale of the business (micro or small), by industry and by district or municipality. The sample was allocated among 440 districts, regencies and municipalities based on the depth of coverage of the industry category. The sample size was decided at the BPS's headquarters for each sub-population target in every district, regency or municipality. Sample selection took place at the province office for each district, regency or municipality and the sub-population target was based on a predetermined sample size.

5.135. Three industry-specific questionnaires were used for micro and small establishments and dealt with: production (mining and quarrying, manufacturing industry, private electricity, private water supply and construction); distribution (wholesale and retail trade, preparing accommodation and food and beverages,

and transportation, warehousing, and communication); and services (financial intermediaries, real estate, leasing and business services, education services, health services and social activities, social services, cultural, entertainment and other individual services except labour, religious and political organizations,, and individual household services).

5.136. The data collected included information about the economic unit (place of Identification, general Information, specific Information), about workers and their payment, about production (general expenses during the previous month, specific expenses during the previous month, turnover and income during the previous month, percentage of production realized during the previous month, stock value, own capital at the end of previous month, changes in fixed assets, capital), and about the constraints and prospects of the business environment (BPS, 2008).

Mauritius – Census of economic activities, 2007-2009

5.137. The Central Statistics Office (CSO) conducted its fifth census of economic activities (CEA) in the islands of Mauritius and Rodrigues from January 2007 to April 2009, with 2007 as the reference year. The census covered non-agricultural establishments and was carried out in two phases. Phase I covered a sample of small production units employing fewer than ten persons and Phase II covered all other units. Phase I was carried out from January 2007 to December 2007 and Phase II from July 2008 to April 2009.

5.138. Phase I of the census excluded agricultural activities, domestic services and concealed and illicit activities. Agricultural activities were not covered because of the difference in methodology and measurement techniques used for collecting and compiling information on the agricultural sector as opposed to other sectors of the economy. Domestic services could not be appropriately covered by an establishment survey, and concealed and illicit activities were difficult to measure.

5.139. The unit of enquiry was a 'small establishment' or 'itinerant unit'. A small establishment was defined as a production unit engaging fewer than ten persons in one type (or predominantly one type) of activity at a fixed physical location. An itinerant unit referred to a mobile production unit that did not operate at a fixed location, such as hawkers and sellers at makeshift locations, taxi operators and units involved in construction activities.

5.140. The reference period was the calendar year 2007. However, to reduce respondents' workload, selected units were asked to provide data for a particular month during the year. The monthly data were then weighted and consolidated to arrive at annual estimates for the year 2007. In the Island of Mauritius data were collected every month, while in the Island of Rodrigues data collection was carried out during four months of the year, March, June, September and December.

5.141. A comprehensive list of small economic units (the sampling frame) was constructed from data available in the business register compiled by the CSO, supplemented by information from other administrative sources. The CSO's Central Business Register is based on licences issued by local authorities and lists of businesses registered with ministries and private organizations. The frame thus constructed comprised around 66,000 production units, of which 64,800 were in Mauritius and 1,200 in Rodrigues.

5.142. The sampling frame for the census was subdivided into 'activity groups' in which all units were engaged in more or less similar economic activities. The activity groups were based on the National Standard Industrial Classification of all Economic Activities (NSIC), which is a five-level hierarchical structure adapted from the ISIC, rev.3. The first step in the construction of strata was the classification of each unit in the frame into its appropriate sub-class; 305 sub-classes were represented by at least one production unit. Some of the 305 did not contain enough units to be taken as strata on their own, in which case two or more were merged into broader groups on the basis of their 'proximity'. The stratification process eventually resulted in 119 strata (activity groups).

5.143. It was decided to survey a sample of around 3,400 units, 3,100 in Mauritius and 300 in Rodrigues. The analysis of data collected in the 2002 census showed that estimates of value added in some activity groups varied considerably. On the assumption that the cost of surveying a production unit was the same in all activity groups, the overall sample was accordingly allocated to the strata according to the 'Neyman allocation' (or optimum allocation) formula at fixed cost (see Cochran, 1997, p.97), which considers both the size of the strata and the heterogeneity of units within them in allocating the sample. Hence, more units were selected from activity groups with a larger variance and relatively fewer units from activity groups with a smaller variance.

5.144. In the Island of Mauritius the selection of units within a stratum (a specific activity group) was effected using the systematic circular method. The final sample for Mauritius comprised 3,113 units, which were then spread evenly over the 12 calendar months of 2007, while ensuring representativeness.

5.145. In the Island of Rodrigues the same methodology was used and the final sample size was 312 units. However, due to the smaller sample size retained for Rodrigues, the total sample was allocated to the four quarters of the year instead of each of the twelve months.

5.146. The first phase of the CEA 2007 necessitated the use of five field documents to collect the required information from the selected establishments:

(a) In order to capture the dynamism of the units in the sampling frame and to provide additional information for the computation of analytical weights ('expansion factors') for estimation purposes, an *identification schedule*

requesting information on any changes in ownership, activity and operation status was completed for each unit sampled by the interviewers.

(b) A *diary* was used as the base document for data collection. This was given to each respondent to record the daily transactions of the production units during the reference month. The diary was necessary because most small production units did not keep adequate records to complete the survey questionnaire.

(c) *Three activity-specific questionnaires* were used to collect information about output, input, value added, etc. on construction (CEAS 2), transport (CEAS3) and all other activities (CEAS1) (see Appendix D9).

5.147. CEAS 1, 2 and 3 covered: (a) the characteristics of production units, (b) employment, hours of work and labour costs, (c) consumption of materials, fuel and services, (d) other payments (taxes, rates, insurance, interest, etc.), (e) services related to information and communication technology, (f) output, (g) other receipts (interest, insurance claims, dividends, etc.), and (h) addition to fixed assets.

5.148. Some three weeks before the survey month, the interviewers were provided with a list of production units that they had to identify in the field. For each unit they had to fill in an identification schedule, whether they were able to locate it or not. During this stage of the data collection exercise information was gathered on whether the establishments could be located or not, whether they had changed owner, activity or address and whether they were operational. This screening exercise was essential, especially for adjusting the analytical weights (expansion factors) to be used for estimating the statistics from the survey observations. Any change in activity was reported to the supervisor so that appropriate action could be taken to replace the unit by the next one in the same activity group (stratum), while maintaining the sample ratios.

5.149. The recording of units' economic transactions in the diary started on the first day of the reference month. The owners or managers of the selected production units were requested to keep daily records of all expenditure and receipts relating to their production activities for a particular survey month in diaries provided to them. Interviewers visited the units at least twice a week to ensure that the records were being properly kept.

5.150. At the end of each week interviewers had to summarise the daily records kept by the respondents, check for any inconsistencies, missing data or misreporting, and ensure that corrective action was taken. At the end of the survey month, the weekly summaries were consolidated and transferred to the respective questionnaires.

5.151. Estimates were made of variables for the 'population of small units' at the stratum level by 'blowing up' the sample figures by a factor equal to the estimated

total number of units in the stratum divided by the number of units selected from the stratum. The number of units in each stratum was first updated to the 2007 level. A first estimate of the number of small production units operating in 2007 for a given stratum was then calculated by applying the growth rate of licences between 2002 and 2007 to the total number of production units in the stratum, as estimated in the 2002 census of economic activities. This was repeated for all strata. Where it was found that licence holders were not operating for one reason or another, these initial estimates were adjusted on the basis of information collected during the identification phase of the survey. Further refinements were made using information from administrative sources if they provided more reliable data on the number of units currently operating (Central Statistics Office, 2007).

Mexico – Economic census, 2009

5.152. Mexico's National Institute of Statistics and Geography (INEGI) is responsible for conducting economic censuses at five-yearly intervals. The latest census was for the year 2009 and covered non-agricultural establishments, and in some cases enterprises. For manufacturing, commercial activities and services, the census included all establishments in urban areas, all large establishments in rural areas, and a random sample of smaller establishments in rural areas. For the other sectors (fishing, mining, electricity and water, building, transportation and financial services) all establishments were covered, even if they were located outside the urban areas. The census included fixed, partly fixed and household-based establishments, but excluded informal trade and own-account persons working without fixed premises.

5.153. The reference period was 1 January to 31 December 2008.

5.154. In 2008, before the census itself started, every large establishment was visited to verify its name, address, economic activity, a person who could answer the questionnaires and the means of returning the questionnaires (via Internet, on paper, in Excel format) and to provide general information. A draft version of the questionnaire was delivered to each establishment at that time, to allow them to prepare their replies in advance. From the information collected a directory was prepared listing all the large establishments. The same was done for special sectors, such as construction and transportation, and the result was included in another special directory. A third directory was prepared for the fishing and mining sectors.

5.155. The census field work took place in 2009, when five groups were created to collect data for different types of unit, as follows:

(a) The *PYME*S *Group*, for medium and small establishments, conducted a census of all buildings in all urban centres (covering 2500 or more people) and in a sample of rural areas, from 1 March to 15 May 2009. Interviewers went from

block to block, knocking on every door they found. They used a single type of questionnaire for all establishments found in the urban zone, except those that belonged to the SEG group. This questionnaire was used for all households where there was some form of economic activity.

(b) The *SEG Group*, for large establishments, collected information from all economic units in the large establishment directory prepared in 2008. They also collected information about establishments not originally included in the 2008 directory that were transferred to it from the PYMES Group because of their size.

(c) The *TC Group,* for transport and construction units, collected information on all economic units in the relevant directory that was prepared in 2008. They also collected information on establishments not originally included in the directory which were transferred to it from the PYMES Group because of their transport or construction activity.

(d) The *PM Group,* for fishing and mining units, collected information from all economic units with fishing, mining or water transport as the main activities, again using the directory prepared in 2008 and transferring relevant establishments from the PYMES Group. In the case of fishing units other strategies covering all *arrival points* of boats and fishermen all along Mexico's seaboard were used to complete the original directory.

(e) The *Central Office*s *Group* collected information on specific institutions and enterprises that were so large or complex that the decentralized offices could not assume responsibility for collecting their data (the electrical industry and financial institutions, for example). INEGI's head office was responsible for the economic census as a whole.

5.156. A set of 29 industry-specific questionnaires were used to collect detailed information on the date the economic unit started operating, days worked, employment, wages, expenditure, income, investment, assets, inventories, innovation and research, products and raw materials, type of operation, legal status, foreign capital, etc. (INEGI, 2009). The basic questionnaire is reproduced in Appendix D10.

Panama – Censuses on manufacturing, trade and services, 1983

5.157. Panama undertook national economic censuses on manufacturing, trade and services in 1983. In these censuses establishments were grouped into those with five or more employees and those with fewer than five, and different questionnaires were designed for each category. The questionnaire for smaller manufacturing units, contained questions under the following headings: location, legal status (one person or partnership), persons employed and remuneration (excluding outworkers), installed power capacity, fixed assets, stocks, purchases

and other costs, purchase of fuel and lubricants, general expenses, production and sales, capital, and profit or loss. The questionnaire on services and trade was more modest and contained questions on persons employed, salaries paid, value of sales and purchases, changes in stocks, general expenses and profit or loss. These censuses were complemented by annual surveys on establishments employing five or more persons.

Tunisia – National survey of economic activities, 2007

5.158. To study the structural changes occurring in Tunisia's economic sectors regularly, the National Statistical Institute (INS) conducted an establishment census in 1976 at the urban level and another in 1981 at the national level, which served as a basis for the sampling frame of the first national survey of economic activities (NSEA) conducted in 1981-82. Thereafter, the INS constructed a national register of establishments that is continuously updated. The register serves to select list-based samples of establishments for a survey of small establishments that the INS has been conducting every five years since 1997 in parallel with a survey covering almost all formal sector establishments. Since that date all sectors, all establishments of every size and all industry groups have been surveyed.

5.159. The main objective of the NSEA of small establishments was to produce income and expenditure accounts for small establishments in the informal sector. The questionnaire used therefore sought to gather the main accounting elements necessary for this exercise in a simplified and consistent manner. A second objective of the survey was to collect detailed information on the workforce, its characteristics, training level, working conditions and the level of income from work for both the employees and employers. A third objective was to determine the characteristics of small establishments and small entrepreneurs in the informal sector (age, sex, training, etc.) and to compute value added, investment, etc. To understand the activities and conditions of small establishments and formulate better supporting policies, it was essential to know the strengths as well as the weaknesses of this important sector of the Tunisian economy.

5.160. The 2007 NSEA of small establishments covered all economic activities except agriculture, livestock raising, forestry and fishing, administration and extra-territorial organizations, production and supply of electricity and water, professional organizations and research and development activities. The survey covered both urban and rural areas.

5.161. The survey was restricted to establishments with fewer than six employees, while establishments with six or more were asked to respond to questionnaires designed for formal sector establishments with a complete set of accounts.

5.162. The sampling frame for the NSEA is the national register of all establishments, small and large. On 31 December 2007 the INS register comprised 525,960 establishments classified by detailed industry group, ownership, employment size, legal status and whether or not they were registered for value added tax. It also contained information on the date when the establishments started operating, the way they were taxed (lump sum/actual) and their employment history.

5.163. Some 503,500 units constituted the frame from which units were sampled according to their activity, legal status, size and geographical location, thus ensuring a good representation of the main industry groups, including those operating at the regional level.

5.164. A sample of 14,436 establishments with fewer than six employees (almost 3 per cent of the total) was selected. The sampling fraction differed from one stratum to another, according to industry and size. The survey covered 459 industry groups, based on Tunisia's four-digit classification of activities, the 'Nomenclature d'Activités Tunisienne (NAT)', and four size groups (own-account, no employees, one or two employees, three to five employees). Thus, when the number of establishments in the strata was high for industry group and size the sampling fraction was low, while when the number was low the sampling fraction was high; in some cases the whole stratum was selected. The survey also included establishments with undefined activities that were determined during the survey. The 'Own-account' category in the register included establishments whose size was unknown, and the 'No employees' category consisted of establishments listed in the social security institution's register of employers but no longer employing anyone.

5.165. The questionnaire (see Appendix D11) comprised seven modules or sections:

(a) Section A, 'Identification', covered the name and address of the establishment, its legal status and the place where the activity was carried out.

(b) Section B, 'Characteristics of the establishment', specified the main and secondary activities, as well as the type of accounts held.

(c) Section C, 'Employment and wages', recorded the demographic characteristics (sex and age), education and training, employment status and skills, remuneration in cash and in kind (net income) for each person working in the establishment (including the employer). Information on social security contributions and hours of work were collected at the establishment level. Casual and seasonal employment was also covered, as well as outworkers and subcontracted work.

(d) Section D, 'Production and purchases', comprised sub-sections for: industrial and artisanal activities, trade activities and services activities. Data were collected on the type of goods and services produced, with the corresponding quantities and values for a specified period; similar data were collected for purchases. For trade, data were collected on the value of goods sold, stock replacement and profit margins. Finally, qualitative information on the monthly rate of production was collected to seasonally adjust the monthly estimates.

(e) Section E, 'Miscellaneous expenses', included payments for various fixed and variable charges and taxes.

(f) Section F, 'Equipment and investment', covered all investments over the previous 12 months and the sources of financing.

(g) Section G included questions on the economic situation of establishments to determine whether they were export-oriented.

5.166. The questionnaire also included a summary sheet for the supervisor to compute simplified production accounts and work out the operating surplus of the establishment, in order to decide whether further information was required.

5.167. Sampling rates changed because of new information that was received on the establishments during the survey, and because of the number of non-respondents.

5.168. Because of the way the sampling frame was constructed, some establishments with a complete set of accounts were included in the sample of informal sector units. The 'formal sector' questionnaire was submitted to the 418 establishments concerned.

5.169. The final sample comprised 8,172 establishments – a sample of only 1.6 per cent owing to the high non-response rate of 43.4 per cent compared to 41.3 per cent in 1997. There were several reasons for this non-response rate: closures accounted for 23.1 per cent of non-respondents and failure to locate the establishment for another 12.6 per cent. The number of closures was inversely proportional to the size of establishments, which points to the instability of the very small informal household businesses. Conversely, the refusal rate increased with the size of the establishments, which was in line with what was observed on the field. The overall non-response rate was particularly high among establishments with 3-5 employees (42.7 per cent).

5.170. For estimation purposes, each responding establishment was allocated an expansion factor which, by definition, was equal to the reciprocal of the sampling fraction. However, the final sampling rates were significantly different from the rates fixed at the sample design stage, owing to the large number of

non-respondents. At the end of the survey the establishments sampled were placed in two groups: responding establishments with completed questionnaires, and non-respondents.

5.171. Most instances of non-response were attributable to closures and failure to locate establishments at the address indicated. Thus, as noted above, only 8,172 responses were obtained out of 14,436 units initially selected. Among the respondents, 1,028 were found to have a complete set of accounts and received a corresponding questionnaire. These establishments, accounting for an estimated population of 26,742 units, were excluded from the category of small establishments because they did not correspond to the international definition of the informal sector, which excludes units with a complete set of accounts. The number of small establishments without a complete set of accounts was therefore estimated at 325,249.

5.172. Weighting was based on the population falling within the scope of the survey. Subsequently, in line with the national accounts, the results of the NSEA could be used to estimate the number of informal units not covered by the survey; differences with the 2007 employment survey findings and with registration statistics could be attributed to the number of informal sector units that were not located (outworkers, itinerant workers),as well as to some 'non- reported' employment in the formal sector.

5.173. The survey covered establishments which, by definition, did not have a complete set of accounts, or which kept only simple accounts. Since the objective of the survey was to reconcile production accounts and 'income and expenditure' accounts (production, intermediate consumption, charges, value added, wage bill, gross operating surplus), it was important that the questionnaires collect detailed information that could be used for adjustments where necessary. When inconsistencies appeared in the accounts (for example, when the gross operating surplus or the mixed income of the self-employed was negative or lower than the wages paid, without any indication or mention that the establishment was having financial problems), then it was necessary to study the detailed information in the questionnaire more closely and make the necessary adjustments.

5.174. When the operating surplus or the employer's annual income was lower than 3,000 dinars (i.e., lower than the 2007minimum wage, which was 3,000 dinars per year) and this figure could not be explained by the establishment's closure or its being dormant for some months of the year, then the ratio of value added to gross output of other establishments within the same industry group was applied to the production value of the establishment, so as to come up with a more reasonable value added (INS, 2009).

Chapter 6.
Mixed surveys

Introduction

6.1. Mixed surveys measuring the informal sector refer to surveys that are carried out in two phases. During the *first phase* information is obtained from households about the activity of individuals in order to identify informal sector entrepreneurs. Each informal sector entrepreneur is part of the sample frame for the second phase, from which a sample is selected. In the *second phase* the sample of informal sector entrepreneurs is questioned about the informal economic unit he or she is responsible for (production, value added, investment, financing, major difficulties encountered in developing the business, training received or given to employees, assistance received from government, etc.). Questions may also be asked on other workers in the economic unit (paid employees, contributing family workers) and on the entrepreneurs' household members.

6.2. The principle underlying mixed surveys is that informal economic units are identified more easily through the jobs of the owners of informal sector units than through the premises where the informal sector activity is carried out, which is the approach used in establishment surveys.

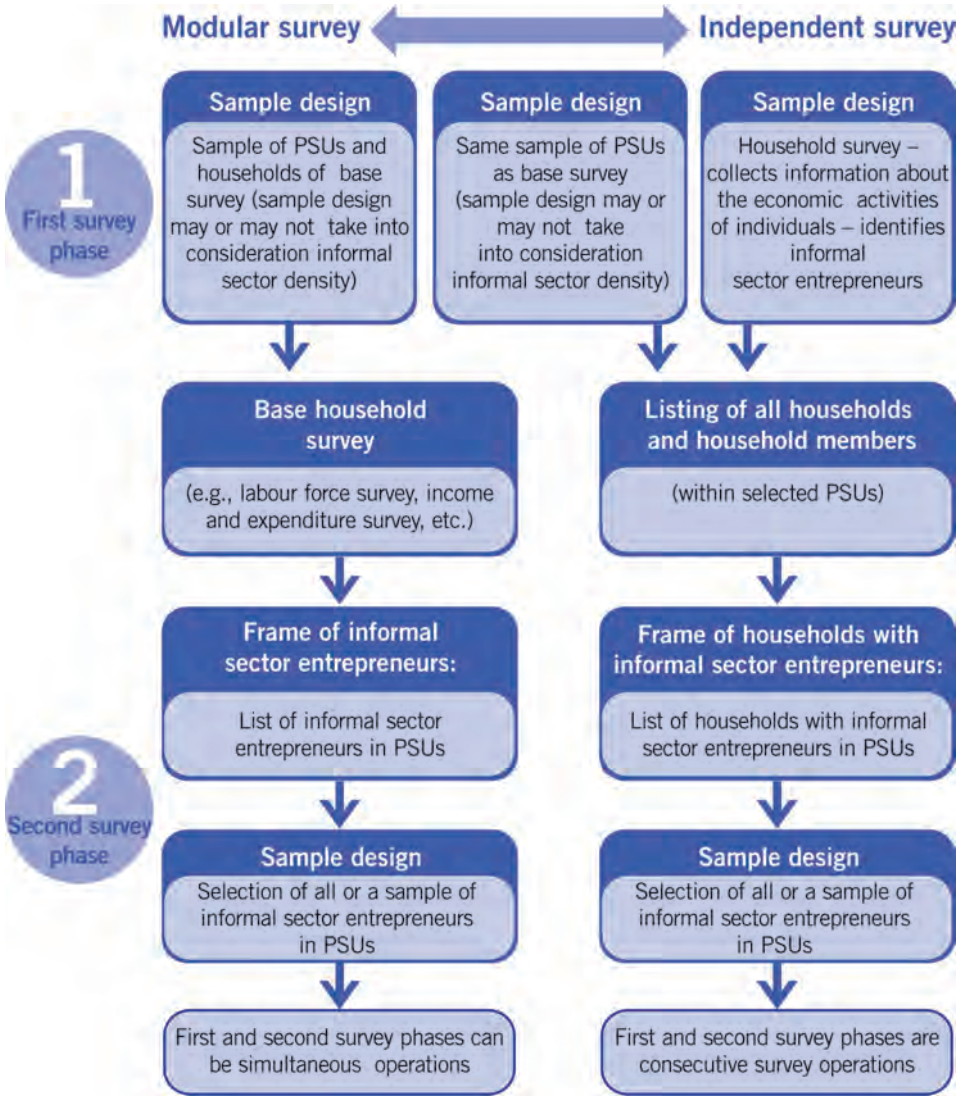
6.3. Mixed surveys were developed during the 1980s to try to overcome the lack of informal sector coverage in conventional list-based establishment surveys. Unless an establishment census makes special provision to cover household-based and mobile activities – for example by being conducted together with a population census – it will not have a complete coverage of the relevant population. In addition, given the high birth and closure rate of informal economic units, updating list-based registers of establishments to draw representative samples of the informal sector is not possible. That is why most establishment surveys based on list samples drawn from incomplete establishment census frames have produced incomplete estimates of the informal sector. This means that the total number of units is underestimated, as small economic units tend to be excluded from the list frame. Consequently, the economic performance of the informal sector tends to be overestimated, since the larger informal economic units with fixed premises usually perform better than those operating within dwellings or without fixed premises. Area-based establishment surveys do not have these drawbacks, and they are therefore preferred to list-based surveys (see paragraph 5.22).

6.4. Many features of the first phase in a mixed survey design are the same as in a typical household survey. As in a household survey, the first phase of a mixed survey of the informal sector deals with a population of numerous small units (households) for which there is not normally an updated register. It is therefore necessary to use area sampling of households. Area units of households are more stable, and existing frames do not need to be continuously updated to be useful tools. On the other hand, the ultimate sampling units (households) are much less stable, and it is necessary to prepare new or use very recent lists for the last stage of selection. In most cases, at least in developing countries, information has to be collected by face-to-face interviewing.

6.5. Despite their basic similarities, the sample design of the first phase in a mixed survey cannot be the same as in a general household survey with a labour force component, because the informal sector units and their characteristics are more unevenly distributed in space and less stable than those of households. To be reasonably efficient, the sample must take into consideration the patterns of concentration of various kinds of informal economic activity and the operational characteristics, such as size and type of premises. These factors increase the complexity of the design. As far as possible, therefore, complex design issues should be addressed during the initial sampling stage to limit the burden on field workers when they are conducting the interviews.

6.6. In this manual two types of mixed survey are distinguished: *mixed modular surveys* and *mixed independent surveys*. The main difference between the two is in the way in which informal sector entrepreneurs are identified in the first phase: mixed modular surveys use an existing household survey (called 'base' survey) while mixed independent surveys carry out a detailed independent listing operation of all households in selected areas. Other differences have to do with sampling design. Figure 6.1 provides a visual overview of the key differences between the two types of mixed survey.

Figure 6.1.
Design characteristics of mixed household and enterprise surveys of the informal sector



6.7 This chapter explains the rationale and generic design of mixed surveys, with both their strong points and their shortcomings, rather than to describing the mixed survey approach in every detail. By means of illustrative examples from national experiences, it presents a comprehensive picture of the statistical properties of these surveys and compares them to alternatives. The chapter is organized as follows: two sections present the main principles of mixed modular surveys and mixed independent surveys; the following section deals with survey planning and design issues; and the last section describes both types of mixed survey as carried out by countries.

6.8. Mixed surveys follow a similar design as area-based establishment surveys, which cover home-based and mobile activities and were discussed in Chapter 5. The main differences are:

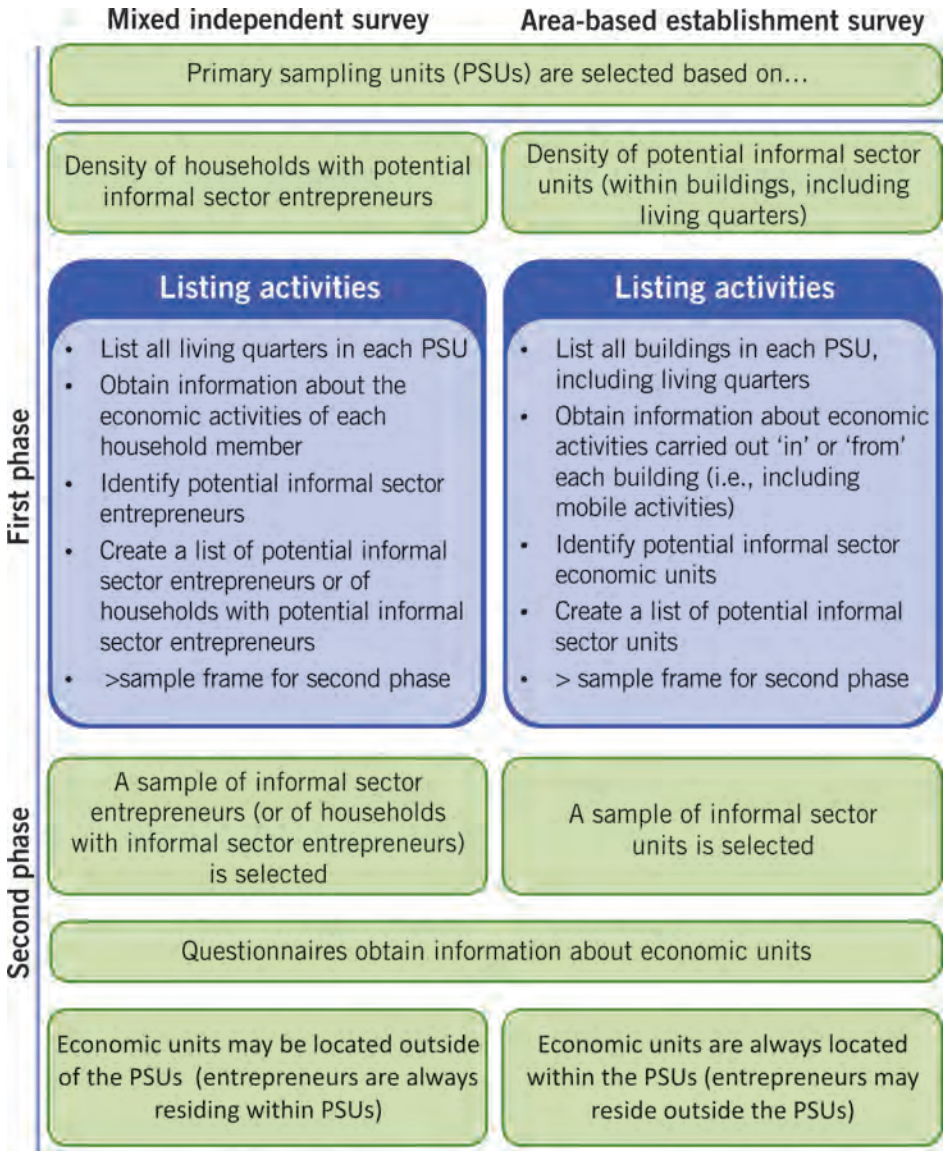
(a) The first phase of a mixed survey comprises either a full *household survey* for a sample of households within PSUs (mixed modular survey) or a listing of all *households* within PSUs (mixed independent survey); by contrast, an area-based establishment survey lists *buildings*, including living quarters, where economic activities are carried out in selected PSUs.

(b) Mixed surveys identify informal sector entrepreneurs or households with informal sector entrepreneurs, while area-based establishment surveys identify informal sector economic units.

(c) In mixed surveys the informal sector entrepreneurs always reside within the PSU, even though their informal sector units may be located outside the PSUs; in area-based establishment surveys the informal sector unit is always located within the PSU, but the informal sector entrepreneurs may reside elsewhere (see Figure 6.2 below).

(d) In addition, the surveys may differ in scope if the mixed surveys target informal sector units only, as area-based establishment surveys generally extend to all economic units not covered by list-based establishment surveys, of which the informal sector units are a subset. On the other hand, mixed surveys that use dual frames (see paragraphs 6.72 to 6.82) are virtually the same as area-based establishment surveys.

Figure 6.2.
Design differences between mixed independent surveys and area-based establishment surveys

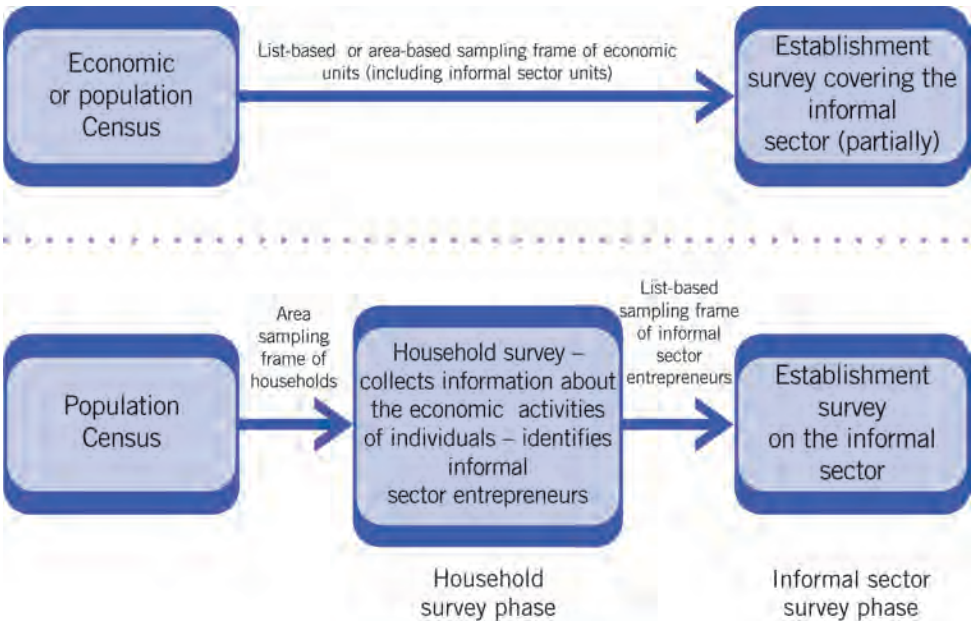


Mixed modular informal sector surveys

6.9. In a mixed modular survey the first phase consists of an existing household survey that has a labour force component (e.g., a labour force survey). The objective of this 'base' survey is to document and analyse the general labour market situation. By incorporating

relevant questions aimed at identifying own-account workers and employers who satisfy the criteria for classification in the informal sector (size of economic unit, bookkeeping practices, registration, etc.), the 'base' survey can be used as a filter to identify potential informal sector entrepreneurs. All or a random sample of them can be selected for the informal sector survey, known as the 'second phase' (see Figure 6.3). If the 'base' household survey relies on proxy responses, flexible criteria are recommended to identify an ample set of potential informal sector entrepreneurs. A more precise definition of the informal sector can be achieved using information collected in the second phase of the survey, which is generally obtained directly from informal sector entrepreneurs.

Figure 6.3.
Alternative sampling strategies for measuring the informal sector



Source: Roubaud and Séruzier 1991.

6.10. After selecting the enumeration areas (PSUs) and listing all households in them, the household survey phase is applied to a random sample of households. The household survey phase here is by definition a proper survey, from which statistics of interest may be obtained. In this sense the first phase of a mixed modular survey has the characteristics of a conventional household survey with an employment component, and the second phase has many of the characteristics of an establishment survey covering the informal sector. Mixed modular surveys, however, are more comprehensive than either, as they combine both approaches.

6.11. Mixed modular informal sector surveys involve the following steps:

(a) selection of areas of households (EAs) as primary sampling units (PSUs);

(b) simple listing of all households in the sample areas;

(c) selection of a random sample of households within each PSU;

(d) submission of a questionnaire to each household member to obtain information on its demographic and work characteristics;

(e) identification of owners of potential informal sector units;

(f) construction of a list of owners of potential informal sector units for each PSU (sample frame for the second phase of the mixed survey);

(g) selection of a sample of owners of informal sector enterprises; and

(h) submission of a questionnaire to each owner of an informal sector enterprise to obtain information about their economic unit, the workers engaged in their unit and/or their families.

Choice of 'base' survey

6.12. Any type of household survey covering employment or sources of labour income can be used as the household survey phase of a mixed modular survey. A labour force survey, understood as a household survey using regular, internationally standardized concepts and methods covering the labour market in general and the population's working conditions in particular, is the best choice, provided that the sample design and the questionnaire is adapted to the objective of measuring the informal sector. Labour force surveys can also provide good estimates of informal employment.

6.13. In most countries the LFS is the main tool for regular statistics on household economic activities. The LFS is both the most widespread type of household survey and the one on which there has been the most work on harmonizing concepts and methodologies of measurement in order to provide good quality national statistics and facilitate international comparisons (ILO, 1990). Moreover, because labour is central to economic policy, employment and its characteristics are important in all countries, as the vast majority of the population, and especially the most disadvantaged, obtain their income through their own work or that of the members of their households. Statistics from an LFS are important in improving the operation of the labour market and access to jobs. Finally, the LFS usually has a large sample and a short questionnaire and is therefore an ideal basis for producing operational stratifications of households that are relevant to various lines of questioning. This facilitates the addition of survey modules on particular subjects.

6.14. Given the limited resources (financial as well as human) that are available for statistics in most countries, an advantage of linking a mixed survey to an LFS programme is that it helps to build up the time series that are needed to describe and analyse changes over time.

6.15. However, a labour force survey is not the only possibility. Provided that the samples are sufficiently large and properly distributed, the World Bank's Living Standards Measurement Study (LSMS) surveys and income and expenditure surveys can both provide a sample frame of entrepreneurs for the informal sector survey phase. Another possibility is to attach a specific module to any representative household survey that does not have a labour force component (migration surveys, victimization surveys, etc.). In some countries where such surveys are planned, the costs of attaching such an informal sector and employment module may be marginal, and the analytic advantages of combining the information collected in the informal module with that collected in the main survey may be considerable. Nevertheless, there is a risk of overloading and 'contaminating' the original survey, though the risk is probably less for an LFS than for other types of survey.

Link between workers, jobs and economic units

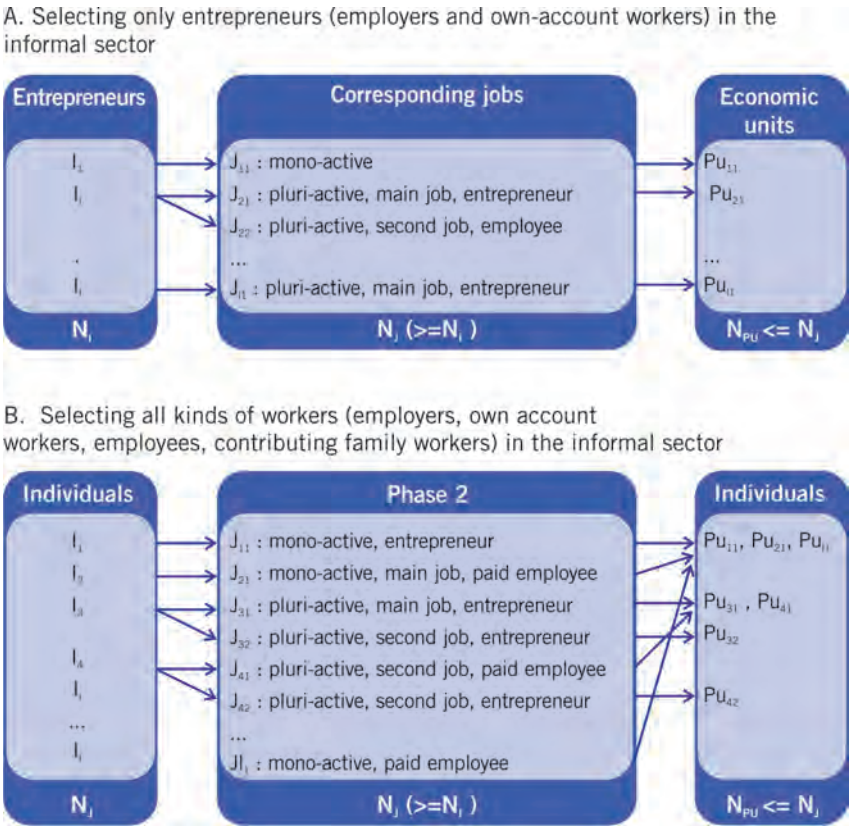
6.16. Once the 'base survey' is selected, the next challenge is to build the relevant population of individuals, jobs and economic units. The objective is to identify economic units through the identification and description of jobs, which play the role of an intermediation unit. This is done by identifying owners of informal sector units and, from them, obtaining information about these units. This strategy relies on two assumptions. The first is that a representative sample of informal entrepreneurs can be drawn from the household sample of the base survey. The second is that a direct relation can be established between the informal unit's owner (identified in the household survey) and the economic unit (to be surveyed in the informal sector survey).

6.17. The first assumption will be met if the sample of households is representative of the whole population and if the questionnaire can identify all persons employed in the informal sector, particularly all owners of informal units. As many informal sector activities are carried out as secondary activities, information about the informal sector needs to be sought for both the main and the secondary jobs.

6.18. The second assumption is best met when only employers and own-account workers in the informal sector are selected for the second stage, as there is a 'quasi' equivalence between economic units and their holders. Figure 6.4 illustrates this scenario under option A. Each entrepreneur will be associated with one enterprise. The only violation of this condition arises when two or more partners own the same economic unit, even if such a situation is not common in the informal sector. Economic units owned by more than one person have a higher probability of being selected than economic units owned by only one person. To deal with this problem, information on the number of partners is needed, which can be obtained either in the household survey phase or in the informal sector survey phase. Household surveys

usually do not collect the relevant information, however, and when they do it may be based on proxy responses. As the reliability of proxy information tends to be poor, it is better to obtain co-ownership information in the second phase. With the information on the number of partners, adjustments can be made to the initial probability of inclusion of the partners' informal units proportionally to the number of partners.

Figure 6.4.
Building the implicit population of individuals, jobs and economic units



Source: adapted from Roubaud and Séruzier, 1991.

6.19. A more complex option to satisfy this assumption is to select for the second phase all workers in the informal sector, whether employees, contributing family workers or entrepreneurs. This is illustrated in Figure 6.4 under case B. As can be seen, more than one worker will be associated with the same enterprise, This option has never been adopted in mixed modular surveys and is not recommended in this manual, however. The main reason is that it violates the second assumption of a one-to-one relationship between entrepreneurs and their units since, when the economic unit employs more than one person, holders of different jobs can lead to the same economic unit, and in practice, therefore, the probability of inclusion is

proportional to the unit's size. Even if this option is feasible in theory, it is not recommended. Firstly, estimations are more complicated than for the first option. Secondly, employees may have some difficulty in providing reliable information about the informal status of their enterprise (whether defined by its size or by its legal status). This strategy can also raise ethical issues, as informal sector entrepreneurs may not appreciate having been selected on the basis of information provided by one of the employees and the employee, if known, may lose his/her job as a consequence. Only if there is an insufficient number of informal employers and own-account workers in the household sample may the strategy of identifying informal sector units on the basis of information from employees be used. Then the distribution of various indicators on the establishment (size, kind of economic activity, legal status as stated by the employee) should be compared at least once with those obtained from the owners of such units.

Sample design

6.20. The only way to guarantee good estimates of the informal sector is if the sample of households is designed to take into account known characteristics of the informal sector activities carried out by its members. Otherwise, despite the consistent and unbiased estimates that household surveys are able to provide, the household sample may not identify enough informal sector entrepreneurs or result in a representative sample of informal sector entrepreneurs for activities that are marginal or geographically concentrated. (Both formal and informal activities other than commerce and services are in many countries traditionally clustered in specific locations.) A standard household survey sample may be too small to produce good estimates for the informal sector survey phase or to achieve the desired level of disaggregation by industry or geographical zone.

6.21. Two strategies can be adopted and combined. The first consists of increasing the sample size for the household survey phase. A possible ratio for calculating the necessary increase is the number of entrepreneurs per household, estimated from a previous survey. This may serve as a proxy for the approximate number of informal units per household.

6.22. The second and preferred strategy is to stratify the sample on the basis of existing information about the nature and location of informal sector entrepreneurs. When selecting primary sampling units (PSUs), usually enumeration areas (EAs), it is recommended that available information on the density of informal entrepreneurs in households be taken into account in order to ensure that high-density areas are over-represented in the sample. This improves the precision of the estimates and reduces survey costs, as it may be possible to have a smaller total sample and fewer non-relevant interviews. The information required for such stratification may be from previous household surveys or censuses, prior reconnaissance work or local informants.

6.23. This sampling requirement may not be as easy to achieve in mixed modular surveys as in mixed independent surveys. The labour force survey sample is normally designed to optimize the estimation of the unemployment rate. This makes sense in developed countries, but it may not be as relevant in developing countries. Available evidence suggests that open unemployment is not a relevant indicator for capturing labour market patterns in the least developed countries, while informal sector and employment indicators may well be. This fact should be taken into account and labour force survey sample frames adapted accordingly, especially as the two objectives are not mutually exclusive.

6.24. For the informal sector survey phase the use of the largest possible sample will improve the precision of estimates. The size of the sample is constrained by the total number of informal units identified during the household survey phase. The best theoretical sampling design for the informal sector survey phase is therefore to include all informal entrepreneurs identified in the household survey phase. This sampling design also has the advantage of greatly simplifying the calculation of estimates, variance and confidence intervals, as the probability of inclusion of informal units at the last stage is equal to 1. If a subsample of informal entrepreneurs has to be selected, the sample frame should be stratified using information collected during the household survey phase. The most common criteria for stratification are: kind of economic activity (industry), status in employment (employer, own-account workers), main or secondary job for the entrepreneur, sex of the entrepreneur, type of premises and income earned. The stratification procedure should be based on characteristics of jobs that are strongly correlated with characteristics of the informal units.

6.25. Finally, when estimating results of an informal sector survey, total or partial non-response should be taken into account, for example, by recalculating weights to adjust for measurement errors during the household survey phase as well as for attrition between phases.

Mixed independent informal sector surveys

6.26. Mixed independent informal sector surveys are based on a multi-stage design involving the following steps:

(a) selection of areas of households (e.g., EAs) as primary sampling units (PSUs);

(b) detailed listing of all households and household members in the sample areas, to obtain information on their demographic and work characteristics;

(c) identification of households with owners of potential informal sector units;

(d) construction of a list of owners of potential informal sector units, or of households with owners of potential informal sector units, for each PSU (sample frame for the second phase of the mixed survey);

(e) selection of a sample of households with owners of informal sector enterprises (or small enterprises, household unincorporated enterprises with at least some market production, etc.) as ultimate sampling units; and

(f) submitting a questionnaire to the sample of owners to obtain information on their economic units.

Sample of PSU (first survey phase)

6.27. A mixed independent survey can use PSUs that are independently selected or PSUs that have been used in an existing 'base' survey. When PSUs are independently selected, the survey should strive for a sample design that shares commonalities with existing household surveys in the country but differs in the type of stratification applied to the sample, as well as in the size of the area units. Even when a base survey is used, an effort must be made to incorporate the density of informal activity in the survey design.

6.28. A major feature of a mixed independent survey is therefore that the sample of primary sampling units (PSUs) can be designed and selected specifically to meet the measurement requirements. For example, reliable statistics may be required for the most important kinds of economic activity or to support analysis of the differences in the income-generating potential, constraints and other characteristics of the various informal sector segments. The sample design can take into account the fact that, in some areas, households with informal sector entrepreneurs carrying out certain kinds of economic activity (such as transport, repair and other services) are likely to be less well represented than households with informal sector entrepreneurs carrying out other activities (such as trade, sale of cooked food), and that households with informal sector entrepreneurs that carry out some activities (such as certain types of manufacturing or trade) tend to be concentrated in specific areas. To ensure adequate representation of all such households in the sample and to reduce any clustering effect, it is important to include in the first stage sample a sufficient number of PSUs with enough concentration of households with informal sector entrepreneurs carrying out 'uncommon' kinds of economic activity.

6.29. However, because of the cost involved, not all countries may be in a position to select a completely independent sample of PSUs. Some are able only to use the same sample of PSUs from a master sample that is used for the regular household survey, or to make minor adjustments to an existing sample – as was done in Turkey where an adjacent PSU was added to each PSU in the household survey sample.

Sampling frame

6.30. For the first phase an area sampling frame of households is used which consists of EAs of appropriate size, stratified according to an estimate of the density of households with informal sector entrepreneurs in these areas and, if

possible, by different kinds of economic activity and other criteria such as size, type of workplace, etc.

6.31. The sampling frame for a mixed survey needs to provide information that is useful for stratification purposes, and specifically on the number and distribution of households with (potential) informal sector entrepreneurs by broad kind of economic activity. Such information can also include the number of own-account workers and employers in units of less than a certain number of workers, as well as other relevant characteristics (income, registration, etc.). The sampling frame needs to ensure good coverage of households with informal sector units (a requirement that is less important for general household surveys) to make it possible to estimate the total number of informal sector units, employment, output, etc. External information to adjust ratios and distributions is usually not available to estimate these totals, although they may well be for population-based surveys. An important consequence of this requirement is that clarity in the boundary of the area units (natural divisions, accurate maps, stability) is much more important than uniformity in the size of the PSUs. Uniformity in population size, on the other hand, is less important because the number of units of interest – namely, informal sector entrepreneurs of different types in various kinds of economic activity – is not necessarily closely related to the population size of the area.

6.32. Typically, the main source for the sample frame is a recent population census. Many such censuses contain information on the number of households, and on household members by status in employment. Those classified as working for their own account or as employers provide an approximate measure of the number of small, informal sector units since, at least in the absolute number of units, small-scale enterprises predominate over large units. To be usable, such information needs to be tabulated at the level of individual EAs. A cross-tabulation of status-in-employment categories against the industry or kind of economic activity at the level of EAs is also useful, since the sampling plan for the mixed survey involves addressing each different kind of economic activity separately. The usefulness of the population census frame is enhanced if it contains information on the number of workers engaged in the entrepreneur's economic unit, as this can help to separate entrepreneurs of micro establishments (or employer units) from entrepreneurs of own-account units, and to separate these from entrepreneurs of larger establishments. Such information is useful not only for a mixed survey but in the planning of establishment surveys and censuses generally. Information about the legal status and type of enterprise owned by the entrepreneur can also help to identify the target population for the mixed survey more clearly and precisely. The information should be collected in population censuses which have two components: a complete count to obtain information on demographic and other basic characteristics of the population, and a large sample attached to the census to collect more detailed information on other characteristics, including economic characteristics.

6.33. For special purposes, it may be possible to use other sources for the frame, or at least to supplement the main census-based frame. Certain kinds of economic activity may be concentrated in a few known locations that can serve as part of the frame. In certain urban areas usable lists or registers of street vendors or other informal businesses may be available or possible to construct. Sometimes use can be made of lists of electricity users or mobile phone subscribers or outlets, especially if domestic and business use can be distinguished.

Area units

6.34. Using larger PSUs than those used in normal household surveys can be an option for mixed surveys, as larger areas have a number of advantages. First, they increase the chances of finding the required number of informal sector entrepreneurs for different industries as well as various types of entrepreneur (i.e., household-based, mobile, with fixed premises); second, fewer areas are needed, as each area permits a larger sample of final sample units (in this case, of households with informal sector entrepreneurs), thereby possibly reducing travel costs and improving supervision; and third, larger areas reduce boundary errors and thus improves coverage, a particularly important consideration in a mixed independent survey. From a given frame of basic area units such as EAs, 'larger' areas can be created in two ways: by grouping geographically contiguous areas, or by introducing higher stages of selection (such as towns or villages) as PSUs within which EAs are selected at the next stage. The balance of advantages can be different in the two situations.

6.35. However, using larger PSUs also has disadvantages. Using fewer but larger areas tends to reduce the efficiency of the sample (larger design effects); this can be serious to the extent that economic activities of the same type tend to be concentrated. If the sampling rates are not increased in proportion to the size of the areas, then the listing cost would increase; this can be a serious matter in mixed independent surveys where the listing is already be a major operation. A particularly serious problem with grouping areas (or introducing higher stages of sampling) is the resulting reduction in effectiveness of the primary stratification on the basis of patterns of concentration as described above. A major part of the mixed survey sample is expected to lie in urban areas, where travel costs are generally a minor consideration, good maps are available and there are pockets of high concentration of similar kinds of economic activity. All this argues in favour of using small, compact sampling areas. Grouping EAs or introducing higher stages may be worth considering in rural areas, and applies more generally to EAs with a low concentration of informal sector activities.

6.36. This manual recommends using the existing EAs as the primary sampling units in most cases, and using larger areas only in 'low-density' EAs or in rural areas. However, in areas with a particularly high concentration of informal sector

entrepreneurs, smaller areas such as segments or blocks may be better than the complete EAs, provided that suitable frames exist for such units.

Stratification of area units

6.37. Identifying and taking due account of the degree of concentration of different types of unit stratification is essential to increase sampling efficiency, permit different designs and sampling rates for different categories of units and minimize the complexity of design at the last stage of selection for different types of unit, as well as the complexity of the questionnaires, as they may be tailored to the situation of the predominant kind of economic activity.

6.38. This last point is of considerable practical importance because it helps to simplify survey implementation in the field, notwithstanding the complexity of the overall design. The idea is, at the higher stages of sampling, to accommodate any differences in the sampling procedures required for different types of unit, so that the units can be sampled and surveyed in a more uniform way at the last stage of selection.

6.39. The type of stratification that is possible depends on the information available. Such information need not be very precise or up-to-date to be useful for the purpose of stratification, so long as it is reasonably correlated with current characteristics of the area units of interest. Also, patterns of distribution are usually much more stable than the fate of individual establishments.

6.40. If nothing better than population figures for geographical areas is available, at least something may be gained from stratification by population density. With information on the number of establishments as well, better stratification can be carried out on the basis of 'economic density', defined for each area as the ratio of establishments to households. The potential for stratification is greatly increased when the number of establishments by kind of economic activity is known, as illustrated below.

6.41. Consider a situation in which information is available on the number of own-account workers and employers, classified by broad kind of economic activity for each EA or another area unit. Generally, it can be expected that such numbers will be closely related to the number of households with informal sector entrepreneurs in each area, but information about special circumstances that may vitiate this assumption should be collected (for example, about recent campaigns to clear areas of informal housing). The objective is to divide up the areas into non-overlapping groups or strata, such that each stratum reflects the concentration of informal sector entrepreneurs belonging to a particular industry. To the extent that a stratum 'captures' a large proportion of the entrepreneurs in the corresponding industry, the sampling requirements for the latter (such as selection rates or sample sizes) can be applied uniformly to the stratum itself. This increases efficiency and can greatly simplify the sampling procedure by reducing

the need to treat units in different kinds of economic activity differently within any given stratum.

6.42. Various measures may be used to assign area units to different 'strata of concentration'. Classification simply in terms of the industry having the largest number of entrepreneurs in the area is unlikely to be useful; often industries differ greatly in size, and many (such as small trading units) tend to predominate in most areas. Sometimes the difficulty can be reduced by excluding from the exercise a very large and widely distributed kind of economic activity for which it is not necessary or meaningful to identify the stratum of concentration. In any case, *relative* measures are likely to be more useful. For example, one may compare industries or kinds of economic activity within an area on the basis of the index

$$R_i = \frac{\text{Number of entrepreneurs in kind of economic activity 'i' in the enumeration area}}{\text{Average number of entrepreneurs in kind of economic activity 'i' per area}}$$

and identify the kind of economic activity having the largest concentration in the area relative to overall size of the industry. In practice, the index tends to work better if the average in the denominator is computed after excluding areas with no entrepreneur in the kind of economic activity concerned. This avoids giving undue weight to minor economic activities that are unevenly distributed over the areas. In this way, EAs that have entrepreneurs operating in uncommon industries will be allocated to the uncommon industry strata. These EAs can then be selected at a high rate so that, even if the ultimate units are selected at a uniform rate, the overall rate for these uncommon industries remains high, thus guaranteeing a good representation of such industries.

6.43. As in standard household surveys, the selection of area units with probabilities proportional to some measure of size (i.e., PPS) is generally a suitable method for a household sample in a mixed survey. The difference lies in what is deemed a suitable measure of size, which may be the total number of households with informal sector entrepreneurs or some similar measure correlated with that number. When the survey covers a number of kinds of economic activity and different types of unit within kinds of economic activity, a composite measure of size may be formed by giving each a different weight. For example, a survey with a special focus on manufacturing may give a higher weight to manufacturing activities in selecting the areas. This will help to over-represent areas with more manufacturing. Subsequently, even if different kinds of economic activity are selected at a uniform rate within each area (so as to simplify the last sampling stage), the average overall rate for industry will still be higher.

Selection of area units with probabilities proportional to size

6.44. Another factor to be taken into account is the density of economic activity, in other words the ratio of the number of informal entrepreneurs to the number of

households in the area. It is more efficient to select denser areas at a higher rate (for example with probabilities proportional to the square-root of density, instead of the usual proportionality to some measure of size), so as to obtain more of the sample from areas of greater density. This will lower the relative cost of listing, which is an important consideration in the case of a mixed survey.

6.45. Usually it is efficient to select areas systematically from lists ordered by variables such as location or density.

Low-density areas

6.46. Areas with a low density of informal sector entrepreneurs[37] generally require special treatment. It is often simpler to select such areas with constant probabilities rather than with the usual PPS scheme. This removes the need for special treatment of areas with too small a number of households with informal sector entrepreneurs (i.e., with too small a measure of size), something which is necessary when areas are selected with PPS. The constant probability method also facilitates the use of 'take-all' sampling at the last stage, which is convenient when each area has only a small number of ultimate units of interest.

6.47. There can be good reason in low-density strata to group areas or 'cluster' them through the introduction of higher stages of sampling. This helps to concentrate the sample and reduces the likelihood of not finding the required number of units in the area. A decision needs to be made on whether areas with no reported activity in the frame should be included in the sample. At the initial stages of implementation of a mixed survey it may be prudent to exclude such areas in view of the high cost of covering them and the small effect of their exclusion on the overall survey results. However, this assumption of a small effect may not be valid; indeed, one cannot always trust the information of 'no activity' in the frame. Where possible, the likely effect of their exclusion should be estimated, for example by a special investigation based on a small sample. When the survey has been repeated a few times, it is desirable to extend it to include such areas even if at a low sampling rate.

Sample size and allocation

6.48. Before deciding on a particular design and method of selection, it is necessary to consider the required sample size and the implied overall selection rate (sampling probabilities) for the ultimate units of observation and analysis. In any survey the required sample size is determined by numerous theoretical and practical considerations, which need not be discussed here in so far as the issues involved are common to any sample survey and not specific to a mixed survey (see

[37] As household members may be informal sector entrepreneurs only in their secondary job, it is important that the sample frame be based on information that covers all jobs held by household members. When the mixed survey excludes agriculture from its scope, rural areas may appear to be low-density areas only because secondary activities are not covered.

ILO, 1993a, and UN, 2008a). In this context, however, two issues need to be discussed: (a) the diversity of sampling rates required for different types of unit in the same survey, and (b) the problem of controlling sample sizes to achieve what is planned.

6.49. In most circumstances, the sample size and hence the sampling rates have to be determined separately for different kinds of economic activity or industry. The kind of economic activity can differ greatly in size and corresponding sample size requirements. Different sampling rates are often also desirable for households of informal sector units run by employers as opposed to informal sector units run by own-account workers, as their number is usually small and they often have to be sampled at higher rates to obtain adequate numbers. Different sampling rates can be applied to different types of unit without unduly complicating the last-stage selection process, by oversampling the strata with the less common industry. This was done in a survey in Sri Lanka which sampled non-agricultural households at a higher rate compared to agricultural households. It resulted in their automatic over-representation *on the average*, thus reducing the need for differential selection at subsequent stages. Following a more satisfactory and precise procedure, the correspondence between the industries and strata of concentration means that the industry-specific subsamples can be controlled to some extent by applying appropriate but uniform rates within strata, thus reducing the need for differential sampling at subsequent stages.

6.50. The example given here does not control separately for units of different type, such as own-account enterprises as against employers' enterprises. It is difficult to avoid differential sampling for this purpose at later stages because of the lack of information on this aspect in most area frames. Furthermore, to control the overall sample size, it is necessary to have an idea of the relationship of the number of entrepreneurs in the frame (or some other measure of size) to the actual number of informal sector entrepreneurs expected at the time of the survey. The two numbers may be highly correlated, but in general they are not equal. The numbers in the frame may fall short of the actual numbers because of growth that has taken place after information for the frame was collected, but also because the frame may not fully cover the less visible informal sector units. Pre-testing, which involves relisting in a small sample or in areas of different type may provide some information on the overall relationship between the two numbers for different categories of unit.

6.51. Several factors contribute to the difficulty of controlling sample size in a mixed survey. In many household surveys the 'PPS method' of sampling area units is used to obtain self-weighting samples of households with reasonable control over the sample size (overall and at the area level). The success of the method depends on how well the measure of size used for PPS selection corresponds to the actual size of the areas. However, the kind of information available in the

frame for a mixed survey is often more approximate because the sources of the area frame (such as population or establishment censuses) tend not to be designed specifically for a survey of the informal sector. Control over sample size often requires a departure from the desired sampling rate, and certainly from self-weighting.

Listing operation

6.52. After selecting the PSUs, it may be necessary to split some of those that are too large to be completely listed (perhaps on a selective basis) and retaining only one of the resulting segments for listing. The listing operation involves canvassing the selected PSUs to obtain information from all households there. Because households are screened, a mixed independent survey can be considered as a particular instance of mixed modular survey where the probability of inclusion of households within selected PSUs is equal to 1, and where the household survey phase is a listing operation covering a smaller set of questions than most HS.

6.53. The listing operation has several objectives:

(a) to identify and produce a complete list of survey units for the second phase of the survey;

(b) to obtain information on characteristics of the entrepreneurs listed in order to identify those who are within the scope of the survey;

(c) to obtain information for a secondary stratification of the ultimate units in the second phase of the survey; and

(d) to obtain other information required for sample selection.

The listing operation should strive to obtain information about informal sector activities of own-account workers and employers that is complete and reliable. The quality of listing is a key factor in the overall quality of the estimates obtained from the survey. It is generally desirable that the listing operation be organized separately from the second phase (informal sector) survey and, ideally, use different enumerators for the two operations.

6.54. A large proportion of households have no informal sector entrepreneur or only one. Even when a number of activities are conducted within the same household, it may be unavoidable (sometimes even advantageous) to treat the household as a single integral economic unit, though in general it is desirable to list each activity separately. In order to identify informal sector entrepreneurs and to obtain additional data for subsequent stratification (if necessary), detailed information on each and every household members above a certain age needs to be obtained regarding their current activity status, the kinds of economic activities carried out, including secondary activities, their status in employment, the size of

the economic unit where they work and the location of their work activities, using a short reference period. As with modular surveys it is recommended that 'potential' informal entrepreneurs be identified at this listing stage, using less strict criteria (for example, including all employers and own-account workers). A more precise definition of the informal sector can be achieved during the second phase, where information about the units is obtained directly from the entrepreneurs. When a listing operation is sufficiently thorough, a mixed independent survey provide better estimates of the informal sector than a mixed modular survey, but the potential gain must be balanced against the increase in costs and the complexity of the sampling frame.

6.55. Completeness in the identification of economic units depends on the type and detail of questions asked at the listing stage. In-depth listing has been done, for example, in Brazil's urban informal economy survey, conducted about every five years independently of the country's other household surveys (IBGE, 2006; and see Appendix E4). In this case the scale of the first survey phase is particularly large, as detailed information is obtained on each household member of working age in every household in the sample areas. The cost aspect is particularly important for the first survey phase, which is an expensive operation unless it can be combined with a household listing for another survey.

6.56. Given that the number of households to be listed may be many times larger than the final sample to be enumerated, the cost of listing, involving detailed questioning, can be high. A light listing form based on a single question is a tempting alternative to reduce costs, but it carries the risk of major measurement errors and underestimation, especially if the key information for many units is based on proxy responses. A simple listing form can include a question such as '*Does any member of the household operate, as his/her main or secondary activity, any business for income-raising purposes at any time of the year?*', which is addressed either to the household reference person or, as recommended by the 15th ICLS resolution, to each member of the household above a given age. Information on the kind of economic activity (industry), number of employees and/or the legal organization of the business should also be collected. However, such a household listing may not be adequate to ensure complete coverage and accurate identification of the owners of informal sector enterprises (or small enterprises, household unincorporated enterprises with at least some market production, etc.), or even just those that are household-based. Some surveys have used a more elaborate method involving explicit probing by using a specified list of activities, though still at the level of the whole household rather than of individual members. It may be useful to begin with a question on the main source of income of the household. This question, requiring a specific answer from each household rather than a simple 'yes or no' response, can be effective in identifying economic activity of household members.

Second-phase operations

6.57. The sample frame for selection of a random sample of informal sector entrepreneurs for the second phase is the list of households with potential informal sector entrepreneurs identified in the previous phase. Assuming that the PSUs have been selected using an adequately stratified design to guarantee good geographical and industry representation, to simplify field work the sample of households with informal sector entrepreneurs should be selected at uniform rates. Sometimes, however, it will be necessary to group the listed households in strata by industry, sex of the entrepreneur, type of workplace, type of enterprise (own-account enterprise as opposed to enterprise run by an employer), etc., for last-stage allocation and selection. The aim then is to make the allocation of the final sample to the various strata as homogeneous and simple as possible and to ensure that an adequate number of ultimate sampling units is selected from each stratum.

6.58. Once the sample of households with informal sector entrepreneurs is selected, all informal sector entrepreneurs identified in the sample are interviewed.

6.59. The design of a mixed independent informal sector survey entails fairly complex survey operations and sample design and estimation procedures. It requires a team of qualified survey staff, sound training of interviewers, constant supervision and control of all survey operations, and care in keeping records of the listing operation, sample selection and sample outcome for each sample area, as well as survey statisticians and programmers qualified to write the correct algorithms for making the estimates, including those describing their precision. The gain in the quality of the estimates obtained from a mixed independent household and enterprise survey must therefore be balanced against the increase in costs and complexity of the survey.

Last stage of sampling

6.60. From a practical standpoint, it is highly desirable that the selection of the sample of households with informal sector entrepreneurs be straightforward. At this stage, selecting units in different kinds of economic activity with different rates should be avoided as much as possible. It is better and often possible to absorb any required differences at earlier stages of sampling. However, too much reliance cannot be placed on the classification of units on the basis of often approximate information obtained during the first-phase listing. This by no means precludes the use of such information for stratification of the units by kind of economic activity prior to sample selection, and special procedures and sampling rates may be necessary for special categories of units, such as enterprises held by employers. When the procedures have to be varied within the same area, such variation should be minimized. When an entirely uniform procedure is not possible, the possibility of meeting the objectives should be reasonably explored before introducing any further complications, by dividing the units into just two categories for sampling purposes:

those that are sampled using the normal or uniform procedure, and others that can all be included in the survey without the need for sampling.

6.61. *It is essential that the procedures adopted do not result in a departure from probability sampling*. The requirement of probability sampling is that each unit has a known and non-zero chance of being selected into the sample. There are examples in country surveys (and in even some international documents) where the desire to achieve certain specified sample sizes for various categories of units has resulted in the adoption of procedures (such as the assignment of zero probability of selection for some units) which do not yield a probability sample. Given that the procedures and rates of sampling may vary by type of unit, a particularly important requirement is to ensure that records are kept of the number of units of various types listed and the number selected in each sample area, so that the sampling rates (and sampling weights to be applied at the estimation stage) can be computed.

6.62. *A desirable feature of the design is to obtain good control over the sample sizes and workloads*. While in most surveys it is preferable to aim at a self-weighting sample for theoretical as well as practical reasons, in the case of a mixed independent survey a fixed sample size within PSUs may be preferable. Variations in sample sizes and workloads are likely to be a more serious problem in mixed surveys and, consequently, the need to control these variations is usually greater. Samples tend to depart from self-weighting in any case because of the need to cater for different kinds of economic activity and types of unit.

6.63. The ultimate sampling units are households with one or more informal sector entrepreneurs. If a household is selected, all its entrepreneurs are included in the sample. For the sake of operational simplicity, it is desirable that a uniform sampling procedure be adopted for all households with one or more relevant entrepreneurs, without distinguishing by kind of economic activity.

Coverage of different kinds of economic activity

6.64. The informal sector includes many different kinds of economic activity. An important practical issue, therefore, is whether it is preferable, or even necessary, (a) to cover the main activities through a series of separate surveys, each focused on a relatively homogeneous set of activities, or (b) to aim at covering all major types of informal sector activity in a single comprehensive enquiry. Country experiences and practices differ in this respect. In most countries, though, surveys have been designed to cover all or most kinds of economic activity together, especially for mixed modular surveys.

6.65. Separate activity-specific surveys may be considered in mixed independent surveys when a survey covering all kinds of economic activity is found to be large and complex. In some cases (in Indonesia, for example) a distinction has been made between manufacturing and related activities on the one hand, and trade

and services on the other. In India, which has more extensive experience on a larger scale, a series of surveys have been conducted covering different kinds of economic activity (see Chapter 5). A series of separate surveys may indeed be operationally simpler and more manageable. The simplicity of separate surveys in terms of design can be an advantage, and this strategy may be preferable when different kinds of economic activity require different types of information or when modes of data collection need to be different. Another advantage relates to the need to fine-tune design and operations to the specific requirements of each kind of economic activity. This may be particularly useful for the purpose of geographical stratification and for adjusting the survey design to take into account different patterns of seasonality in activities. When different kinds of economic activity are concentrated in different geographical areas or operating with different seasonal patterns, activity-specific surveys may reduce costs. Finally, the survey objectives may be limited to some kinds of economic activity only.

6.66. However, there are a number of disadvantages to activity-specific surveys if the ultimate objective is a complete coverage of all informal sector activities. Firstly, for the same total coverage, several separate operations are likely to be more expensive than a single combined enquiry. There will be overhead costs in launching each separate operation it may be necessary to incur the cost of separate training, travel, supervision and data collection, and listing costs may increase in the case of mixed independent surveys. Listing is in any case a major operation because of the fairly detailed and accurate information required for the identification of units that are within the scope of the survey, and for the stratification and selection of the units. A separate listing operation can be avoided only if the same set of lists can be used for the selection of samples for different kinds of economic activity. This already links not only the design and selection of the separate samples, but also the operations for their implementation. Common lists can be used only if the different surveys are conducted closely together in time, which reduces much of the operational advantage of separate implementation. The use of common lists also removes the possibility of using fine-tuned activity-specific sample designs, and more complex information is required at the listing stage for the clear and separate identification of different kinds of economic activity. In a combined design, such information is required only for distinguishing *groups* of activities which need to be differentiated for the purpose of sample selection and data collection. In a good combined design it is desirable (and often possible) to minimize the need for such differentiation at the stage of final sample selection and scheduling of interviews.

6.67. There are also serious substantive problems in conducting separate industry-specific surveys. Firstly, correct industrial classification categories may be difficult to identify precisely during the first phase of a mixed survey. It may be difficult in practice to assign complex and mixed informal sector activities to the standard list of categories, as a single informal sector unit may be engaged in

activities belonging to different kinds of economic activity. There can be problems in separating out different informal sector units within the same household. The handling of these problems becomes more difficult when the enumeration of different kinds of economic activity has to be separated operationally.

6.68. There are also analytical complexities. For example, units included in an activity-specific survey may at the time of enumeration turn out to engage in activities outside the kinds of economic activity covered by the survey. Similarly, units not included on the basis of characteristics recorded at the time of listing may in fact engage in the kinds of economic activities that are meant to be covered in the survey. In a mixed survey covering all kinds of economic activity together, these can be enumerated and tabulated appropriately, irrespective of their classification at the time of listing and sample selection. It is much more difficult, if not impossible, to do so in separate surveys.

6.69. Perhaps the most serious drawback of separate surveys is the likelihood of *increased coverage error*. Because of the kind of difficulties noted above, it is hard to ensure that separate surveys cover the total population of informal sector units without duplication or omission. Finally, either by design or because of practical and cost constraints, separate surveys often do not cover uniformly all the kinds of economic activity that are of interest.

6.70. In conclusion, an approach covering all kinds of economic activity in an integrated enquiry is clearly the preferred arrangement. Separate activity-by-activity surveys should be considered only when the descriptive and analytical interest is restricted to certain kinds of economic activity, or when the scale of the combined survey is considered too large to be manageable on practical grounds.

Confining samples to a small number of cities

6.71. Sometimes samples are confined to a capital city or to a small number of cities or towns. This is done because of the cost and difficulty of conducting the survey in more than a small number of centres, or because the descriptive and analytical interest of users is limited to these cities. From a national perspective such designs are very inefficient. If the number of units involved is very small, the process of 'random' selection can easily become a mere pretence; there can for instance be too many areas which appear too 'important' to be left out of the sample, and it is best to recognize explicitly that the sample is a purposive sample rather than random. Indeed, with a very small sample of PSUs a thoughtfully selected purposive sample may actually 'represent' the population better than a random selection of a few units. As a rule, however, such designs should be avoided if the objective is to obtain statistics that are valid for the whole country.

The dual household/establishment frame approach

6.72. The first phase of a mixed modular or independent survey is particularly suitable for identifying owners of household-based and mobile economic units. However, this approach can be considered less satisfactory in dealing with owners of informal sector units that are located away from the household. Such units are often fewer in number and may require special sampling and data collection procedures. Examples are microeconomic units employing one or more hired workers or enterprises operated jointly by more than one household, which are frequently located away from the premises of any one household. The concentration of establishments in a marketplace, for instance, falls into this category. The quality and coverage of such units can be improved by identifying and listing them using the establishment approach discussed in Chapter 5. Separate identification and enumeration of establishments located outside private households, in non-residential buildings in the sample area, have a number of additional advantages. They can be sampled separately, possibly using different (usually higher) sampling rates and interview procedures, as interviewing at the place of work is facilitated. Moreover, some estimation complexities such as those arising from an establishment being operated by more than one household can be avoided.

6.73. Thus, it is useful to undertake a dual, mutually exclusive listing of (a) household-based (including mobile) entrepreneurs, and (b) economic units with fixed visible premises in the sample areas. This was done, for example, for the urban small unincorporated enterprises survey conducted in Turkey in 2000 (Turkish Statistical Institute, 2004), and for the national survey on non-agricultural enterprises in the informal sector undertaken in India in 1999-2000. In the Turkish case the survey shared the sample areas (blocks) of the monthly household labour force survey in order to reduce the cost of the first survey phase and improve the quality of the data obtained.

6.74. It may be useful to use an area-based sample of households and an area-based sample of establishments. Each area-based sample is selected from a different sampling frame (population census and establishment census). The population census sample frame would be used to select household-based (including mobile) entrepreneurs and the establishment census sample frame would be used to select fixed visible business premises. The use of dual frames can be advantageous when household-based informal sector entrepreneurs and informal sector units with fixed locations are clustered in different areas. An example of a survey based on this kind of dual-frame approach is the informal sector survey conducted in the West Bank and Gaza Strip in 2003 by the Palestinian Central Bureau of Statistics. Other examples are the 2001 and 2002 mixed modular informal sector surveys of Colombia (DANE, 2004; see also paragraph 6.137), where informal sector activities conducted at the entrepreneur's home or without fixed premises are surveyed through a mixed

modular household and enterprise survey and a sample of informal sector establishments with fixed visible premises is selected from an establishment sampling frame using an establishment survey approach. To avoid duplication, an important design requirement for this type of survey is the effective exclusion from the household frame of informal sector entrepreneurs who undertake their activities in fixed visible premises.

6.75. The idea of the dual approach is to divide the population of units into two categories that in principle are non-overlapping and exhaustive: the bulk of smaller units which are best covered through a household listing operation or a base survey, and units which require special treatment and are appropriately listed using an establishment approach (see Chapter 5). To define these categories clearly, three types of situation may be identified, as illustrated in Table 6.1 below. To keep the categories distinct, it is important to define in operational terms what is meant by a 'building', 'structure', 'occupied dwelling unit', etc. In particular, it should be made clear whether kiosks, stalls and other make-shift structures fall under 'type A' (having separate fixed premises) or 'type C'.

Table 6.1.
Type of informal sector activity in a PSU

Type A	Economic units located within the PSU in a building or structure other than living quarters, including living quarters of the entrepreneur. The owner(s) of the economic unit may or may not reside within the sample area.
Type B	One or more informal sector activities carried out by its residents within the household premises. Paid employees may or may not be hired.
Type C	All other informal sector activities without a fixed or definite location that are carried out by entrepreneurs residing in the sample household premises, thorough irrespective of whether the activity is conducted within or outside the sample area.

6.76. To select the sample of PSUs for 'type A' economic units, information from a recent establishment census should be used as much as possible, as it contains the information on economic units that can be used for stratification and selection of area units for fixed visible units. Ideally, the area units to be used should be the enumeration areas (EAs) used in a population census, because an establishment census area frame is usually not as complete as a population census frame in its coverage or as good at demarcating and mapping area units. This is because of differences in the resources typically available for, and the objectives of, the two types of census. Thus there are advantages to basing the establishment census on population census areas. In some countries establishment censuses have been conducted independently of the population census, in the sense that the two do not use the same set of area units. Normally, the quality of the area frame resulting from an establishment census is not as good as that from a population census.

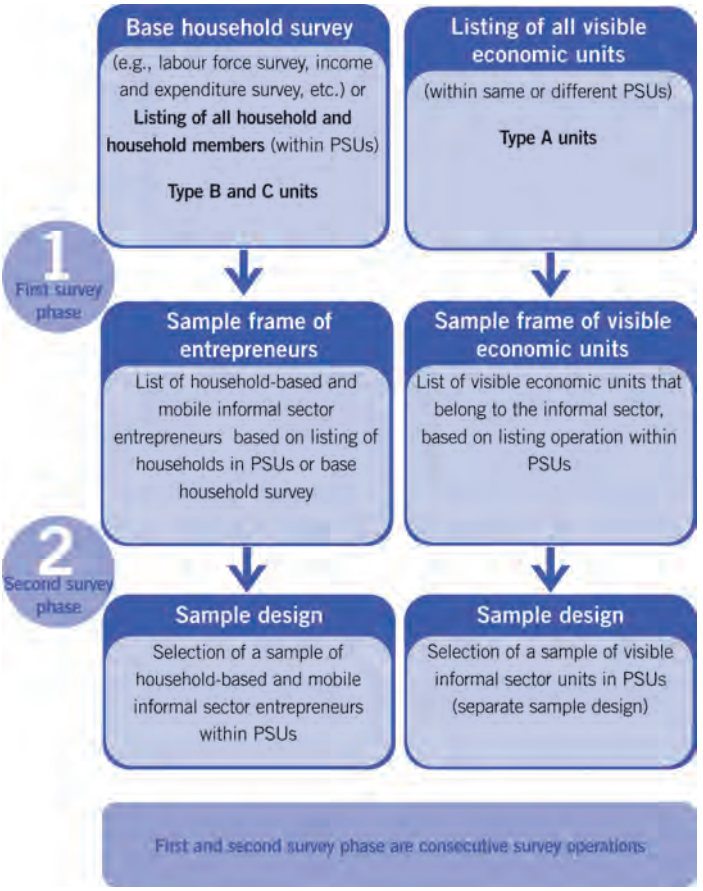
6.77. The listing operations in the dual establishment and household approach should be kept separate. Listing involves the coverage of all structures in the area, whether residential or non-residential. All residential or mixed-use buildings are covered in the *household component* of the listing operation. This identifies all households and every informal sector activity carried out by household members, obtaining information on the kind of economic activity and on its location and kind of premises, if any. Information on the size (the number of regular hired workers, for example) and other characteristics for identifying economic units and determining whether they come within the scope of the survey is also obtained. From the list of informal activities so obtained, those of type A (i.e., conducted at a fixed location away from the household (or, more correctly, the dwelling unit) are eliminated from the list. Instead, they are added to the second list if they are located within the sample area, after eliminating any duplicates in that list. In this way the household component of the list covers type B and type C activities.

6.78. Through its coverage of all structures in the sample area, the second, establishment component of the listing identifies all establishments located in buildings other than occupied residential dwellings (type A). To these are added, for completeness, any missed establishments of type A located within the area that have been discovered through the household listing operation described in paragraph 6.77 above (see Figure 6.5).

6.79. The two components of the list can be kept apart and sampled and enumerated separately. As mentioned in the previous section, the dual approach can be extended to the use of different area samples for activities of (a) type A and (b) types B and C.

6.80. While there is much to recommend in the dual frame approach, it is costly and complex. Special care is needed to ensure that there is no double-counting or gaps in coverage. However, steps can be taken to reduce the size of the listing operation, for example: by reducing the number of area units selected and increasing the last-stage sampling rate, even to the point of 'take-all' sampling in some areas and for some kinds of economic activity; by over-representing more dense areas (i.e., areas with more economic units for a given number of households) in the sample; and, in some cases perhaps, by dropping areas with no or little economic activity from the study population. Generally, these steps increase design effects and make the sample less efficient. In most cases, however, some reduction in sampling efficiency is less worrying than the bias that may result from poor-quality coverage. Coverage bias has a direct and proportionate impact on the estimation of aggregates from the survey. The improvement of the quality (coverage) of listing should therefore be a primary concern.

Figure 6.5.
Mixed survey design with dual frames



6.81. The dual approach should keep the household and establishment lists separate and should sample and enumerate them separately. The household list should limit its coverage to household-based and mobile activities, while the establishment component can use different sampling and enumeration procedures. The appropriate unit of sampling should be the economic unit rather than the household. The most convenient arrangement is generally to conduct the main interview at the location of the establishment. Several types of establishment are likely to fall within this component. First, micro-units with one or more hired workers are usually few in number and may be selected at a high rate or even all taken into the sample. If sampled, stratification by type and size can be useful. Second, concentrated establishments (in a marketplace, for instance) can be stratified by type and, if there is a large number of them, sampled at a low rate. Third, establishments operated by more than one household in partnership are most likely to be in this category, and using the establishment rather than the

household as the sampling unit avoids some of the estimation complexities which would otherwise be present. Fourth, other establishments can be sampled in the same way as household-based and mobile activities, the difference being simply that here the sampling unit would be the establishment.

6.82. The dual approach is practically equivalent to the area-based establishment surveys discussed in Chapter 5. Such differences as may exist include the following:

(a) Mixed surveys with dual frames may use separate area sample frames and two separate sets of PSUs. They may use an area-based frame of households to select household-based activities and another area-based frame of economic units to select units with fixed premises. By contrast, area-based establishment surveys use only one area frame to select both household-based units and units with fixed visible premises, i.e., an area-based frame of economic units.

(b) Mixed surveys with dual frames may target informal sector units only. By contrast, area-based establishment surveys generally extend to all economic units not covered by list-based establishment surveys, of which the informal sector units are a subset.

Planning and design

6.83. Mixed surveys raise a number of important issues related to the time interval between phases, the place of interview for the informal sector survey phase and the relevant respondents, all of which needs to be addressed in their planning and design.

Seasonal and other aspects of variation in time

6.84. A programme of informal sector surveys may involve one or both of the following two basic arrangements:

(a) It may comprise a survey on a continuing basis, aimed primarily at obtaining current estimates of levels and trends. The size and scope of such a survey may be limited to the most important topics on which frequent and up-to-date information is required. Typically, the arrangement would be to attach such a survey to an ongoing labour force survey.

(b) It may involve one-time or occasional surveys aimed at obtaining information of longer-term interest that pertains to the structure of the informal sector and, possibly, to the average conditions and patterns prevailing over a period of time. The survey may be large, so as to be produce estimates for smaller domains or subpopulations than would a continuing survey. The survey content may thus be more detailed than that of a more frequent or continuing survey.

Each type of survey has specific requirements in terms of its timing and structure over the period covered.

6.85. In a continuous survey, representativeness of the sample over time and more robust estimates of change are achieved by adopting a 'rotation pattern' to support the type of estimates to be produced. The survey is generally organized in the form of an ongoing series of rounds, each round being designed to produce separate estimates covering a period defined by the required frequency of reporting. Detailed discussions of this aspect of survey design of labour force and other regular surveys are available elsewhere (see UN, 2008a). It may be noted, however, that for an informal sector module attached to a labour force survey it is not necessary that the two have the same frequency or duration as the survey round. The module may be attached selectively, for example during one particular quarter each year in the case of a quarterly labour force survey. It is also possible to apply the module to a subsample of each round and then cumulate data over several rounds (e.g., months in a monthly labour force survey) to construct less frequent and extended rounds for the informal sector component.

6.86. The basic consideration in the case of an occasional survey is that, if information collected during a particular time period is to be applied more generally to a longer period of interest, then the former should in some sense be representative of the longer period; in other words, the survey periods should capture seasonal and other variations in time. For this purpose it may be preferable to spread out the survey period as much as possible. Furthermore, to estimate and average out seasonal and other variations properly over a longer period, such as a year, the total survey period should be divided into *sub-rounds* over each of which a spatially representative sample is enumerated.

6.87. This fundamental requirement of ensuring representativeness of the sample not only in space but also over time is common to any survey arrangement, whether a one-time survey or an individual round of a continuing survey. For mixed surveys, however, there are special considerations.

6

6.88. There are a number of advantages to dividing the survey period into sub-rounds. With a spatially representative sample for each sub-round, the total sample is representative in both space and time. Data from various sub-rounds can be cumulated over a longer period to produce overall estimates; at the same time comparison between sub-rounds provides information on seasonal and other variations. Some selected variables can be estimated more frequently, with less disaggregation. The survey workload can be distributed more uniformly. The main disadvantage can be the increased cost of enumerating a representative sample for each sub-round separately.

6.89. The samples for the sub-rounds can be related in various ways: independent or entirely different samples at all stages; samples with overlapping

areas but different ultimate units; partial overlap in the ultimate units covered; and re-enumeration of the same ultimate units in all sub-rounds. Partial overlap on a continuous basis in an on-going survey makes it possible to estimate change with greater precision, even if the estimate of levels is less accurate than when using different samples in each round.

6.90. For an informal sector survey an independent sample for each sub-round may in many cases be the most suitable. Generally speaking the survey period is spread over a whole year and divided into quarterly or shorter sub-rounds. Covering a different sample of areas in each sub-round is convenient for several reasons. The number of areas to be covered in each round is minimized, which means that, for a given sample size, the sampling rates within the areas are maximized and an efficient use is made of the listings. The listing operation can be phased in the same way as the main survey, thus minimizing the time lag between listing and enumeration. It is important to note that, to measure seasonal and other changes at the aggregate level, it is not necessary to have overlapping samples from one period to another, though overlaps generally increase the estimates' precision. Non-overlapping samples between sub-rounds are preferred because they maximize efficiency in aggregating the sub-round results over the whole survey period.

6.91. In so far as the pattern of seasonality differs geographically, it is necessary to ensure that each major geographical domain is covered in the sample for each season or sub-round. The same applies to urban-rural differences. This can be done through appropriate stratification and selecting the sample for each sub-round to include areas from each stratum.

6.92. It is equally important to ensure that different kinds of economic activity are properly represented in each sub-round. The pattern of seasonality can be markedly different for different types of activity. Sometimes it is argued, incorrectly, that the survey for a particular kind of economic activity should be timed to coincide with the period at which the activity peaks or is concentrated. However, the results will be biased unless in estimating annual aggregates account is taken of the slack periods as well. In the overall estimates all periods must be represented. This does not imply that *sample sizes* need to be the same; in fact, it is more efficient to select larger samples for periods of more intense activity, but then the results must be appropriately weighted before aggregation. If a survey is confined to a particular time of the year, then information on seasonal variation has to be obtained through retrospective questioning.

6.93. To measure gross changes at the level of individual units, the general recommendation is to use a long reference period for the information collected, such as covering the whole year through retrospective questions, or to enumerate the same units repeatedly, for example in every sub-round, using a shorter reference period. The same applies to measuring variables at the individual level

(such as annual income or output) which by definition require data pertaining to an extended period.

6.94. In the case of a mixed survey neither of these options may be particularly suitable. Given the type of unit and the nature of the information sought, retrospective questioning with long reference periods is often inappropriate. But enumerating the same sample repeatedly reduces the sample size available for the production of annual estimates drastically. Often it is already difficult to produce such estimates with the required disaggregation and degree of precision.

6.95. On the other hand, the follow-up of a small subsample over an extended period can be fruitful. The objective of such a follow-up would not be the production of overall estimates of gross changes (for which the sample size may be insufficient) but a study of the dynamics of change in the informal sector.

Implementation of the sample of informal sector entrepreneurs

6.96. To ensure that the standards of probability sampling are met, it is important that the sample of informal sector entrepreneurs be designed to ensure good control over the sample size, particularly over the samples taken in individual areas. Finding a large and unexpected concentration of entrepreneurs in individual areas contributes to a loss of control, as do large and variable non-response rates. Relevant and accurate information on the number and characteristics of entrepreneurs in the sampling frame are needed for good sampling design. In addition, minimum sample targets need to be achieved not only in the overall sample size but also in the sizes required for obtaining precise estimates of the different kinds of economic activity.

6.97. It is sometimes argued that the survey timing should coincide with peak periods of the activity or activities to be covered. However, this can be a biased procedure. It is better to spread out the enumeration over time so as to capture seasonal and other variations.

6.98. The same argument applies to substitution for units found to be dormant at the time of the survey. The substitution of inactive units by active units obviously results in over-estimation of the extent of activity at any particular time. Sometimes quotas are fixed in order to achieve a pre-specified, fixed sample size for different categories of unit. For instance, a survey may be discontinued after a certain sample size is achieved. Since the sample areas are not covered in a random order, such a procedure would normally result in a non-probability sample. Another example with similar results is provided by certain procedures for the selection of units at the last stage. For instance, in a survey a specified number of units of a certain type are taken from each sample area, if the area contains a sufficient number of units of the required type. Otherwise units from other categories are taken to achieve the required quota. Clearly this does not yield a

probability sample for the last-mentioned categories of units. Taking *fixed sample sizes* rather than *fixed sampling rates* increases the problem, though this is sometimes unavoidable if adequate control cannot be achieved otherwise. Finally, uncontrolled substitution for non-responding units is a common source of bias in informal sector surveys, as in many other types of survey.

6.99. Many problems during sample implementation arise from the undue importance given to fixed sample sizes and samples taken from individual areas in terms of absolute numbers, when steps have not been taken to ensure control in the design itself. It is neither necessary nor useful to aim at a sample size fixed in absolute numbers. A considerable amount of variation from the 'target' sample size can usually be accommodated without much difficulty and effect on the survey results. Beyond a certain point, of course, it becomes necessary to control such variation. Variation in sample size is often a more serious problem in informal sector surveys than in certain other types of survey, because of the diversity of the kinds of economic activity and the types of unit to be covered and the specific requirements for each type. A balance is required between accepting these variations and making adjustments to the sampling process at the ultimate stage.

6.100. Often it is possible to reduce the unusual problems of variation in sample sizes by adopting an appropriate survey design. In an informal sector survey it is desirable to introduce the necessary variations and controls at higher stages of sampling to the extent possible, so that decisions made in the field during the final sample selection and enumeration can be minimized. Such adjustments can result in departures from the standards of probability sampling if the procedures be used are not correctly formulated and controlled.

Place of interview

6.101. The place of interview for the informal sector survey phase is also of great importance. To enhance reliability of the information one should conduct the survey in the premises of the informal sector unit owned by the entrepreneur, as in other establishment surveys. Similarly, for informal units located at home, the interview should take place at the home of the entrepreneur. With informal units without fixed premises, such as itinerant units or activities performed on the public highway, the direct measurement of informal activities at the place of work is inappropriate; the street is certainly not a suitable place for completing a survey questionnaire. These units too should be interviewed at the home of the entrepreneur. In this manner the interviewers may to some extent check the reliability of the collected information (thereby reducing under-declaration); they can also interview the other members of the informal units directly, if the entrepreneur is not able to provide information about their characteristics (education, training, migration status, etc.). Of course, the strategy raises

logistical difficulties (for example, locating the premises if they are far away from the entrepreneur's dwelling) and these need to be addressed.

Respondent

6.102. Mixed surveys, like establishment surveys but unlike household-based surveys, *do not allow proxy respondents.* The only person supposed to answer informal sector survey questions is the informal sector entrepreneur. This means that information collected in the informal sector survey phase is in general more reliable than the information collected in the household survey phase. Not accepting proxy respondents has a cost, however, as the entrepreneur needs to be found and convinced to participate. But this has another favourable consequence. Common information collected in both the household and informal sector surveys – such as job status of the informal sector entrepreneur, the industry of the informal unit, etc. – can be double-checked and corrected in the household survey if necessary.

Time between phases

6.103. The delays between the first survey phase ('base' survey or listing) and the second phase should be as short as possible. The longer the time lag between the first and second phases the higher the risk of attrition, as many informal sector entrepreneurs will have ceased their informal activities temporarily or permanently or moved the household to another location. An extreme solution to avoid this problem of attrition is to conduct the two phases at the same time (i.e., conduct the informal sector survey phase once the first phase has been completed and informal sector entrepreneurs identified, as many mixed modular surveys do, or to integrate the two phases in the same questionnaire (cf. the Peruvian survey and the LSMS case). However, this strategy can create problems. First, it is impossible to draw a subsample of informal sector entrepreneurs before they have been surveyed exhaustively. Second, the informal sector survey phase takes place in the household dwelling, while it is preferable to conduct the informal unit survey at the informal units' premises. The ideal time difference between the two phases is a trade-off between the objective of reducing attrition and the time necessary to draw the informal sector survey phase sample (data entry, section procedures, etc.), to optimize the organization of the enumerators, etc. In any case, the attrition rate has to be taken into account to produce unbiased estimates. In particular, the informal sector survey phase should be conducted for all informal units selected, whether or not they are still operating (in this case, the reference period would be the previous operating month – by definition after or equal to the reference period of the household survey phase).

Reference period

6.104. The reference period is a fundamental aspect of survey planning. To be useful for national accounts, the reference period needs to be the calendar year. However, a mixed survey that targets the informal sector has to take into account that managers of informal sector units will not be able to provide data for a calendar year, because they do not keep records, and their replies will rely on recall. For these units, regardless of the survey frequency, the reference period for information about the unit should be short, for example a month or a week (UN, 1994); for agricultural units, the previous six months has also been used (ADB, 2011). A flexible reference period, where the respondents are allowed to provide information for any period they can (a day, a week, a month) could be envisaged, as was done for the 1-2-3 mixed survey (see paragraph 6.128). This will be demanding for data processing, but it may ensure greater reliability of the statistics produced in the absence of existing written accounts than the insistence on a particular reference period. In all cases, additional information needs to be collected about activities during the year, in order to take into account their seasonal nature for many of the informal sector units. The questionnaire can, for example, include an item requesting approximate information about how typical the reference period was relative to the whole year, and about the rhythm of activity over the last year, using very broad answer categories (such as higher activity than the reference period, lower activity, no activity).

Weighting and estimation

Basic requirements

6.105. The following are some of the special requirements and problems in weighting and estimation that arise in informal sector surveys:

(a) In general, informal sector surveys require the selection of different types of unit at different rates; often the differences in the rates are quite large.

(b) Complete coverage of informal sector units is difficult to achieve, and coverage errors may differ markedly among different types and sizes of units and different kinds of economic activity. This can distort the distribution of the resulting sample with regard to important population characteristics.

(c) Response rates may differ by type of unit.

(d) Apart from estimates of proportion, means, ratios and distribution, etc., the estimation of aggregates (such as the total number of units, employment and output) for various categories is usually a basic objective of the survey. These estimates are often directly affected by the magnitude of the coverage bias.

(e) Often external information is lacking on the size of the population surveyed for different types of unit. This accentuates the effect of the coverage bias and, in particular, adversely affects the reliability of the estimates of aggregates.

(f) Certain units of observation and analysis lack one-to-one correspondence with the units of sampling and therefore require special treatment at the estimation stage.

The weighting and estimation procedures devised to reduce the impact of these problems on the survey results will be discussed in the following sections.

Systematic approach to weighting

6.106. Sample weighting is introduced to take into account selection probabilities, under-coverage, non-response and other factors resulting in discrepancies between the sample results and more reliable information about the population that can be obtained from other sources. When sample observations are weighted, it is highly desirable to follow a systematic, step-by-step procedure that separates the different aspects of weighting. The weights to be applied may be calculated at each step in a series, with the final weight being the product of the successive weights generated at each step. This allows an examination of the correctness and the effect of each step in the weighting procedure. The basic steps include the following:

(a) *a set of* ***design weights*** to compensate for differences in selection probabilities, *which* may include adjustments for known large biases in coverage. Basically, the design weights are inversely proportional to the selection probabilities. They produce what may be termed 'simple unbiased estimates', meaning that the estimates are produced directly from the survey results on the basis of units' selection probabilities, without recourse to information external to the survey. Although these initial estimates may be adjusted or refined at subsequent stages, they provide a test of the quality of the sample design and implementation;

(b) *a set of* ***non-response weights*** to reduce the effect of response rates in different parts of the sample and among units of different types. The basic procedure is to divide the sample into a number of 'domains' and apply a uniform corrective weight to all units in a domain. The weights are inversely proportional to the domain response rate. Such weights can be defined only on the basis of characteristics that are available for both the responding and the non-responding units; this generally means on the basis of the information available in the sample lists, though other sources of information such as results from a previous enumeration may also be available in special circumstances. Since any informal sector survey requires fairly elaborate information for the identification of units to be included in the survey, it is usually possible to use a variety of variables to

adjust for non-response. One should choose variables whose category captures large differences in response rates;

(c) *one or more sets of* ***external weights***, introduced with the objective of making the distribution of important characteristics in the sample agree with the distribution in the population established in a more reliable external source. Such adjustments based on external information are particularly important in cases when the sample size is small, when non-response rates are high, when there are serious departures from probability sampling in the selection or implementation of the sample, and when the sample as designed cannot control the distribution of the outcome of certain important characteristics. The frequent lack of reliable external information by variable of interest in an informal sector survey limits the use of external weighting;

(d) ***inflation factor(s)***, used for adjusting the sample results to estimates of population aggregates.

6.107. These steps involve weighting in relative terms, on the basis of relative selection probabilities, relative response rates, relative distribution by certain characteristics, etc. The weights can be scaled arbitrarily. Generally, for the sake of convenience and clarity, it is best to scale the weights at each stage so that the average per unit weight is 1.0. The adjustment to population aggregates requires absolute values, and it is good practice to keep it as a separate step in the weighting process.

6.108. There are two basic ways in which a population aggregate may be estimated: as a simple unbiased estimate, except that actual rather than relative values of selection probabilities are used in the denominator; or in the form of estimated ratios, where a ratio from the sample is adjusted on the basis of an estimate of the denominator obtained from some more reliable external source.

6.109. In multistage samples, particularly when the sample size is not large and good coverage is difficult to achieve, the first type of estimates can be subject to large variance and bias. Unfortunately this may be the case in informal sector surveys, owing to the difficulty of enumerating small, unstable and not always easily identified units. However, the use of ratio requires more reliable external information than that available directly from the sample survey. In the case of informal sector units such information is usually limited, and one should try to make the maximum use of whatever relevant information is available. For instance, total size and characteristics of the population estimated from the households listing may be compared with more reliable external estimates, if available, and the survey data adjusted as appropriate. It may be possible to make similar checks and adjustments to economic characteristics of the population obtained during the listing operation. However, it is important to emphasize that sample observations should not be adjusted automatically and indiscriminately; external information

should be used only when it is clearly more reliable than the information that can be expected directly from the survey.

Trimming of extreme weights

6.110. The problem of large weights can sometimes turn out to be considerable in an informal sector survey where, perhaps more so than in usual household surveys, one can encounter unexpectedly large concentrations or numbers of units at the enumeration stage. This often requires taking a reasonable subsample and subsequently weighting the results upwards to compensate. However, it is desirable to avoid assigning extremely large weights to any units in the sample. The use of large and variable weights, even if affecting only a small part of the sample, can result in a substantial increase in variance, which means loss of precision in the estimates. It is common practice therefore to trim extreme weights to some maximum value in order to limit the associated increase in variance. The justification for this procedure is that the effect of any bias introduced as a result of arbitrary trimming of extreme weights is smaller than the benefit deriving from reduced variance.

Units requiring special treatment

6.111. This section discusses several cases requiring special treatment where units of observation and analysis lack one-to-one correspondence with the ultimate units of sampling.

Several informal sector entrepreneurs (units) in the same household

6.112. When a household is selected all informal sector units in it can be taken into the sample, and each unit receives the same selection probability (and hence the same design weight) as the household to which it belongs. In mixed modular surveys the unit is the informal sector entrepreneur, but in mixed independent surveys it is the household with informal sector entrepreneurs. While as a sampling issue this presents no special problem, it can do so in data collection. Ideally, in an informal sector survey, each separate economic unit should be the unit of observation and analysis, but in practice it may not be possible to separate multiple economic units in the same household. By definition, informal sector units are unincorporated (not legally separated from the household as an economic entity) and maintain no separate accounts. Indeed, it has been argued that all economic activity of a household should be treated as a single integrated whole for the purpose of data collection and analysis (paragraph 12 of the 15th ICLS resolution; ILO, 1993a). This may be unavoidable in many situations. Nevertheless, for proper description and analysis of the structure and functioning of the informal sector, it is desirable to obtain separate information on each kind of economic activity in the household.

Units with several kinds of economic activity

6.113. Again, this is not a problem in terms of sampling. If a unit has been selected into the sample, details of all its activities can be enumerated as recommended in paragraph 13 of the 15th ICLS resolution (ILO, 1993a). All data on the unit are given the same weight, determined according to the procedure for selecting the unit. At the tabulation and analysis stage, however, different kinds of economic activity carried out by the same unit may appear under different categories, depending on their characteristics. It is not necessary for these kinds of economic activity to correspond to the kind of economic activity or stratum from which the unit was selected, though the sampling weight is always determined in accordance with the latter.

Changes in kind of economic activity and other characteristics of the units

6.114. The sampling weight of a unit is always determined by how it was selected on the basis of its characteristics as determined at the time of listing. Information pertaining to the unit is always tabulated according to its characteristics as determined at the time of enumeration.

Units with partners in different households

6.115. Informal sector enterprises may be owned or operated in partnership. Even if the overall proportion of such enterprises is very small, the proportion may be greater for certain kinds of economic activity or in certain areas. Consider a situation in which a partnership enterprise is selected through a sample of households, but its partners reside in different households. The problem is to compute the probability with which the enterprise appears in the sample, given the probabilities of selection of the associated households.

6.116. There is no problem if all owners of a partnership reside in the same household, since in that case the unit appears in the sample with the same probability as the household. There is also no problem if such units are selected into the sample directly using the establishment approach - as may be done in an informal sector survey for units located outside private households. The problem arises when the owners of a partnership unit reside in different households and the units concerned are taken into the sample on the basis of the selection of associated households.

6.117. As a sampling issue, this latter situation is in fact similar to that in an establishment survey where the units of sampling and observation are generally individual establishments, but in a certain proportion of cases information can be collected only at the level of enterprises that have multiple establishments. The technical discussion that follows therefore has a wider relevance than in the context of an informal sector survey alone.

6.118. The preferred approach to the problem is to take the partnership unit into the sample if *any* of the households of its owners is selected, and determine the former's selection probability (and sampling weight) accordingly on the basis of the known selection probabilities of *all* the owners' households associated with it. This approach is more practical because information to determine whether the unit is operated as a partnership and the number and location of the associated households is not required for sample selection and can be collected more easily and accurately during the main interview for the selected units. Another possible advantage derives from the fact that the approach automatically offers a greater chance of partnership units being selected, which is often desirable because of their small number and particular interest.

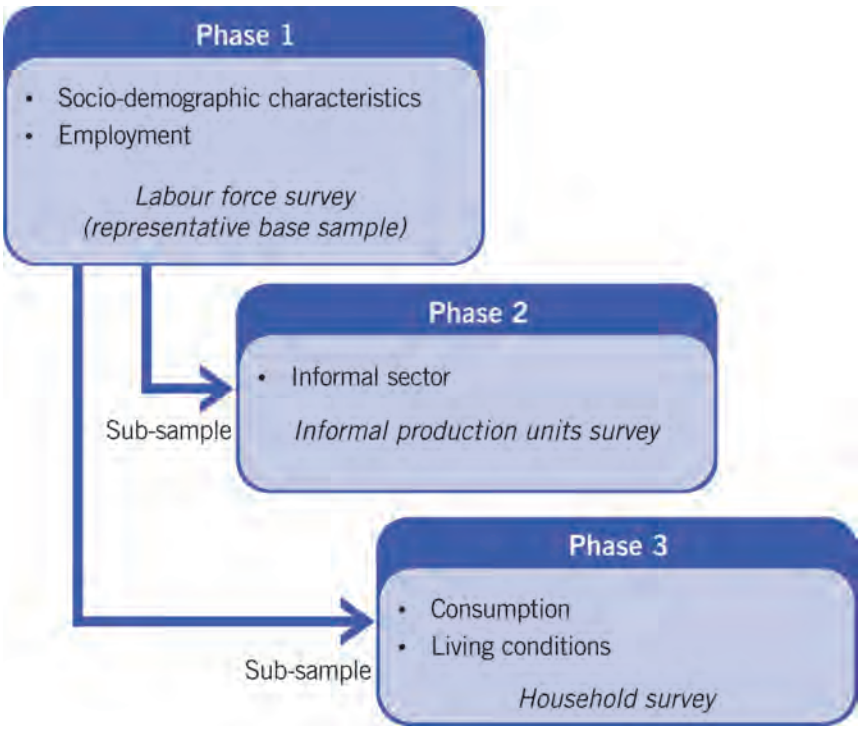
6.119. There is an alternative approach that is technically simpler but has practical drawbacks. This approach establishes a rule whereby each observation unit is associated with one and only one sampling unit, which means that the former's selection probability (and corresponding sampling weight) is the same as that of the associated sampling unit. For instance, for each partnership unit the 'main' owner may be identified and the unit taken into the sample only if the household of the main owner is selected, irrespective of whether or not the households of any other partners are selected. Similarly, in an establishment survey, an enterprise may be included only if its principal establishment is selected. However, practical problems arise if the unit is run by people who are on an equal footing, so that there is no 'main' owner, or if there are differences as to the relative position of the partners, or even if it is not clear whether someone is a partner, a helper or an employee. An additional difficulty is that fairly elaborate information to identify each partnership, the partners and the main partner among them has to be obtained at the *listing stage*, prior to the main interview.

Mixed surveys in the world

The 1-2-3 survey

6.120. The *1-2-3 survey* is an arrangement of three interlocking surveys aimed at different statistical populations: individuals, economic units and households (Figure 6.6). The 1-2-3 survey is a type of mixed modular survey. Given the characteristics of the informal sector survey phase, the 1-2-3 survey can also be considered as a matched employer/employee survey.

Figure 6.6.
Basic scheme of the 1-2-3 survey



6.121. The 1-2-3 survey was first used in Mexico at the end of the 1980s. Initially designed to study the informal sector (Roubaud 1992), the 1-2-3 survey was gradually extended to measure and monitor poverty and governance also. Over the last few years the 1-2-3 survey has spread to many countries in Africa, Asia and Latin America.

6.122. The first two phases of a 1-2-3 survey are a labour force survey and an informal sector survey. The third phase is an income and expenditure survey, administered to a subsample of households identified in phase 1, which is designed to estimate the weights of the formal and informal sectors in households' consumption, by product and type of household. Ad hoc surveys can be added to any of the three phases to obtain additional information on, for example, access to micro-credit, social insurance and taxes.

6.123. The household survey phase of the 1-2-3 survey has been specifically designed to measure informal sector and employment issues. The questionnaire (see Appendix E1) asks each member of the labour force about the number of persons employed in the enterprise, the type of registration held (depending on national legislation) and, for employers and own-account workers, the type of

accounts and other information. The information is collected both for the main and the second job. This provides flexibility in the operational definition of the informal sector, which can be adjusted to the purpose of each survey (national definition, international comparison, academic studies). It then it is possible to produce information on the size of total employment in the informal sector and, by using the question on status in employment to identify the number of employers and own-account workers, on the number of informal economic units. This latter information is crucial to selecting a representative sample of informal units for the informal sector survey phase.

6.124. Apart from informal sector employment, the questionnaire provides for the measurement of informal employment in the formal sector by using a set of questions about the type of protection linked to jobs: type of labour contracts, payslips, different kinds of allowance (according to national circumstances). As with the informal sector, the household survey phase questionnaire provides flexibility as to the criteria of informality to be chosen with respect to international recommendations.

6.125. Finally, although it is often considered as a light survey, the household survey phase may include a broad range of variables – such as education, experience, on-the-job training, sex, ethnic group, segmentation, migration experience, intergenerational job mobility, working time, employment related income, bonuses, social protection, job satisfaction, neighbourhood effects, etc. –for carrying out an in-depth analysis of informal and labour market issues, including earning functions and returns on human capital (De Vreyer and Roubaud, 2012). To improve the analytical potential of the household survey phase, a panel component has been introduced in some countries (Benin, Burundi, Madagascar, Peru).

6.126. The second phase of the survey is carried out among informal sector entrepreneurs identified during the first phase. It is designed to answer precise questions regarding the role of the sector in the economy, as well as its actual and potential contribution to improving living conditions. The standard questionnaire (see Appendix E2) is an individual form comprising seven modules (12 pages), to which additional modules can be added according to national priorities), as follows:

Module A: Characteristics of the establishment
Module B: Labour force
Module C: Production
Module D: Expenditure and costs
Module E: Customers, suppliers, competitors
Module F: Capital, investment and financing
Module G: Problems and prospects
Module S: Social insurance (optional).

6.127. Field experience shows that the average time to complete the basic questionnaire is between 60 and 90 minutes (Rakotomanana, Ravelosoa and Roubaud, 2003, and Amegashie et al., 2005). Information about the characteristics of the informal unit and its owner, obtained during the household survey phase, is compared with information collected directly from the entrepreneur in the second phase. The information compared includes the address, industry, legal status, type of accounts, registers, type of premises, etc. and the entrepreneur's name, age, sex, relation to the head of household, job status, etc. If the information is consistent, the other modules are applied. The reason for any change between phases 1 and 2 is noted and, if the respondent is not responsible for an informal unit, the survey ends. In addition to delimiting precisely the scope of the informal sector survey phase, this comparison can be used to assess the quality of the household survey phase (as in post-census surveys).

6.128. The questionnaire uses flexible reference periods to collect information about each income and expenditure item separately, in order to ensure compatibility with the daily empirical categories managed by the informal sector entrepreneurs, who generally do not follow formal accounting rules (or even keep any kind of accounts). It also obtains information about the origin of each item purchased and the destination of each product sold, so as to understand the place of the informal sector in the national economy and its relations with other sectors (public, foreign enterprises, formal domestic enterprises, etc.). In its standard form the questionnaire distinguishes the following categories: public or para-public sector; large trading private enterprise; small trading private enterprise; large non-trading private enterprise; small non-trading enterprise; household/individual; direct exports (for destination of products) or imports (for origin of inputs); own consumption; and informal units (as intermediate consumption). Detailed subcontracting relations are also explored. With this information it is possible to construct input/output tables at the individual level (and, more important, at the aggregate level), splitting formal and informal sectors at both the product and the industry level.

6.129. Another feature of the questionnaire is that it includes a set of questions about the rhythm of activity over the previous year, by establishing the level of turnover month by month in which it distinguishes four options: 0=no activity; 1=low activity; 2=average activity; 3high activity. This takes into consideration the importance of seasonality in informal sector activities. To quantify these qualitative appraisals, a specific question captures the estimated minimum and maximum level of turnover (never taken *per se* but only to estimate the percentage gap between low and high months). This procedure provides an estimate of the annual aggregates of the informal units, which are not directly measurable without actually obtaining data for each month of the year. Empirical evidence based on African data shows that not taking into account these seasonality factors leads to a

substantial underestimation of informal units' mixed income (from a minimum of 5 per cent in Senegal to 39 per cent in Mali; Vescovo, 2007). A better option is to use a sample distributed throughout the year, as was done in Mongolia.

6.130. The questionnaire also include items designed for exploring the relations between the informal sector and the State, such as type of register, reasons for not being registered, level of corruption, compliance with mandatory regulations, and any difficulties and demands that informal sector entrepreneurs have addressed to the public authorities regarding specific policies to facilitate informal sector activities (simplifying registration procedures, scaling up micro-credit structures, targeting training programmes, improving access to equipment, market and information, adapting the tax system, etc.). These qualitative modules have strategic statistical properties. First, they are easier to collect than quantitative production data, so one can ensure that, even if the survey fails in its quantitative part, it will at least provide valuable information on these issues. Second, field experience shows that informal producers are usually keener to answer this type of question than provide the standard accounts data. This in turn can improve the response rate and the quality of answers to the quantitative part of the questionnaire (Herrera, Razafindrakoto and Roubaud, 2007).

6.131. Finally, inasmuch as it asks for information about each worker in the economic unit, together with their personal characteristics (relation with the owner of the enterprise, sex, age, ethnic group, education, training, experience, tenure, etc.), the informal sector survey phase can be considered as a matched enterprise/employee survey. This provides evidence as to how the relationship between employees and the economic units determines remuneration and employment flows, and this in turn facilitates the formulation of employment creation policies (for other studies conducted in formal enterprises, see Abowd and Kramarz, 1999). Studying the matching process between employer and employee, while taking into account the individual characteristics of employees and enterprises, is especially helpful in understanding the functioning of the labour market and industrial relations.

6.132. The survey on consumption (phase 3) of the 1-2-3 survey is basically an income and expenditure survey conducted on a subsample of households surveyed in the household survey phase. It is designed not only to determine the level and structure of household consumption but also to estimate the share of the informal sector in household consumption (and in household fixed capital formation). It uses accounts diaries covering two weeks (for daily expenses on food items) and retrospective modules for all others consumption categories (health, education, clothing, etc.), based on a reference period of six months to two years depending on the frequency of purchase. Account diaries provide a better measure of consumption and thus of poverty than does the retrospective questioning used by

the LSMS surveys,[38] but they take less account of seasonality than do traditional income and expenditure surveys, which use a reference period of a year.

6.133. In addition to the type, quantity, unit price and total value of each product separately, the questionnaire obtains information on the following items:

(a) the place where the product was purchased (or obtained), distinguishing between informal places of purchase (1. Self production; 2. Hawking, street; 3. Seller's home, small informal shop; 4. Market; 5. Other informal place of purchase) and formal places of purchase; 6. Supermarket; 7. Regular shops and stores; 8. Public sector, such as friendship stores, etc.; 9. Other formal places. While in most cases it is possible to identify clearly the place of purchase, the distinction between categories 5 and 9 requires information as to whether the provider keeps accounts and has registers or as to the number of persons working in the enterprise, which the respondent may not know. One way to minimize these difficulties is to increase the number of categories, as was done in Colombia (up to 39 types of place) and Morocco (42 types); another is to improve the training of interviewers.

(b) the reason each provider has been chosen, distinguishing (in the standard version) between: 1. Less expensive; 2. Better quality; 3. Access to credit, payment facilities; 4. Proximity; 5. Good relations; 6. Product not found elsewhere; 7. Other reason. This is a useful question for determining the behaviour of different types of household (according to level of wealth, sources of income etc.) in their decisions to buy a product in the formal or the informal sector.

(c) the country of origin of each product consumed, which is of particular relevance in countries where trade statistics are not reliable and where important flows of imports enter the country 'informally' (without having been registered by customs procedures); this is the case of many developing countries (and even developed countries affected by contraband in particular products, such as cigarettes).

1-2-3 surveys in Africa

6.134. The full 1-2-3 phase survey was first implemented in the capital of Cameroon, Yaoundé, in 1993 (Roubaud, 1994b), since when 1-2 or 1-2-3 phase surveys have been undertaken in Burundi, Comoros, Democratic Republic of Congo, Madagascar, Morocco and in ten countries of West Africa. Many countries have conducted the surveys at regular intervals, as national surveys, as surveys of

[38] A standard LSMS survey questionnaire considers a fixed and limited number (around 100) of consumption items, while a standard phase 3 questionnaire has a variable and much higher number of items at a very detailed level of disaggregation (4 or 5 digits classification), which provides much better estimates; for a more general comparison of these two types of survey for estimating consumption and monetary poverty, see Razafindrakoto and Roubaud, 2003.

the capital city or as urban surveys. In particular, phase 1 surveys were conducted in Madagascar every year from 1995 to 2004, and in 2006, 2010 and 2012, and phase 2 and 3 surveys approximately every three years since 1995. The 1-2-3 survey has contributed to the diffusion of labour force surveys in sub-Saharan Africa, where labour force surveys are still rare. Other survey programmes in Africa, such as general household surveys, LSMS surveys and income and expenditure surveys, have also started to adopt some of the useful properties of the 1-2-3 survey system (Razafindrakoto et al., 2009).

6.135. In these African countries the sample for phase 1 (household survey) was specifically designed to integrate the objectives of phases 2 and 3. Taking into account budgetary constraints, the sample size of the household survey phase was calculated to obtain a desired number of informal sector entrepreneurs in the informal sector survey phase. The stratification process was applied in each phase to optimize the sampling design for the informal sector measurement objectives. In practice this means that the sample frame of EAs (PSUs) was stratified at least by district, to take into account the unequal spatial distribution of informal sector density. Wherever possible, the sex of the head of household should be an additional stratification criterion at the second stage of the sampling frame of the first phase (i.e., for the selection of the households within EAs). For the informal sector survey phase, in all 1-2-3 surveys where informal units were derived from the household survey phase, stratification of informal units was implemented using the information obtained in the household survey phase. For example, in Madagascar and West Africa, 20 strata were defined by industrial sector (ten industries) and the status of the informal sector entrepreneur (employer and/or own-account worker). The unequal probabilities in each stratum were determined according to the number of informal units in the HS sample, over-representing those with the highest economic potential. The same type of stratification was applied in phase 3 at the household level (sex of head of household and household's income).

1-2-3 surveys in Latin America

6.136. While in Africa the informal sector was measured using establishment surveys prior to 1993, Latin America has probably had the most extensive regional experience in measuring the informal sector through household surveys. Mexico's National Institute to Statistics and Geography (INEGI) was the first to implement mixed surveys. Drawing on this experience, a few others national statistical offices in the region conducted mixed modular informal sector surveys early in the 1990s (El Salvador, 1992; Peru, 1992; Guatemala, 1993).

6.137. In Colombia 1-2-3 surveys were carried out in 2001-2002 (DANE, 2004) that benefited from the country's extensive and institutionalized experience in measuring employment in the informal sector (Villamizar, 2004). Phases 1 and 2 were conducted in urban areas and phase 3 at the national level. The survey

introduced two interesting methodological innovations. The first was the use of a dual frame (see paragraphs 6.72 to 6.82). While mobile entrepreneurs of informal units or within dwellings were selected from the mixed survey, the sample of informal units with premises was drawn from an area sampling frame, where the ultimate sampling unit was the establishment (Mayorga and Parra, 2004). The latter was a randomly stratified (four strata of establishment density) two-stage (EAs, establishment) sample, in which the EAs were selected in phase 1 in proportion to the establishment density (number of establishments in the enumeration area). The original design was chosen because the Colombian National Administrative Office of Statistics (DANE), based on the 2005 general census (see paragraphs 5.86 to 5.88), elaborated an updated master sample of EAs for enterprise surveys (DANE, 1999). The second innovation comes from the identification and qualification of 'grey zones', in which the sector (formal or informal) of the places where goods are purchased is not clear (Freire, 2004). For this purpose, apart from disaggregating the typology of place of purchase in phase 3, a complementary investigation was conducted to specify the formal or informal character of the dubious cases. The results from the 1-2-3 survey were used for the drawing up the country's national accounts. The 1-2-3 survey in Colombia has now been discontinued, but the yearly survey of micro-establishments continues, using an establishment-based approach (see paragraphs 5.89 to 5.92).

6.138. In Venezuela only phases 1 (national) and 2 (pilot in the capital city, Caracas) were conducted. The main methodological innovation was a special protocol to evaluate the reliability of using proxy respondents in the household survey phase (an approach shared by most HS) in order to identify the informal units to be surveyed in the phase 2 informal sector survey. For this purpose seven questions (on types of register, juridical status, accounts) were used to identify informal units. The questions were asked of both the regular respondents in the HS and the informal sector entrepreneurs. The result of this evaluation was positive, as the global index of consistency (same answer by the two respondents) was particularly high (generally more than 80 per cent, and often more than 90 per cent). Moreover, the non-response rate of the regular respondent in the HS for the new identifying questions was generally under 5 per cent (Lugo and Quiroz, 2004, pp. 167-194). This methodological exercise tends to prove that the identification of informal units through proxy respondents is feasible.

6.139. In Peru the INEI conducted its first mixed modular informal sector survey (1-2 survey) in 1993, mainly for the purpose of national accounts. The module was attached to the 1993/1994 national household survey and applied to all household businesses (non-professional) employing up to ten workers. A total of 4,300 household businesses were surveyed in the 15 largest metropolitan areas. In 2001/2002 a 1-2-3 survey was attached to the annual national household survey (ENAHO), an LSMS type of survey that INEI has been conducting since 1996. The specific informal sector questions were included in the household survey during the

last quarter of 2001. Phases 2 and 3 surveys were also included in the ENAHO questionnaire. Non- farm household businesses (informal sector survey phase) and households (phase 3) were exhaustively selected and surveyed. In 1993 only non-professional household businesses with ten workers or fewer were surveyed. In 2001 the coverage was extended to all non-farm household businesses, so as to be consistent with the regional definition of the informal sector (Hidalgo et al., 2004).

6.140. Since May 2003 the ENAHO has become a continuous survey (producing monthly indicators), with a panel component that provides data on seasonal variation and on the dynamics of the informal sector. In addition, since 2004 the annual household sample was increased to around 20,000 households and the number of informal units to almost 12,000. This provides for a more detailed disaggregation of industries. The increase in the sample of the informal sector survey was due to the inclusion of rural areas. The sample is no longer restricted to urban areas but covers all domains at the national level.

1-2-3 surveys in Asia

6.141. As part of an interregional project with ESCAP as the lead agency, the 1-2-3 survey methodology was implemented in four countries (Mongolia, Philippines, and Sri Lanka). Due to budgetary constraints the statistical operations in these countries was limited to the first two phases. The informal sector survey phase was not targeted only at informal units but at all unincorporated market enterprises, known as 'household unincorporated enterprises with at least some market production' (HUEMs). Unincorporated market enterprises may be formal or informal and the informal sector is a subset (Gennari et al., 2009). Enlarging the scope of the surveys provides an opportunity for different measures, according to data users' descriptive and analytical objectives.

6.142. For the household survey phase the four pilot countries used their regular labour force surveys, which were revised to include specific questions to identify unincorporated enterprises. For the informal sector survey phase the generic questionnaire was adapted to each national situation from the standard questionnaire of the 1-2-3 survey. In Mongolia the project took advantage of the new round of the labour force survey of a national sample of 7.000 households distributed over a full year, from July 2007 to June 2008. The field operations began in July 2007 for the HS and the informal sector survey phase in September. Estimations from previous surveys provided an approximate ratio of 0.6 HUEM per household, which led to a decision to include in the second phase all the HUEMs identified in the household survey phase (with an expected sample of 2.200 HUEM, of which 60 per cent were informal). In Vietnam the labour force survey was conducted in August 2007 with a national sample of 175.000 households, representative of the 64 provinces. A pilot informal sector survey was conducted in Hanoi (November 2007) and in Ho Chi Minh City (January 2008), the country's two largest cities (Cling et al., 2010). Again, all HUEMs identified in the HS were

selected (1.500 in Hanoi and 2.200 Ho Chi Minh City). From 2007 onwards informal sector measurement was institutionalized, and the HS scheme became a continuous survey that now includes specific questions designed to estimate informal sector employment and informal employment twice a year (in April and August). Also in 2009/2010 the informal sector survey was repeated in the two cities in both a cross-section and a panel survey.

6.143. In 2009 and 2010, the Asian Development Bank (ADB) launched a similar initiative by assisting national statistical offices to conduct 1-2 surveys in three Asian countries (Armenia, Bangladesh and Indonesia). One result of this initiative is the publication of a handbook which covers three major topics: implementing mixed survey, measuring and analysing informal employment, and estimating the contribution of the informal sector to GDP (ADB, 2011),

Mexico – National micro-establishment survey (ENAMIN)

6.144. Mexico's experience with mixed modular surveys on the informal sector began in 1987, and since 1992 its national micro-establishment survey (ENAMIN) has been conducted on a regular basis. The survey encompasses all non-farm activities without prejudging if they are formal or informal. For trade, transport, construction and services, it includes units with six or fewer workers (including the owner or manager); for manufacturing it includes units with 16 or fewer (including the 'head'). Mexico adopted only the two first stages of the 1-2-3 survey because an income and expenditure survey was already well established and it was difficult to introduce another survey, especially as there were doubts as to whether a sample designed to produce labour force measures was suitable for an income and expenditure survey. Moreover, there was a reluctance to overburden the Mexican labour force survey, which is a semi-panel continuous survey with each group of selected dwellings remaining in the sample for five quarters before being replaced by a new group. The concern was that a heavy survey could undermine the willingness of respondents to participate in the next round of the survey and increase the non-response rate to unacceptable levels.

6.145. The first phase of the mixed survey is the labour force survey, which has a questionnaire that already includes the necessary elements for identifying entrepreneurs in the informal sector, as well as employees and contributing family members. The questionnaire design has been improved since 2005 when the Encuesta Nacional de Ocupación y Empleo (ENOE) replaced the Encuesta Nacional de Empleo (ENE) as the Mexican labour force survey (see Chapter 4). The second phase, the ENAMIN, is directed at heads of non-farm micro-economic units (professionals included) operating either with or without premises, whether the business in question is the main or a secondary activity.

6.146. In addition to standard elements for national accounting, the ENAMIN questionnaire (see Appendix E3) includes questions on entry barriers, bureaucratic

obstacles and transition costs (De Soto, 1987), whether it is a survival strategy or a good business opportunity, etc. (Maloney, 1998). From 1992 to 2002 the sample (which was actually a subsample of entrepreneurs of micro-businesses taken from the labour force survey, or first phase) was restricted to urban areas. Since 2008 the ENAMIN sample covers the whole country.

6.147. An important issue in Mexico has been the high number of micro-entrepreneurs identified by ENAMIN in the first phase who, when interviewed directly, do not satisfy the requirements for inclusion. There is reason to suspect that this is not because of response errors due to proxy response in the first phase, but rather because of misreporting by entrepreneurs in the second phase who have good reasons to hide from any institution tracking their activities. In order to correct for the non-response rate, the ENAMIN set of weighting factors can be adjusted for the loss of observations, the assumption being that the non-responding units are similar to responding units. Another option is to maintain the weighting factors from the original labour force survey, given that sufficient information was obtained on them at the time. In Mexico the latter option was chosen, given that the observations missed are concentrated rather than evenly distributed. Estimates show that non-responding units had higher value added than responding units, further suggesting that non-responding units in the second phase have economic reasons to dodge ENAMIN's questions.

6.148. The ENAMIN questionnaire covers 15 topics:

- Verification of the information supplied in the first phase
- Migration condition
- Labour background
- Business start-up, how, when and why
- Type of accounts/business registration
- Premises
- Hours worked
- Data on employees and others helping in business chores
- Equipment/physical assets/investment
- Problems faced in conducting the business/activity
- Unexpected contingencies/business expenditure and incomes/sales
- Loans and financing
- Formal training (in order to improve business performance)
- Other support programmes
- Prospects/Expectations

6.149. Not all questions are asked of everyone; they depend, rather, on the sequence followed. The interview averages about an hour and eight minutes and is

held either at the business premises – if the business has premises – or in the household, ensuring that the answers are from the direct respondent.[39] The questions on income and expenditure are industry-specific (manufacturing, trade, construction, transport and services). If a respondent has more than one business in different locations, the instructions given to the field staff during training emphasize that if they are in the same industry and produce the same type of goods or services, the locations should all be considered as a single enterprise.

6.150. The most difficult variable on which to obtain accurate data is the enterprise's income. In order to improve the quality of responses about income, the questionnaire uses three strategies. First, it obtains information about the opportunity income, i.e., the income that the entrepreneur would accept to work for as a salaried employee. The entrepreneur is then asked about the income actually earned. The first question serves to create some psychological pressure on the entrepreneur to report the actual income more faithfully, the assumption being that if the first question is not asked the income reported will be lower. Secondly, it allows comparison of the income information with current expenditure and salaries paid during the same period, as these elements serve, by subtraction, to reconstruct the mixed income of the individual leading the activity. It is possible to obtain negative values, either because that actually is the case during the period of reference (a calendar month) or simply because the information on total sales is being under-reported. A final strategy is to obtain information about total current expenses over a year, by asking about the frequency of each type of expenditure (i.e., how many times a year the disbursement is made) together with the average monetary amount. This detailed picture of business expenditure makes it possible to infer the actual level of activity. Among the economic items collected, expenditure is less likely to be under-reported than total sales or incomes. The questionnaire then focuses on the three main products or services provided, their unit price, the quantity traded and the specific cost of trading them. From there a margin or coefficient can be obtained that can be applied to the year for total current expenditure, in case there is no information on total sales.

6.151. As described above, for each record in the ENAMIN survey there are three ways to estimate the micro-business owner's income. Adding to this any interest paid generates an estimate of the operating surplus of each economic unit. Then, with the addition of wages paid, the total value added can be reconstructed (eliminating taxes and subsidies). If one approach is affected by a partial non-response there is always another approach to try. If there is enough information to complete two or three approaches the rule of thumb in processing each register is to take the approach that gives the highest mixed income, for the basic assumption is that micro-entrepreneurs will always underestimate their income.

[39] Respondents are given a map of the country as well as a statistical agenda, to thank them for their willingness to collaborate with the survey. In most cases both gifts are appreciated.

6.152. The changes made in Mexico's ENOE (see Chapter 4) provide additional information about micro-businesses. The contextual information and auxiliary variables from the ENOE together with the information from the ENAMIN registers are useful in making imputations, especially with regard to those quantitative variables of economic significance.

6.153. Literature on these issues (Little & Rubin, 1986) classifies imputation techniques in two broad families: deterministic and probabilistic. In the first category the most common measures are: general averages, averages by class or conditional averages. In the case of the 2008 mixed modular wave the procedure followed was one of imputing averages by building classes of affinities. A unit in the first phase not interviewed in the second reflects the characteristics of the class of unit in ENAMIN where it could belong. In principle this is a simple procedure, lent some sophistication by the criteria and methods used to define what affinity' means.

6.154. An objection raised with respect to the deterministic method is that, if a data base is edited with imputation results, then variances will be underestimated and the nature of the variable distribution will be modified. Imputation procedures by means of averages significantly alter multi-modal distribution. To address this problem probabilistic methods are increasingly suggested, either those introducing a random component into the selection of a donor register (simple random hot deck method and random hot deck by classes method) or those introducing a stochastic component in a regression. This latter method may help to avoid alterations in the statistical precision needed to build intervals and conduct hypothesis testing, but sound modelling is required and, as any experienced econometrician knows, this cannot be guaranteed. For this reason INEGI opts for imputation procedures that are not dependent on modelling and do not modify the microdata based on these imputations. The deterministic imputation used with ENAMIN's rounds are concerned only with aggregates and are conducted to supply national accountants with economic aggregate variables that in turn become the starting point of national accountants' own procedures, as explained in Chapter 8.

6

The LSMS experience in measuring the informal sector

6.155. Even if it is not their main objective, the Living Standard Measurement Study (LSMS) surveys can be considered as a form of mixed modular informal sector survey. Launched by the World Bank, the LSMS programme was initially designed to measure and monitor poverty and inequality, but changes in internal priorities at the Bank towards modelling the microeconomic behaviour of households have led to changes in their structure. Based on relatively small samples on a national scale (1,600 households in Côte d'Ivoire), they have become multi-objective studies covering almost all aspects of the economic and domestic activities of households: consumption, income, agriculture, jobs, transfers, migration, education, health, anthropometry, etc. The first LSMS surveys

were undertaken in Côte d'Ivoire and Peru in 1985/86, since when they have been conducted in Bolivia, Ghana, Jamaica, Morocco, Mauritania, Pakistan, inter alia. In most of these countries the surveys were the first to take advantage of developments in microcomputers, and their data are therefore available in electronic format. They have been studied extensively and have given rise to publications on a wide variety of subjects, initiated by the team at the World Bank and universities associated with it. As a generic type, the LSMS survey is probably the most widespread household survey employed in the developing world.

6.156. In the LSMS survey questionnaires, informal sector and informal employment can potentially be tracked through the 'Employment' and 'Non-farm household business' (NFHB) modules. The 'Employment' module is conceived as a simplified labour force survey that collects information for core labour market indicators. For wage workers only detailed wage earnings are collected as an element of the characteristics of jobs, which can serve to measure the wage component of informal employment. Information on NFHB is collected in the corresponding module (the same process being followed for 'Farm household business'). Each household surveyed is asked if it has at least one non-farm business. If it has, the screened households are asked to answer questions about the business's characteristics, mainly to provide information on income from these activities. In some questionnaires up to four NFHBs per household are considered. The split between formal and informal NFHBs can be effected in the module if the module includes questions on the business's size or registration, but this is not systematically the case. From an informal sector survey perspective, the LSMS survey is a mixed modular survey in which phases 1 and 2 are integrated in the same questionnaire and households' economic units are selected with a probability of inclusion equal to 1.

6.157. Nevertheless, for informal sector measurement purposes the LSMS surveys have several shortcomings, as they are not designed for measuring the informal sector. Two weak points can be cited here: their limited reliability, as questions related to production and income are not formulated in a manner to capture the informal sector aggregates; and their partial subject-specific coverage, as some important indicators are not covered by the questionnaire (origin of inputs, destination of production, investment, capital, prices, difficulties and demands, etc.). Moreover, the link between jobs ('Employment' module corresponding to household survey phase) and economic units (NFHB module corresponding to informal sector survey phase) is not systematically established. Furthermore, it is not always possible to identify the informal status of household businesses – for instance, when the question on registration is not included, as was the case in the first LSMS surveys. An added problem is that the labour market indicators are not collected according to a definition that is consistent with international ILO standards on unemployment and employment. Given the complexity of obtaining

informal sector indicators,[40] from the LSMS surveys and given that the resulting data are only approximated, the LSMS can only be regarded as a second-best strategy for measuring informal sector and employment issues.

6.158. In spite of its shortcomings, however, the LSMS survey does present some advantages. First, in countries where no specific informal sector survey has been conducted, the LSMS survey is probably the best available source on informal sector and informal employment and related issues. Second, given its extensive module coverage and multipurpose objective, the LSMS survey can be used to explore the link between the informal sector and various issues such as health, education, migration, poverty etc. Finally, the LSMS survey could be used as the filter survey (household survey phase) for designing the sample for the informal sector survey phase (and possibly phase 3) of a specific mixed modular informal sector survey. In such a case the questionnaire should be revised and completed (for example on the basis of the 1-2-3 survey questionnaire, as was done in Peru's ENAHO survey and in Benin's EMICoV survey of household living conditions). But the risk is that such an option may 'overload' an already 'heavy survey' by adding new modules.

Brazil – Mixed independent informal survey

6.159. Brazil carries out a mixed independent informal survey every five years. The survey covers all non-agricultural economic units with fewer than five employees in urban areas. Registration was not used as a criterion to define the informal sector because registration is related to the legal status of the unit and not to its organizational characteristics; in addition it was not considered a stable criterion over time. The survey used an independent design because of the need to have good estimates of the informal sector by region, which the regular LFS could not guarantee as it did not consider informal sector density in its sample design. The PSUs within each stratum (geographical areas) were independently selected using systematic sampling with probabilities proportional to the number of dwellings. Within selected PSUs dwellings were listed to determine whether any household members were own-account workers or employers with up to five employees. The listing form (see Appendix E4) also obtained information on the kind of economic activity carried out. With this information a list of households with informal sector entrepreneurs was constructed by broad industrial group, from which a stratified sample was selected. In the case of households with more than one informal sector entrepreneur, priority was given to the least frequent activity in the list (generally an activity other than commerce and services), in order to increase the chances of including such activities in the sample. Once the

[40] The exercise conducted in Vietnam shows that it is necessary to manipulate no fewer than ten different files from the Vietnamese household living standard survey to compute an indicator as simple as informal sector employment, and up to 14 files for the calculation of income, notwithstanding the assumption that needs to be made to classify jobs as being in the informal sector (Razafindrakoto and Roubaud, 2007).

household was selected, information about all informal sector economic activities was obtained. Based on this list, 16 households were selected within each PSU selected, ensuring that the structure of economic activities within each PSU was kept. Although the time lag between the listing and the selection of households of informal sector entrepreneurs was only two months, there was still significant attrition.

6.160. The second phase questionnaire started with a 'mini' LFS applied to all household members ten years old and above, in order to obtain basic information about the household members as well as to identify with more precision the number of own-account informal workers and employers in units with up to five employees (see Appendix E5). It obtained information using different reference periods. For most items, such as the characteristics of the entrepreneur and of the economic unit, it used a short reference period of a month (October), given the lack of accounting registers. For items relating to investment and constraints, a long reference period (the previous year) was used. For items relating to access to credit the reference period was the previous three months, and for items relating to assistance received the previous five years. The questionnaires obtained information about: (a) characteristics of the informal sector entrepreneurs; (b) characteristics of the economic unit (whether there were associates, number of operating days and hours in a week and in the months of the year and, for each month of the reference year, whether the level of operation was high, normal or low and the reasons for the level of activity in the current reference month); (c) value of production, expenditure, assets, equipment, investments, credit, debts; (d) number of employees and their characteristics; and (e) other items, including type of clients, constraints, etc. (IBGE, 2006).

Turkey – Urban small unincorporated enterprises survey, 2000

6.161. The mixed independent survey covered urban areas and was carried out in the four quarters of 2000. It defined the informal sector as economic units in urban areas that are unincorporated enterprises (individual ownership or ordinary partnership), pay a lump-sum tax or none at all and employ fewer than ten persons in the non-agricultural sector. It used the same master sample as the household labour force survey, to which it added an adjacent cluster for each cluster (or PSU), in order to increase the sample and guarantee good representation of informal sector units. All households and fixed business premises in the selected clusters were targeted. Two lists were drawn up: one of fixed visible business premises, and one of households that carried out economic activities without a fixed location or at home. The two lists were thus mutually exclusive. During the household listing operation information was obtained for each household member six years of age and above (in the case of households) about their main and secondary economic activities, their social security coverage and the number of workers engaged in the economic unit (see the listing form in Appendix E6).

Information about payment of the lump-sum tax was not requested during the listing operation because of the possibility of response errors. The listing therefore identified potential informal sector entrepreneurs. Because of the high cost of the listing operation, it was carried out at the same time as the labour force survey and the same interviewers were used.

6.162. In the second phase of the mixed independent survey, all owners of unincorporated establishments and all household members six years of age and above who worked as employers or self-employed persons in a household-based or mobile enterprise, identified during the listing operation, were selected for interviewing in the second phase of the survey. Although all persons aged six and above were theoretically included, no one under 12 years old was found to be working as an own-account worker or an employer. A total of 25,666 informal sector entrepreneurs were grouped into four subsamples, each of which was covered in one of the four quarters. Two reference periods were used to obtain information: the previous year and previous month of operation (for home-based and mobile activities), and the previous month for fixed visible premises. Two forms were used. Form 1 obtained the household, employment and personal characteristics of all household members (for household-based and mobile activities) and of all household members of the entrepreneur's household (for fixed visible premises). Form 2 obtained information about the characteristics of the entrepreneur and of the business (including basic information about sales, expenditure and profit), the number of workers engaged and their working conditions, credit and loans, clients, relations with other units, problems, training, registration, migration, social protection and importance of income earned in household consumption (see Appendix E7). By means of in-depth questions addressed to the owners of the economic units, it was possible to identify economic units that satisfied the target definition of the informal sector (Turkish Statistical Institute, 2004).

Palestine – Independent informal sector survey, 2003

6.163. In 2003 a mixed independent survey was carried out in the West Bank, Gaza Strip and the part of the Jerusalem governorate that was annexed by Israel after the 1967 occupation. It was carried out in four quarters, covering the whole year, and used a dual sample frame.

6.164. A sample of informal establishments was selected using a one-stage stratified sampling design based on a list frame constructed from the establishment part of the 1997 general population, housing and establishment census. The strata were defined on the basis of geographical location and industry. Informal establishments were defined as those economic units employing fewer than six employees in the household sector and covered non-agricultural units

(manufacturing, contractors, domestic trade, services and transport, storage and communications).

6.165. At the same time a sample of households was selected from an area frame constructed from the same 1997 census, to identify informal sector entrepreneurs whose economic unit was not covered by the establishment list frame. For the first stage EAs were selected using a stratified design, according to geographical location and type of locality (urban, rural, camps). The listing operation in the selected areas was based on a short questionnaire to identify potential informal economic units, in both business premises and dwellings. For the second stage 20 households were selected in each of the 636 EAs selected.

6.166. Two separate questionnaires were prepared. One surveyed establishments covered in the establishment sample (see Appendix E8) and obtained information about the characteristics of the economic unit, number of workers, hours of work, earnings and other characteristics, demographic and labour market information on the entrepreneur, and information about the economic unit, including registration, type of ownership, bookkeeping practices, payment of taxes, etc., income and expenditure, assets and investments and constraints. The reference period was the quarter.

6.167. The other questionnaire was designed for households and contained two parts. The first part sought detailed demographic and labour market information about all household members. The second part (see Appendix E9) was a shorter version of the establishment questionnaire and sought information about the number of employees.

Chapter 7.
Tabulation, reporting and dissemination

Introduction

7.1. The objective of any statistical undertaking must be the preparation and release of statistics that are meaningful. The release of statistics is the stage of data production that is most directly concerned with meeting users' needs, and the necessary groundwork must be laid at an early stage of the survey design. As discussed in Chapter 3, planning a data collection operation entails determining,

in collaboration with the main users, the descriptive and analytical purposes or objectives that will be given priority. These purposes or objectives then set the broad context for the specific indicators, tabulations and reports to be produced, as well as the formats in which the statistics are to be disseminated.[41] During survey planning a statistical tabulation and dissemination plan should be formulated in discussions with the key stakeholders and users of the statistics.

7.2. Advances in computer technology and its widespread use are transforming the options available to tabulate, analyse and disseminate survey results. For producers of statistics the benefits include reducing the time required to process results, facilitating the production of a greater number and a wider variety of tabulations, both initially and later on demand, and creating more efficient forms of dissemination of the statistics. From the user's standpoint, microcomputers and electronic products for processing the survey observations and presenting the results have greatly increased the number and background of people using statistics. Because these developments are expanding the availability and potential uses of statistics, they are generating a new interest in, and increasing the demand for, statistical products and services from a widening range of users with different degrees of statistical know-how.

7.3. Producers of statistics need not only to release statistics that are relevant but also to provide this information in ways and formats that are easily accessible and understandable. Thus, parallel with the demand for new statistics and statistical products, there is a growing need to disseminate them together with the metadata necessary for their proper use and interpretation. In the case of statistics on the informal sector and informal employment, the metadata is all the more important because of the wide variety of meanings that these terms have been given. The adoption of the international standards and guidelines on these topics and their implementation at the national level may assist users of statistics to understand what the numbers represent.

7.4. National statistical offices need to disseminate statistics nationally as well as internationally. They can benefit in many ways from international dissemination and comparability of the statistics produced. Contributing to international compilations of statistics on informality demonstrates that the National statistical office prepares the statistics according to internationally recognized standards and methods. It is a signal of the quality of the statistics and it increases their value. National and international policy-makers, academics and the media consult international publications to understand how the national situation compares to that of other countries. Comparable statistics on informal employment can be used to develop indicators to monitor the performance of labour markets and as a supplement to the unemployment rate, which is still often the sole indicator used today. In summary, national statistical

[41] For example, the micro-business surveys in Mexico are prepared and conducted by INEGI and the Ministry of Labour. A formal agreement is reached by the two institutions to design the survey and produce tabulations. In this way the decision-makers of both are involved throughout the planning and dissemination process

offices benefit from producing information according to international standards. At the same time, they may opt to use a different approach for dissemination among national users. This chapter provides guidance on formats for tabulation, reporting and dissemination of statistics that contribute to the harmonization and comparability of statistics on informal employment and informal sector among countries. These tabulations may also serve as a starting point for discussion with national users on the type of statistics that they are interested in.

7.5. The successive sections in this chapter present: a review of information collected as part of a programme of statistics on the informal sector and informal employment; an introduction to some of the main variables and indicators on employment in the informal sector and informal employment that can be computed from the data collected data; suggestions for developing a national tabulation plan for statistics on informal employment and the informal sector; some examples of metadata that help to interpret statistics on informal employment and the informal sector; an examination of the main dissemination formats available to users (printed and computer-based products, including microdata) ; and the kind of promotion that is needed for a successful statistics dissemination programme.

Items of data collection

7.6. The data items to be collected on the informal sector and informal employment depend on the measurement objectives identified in consultation with users. Because each country's particular circumstances differ, this manual will provide only an illustrative list of possible data items. The list below reflects the measurement objectives specified in Chapter 3, based on the 15th ICLS resolution and on statistics prepared from national labour force surveys, mixed surveys and establishment surveys that cover the informal sector. Not all data items can be collected from all of these sources, as indicated in Table 3.2.[42]

1. Persons employed in the informal sector and/or in informal jobs

(a) Characteristics of persons

- Sex
- Age
- Marital status and household composition (e.g., with small children)
- Relationship to the reference person
- Migration status
- School attendance
- Educational attainment
- Kind of vocational training received
- Geographical location (e.g., urban/rural), etc.

[42] Data items which can be definition criteria are presented in italics.

(b) Characteristics of their jobs[43]

- Occupation
- *Status in employment*
- Hours (actually or usually) worked
- Whether main or secondary job
- Nature of employment (continuous, casual)
- *Type of work contract (written, oral)*
- Type of workplace (fixed visible premise, within dwelling, mobile)
- Duration of employment (as agreed, from starting date)
- *Entitlement to paid annual leave or sick leave and actual leave taken*
- *Entitlement to maternity or paternity leave and actual leave taken*
- *Entitlement to severance pay*
- Contribution to social security schemes
- Payment of income tax

(c) Remuneration received

- Wages and salaries in kind or in cash
- Bonuses, allowances
- Employers' and workers' social contributions
- Mixed income

2. Informal sector units

(a) Characteristics of economic units

- Geographical location (urban/rural, region)
- *Kind of economic activity*
- *Legal organization (unincorporated/corporation/household)*
- Type of economic organization (single or multi-establishment unit)
- Type of ownership (individual ownership, household ownership, business partnership with members of other households)
- Number of business partners from other households, if any;
- Type of premises *(*within the home, attached to dwelling, fixed visible location, independent of the dwelling, home or workplace of client, market/bazaar/trade fair stall, street, pavement or highway, no fixed visible premises, etc.)
- *Registration:* type of registration or licensing of units
- *Size* (number of persons/employees engaged in the production unit)

[43] To the extent possible the information should be collected for main and secondary jobs. Where the percentage of employed persons with secondary jobs is small or where constraints limit the collection of data, the information can be collected in respect of the main job.

(b) Characteristics of conditions of business operation

- Year of creation and evolution of unit
- Frequency of operation (perennial, seasonal, casual)
- Duration of operation during the reference period
- *Bookkeeping and accounting practices* (whether the unit keeps accounts and whether these are written and formal or are informal)
- Use and access to mobile phone and Internet
- Access to credit and finance (source of loans or financing: bank, cooperative, friends, family, etc., whether the owner has applied for a loan, whether a loan has been granted, sources of information for obtaining a loan, reasons for not applying for a loan, reasons for not being granted a loan, impact of loan on production)
- Type and number of customers, or proportion of output sold to different types of customer
- Extent and terms of work performed for other enterprises under subcontracting arrangements
- Sources of capital for the acquisition of fixed assets
- Origin of the main goods used for further processing or resale (importation, informal sector, other)
- Availability of public utilities at the place of work
- Participation in informal sector support programmes and kind of assistance received, if any
- Membership in associations or cooperatives of informal sector producers
- Problems faced in creating enterprises and constraints on their operation or expansion

(c) Expenditure

(c1) Compensation of employees

- Wages and salaries paid in cash during the reference period
- Value and form (piece rate, hourly rate, etc.) of payments in kind during the reference period
- Other payments to employees during the reference period
- Contributions by the employer to social security schemes on behalf of workers during the reference period

(c2) Purchase of goods and services

- Cost of raw materials and supplies, by product (quantity and total value)
- Purchase of services, by product (quantity and total value)
- Purchase of goods for resale, by product (quantity and total value);

- Other expenditure: fuel, gasoline, water, electricity, rental space, transport services, communication (telephone, Internet), interest paid on loans, repair and maintenance, taxes and insurance

(d) Value of sales during reference period

- Goods sold after transformation, by type of good
- Goods sold without transformation (i.e., trade), by type of good
- Services offered (such as rentals)

(e) Inventories (number and value by product, at the beginning and at the end of reference period)

- Inventories of raw materials and supplies
- Inventories of work in progress
- Inventories of finished goods for sale after transformation
- Inventories of finished goods for resale without transformation (i.e., trade)

(f) Estimated value of production for own consumption, by type of good

(g) Taxes paid and subsidies received, if relevant

(h) Fixed capital formation

- Value of fixed assets used for the business activity (at acquisition cost) at the beginning of the reference period, by asset
- Expenditure on new and used assets during the periods, by asset
- Assets sold or disposed of during the period, by asset
- Depreciation, by asset

It is important to specify if the asset is owned, rented or leased, borrowed free of charge or shared; the value items under this heading can be land, buildings and other structures, transport equipment, machinery and equipment, furniture, tools, animals, etc.

3. Informal sector entrepreneurs

(a) Characteristics of entrepreneur

- Sex
- Age
- Marital status and household composition
- Place or country of origin
- Period of residence in the present area
- Previous place of residence, if any

- Educational attainment
- Acquisition of skills needed to conduct the business (formal or informal training)

(b) Characteristics of employment conditions

- Present occupation
- Time spent at work in the business during the reference period
- Engagement in other economic activities
- Characteristics of other economic activities, if any
- Main source of income
- Reasons for working in the informal sector
- Bank account (whether the owner has a bank account)
- Characteristics of previous employment in or outside the informal sector, if any
- Plans for future business development or alternative employment

4. Members of households with informal sector entrepreneurs

- Sex
- Age
- Marital status and household composition
- Relationship to the reference person
- Activity status (e.g., employed, unemployed, not in the labour force)
- Employment characteristics (e.g., occupation, kind of economic activity, status in employment, etc.)
- Inside or outside the informal sector
- Inside or outside informal employment
- Amount and sources of income

Selected derived variables and indicators

7.7. The main derived variables need to be computed before the statistics are tabulated. Like the data collection items, these variables depend on the survey measurement objectives and on the needs of users identified during producer-user consultation meetings. Programmes need to be developed for the algorithms that compute the derived variables from the collected data items, in accordance with national and/or international definitions.

7.8. Some of the main derived variables for the informal sector and informal employment are listed below. To compute them, it may be necessary to use characteristics of the main and/or secondary jobs for the employed population: kind

of economic activity (agriculture, non-agriculture), status in employment (paid employment, self-employment), type of production unit (formal sector, informal sector and households); nature of the job (formal/informal). Other variables are required to produce statistics on the number of informal units by certain characteristics. The list below is not exhaustive; it should be adapted to national descriptive and analytical needs and should be a part of the broader set of derived variables to be computed from the survey. Statistics on informal sector and informal employment should not be processed, tabulated and disseminated in isolation but be consistent with the larger set of related social and economic statistics.

Employment in the informal sector and informal employment

7.9. The main derived variables for employment in the informal sector and informal employment can be calculated using the matrix shown in Table 7.1 below:[44]

Table 7.1.
Main derived variables on employment[45]

	Informal employment	Formal employment	Total employment
Total employment	A	B	C
Informal sector	D	E	F
Formal sector	G	H	I
Households	J	K	L
Employment in agriculture*	M**	N**	O**

** ISIC rev. 4, Section A (including forestry and fishing)*
*** Requires identification of criteria to distinguish between formal and informal jobs of employers, own-account workers and members of producer's cooperatives working in agriculture.*

Notes:

- Cell A = Persons/jobs in informal employment
- Cell D = Persons/jobs in informal employment in the informal sector
- Cell G and J = Persons/jobs in informal employment outside the informal sector
- Cell F = Employed persons/jobs in the informal sector
- Cell E = Persons/jobs in formal employment in the informal sector

[44] This assumes that the activity status variable (employed, unemployed, outside the labour force) has already been calculated for the relevant reference period

[45] In countries where the informal sector excludes agriculture, these variables cover non-agricultural jobs only.

Informal sector units

7.10. The main derived variables on informal sector units relate to the number of units and the workers engaged and to their output:

- Number of informal sector units
- Number of informal sector entrepreneurs (own-account workers and employers)
- Number of own-account informal sector enterprises
- Number of enterprises of informal employers
- Number of workers engaged in informal sector units
- Number of contributing family workers engaged in informal sector units
- Number of paid employees engaged in informal sector units
- Number of households with informal sector entrepreneurs
- Gross output
- Intermediate consumption
- Compensation of employees
- Operating surplus (mixed income)
- Total value added

7.11. Derived variables relating to the output of informal sector units required for national accounts need to be constructed by following a number of further steps described in Chapter 8 of this manual and in Chapter 4 of ADB, 2011.

7.12. The above list of derived variables is important for statistics to be disseminated as part of a broader set of indicators on the informal sector and on informal employment. These statistics present the absolute number of persons/jobs/units that form part of the informal sector and informal employment. Additional indicators are needed on their relative size in total employment/jobs/production units, etc. For this, a range of indicators also needs to be computed based on the information collected.

7.13. In the case of employment, it is possible to accomplish this with a few indicators (see Box 7.1.).

Box 7.1.
List of indicators on employment in the informal sector and informal employment

Indicator 1:	informal employment as a percentage of total employment	=	$\frac{A}{C}$	*100
Indicator 2:	informal sector employment as a percentage of total employment	=	$\frac{F}{C}$	*100
Indicator 3:	informal employment outside the informal sector as a percentage of total employment	=	$\frac{G,J}{C}$	*100
Indicator 4:	formal employment in the informal sector as a percentage of total employment	=	$\frac{E}{C}$	*100

7.14. The first two indicators compare the size of informal employment and of informal sector employment to total employment and give a general idea of the proportion of the employed population who either have informal jobs or work in informal enterprises. As noted above, the indicators are computed separately for employment in all kinds of economic activity. When employment in the informal sector excludes agriculture, the denominator too should exclude agriculture. Otherwise, to know whether informal employment and employment in the informal sector are concentrated in agriculture, the indicators may be computed separately for agriculture and non-agricultural employment.

7.15. Indicators 3 and 4 focus on the non-overlapping components of informal employment and informal sector employment.[46] Indicator 3 refers to the share of the employed population engaged in informal jobs outside the informal sector. These include employees holding informal jobs and working in formal enterprises, contributing family workers employed in formal enterprises, informal domestic workers, and persons engaged in the production of goods exclusively for own final use (if considered as employed). Depending on the relative size of each of these groups, it may be useful to present the indicator for each separately.

7.16. Indicator 4 refers to the proportion of people employed in the informal sector who hold formal jobs. These are employees in an informal sector enterprise whose employment relationship is subject to national labour legislation, income tax, social protection or entitlement to such protection, and certain employment benefits such as paid holidays or sick leave (see paragraph 2.79). While in some countries it is possible to find formal employees working in the informal sector, the numbers tend to be small. It is therefore important to ascertain whether an

[46] When employment in the informal sector excludes agriculture, the denominator should also exclude agriculture and the indicators refer to non-agricultural activities.

apparently high number of workers in this situation is a definitional issue, for example, because size is the only criterion used to define informal enterprises – because formal jobs are defined by a written contract, including informal written agreements, or because different registration criteria are used for the enterprise and the employees and are not linked in the national administrative record system.

7.17. Indicator 5 compares the size of informal sector employment and of informal employment.[47] The indicator is in the form of a ratio because the denominator does not necessarily contain the numerator; thus the ratio could be higher than 100. A value of 100 means that the size of informal sector employment and informal employment are the same; a value lower than 100 indicates that there are more persons holding informal jobs than persons employed in informal enterprises; a value higher than 100 would indicate the opposite. In most cases the value of the indicators will be below 100, but in theory at least values may be higher than 100 if there is a large number of employees with formal jobs who are also working in informal enterprises. In the few countries where such situations exist, the numbers tend to be small (see paragraph 7.16).

7.18. While the proposed indicators can be informative at an aggregate level, further disaggregation by sex, age group, urban/rural area and other characteristics such as status in employment (own-account workers, employers, employees, etc.) and by whether the employee is a paid domestic worker, etc. may be useful for employment analysis and to inform policy-making. Producers of statistics need to consult the users to determine which broader set of indicators they would like to have produced and disseminated. (See paragraphs 7.37 to 7.41 for an example of this kind of indicator dissemination programme.)

7.19. The proposed set of indicators can be calculated separately for men and women, by status in employment and by kinds of economic activity, assuming that countries collect statistics of the informal sector for all kinds of economic activity, including agriculture, for all workers. When countries exclude agriculture from employment in the informal sector, then the criteria to distinguish between formal and informal jobs of agricultural entrepreneurs (employers, own-account workers, members of producers' cooperatives) need to be determined at the national level. (Examples of approaches used by countries for this purpose are presented in paragraphs 4.44 to 4.56.) Countries that do not collect these data, because the informal employment in agriculture is likely to be small or where the agriculture sector itself is small, may exclude these categories of workers from the measure of informal employment when computing the proposed set of indicators. However, this may result in an underestimation of the relative size of informal employment as a component of total employment (indicator 1) and an overestimation of its size compared to informal sector employment (indicator 5).

[47] Again, the indicator is calculated for employment in all kinds of economic activity and therefore when the informal sector excludes agriculture, informal employment too should exclude agriculture.

7.20. The database *Women and men in the informal economy: A statistical picture* prepared by the ILO and WIEGO[48] is a useful guide to key sets of indicators relating to employment in the informal sector, informal employment outside the informal sector and total informal employment. The database contains statistics from 46 countries plus urban China that follow the dynamic template in Table 7.2 below. The indicators are the following:

1. Informal non-agricultural employment by component
2. Percentage of employment in the informal sector by status in employment
3. Percentage of informal non-agricultural employment by status in employment
4. Informal non-agricultural self-employment as a percentage of total non-agricultural self-employment by status in employment
5. Informal wage employment as a percentage of total wage employment, by type of employee
6. Percentage of informal non-agricultural employment outside the informal sector by type
7. Share of women in employment by type
8. Share of women in informal non-agricultural employment by component
9. Share of informal employment by kind of non-agricultural activity
10. Percentage of non-agricultural employment by sex, formal/informal nature and kind of economic activity

Table 7.2.
Template used by the ILO to compile and disseminate statistics on employment in the informal sector and informal employment (extract)

Country: **Year:**

Source:

	Total	Women	Men	Urban	Rural
1. Informal non-agricultural employment and its components (in '000s)					
Persons in informal employment					
Persons employed in the informal sector					
Persons in formal employment in the informal sector					
Persons in informal employment outside the informal sector					

[48] Available online at the ILO Database on labour statistics, LABORSTA (http://laborsta.ilo.org).

	Total	Women	Men	Urban	Rural
2. Informal non-agricultural employment and its components (as % of non-agricultural employment)					
Persons in informal employment					
Persons employed in the informal sector					
Persons in formal employment in the informal sector					
Persons in informal employment outside the informal sector					
3. Employment in the informal sector by status in employment (%)					
Employers, own-account workers and MPCs					
Contributing family workers					
Employees					
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
4. Informal non-agricultural employment by status in employment (%)					
Employers, own-account workers and MPCs					
Owners of informal sector enterprises					
Producers of goods exclusively for own final use					
Contributing family workers					
Employees					
Formal sector employees					
Informal sector employees					
Domestic workers employed by households					
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
5. Informal non-agricultural self-employment as % of total non-agricultural self-employment by status in employment					
Employers & members of producers' co-operatives (MPCs)					
Own-account workers					
Enterprise owners					
Total self-employment (incl. contributing family workers)					
6. Informal wage employment as % of total wage employment by type of employees					
Agricultural employees					
Non-agricultural employees					
Formal sector employees					
Informal sector employees					
Domestic workers employed by households					
Total employees					

	Total	Women	Men	Urban	Rural
7. Informal non-agricultural employment outside the informal sector by type (%)					
Producers of goods exclusively for own final use					
Contributing family workers: formal sector					
Employees					
Employees: formal sector					
Employees: domestic work					
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Tabulations

7.21. Once the initial data processing has been completed, the tabulation phase should begin. An initial detailed set of tabulations on informal sector and informal employment is required in order to provide a comprehensive view of the topics and exploit the information collected as fully as possible. At the same time it is important that the tabulation of these topics be integrated with related topics (e.g., total labour force) in the statistics tabulation programme of the general survey.

7.22. To assist the understanding and use of the statistics and the accuracy of interpretation it is important that detailed specifications accompany each table. These include providing information about the classification variables and their categories in the tables and the location of this information in the computer file with the observations and derived variables for each unit of observation. If derived numbers such as ratios and percentage distributions are tabulated, information on how they were derived should also be given.

7.23. A sample list of tabulations for statistics on informal sector and informal employment, as well as table layouts and categories of cross-classifying variables, is provided here as a guide to countries in their development of a tabulation plan. Each of the tabulations proposed below can be broken down into a set of separate tables, depending on national needs and circumstances. When preparing tabulations, attention should be given to the limitations that are imposed by sample size. Throughout this section, the titles of the tables follow the following format:

> <tabulation unit >
> **by** <variables corresponding to columns >,
> **according to** <variables corresponding to rows>.

Tabulation variables and possible categories are presented in Appendix B2.

Proposed tabulations

7.24. The suggested tabulation list is split into two broad sections. The first section includes 63 tables related to employment in the informal sector and informal employment. The second section includes 26 tables related to informal sector units. Each section is further subdivided into thematic groups. The suggested layout for tabulations is found in Appendix B1.

7.25. The tables with statistics on employment in the informal sector and on informal employment are divided into five thematic groups (Groups A to E) based on the specified components of the population. These tables will generally be an output of a labour force survey (or of a household survey with a labour force component). The first three groups of tables compare the characteristics of persons employed in the informal sector and of informal employment with the total population (Group A), persons employed (Group B) and employees (Group C). They provide a comprehensive view of similarities and differences between informality and the population and employment as a whole. The last two groups of tables, by focusing on persons in informal employment and in informal sector employment, provide detailed information about the socioeconomic characteristics and employment and working conditions within these two dimensions of employment.

7.26 The tables with statistics on informal sector units are organized in three thematic groups (Groups F to H), according to the unit of analysis. They refer to the tabulation of informal sector survey data, either from the second phase of mixed surveys or from establishment surveys.

GROUP A: Tabulations for the total population

7.27 This table provides a general summary of the distribution of the population by main labour force characteristics, including labour force status and, among the employed, kind of economic activity (agriculture/non-agriculture) and the formal/informal nature of their job.

Table A
Total population by sex and household composition, according to activity status (combining the formal/informal nature of the job and agriculture/non-agriculture activities) and age group

GROUP B: Tabulations for employed persons

7.28. This group of tables provides information on the distribution of the employed population by type of production unit, nature of the job and other main employment characteristics. It thus allows comparisons of the employment characteristics of persons inside and outside informal sector employment and informal employment.

Tables B.1 – B.3
Employed persons by status in employment and nature of the job, according to type of production unit (formal/informal), sex and type of area (urban/rural) in:

- all kinds of economic activity
- agriculture, forestry and fishing
- other kinds of economic activity

Table B.4
Employed persons by type of production unit and nature of the job, according to kind of economic activity and type of institutional unit

Tables B.5 – B.16
Employed persons by type of production unit and nature of the job, according to:

- type of institutional unit
- kind of economic activity
- occupation
- number of persons engaged in the production unit
- type of workplace
- number of usual hours of work per week
- number of hours actually worked during the reference week
- level of monthly employment-related income
- age group
- educational level
- method of training
- Duration of employment

and sex and type of area

Tables B.17-B.18
Employed persons wanting to work more hours by type of production unit and nature of the job, according to:

- reason for wanting to work more hours
- number of hours actually worked during the reference week

and sex and type of area

Table B.19
Employed persons looking for another job by type of production unit and nature of the job, according to reason for looking for another job, sex and type of area

GROUP C: Tabulations for employees

7.29. This group of tables provides information on the distribution of employees by type of production unit, nature of the job, selected employment conditions and basic personal and employment characteristics. It allows comparisons of the characteristics of employees inside and outside informal sector employment and informal employment.

Table C.1
Employees by type of production unit and nature of the job, according to conditions of employment, sex and type of area

Tables C.2 – C.7
Employees by type of production unit and nature of the job, according to:

- age group
- educational level
- method of training
- kind of economic activity
- occupation
- level of monthly earnings

and conditions of employment

GROUP D: Tabulations for persons in informal employment

7.30. This group of tables provides information on the personal characteristics and employment and working conditions of persons in informal employment.

Tables D.1 – D.7
Persons in informal employment by status in employment and sex, according to kind of economic activity and:

- educational level
- method of training
- number of persons engaged
- type of workplace
- duration of employment
- usual hours of work
- level of monthly employment-related income

Tables D.8 – D.11
Persons in informal employment by status in employment and sex, according to occupation and:

- educational level

- method of training
- usual hours of work
- level of monthly employment-related income

Tables D.12 – D.13
Persons in informal employment by status in employment and sex, according to type of workplace and:

- number of persons engaged
- duration of employment

Tables D.14 – D.15
Persons in informal employment by status in employment and sex, according to duration of employment,

- kind of economic activity
- occupation

and level of monthly employment-related income

Tables D.16 – D.18
Persons in informal employment by status in employment and sex, according to:

- education level, method of training
- usual hours of work
- type of workplace

and level of monthly employment-related income

GROUP E: Tabulations for persons employed in the informal sector

7.31. This group of tables provides information on the personal characteristics and employment and working conditions of persons in informal sector employment.

Tables E.1 – E.7
Persons employed in the informal sector by status in employment and sex, according to kind of economic activity and:

- educational level
- method of training
- number of persons engaged
- type of workplace
- duration of employment
- usual hours of work
- level of monthly employment-related income

Tables E.8 – E.11
Persons employed in the informal sector by status in employment and sex, according to occupation and:

- educational level
- method of training
- usual hours of work
- level of monthly employment-related income

Tables E.12 – E.13
Persons employed in the informal sector by status in employment and sex, according to type of workplace and:

- number of persons engaged
- duration of employment

Tables E.14 – E.18
Persons employed in the informal sector by status in employment and sex, according to:

- educational level, method of training
- duration of employment, kind of economic activity
- duration of employment, occupation
- usual hours of work
- type of workplace

and level of monthly employment-related income

GROUP F: Tabulations for informal sector units

7.32. This group of tables provides information on the characteristics of informal sector units.

Tables F.1 – F.17
Informal sector units by sex of the entrepreneur and status in employment, according to type of area (urban/rural) kind of economic activity and:

- type of ownership and number of partners, if any
- duration of operation
- main problems faced
- type of workplace
- number of persons engaged in the production unit and status in employment
- bookkeeping practices (when not a definition criterion)

- relation with other enterprises (independent or producing for other enterprises as subcontracting
- whether they obtained credit and type of credit
- number and type of customers
- membership of associations or cooperatives, by type
- availability of public utilities
- participation in support programmes by type
- number of employees engaged
- number of contributing family workers engaged
- range of value added during the reference period
- type of assets bought or rented during the reference period
- type of assets sold or leased during the reference period

Tables F.18
Average output sold, output produced, output produced for own final use, intermediate consumption, change in inventories and value added, per day of business operation during the reference period, by kind of economic activity and sex of the entrepreneur

GROUP G: Tabulations for informal sector entrepreneurs

7.33. This group of tables provides information on the personal characteristics and employment and working conditions of owners of informal sector units (employers and own-account workers).

Tables G.1 – G.13
Informal sector entrepreneurs by sex and status in employment, by

- age group
- level of education
- marital status and household composition
- place or country of origin
- whether he/she has a bank account
- member of a cooperative by type
- hours actually worked
- occupation
- whether he/she has other jobs and status in employment in other jobs
- main source of income
- plans for the future
- participation in training programmes by type (formal/informal)
- whether covered by social security scheme

GROUP H: Tabulations for members of households of informal sector entrepreneurs

7.34. This group of tables provides information on the personal characteristics and employment and working conditions of persons in informal sector employment.

Tables H.1 – H.5
Members of households with informal sector entrepreneurs by sex and activity status, according to:

- age group
- marital status and household composition
- type of production unit (if employed)
- nature of job (if employed)
- status in employment (if employed)

Metadata

7.35. It is essential to provide methodological and quality information on informal sector and informal employment statistics along with the statistics themselves. Metadata about the measurement methodology are needed to facilitate sharing, querying, interpreting and understanding the data so that the data points can be processed by computer software and the resulting statistics converted into information. Such metadata are useful to harmonize available national statistics as a basis for preparing global and regional estimates. Metadata about the quality of the data are needed to evaluate the validity of the statistics as a representation of the reality. For this, metadata should be provided in a consistent manner. With respect to statistics on the informal sector and informal employment, supplying full information on metadata is especially important because this field of statistics is relatively new and there are often significant differences in the criteria used to identify both the informal sector and informal employment, among countries and over time within countries.

7.36. Informal sector and informal employment statistics respond to a wide variety of needs and, so, depending on the intended use of the statistics, metadata serve different users and producer of statistics. Determining the minimum set of essential information that should accompany the statistics is not an easy task. During the past decade high priority has been placed on the development of general standards for the production, dissemination and exchange of metadata. The following initiatives have been developed to serve as working tools to assist in the preparation of metadata for each stage of a statistical project (data collection, data processing, tabulation and dissemination of statistical information):

- The *Data Documentation Initiative (DDI)* is an effort to set an international standard, based on an encoding language known as XML,

for the content, presentation, transmission and preservation of documents on statistics relevant to the social sciences and recently extended to economic statistics. It is designed to document statistical projects such as censuses, surveys and administrative registers. The DDI makes it possible to show on one screen the frequencies obtained from each variable in terms both of the aggregate of sample observations and of the aggregate expanded by the weighting factor of each observation (DDI, 2012).

- The *ISO/IEC 11179* standard builds a metadata register to direct the way metadata are presented and described. The main aim is to have a standard description to achieve a common understanding of statistics among different projects within and between organizations so that different waves of the same project can easily be compared over a span of time (ISO/IEC, 2012).
- The *Standard of Data and Metadata Exchange (SDMX)* supplies specifications for the exchange of data and metadata based on a common model of information. The standardized procedure for transferring information rests on the definition of formats for aggregated records and metadata, which clarify how data is constituted and structured. It defines structures for the transfer of data and metadata. By means of the SDMX many dimensions of data dissemination (including accessibility, timeliness, consistency, transparency and interoperability) can be improved (SDMX, 2009).
- The *Data and Metadata Reporting and Presentation Handbook*, prepared by the Organization for Economic Cooperation and Development (OECD), provides guidelines and recommendations on the dissemination of data and metadata. Recommendations were taken from various international organizations and national statistical offices in order to harmonize the formats used in documenting and describing statistical information (OECD, 2007).

Dissemination in Reports

7.37. The full reporting of survey results requires several different types of output. The aim of the first type, an advance report, is to release information on the survey as soon as possible. It consists of the production of basic cross-tabulations and a commentary on the main findings. A series of other reports not requiring prolonged or complex statistical analysis may also be produced at this stage. A second type involves the preparation of a comprehensive technical report on the survey methodology and operations and the precision or variability of the results. The third type of output provides a fuller account of the results and wider collaboration with others outside the statistical agency. It includes a

detailed report on the survey as well as details of publications tailored to specific categories of user. Each of these types of output is discussed below.

Advance release of results

7.38. A first report should present brief highlights of the main survey results together with any important information concerning the coverage and validity of the statistics. It may be based on an early review of the statistics prior to a full technical analysis. It may be released as a brief report and/or a press release. First stage reports can also highlight specific topics and be developed for particular users. The preparation of comments is important because it improves the likelihood that the interpretation of the basic findings both by the general public and by analysts will be correct.

Administrative/technical report

7.39. The second type of report should provide both a record of survey operations and information on the basic definitional and technical aspects of the statistics, i.e., the metadata. This information is important for the survey organization as well as to inform users about the statistics and how to use them correctly. Topics covered in this report should include:

- a brief description of the survey operation, the size and distribution of the sample, and the data collection procedures used;
- the basic concepts and definitions and other terms that underlie the statistics;
- the methodology used to collect the data and compile the statistics;
- information related to the validity of the results, such as sampling variances, level of non-response and other known sources of bias.

A copy of the questionnaire and of field manuals and manuals used for coding the data can be attached as an online resource (UN, 1984, p.60, and Statistics Canada, 2002, p.26).

Detailed survey reports

7.40. The third type of reporting should provide more elaborate and comprehensive reviews and analysis of the survey findings. It should include comparisons between demographic, socio-economic and geographical groups as well as current levels, along with changes that may have occurred since surveys covering previous periods. These analyses may be published as the main survey report. Generally, such publications comprise a summary, detailed sections on particular topics that often include summary tables and text, a technical appendix and detailed tables.

7.41. Specialized user-oriented reports are now being prepared more frequently to meet the growing demand for statistical information. Examples are monographs on a specific subject related to the survey results and policy-oriented analyses. Both types of report usually call for collaboration with individuals and units outside the statistical agency, to introduce other relevant information on the topic and to cover any political considerations that maybe involved. Some of these publications may be aimed at a non-technical audience and thus require simplified tables and charts, non-technical language and a design format that is different from the standard in statistical publications and more interesting.[49]

Computer-based Products

7.42. The growing availability of microcomputers and the Internet has created new options and opportunities for the dissemination of survey results. There are several advantages to disseminating statistics on the Internet or on compact discs rather than in printed form. Electronic products are a more efficient and less costly way of releasing survey results. Moreover, they potentially have a wider outreach and can greatly enlarge the user base and increase the demand for and use of statistics.

7.43. The reports suggested in the previous section can be made available on the Internet. In addition, unique computer products should be prepared. Statistical tables may be disseminated online, on an Internet website or on compact discs. Compact discs are especially useful in developing countries where there may be problems with access to Internet. Compact discs and the Internet make it possible to disseminate tables with a large amount of statistics supported by the sampling scheme, such as detailed results for geographical areas. Such products need to be formatted to allow users to meet their own statistical needs, or include software that make this possible.

7.44. Another important approach to disseminating statistics is the use of dynamic templates. A template standardizes the way information is disaggregated and published. It also provides information on what is covered and not covered in the survey. By identifying gaps in the statistics, it sets a direction for future steps that a country may take either to improve its coverage or to add items to its questionnaires. For these reasons the use of templates is an important way of harmonizing statistics among counties. Table 7.3 presented an example of a dynamic template that is used in the ILO to disseminate statistics on employment in the informal sector and informal employment.[50]

[49] A useful guide for developing and disseminating statistical publications for a non-technical audience is United Nations, 1997.

[50] National statistics based on this template are disseminated in the ILO database on labour statistics.

7.45. An advantage of a template over specific tabulations is that the temptation exists to push samples beyond their limit. Some cells in typical cross-tabulations do not have a large enough number of observations to offer sufficiently unbiased or precise estimates, and it is not easy to caution users about the robustness of statistics in each cell. In a template showing standard errors, coefficients of variation and intervals, however, the statistical precision of the statistics can be shown. Brazil and Mexico use this format to release information on the main indicators of their labour force surveys; symbols are shown in a column in the template[51] to indicate whether the variation is significant from one reference period to another.

7.46. Templates can also offer users the possibility of making interactive cross-tabulations if each disaggregation refers to the same universe or subset. Many countries find this so-called 'data cubes' application attractive because it enables a simple interaction with the database without requiring the use of SQL or other computer languages.

7.47. Individual 'anonymized' survey records may also be disseminated through Internet or compact discs as microdata sets The availability of microdata bases is especially promising as a way of meeting the growing need for social and economic statistics for planning and analysis within government and by researchers at academic and policy-oriented institutions, both within and outside the country. Furthermore, the preparation of microdata bases for public use reduces the need for the time-consuming 'on request' services of national statistical offices to serve users who require special tabulations.

7.48. Though the advantages of disseminating statistics in public-use microdata files are considerable, the confidentiality of respondents must be preserved when providing statistical results in this form. Countries that permit the preparation of such files generally have legislation restricting the release data in any form that might lead to the identification of individuals. To address this problem the options offered by Statistics Canada (Statistics Canada, 2002, pp. 18-19) for the release of individual data include:

- the production of public-use microdata files that have been screened to protect confidentiality, subject to approval by the Microdata Release Committee;
- the provision of a custom retrieval service through which external users can submit special requests for retrieval from the confidential microdata base, subject to prior screening for confidentiality before release;
- contracting with an external analyst to perform statistical analyses after having been sworn in under the Statistics Act.

[51] In the case of Mexico (INEGI, 2011, p. 123) ↑ means that a positive variation is statistically significant and that it is not explained by mere sample randomness, ↓ means a negative variation or decrease is statistically significant, and ↔ means that any variation in any direction is not statistically significant.

7.49. Files must be provided in a generic format that can be read by most statistical applications. In addition, basic documentation on the survey should be prepared and made available on the Web and in printed form to assist potential users in determining whether the data base will be useful for their needs and to inform users of the characteristics and limitations of the data. In its efforts to promote the accessibility of the Living Standards Measurement Surveys (LSMS) the World Bank posts microdata from national surveys on the Web along with documentation on the metadata for each survey. The documentation typically contains a description of the purpose of the survey, the questionnaires, the organization of the survey team, the raw data files, the constructed data fields, codes not contained in the questionnaire and other documents that are useful for analysing the data (see http://www.worldbank.org/lsms/country/datahome.html). Such information can be easily compiled if an administrative and technical report is prepared on the survey.

Promotional efforts

7.50. Public dissemination of results and the development of a broad group of users are important to justify and build support for the high cost of public resources that are used in national statistical programmes. Dissemination of statistics on informality can be a greater problem than that of other labour force statistics as the measurement is rarely regular. Though an important topic, limited resources are generally earmarked by national statistical offices for the production of regular statistics on informality, given the greater difficulty and possible higher sensitivity of the subject. There are nevertheless various ways in which the availability of statistics on informality can be made known. One of the most useful vehicles for doing so is the Internet site of the unit responsible for collecting and publishing the statistics, which should offer search and navigation tools as well as information on the statistics and on various statistics products. For example, the site may contain listings of statistics and product browsers by theme and subject as well as catalogues of documents.

7.51. Press materials, too, are used to publicize the release of basic survey results, in the form of catalogues and brochures announcing the publications and statistics that are available. Such information should be circulated widely to potential statistics users in both the public and the private sector. Promoting wide circulation may require developing a list of potential users.

7.52. Speeches by staff before various groups and organized conferences of users are another way of acquainting the public with available statistics and provide an opportunity to discuss their potential uses and limitations in statistical information. In addition, articles for newspapers, magazines and professional journals can provide more detailed analysis of survey results.

7.53. Promotion can be facilitated by information specialists located in the statistical organization or, more broadly, in government. If such specialists are available, it is important that the statisticians work closely with them in preparing the materials and promotional activities. As at other stages of any survey operation, a dialogue between statistics producers and media specialist users is essential.

Chapter 8.
Use of statistics on informal sector and informal employment for national accounts

Introduction

8.1. The concept and definitions of the informal sector and informal employment and the methods for their statistical measurement have been discussed in the earlier chapters of this manual. This chapter deals with the use of these statistics in the compilation of national accounts, to ensure that they reflect all economic activities in the country.

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8.2. One of the major uses of the statistics described in this manual is to quantify the contribution of the informal sector and of informal employment to the economy. There are two indicators that are widely used by analysts for this purpose: the share of economic activities undertaken in the informal sector in the total gross domestic product (GDP); and the share of informal employment in the total employment of the economy. Informal sector production as a share of GDP is likely to be a key variable as a measure of the importance and performance of the informal sector. Therefore, measuring informal sector production more exhaustively and accurately strengthens the quality of national accounts and helps to meet the needs of users of statistics in countries with a large number of household enterprises.

8.3. There is good reason to believe that the informal sector accounts for a substantial portion of production in many economies, especially in developing and transition countries. It is likely that the informal sector has not only grown in recent decades but has emerged in new guises in the wake of industrial restructuring, globalization and financial crises. The informal sector is of high policy interest in many parts of the world, firstly because it is linked directly and indirectly to the main development objectives, such as increased income, job creation and reduction of poverty, and secondly because the informal sector's characteristics are key factors in designing and monitoring targeted support and assistance programmes.

8.4. As explained in Chapter 2, the informal sector is an enterprise-based concept defined in terms of certain types of household enterprise. The System of National Accounts 1993 (1993 SNA) included a reference to the informal sector, in the context of sub-sectoring the household sector, but it did not amplify on the definition or provide guidance on its application to national accounting. The System of National Accounts 2008 (2008 SNA), however, acknowledges the importance of the informal sector, particularly in the developing and transition economies, and includes a separate chapter entitled 'Informal aspects of the economy' (UN et al, 2009, Chapter 25) dealing with issues relating to the treatment of the informal sector in national accounts. It recognized that effective measurement of the informal sector would improve the scope of national accounts and thus ensure the exhaustive measurement of the GDP.

8.5. The defining criteria for the informal sector are not applied uniformly to all countries because their implementation depends upon national registration practices and the issue of size (employment). As a consequence, present national estimates of informal sector production as a share of GDP suffer from problems of comparability. Continued interest from countries with a significant number of household enterprises should improve the situation. It is expected that the preparation of reliable and, in the long run, comparable measures of the informal sector will result in reliable measurement of household production and generation of income.

8.6. The purpose of this chapter is twofold: to inform survey statisticians of the data required for compiling national accounts compilation and measuring the GDP exhaustively; and to raise awareness among national accountants of the value of using direct survey data on the informal segment of the economy. On one hand, national accounts compilers often complain about the lack of reliable data on the productive activities of the small and micro unincorporated enterprises while, on the other, survey statisticians complain that data that have been collected on the informal sector and informal employment are seldom used in compiling national accounts.

8.7. The successive sections of the chapter discuss the need for reliable statistics on the productive activities of informal sector enterprises for measuring GDP exhaustively and balancing the supply and use of goods and services produced in the economy, describe the informal sector and informal employment in the 2008 SNA, discuss the use of informal sector statistics for national accounts purposes, describe briefly the use of survey data on the informal sector for estimating national accounts aggregates, and present some illustrative country experiences in quantifying the contribution of the informal sector to national accounts.

Need to improve the identification of activities of informal sector units

8.8. Information about informal sector activities is vital to planners and policy-makers in devising programmes for sustainable development and devising social security measures for the welfare of informal sector workers. It is also needed to ensure complete coverage of the economy in GDP estimates, as well as to help to balance balancing the supply-use table of goods and services produced and used in the economy during a given accounting period.

Exhaustive coverage of the GDP

8.9. As explained in Chapter 2 the informal sector manifests itself in different ways in different countries. Its size and significance may depend on the country's social structures, national and local economic policies and government enforcement of labour legislation. People's motives for participating in the informal sector range from a pure survival strategy to a desire for flexible work arrangements. The sector can encompass practically every kind of economic activity and household enterprise with very different methods of operation. A large number of informal sector units carry out their activities without a fixed location, in living quarters and in small makeshift shops or workshops. Informal sector activities range from street vending, shoe shining and other activities that require easily acquired skills and little or no capital to activities that involve a certain amount of investment in equipment or a certain level of expertise, such as tailoring, car repair and professional services. Many informal sector enterprises are operated by an individual working alone, as a self-employed entrepreneur or with

the help of unpaid family members; other informal entrepreneurs may engage paid workers.

8.10. With the traditional statistical approach to establishment surveys, which may rely on addresses provided by the business register or list-based sampling frames, these units are often overlooked or ignored and therefore not included in the statistical coverage. In this situation the contribution of informal units to the GDP remains either unaccounted for or else estimated on the basis of certain norms and value judgements. This naturally affects the quality and coverage of the national accounts aggregates. It is thus important that an effort be made to measure the activities of informal enterprises statistically, with a view to ensuring exhaustive coverage of all economic activities undertaken in an economy and to help to quantify the contribution and structure of the informal sector.

8.11. Methods of collecting data on the informal sector and the practices of various countries have been described in the earlier chapters of this manual, along with a discussion of their advantages and disadvantages. As noted in the earlier chapters, there is no single method that is appropriate for all countries, and the choice of method for measuring the informal sector should depend on such circumstances as the capability of the country's statistical system, its measurement objectives, users' needs, the available information about the sector (kind of economic activity, geographical location, etc.) and the availability of resources.

Designing measures to balance supply and use of goods and services

8.12. Goods and services produced in an economy during a reference period are used for intermediate consumption, final consumption, capital formation or export. The supply of goods and services produced in and imported from an economy during an accounting period should be equal to the sum of these uses (intermediate consumption, final consumption, capital formation and exports). However, in practice the statistics on the supply and use of goods and services seldom balance. The main reason for this is the use of different data sources for compiling estimates of production and uses of goods and services during a given accounting period. For developing economies, the omission or inadequate measurement of the economic activities of small and informal sector enterprises is often one of the main reasons for this statistical imbalance in the supply and use of goods and services.

8.13. Goods and services produced by informal sector enterprises are traded on markets and are used by others. The use of these goods and services is captured when collecting information to compile expenditure aggregates. However, the production of goods and services by informal sector enterprises is seldom captured completely by list-based production surveys and thus contributes to the imbalance between supply-side and use-side measurements. As a statistical tool, a balanced

supply and use table is used by national accountants for benchmarking national accounts macro-economic aggregates and for preparing input-output transaction tables that have wide-ranging applications for planning and policy-making. Complete coverage of goods and services produced by informal sector enterprises is thus very helpful in balancing the supply and use of goods and services.

8.14. The preparation of national accounts involves reconciling statistics from different sources. Efforts to reconcile supply and use statistics when preparing national accounts have led to recognition of the importance of the informal sector. The production of a commodity, as measured in surveys of formal enterprises, has been found to be far less than consumption of the commodity as measured by expenditure surveys.

Informal sector and informal employment in the 2008 SNA

8.15. To promote the international standards for compiling national accounts as an analytical tool and the international reporting of national accounts statistics on a comparable basis, the United Nations Statistical Commission has developed the System of National Accounts (SNA). The SNA is a statistical framework that provides a comprehensive, consistent and flexible set of macro-economic accounts to be used for policy-making, analysis and research. The first version of the SNA was published in 1953 and revised by the United Nations in 1968. To bring the accounts into line with economic developments, advances in methodological research and users' needs, comprehensive revisions of the SNA recommendations were carried out in 1993 and 2008 under the auspices of the Inter--Secretariat Working Group on National Accounts comprising the Commission of the European Communities (Eurostat), the International Monetary Fund, Organisation for Economic Cooperation and Development, the United Nations and the World Bank. The United Nations Statistical Commission adopted the 2008 SNA at its thirty-ninth session in 2008 and encouraged all countries to compile and report their national accounts on the basis of the 2008 SNA recommendations as soon as possible.

8.16. The fundamental units for measuring production, consumption and accumulation identified in the 2008 SNA are economic units that are capable of owning assets and incurring liabilities on their own behalf. These units can engage in the full range of transactions with other entities, and they are called 'institutional units'. Institutional units are classified under different 'institutional sectors' on the basis of their principal functions, behaviour and objectives. The resident institutional units that make up the total national economy are grouped into five mutually exclusive institutional sectors: 'non-financial corporations', 'financial corporations', 'general government', 'non-profit institutions serving

households (NPISHs)' and the 'household sector'. As explained from paragraph 8.21 onwards, the informal sector is a subset of the household institutional sector.

8.17. It is important to note that there are differences in the meaning and coverage of certain terms when used in the 2008 SNA and when used in this manual. Table 8.1 below provides clarification on the usage of such terms.

Table 8.1.
Comparison between the use of terms in the SNA and in ICLS/ILO

Term (1)	SNA usage (2)	ICLS/ILO usage (3)	Comment (4)
Sector	Institutional sectors that group together similar institutional units on the basis of their principal functions, behaviour and objectives (*2008 SNA,* paragraph 4.16)	Group of production units.	The 2008 SNA uses 'sector' for the five institutional sectors defined in UN et al., 2009, paragraph 4.24; in the context of the SNA, the informal sector is a subsector of the household sector, see paragraph 2.92 of this manual.
Market producers	Producers who sell or barter *most or all* of their output (*2008 SNA,* paragraph 6.133)	Producers who sell or barter *some or all* of their output (15th ICLS resolution, paragraph 14). Thus, informal sector units may not all be market producers as defined in the 2008 SNA.	The ICLS chose the term 'market producers' for a wider concept than that of the SNA because units engaged **solely** in production for own final use differ in their behaviour and objectives from those producing **some or all** for the market.
Formal sector	Not defined in the *2008 SNA.*	Comprises corporations (including quasi-corporations), government units, non-profit institutions and household unincorporated enterprises producing goods and services for sale or barter that are not included in the informal sector	The 2008 SNA does not use the formal/informal dichotomy in terms of either sectors or production units.

Term (1)	SNA usage (2)	ICLS/ILO usage (3)	Comment (4)
House-holds	Households have various functions (as defined in Chapters 4 and 24 of the 2008 SNA): as producers, as providers of labour and as consumers of goods and services. Households engaged in production for own final use, sale or barter are considered unincorporated enterprises.	Households as providers of labour and households producing goods and services exclusively for own final use.	The term 'households' has a broader meaning in the SNA than when used by ICLS. Besides informal sector enterprises it includes unincorporated enterprises treated as formal enterprises, plus unincorporated enterprises producing for own final use, plus households with no unincorporated enterprises. plus institutional households.
Enterprise	An institutional unit in its capacity as a producer of goods and services. (*2008 SNA,* paragraph 5.1)	Any unit engaged in the production of goods and services for sale or barter.	The ILO definition includes only production units with employment, separating production units as 'enterprises' from 'households'.

Informal sector in the 2008 SNA

8.18. The informal sector is broadly characterized as consisting of units engaged in the production of goods or services, with the primary objective of generating employment and incomes. These units typically operate with a weak (formal) organization, with little or no formal division between labour and capital as factors of production, and on a small scale. Labour relations, where they exist, are based mostly on casual employment, kinship or personal and social relations rather than on contractual arrangements with formal guarantees.

8.19. The informal sector is defined by the 15th ICLS resolution (ILO, 1993a) according to the types of production unit that it is composed of. It consists of household unincorporated enterprises with at least some production for sale or barter, which operate within the production boundary of the SNA. Informal sector units are divided into two subsets:

(a) *Informal own-account enterprises.* These are household enterprises owned and operated by own-account workers, either alone or in partnership with members of the same or other households, which may employ contributing family workers and employees on an occasional basis but do not employ employees on a continuous basis. Depending on national circumstances, the term 'informal' is applied either to all own-account enterprises or only to those that are not registered under relevant provisions of national legislation.

(b) *Enterprises of informal employers.* These are household enterprises owned and operated by employers, either alone or in partnership with members of the same or other households, which employ one or more employees on a continuous basis. Enterprises may be considered informal if they meet one or more of the following criteria: (a) small size of the enterprise in terms of employment, (b) non-registration of the enterprise, and (c) non-registration of its employees.

8.20. Household unincorporated enterprises as defined in the 2008 SNA do not constitute legal entities independently of the household members who own them. These enterprises do not own assets or incur liabilities on their own behalf independently of their owner, and they therefore do not constitute separate institutional units. Any capital raised by the owner for the activities of the unincorporated enterprise is treated as his/her liability. Expenditure incurred for the activities of the unincorporated enterprise is often indistinguishable from household expenditure. Moreover, fixed assets such as a vehicle and the premises where the activity is carried out may be used for other purposes. As a result, data on transactions relating to the productive activities of the unincorporated enterprise are not available separately for the compilation of a complete set of accounts that includes both the financial and the non-financial assets engaged. The production activity of the household is therefore listed by the SNA as an unincorporated enterprise in the households sector rather than as a quasi-corporation in one of the corporations sectors.

8.21. Informal sector production units have the characteristic features of household enterprises and are therefore situated in the household institutional sector as a subset. In the 15th ICLS resolution the household unincorporated enterprises of the SNA are subdivided into three segments: (a) those constituting the informal sector, (b) those treated as formal on the basis of their size and/or registration, and (c) those producing goods and services solely for own final use.

8.22. The household institutional sector of the 2008 SNA is made up as follows:

SNA household institutional sector units = informal sector enterprises

plus
household unincorporated enterprises in the formal sector
plus
household unincorporated enterprises producing exclusively for own final use
plus
households with no unincorporated enterprises
plus
institutional households

The delineation of informal sector units in terms of SNA institutional sectors is shown in Table 8.2.

Table 8.2.
Informal sector units within the framework of the SNA

<table>
<tr><th colspan="7">SNA institutional sectors</th></tr>
<tr><th>General government</th><th>Corporations (financial and non-financial)</th><th colspan="4">Households</th><th>NPISH</th></tr>
<tr><td rowspan="2"></td><td rowspan="2"></td><td rowspan="2">Households with unincorporated enterprises that are registered and/or have more than a given number of employees (belong to the formal sector)</td><td colspan="2">Households with unincorporated enterprises that are not registered and/or have fewer than a given number of employees (Informal sector enterprises)</td><td rowspan="2">Households with unincorporated enterprises producing exclusively for own final use subsistence farming owner-occupied housing services, and domestic and personal services produced by paid staff</td><td rowspan="2">Institutional households such as prisons, religious orders and retirement homes, etc.</td><td rowspan="2">Households with no unincorporated enterprises</td></tr>
<tr><td>Informal own-account enterprises (having no employees on a regular basis)</td><td>Enterprises of informal employers</td></tr>
</table>

Informal sector as a subset of the household sector

8.23. From the delineation of the informal sector units within the SNA institutional sectors (see paragraph 8.21), it is clear that the informal sector is a subset of the household institutional sector, comprising households that contain (a) informal own-account enterprises (having no employee on a regular basis) and (b) enterprises of informal employers.

8.24. To compile the SNA set of accounts for the household institutional sector, information is also required on the remaining parts of the sector: (a) household unincorporated enterprises in the formal sector (i.e., households containing an unincorporated enterprise that is registered and/or has more than given number of employees), (b) household unincorporated enterprises producing exclusively for own final use (i.e., households containing an unincorporated enterprise producing goods exclusively for own final use, such as subsistence farming or production of other goods, owner-occupied housing services, and domestic and personal services produced by paid staff), (c) households with no unincorporated enterprises, and (d) institutional households (such as prisons, religious orders, retirement homes, etc.).

8.25. As far as possible information should be available on all parts of the household institutional sector at the same point in time, as this facilitates the inclusion of the informal sector when compiling the SNA sequence of accounts. Even if reliable information is available only on the informal sector part of the household sector, the national accounts compilers should nevertheless endeavour to use this instead of

resorting to norms and ratios or residual approaches. Using the available statistics on the informal sector in the compilation of national accounts encourages statisticians to produce them on a more comprehensive and regular basis.

Contribution of informal employment

8.26. Informal employment, as defined by the 17th ICLS guidelines adopted in 2003, refers to jobs rather than to the economic units discussed above. This concept covers employment in the informal sector as well as informal employment in formal enterprises and in households producing exclusively for own final use; it excludes formal employment in the informal sector (see Figure 2.1). Depending on the available information, informal jobs can be found in most institutional sectors. In the household sector, for example, formal employers may not declare all their employees; in non-financial corporations and financial corporations, employees may be hired directly without a formal contract or indirectly through subcontracting arrangements; and the Government and the NPISH sectors may also employ persons on an informal basis.

8.27. The measurement of informal employment that is not in the informal sector may provide a basis for estimating underground production by industries in institutional sectors other than the household sector. However, in estimating underground production based on informal employment in the financial and non-financial corporations sector, care should be taken to avoid duplication, because the output of these sectors is generally based on information from account books whereas the total output is the product of all the labour employed, including undeclared informal employment. The information on the output and intermediate consumption is rarely available by formal and informal employment.

8.28. Having measured the production of informal enterprises it is possible to estimate labour productivity for the informal sector, as the entire output may be attributed to the employment in this sector. Estimating the labour productivity of informal employment is not that straightforward, however, as informal employment is observed both in the informal and formal sectors and as it is not possible to attribute production in the relevant establishments exclusively to informal employment, even though rough estimates may be made with the help of labour input matrices. Data sources used for preparing labour input matrices are discussed in paragraphs 8.41 et seq.

Statistics on the informal sector for national accounts

8.29. In the SNA framework, only production and generation of income accounts can be compiled for informal enterprises. No other accounts can be compiled because of the impossibility of identifying which income flows, consumption and capital formations relate solely to the activity of informal enterprises, as opposed to the household to which they belong.

8.30. The 2008 SNA recommends that, where possible, two supplementary tables relating to the informal sector be prepared, one covering production and the generation of income and one covering employment. These can be prepared either by using available statistics on the activities of the informal sector enterprises (direct method) or on the basis of certain norms and ratios (indirect method). These methods are discussed in the following section.

Direct estimates

8.31. The SNA proposes three approaches to the measurement of gross domestic product (UN et al., 2009, paragraphs 2.138 to 2.140):

(a) *Production approach*. GDP is equal to the sum of total output minus total intermediate consumption, plus taxes minus subsidies on products not included in the value of output. In other words, it is the sum of the gross value added by all resident producers (all institutional sectors) plus all taxes minus subsidies on products.

(b) *Expenditure approach*: GDP is equal to final consumption expenditure, plus gross capital formation, plus exports, minus imports. In other words, it is the sum of final consumption by households, non-profit institutions and government plus gross capital formation by all institutional sectors plus changes in inventories plus exports minus imports.

(c) *Income approach*: GDP is equal to compensation of employees, plus gross mixed income, plus gross operating surplus, plus taxes minus subsidies on production and imports.

8.32. Theoretically, for any economy, estimates of the GDP derived from the three approaches should be the same, but in practice it is seldom so, mainly because of the use of different data sources for compiling them. In countries where detailed statistics are scarce, the method most often used is a mix of the production and expenditure approaches.

8.33. The production approach is the basic and perhaps the only approach that can be used by many developing countries. Even if countries do not have all the statistics required, the production approach is preferable to the income approach and the expenditure approach, because at least some statistics on production by kind of economic activity, albeit not exhaustive, are generally available from administrative data sources. Statistics on the income of informal sector enterprises are less usual and generally less reliable.

8.34. For direct measurement of production and employment in informal enterprises by economic activity, which is needed for the production approach, statistics are required on items such as output, intermediate consumption and change in stocks, and details of these items should be collected, if possible.

In addition to data on the quantity and value of output produced, data on output sold, output used for own final use and output used for barter are desirable; for intermediate consumption data are useful on the quantity and value of raw materials, fuel, water, rental charges, etc.; and for stocks data should be sought on the opening and closing stocks. This information may be collected using the survey methods as described in the earlier chapters of this manual. The minimum statistical data needed on the informal sector for national accounting purposes are shown in Table 8.3 below.

Table 8.3.
Minimum and desirable data on the informal sector and informal employment to be collected and reported for national accounting purposes

Account		Data items to be collected from informal sector enterprises	Priority of data for national accounts	Reporting recommended in 2008 SNA
Production account	$	*Value of output (including own final use)*	**	✓
		■ Value of sales/shipment of goods and services produced	**	
		■ Quantity of produced goods and services sold/shipped	*	
		■ Value of production for own final used, barter, etc.	**	
		■ Value of shipment/sales of all goods and services purchased for resale in the same condition as received	**	
	$	■ Value of own-account fixed assets		
	$	*Value of intermediate consumption*	**	✓
		■ Cost of raw materials and supplies except gas, fuel and electricity	**	
		■ Quantity of raw materials and supplies purchased	*	
		■ Cost of gas, fuel and electricity purchased	**	
		■ Purchase of services (rental of buildings, machinery and vehicles, maintenance, transport, insurance, licence fees, etc.)	**	
		■ Purchase of goods and services for resale in the same condition as received	**	
		Changes in inventories	**	
		■ Fuels, materials and supplies		
		■ Finished and semi-finished goods		
		■ Goods purchased for resale in the same condition as received		
	$	Value added	**	✓

Account		Data items to be collected from informal sector enterprises	Priority of data for national accounts	Reporting recommended in 2008 SNA
Generation of income account, allocation of primary income account	$	*Compensation of employees* (Wages and salaries in cash and in kind, bonuses, allowances)	**	✓
		Taxes on production and imports	**	
	$	Gross mixed income	**	✓
	$	Consumption of fixed capital	**	✓
	$	Net mixed income	**	✓
Employment		*Number of jobs. showing:*	**	✓
		(a) Employment in the informal sector	**	✓
		■ formal jobs (though less likely)	**	✓
		■ informal jobs	**	✓
		(b) Informal employment outside the informal sector	**	✓
		■ in the formal sector	**	✓
		■ in other household unincorporated enterprises	**	✓

* Desirable data set

** Minimum recommended data set for national accounting purposes

$ Derived data set –often derived from other collected data sets

Indirect estimates

8.35. As informal sector enterprises do not normally keep records of their economic activities, it is not possible to consult them when collecting information about their output or intermediate consumption. As a result it is very difficult to estimate value added precisely for informal enterprises. When the quality of responses is expected to be too poor, an indirect method may be used to estimate the contribution of the informal sector.

8.36. The indirect method described here, known as the 'labour input method' in statistical literature, involves three steps: (a) obtaining estimates of labour input in the informal sector by economic activity from a household survey (generally the labour force survey); (b) deriving estimates of output and value added per unit of labour input with the same economic activity breakdown for enterprises belonging to the informal sector; and (c) multiplying the labour input estimates by the per unit productivity norm to obtain the output and value added of the informal sector by economic activity. In other words, this approach depends on access to statistics from establishment surveys and/or labour force surveys to establish the labour input matrix.

8.37. Conducting annual surveys on a regular basis for the measurement of informal sector enterprises is both resource intensive and time consuming. Together with the corresponding estimate of the input, the per unit value added estimate derived from such surveys may be re-used for later periods after making appropriate adjustments for inflation, in order to derive indirect estimates for the informal sector in subsequent years until a new survey has been conducted. At the core of the indirect method is the availability of the labour input matrix and the labour productivity norm by economic activity. A brief description of the preparation of a labour input matrix is therefore presented in the following section.

Labour input matrix

8.38. The measurement of labour productivity for national accounts purposes requires the measurement of labour inputs in terms of employment, i.e., the number of jobs and total hours worked in various economic activities in the economy during an accounting period (UN et al., 2009, Chapter 19). To assess the contribution of the informal sector and other components of informal employment to GDP, employment and production statistics are needed that are consistent. Following the recommendations of the 2008 SNA, labour input matrices can be developed to measure consistently the various components of employment that contribute to the production of the institutional sector. The objective is to design as detailed a table of industries as possible by formal/informal employment and formal/informal sector.

8.39. It is very important to ensure that the employment and production statistics are consistent, and notably that they are consistent with the production boundary and use the same criteria for residence.

8.40. A practical way to achieve this is to reconcile production statistics with the corresponding employment statistics in a manner that avoids double-counting and includes all jobs. Employment in the formal sector coincides with formal employment if it can be assumed that formal enterprises employ only paid employees with social protection, that no worker in the informal sector has social protection and that all employees in households producing exclusively for own final use do not have social protection. However, some of the paid jobs offered by the formal enterprises may not be covered by labour legislation and are therefore omitted from the payroll, in which case they do not appear as 'employment' in the accounts and fall within informal employment in formal sector enterprises. Payment for such jobs generally appears in the formal employer's accounts as purchase of services from 'service providers', i.e., an intermediate consumption of services resulting in a lower value added, with no record of the number of persons or hours or rate of payment; it is then not possible to separate such payments from payments to formal firms acting as subcontractors. In the initial stage of compilation, national accountants aggregate the results of the formal enterprises. At this stage there is a formal consistency between production and formal

employment, but this does not reflect the fact that some of the labour input has been supplied by informally employed labour, including unpaid contributing family members. Ideally, adjustments need to be made for this discrepancy by using estimates of informal employment in the formal sector obtained from the household surveys' mapping of such employment as well as informal sector employment. At later stages, adjustments need to be made to balance the production (supply) of commodities with their uses in the elaboration of the supply-use table. Given that mixed informal sector surveys and area-based establishment surveys can provide data at the national level for informal sector employment, labour input matrices can then be prepared to indicate informal employment outside the informal sector. This is useful for estimating the size of the various components of informal employment, namely, informal employment in both the formal sector and the informal sector within the institutional sector of households.

Data sources for compiling labour input matrices

8.41. Broadly speaking, there are three sources of employment data: labour force surveys (for labour supply), establishment surveys (for labour demand) and administrative records (such as social security, payroll tax, etc.) They may be used singly or in combination, especially when their reference periods differ. The usual caveats that the quality of a survey's results depends on sample size, survey design, response rates and reference period obviously apply as much to the surveys used for employment statistics as they do to other surveys.

8.42. *Labour supply.* The main sources of labour supply data are population censuses and/or household surveys. As HS are carried out more frequently, they are the preferred data source where they exist. In countries where labour force surveys are not carried out regularly, it may be possible to refer to other household surveys (such as income and expenditure surveys or demographic surveys) that have collected information on the labour force. However the sample size of such surveys is generally smaller than that of an HS, and this makes it difficult to obtain statistics with the required precision, particularly if there is a need to cross-classify variables by economic activity.

8.43. In a population census (or labour force survey or any other household survey) the main table required is one that cross-classifies 'kind of economic activity' (agriculture, mining, manufacturing, trade, services, etc., by ISIC) by 'status in employment' (employers, own-account workers, contributing family workers, employees, etc.) and possibly by sex and/or by urban and rural area.

8.44. In each economic activity own-account workers and contributing family workers can be assumed to belong to the informal sector component called 'self-employed'. Employers may be considered to be in the informal sector if the units they own or operate satisfy the criteria for inclusion, for example, if they

have fewer than a given number of employees and/or are not registered. If no information on size or registration is available, then the employers' category will need to be compared with sources on the labour demand side in which the number of employers in units that are registered or have five or more employees is known.

8.45. *Labour demand.* The main data sources are establishment and enterprise censuses, surveys of formal or large and medium-size establishments and enterprises and administrative sources such as social security, employment associated with payroll tax, etc.

8.46. The first step in an establishment/enterprise census or economic census is to check whether the legal status has been recorded; if it has, a comparison will be made only with the unincorporated units, all corporate or quasi-corporate firms and their employees being classified in the formal sector. All employees covered by enterprise surveys carried out by statistical agencies may be classified in the formal sector, since they generally adopt the criteria of legal status and size to determine the coverage of the survey. In addition, civil servants and workers contracted by the central or local government are classified in the formal sector. A difficulty may arise with military and police personnel, as these may not be included in the aggregate figure for government employees. Employees and employers working in small establishments with fewer than the given number of employees (depending on the cut-off point applied in the country) may either not be covered by these sources or be classified in a specific category of the informal sector called 'enterprises of informal employers'. All other employees in large registered or incorporated enterprises are classified in the formal sector.

8.47. The preferred reference year is the year for which both the results of a population census (and a labour force survey) and an establishment/enterprise census, if any, are available. However, it is rare for both sources to be available for the same reference year, and it then becomes necessary to make some assumptions and adjustments. The choice of the reference year is therefore dependent on national circumstances.

8.48. Usually, the number of employees obtained from the population census is systematically higher than the number of employees derived from sources on the demand side, especially establishment or enterprise censuses. The statistics therefore need to be checked to see whether the number of employees in the formal sector has been underestimated by the establishment/enterprise census, for example by looking at its coverage and, where possible, by a simple comparison with other sources (social security registrations, employment associated with payroll tax, etc.). Note, however, that social security registers may systematically overestimate the number of currently active employers and employees because the de-registration procedures are not a reliable source for statistics on employment at a particular date or during a particular period. The exercise thus consists of

determining which employees and employers should be considered as formal, by comparing the categories of employees and employers in the labour force survey with those among them who are registered, as determined through establishment/enterprise based information.

8.49. If the distribution by economic activity, status in employment and sex is available on the labour supply side, assumptions can be made on the labour demand side to obtain the corresponding estimates. The objective is to design as detailed a table of industries as possible by formal/informal employment and informal/formal sector.

Estimating informal employment

8.50. Informal employment outside the informal sector may be estimated from the figures for total employment (obtained from labour force surveys or population censuses) by subtracting employment in the formal sector (obtained from establishment/enterprise censuses) and employment in the informal sector (obtained from mixed surveys or informal sector surveys). The result may then be used as an estimate of informal employment in the formal sector, with the usual weaknesses attached to such 'residual' estimates.

8.51. Table 8.4 presents the sources used for establishing the labour input matrix. This should ideally be prepared as precisely as the sources permit from the most detailed classification of economic activities and of employment status and in full-time equivalent jobs.

8.52. Labour input matrices are a valuable tool for measuring the informal sector. The disaggregation of total employment according to the most detailed classification by economic activities is a basis for estimating the value added of a worker at the industry level. The performance indicators derived from the surveys, such as production (output), value added, intermediate consumption or mixed income, will be imputed to the number of economic units in the informal sector, or per worker. The objective of imputation by economic activity and by sector (formal/informal) is to make the estimates of total production as exhaustive as possible.

8.53. The steps followed in preparing the labour input matrix are summarized in Box 8.1.

Table 8.4.
Sources used for building a labour input matrix

Economic activities / Sources	Agricul-ture, forestry and fishing	Mining and quarry-ing	Manu-facturig	Electri-city, gas, water supply and sewerage	Construc-tion	Trade	Accom-modation and food service activities	Transport and storage	Financial activities	Real estate	Other services	Total
Population census (A) or Labour force survey (B) or Other household survey (C)	■ Total employment by economic activity and by employment status (self-employed/paid employees), in full-time equivalent (1) ■ Employment in unincorporated enterprises engaged exclusively in production for own final use by economic activity, in full-time equivalent (6)											
Establishment/enterprise census or Economic census	■ Total employment (self-employed and paid employees) in unincorporated enterprises with fewer than a given number of employees (say, fewer than five employees) (2) ■ Total employment in incorporated enterprises and in unincorporated enterprises with more than the specified number of employees (say, five and more employees) (3)											
Mixed household/establishment survey (D)	■ Total employment by kind of economic activity (industry) and by employment status (1) ■ Informal employment in formal sector (household survey) (4) ■ Employment in informal sector (enterprise survey) (5)											
Informal employment	(1) – (3)											
Informal employment by component	(1) - (3) = (4) + (5) + (6) Informal employment = informal employment in the formal sector + employment in informal sector enterprises + employment in unincorporated enterprises engaged exclusively in production for own final use											

Note: The possibility of formal employment in the informal sector (which is unlikely) has not been considered here.

Box 8.1.
Steps to be followed in preparing a labour input matrix

A. Labour supply side

(a) Identify most recent data sources for statistics on labour force and employment (labour supply side) in the country (population censuses, labour force surveys).

(b) Obtain the results of the most recent source for economic activities, especially detailed tables, through publications or edited (but possibly unpublished) tables.

(c) Identify the basic table cross-classifying economic activities (preferably) or occupation by status in employment, by sex and by urban/rural area.

(d) Identify the corresponding table in other sources for an earlier date.

B. Labour demand side

(a) Identify data sources for statistics on employment in establishments (labour demand side) in the country (enterprise/establishment censuses or surveys, administrative sources such as social security register, employment associated with payroll tax, etc.).

(b) Select sources for the years for which labour supply sources are available, or at least a year close to them.

(c) Assess the coverage of the sources identified and complete with activities missing in the source – for instance, civil service employment (including military, defence and police forces), public sector enterprises, etc.

(d) Prepare a table of employment for each of these sources by legal status and size of enterprise. Use the size cut-off used by the country to distinguish the informal enterprises (say, fewer than five employees).

C. Reconciliation process

(a) If the units of employment on the demand and supply sides of labour are different, convert the enterprise-based (demand side) and household-based (supply side) estimates of labour input to the same units of labour input, such as hours worked or full time equivalent employment units.

(b) Compare the number of paid employees from the labour supply source and from the labour demand source; determine the extent to which the difference can be interpreted as the number of paid employees working in informal employment (and/or the number of paid employees not declared by their employers) and any adjustments that are needed for this to be reasonable.

(c) In the last steps a disaggregation by sex can be done. If data by sex are not available in the labour demand sources, which is frequently the case, one may apply the sex-ratio for paid employees in the labour supply source or those available for an identified segment of the formal sector.

(d) Informal employment comprises: (a) self-employed – specifically, own-account and family workers – and (b) paid employees with informal employment obtained as a residual. These results should be presented by economic activity (in as much detail as possible but, usually, for manufacturing, construction, trade and services), by status and by sex. If there is access to results by detailed occupation, the identification of professionals will be of statistical interest.

(e) Use the results of the national informal sector survey, if any, to reduce the size and heterogeneity of the residual (paid employees in the labour force survey minus paid employees in the labour demand survey minus paid employees in the informal sector).

Productivity coefficients

8.54. The other component of the indirect labour input method is the measure of per unit labour productivity by economic activity undertaken by informal sector enterprises, which may be obtained from other sources such as mixed or establishment surveys that cover the informal sector, research or case studies. These estimates may have to be updated by using an appropriate price index.

Use of informal sector survey statistics for estimating national accounts aggregates

8.55. Statistics obtained from mixed surveys or establishment surveys that cover the informal sector may be used for compiling the production and income accounts of the informal sector. To serve this purpose, these surveys must collect data that are consistent with the conceptual framework of the SNA. Production is generally measured by the value of sales or output, adjusting for changes in inventory. If information on the intermediate consumption of various products and services, the wage bill and various items of expenditure is not collected, then it is necessary to make many assumptions. Surveys that collect only information about the income of entrepreneurs are even less useful, since national accountants generally prefer to make assumptions in order to derive the value added and mixed income from production, rather than the reverse.

Production account

8.56. The production account is designed to present value added as one of the main balancing items in the SNA. Consequently, it does not cover all transactions linked with the production process but only the result of production (output) and the use of goods and services (intermediate consumption) in generating this output. Intermediate consumption does not cover the depreciation of fixed capital, which is recorded as a separate transaction (consumption of fixed capital) reflecting the difference between gross and net value added or balancing items.

8.57. The production account in the SNA shows the values of the output of production and of the various inputs required to produce it. The production account for informal sector units is illustrated in Table 8.5. It contains only three items: the output from production is recorded under resources on the right-hand side of the account; intermediate consumption is recorded on the left-hand side; the balancing item in the production account is value added, which can be measured either gross or net, i.e., before or after deducting consumption of fixed capital.

8.58. To collect reliable information for compiling the production account of informal sector enterprises by economic activity, it is important to have a sample of enterprises that can ensure adequate representation of all economic activities, and to avoid omission and duplication of informal sector enterprises. However,

many mixed surveys and establishment surveys that cover the informal sector are unable to achieve this objective. The constraints of sample size means that most mixed surveys provide aggregate results only for some economic activities, e.g., for only part of the one-digit level of the ISIC Rev. 4. Depending on the structure of the national economy, it may be essential to obtain results for some activities at the two-digit ISIC level. If such breakdowns are not possible, then the survey results can only be used to establish norms or ratios that may be used to derive indirect estimates of the national accounts aggregates. Mixed surveys with limited geographical coverage and establishment surveys of the informal sector with a limited scope can be used only for the more limited aim of refining assumptions about norms and ratios used by national accountants for the indirect estimation.

Table 8.5
Production accounts for informal sector enterprises

Uses	Resources
Intermediate consumption = purchases minus changes in inventories of raw materials and supplies, fuel and electricity	**Output** = sales plus changes in inventories (of finished, semi-finished and work-in-progress products and of goods purchased for resale) plus production of goods for own final use plus goods and services used for barter and/or given to others free minus purchase of goods and services for resale.

Value added

8.59. Value added can be measured at basic prices, producers' prices or purchaser's prices, depending on the valuation of the output at the corresponding prices. Note that intermediate consumption is always measured at the purchaser's prices. The basic prices, producers' prices and purchaser's prices are related as follows:

Basic prices
+
taxes on products excluding invoiced value added tax
-
subsidies on products
=
producers' prices
+
value added tax not deductible by the purchaser
+
separately invoiced transport charges
+
wholesalers' and retailers' margins
=
purchasers' prices

The generation of income accounts

8.60. Primary incomes accruing to government units and to the units participating in the process of production are presented in the 'generation of income' account (see Table 8.6). The resources, listed on the right-hand side of the generation of income accounts consist of just a single item, value added, the balancing item being carried forward from the production account. As stated earlier, value added may be measured before the deduction of consumption of fixed capital (gross) or after (net).

Table 8.6
Generation of income account

Uses	Resources
Compensation of employees (total remuneration payable in cash and in kind) **Taxes on production and imports** Subsidies (-)	**Value added**
Mixed income operating surplus	

8.61. The left-hand side of the generation of income account records the uses of value added. There are only two main financial charges that producers have to meet out of value added: compensation of workers employed in the production process, and any taxes less subsidies on production. Compensation of employees is defined as the total remuneration, in cash and/or in kind, payable by an enterprise to an employee in return for work done by the latter for the production of goods and services during the accounting period. Taxes less subsidies on production consist of taxes payable or subsidies receivable in respect of goods or services produced as outputs and other taxes or subsidies on production, such as those payable or receivable in respect of the labour, machinery, buildings or other assets used in the process. Taxes on production do not include any income tax payable by the recipients of incomes accruing from production, whether employers or employees.

8.62. To compile the generation of income accounts for informal sector enterprises, mixed surveys and establishment surveys that cover the informal sector should collect data on the compensation of employees by informal sector enterprises and also on the production taxes payable by the informal sector production units. (For details of concepts and definitions relating to these items, see reference Chapter 6 of the 2008 SNA).

Illustrative country experiences in quantifying the contribution of the informal sector in national accounts

8.63. As noted in earlier chapters of the manual, several countries currently conduct surveys for the measurement of informal sector and informal employment. Newly available statistics on the informal sector and informal employment are used by some countries in the preparation of national accounts. For example, Mexico published a satellite account of household production for 1993-1998 (INEGI, 2000) and for 1998-2003 (INEGI, 2006) covering informal employment broadly defined as well as the informal sector. India carried out a combined household/establishment survey on informal sector in 1999-2000 and estimated, in a research study, the contribution of the informal sector, compared to the old definition of the unorganised sector, in 2003-04 (Kolli and Hazra, 2005). Detailed labour input matrices for the years 1999 and 2005 have been prepared that allows to measure the contribution of the informal sector and informal employment to the value added of major industries and to the GDP (Kolli and Sinharay, 2011a and b). AFRISTAT (1999) has prepared new harmonized accounts for the countries of the West Africa Economic and Monetary Union. The transition countries, in building a complete new system of accounts after abandoning the material production balances, have more systematically prepared new accounts of household production that include the informal sector.

8.64. In Mexico, where the international definition of the informal sector was implemented (INEGI, 2000) in the 1998 labour force survey, results show that there were 3,5 million own-account workers and 0,7 million employers with 1,3 million employees (of whom 0,6 million were registered at the Mexican Institute of Social Security). Further, of a total gross value added by households of 1.2 billion pesos, 36 per cent was imputed to the informal sector, 60 per cent to agriculture and 4 per cent to paid domestic workers.

8.65. The labour input matrix in Italy measures multiple job-holding Calzaroni, 2000, and Calzaroni et al., 2000). When multiple job-holding is measured, it accounts for 41 per cent of the total GDP increment due to the non-observed economy, which accounted for 16 per cent of GDP in 1983 (Charmes, 1991, and Charmes, 2004).

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Appendices A1 and A2
International resolution and guidelines on informality, adopted by the International Conference of Labour Statisticians

APPENDIX A1 – Resolution concerning statistics of employment in the informal sector, adopted by the 15th International Conference of Labour Statisticians, 1995

APPENDIX A2 – Guidelines concerning a statistical definition of informal employment, endorsed by the 17th International Conference of Labour Statisticians, 2003

APPENDIX A1 – Resolution concerning statistics of employment in the informal sector, adopted by the 15th International Conference of Labour Statisticians, 1995

Resolution concerning statistics of employment in the informal sector,
adopted by the Fifteenth International Conference of Labour Statisticians
(January 1993)

The Fifteenth International Conference of Labour Statisticians,

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Recalling paragraph 33 of the resolution concerning statistics of the economically active population, employment, unemployment and underemployment (resolution I), adopted by the Thirteenth Conference (1982) and the resolution concerning the informal sector (resolution VIII), adopted by the Fourteenth Conference (1987),

Considering that statistics on employment in the informal sector are especially needed in order to improve the statistical systems of countries where informal sector activities account for a significant proportion of total employment and income generation,

Observing the development of concepts and techniques for obtaining and analysing such statistics in a number of countries,

Recognizing that although these concepts and techniques will be further improved in the light of additional experience, there is currently a need for international standards to provide technical guidelines as a basis for the development of suitable definitions and classifications of informal sector activities and the design of appropriate data collection methods and programmes, and recognizing the usefulness of such standards in enhancing the international comparability of statistics,

Adopts this twenty-eighth day of January 1993 the following resolution:

OBJECTIVES

1. Countries where the informal sector plays a significant role in employment and income generation and economic and social development should aim, where practicable, at developing a comprehensive system of statistics on employment in the informal sector to provide an adequate statistical base for the various users of the statistics, with account being taken of specific national needs and circumstances. The system to be developed should contribute to the improvement of labour statistics and national accounts as an information base for macroeconomic analysis, planning, policy formulation and evaluation, to the integration of the informal sector into the development process and to its institutionalisation. It should provide quantitative information on the contribution of the informal sector to various aspects of economic and social development, including employment creation, production, income generation, human capital formation and the mobilisation of financial resources. The system may also provide data for the design and monitoring of specific support policies and assistance programmes for the informal sector as a whole or parts thereof with a view to increasing the productive potential and employment and income generating capacity of informal sector units, improving the working conditions and social and legal protection of informal sector workers, developing an appropriate regulatory framework and promoting the organisation of informal sector producers and workers, and for the analysis of the economic and social situation of particular groups of informal sector workers such as women, children, rural-urban migrants or immigrants.

2. In order to fulfil the above objectives, comprehensive, detailed and reliable statistics should, as far as possible, be compiled on: (i) the total number of informal sector units, classified by various structural characteristics to provide information on the composition of the informal sector and identify particular segments; (ii) total employment in such units, including information on the number of persons engaged by socio-demographic and other characteristics and on the conditions of their employment and work; (iii) production and incomes generated through informal sector activities, derived, where possible, from data on outputs, inputs and related transactions; and (iv) other characteristics pertaining to conditions under which informal sector units are created and carry out their activities, including their relationships with other units inside and outside the informal sector.

3. In order to enhance their comparability and usefulness, statistics on the informal sector should, as far as possible, be compatible with other related economic and social statistics and with national accounts as regards the definitions, classifications and reference periods used.

4. Statistics on the informal sector should be compiled at regular intervals so that changes in the size and characteristics of the informal sector over time can be monitored adequately. The frequency of data collection may vary according to the different types of statistics mentioned in paragraph 2, survey methods required and their implications for the use of human and financial resources.

CONCEPT

5. (1) The informal sector may be broadly characterised as consisting of units engaged in the production of goods or services with the primary objective of generating employment and incomes to the persons concerned. These units typically operate at a low level of organisation, with little or no division between labour and capital as factors of production and on a small scale. Labour relations - where they exist - are based mostly on casual employment, kinship or personal and social relations rather than contractual arrangements with formal guarantees.

(2) Production units of the informal sector have the characteristic features of household enterprises. The fixed and other assets used do not belong to the production units as such but to their owners. The units as such cannot engage in transactions or enter into contracts with other units, nor incur liabilities, on their own behalf. The owners have to raise the necessary finance at their own risk and are personally liable, without limit, for any debts or obligations incurred in the production process. Expenditure for production is often indistinguishable from household expenditure. Similarly, capital goods such as buildings or vehicles may be used indistinguishably for business and household purposes.

(3) Activities performed by production units of the informal sector are not necessarily performed with the deliberate intention of evading the payment of taxes or social security contributions, or infringing labour or other legislations or administrative provisions. Accordingly, the concept of informal sector activities should be distinguished from the concept of activities of the hidden or underground economy.

OPERATIONAL DEFINITIONS

Informal sector

6. (1) For statistical purposes, the informal sector is regarded as a group of production units which, according to the definitions and classifications provided in the United Nations System of National Accounts (Rev.4), form part of the household sector as household enterprises or, equivalently,

unincorporated enterprises owned by households as defined in paragraph 7.

(2) Within the household sector, the informal sector comprises (i) "informal own-account enterprises" as defined in paragraph 8; and (ii) the additional component consisting of "enterprises of informal employers" as defined in paragraph 9.

(3) The informal sector is defined irrespective of the kind of workplace where the productive activities are carried out, the extent of fixed capital assets used, the duration of the operation of the enterprise (perennial, seasonal or casual), and its operation as a main or secondary activity of the owner.

Household enterprises

7. According to the United Nations System of National Accounts (Rev.4), household enterprises (or, equivalently, unincorporated enterprises owned by households) are distinguished from corporations and quasi-corporations on the basis of the legal organisation of the units and the type of accounts kept for them. Household enterprises are units engaged in the production of goods or services which are not constituted as separate legal entities independently of the households or household members that own them, and for which no complete sets of accounts (including balance sheets of assets and liabilities) are available which would permit a clear distinction of the production activities of the enterprises from the other activities of their owners and the identification of any flows of income and capital between the enterprises and the owners. Household enterprises include unincorporated enterprises owned and operated by individual household members or by two or more members of the same household as well as unincorporated partnerships formed by members of different households.

Informal own-account enterprises

8. (1) Informal own-account enterprises are household enterprises (in the sense of paragraph 7) owned and operated by own-account workers, either alone or in partnership with members of the same or other households, which may employ contributing family workers and employees on an occasional basis, but do not employ employees on a continuous basis and which have the characteristics described in subparagraphs 5 (1) and (2).

(2) For operational purposes, informal own-account enterprises may comprise, depending on national circumstances, either all own-account enterprises or only those which are not registered under specific forms of national legislation.

(3) Registration may refer to registration under factories or commercial acts, tax or social security laws, professional groups' regulatory acts, or similar acts, laws, or regulations established by national legislative bodies.

(4) Own-account workers, contributing family workers, employees and the employment of employees on a continuous basis are defined in accordance with the most recently adopted version of the International Classification of Status in Employment (ICSE).

Enterprises of informal employers

9. (1) Enterprises of informal employers are household enterprises (in the sense of paragraph 7) owned and operated by employers, either alone or in partnership with members of the same or other households, which employ one or more employees on a continuous basis and which have

the characteristics described in subparagraphs 5 (1) and (2).

(2) For operational purposes, enterprises of informal employers may be defined, depending on national circumstances, in terms of one or more of the following criteria:

(i) size of the unit below a specified level of employment;

(ii) non-registration of the enterprise or its employees.

(3) While the size criterion should preferably refer to the number of employees employed on a continuous basis, in practice, it may also be specified in terms of the total number of employees or the number of persons engaged during the reference period.

(4) The upper size limit in the definition of enterprises of informal employers may vary between countries and branches of economic activity. It may be determined on the basis of minimum size requirements as embodied in relevant national legislations, where they exist, or in terms of empirically determined norms. The choice of the upper size limit should take account of the coverage of statistical inquiries of larger units in the corresponding branches of economic activity, where they exist, in order to avoid an overlap.

(5) In the case of enterprises which carry out their activities in more than one establishment, the size criterion should, in principle, refer to each of the establishments separately rather than to the enterprise as a whole. Accordingly, an enterprise should be considered to satisfy the size criterion if none of its establishments exceeds the specified upper size limit.

(6) Registration of the enterprise may refer to registration under specific forms of national legislation as specified in subparagraph 8 (3). Employees may be considered registered if they are employed on the basis of an employment or apprenticeship contract which commits the employer to pay relevant taxes and social security contributions on behalf of the employee or which makes the employment relationship subject to standard labour legislation.

(7) Employers, employees and the employment of employees on a continuous basis are defined in accordance with the most recently adopted version of the International Classification of Status in Employment (ICSE).

10. For particular analytical purposes, more specific definitions of the informal sector may be developed at the national level by introducing further criteria on the basis of the data collected. Such definitions may vary according to the needs of different users of the statistics.

Population employed in the informal sector

11. (1) The population employed in the informal sector comprises all persons who, during a given reference period, were employed (in the sense of paragraph 9 of resolution I adopted by the Thirteenth International Conference of Labour Statisticians) in at least one informal sector unit as defined in paragraphs 8 and 9, irrespective of their status in employment and whether it is their main or a secondary job.

(2) Where possible, the population employed in the informal sector should be subclassified into two categories: persons exclusively employed in the informal sector, and persons employed both in and

outside the informal sector. The latter category may be further divided into two subcategories: persons whose main job is in the informal sector, and persons whose secondary job is in the informal sector.

(3) If the total employed population is to be classified into mutually exclusive categories of persons employed in and outside the informal sector, persons employed both in and outside the informal sector should be classified as a separate category, or criteria should be established to determine their main job (e.g. on the basis of self-assessment, time spent at work or amount of remuneration received in each job).

(4) In some countries, a significant number of children below the age specified for measurement of the economically active population in population censuses or household surveys work in informal sector units and may represent a group of particular concern for labour legislation and educational and social policies. In such situations, every possible effort should be made in informal sector surveys to collect information on the work of all children irrespective of age, and children below the minimum age specified in population censuses or household surveys should be identified separately.

TREATMENT OF PARTICULAR CASES

12. (1) Different members of a household may be engaged as self-employed persons in different kinds of informal sector activities during a given reference period. In order to determine whether such activities should be regarded as separate enterprises or as parts of a single enterprise, due consideration should be given to the definitional requirements of an enterprise as specified in the International Standard Industrial Classification of All Economic Activities (ISIC, Rev.3). Where it is difficult in practice to apply these requirements, different activities carried out by different household members should be treated as separate enterprises if they are perceived as such by the household members themselves.

(2) A household member or group of household members may be engaged as self-employed persons in different kinds of informal sector activities during a given reference period. For practical purposes, all activities carried out at a time by the same household member or group of household members should be treated as parts of a single enterprise rather than as separate enterprises.

13. In the case of informal sector units which are engaged in different kinds of production activities during a given reference period, efforts should be made to collect as much separate information as possible in respect of each activity, even when the enterprises concerned need not or cannot be partitioned into establishments as defined by the International Standard Industrial Classification of All Economic Activities (ISIC, Rev.3). In particular, such separate information should be collected in respect of all activities of the enterprise which are horizontally integrated (i.e. producing different kinds of goods or services for sale or exchange and carried out parallel with each other), irrespective of their share in the total value added of the enterprise.

14. Household enterprises, which are exclusively engaged in non-market production, i.e. the production of goods or services for own final consumption or own fixed capital formation as defined by the United Nations System of National Accounts (Rev.4), should be excluded from the scope of the informal sector for the purpose of statistics of employment in the informal sector. Depending on national circumstances, an exception may be made in respect of households employing domestic workers as referred to in paragraph 19.

15. With account being taken of paragraph 14, the scope of the informal sector should include household enterprises located in urban areas as well as household enterprises located in rural areas.

However, countries which start to conduct surveys of the informal sector may initially confine data collection to urban areas. Depending upon the availability of resources and appropriate sampling frames, the coverage of the surveys should gradually be extended to cover the whole national territory.

16. For practical reasons, the scope of the informal sector may be limited to household enterprises engaged in non-agricultural activities. With account being taken of paragraph 14, all non-agricultural activities should be included in the scope of the informal sector, irrespective of whether the household enterprises carry them out as main or secondary activities. In particular, the informal sector should include secondary non-agricultural activities of household enterprises in the agricultural sector if they fulfil the requirements of paragraphs 8 or 9.

17. Units engaged in professional or technical activities carried out by self-employed persons such as doctors, lawyers, accountants, architects or engineers, should be included in the informal sector if they fulfil the requirements of paragraphs 8 or 9.

18. (1) Outworkers are persons who agree to work for a particular enterprise, or to supply a certain quantity of goods or services to a particular enterprise, by prior arrangement or contract with that enterprise, but whose place of work is not within any of the establishments which make up that enterprise.

(2) In order to facilitate data collection, all outworkers should be potentially included in the scope of informal sector surveys, irrespective of whether they constitute production units on their own (self-employed outworkers) or form part of the enterprise which employs them (employee outworkers). On the basis of the information collected, self-employed and employee outworkers should be distinguished from each other by using the criteria recommended in the United Nations System of National Accounts (Rev.4). Outworkers should be included in the informal sector, or in the population employed in the informal sector, if the production units which they constitute as self-employed persons or for which they work as employees fulfil the requirements of paragraphs 8 or 9.

(3) In situations where the number of outworkers is significant or where outworkers represent a group of particular concern for data users, self-employed outworkers should be identified as separate sub-categories of informal own-account enterprises and enterprises of informal employers or of the owners of such enterprises.

(4) For purposes of distinction between employment on a continuous basis and employment on an occasional basis, and in application of the definition of registered employees according to paragraph 9(6), employee outworkers should be treated in the same way as other employees. Where relevant, employee outworkers may be identified as a separate sub-category of informal sector employees.

19. Domestic workers are persons exclusively engaged by households to render domestic services for payment in cash or in kind. Domestic workers should be included in or excluded from the informal sector depending upon national circumstances and the intended uses of the statistics. In either case, domestic workers should be identified as a separate sub-category in order to enhance international comparability of the statistics.

20. Activities excluded from the scope of the informal sector, such as domestic services, non-market production and agricultural activities, may be identified as separate categories outside the distinction between the informal and formal sectors.

DATA COLLECTION PROGRAMME AND METHODS

21. (1) The collection of data on the informal sector should be integrated into the regular national statistical system. The data collection programme should provide both for (a) the current monitoring, if possible once a year, of the evolution of employment in the informal sector and (b) the in-depth examination, if possible every five years, of informal sector units with respect to their numbers and characteristics, in particular, their organisation and functioning, their production activities and levels of income generation, as well as their constraints and potentials.

(2) The data collection programme with regard to the broad objective (a) should preferably be based on a household survey approach, with households as reporting units and individual household members as observation units. With regard to the broad objective (b), the data collection programme should preferably be based on an establishment survey approach or a mixed household and enterprise survey approach, or a combination of both, with the informal sector units themselves and their owners as observation and reporting units.

(3) Other measurement methods can also be considered, such as methods of indirect macroeconomic estimation or the comparative analysis of data from different sources.

Household surveys for monitoring informal sector employment

22. (1) Existing surveys of the economically active population and similar household surveys provide a useful and economical means of collecting data on employment in the informal sector in terms of the number and characteristics of the persons concerned and the conditions of their employment and work.

(2) For this purpose, questions pertaining to the definition of the informal sector should be incorporated into the survey questionnaire and asked in respect of all persons employed during the reference period of the survey, irrespective of their status in employment.

(3) Special care should be taken in the survey design and operations to ensure comprehensive coverage of the population employed in the informal sector as defined in paragraph 11(1) above. In particular, special efforts should be made in the sample design to ensure appropriate representativeness of areas where persons engaged in informal sector activities tend to live. It is also important to collect data on secondary activities of household members in the same detail as on the main activity, including the criteria used for defining the informal sector. Special probings may be needed with respect to informal sector activities that would otherwise go unreported, such as unpaid work in family enterprises or activities carried out by women on their own account at or from home. To obtain comprehensive data on children working in the informal sector, it may also be necessary to lower the minimum age normally used in the survey for measuring characteristics of the economically active population.

(4) The data collected should be analysed in conjunction with other relevant information obtained from the same survey. In particular, a mutually exclusive breakdown may be made of the economically active population by employment in and outside the informal sector and unemployment. Depending on national circumstances and data needs, information on various forms of atypical or precarious employment outside the informal sector may be obtained along with data on the different forms of employment in the informal sector. For this purpose, all employed persons, whether working in the informal sector or outside, should be classified by status in employment at an appropriate level of disaggregation.

(5) In order to monitor trends in informal sector employment over time, questions on

employment in the informal sector should be included, if possible, once a year in existing infra-annual surveys of the economically active population or similar household surveys. Surveys conducted at less frequent intervals (e.g., annually or quinquennially) should include questions on employment in the informal sector in every survey round, if possible.

Establishment surveys of informal sector units

23. It may be possible to collect data on informal sector units through various kinds of establishment surveys depending on the measurement objectives, the intended uses of the data, the calendar and structure of the national statistical system, and the availability of sampling frames and resources.

24. (1) In conjunction with an establishment or economic census or using the latest economic census as an area sampling frame, special surveys of informal establishments may be conducted to collect specific data on employment, production, income generation and other characteristics of informal sector units and their owners.

(2) For this purpose, the economic census should, in principle, contain the required items for identifying the informal sector units according to the definition set forth in paragraph 6. However, as the observation unit in economic censuses is typically the establishment, the reconstitution of informal sector enterprises on the basis of the available information may not be easy to achieve in practice.

(3) Unless particular measures are taken, the coverage of such surveys of informal sector establishments is limited by the scope of the economic census on which they are based. In particular, coverage typically excludes informal sector units which do not operate in fixed premises designated for the purpose of carrying out production activities or which are not identifiable as such from the outside during the listing operation.

(4) While it is generally preferable to cover all types of informal sector activities through a single survey, branch-specific surveys or a series of such surveys may be considered if the measurement objectives are limited to particular kinds of informal sector activities, or if the scale of a single survey is considered too large to be manageable in practice.

(5) In a branch-specific survey, the listing operation should be such as to identify all and only those informal sector units that fall within the scope of the survey. Rules need to be established for informal sector units also engaged in other activities, particularly if some of these activities fall outside the scope of the survey.

(6) When the intention is to cover all types of informal sector activities through a series of branch-specific surveys rather than a single survey, the data collection programme should be designed to ensure a comprehensive coverage of informal sector units without omission or duplication between surveys. The timing of the surveys and the methodology to obtain overall aggregates should be carefully planned.

Mixed household and enterprise surveys

25. (1) The basic principle of mixed household and enterprise surveys is to construct a sampling frame of informal sector enterprises through a household survey operation, prior to the informal sector survey itself. The household survey component, if appropriately designed, makes it possible to

identify informal sector enterprises rather than establishments, and to cover virtually all informal sector units irrespective of size, kind of activity, and type of workplace.

(2) Mixed household and enterprise surveys are based on area sampling and conducted in two phases: (i) informal sector enterprises and their working owners are identified during the first phase through a household listing or interviewing operation (household survey component); (ii) all or a sample of the business owners thus identified are interviewed during the second phase to obtain information on the characteristics of their enterprises (enterprise survey component).

26. (1) The time interval between the two phases should be kept as short as possible, to minimise loss rates of units.

(2) Informal sector enterprises should be identified on the basis of own-account workers and employers who are members of the sample households. Identification based on employees of informal sector units should be avoided.

(3) In order to avoid omissions, the household survey component must be targeted to all employers and own-account workers in the sample who are potentially included in the informal sector. The informal sector units are then subsequently identified on the basis of the information obtained from the enterprise survey component.

(4) While information during the first phase of the survey may often have to be obtained from proxy respondents, it is highly desirable in the second phase that the business owners themselves are interviewed. Where relevant, these interviews should preferably be conducted at the place of work rather than the place of residence of the household member.

27. (1) Since informal sector enterprises may be owned and operated by members of different households in business partnership, and such partnerships may differ significantly from other units in their characteristics, an appropriate procedure should be adopted, at the selection stage of the informal sector units, or, preferably, at the stage of assigning the sampling weights, to ensure that the resulting statistics are representative of the total survey universe. The sampling weights should be determined with great care.

(2) For a comprehensive coverage, all informal sector enterprises and their operators in the sample areas or in the sample households should be identified in the first phase of the survey. In particular, businesses operated as secondary activities of household members should be identified on the same basis as businesses operated as main activities. Special probing may also be necessary to identify women and children engaged in informal sector activities on their own account.

28. If information on seasonal variations of informal sector activities is to be obtained and annual estimates of the main aggregates are to be produced, data collection should be spread over a period of a whole year by dividing the sample into independent subsamples for different quarters or months of the year.

29. The nature and efficiency of the survey design of a mixed household and enterprise survey will depend on whether the survey is conceived as (i) an independent survey, (ii) an attachment to an existing household survey, or (iii) part of an integrated survey designed to meet several objectives.

30. (1) In an independent survey, the sampling scheme may be designed to satisfy the specific requirements of informal sector measurement and to ensure an adequate representation of different types of informal sector activities or units in the sample.

(2) A sufficiently stratified sample at the first stage of selection helps avoid the need for differential last stage sampling rates for different categories of informal sector units and facilitates survey implementation in the field. Using the latest population census or other available information, an area sampling frame for the household survey component should be constructed so as to consist of area units of the desired size, stratified as far as possible according to the concentration of households that operate informal sector units. Provided data are available from the population census and retrievable at a sufficient level of geographical detail, the stratification of area units may be based on the concentration of own-account workers and employers by broad industry group, and, if possible, by type of location of the workplace and, for employers, by number of their employees. Where such data are not available, provision should be made to obtain them from the next population census.

(3) The household survey component of an independent mixed survey may be restricted to a household listing operation in the selected area units, in which information is obtained on the composition of the household and, in respect of each household member of working age, whether the person operated, as main or secondary activity, any informal sector business during a specified reference period. Basic information on the type of workplace, its location, branch of economic activity, and, if possible, number of employees should also be obtained.

31. (1) If the enterprise survey component of a mixed survey is conceived as an attachment to an existing household survey (e.g. a labour force survey or a household income and expenditure survey) efforts should be made to make up for the limitations resulting from the design and selection of the base survey sample.

(2) The effective sample size of the enterprise survey component may be increased by selecting the sample of informal sector units on the basis of all households identified during the listing operation of the base survey rather than only those selected for the base survey sample. Alternative procedures would be to add, if resources are available, appropriately chosen supplementary areas to the base survey sample, or, if the base survey is of a continuing nature, to cumulate the subsamples of informal sector units over several rounds.

32. In developing integrated surveys for the collection of data on the informal sector and other topics (e.g. labour force, household economic activities), the requirements of informal sector measurement can be incorporated, to a greater or lesser extent, into the overall design of the survey, through appropriate methods of sample allocation and selection. The major requirement of the informal sector component is adequate representation of the different types of informal sector activities and units in the sample.

ITEMS OF DATA COLLECTION

33. (1) The type of data to be collected on the informal sector depends largely upon the specific circumstances in each country, methods of data collection, the intended uses of the statistics and the practical feasibility of data collection. For determination of the items of data collection, the main users of the statistics should be consulted and the results of previous surveys analysed or pilot surveys conducted.

(2) In order to enhance the usefulness of informal sector statistics for joint analysis with other related economic and social statistics and for the purposes of international comparison, the definitions and classifications of the items of data collected should, as far as possible, be compatible with those used in other national surveys or censuses and correspond to the most recently adopted versions of relevant international recommendations and standard classifications.

34. The statistics obtained should include, as a minimum, the number of persons engaged in informal sector units by status in employment and by kind of economic activity and, if possible, the number of informal sector enterprises by kind of economic activity and by type (i.e. informal own-account enterprises, enterprises of informal employers).

35. (1) In addition, data may be collected in more or less detail and with appropriate frequencies on any one or more of the following topics:

(i) Employment and working conditions: number of persons engaged in informal sector units during the reference period by sex, age, migration characteristics, school attendance, educational attainment, kind of vocational training received, occupation, time spent at work and, where possible, other jobs held in or outside the informal sector taking account of the categories and subcategories mentioned in paragraph 11(2); number of employees by nature of employment (continuous, casual; registered, not registered); compensation of employees and its components (wages and salaries in cash or in kind, employers' social contributions), frequency and mode of remuneration, entitlement to paid annual or sick leave, etc.

(ii) Production, income generation and fixed capital: frequency of operation (perennial, seasonal, casual); duration of operation during the reference period; quantity and value of outputs produced during the reference period; total amount of sales; intermediate consumption; taxes paid on production and subsidies received, if any; property income received and property charges payable in connection with business activities; characteristics of loans taken for business activities; fixed assets owned by the units; fixed capital formation during the reference period; etc.

(iii) Conditions of business operation: legal organisation of the units; type of accounts kept; type of ownership (individual ownership, household ownership, business partnership with members of other households); number of business partners from other households, if any; location (urban versus rural areas); type of workplace: workshop, shop, etc., fixed market or street stall, home of the enterprise owner, no fixed place (e.g. homes of clients, construction sites, mobile); type and number of customers, or proportion of output sold to different types of customers; extent and terms of work performed for other enterprises under subcontracting arrangements; sources of capital for the acquisition of fixed assets; origin of the main goods used for further processing or resale (importation, informal sector, other); type of registration or licensing of units; availability of public utilities at the place of work; participation in informal sector support programmes and kind of assistance received, if any; membership in associations or cooperatives of informal sector producers; problems faced in the creation of enterprises and constraints on their operation or expansion; year of creation and evolution of enterprises; etc.

(iv) Enterprise owners: sex; age; marital status; place or country of origin; period of residence in the present area; previous place of residence, if any; educational attainment; acquisition of skills needed to conduct the business (formal versus informal kinds of training); present occupation; time spent at work in the business during the reference period; engagement in other economic activities; characteristics of other economic activities, if any, and main source of income of enterprise owners; reasons for working in the informal sector; characteristics of previous employment in or outside the informal sector, if any; plans for the future

regarding business development or alternative employment; etc.

(v) Households of the enterprise owners: other household members by sex, age, marital status, relationship to the reference person and activity status; employment characteristics of other household members employed in or outside the informal sector; amount and sources of income of the households; etc.

(2) For the purposes of national accounting, the collection of data on the production and incomes generated by informal sector units should aim at providing the elements needed for the estimation of gross output, value added and mixed income (operating surplus) as defined in the United Nations System of National Accounts (Rev.4).

(3) Since production activities of informal sector units often overlap with consumption activities of the households of the enterprise owners, efforts should be made in the collection of data on intermediate consumption, property charges and fixed assets to separate usage for business purposes from usage for household consumption. If a clear distinction is not possible, the expenditures concerned should at least be allocated approximately in proportion to the use for business purposes.

(4) In the case of informal sector units engaged in several different kinds of production activities, inputs into production in the form of labour, capital, goods or services, which cannot be clearly allocated to a specific kind of activity, should be distributed in an appropriate way over all activities for which they are used.

(5) The collection of data on characteristics of the households of the enterprise owners enables informal sector activities to be analysed in the context of households as a whole. Such analyses may include studies of the role of other household members in providing additional income to households and the impact of the household situation on the activities of women in the informal sector.

SUB-CLASSIFICATIONS

36. (1) In order to provide information on the composition of the informal sector and to identify more homogeneous groups for analytical purposes, as targets for social and economic policies and informal sector support programmes, and as basis for comparisons of statistics over time and between countries, informal sector units should be sub-classified by various characteristics on the basis of the information collected.

(2) Enterprises of informal employers, when included in statistics of the informal sector, should be identified separately from informal own-account enterprises.

(3) Useful sub-classifications of informal own-account enterprises and enterprises of informal employers, both for the analysis of informal sector statistics at the national level and international comparison, include distinctions according to the following characteristics:

(i) kind of economic activity;

(ii) type of workplace: home of enterprise owner, other fixed premises, no fixed place;

(iii) location: urban areas, rural areas;

(iv) number of persons engaged;

(v) type of ownership: individual ownership, household ownership, business partnership with members of other households;

(vi) relation with other enterprises: independent producers, producers working under subcontracting arrangements for other enterprises.

(4) In addition, it may be useful to sub-classify informal own-account enterprises according to the composition of their workforce, distinguishing one-person units from two-and-more person units and, among the latter, users of occasional hired labour from non-users of such labour.

(5) Depending on the needs of data users and the size of samples, two or more of these characteristics may be combined into more complex classification schemes.

(6) For the purpose of international comparisons, the classification by kind of economic activity should adhere to or be convertible into the International Standard Industrial Classification of All Economic Activities (ISIC, Rev.3). For international reporting of the statistics, data should be provided at the level of ISIC tabulation categories, except for category "Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods" which should be subdivided appropriately. For other purposes, data classified according to kind of economic activity may be required in as much detail as is supported by the size of the samples. To reflect the diversity of informal sector activities, it may be necessary to develop appropriate further sub-divisions of some of the groups which the activity classification commonly used provides at its most detailed level. To ensure the comparability of informal sector statistics with other statistics, any such sub-divisions should be so defined that the data can be aggregated to higher level categories of the classification without cutting across their boundaries. Units engaged in more than one activity during the reference period should be classified according to their main activity which may be defined as that with the largest value added.

(7) The size intervals used for the sub-classification by number of persons engaged should be consistent with the standard size intervals recommended for the 1983 World Programme of Industrial Statistics, i.e. 1-4, 5-9, 10-19, etc. persons engaged. Depending upon the intended uses of the statistics, these intervals may be further subdivided.

FURTHER ACTION

37. (1) In view of the particular characteristics of informal sector units and their owners, special efforts should be made in the design and operations of informal sector surveys to increase response rates and obtain the required information as accurately as possible.

(2) Countries collecting data on the informal sector should share their experiences with the International Labour Office.

38. (1) The International Labour Office should follow the developments in designing and implementing informal sector surveys, as well as surveys of household economic activities, disseminate and evaluate information about the lessons being learned from this experience for discussion at the next International Conference of Labour Statisticians, prepare a manual to provide technical guidelines on the contents of this resolution which reflects such improvements in concepts and techniques and, if necessary, arrange for a review of this resolution by a future International Conference of Labour Statisticians.

(2) The International Labour Office should cooperate, as far as possible, with countries in the development of statistics of employment in the informal sector in providing technical assistance and training.

APPENDIX A2 – Guidelines concerning a statistical definition of informal employment, endorsed by the 17th International Conference of Labour Statisticians, 2003

Guidelines concerning a statistical definition of informal employment

The Seventeenth International Conference of Labour Statisticians (ICLS),

Acknowledging that the relevance of informal employment varies among countries, and that a decision to develop statistics on it is therefore determined by national circumstances and priorities,

Noting that the term "informal economy" is used by the ILO as including the informal sector as well as informal employment and that, as a supplement to the System of National Accounts, 1993, an international conceptual framework for measurement of the non-observed economy already exists, which distinguishes the informal sector from underground production, illegal production and household production for own final use,

Recalling the existing international standards on statistics of employment in the informal sector contained in the resolution concerning statistics of employment in the informal sector adopted by the 15th ICLS (January 1993),

Noting the recommendation made by the Expert Group on Informal Sector Statistics (Delhi Group), during its Fifth Meeting, that the definition and measurement of employment in the informal sector need to be complemented with a definition and measurement of informal employment,

Emphasizing the importance of consistency and coherence in relating the enterprise-based concept of employment in the informal sector to a broader, job-based concept of informal employment,

Considering the methodological work, which the International Labour Office and a number of countries have already undertaken in this area,

Supporting the request, which was made by the International Labour Conference in paragraph 37(n) of the resolution concerning decent work and the informal economy adopted during its 90th Session (2002), that the International Labour Office should assist countries in the collection, analysis and dissemination of statistics on the informal economy,

Recognizing that the considerable diversity of informal employment situations poses limits to the extent to which statistics on informal employment can be harmonized across countries,

Realizing the usefulness of international guidelines in assisting countries in the development of national definitions of informal employment, and in enhancing the international comparability of the resulting statistics to the extent possible;

Endorses the following guidelines, which complement the resolution concerning statistics of employment in the informal sector of the 15th ICLS, and encourages countries to test the conceptual framework on which they are based:

1. The concept of informal sector refers to production units as observation units, while the concept of informal employment refers to jobs as observation units. Employment is defined in the sense of paragraph 9 of the resolution concerning statistics of the economically active population, employment, unemployment and underemployment adopted by the 13th ICLS.

2. Informal sector enterprises and employment in the informal sector are defined according to the resolution concerning statistics of employment in the informal sector adopted by the 15th ICLS. For the purpose of statistics on informal employment, paragraph 19 of the resolution concerning statistics of employment in the informal sector adopted by the 15th ICLS should be applied to exclude households employing paid domestic workers from informal sector enterprises, and to treat them separately as part of a category named "households".

3. (1) *Informal employment* comprises the total number of informal jobs as defined in subparagraphs (2) to (5) below, whether carried out in formal sector enterprises, informal sector enterprises, or households, during a given reference period.

(2) As shown in the attached matrix, informal employment includes the following types of jobs:

(i) own-account workers employed in their own informal sector enterprises (cell 3);

(ii) employers employed in their own informal sector enterprises (cell 4);

(iii) contributing family workers, irrespective of whether they work in formal or informal sector enterprises (cells 1 and 5);

(iv) members of informal producers' cooperatives (cell 8);

(v) employees holding informal jobs (as defined in subparagraph (5) below) in formal sector enterprises, informal sector enterprises, or as paid domestic workers employed by households (cells 2, 6 and 10);

(vi) own-account workers engaged in the production of goods exclusively for own final use by their household (cell 9), if considered employed according to paragraph 9(6) of the resolution concerning statistics of the economically active population, employment, unemployment and underemployment adopted by the 13th ICLS.

(3) Own-account workers, employers, members of producers' cooperatives, contributing family workers, and employees are defined in accordance with the latest version of the International Classification of Status in Employment (ICSE).

(4) Producers' cooperatives are considered informal if they are not formally established as legal entities and also meet the other criteria of informal sector enterprises specified in the resolution concerning statistics of employment in the informal sector adopted by the 15th ICLS.

(5) Employees are considered to have informal jobs if their employment relationship is, in law or in practice, not subject to national labour legislation, income taxation, social protection or entitlement to certain employment benefits (advance notice of dismissal, severance pay, paid annual or sick leave, etc.). The reasons may be the following: non-declaration of the jobs or the employees; casual jobs or jobs of a limited short duration; jobs with hours of work or wages below a specified threshold (e.g. for social security contributions); employment by unincorporated enterprises or by persons in households; jobs where the employee's place of work is outside the premises of the employer's enterprise (e.g. outworkers without employment contract); or jobs for which labour regulations are not applied, not enforced, or not complied with for any other reason. The operational criteria for defining informal jobs of employees are to be determined in accordance with national circumstances and data availability.

(6) For purposes of analysis and policy-making, it may be useful to disaggregate the different types of informal jobs listed in paragraph 3(2) above, especially those held by employees. Such a typology and definitions should be developed as part of further work on classifications by status in employment at the international and national levels.

4. Where they exist, employees holding formal jobs in informal sector enterprises (cell 7 of the attached matrix) should be excluded from informal employment.

5. *Informal employment outside the informal sector* comprises the following types of jobs:

(i) employees holding informal jobs (as defined in paragraph 3(5) above) in formal sector enterprises (cell 2) or as paid domestic workers employed by households (cell 10);

(ii) contributing family workers working in formal sector enterprises (cell 1);

(iii) own-account workers engaged in the production of goods exclusively for own final use by their household (cell 9), if considered employed according to paragraph 9(6) of the resolution concerning statistics of the economically active population, employment, unemployment and underemployment adopted by the 13th ICLS.

6. Countries which do not have statistics on employment in the informal sector or for which a classification of employment by type of production unit is not relevant, may develop statistics on informal employment, if desired, specifying appropriate definitions of informal jobs of own-account workers, employers and members of producers' cooperatives. Alternatively, they may limit the measurement of informal employment to employee jobs.

7. Countries which exclude agricultural activities from the scope of their informal sector statistics should develop suitable definitions of informal jobs in agriculture, especially with respect to jobs held by own-account workers, employers and members of producers' cooperatives.

Annex

Conceptual Framework: Informal Employment

Production units by type	Jobs by status in employment								
	Own-account workers		Employers		Contributing family workers	Employees		Members of producers' cooperatives	
	Informal	Formal	Informal	Formal	Informal	Informal	Formal	Informal	Formal
Formal sector enterprises					1	2			
Informal sector enterprises[a]	3		4		5	6	7	8	
Households[b]	9					10			

(a) As defined by the Fifteenth International Conference of Labour Statisticians (excluding households employing paid domestic workers).

(b) Households producing goods exclusively for their own final use and households employing paid domestic workers.

Note: Cells shaded in dark grey refer to jobs, which, by definition, do not exist in the type of production unit in question. Cells shaded in light grey refer to formal jobs. Un-shaded cells represent the various types of informal jobs.

Informal employment: Cells 1to 6 and 8 to 10.

Employment in the informal sector: Cells 3 to 8.

Informal employment outside the informal sector: Cells 1,2, 9 and 10.

Appendices B1 and B2
Proposed layout and tabulation variables and categories

APPENDIX B1 – Proposed layout for tabulations

APPENDIX B2 – Proposed tabulation variables and categories

APPENDIX B1 – Proposed layouts for tabulations

GROUP A. Tabulations dealing with total population

Table A. Total population by sex and household composition according to activity status and age group

Activity status and age group	Total	Male					Female				
		All	Married or cohabiting with small children	Other married or cohabiting	Not married or cohabiting with small children	Other not married or cohabiting	All	Married or cohabiting with small children	Other married or cohabiting	Not married or cohabiting with small children	Other not married or cohabiting
Total population (all ages)											
Working age population											
In the labour force											
Unemployed											
Employed											
Employed in agriculture											
Formal employment											
Informal employment											
Employed in non-agriculture											
Formal employment											
Informal employment											
Not in the labour force											
Under 15 years											
15-24 years											
<activity status categories>											
25 – 54 years											
<activity status categories>											
...											
55 years or more											
<activity status categories>											

GROUP B. Tabulations dealing with employed persons

Tables B.1- B.3. Employed persons by status in employment and nature of the job, according to type of production unit, sex and type of area

Type of production unit, sex and type of area	Total			Own-account workers, employers, members of producers' cooperatives		Contributing family workers	Employees	
	Total employment	Formal employment	Informal employment	Formal employment	Informal employment	Informal employment	Formal employment	Informal employment
Total								
Formal sector units					n.a.			
Public ownership				n.a.	n.a.	n.a.		
Private ownership					n.a.			
Other form of ownership					n.a.			
Informal sector units				n.a.				
Households								
Producing goods exclusively for own final use		n.a.		n.a.		n.a.	n.a.	n.a.
Employing paid domestic workers				n.a.	n.a.	n.a.		
Male								
Type of production unit								
Female								
Type of production unit								
Urban								
Type of production unit								
Rural								
Type of production unit								

1. All kinds of economic activity
2. Agriculture, forestry and fishing
3. Other kinds of economic activity

Table B.4. Employed persons by type of production unit and nature of the job, according to kind of economic activity and type of institutional unit

Kind of economic activity and type of institutional unit	Total			Formal sector enterprises			Informal sector enterprises			House-holds producing goods for own final use	Households employing paid domestic workers		
	Total employ-ment	Formal employ-ment	Informal employ-ment	Total employ-ment	Formal employ-ment	Informal employ-ment	Total employ-ment	Formal employ-ment	Informal employ-ment	Informal employ-ment	Total employ-ment	Formal employ-ment	Informal employ-ment
Total													
Corporation							n.a.	n.a.	n.a	n.a	n.a	n.a	n.a
Financial							n.a	n.a	n.a	n.a	n.a	n.a	n.a
Non-financial							n.a	n.a	n.a	n.a	n.a	n.a	n.a
Government							n.a	n.a	n.a	n.a	n.a	n.a	n.a
NPISH*							n.a	n.a	n.a	n.a	n.a	n.a	n.a
Household													
Kind of activity 1													
Institutional unit													
Kind of activity 2													
Institutional unit													
...													

* Non-profit institution serving households.

Tables B.5-B.16. Employed persons by type of production unit and nature of the job, according to *<variable>*, sex and type of area

<variable>, sex and type of area	Total			Formal sector enterprises			Informal sector enterprises			House-holds producing goods for own final use	Households employing paid domestic workers		
	Total employ-ment	Formal employ-ment	Informal employ-ment	Total employ-ment	Formal employ-ment	Informal employ-ment	Total employ-ment	Formal employ-ment	Informal employ-ment	Informal employ-ment	Total employ-ment	Formal employ-ment	Informal employ-ment
Total													
<variable>													
Male													
<variable>													
Female													
<variable>													
Urban													
<variable>													
Rural													
<variable>													

<variables>

5. Type of institutional unit
6. Kind of economic activity
7. Occupation
8. Number of persons engaged in the production unit
9. Type of workplace
10. Duration of employment
11. Number of usual hours of work per week
12. Number of hours actually worked during the reference week
13. Level of monthly employment-related income (in categories)
14. Age groups
15. Educational level
16. Method of training

Tables B.17-B.18. Employed persons wanting to work more hours by type of production unit and nature of the job, according to *<variable>*, sex and type of area

<variable>, sex and type of area	Total			Formal sector enterprises			Informal sector enterprises			House-holds producing goods for own final use	Households employing paid domestic workers		
	Total employ-ment	Formal employ-ment	Informal employ-ment	Total employ-ment	Formal employ-ment	Informal employ-ment	Total employ-ment	Formal employ-ment	Informal employ-ment	Informal employ-ment	Total employ-ment	Formal employ-ment	Informal employ-ment
Total													
<variable>													
Male													
<variable>													
Female													
<variable>													
Urban													
<variable>													
Rural													
<variable>													

<variables>

17. Reason for wanting to work more hours

18. Number of hours actually worked during the reference week

Table B.19. Employed persons seeking another job by type of production unit and nature of the job, according to reason for seeking another job, sex and type of area

Reason for seeking another job, sex and type of area	Total			Formal sector enterprises			Informal sector enterprises			House-holds producing goods for own final use	Households employing paid domestic workers		
	Total employ-ment	Formal employ-ment	Informal employ-ment	Total employ-ment	Formal employ-ment	Informal employ-ment	Total employ-ment	Formal employ-ment	Informal employ-ment	Informal employ-ment	Total employ-ment	Formal employ-ment	Informal employ-ment
Total													
Higher income													
Lack of job security or tability													
reason													
Male													
Reasons													
Female													
Reasons													
Urban													
Reasons													
Rural													
Reasons													

GROUP C. Tabulations dealing with employees

Table C.1. Employees by type of production unit and nature of the job, according to conditions of employment, sex and type of area

Conditions of employment, sex and type of area	Total			Formal sector enterprises			Informal sector enterprises			Households employing paid domestic workers		
	Total employment	Formal employment	Informal employment	Total employment	Formal employment	Informal employment	Total employment	Formal employment	Informal employment	Total employment	Formal employment	Informal employment
Total												
Contract without limit of time												
Yes												
No												
Written employment contract												
Yes												
No												
Employers' social contribution												
Yes												
No												
Paid annual leave												
Yes												
No												
Paid sick leave												
Yes												
No												
Male												
Conditions of employment												
Female												
Conditions of employment												
Urban												
Conditions of employment												
Rural												
Conditions of employment												

Table C.2-C.7. Employees by type of production unit and nature of the job, according to *<variable>* and conditions of employment

<variables> and conditions of employment	Total			Formal sector enterprises			Informal sector enterprises			Households employing paid domestic workers		
	Total employment	Formal employment	Informal employment	Total employment	Formal employment	Informal employment	Total employment	Formal employment	Informal employment	Total employment	Formal employment	Informal employment
Total												
<variable>												
Contract without limit of time (yes/no)												
<variable>												
Written employment contract (yes/no)												
<variable>												
Employers' social contribution												
<variable>												
Paid annual leave												
<variable>												
Paid sick leave												
<variable>												

<variables>

2. Age group
3. Educational level
4. Method of training
5. Kind of economic activity
6. Occupation
7. Level of monthly earnings (category of earnings)

GROUP D. Tabulations dealing with persons in informal employment

Tables D.1-D.7. Persons in informal employment by status in employment and sex, according to kind of economic activity and *<variable>*

Kind of economic activity *<variables>*	Total			Own-account workers, employers, members of producers' cooperatives			Contributing family workers			Employees		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total												
Kind of economic activity 1												
<variable>												
Kind of economic activy 2												
<variable>												
…												

<variables>

1. Educational level
2. Method of training
3. Number of persons engaged
4. Type of workplace
5. Duration of employment
6. Usual hours of work
7. Level of monthly employment-related income

Tables D.8-D.11. Persons in informal employment by status in employment and sex, according to occupation and *<variable>*

Occupation *<variable>*	Total			Own-account workers, employers, members of producers' cooperatives			Contributing family workers			Employees		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total												
Occupation 1												
<variable>												
Occupation 2												
<variable>												
…												

<variables>

8. Educational level
9. Method of training
10. Usual hours of work
11. Level of monthly employment-related income

Tables D.12-D.13. Persons in informal employment by status in employment and sex, according to type of workplace and *<variable>*

Type of workplace and *<variables>*	Total			Own-account workers, employers, members of producers' cooperatives			Contributing family workers			Employees		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total												
At own home												
<variable>												
Client or employer's home												
<variable>												
Other fixed premises												
<variable>												
Agricultural land												
<variable>												
Construction site												
<variable>												
Market or street stall												
<variable>												
Without fixed location												
<variable>												

<variables>

12. Number of persons engaged

13. Duration of employment

Tables D.14-D.15. Persons in informal employment by status in employment and sex, according to duration of employment, *<variable>* and level of monthly employment-related income

Duration of employment, *<variable>* and level of monthly employment-related income	Total			Own-account workers, employers, members of producers' cooperatives			Contributing family workers			Employees		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total												
Less than 3 months												
<variable>												
3 to under 6 months												
<variable>												
6 to under 12 months												
<variable>												
1 to under 5 year												
<variable>												
5 to under 10 years												
<variable>												
Monthly employment-related income **Category 1**												
Duration of employment and *<variable>*												
Category 2												
Duration of employment and *<variable>*												
....												

<variables>

14. Kind of economic activity

15. Occupation

Tables D.16-D.18. Persons in informal employment by status in employment and sex, according to level of monthly employment-related income and *<variable>*

Level of monthly employment-related income *<variable>*	Total			Own-account workers, employers, members of producers' cooperatives			Contributing family workers			Employees		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total												
Monthly employment-related income **– category 1**												
<variable>												
Monthly employment-related income **– category 2**												
<variable>												
…												

<variables>

16. Educational level
17. Usual hours of work
18. Type of workplace

GROUP E. Tabulations dealing with persons employed in the informal sector

Tables E.1-E.7. Persons employed in the informal sector by status in employment and sex, according to kind of economic activity and *<variable>*

Kind of economic activity *<variable>*	Total			Own-account workers, employers, members of producers' cooperatives			Contributing family workers			Employees		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total												
SECTION A												
<variable>												
SECTION B												
<variable>												
…												

<variables>

1. Educational level
2. Method of training
3. Number of persons engaged
4. Type of work-place
5. Duration of employment
6. Usual hours of work
7. Level of monthly employment-related income

Tables E.8-E.11. Persons employed in the informal sector by status in employment and sex, according to occupation and *<variable>*

Occupation *<variable>*	Total			Own-account workers, employers, members of producers' cooperatives			Contributing family workers			Employees		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total												
Occupation 1												
<variable>												
Occupation 2												
<variable>												
…												

<variables>

8. Educational level
9. Method of training
10. Usual hours of work
11. Level of monthly employment-related income

Tables E.12-E.13. Persons employed in the informal sector by status in employment and sex, according to type of workplace and *<variable>*

Type of workplace *<variable>*	Total			Own-account workers, employers, members of producers' cooperatives			Contributing family workers			Employees		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total												
At own home												
<variable>												
Client or employer's home												
<variable>												
Other fixed premises												
<variable>												
Agricultural land												
<variable>												
Construction site												
<variable>												
Market or street stall												
<variable>												
Without fixed location												
<variable>												

<variables>

12. Number of persons engaged
13. Duration of employment

Tables E.14-E.18. Persons employed in the informal sector by status in employment and sex, according to level of monthly employment-related income, *<variable 1>* and *<variable 2>* plain 2

Level of monthly employment-related income, *<variable 1>* and *<variable 2>*	Total			Own-account workers, employers, members of producers' cooperatives			Contributing family workers			Employees		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total												
Level of monthly employment-related income												
Category 1												
<variable 1> category 1												
<variable 2>												
<variable 1> category 2												
<variable 2>												
...												
Category 2												
<variable 1> category 1												
<variable 2>												
<variable 1> category 2												
<variable 2>												
...												

<variables>

14. Educational level and method of training
15. Duration of employment and kind of economic activity
16. Duration of employment and occupation
17. Usual hours of work
18. Type of workplace

GROUP F. Tabulations dealing with informal sector units

Tables F.1-F.17. Informal sector units by sex of the entrepreneur and status in employment, according to type of area (urban/rural), kind of economic activity and *<variable>*

Kind of economic activity and *<variable>*	Total			Male			Female		
	Total	Own account workers	Employers	Total	Own account workers	Employers	Total	Own account workers	Employers
Total									
<variable>									
Manufacturing									
<variable>									
…									
<variable>									

<variables>

1. Type of ownership and number of partners, if any
2. Duration of operation
3. Main problems faced
4. Type of workplace
5. Number of persons engaged in the production unit and status in employment
6. Bookkeeping practices
7. Relation with other enterprises (independent or producing for other enterprises as subcontracting)
8. Whether credit was obtained and type of credit
9. Number and type of customers
10. Membership of associations or cooperatives, by type
11. Availability of public utilities
12. Participation in support programmes by type
13. Number of employees engaged
14. Number of contributing family workers
15. Range of value added during the reference period
16. Type of assets bought or rented during the reference period
17. Type of assets sold or leased during the reference period

Table F.18. Average output sold, output produced, output produced for own final use, intermediate consumption, change in inventories and value added, per day of business operation during the reference period, according to kind of economic activity and sex of the entrepreneur

Kind of economic activity Sex	Output sold	Average gross output	Output produced for own final use	Intermediate consumption	Change in inventories	Value added
Total						
Kind of economic activity 1						
Male						
Female						
Kind of economic activity 2						
Male						
Female						
...						

GROUP G. Tabulations dealing with informal sector entrepreneurs

Tables G.1-G.13. Informal sector entrepreneurs by sex and status in employment, according to *<variable>*

<variable>	Total			Male			Female		
	Total	Own account workers	Employers	Total	Own account workers	Employers	Total	Own account workers	Employers
Total									
<variable>									

<variables>

1. Age group
2. Level of education
3. Marital status
4. Place or country of origin
5. Whether has a bank account
6. Member of a cooperative by type (consumer, producer)
7. Hours actually worked
8. Occupation
9. Whether has other jobs and status in employment in other jobs
10. Main source of income
11. Plans for the future
12. Participation in training programs by type (formal/informal)
13. Whether covered by social security scheme

GROUP H. Tabulations dealing with members of households with informal sector entrepreneurs

Tables H.1 – H.5. Members of households with informal sector entrepreneurs by sex and activity status, according to *<variable>*

<variable>	Total			Male			Female		
	Employed	Unemployed	Not in the labour force	Employed	Unemployed	Not in the labour force	Employed	Unemployed	Not in the labour force
Total									
<variable>									

<variables>

1. Age groups
2. Marital status
3. Type of production unit (if employed)
4. Nature of the job (if employed)
5. Status in employment (if employed)

APPENDIX B2 – Proposed tabulation variables and categories

The tabulation variables and possible categories are presented in Table 7.3. Countries may adapt them using more or less detail, depending on the descriptive and analytical needs and the limits imposed by the sample.

Table B2.1. Tabulation categories

VARIABLE	TABULATION CATEGORIES
Type of production unit	▪ Formal sector units ▪ Public ownership ▪ Private ownership ▪ Other form of ownership ▪ Informal sector units ▪ Households ▪ Producing goods exclusively for their own final use ▪ Employing paid domestic workers
Status in employment	▪ Own-account worker, employer, member of producers' cooperative ▪ Own-account worker ▪ Employer ▪ Member of a producers' cooperative ▪ Contributing family worker ▪ Employee
Nature of the job	▪ Formal employment ▪ Informal employment
Sex	▪ Male ▪ Female
Marital status and household composition	▪ Married/cohabiting with children below school age ▪ Married/cohabiting with children beyond school age ▪ Married/cohabiting without children ▪ Single/widowed/divorced/separated with children below school age ▪ Single/widowed/divorced/separated with children beyond school age ▪ Single/widowed/divorced/separated without children
Type of area	▪ Urban ▪ Rural
Type of institutional unit	▪ Corporation ▪ Financial ▪ Non-financial ▪ Government ▪ Non-profit institution serving households ▪ Household

VARIABLE	TABULATION CATEGORIES
Kind of economic activity	ISIC rev. 4 tabulation categories or alternative aggregation for the informal sector (UN, 2008c, Table 4.5.). The alternative aggregation, reproduced as Table E2.2 below, consists of 11 categories, designated by the Roman numerals I to XI. This is a smaller number of categories at the highest level than the standard ISIC rev.4. The objective of this alternative aggregation is to reflect better the high concentration of informal sector activities in such groups as: A (Agriculture, forestry and fishing), C (Manufacturing), F (Construction), G (Wholesale and retail trade; repair of motor vehicles and motorcycles), H (Transportation and storage), I (Accommodation and food service activities), and S (Other service activities). While grouping together or excluding certain activities where the informal sector is largely absent (i.e. public administration activities and activities of extraterritorial organizations and bodies), this alternative aggregation also provides sufficient detail in those activities most relevant to the informal sector. For example, manufacturing, repair services and trade are presented separately. Likewise, retail trade activities via stalls and markets, as well as door-to-door and other direct forms of retail sale, are identified separately.
Occupation	ISCO-08 major groups (ILO, 2012)
Number of persons engaged in the production unit	▪ 1 ▪ 2-4 ▪ 5-9 ▪ 10-19 ▪ 20-49 ▪ 50-99 ▪ 100-199 ▪ 200 or more
Type of work place	▪ At own home ▪ Client's or employer's home ▪ Other fixed premises ▪ Agricultural land ▪ Construction site ▪ Market or street stall ▪ Without fixed location (mobile)
Number of usual hours of work per week	▪ under 20 hours ▪ 20-29 hours ▪ 30-39 hours ▪ 40-44 hours ▪ 45-49 hours ▪ 50 hours or more

VARIABLE	TABULATION CATEGORIES
Number of hours actually worked during the reference week	▪ under 20 hours ▪ 20-29 hours ▪ 30-39 hours ▪ 40-44 hours ▪ 45-49 hours ▪ 50 hours or more
Level of monthly employment-related income/earnings	Employment-related income/earnings classes to be determined according to national currencies and income distribution
Age groups	▪ under 15 years (if applicable) ▪ 15-19 years ▪ 20-24 years ▪ 25-29 years ▪ 30-34 years ▪ 35-39 years ▪ 40-44 years ▪ 45-49 years ▪ 50-54 years ▪ 55-59 years ▪ 60-64 years ▪ 65 years or more
Educational level	ISCED or national classification
Method of training	▪ No training received ▪ Apprenticeship ▪ On the job/informal apprenticeship ▪ Correspondence course ▪ Virtual/internet learning ▪ Private study ▪ Institution full-time ▪ Institution part-time ▪ Other
Duration of employment (job turnover)	▪ Less than 3 months ▪ 3 to under 6 months ▪ 6 to under 12 months ▪ 1 to under 5 years ▪ 5 to under 10 years ▪ 10 years or more
Reason for wanting to work more hours	▪ To have a higher income ▪ Other reason
Reason for looking for another job	▪ To have a higher income ▪ Lack of job security or stability ▪ Other reason

VARIABLE	TABULATION CATEGORIES
Conditions of employment (other than hours of work and earnings)	▪ Contract without limit of time (yes/no) ▪ Written employment contract (yes(no) ▪ Employers' social contributions (yes/no) ▪ Paid annual leave or compensation (yes/no) ▪ Paid sick leave (yes/no) ▪ Paid maternity leave (yes/no/not applicable)
Type of ownership	▪ Individual ownership ▪ Household ownership ▪ Business partners with members of other households
Book-keeping practices	▪ The unit keeps complete written accounts ▪ The unit keeps partial written accounts ▪ The unit does not keep accounts
Main problems faced	▪ Lack of clients/markets ▪ Lack of skilled staff ▪ Lack of regular staff ▪ Lack of management skills ▪ Labour problems ▪ Lack of infrastructure ▪ Lack of transport ▪ Lack of raw materials ▪ Lack of space/land ▪ Lack of access to electricity ▪ Electricity cuts ▪ High cost of electricity ▪ Security problems ▪ Corruption ▪ Non-payment of debts ▪ High taxes ▪ Strict regulations ▪ Too much competition ▪ Other problems ▪ No problems

Table B2.2. Alternative ISIC aggregation for analysis and reporting on informal sector statistics (cf., UN 2008c, Table 4.5, page 281)

Category	Title	ISIC sections	ISIC divisions	ISIC groups	ISIC classes
I	Agriculture, forestry and fishing	A	01–03	011–032	0111–0322
II	Mining and quarrying, manufacturing, electricity, gas and water supply, waste management	B, C, D, E	05–39	051–390	0510–3900
II *a*	*of which: Manufacturing*	*C*	*10–33*	*101–332*	*1010–3320*
III	Construction	F	41–43	410–439	4100–4390
IV	Wholesale and retail trade	G*	45,* 46, 47	451, 453, 461–479	4510, 4530, 4610–4799
IV *a*	*of which: Retail trade not in stores*[a]	*G**	*47**	*478, 479**	*4781–4789, 4799*
V	Repair of motor vehicles and motorcycles; repair of computers and personal and household goods	G,* S*	45,* 95	452, 454, 951–952	4520, 4540, 9511–9529
VI	Transportation and storage	H	49–53	491–532	4911–5320
VII	Accommodation and food service activities	I	55–56	551–563	5510–5630
VII *a*	*of which: Restaurants, mobile food service activities and event catering*	*I**	*56**	*561, 562**	*5610, 5621*
VIII	Professional, scientific and technical activities; administrative and support service activities; arts, entertainment and recreation	M, N, R	69–82, 90–93	691–829, 900–932	6910–8299, 9000–9329
IX	Education; human health and social work activities	P, Q	85–88	851–889	8510–8890
X	Other personal service activities	S*	96	960	9601–9609
XI	Other activities	J, K, L, S*	58–68, 94	581–682, 941–949	5811–6820, 9411–9499

* Denotes a split of a section, division or group.

[a] Not including retail trade via mail order houses or via Internet.