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Statistics on the Informal Economy: Definitions, Regional Estimates & Challenges

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WIEGO Working Papers

The global research-policy-action network Women in Informal Employment: Globalizing and Organizing (WIEGO) Working Papers feature research that makes either an empirical or theoretical contribution to existing knowledge about the informal economy especially the working poor, their living and work environments and/or their organizations. Particular attention is paid to policy-relevant research including research that examines policy paradigms and practice. This series includes statistical profiles of informal employment and critical analysis of data collection and classification methods. Methodological issues and innovations, as well as suggestions for future research, are considered. All WIEGO Working Papers are peer reviewed by the WIEGO Research Team and/or external experts. The WIEGO Publication Series is coordinated by the WIEGO Research Team.

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Main Findings

In 2002 the ILO in collaboration with the WIEGO network produced *Women and Men in the Informal Economy: A Statistical Picture* (ILO 2002) to provide a statistical picture of the informal economy across regions using the available data. At the time national data were so limited that estimates of informal employment could only be determined by an **indirect, residual approach** and data were based on 25 countries. The regional estimates reported here reflect important advances over the earlier estimates, specifically: a) more and better data because these estimates were based on 40 countries with direct measures and 80 countries with indirect measures; and b) an improved estimation method with a more sophisticated and robust analytic approach combining direct and indirect measures.

Size of the Informal Economy

Informal employment comprises more than one-half of non-agricultural employment in most regions of the developing world – specifically 82 per cent in South Asia, 66 per cent in Sub-Saharan Africa, 65 per cent in East and Southeast Asia and 51 per cent in Latin America. In the Middle East and North Africa informal employment is 45 per cent of non-agricultural employment. Eastern Europe and Central Asia have the lowest level – at 10 per cent – which reflects the legacy of a centrally planned economy where informal activities were considered illegal and even forbidden. Estimates for China which are based on six cities show that 33 per cent of non-agricultural employment is informal.

Regional estimates provide a useful overview, but they hide the diversity that exists within a region. For example, informal employment accounts for an estimated 51 per cent of all non-agricultural employment in Latin America, but the share varies across individual countries from: 40 per cent in Uruguay to 75 per cent in Bolivia. Similarly, in East and Southeast Asia the regional average is 65 per cent, with informal employment accounting for 42 per cent of non-agricultural employment in Thailand and 73 per cent in Indonesia. The relative size of informal employment also varies across sub-regions. In Sub-Saharan Africa, informal employment tends to account for a smaller share of non-agricultural employment in southern Africa (e.g. 33 per cent in South Africa and 44 per cent in Namibia) relative to countries in other sub-regions (e.g. 82 per cent in Mali and 76 per cent in Tanzania).

In developed countries, the concepts such as non-standard or atypical work are often used to refer to employment arrangements that would be identified as informal employment in developing countries. The arrangements in question are generally referred to as non-standard employment because they tend not to afford workers the protections and benefits built around the norm of regular, full time, year-round wage employment. The term “non-standard work” includes: *own account self-employed* workers without employees, *temporary* (or fixed-term) workers, including temporary help agency and on-call or contract company workers; and some *part-time* workers. The significance of non-standard employment arrangements in developed countries is shown in 2008 data for OECD countries:

- Own account self-employment is as high as 21 and 20 per cent of *total employment* in Greece and Turkey respectively; for 11 of the 28 countries with data it ranges from 10 to 19 per cent of *total employment* and for the remaining 15 countries, from 4 to 9 per cent of *total employment*.
- Temporary or fixed term work ranges from a high of 29 per cent of *wage and salary employment* in Spain to a low of about 4 per cent in Slovakia and the United States; of the 28 countries with data, temporary employment is over 20 per cent of *wage and salary work* in 4 countries, from 10 to 18 per cent in 12 countries and from 4 to 9 per cent in 12 countries.
- Part-time employment is over 20 per cent of *total employment* in 8 of the 29 countries with data, reaching a high of 36 per cent in the Netherlands; it is between 11 and 19 per cent in 13 countries and under 10 per cent in 8 countries.

Components of the Informal Economy

Informal employment inside the informal sector is comprised of all employment in informal enterprises, including employers, employees, own account workers, contributing family workers and members of co-operatives. *Informal employment outside the informal sector* includes a) employees in formal enterprises (including public enterprises, the public sector, private firms and non-profit institutions) not covered by social protection; b) employees in households (e.g. domestic workers) without social protection; and c) contributing family workers in formal enterprises. In all regions, with the exception of Eastern Europe and Central Asia and in urban China, informal employment in the informal sector is a larger component of non-agricultural employment than informal employment outside the informal sector. It ranges from a high of 69 per cent of non-agricultural employment in South Asia to 7 per cent for Eastern Europe and Central Asia.

In three of the five regions with data (Latin America and the Caribbean, South Asia and East and Southeast Asia) plus urban China, non-agricultural informal employment is almost evenly split between wage and self-employment. However, wage employment dominates non-agricultural informal employment in Eastern Europe and Central Asia while self-employment is predominant in Sub-Saharan Africa.

Self-employment is comprised of employers, employees, own account workers and contributing family workers. Across the regions own account workers are the largest category comprising from 53 per cent of non-agricultural informal employment in Sub-Saharan Africa to 33 per cent in East and Southeast Asia (excluding China). The second largest category is contributing family workers who comprise about 5 per cent of non-agricultural informal employment in Eastern Europe and Central Asia to 12 per cent in South Asia. Few workers are employers: only 2 per cent in Sub-Saharan Africa, Eastern Europe and South Asia to 9 per cent in East and Southeast Asia (excluding China), but as high as 16 per cent in urban China.

Women and Men in the Informal Economy

In three out of six regions, informal employment is a greater source of non-agricultural employment for women than for men: South Asia – 83 per cent of women workers and 82 per cent of men workers; Sub-Saharan Africa – 74 per cent and 61 per cent; Latin America and the Caribbean – 54 per cent and 48 per cent; plus urban China – 36 per cent and 30 per cent. In East and Southeast Asia (excluding China) the percentage is roughly the same (64 per cent of women workers and 65 per cent of men workers). Only in the Middle East and North Africa is informal employment a greater source of employment for men than for women (47 per cent of men workers and 35 per cent of women workers). However because there are more men in employment than women, men generally comprise a greater share of informal non-agricultural employment than women.

In Sub-Saharan Africa and East and Southeast Asia (excluding China) the percentages of women engaged in own account employment are higher than of men: especially in Sub-Saharan Africa, where 60 per cent of women engaged in informal employment are own account workers.

In developed countries, women are more likely to be in non-standard employment arrangements than men. Women have lower rates of self-employment compared to men but, *within* self-employment, they are more likely to be own account workers and less likely to be employers. In most of the OECD countries, women's rates of temporary and part-time employment are higher than men's. In many countries, part-time workers have lower hourly wages, lower levels of advancement, and less long-term employment than full-time workers, even after controlling for individual and job characteristics. For women, working part-time is often described as a choice to limit hours of paid labour in order to spend time in care responsibilities. However social context, social norms, and the extent of public support of child care constrain the extent to which women actually "choose" their work hours.

Introduction

There is renewed interest in the informal economy worldwide. In part, the renewed interest stems from the fact that, contrary to predictions, the informal economy has not only persisted but has also emerged in new forms and in unexpected places. Moreover many now recognize that the informal economy is integrally linked to the formal economy and contributes to the overall economy. There is also growing recognition that supporting the working poor in the informal economy is a key pathway to reducing poverty and inequality. In particular, since women tend to be concentrated in the more precarious forms of informal employment, supporting working poor women in the informal economy is a key pathway to reducing women's poverty and gender inequality.

The renewed interest in the informal economy has been accompanied by a call for better statistics on the phenomenon. Underlying this paper, in response to that call, are several inter-related premises. First, there have been significant advances in measuring informal employment in developing countries where modern industrial jobs have never been a significant part of the workforce. Second, more and more developing countries have been – and should be – encouraged to use the official international statistical definitions outlined in this paper in collecting labour force and other economic data. Third, the conceptual and methodological framework used for measuring informal employment in developing countries can – and should – be applied to developed countries where modern industrial jobs are increasingly being informalized and self-employment is on the rise in some countries. And fourth, the use of unofficial definitions and proxy measures will not generate the coherent set of data that is badly needed for research and policy purposes.¹

An increase in the number of countries collecting data on informal employment, both inside and outside the informal sector, as well as improvements in the quality of these data have made possible the compilation of data from countries and the use of these data to provide a statistical picture of the informal economy worldwide.² In 2002 the ILO, in collaboration with the WIEGO network, produced *Women and Men in the Informal Economy: A Statistical Picture* (ILO 2002) to provide a statistical picture of informal employment across regions using the available data. At the time, because few countries collected data on informal employment, data were so limited that estimates of informal employment could only be determined by an **indirect, residual approach** and were based on only 25 countries.

In 2011 the ILO and WIEGO compiled data for 47 countries from different regions. These data are available on the website of the ILO Statistics Department and were used in the preparation of the new regional estimates presented here.³ They reflect the following important advances over the earlier estimates:

- More and better data – The regional estimates were based on 40 countries with direct measures and 81 countries with indirect measures.
- Improved estimation method – A more sophisticated and robust analytic approach combines direct and indirect measures.
- Updated statistics were prepared on nonstandard work in developed countries – on own account self-employment, temporary and part-time employment.

¹ An example is the use of proxy measures of the output of different sectors of informal enterprises by Schneider (2005) rather than direct survey data on employment in these sectors.

² For a history of the development of statistics on informal employment, see <http://wiego.org/informal-economy/statistics-informal-economy>.

³ The data for 47 countries on informal employment are published on the website of the ILO Statistics Department http://www.ilo.org/global/statistics-and-databases/WCMS_179795/lang--en/index.htm. Detailed country tables are also in the ILO and WIEGO publication *Women and Men in the Informal Economy 2013: A Statistical Picture* (ILO and WIEGO 2013).

This paper is in four parts. The first section describes the statistical definitions related to the informal economy. The second section presents the latest regional estimates of informal employment in developing and transition countries. The third section discusses the application of the concept of informal employment to developed countries and presents data on a related concept – non-standard work – in these countries. And the final section outlines what is needed to further improve statistics on informal employment for research and policy purposes. It makes the case for applying a common statistical framework – specifically, the informal employment framework – to both developed and developing countries, while acknowledging related challenges.

I. Statistical Concepts & Definitions: Development and Framework

The concepts of informal sector and informal employment are relatively new in the field of statistics. The 1993 International Conference of Labour Statisticians (ICLS) adopted an international statistical definition of the “informal sector” that, subsequently, was included in the revised international *System of National Accounts 1993* (Commission of the European Communities *et al* 1993). In order to fit into the framework of the System of National Accounts and provide for a separate accounting of Gross Domestic Production (GDP) in the informal sector, the definition was based on characteristics of production units or enterprises rather than of employment relations. The “informal sector” refers to employment and production that takes place in unincorporated small or unregistered enterprises (e.g., less than five employees).⁴

Ten years later, in 2003, following from the 2002 International Labour Conference Resolution on “Decent Work and the Informal Economy”, the 17th ICLS broadened the concept to “informal employment”.⁵ Informal employment refers to all employment arrangements that leave individuals without social protection through their work, whether or not the economic units they operate or work for are formal enterprises, informal enterprises or households.

Workers who are employed in the informal sector or in informal employment can be further classified according to the categories of the International Classification of Status in Employment (ICSE-93) (see box 1 for Conceptual Framework: Informal Employment). In this framework developed by Ralf Hussmanns, the specific groups of workers employed in the informal sector and in informal employment outside the informal sector are as follows:

Persons employed in the informal sector (including those rare persons who are formally employed in the informal sector):

- own account (self-employed) workers in their own informal enterprises
- employers in informal enterprises
- employees of informal enterprises
- contributing family workers working in informal enterprises
- members of informal producers’ cooperatives

Persons in informal employment outside the informal sector, specifically:

- employees in formal enterprises not covered by social protection, national labour legislation, or entitlement to certain employment benefits such as paid annual or sick leave
- paid domestic workers not covered by social protection, national labour legislation, or entitlement to certain employment benefits such as paid annual or sick leave
- contributing family workers working in formal enterprises

⁴ For the full definition see ILO, Report of the Fifteenth International Conference of Labour Statisticians, Geneva 19-28 January 1993.

⁵ For the full definition see International Labour Office, 2003 Report of the Seventeenth International Conference of Labour Statisticians, Geneva 24 November - 3 December 2003, Geneva: ILO. A discussion of the conceptual change and its implications for survey design is given in R. Hussmanns. 2004. *Measuring the Informal Economy: From Employment in the Informal Sector to Informal Employment*, Geneva: ILO.

Box 1: 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 in 1993.

^(b) Households producing goods for their own final use and households employing domestic workers.

Dark green cells refer to jobs that by definition do not exist in the type of production unit in question.

Light green cells refer to jobs which exist in the type of production unit in question but which are not relevant to our concerns as they represent formal jobs.

The unshaded cells are the focus of our concern – they refer to types of jobs that represent the different segments of the informal economy.

Cells 1 and 5: Contributing family workers: no contract of employment and no legal or social protection arising from the job, in formal enterprises (cell 1) or informal enterprises (cell 5). (Contributing family workers with a contract of employment, wage, social protection, etc. would be considered employees in formal employment.)

Cells 2 and 6: Employees who have informal jobs, whether employed by formal enterprises (cell 2) or informal enterprises (cell 6).

Cells 3 and 4: Own account workers (cell 3) and employers (cell 4) who have their own informal enterprises. The informal nature of their jobs follows directly from the characteristics of the enterprise they own.

Cell 7: Employees working in informal enterprises but having formal jobs. (This may occur, for example, when unincorporated enterprises are defined as informal using size as the only criterion.)

Cell 8: Members of informal producers' cooperatives. The informal nature of their jobs follows directly from the characteristics of the cooperative of which they are member.

Cell 9: Producers of goods for own final use by their household (e.g. subsistence farming), if considered employed according to the international definition of employment.

Cell 10: Paid domestic workers employed by households in informal jobs.

Source: Ralf Hussmanns. 2004. *Measuring the Informal Economy: From Employment in the Informal Sector to Informal Employment*. Working Paper No. 53; Policy Integration Department, Bureau of Statistics, ILO (December).

To sum up, there are three related statistical terms and definitions based on ICLS resolutions/guidelines: the “*informal sector*” refers to unincorporated enterprises that may also be unregistered and/or small; “*informal employment*” refers to employment without social protection through work both inside and outside the informal sector; and the “*informal economy*” refers to all units, activities, and workers so defined and the output from them. Together, workers identified in these categories form the broad base of the workforce and economy, both nationally and globally. These official statistical definitions endorsed by international agreements need to be followed by both official statisticians and researchers.

II. Regional Estimates of Employment in the Informal Economy – Developing Countries⁶

The regional estimates of employment in the informal economy in this section combine direct estimates from survey data with indirect estimates for those countries lacking direct estimates. Combining direct and indirect estimates facilitates the production of more accurate regional estimates when statistics on the informal economy are available for a large number of countries, but still lacking for others. Because a more refined methodology was used to compile these regional estimates than to compile the earlier estimates of informal employment (ILO 2002), the two sets of estimates should not be compared to analyze changes over time.

The regional estimates represent a combination of direct and indirect estimates of informal employment, together with general information on the labour force from international databases, such as employment-population ratios and non-agricultural employment as a share of total employment (**see box 2 and Annex I Technical Note on Regional Estimates of Informal Employment**). The statistics based on the analysis of direct estimates from survey data were used to generate *indirect* estimates of informal employment for countries lacking survey-based statistics. These estimates of informal employment were then aggregated across countries to produce the regional estimates. The regional estimates are restricted to low- and middle-income countries. In the tables which follow, six regions are considered: Latin America and the Caribbean, Sub-Saharan Africa, the Middle East and North Africa, Eastern Europe and Central Asia, South Asia, and East and Southeast Asia. Estimates for China are included in the tabulations based on urban data from six cities. This is the first time such estimates have been available for China. Since the data for China only cover six cities in the country, they are not comparable in terms of geographical coverage to the national data used to prepare the regional estimates.

The level of employment and the prevalence of agricultural employment vary across the six regions (**table 1**). The regional employment to population ratio for women is always lower than that for men and ranges from 22 per cent in the Middle East and North Africa to 55 per cent in Sub-Saharan Africa.⁷ Men's employment to population ratio exhibits less variation – from 61 per cent in Eastern Europe and Central Asia to 78 per cent in South, East, and Southeast Asia. Dependence on agricultural employment also varies across regions. It is lowest in Latin America and the Caribbean, Eastern Europe and Central Asia and highest in South Asia and Sub-Saharan Africa. In both regions where it is highest, over half of all employment is in agriculture.

Size and Significance

Informal employment comprises more than one-half of non-agricultural employment in most regions of the developing world – specifically 82 per cent in South Asia, 66 per cent in Sub-Saharan Africa, 65 per cent in East and Southeast Asia and 51 per cent in Latin America. In the Middle East and North Africa informal employment is 45 per cent of non-agricultural employment. Eastern Europe and Central Asia have the lowest level – at 10 per cent – which reflects the legacy of a centrally planned economy where informal activities were considered illegal and even forbidden. Estimates for China, which are based on six cities, show that 33 per cent of non-agricultural employment is informal.

In three (out of six) regions and in urban China, informal employment is a larger source of employment for women than formal employment and a larger source of employment for women than for men. In Sub-

⁶ This section including the regional estimates was prepared by James Heintz.

⁷ The employment to population ratio is expressed as the number of employed individuals as a percentage of the total working age population, typically defined as 15 years old and older.

Saharan Africa, 74 per cent of women non-agricultural workers are informally employed compared to 61 per cent of men; and in Latin America the figures are 54 per cent of women in comparison to 48 per cent of men. In South Asia, the proportion is similar: 83 per cent for women and 82 per cent for men. In urban China 36 per cent of women in contrast to 30 per cent of men are in non-agricultural informal employment. Women's and men's shares are nearly equal in East and Southeast Asia (64 per cent women and 65 per cent men). In Eastern Europe and Central Asia, non-agricultural informal employment is 13 per cent of men's but only 7 per cent of women's employment. Only in the Middle East and North Africa does informal employment account for a significantly larger share of men's than women's non-agricultural employment.

The three indicators in table 1, taken together, create a composite picture of sex differences in the structure of employment. For example, informal employment may account for a smaller proportion of women's employment than men's in the Middle East and North Africa, but women's employment-to-population ratio is also much lower than men's. That is, women have much less access to any kind of employment when compared to men. The subgroup of women who are able to enter non-agricultural employment may have better access to formal jobs than the average man working outside agriculture. Women's employment to population ratio is also low in South Asia. However, in this case, employed women are disproportionately concentrated in informal activities, both agricultural and non-agricultural.

Table 1: Overview of the Structure of Employment: Employment Population Ratios, Agricultural Employment, and Non-Agricultural Informal Employment, 2004/2010

	Employment population ratio			Agricultural employment as a % of total employment			Informal employment as a % of non-agricultural employment*		
	Women	Men	Total	Women	Men	Total	Women	Men	Total
Latin America and the Caribbean	48	75	61	11	22	18	54	48	51
Sub-Saharan Africa	55	74	65	59	55	57	74	61	66
Middle East and North Africa	22	67	45	37	22	26	35	47	45
Eastern Europe and Central Asia	49	61	55	16	18	17	7	13	10
South Asia	34	78	57	72	47	54	83	82	82
East and Southeast Asia (excluding China)	53	78	65	40	42	41	64	65	65
China **	67	75	71	...	...	...	36	30	33

* Due to the possible existence of some formal wage employment in the informal sector, estimates of total informal employment in this table may be slightly lower than the sum of the two components (informal sector employment and informal employment outside the informal sector) reported in Table 3.

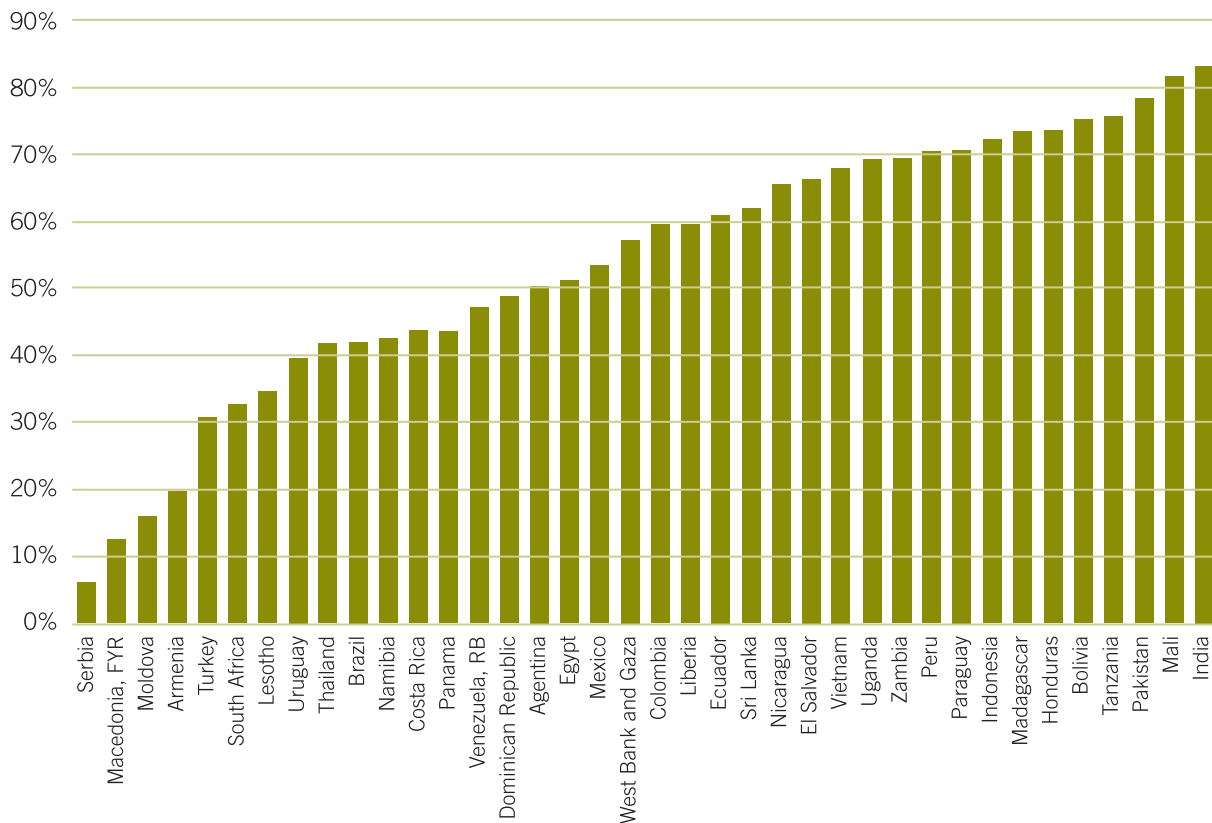
** Estimates for urban China based on six cities: Fuzhou, Guangzhou, Shanghai, Shenyang, Wuhan, and Xi-an

Regional estimates provide a useful overview, but they hide the diversity that exists within a region. To give a sense of this diversity, figure 1 presents direct estimates of informal employment as a share of non-agricultural employment for selected countries. Informal employment accounts for an estimated 51 per cent of all non-agricultural employment in Latin America, but the share varies across individual countries: 40 per cent in Uruguay, 66 per cent in El Salvador and Nicaragua, and 75 per cent in Bolivia. Similarly, in East and Southeast Asia the regional average is 65 per cent, with informal employment accounting for 42 per cent of non-agricultural employment in Thailand, 68 per cent in Vietnam, and 73 per

cent in Indonesia. In the Middle East and North Africa, the regional average is 45 per cent with informal employment accounting for 31 per cent of non-agricultural employment in Turkey to 57 per cent in the West Bank and Gaza.

The relative size of informal employment also varies across sub-regions. In Sub-Saharan Africa, informal employment tends to account for a smaller share of non-agricultural employment in southern Africa (e.g. 33 per cent in South Africa and 44 per cent in Namibia) relative to countries in other sub-regions (e.g. 82 per cent in Mali and 76 per cent in Tanzania).

Figure 1: Informal Employment as a Per Cent of Non-Agricultural Employment, Selected Countries, 2004/10



Statistics on informal employment are often restricted to non-agricultural activities. However, lack of social protection also characterizes much of agricultural employment. It can be assumed that much of agricultural employment is also informal, and it is important to keep in mind the relative size of agricultural employment when considering the prevalence of informal employment relative to total employment. Table 2 summarizes regional estimates of informal agricultural wage employment and of agricultural self-employment as a proportion of total employment.⁸ Agricultural self-employment accounts for a significantly larger share of total employment than informal agricultural wage employment across all regions. For example, in Sub-Saharan Africa, agricultural self-employment accounts for over half (54 per cent) of total employment. Agricultural self-employment accounts for a larger share of women's employment compared to men's in Sub-Saharan Africa, South Asia, and East and Southeast Asia. Across all regions, informal agricultural wage employment's share of total employment is largest in South Asia, at 17 per cent, and smallest in Eastern Europe and Central Asia, at less than 1 per cent. However agricultural wage workers have a high likelihood of holding informal jobs.

⁸ For lack of an international standard definition, the direct estimates from national data do not differentiate between self-employment on formal vs. informal agricultural enterprises or farms.

Table 2: Agricultural Informal Wage Employment and Agricultural Self-Employment as a Percentage of Total Employment, 2004/2010

	Agricultural informal wage employment as % of total employment			Agricultural informal self-employment* as % of total employment		
	Women	Men	Total	Women	Men	Total
Latin America and the Caribbean	1	6	4	9	15	12
Sub-Saharan Africa	2	4	3	57	52	54
Middle East and North Africa****	...	...	...	...	...	...
Eastern Europe and Central Asia	0.4	0.2	0.2	15	18	16
South Asia	21	15	17	50	32	38
East and Southeast Asia (excluding China)	5	9	8	35	32	33

* Employers, own account workers, members of producers' cooperatives, and contributing family workers.

** Too few countries to estimate these sub-categories.

Composition and Segmentation

Employment in the informal sector is comprised of all employment in informal enterprises, including own account workers, employers, employees and contributing family workers, as well as employment in informal producers' cooperatives. Informal employment outside the informal sector includes employees and contributing family workers in formal enterprises (for the public sector, public enterprises, private enterprises, and non-profit institutions) not covered by social protection or entitled to certain other employment benefits; and informal employees in households – e.g. paid domestic workers without social protection.

Table 3 presents estimates of employment in the informal sector and informal employment outside of the informal sector, both as a percentage of total non-agricultural employment. Employment in the informal sector follows the same general patterns observed for informal employment as a whole: it is highest in South Asia (69 per cent of non-agricultural employment), East and Southeast Asia (57 per cent) and Sub-Saharan Africa (53 per cent) and lowest in Eastern Europe and Central Asia (7 per cent).

Table 3: Employment in the Informal Sector and Informal Employment Outside of the Informal Sector as Percentage of Non-Agricultural Employment, by Sex 2004/2010

	Employment in the informal sector as % of non-agricultural employment			Informal employment outside the informal sector as % of non-agricultural employment		
	Women	Men	Total	Women	Men	Total
Latin America and the Caribbean	32	36	34	19	14	16
Sub-Saharan Africa	59	49	53	11	15	14
Middle East and North Africa*	...	...	...	...	...	...
Eastern Europe and Central Asia	3	10	7	10	7	8
South Asia	64	70	69	21	13	15
East and Southeast Asia (excluding China)	56	59	57	17	11	14
China**	23	21	22	15	11	13

Note: Employment in the informal sector includes formal employment in informal enterprises (if any).

* Too few countries to estimate these sub-categories

** Estimates for urban China based on six cities: Fuzhou, Guangzhou, Shanghai, Shenyang, Wuhan, and Xi-an

However, in contrast to informal employment, employment in the informal sector often accounts for a larger share of men's non-agricultural employment than women's, the notable exception being Sub-Saharan Africa. Employment in the informal sector also accounts for a larger share of women's employment relative to men's in the six-city estimates for China. The opposite pattern occurs with regard to informal employment outside of the informal sector – the proportion for women is larger than for men, again with the exception of Sub-Saharan Africa. Women tend to be disproportionately employed as informal paid domestic workers (informal employees in households) and also, but less so, contributing family workers in formal enterprises.

Non-agricultural informal employment is about equally split between wage employment and self-employment in Latin America and the Caribbean, South Asia and East and South East Asia and urban China (**table 4**). Wage employment dominates non-agricultural informal employment in Eastern Europe and Central Asia while the majority of informal employment in Sub-Saharan Africa is self-employment. However there are sharp differences between women and men. In general, women in informal employment are more likely to be self-employed than are men, the exception being Eastern Europe and Central Asia. In Latin America, both women and men working in informal employment are about equally split between wage employment and self-employment.

Table 4: Informal Wage Employment and Informal Self-Employment as a Percentage of Non-Agricultural Informal Employment, 2004/2010

	Informal wage employment as % of non-agricultural informal employment			Informal self-employment* as % of non-agricultural informal employment		
	Women	Men	Total	Women	Men	Total
Latin America and the Caribbean	49	48	48	51	52	52
Sub-Saharan Africa	24	42	33	76	58	67
Middle East and North Africa****	...	...	...	...	...	...
Eastern Europe and Central Asia	72	52	59	28	48	41
South Asia	42	49	47	58	51	53
East and Southeast Asia (excluding China)	39	56	49	61	44	51
China***	52	47	49	48	53	51

* Employers, own account workers, members of producers' cooperatives, and contributing family workers

** Too few countries to estimate these sub-categories

*** Estimates for urban China based on six cities: Fuzhou, Guangzhou, Shanghai, Shenyang, Wuhan, and Xi-an

Self-employment can be further disaggregated into employers, own account workers and contributing family workers (**table 5**).⁹ Across the regions, own account workers are by far the largest self-employment category, accounting for between 33 and 53 per cent of non-agricultural informal employment. The proportions of women in own account work relative to men tend to follow the same broad pattern as total self-employment. The exception is South Asia in which own account workers comprise a larger proportion of men's non-agricultural informal employment than women's. This is because contributing family workers account for a particularly sizeable share of women's informal employment in South Asia. Contributing family workers are the second largest category of the self-employed comprising from 5 per cent of informal employment

⁹ In some countries, members of producers' cooperatives represent a fourth (but usually small) category of informal self-employment. Where relevant, data on members of informal producers' cooperatives are included in the overall estimate of informal non-agricultural self-employment, but separate regional estimates for this particular category of self-employment are not presented in table 5.

in Eastern Europe and Central Asia to 12 per cent in South Asia. The percentage of women contributing family workers is at least twice that of men in all regions except Eastern Europe and Central Asia where it is roughly the same. In the sub-regions of Asia it is three times greater. Employers comprise only between 2 and 9 per cent of non-agricultural informal employment, and 16 per cent in urban China, with the proportion being higher for men than women. Very few women in informal employment are employers: 0 per cent in South Asia, 1 per cent in Sub-Saharan Africa, Eastern Europe and Central Asia, 2 per cent in Latin America/Caribbean, 9 per cent in East/Southeast Asia (excluding China) and 12 per cent in China.

Table 5: Informal Employers, Own Account Workers, and Contributing Family Workers as a Percentage of Non-Agricultural Informal Employment, 2004/2010

	Employers as % of informal employment			Own account workers as % of informal employment			Contributing family workers as % of informal employment		
	Women	Men	Total	Women	Men	Total	Women	Men	Total
Latin America and the Caribbean	2	5	4	41	43	42	9	4	6
Sub-Saharan Africa	1	3	2	60	47	53	15	8	11
Middle East and North Africa*	...	...	...	...	...	...	...	...	...
Eastern Europe and Central Asia	1	2	2	20	41	34	6	5	5
South Asia	0	2	2	32	41	39	26	9	12
East and Southeast Asia (excluding China)	9	9	9	38	31	33	15	5	9
China**	12	19	16	27	32	30	8	2	4

Note: Regional estimates of members of informal producers' cooperatives as a per cent of informal non-agricultural employment are not shown in this table, although some, but not all, individual countries with direct estimates report statistics for this category of informal self-employment.

* Too few countries to estimate these sub-categories

** Estimates for urban China based on six cities: Fuzhou, Guangzhou, Shanghai, Shenyang, Wuhan, and Xi-an

Informal Employment by Branch of Economic Activity

Informal employment outside agriculture is dominated by service activities, such as trade, transportation, and various other services (**table 6**). Trade is perhaps the single most important branch of economic activity, accounting for 25 per cent (Eastern Europe and Central Asia) to 43 per cent (Sub-Saharan Africa) of all non-agricultural informal employment across the regions. Outside of service activities, manufacturing and construction represent important branches of activity. Manufacturing varies from 14 per cent (Latin America and Eastern Europe and Central Asia) to 29 per cent (South Asia) and construction from 7 per cent (Sub-Saharan Africa) to 28 per cent (Eastern Europe and Central Asia) of non-agricultural informal employment.

There is clear evidence of gender segmentation in informal employment. Very few women work in informal construction and transportation activities, the one modest exception being female construction workers in South Asia. These two sectors are clearly male-dominated. Manufacturing accounts for an equal or greater share of women's informal employment than men's in all regions, except for Sub-Saharan Africa. A similar pattern holds for trading activities, with the exceptions in this case of the Middle East and North Africa and South Asia. Services other than trade and transportation (e.g. domestic work) account for a larger share of women's employment than men's across all regions.

Table 6: Distribution of Non-Agricultural Informal Employment by Branch Of Economic Activity (Per Cent), by Sex, 2004/2010

	Manufacturing %			Construction %			Trade %			Transportation %			Other services %		
	W	M	Tot	W	M	Tot	W	M	Tot	W	M	Tot	W	M	Tot
Latin America and the Caribbean	14	14	14	0.4	25	13	36	31	33	1	11	6	49	19	33
Sub-Saharan Africa	15	19	17	1	12	7	51	37	43	1	10	6	31	23	27
Middle East and North Africa	34	16	19	2	30	26	29	31	31	1	11	10	34	14	17
Eastern Europe and Central Asia	20	12	14	2	42	28	36	20	25	1	10	7	41	16	25
South Asia	46	25	29	7	17	15	15	30	27	1	12	9	30	16	18
East and Southeast Asia (excluding China)	19	18	18	1	18	11	42	26	32	1	16	10	37	21	28
China*	7	9	8	1	7	4	42	34	8	1	10	6	47	40	44

W = women, M = men, and Tot = total.

* Estimates for urban China based on six cities: Fuzhou, Guangzhou, Shanghai, Shenyang, Wuhan, and Xi-an

The broad patterns with regard to women's and men's informal employment apparent in the six regions are also evident in the estimates for urban China. But informal employment is even more dominated by services (trade, transportation, and other services) in China than in the other regions.

Women's Share of Informal Employment

The analysis of women's informal employment has emphasized various categories of informal employment as a percentage of women's non-agricultural employment or women's informal employment. It is also possible to look at *women's share* of informal employment relative to men's (**table 7**). But women's share of informal employment needs to be understood in the context of women's share of total employment, which is often quite low due to a low labour force participation rate of women in many countries and regions.

Women's share of non-agricultural informal employment ranges from 15 per cent in the Middle East and North Africa to 47 per cent in Sub-Saharan Africa and in Latin America and the Caribbean and 48 per cent in urban China. One of the reasons why women's share of informal employment is low in the Middle East and North Africa is that women's employment rate, as indicated by the employment-population ratio, is low in this region. A similar pattern is evident in South Asia. Women's share of employment in the informal sector is equal to or less than women's share of informal employment across all regions. What is notable is that women account for the majority of informal employment outside of the informal sector in Latin America and the Caribbean, Eastern Europe and Central Asia, and East and Southeast Asia. Women's share of informal self-employment (non-agricultural) is equal to or higher than women's share of informal wage employment (non-agricultural), the exception among the six regions being Eastern Europe and Central Asia. Urban China is also an exception.

Table 7: Women's Share of Different Categories of Non-Agricultural Employment (Per Cent), 2004/2010

	Women's share of informal employment	Women's share of informal sector employment	Women's share of informal employment outside informal sector	Women's share of informal wage employment	Women's share of informal self-employment*
Latin America and the Caribbean	47	41	51	47	47
Sub-Saharan Africa	47	47	35	33	53
Middle East and North Africa**	15	...	...	...	...
Eastern Europe and Central Asia	34	25	60	41	23
South Asia	20	19	30	18	22
East and Southeast Asia (excluding China)	41	40	52	33	49
China***	48	46	51	50	45

* Employers, own account workers, members of producers' cooperatives, and contributing family workers

** Too few countries to estimate all sub-categories

*** Estimates for urban China based on six cities: Fuzhou, Guangzhou, Shanghai, Shenyang, Wuhan, and Xi-an

Box 2: Estimating Informal Employment and Employment in the Informal Sector by Region

Regional estimates were compiled for countries considered to be low- and middle-income countries in 2009 using the World Bank's classification from the World Development Indicators database. Data on the working age population, the employment population ratio, and non-agricultural employment as a share of total employment (disaggregated by sex) were compiled from international databases – for example, the ILO database LABORSTA (as published in Key Indicators of the Labor Market) and the World Development Indicators.

The ILO Department of Statistics assembled detailed statistics of informal employment and employment in the informal sector on the basis of data generated by national statistics offices in 47 countries. In generating the regional estimates, direct estimates for 40 (out of the 47) countries were used to generate estimates for countries lacking direct estimates. The 40 countries used in producing the indirect estimates had the most complete and comparable data of informal employment.

For those countries which did not have direct estimates of informal employment based on national survey data, informed “best estimates” of informal employment as a share of total non-agricultural employment were generated using regression analysis, controlling for employment to population ratios, real per capita GDP, and categories of employment in the informal economy. A small number of countries (four out of the remaining seven) had direct estimates for employment in the informal sector, but not informal employment. In these cases, the direct estimates were incorporated into the regional estimates, but only for the purposes of estimating employment in the informal sector.

The actual direct estimates from national surveys were combined with the informed predicted estimates for those countries which lacked direct estimates. Weighted averages were then calculated for each region using non-agricultural employment as the basis for weighting the individual country estimates. See technical note in Annex 1 for more methodological details.

III. Informal Employment in Developed Countries¹⁰

Until now the concept of informal employment has been regarded by official statisticians as applying to developing countries only, although there are employment arrangements in developed countries that would be identified as informal employment in developing countries. To advance informal employment statistics at the international level, the development of these statistics in developed countries should be a priority. For the time being, in developed countries, concepts such as non-standard work or undeclared work are more often used.¹¹ These concepts are related to the concept of informal employment but are not identical to it. Not all non-standard employment in developed countries is informal, and not all informal employment is non-standard. The same applies to undeclared work.¹²

Data on the three main categories of non-standard work in OECD countries are presented in the following section as a first step in estimating informal employment in developed countries. Use of these longstanding statistical categories is part of an initiative of the WIEGO Statistics Programme to provide for the classification and analysis of the full set of employment situations in *both* developed and developing countries and, as part of it, to develop markers of informality in the labour force statistics of developed countries. Comprehensive and internationally comparable data on undeclared work are not available.

Non-standard Employment and the Informal Economy

An increasing share of the labour force in developed countries works under arrangements which offer limited benefits and social protection. For some jobs in particular, and in some countries, the trend is marked. For example, a recent study by the European Foundation for the Improvements of Living and Working Conditions found that in the years 1995-2005, 15 European Union countries experienced a “de-standardization” of employment relations in low skilled, low paying jobs. Employment created in low-paying jobs was in part-time and fixed-term arrangements, while full-time permanent jobs were either destroyed or remained stagnant (Fernandez-Macias and Hurley 2008).

Many but not all of the persons working under such arrangements would likely be identified as having informal jobs in developing countries. The arrangements in question are generally referred to as non-standard employment because they tend not to afford workers the protection of regular, full time, year-round wage employment. As commonly used, the term “non-standard” work includes: *own account self-employed* workers without employees; *temporary* (or fixed-term) employment, also including temporary help agency and on-call or contract company workers¹³; and some *part-time* workers.

¹⁰ This section was prepared by Françoise Carré with the assistance of Brandynn Holgate.

¹¹ “Undeclared” work is considered employment by statistical definitions and is not an illegal activity but has not been declared to one or more administrative authorities as mandated, most notably to tax authorities (ILO and WIEGO 2013; Robert 2009; OECD 2004: 232).

¹² Various definitions are used to refer to workers whose work arrangements deviate from the so-called “standard” norm, including:

- employment arranged through an employment intermediary: *temporary agency workers and contract workers*
- employment which is not full-time: *part-time workers*
- employment which is not long-term: *contingent workers*
- employment which is not protected: *precarious workers*
- employment which has not been declared to one or more administrative authorities, as mandated: *undeclared workers*

¹³ The USA also includes contract company workers.

The significance of non-standard employment arrangements in developed countries is shown in 2008¹⁴ data for OECD countries (**tables 8, 9 and 10**):

- Own account self-employment is as high as 21 and 20 per cent of *total employment* in Greece and Turkey respectively; for 11 of the 28 countries with data it ranges from 10 to 19 per cent of *total employment* and for the remaining 15 countries, 4 to 9 per cent of *total employment*.
- Temporary or fixed term work ranges from a high of 29 per cent of *wage and salary employment* in Spain to a low of about 4 per cent in Slovakia and the United States; of the 28 countries with data, temporary employment is over 20 per cent of *wage and salary work* in 4 countries, from 10 to 18 percent in 12 countries and from 4 to 9 per cent in 12 countries.
- Part-time employment is over 20 per cent of *total employment* in 8 of the 29 countries with data, reaching a high of 36 per cent in the Netherlands; between 11 and 19 per cent in 13 countries and under 10 per cent in 8 countries.

Since these estimates are based on published data sources, it is not possible to add the three categories to obtain an overall measure of non-standard employment. A summary statistic would require eliminating the double counting of part-time workers among these categories – an important distinction because temporary workers often are more likely to work part-time than standard workers.¹⁵ Further, all percentages would need to be based on total employment. In the data above, the percentages of temporary workers are based on wage and salary employment only, because more countries reported data on this denominator. Moreover, in developed countries, an estimate of total non-standard employment would not be an exhaustive or accurate indicator of informal employment in a country because there may be forms of non-standard employment not reflected in the statistics, that is, employment with aspects of informality might be counted as part of regular employment. Also not all workers in non-standard employment arrangements should be classified as in informal employment. Some temporary and part-time workers are covered by social protection and labour legislation while others are not; this varies by country. On one hand, some self-employed are entitled to and can afford to pay for their own social protection (see discussion of benefits under each category below). On the other hand, there may be persons in standard employment who hold informal jobs. An example would be regular, full-time, year-round employees whose employers do not pay all or part of their social security contributions in order to reduce the employer's labour cost and possibly increase the employee's take-home pay.

In 2008 the WIEGO Statistics Programme organized a meeting of experts to explore the steps required for having comprehensive data on all forms of informal and non-standard employment in OECD countries. The long term goal of these efforts is to provide for the classification and analysis of the full set of employment situations in both developed and developing countries. The meeting recommended developing markers of informality that would bridge ICLS definitions of informal employment with developed country statistics on employment, particularly non-standard employment categories.¹⁶ These markers would override differences in institutional settings across countries – for example the difference between countries with universal health insurance and those where it is tied to standard employment only – and

¹⁴ A related paper released by the ILO and WIEGO provides statistics on two of the categories, temporary and part-time employment, for 2011, rather than 2008 (ILO and WIEGO 2013). In this paper, for consistency, we use the 2008 data in order to report the same year for all three categories of employment.

¹⁵ For example, in 2008 in Canada, average weekly hours are 33 hours for men in temporary work compared to 38 hours for men in standard jobs; for women, the average was 27 hours in temporary work compared to 34 hours for women in standard jobs (Galarneau 2010, table 5: 12).

¹⁶ This section draws extensively from Carré and Heintz 2009b, which summarizes discussions from an expert workshop held at Harvard University by WIEGO in November 2008.

provide for a comparison of the size of informal employment in different national institutional contexts. Criteria would include whether or not workers receive social protection and labour standard protection coverage, and whether they experience significant economic risk due to their employment arrangement, as with casual or day labour for example. As participants in the Expert Group on Quality of Employment Indicators convened by the UN Economic Commission for Europe, Eurostat, and ILO since 2010, WIEGO researchers are exploring ways to use existing official statistics on employment quality and non-standard work to measure informal employment.

It is also important to recognize that most official employment data is based on *de jure* distinctions between employment arrangements. *De facto* informality, such as that resulting from evasion of employment regulations or outright violation of labour standards is not readily visible and is only partially measured. In a number of OECD countries, primarily middle- and low-income countries, so-called “undeclared” (or under-declared) employment has been highlighted as a form of informal employment (see footnote 9 for definition). Fiscal and GDP measurement impacts are of primary concern in using the concept of undeclared work, but there is also a recognition that people in undeclared work miss out on access to social protection that would otherwise be mandated and may be exposed to wage theft when they are paid in cash.¹⁷ Also, employment arrangements that sit between wage and self-employment, or are too novel to have prompted a categorical definition, are not measured separately and thus are not included in non-standard arrangements.

Many countries are preparing and publishing data on changing employment arrangements and the exposure of workers to greater risk and vulnerability. The work of the Federal Statistical Office of Germany is noteworthy in this respect. It not only publishes statistics on atypical (non-standard wage and salary employment) employment and on the quality of employment, but also has developed certain “markers of economic risk” or informality among workers in the country (**see box 3**).

¹⁷ Estimates of the share of workers who are not registered with mandatory social security or who work without an employment contract are provided as partial measures of undeclared work. For example, 26 per cent of workers in Republic of Korea (2005) are not registered for mandatory social security and 1.8 per cent of workers in the Czech Republic (2006-07) do not have a work contract (OECD 2008: 86).

Box 3: Atypical Employment and Quality of Employment in Germany

Employment in Germany is highly formalized. Most workers are registered and therefore covered by labour law as well as by social protection. However employment arrangements in Germany are changing and workers are being exposed to greater economic risk and vulnerability. To monitor these changes, the Federal Statistical Office of Germany prepares statistics on atypical employment and on quality of employment. A starting point for these analyses are the categories of non-standard employment explored in this section, that is, part-time work of no more than 20 hours per week, temporary employment and own account self-employment. In 2010, 7.8 million persons were in non-standard wage employment (or atypical employment) – a quarter of wage employment. If own account self-employment is included, non-standard employment increased to 10 million, 27 per cent of total employment. In contrast to standard employment, which generally is aimed to fully finance the relevant person's own livelihood and possibly that of dependants, many atypical employment forms can meet that requirement only to a limited degree. However, given the legal and institutional framework in Germany not all workers in these employment categories can be identified as in informal employment. To identify persons within these categories who are working under informalized conditions, the Statistical Office of Germany uses certain "markers" of economic risk and exposure. These include:

- Marginal workers – persons defined in German social law as employees earning no more than 400 Euros a month, irrespective of the hours worked. Marginal employees are entitled to significantly reduced social benefits and employers pay social insurance contributions for these workers at a reduced rate. Marginal employees represent nearly half of all part-time employees usually working no more than 20 hours per week. In 2010 marginal workers were 8 per cent of wage employment and 13 per cent of women's wage employment. Since 1999 marginal employment is required to be registered.
- Involuntary part-time employment refers to persons in part-time work who wished to work full time. In 2010 about one-fifth of persons (22 per cent) were in part-time work because they could not find a full time job. This is a four-fold increase from 1992 when only 6 per cent of workers were in involuntary part-time work. About 38 per cent of men but only 19 per cent of women in part-time work said they wanted to find a full time job, but could not. At the same time 50 per cent of the women indicated family-related obligations as the main reason for working part-time; in a context where child care availability is limited, some of these workers might be deemed "involuntary" part-time workers.
- Involuntary fixed term employment refers to persons who sought a permanent job but did not find one. For these persons both long term occupational and personal life planning are difficult. Of the 57 per cent of persons who gave reasons for having a fixed term contract, 48 per cent responded that it was because they could not find a permanent job – an increase from 42 per cent in 1999.

Sources: This box was based on publications of the Federal Statistical Office of Germany, *Atypical Employment Decreasing in Crisis Year 2009*, and the Federal Statistical Office of Germany, Wiesbaden, *Quality of Employment: Earning Money And What Else Counts* (2011), as well as calculations provided by Thomas Koerner of the Federal Statistical Office of Germany.

Given cross-national differences in employment regulation and context, some research has aimed to develop a single criterion and shared measure of informal employment for countries that have broadly shared norms for employment. In European countries, for example, informal wage employment has been defined by some research as employees without a contract or uncertain about having a contract (Hazans 2011).¹⁸ Informal self-employment has been defined as non-professional own account workers and self-employed employers with under five workers. The criteria to be used are still under examination; for example, should employees with a short-term or fixed-term contract (non-standard contract) be considered formal because they do have a written contract? And does having a contract necessarily ensure registration with social insurance schemes?

Many of the transition countries in Eastern Europe as well as Turkey already apply the ICLS concept of informal employment in their labour force surveys, specifically FYR Macedonia, Rep. of Moldova, Russian Federation, Serbia and the Ukraine. To continue moving forward on the measurement of the informal economy, it will be important to compare data on informal employment and non-standard employment. Data now available show a close correlation between informal wage employment and non-standard employment. In 2007 in the FYR Macedonia, temporary employment accounted for 77 per cent of all informal wage employment and non-standard employment accounted for 78 per cent. In 2008 in Serbia about one third of workers in non-standard wage employment were informal. However, considering informal employees only, most were in non-standard employment. For example, 81 per cent of informal employees had temporary contracts and 82 per cent were in non-standard jobs (Heintz 2009).

As a starting point for the measurement of informal employment in developed countries – and relying on the data with shared definitions – this section reviews data for developed countries on the three main components of non-standard employment from 1990-2008. Additional data which contribute to developing markers of informality – e.g. access to benefits and earnings – are also analyzed.

The data do not show a clear trend over the 20 years within and across countries. One reason is that each country includes different non-standard arrangements under these three general categories. Countries capture the non-standard arrangements which are of greatest concern to them in that they are seen to expose workers to economic risk, but this is not consistent across countries. For example the USA includes contract company workers under forms of employment that are “temporary”¹⁹ while EU countries tend not to. Some countries have a contract for “intermittent” employment and these workers are counted separately from regular workers; other countries do not have a specific statistical category for intermittent workers and do not, therefore, count them separately from regular workers.

Secondly, the economic situation is very different across these countries, making it difficult to track any consistent change among the three employment arrangements across countries. For example, recessions tend to trigger increases in the incidence of temporary employment as a proportion of total wage employment. Either temporary employment grows faster than total employment, or, conversely, it declines more slowly than total employment. For example, in Canada, temporary employment as a proportion of wage employment increased between 2008 and 2009 because permanent employment declined faster than temporary employment during the global recession (Galarneau 2010, table 1: 6).²⁰ However, data from Spain show that with the recent financial crisis non-standard employment dropped significantly as a share of total employment between 2007 and 2010 because temporary workers were laid off much more frequently than regular workers (**see box 4**).

¹⁸The premise is that employees with an oral contract in countries where this is the norm would answer “yes” to the European Social Survey question about whether they have a contract.

¹⁹ The Current Population Survey Supplement on Alternative Work Arrangements includes contract company workers. In table 9, the OECD included contract company workers along with other forms of temporary work.

²⁰ Based on Canadian Labour Force Survey.

Box 4: Non-Standard Employment in Spain

A distinguishing feature of the Spanish labour market is the dual nature of employment protection legislation, with a stark distinction between workers with regular, indefinite duration contracts and those with temporary employment contracts. It has been argued that despite reforms over the past 15 years, dismissal costs for workers on regular contracts continue to remain high and have encouraged massive use of temporary workers (OECD 2010a). The recession has accentuated the duality in the labour market in Spain. Nearly 80 per cent of the job losses in Spain since the start of the recession has been in non-standard employment arrangements and the major part was among temporary workers.

In 2010, 5.7 million workers or 31 per cent of wage employment were in the following non-standard wage employment arrangements: irregular work, temporary employment and part-time work of less than 20 hours per week. In 2007 before the onset of the financial crisis, non-standard wage employment was much higher at 7.4 million workers (37 per cent of wage employment). About 1.7 million temporary wage workers were shed since the beginning of the crisis. If own account self-employment is included then non-standard employment increases to 7.6 million workers in 2010. Non-standard employment comprised 47 per cent of total employment in 2007 and only about 41 per cent in 2010.

In Spain, temporary employment affects entry into the labour force for many young people. Young workers are predominately in temporary employment; 57 per cent of young workers ages 15 to 24 were in temporary employment in 2010 in contrast to 23 per cent for workers aged 25 to 60. However this represents a sharp drop since 2007, when 62 per cent of young workers were in temporary employment.

Part-time employment was prevalent among 18 per cent of the workers in 2010, a slight decline from 19 per cent in 2007. Part-time work was quite high among public sector wage employment (20 per cent). Only 11 per cent of part-time workers chose this form of employment. Another 9 per cent are in part-time work because they are engaged in “further education or training.” Perhaps most significant are the many persons who are in involuntary part-time work. About 43 per cent could not find a full-time job, with similar proportions for women and men. Women part-timer workers are particularly affected by care constraints; about 27 per cent were working part-time because of child care, elder care, and family-related obligations.

Part-time employment that is chosen was less likely among wage employees, both in public and private sectors, than among workers overall. Furthermore, among wage workers, temporary workers were less likely to report that they chose part-time than workers overall.

Source: This box was prepared by Uma Rani of the ILO. The analysis was based on the *Economically Active Population Survey, Encuesta de poblacion Activa, 2007 and 2010*, Instituto Nacional de Estadísticas, Madrid, Spain.

Own Account Self-Employment

Since the self-employed do not have access to employer-based benefits and often have limited access to systems of social protection, they can be considered as in non-standard employment. But the self-employed are not a homogeneous group.²¹ Within self-employment, own account work is more directly related to the informal economy because it is often characterized by lower earnings, poorer working conditions, and weaker attachments to formal structures. In OECD countries, for example, compared to both self-employed employers and regular employees, own account workers tend to report poorer working conditions, longer and irregular working hours, less access to training, less autonomy and more job insecurity – in short, own account workers tend to be exposed to great economic risk (OECD 2000).

Recent changes in labour market structures have made it harder to draw a clear distinction between wage work and self-employment: this is because it is often difficult to verify whether a worker is *economically* independent or dependent. For example, a self-employed worker may have only one customer and may even work on the customer's work site. Such self-employed workers are similar to dependent wage workers. A number of governments have been increasingly concerned with the rise of "false self-employment" as a means for firms to avoid tax liabilities. In many such cases, the customer firms try to avoid or bypass obligations – such as payroll taxes that cover unemployment insurance, worker compensation insurance, pension and (except in the United States) health insurance – by declaring that their workers are self-employed (OECD 2000).

In 2008 own account self-employment ranged from about 20 per cent of total employment in Greece, Republic of Korea (South Korea), and Turkey to a low of 4 per cent in Luxembourg (**table 8**). These rates were relatively stable for most countries. From 1990 to 2008, own account self-employment declined significantly in only 4 (of the 28) countries with data: Belgium, Greece, Ireland, and Spain. France and Luxembourg experienced a steady but small decline. The Czech Republic and Slovakia reported a significant increase over the whole period. During the recent period, 2000 to 2008, Greece, Hungary, Iceland, Republic of Korea, Poland and Turkey experienced declines (2 to 4 points) in own account self-employment; five countries experienced small increases; while Slovakia experienced large increases.

Table 8: Own Account Self-Employment as Percentage of Total Employment and Women's Employment in OECD Countries: 1990, 2000, 2008

	% of Total Employment			% of Women's Employment		
	1990*	2000	2008	1990*	2000	2008
Australia b/	9.5	9.6	8.8	7.3	6.9	6.6
Austria c/	5.5	5.0	6.6	5.4	4.6	6.0
Belgium a/	14.4	9.4	8.4	10.2	7.3	6.2
Canada a/	7.4	10.3	10.2	6.1	8.7	8.3
Czech Republic	6.3	10.3	11.9	4.4	7.0	7.7
Denmark a/	5.1	4.0	4.5	1.9	2.4	2.8
Finland a/	n/a	8.5	8.5	n/a	6.0	6.2
France a/	8.1	5.8	4.9	5.0	3.9	3.5

(continued on following page)

²¹ Statistics on self-employment distinguish three main sub-categories: a) self-employed with employees (i.e. employers); b) self-employed without employees (i.e. own account operators including independent contractors and freelancers); and c) unpaid family workers. Unpaid family workers are usually excluded from compilations of the self-employed because they are considered entrepreneurial assistants and not entrepreneurs. OECD data show this would underestimate the real level of women's entrepreneurship because some women classified as unpaid family workers would be better considered as partners of the self-employed person.

Table 8 (continued): Own Account Self-Employment as Percentage of Total Employment and Women's Employment in OECD Countries: 1990, 2000, 2008

	% of Total Employment			% of Women's Employment		
	1990*	2000	2008	1990*	2000	2008
Germany a/	4.1	5.0	6.0	3.0	3.8	4.8
Greece c/	27.4	24.4	20.9	17.0	17.9	16.9
Hungary c/	6.0	10.0	6.7	4.7	5.8	5.2
Iceland b/ c/	10.9	10.2	8.0	5.9	6.3	4.9
Ireland	17.2	11.7	10.9	5.7	4.4	4.3
Italy i/	n/a	11.6	10.6	n/a	7.9	7.0
Japan	11.0	8.5	7.0	9.4	6.5	4.6
Korea, Republic of b/ c/	n/a	20.8	18.8	n/a	16.2	14.5
Luxembourg a/ g/	6.5	5.1	3.9	5.0	4.7	4.6
Netherlands a/	6.8	7.1	9.0	6.7	6.1	7.5
New Zealand b/	11.4	12.7	11.1	7.7	8.8	8.1
Norway	n/a	5.4	5.4	n/a	3.3	2.9
Poland a/	n/a	18.6	14.7	n/a	15.7	11.8
Portugal	17.4	17.5	17.5	18.4	17.5	17.9
Slovakia c/ d/	4.3	5.3	10.4	2.3	2.9	6.0
Spain e/	16.1	12.2	10.5	13.5	9.6	8.1
Sweden a/	n/a	6.7	6.4	n/a	3.8	4.1
Switzerland b/ f/	5.5	8.4	7.7	4.5	7.9	7.4
Turkey b/ h/	n/a	24.7	20.4	n/a	11.8	11.0
United Kingdom a/	9.2	8.7	10.2	5.3	5.6	6.4
United States	n/a	n/a	n/a	n/a	n/a	n/a

Note:

*1991 for Iceland, New Zealand, and Switzerland; 1992 for Hungary and Portugal; 1993 for Czech Republic and Greece; 1994 for Austria and Slovakia

Source (unless otherwise noted):

ILO – LABORSTA website, Main Statistics (annual),
(<http://laborsta.ilo.org/>)

Table 2D, Employment by status in employment

a/ EUROSTAT – LFS series (annual), Employment by sex, age groups, and economic activity (http://epp.eurostat.ec.europa.eu/portal/page/portal/employment_unemployment_lfs/data/database)

For Canada, Statistics Canada. Table 282-0012 - Labour force survey estimates (LFS), employment by class of worker, System (NAICS) and sex, annual (persons) North American Industry Classification. Available at (<http://www5.statcan.gc.ca/cansim/>) (accessed February 21, 2012).

b/ Excluding armed forces

c/ Excluding conscripts. In Austria, excluding conscripts in military service

d/ Excluding persons on child care leave

e/ Excluding compulsory military service

f/ Excluding seasonal border workers

g/ 2001

h/ 2002

i/ Revisions of national labour force survey provided April 2011. 2004 instead of 2000. Data prior to 2004 not included due to change in series.

Compared to men, women have lower rates of self-employment but *within* self-employment, they are more likely to be own account workers and less likely to be employers.²² In 2008, own account self-employment was relatively high in Greece, Portugal, and the Republic of Korea, accounting for over 12 per cent of total *women's* employment. Over the past two decades – from 1990 to 2008 – in Belgium, Japan and Spain women's own account self-employment declined significantly. But in the last decade – from 2000 to 2008 – in most countries, there was little change in women's own account self-employment except for a 3 point increase in Slovakia and a 4 point decrease in Poland.

Benefits

Self-employed workers are – by definition – responsible for their own contributions to national retirement plans (in countries with universal systems where they are eligible to enroll), health insurance schemes, and other protection. In some countries, enrolment and payment of a premium out of one's resources are mandatory. For example, most developed countries have a tax-financed old age pension system with mandatory contributions. Self-employed workers are usually ineligible for government-run unemployment insurance, being considered responsible for their own jobs.

The situation of the “false” self-employed workers may vary across countries and across parts of social protection systems. Some workers may receive access to some aspects of social protection selectively and if they bring forth requests and complaints, may be reclassified as wage workers.

Temporary Employment

Temporary employment tends to be associated not only with shorter job duration than standard employment and possibly greater exposure to spells of unemployment, but also with less employer-based benefit coverage, and greater exposure to earnings fluctuation (because work duration is less predictable). It can be associated with lower pay as well. This occurs in spite of regulation to prevent pay disparity. Many countries, European Union members in particular, honour directives for pay parity between identical temporary and regular jobs; even in these countries, however, temporary jobs may concentrate in certain job categories. As a result, pay parity mandates may have limited effects. There is also a relation between labour legislation and temporary employment. Countries with a strong legal protection of employees against dismissal tend to have higher rates of temporary employment than countries with less legal protection.

Temporary employment encompasses all short-term employment arrangements, whether through an intermediary (e.g. a temporary/staffing agency or labour broker)²³ or by direct hire for a fixed term. Countries define temporary employment somewhat differently. All countries, however, report a mix of short-term direct hire employment and employment through a temporary agency.²⁴

The data on temporary employment reported here are based on the share of wage and salary employment (i.e. excluding self-employment) rather than on total employment since temporary employment is a form of wage employment in virtually all OECD countries²⁵ (**table 9**). In 2008, countries with the highest rates of temporary employment among wage and salary workers are Spain (29 per cent), Poland (27 per cent), Portugal (23 per cent), and Republic of Korea (20 per cent). Spain and Portugal had high rates throughout the period.

²² Authors' calculations based on ILO LABORSTATA and Eurostat online databases.

²³ For example, one estimate developed by the industry association is of 12 million workers having used temporary agencies in Europe during 2010 (Eurociett 2011).

²⁴ Data source is OECD online database, “Employment by Permanency of the Job.” For European countries, data source used by OECD is Eurostat Labor Force Survey, temporary employment defined as fixed-term, or limited duration employment, temporary agency work and, depending on the country, seasonal employment, training contracts, and apprentices. (Country definitions are available through OECD). For other countries, national labor force survey (monthly or quarterly) was used. The most recent year is provided when 2008 was not available at the time of analysis.

²⁵ These arrangements are forms of wage employment and do not apply to self-employment, with the exception of the USA, which uses expectation of employment duration regardless of status in employment. US temporary workers are those who do not expect their job to last. Among these, temporary help workers and contract company workers are included. Source used by OECD is the Current Population Survey Supplement on Contingent and Alternative Work Arrangements.

Table 9: Temporary Employment as Percentage of Employees (Wage and Salary) in OECD Countries: Total, Women, and Men, 1990, 2000, 2008

	As % of Total Employees			As % of Women Employees			As % of Men Employees		
	1990	2000	2008	1990	2000	2008	1990	2000	2008
Australia e/ f/ i/	4.6	4.8	5.2	5.0	5.4	5.9	4.2	4.3	4.4
Austria c/	6.0	7.9	9.0	6.3	8.4	9.1	5.7	7.6	8.9
Belgium	5.3	9.0	7.6	8.6	12.1	9.7	3.3	6.6	5.9
Canada d/	11.3	12.5	12.3	11.7	13.2	12.7	11.0	11.8	11.8
Czech Republic b/	5.5	9.3	8.0	4.9	9.4	9.8	6.0	9.1	6.5
Denmark	10.8	10.2	8.6	11.0	11.7	9.5	10.6	8.7	7.8
Finland d/	18.3	16.5	15.1	21.0	19.8	18.8	15.6	13.1	11.3
France	10.4	15.4	14.1	11.9	16.4	15.3	9.3	14.5	12.9
Germany	10.3	12.6	14.5	11.2	12.9	14.8	9.6	12.4	14.3
Greece	16.5	13.1	12.1	15.9	15.7	14.1	16.9	11.5	10.6
Hungary d/	5.6	7.1	7.9	5.5	6.5	7.0	5.7	7.7	8.7
Iceland a/	14.4	12.2	9.5	15.2	12.9	9.9	13.7	11.5	9.1
Ireland	8.5	4.3	8.0	11.3	5.4	9.4	6.6	3.4	6.7
Italy	5.2	10.1	14.0	7.6	12.2	16.4	3.9	8.8	12.1
Japan	10.6	12.5	13.6	19.1	20.9	21.0	5.4	6.8	8.3
Korea, Rep. of g/	n/a	24.7	20.4	n/a	27.6	23.6	n/a	22.6	18.2
Luxembourg	3.4	3.4	7.7	4.9	4.5	6.8	2.6	2.6	8.4
Netherlands	7.6	13.8	18.1	10.2	16.9	19.8	6.1	11.4	16.6
Norway	12.9	9.3	9.0	15.1	11.5	11.1	8.2	7.3	7.0
Poland f/	n/a	11.7	27.0	n/a	10.9	27.7	n/a	12.4	26.3
Portugal	18.3	20.4	23.2	20.5	22.7	24.8	16.8	18.6	21.8
Slovakia	2.9	4.8	4.7	2.6	4.5	4.8	4.0	5.1	4.6
Spain	29.8	32.1	29.4	34.2	34.6	31.2	27.7	30.6	27.9
Sweden d/	14.6	15.2	16.1	16.8	17.4	18.7	12.4	13.0	13.4
Switzerland a/	12.6	11.7	13.3	14.3	12.8	13.2	11.4	10.7	13.4
Turkey	14.4	20.3	11.2	16.0	12.6	11.6	14.1	22.2	11.1
United Kingdom	5.2	6.7	5.3	7.0	7.6	6.0	3.6	5.8	4.7
United States c/ f/ h/	5.1	4.0	4.2	5.4	4.2	4.2	4.9	3.9	4.2

Source: OECD. Stat Extracts, Employment by permanency of the job (<http://stats.oecd.org/index.aspx>)

Total employment is Wage and Salary Employment.

Countries have slightly different definitions of Temporary Employment. For definitions, see OECD Stats Extracts.

Notes: a/ 1991 b/ 1993 c/1995 d/ 1997 e/ 1998 f/ 2001 g/ 2004 h/ 2005 i/ 2006

In most of these countries, women's rates of temporary employment are higher than men's. Women's temporary employment is highest in Spain, Poland, Portugal, Republic of Korea, Japan, Netherlands, Finland and Sweden (listed in rank order). In these countries incidence ranges from 19 to 31 per cent of wage and salary employment. Temporary employment among men is highest in Spain, Poland and Portugal, from 22 to 28 percent of total dependent employment – the only three countries with incidence above 20 percent.

Over the period 1990-2008, temporary employment as a share of wage and salary employment increased in most countries (18 of the 28 countries with data). Countries with the greatest increases over the period are Italy (9 percentage points) and the Netherlands (10 points). In Austria, France, Germany, Japan, Luxembourg and Portugal – temporary employment increased from 3 to 5 percentage points of wage and salary employment. The most dramatic change occurred in Poland where temporary employment appears to have increased from 12 to 27 per cent of wage and salary employment between 2000 and 2008. In a few countries – Finland, Greece, Iceland, Norway, and Turkey – the incidence of temporary employment declined by 3 to nearly 5 percentage points.

Between 1990 and 2008, women's rate of temporary employment increased in 17 (out of 28) countries with data and declined, or was stable, in the others. The increases were largest in the Czech Republic, Italy and the Netherlands. In Denmark, Finland, Greece, Iceland, Ireland, Republic of Korea, Norway, Spain, Switzerland, Turkey and the United States there was a decline in the rate of temporary employment. Over the same period, Italy, Luxembourg and the Netherlands experienced striking increases in temporary employment among men, starting quite low in 1990 and reaching levels close to those for women by 2008 in the latter two countries.

In recent years, a distinction has been drawn between voluntary and involuntary temporary employment.²⁶ Estimates show that the share of involuntary temporary employees accounted for 60 per cent of temporary employees in 2007 and it increased by two percentage points to 62 per cent in 2010 for the EU as a whole (IILS 2012).

Industry and Occupation

Temporary employment affects a segment of the workforce and tends to concentrate in a subset of industries and related occupations where the organization of work tasks, and the labour deployment practices of firms, cause this form of employment to be more prevalent.

Across European countries in 2008²⁷ several service sectors have higher incidence of temporary employment than average for all industries (11 per cent): Households as employers (20 per cent); Accommodation/hotels and food services (18 per cent); Administrative and support services, as well as Arts, entertainment and recreation (both at 17 per cent of total employment).

The occupational pattern of temporary employment is related to the pattern by industry. There is higher than average incidence of temporary employment in occupations which are concentrated in the industry categories above. These occupations are Service workers and Clerks (over 10 per cent) as well as the broad category of Elementary occupations (over 21 per cent).²⁸

²⁶ Eurostat provides information that helps to differentiate between voluntary and involuntary temporary work. Involuntary temporary work is defined as those workers who are engaged in these forms of employment because they cannot find either full-time or permanent jobs.

²⁷ Eurostat Labour Force Survey, Annual; age of working population is 15-64.

²⁸ Elementary occupations consist of a mixed group of sales and service occupations (e.g. street vendors, shoe cleaners, domestic labourers, messengers, building caretakers, garbage collectors), agricultural and fishery labourers, and mining, construction, manufacturing and transport labourers.

Among women workers, the pattern of high incidence across industries is broadly similar to that for the female workforce as a whole. Highest rates of incidence for women occur in Administrative support industries in Poland (49 per cent) and Portugal (32 per cent). Virtually all work in Private households (over 95 per cent) in Cyprus is considered temporary work, so is 65 per cent of such work on Poland. This pattern is associated with the high incidence of temporary work among women in Service and Clerk occupations.

Among men, sectors with the highest incidence of temporary work are: Households (20 percent), Education, Administrative and support services, and Accommodations and food services (all at 16 per cent), as well as Construction (14 per cent), a sector where men concentrate and which has a pattern of project-based employment that is often short-term. This industry distribution has ramifications for the relatively higher incidence of temporary employment in particular occupations for men, that is, Elementary occupations (21 per cent), Craft workers (13 per cent), and Service workers and Sales workers (12 per cent).

In all, this industry and occupation distribution of temporary employment follows the patterns of employer practices in service sector activities (both in-person services and white-collar work), in the Household sector, and in Construction. These are environments where short-term employment and seasonal employment are longstanding practices, or where temporary work is used to staff entry-level positions as is the case in Administrative services.

Earnings

Information on hourly earnings of workers in fixed-term contracts for a subset of countries provides an indication of pay differentials between workers with temporary contracts and those with regular employment (Eurostat 2006 Structure of Earnings Survey). For many of the countries, hourly earnings are lower than those of workers in regular or “indefinite” contracts (an employment arrangement with no end date established ex ante). In many countries, the lower hourly earnings of temporary employees as compared with indefinite employees are at least partly due to differences in jobs. Temporary arrangements are more prevalent in certain job categories (often entry-level) and in certain industries than others. New labour force entrants (particularly youth), because they are in entry-level jobs, are more likely to be in temporary employment and to have lower earnings. As noted below, some country-level studies find that, once controls for individual characteristics are included, there remains an hourly pay differential between temporary workers and those in indefinite employment. There are countries, however, where hourly earnings are higher for workers with fixed-term contracts, specifically Estonia, Latvia, and Lithuania. The differential is smaller for women than for men, possibly because women as a whole have lower and less dispersed earnings (women are concentrated in few occupational levels), and their earnings are less affected by the nature of the employment contract.

In the United States in 2005, workers in varied kinds of temporary employment had lower median hourly earnings than the average for the workforce. For example, the median wage for short-term hires was US\$9.00 as compared to US\$11.12 for the workforce as a whole, a difference due in part to their holding different types of jobs. More striking was the difference in weekly earnings likely due to working fewer hours over a year; median weekly earnings for short-term hires were US\$300 as compared to US\$572 for the average of all workers (Carré and Heintz 2009a, table 3.2: 51).²⁹

In Canada there are also consistent hourly earnings differences between permanent/standard jobs and temporary (contract, seasonal, casual and other temporary³⁰) jobs. In 1997, compared to average hourly earnings in permanent jobs, earnings in seasonal jobs were 34 per cent lower, contract jobs were 12

²⁹ Based on Current Population Survey.

³⁰ In the Labour Force Survey of Statistics Canada, temporary agency workers are counted among the “casual and other temporary” sub-category of temporary work.

percent lower, and “casual and other” jobs were 32 per cent lower. In 2009, compared to hourly earnings of CA\$22.71, seasonal jobs were 34 per cent lower (CA\$14.98), contract jobs were 14 per cent lower (CA\$19.61) and “casual and other” jobs were 33 per cent lower (CA\$15.31). Controlling for personal characteristics³¹ of workers mitigates these differences to some degree and for some worker groups but gaps still remain overall (Galarneau 2010). Women in seasonal work have average hourly earnings 35 per cent below those of comparable women in permanent employment. Compared to women in permanent jobs, women in contract work have hourly earnings 8 per cent below and those in “casual and other temporary” jobs have hourly earnings 25 per cent below.³²

Benefits

European Union countries mandate parity in wages and benefits for workers in most forms of temporary employment, whether direct-hire or through a temporary agency.³³ Although such workers remain eligible for all socially administered employment-based benefits, they may not meet some of the hours, seniority, and earnings thresholds necessary for eligibility due to the instability of their employment.

In Canada, temporary or contract workers were less likely than full-time workers to be entitled to employer pensions, health plans, dental plans, paid sick leave, and paid vacation leave. According to the 2000 Survey of Labour and Income Dynamics, workers in temporary/non-permanent jobs had lower rates of employer sponsored benefits than workers in permanent jobs. Only 14 per cent had insurance (extended medical, dental and life/disability) compared to 57 per cent of permanent workers. Only 19 per cent had an employer-sponsored retirement plan compared to 52 per cent of permanent workers (Marshall 2003, table 2).

In the United States where core benefits are employer-based, temporary workers are much less likely than regular full-time workers to have health insurance and private pension plans. In 2005, only 17 per cent of workers in temporary employment (including short-term hires, temp agency workers, on-call workers, and day labourers) received some health benefit coverage through their employer; 41 percent were without health insurance from any source. This contrasts with 14 per cent of regular full-time workers without health insurance from any source. Within temporary employment, there are differences in coverage: 34 per cent of on-call workers, 58 per cent of temp agency workers, and 61 per cent of day labourers were without health insurance from any source (Carré and Heintz 2009a, table 3.3: 53).

Regarding mandates for paid time off, the situation in the United States contrasts to that of many countries. It has neither a federal mandate of a minimum of paid time off (for sick time or holiday), though state legislatures can pass a mandate, nor are provisions available to full-time regular workers mandated to apply to workers in temporary (or part-time) employment. Other countries extend some guaranteed paid time off to workers in temporary employment. For example, in Australia, casual workers receive a “casual loading” on top of their usual salary to compensate for not receiving paid annual leave (Ray and Schmitt 2007: 8). Sweden applies a “holiday pay” mandate (12 per cent of wages) to all workers including “replacement staff, short-term employees, and those on probation who have worked more than 60 hours for an employer” (Ibid: 12).

³¹ Adjustments are made for gender, age, education, student status, family type, recent immigrant status, province, and CMA versus non CMA (Census Metropolitan Area) (Galarneau 2010).

³² Some would argue that, given that labour markets are stratified and even segregated, a number of characteristics are closely correlated with higher odds of ending in temporary work, so that controlling for these characteristics effectively diminishes the measurement of differences in the labour market itself. Nevertheless, after controlling for personal characteristics, pay differentials remain in this case (Galarneau 2010, tables 6 and 7: 14; based on Labour Force Survey).

³³ European Council Directive EU311999L0070 (Council of Ministers 1999) as described in Michon, 1999 covers parity for fixed-term direct hires. EU Directive 2008/104/EC covers temporary agency work. ILO Convention no. 181 sets standards for private employment agencies (Eurociett 2011).

Table 10: Part Time Employment as Percentage of Total Employment and Women's Employment in OECD Countries: 1990, 2000, 2008

	as % of Total			as % of Women		
	1990	2000	2008	1990	2000	2008
Australia b/	n/a	24.1	23.8	n/a	39.4	37.7
Austria	n/a	12.2	17.6	n/a	24.4	30.9
Belgium	13.5	19.0	18.7	28.8	34.5	33.8
Canada	17.0	18.1	18.4	26.7	27.2	26.4
Czech Republic	n/a	3.2	3.5	n/a	5.4	5.8
Denmark	19.2	16.1	18.0	29.7	24.0	23.7
Finland	7.6	10.4	11.5	10.6	13.9	15.1
France	12.2	14.2	13.4	22.5	24.9	22.7
Germany	13.4	17.6	22.1	29.8	33.9	38.6
Greece	6.7	5.5	7.8	11.6	9.5	13.4
Hungary	n/a	2.9	3.1	n/a	4.5	4.3
Iceland a/	22.2	20.4	15.1	39.7	33.7	23.6
Ireland	10.0	18.1	21.0	21.2	33.0	36.0
Italy	8.9	12.2	16.3	18.4	23.4	31.0
Japan c/	n/a	17.7	19.6	n/a	30.9	33.2
Korea, Rep. of	4.5	7.0	9.3	6.5	9.8	13.2
Luxembourg	7.6	12.4	12.7	19.1	28.4	27.3
Netherlands	28.2	32.1	36.1	52.5	57.2	59.9
New Zealand	19.7	22.2	22.4	34.8	35.8	35.0
Norway	21.8	20.2	20.3	39.8	33.4	30.8
Poland	n/a	12.8	9.3	n/a	17.9	14.1
Portugal	7.6	9.4	9.7	12.8	14.9	14.3
Slovakia	n/a	1.9	2.7	n/a	2.9	4.1
Spain	4.6	7.7	11.1	11.5	16.5	21.1
Sweden	14.5	14.0	14.4	24.5	21.4	19.6
Switzerland a/	22.1	24.4	25.9	42.6	44.7	45.9
Turkey	9.3	9.4	8.4	19.0	19.3	19.2
United Kingdom	20.1	23.0	22.9	39.5	40.8	37.7
United States	14.1	12.6	12.2	20.2	18.0	17.0
OECD countries	10.8	11.9	15.5	19.1	20.3	25.3

Source: <http://stats.oecd.org/index.aspx> (updated 05 Dec 2011). Data extracted on 03 Dec 2009 18:02 UTC (GMT) from OECD. Definition: Common OECD definition, hours in main job less than 30 hours.

Notes: a/ 1991; b/ 2001; c/ 2002

Part-Time Employment

In OECD statistics, part-time work is defined as less than 30 hours per week in a main job. Part-time work is often associated with lesser coverage under employer-based and even socially provided insurance and other forms of social protection. In many countries it can also be associated with lower hourly pay. OECD reports that part-time workers have lower hourly wages, lower advancement, less long term employment than full-time workers – even after taking account of individual and job characteristics (OECD 2010b: 3).³⁴ Limited working hours (part-time) are a source of economic risk for the self-employed as well as wage workers. A distinction between involuntary and voluntary part-time employment is often used as a proxy for describing the hardship associated with some types of part-time work as compared with others; in the context of measuring informal employment, the distinction is less useful than how part-time arrangements are handled in social protection and labour regulation, e.g. whether the worker receives social protection through employment.

Part-time work grew as a share of total employment in many OECD countries since the 1990s (**table 10**). Across the OECD countries as a whole, the incidence of part-time in total employment increased from 11 per cent in 1990 to 16 per cent of total employment in 2008. In Europe, part-time increased from 13 to 16 per cent, while it declined in North America from 14 per cent to 13 per cent.

In 2008, the highest level of part-time work was in the Netherlands with 36 per cent of total employment. Over the period 1990 to 2008, the highest levels (over 15 per cent throughout the period) were in Australia, Canada, Denmark, Iceland, the Netherlands, New Zealand, Norway, Switzerland, and the United Kingdom. Germany, Ireland, Italy, and the Netherlands had particularly steep growth over the whole period. Among countries with data only starting in 2000, Austria showed steep growth over 2000-2008.

Part-time work affects women's employment to a greater degree than men's. For women, working part-time is often described as a choice to limit labour market hours in order to spend time in care responsibilities and thus is "voluntary". However, social context, social norms, and the level of public support of child care constrain the extent to which women actually "choose" their work hours. In some countries, part-time hours (and reduced earnings) are the only way to hold down a job and meet care responsibilities. Further, given the sex segregation of jobs, including the typing of part-time jobs as "women's jobs," some women who would like to work full-time may find opportunities to work only part-time.

As of 2008, the incidence of part-time in women's employment was highest in the Netherlands (60 per cent) and Switzerland (46 per cent). Over the period 1990-2008, in most countries part-time work was significantly higher among women's employment than in total employment. In many countries women's part-time work increased significantly over the entire period: Austria (24 per cent to 31 per cent over 2000-2008 only), Germany (30 to 39 per cent), Ireland (21 to 36 per cent), Italy (18 to 31 per cent), Republic of Korea (6 to 13 per cent), Luxembourg (19 to 27 per cent), the Netherlands (52 to 60 per cent), and Spain (12 to 21 per cent). There were declines in women's part-time work in Denmark, Iceland, Norway, and Sweden – countries with historically high rates of part-time among women – as well as in the United States. There were also small declines in Australia and the United Kingdom.

Industry and Occupation

The incidence of part-time in a workforce is a function of the industries and occupations distribution of jobs; some industries – notably service industries – and some occupations – notably pink collar and white collar ones – have a higher incidence of part-time. These patterns overlap with the gender composition of jobs. Service industries and occupations tend to have higher concentration of women and, when they work, women have higher rates of part-time work than men.

³⁴ Also, for the OECD as a whole, involuntary part-time employment accounted for 2.5 percent of total employment in 2008 (OECD online "Incidence of Involuntary Part-time Workers.")

Incidence of part-time across industries is examined in detail for European countries (Eurostat 2008). Because Eurostat data use slightly different definitions of part-time than the OECD, the level of incidence may vary slightly from OECD measures reported above, but the relative position of countries in terms of incidence within the total workforce and among women does not differ.³⁵

Some industries are heavier users of part-time for several reasons. Sometimes, this is an historical legacy, the work having traditionally had fluctuating and short hours. Other times, heavy use of part-time is a recent phenomenon reflecting changes in the structure of employment.

Among European countries in 2008, for the total workforce, the incidence of part-time is high among: Private household workers³⁶ (over 40 per cent in all countries but one with available data), a group that includes domestic workers, as well as in a range of service industries such as: Accommodations and food Services; Wholesale and retail trade; Administrative and support services; Education; Human health and social work. On the whole, even within these industries, there is wide variation across countries. Agriculture has high incidence of part-time in Croatia, the Netherlands, and Portugal.

Across countries, part-time concentrates almost exclusively in white collar occupations, that is, Clerks, Service workers, and Elementary occupations. Among blue collar occupations, only Skilled agricultural workers display high incidence and only for a subset of countries (Central, East European, and some Southern European countries).

The occupations most affected in specific countries vary from this general pattern. For example, in several Northern and Central European countries, incidence is relatively high among Professionals and Technicians. Further, the Netherlands has high incidence among these occupational categories – as well as Skilled agricultural workers.

While the incidence of part-time is relatively high overall among women, it is extremely high in some industries. For instance, women Private household workers have extremely high incidence of part-time (ranging from 25 to over 80 per cent) in the subset of countries which report these data. As a rule, the sectors in which part-time incidence is high for women are all the service sectors where incidence is high overall; for women, however, the part-time rates are substantially higher than for the workforce as a whole. Even within industry categories where heavy use is common, there is wide variation across countries. For example, among Private household workers, incidence ranges from a high of 96 per cent in the Netherlands (which has very high rates of part-time overall) to a low of 24 per cent in Greece.

The higher incidence of part-time women workers in particular industries mirrors their concentration in particular occupations that are clustered in particular industries. Nevertheless, within this general pattern, there are cross-country differences, or even cross-regional, differences, as with Nordic countries versus those from Central and Eastern Europe. For example, for women Clerks, incidence of part-time ranges from 0 per cent in Bulgaria, Croatia, and Romania to nearly 77 per cent part-time in the Netherlands. And for women Service workers, incidence ranges from 1.1 per cent in Romania to as high as 85 per cent in the Netherlands.

Earnings

In all but five European countries for which information is available for recent years, average hourly earnings of part-time workers are lower than for full-time workers (Eurostat 2006). This disparity exists in spite of an EU directive for member countries to implement equal pay for part-time and full-time workers in the same jobs (see below). However, part-timers may not be in the same jobs as full-time

³⁵ Eurostat numbers refer to total employment, excluding family workers.

³⁶ Activities of Private Households as Employers – this category also includes activities for household own use.

workers, thus weakening the impact of a pay parity mandate. Part-time workers are more likely to be in service jobs which tend to have lower hourly pay.³⁷ Canada and the United States do not have a national mandate for pay parity between part-time and full-time workers. The majority of full-time workers in the United States earn more per hour than part-time workers (Pongrace and Zilberman 2009). Even after controlling for observable differences in worker characteristics, a pay differential remains (Kalleberg, Reskin and Hudson 2000). Also, involuntary part-time workers – those who would prefer full-time work – have lower hourly wages in 2005 at US\$8 than the average of all employed at US\$11.12 (Carré and Heintz 2009a: 53).

Benefits

Part-time workers tend to receive fewer benefits than full-time workers. In Europe, however, part-time workers are more likely to be eligible for benefits than part-time workers in North America, Japan, or Republic of Korea. The European Union issued a directive proscribing discrimination by employers against part-time workers in pay, certain benefits, and working conditions (European Union 1997). In some countries, however, these protections do not apply to part-time workers who work below a certain threshold number of hours. For example, public health, old age pension and unemployment benefits in France, Germany, Ireland, Japan, and Sweden require minimum hours or earnings for eligibility which part-time workers may not meet (Ray and Schmitt 2007).

Regarding paid time off, Ireland mandates compensation for working on holidays (pay, time off, or premium for work on that day) for part-time workers if they have worked “at least 40 hours in the five weeks before the public holiday” (Ibid.). In the United Kingdom part-time workers, as all other workers, are guaranteed at least four weeks of annual leave (Ibid).

In Canada, part-time workers are less likely than full-time workers to be entitled to company pensions, health and dental plans, paid sick leave and paid vacation leave (Lipsett and Reesor 1997). Data from the 2000 Survey of Labour and Income Dynamics show that only 17 percent of part-time workers had employer-based insurance (extended medical, dental, and life/disability) as compared to 58 per cent of full-time workers. Similarly, 22 per cent had an employer-based pension plan as compared to 52 per cent of full-time workers (Marshall 2003, table 2). In the United States, where part-time work is less common than in most other OECD countries, part-time workers are offered very few benefits. For example, in 2005, 72 per cent of part-time workers were not offered or were not eligible for a job-based retirement plan (Ditsler and Fisher 2006 in Mishel *et al* 2009: 254).

Japanese employers are not obligated to pay social security, disability, and unemployment insurance taxes for many part-time and temporary workers (Houseman and Osawa 2003). The situation is mitigated with regards to health insurance because Japan has a universal programme with everyone enrolled in some form of health insurance.

³⁷ 2006 Eurostat data, available at <http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/>.

IV. Improving Statistics for Research and Policy

This paper has shown that great strides have been made in the development of concepts and methods and in the availability of data on informal employment. However, additional work is required before these concepts become institutionalized in official statistics at the international, regional and national levels. Further improvements will require – as the discussion in earlier sections has also shown – the continued collaboration between producers and users of statistics.

Put briefly, the producers of statistics should try to generate more and better statistics on informal employment. And the users of statistics – data analysts and policymakers – need to recognize that there are official international definitions of the *informal sector* and *informal employment* (International Conference of Labour Statisticians 1993 and 2003, respectively). In fact, many countries began to collect data on the informal sector and informal employment because international definitions became available which they could use. This is reflected in the growing number of countries for which data are now available.

This plan of action to improve statistics on informal employment and their dissemination and analysis was outlined in both editions (2002 and 2013) of the *Women and Men in the Informal Economy: A Statistical Picture*. Because of its comprehensive nature, the plan is repeated below:

Goal # 1 – Institutionalizing the Collection, Tabulation, Dissemination and Use of Data on Informal Employment and the Informal Sector

- Provide technical assistance and training to national statistical offices on the collection, processing and analysis of data on the informal economy. The publication in 2012 of the *Manual on Surveys of Informal Employment and the Informal Sector*, prepared by the ILO Department of Statistics in cooperation with members of the Delhi Group and the WIEGO Network, will be both an impetus and a resource for training. Such training should be provided as part of a programme of technical assistance to advise national statistical offices on the development of statistics on the informal economy through (i) the use of relevant information already collected in surveys, and/or (ii) the inclusion of new survey questions, if necessary. The programme should also aim at improving the quality of data on informal employment and the informal sector, as well as their international comparability.
- Promote the importance of collecting data on informal employment and informal sector employment in labour force surveys rather than promoting multi-purpose surveys or surveys tailored to priorities of the international funding agency.
- Give special attention in labour force or other household surveys to collecting data on the earnings of both wage and self-employment, the types of social protection received through employment, place of work, seasonality and other temporal patterns, and multiple or secondary jobs.
- Raise awareness of the fact that there are several methods and types of surveys to collect information on informal enterprises, which all have their strengths and limitations, rather than a single method that is universally applicable.
- Encourage countries to use data on the informal sector and informal employment in the preparation of national accounts in order to improve the integration of the contribution to GDP of the informal economy in national accounts.

Goal # 2 – Improving Statistical Concepts and Methods

- Review and revise the International Classification of Status in Employment (ICSE) to identify all categories of informal employment in today's globalized economy, including relevant categories in developed countries. There was a strong consensus at the 19th ICLS (2013) about the need to revise the ICSE-93 to better account for the development in the labour market. The revision of the ICSE is crucial in several ways for the improvement of data on informal employment. For instance, the current ICSE does not include adequate mutually-exclusive categories for casual day labourers, temporary or part-time workers, or the various categories of contracted and sub-contracted workers. While these workers are generally counted as employed in labour force surveys, it is often not possible to separate them out as distinct categories in data tabulations or analyses. Similarly, they are included in informal employment but without being identifiable as distinct sub-categories of informal employment inside or outside the informal sector.
- Improve the methods for identifying categories of informal workers such as paid domestic workers, home-based workers, street vendors, and waste pickers as was done for chapter 3 of this report. The three major classifications by economic characteristics of employment – Kind of Economic Activity (ISIC), Status in Employment (ICSE) and Occupation (ISCO) – are better at describing employment in the formal economy than in the informal economy. Since informal employment continues to be such an important share of the labour force, efforts must be made to better identify and describe these categories in the three classification systems both at the international and national levels as well as in the tabulation and dissemination of data on these workers.
- Improve the methods to measure informal employment in agriculture. While the international definition of informal wage employment is suitable for agricultural as well as non-agricultural employees, the international definition of informal self-employment (other than contributing family workers and producers of goods exclusively for own final use by their household) refers to non-agricultural activities only. This is because employers, own account workers and members of producers' co-operatives are considered to be informally employed if their enterprise/co-operative belongs to the informal sector (defined by the 15th ICLS in respect of non-agricultural activities). The criteria of enterprise registration or size, which form part of the 15th ICLS definition of informal enterprises, are not meaningful in the case of agricultural holdings. Other criteria would have to be specified if the measurement of informal self-employment were to be extended to cover agricultural activities. Further methodological work is needed to develop such criteria.
- Undertake the methodological, analytic and awareness-raising work required to apply the concept of informal employment to developed countries. Given the changes that are occurring in labour markets and the structure of employment worldwide, understanding employment dynamics, trends in labour market structures and patterns of work mobility are of increasing importance. A crucial step is the revision of the ICSE to capture, across all forms of employment in developed countries, the type of economic risk, and the type of authority the job holder has over establishments and other workers. Another step is a comparison of informal employment and non-standard or atypical work to see how these concepts compare in existing survey instruments and data. With this information it would be possible to determine what can be done with the existing data and what is needed for more comprehensive estimates of informal employment in developed countries. As members of the UN Economic Commission for Europe, Eurostat, and ILO Expert Group on Quality of Employment Indicators, WIEGO and Instituto Nacional de Estadística y Geografía (INEGI) Mexico are working to include the measurement of informal employment among the explicit uses of the Quality of Employment Framework as well as the relevant specific measures/indicators.

Goal # 3 - Making Data Available, Encouraging Data Analysis and Disseminating Analyzed Data

- Develop, maintain and update at regular intervals by the ILO a comprehensive international data base on the informal economy, incorporating existing data on informal employment and total employment from as many countries as possible. The ILO Department of Statistics working with the ILO Information System for Latin America and the Caribbean (SIALC) and the WIEGO Network compiled data on informal employment both outside and inside the informal sector from nearly 50 countries using a common template. There are a number of additional countries in Asia and Africa that had collected data on informal employment and/or informal sector employment that either did not respond to the ILO request for information or did not complete the questionnaire fully. Thus they need technical assistance that would enable them to provide data for inclusion in the international database.
- Encourage countries to prepare and make available public-access micro-data files of labour force or similar household surveys. At the March 2011 research conference organized by WIEGO in Cape Town, the difficulty in accessing the micro-data files was identified by many researchers as a major problem preventing them from working on the informal economy. A compilation of the available micro-data sets and information on how to obtain them should be prepared and regularly updated. The International Household Survey Network (IHSN) Survey Catalog is an important step in achieving this. Micro-data archives of national household survey data (i.e. archives containing the actual data) should also be established and maintained, similar to what has already been done in Latin America. These should be made available to researchers.
- Encourage national, regional and international statistical agencies to analyze the data on the informal economy, which they have collected, and to disseminate the findings in reports, articles, press releases and websites in user-friendly formats.

The framework proposed by the ICLS Resolution allows countries to adopt the basic operational definition and criteria to their specific circumstances. In particular, flexibility is allowed with respect to the upper limit on the size of employment; the introduction of additional criteria such as non-registration of either the enterprise or its employees; and the inclusion or exclusion of professionals.

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Annex I

Technical Note on Regional Estimates of Informal Employment

1. Population, employment and labour market indicators

Regional estimates were developed for low- and middle-income countries in 2009 based on the World Bank's classification scheme from the *World Development Indicators* database. Data on the working age population, the employment population ratio, per capita GDP and oil rents as a share of GDP were compiled from the World Bank's *World Development Indicators*. This database provides a single source for basic economic, demographic, and general labour force variables. Estimates of non-agricultural employment as a share of total employment (disaggregated by sex) were taken from the ILO's *Key Indicators of the Labour Market* based on the ILO's LABORSTA database. Estimates of population and total employment were from 2009 data. For the agricultural/non-agricultural share of total employment, data for the most recent year available was used.

The ILO Department of Statistics assembled detailed estimates of informal employment and employment in the informal sector on the basis of data generated by national statistics offices. Direct estimates for 40 out of 47 countries were used to generate the regional estimates for countries lacking direct estimates. The seven countries not included had incomplete data that was not strictly comparable to the other national estimates. The 40 countries used in producing the indirect estimates had relatively complete and comparable estimates of informal employment. Regional estimates of employment-to-population ratios and agricultural employment as a percentage of total employment were calculated as weighted averages of the country-level statistics, using estimates of the working age population and total employment as the basis for constructing the weights. Regional estimates were developed for six broad regions: (1) Latin America and the Caribbean, (2) Sub-Saharan Africa, (3) the Middle East and North Africa, (4) Eastern Europe and Central Asia, (5) South Asia, and (6) East and Southeast Asia. In the small number of cases in which sex-disaggregated estimates of non-agricultural employment as a share of total employment were not available for a specific country, the regional averages were applied to that country.

2. Non-agricultural informal employment estimates

For those countries which did not have direct estimates of informal employment based on national survey data, informed "best estimates" of informal employment as a share of total non-agricultural employment were generated using regression analysis. Data from the countries for which direct estimates were available were used to estimate the following model:

$$\frac{I_i}{N_i} = \alpha + \beta_1 \ln GDP_i + \beta_2 EPOP_i + \sum_{j=1}^6 \delta_j D_{j,i} + \varepsilon_i$$

In the above expression, I_i represents non-agricultural informal employment for country 'i', N_i total non-agricultural employment, $\ln GDP_i$ the natural logarithm of per capita GDP, $EPOP_i$ the employment population ratio, $D_{j,i}$ six regional dummy variables for region 'j', and ε_i a stochastic error term. Latin America and the Caribbean was taken as the default region. Direct estimates for the Sub-Saharan Africa region included a significant proportion of estimates from countries in southern Africa. The southern African countries have distinct patterns of informal employment. Therefore, a coefficient estimate for the regional dummy variable based on pooled data for the region may not accurately capture patterns of informal employment. For this reason, a separate sub-regional dummy variable for the southern Africa countries with direct estimates (Lesotho, Namibia, and South Africa) was introduced. The full set of regions used in the empirical model was: Sub-Saharan Africa (ssa), southern Africa (safrica), Middle East and North Africa (mena), Eastern Europe and Central Asia (eeca), South Asia (sasia), and Southeast and East Asia (seea). For oil exporting countries,

measured GDP per capita is higher than for other comparable countries and the oil premium may distort the estimates and predictions of this exercise. Therefore, per capita GDP was adjusted to exclude oil rents.

The parameters of the model ($\alpha, \beta_1, \beta_2, \delta_1, \delta_2, \delta_3, \delta_4$, and δ_5) were estimated using a generalized linear model to take into account the fact that the dependent variable ranged between zero and one. The generalized linear model incorporated a binomial distribution with a logit link. Pearson chi-squared dispersion estimates and a robust Huber-White sandwich method for variance estimates were used. Separate estimates for men and women were generated, using the appropriate sex disaggregated employment variables in the regressions. The estimated models were then used to generate out-of-sample predictions of non-agricultural informal employment's share of total non-agricultural employment for those countries for which direct estimates did not exist.

The actual estimates from national household or other surveys were combined with predicted estimates for those countries which lacked direct estimates. Weighted averages were then calculated for each region using non-agricultural employment as the basis for weighting the individual country estimates. Although not used for the regional estimates, standard ordinary least squares (OLS) estimates were also generated as a robustness test, given the distributional assumptions required for the generalized linear model. The regional estimates did not differ significantly from those produced by the generalized linear model.

3. Detailed estimates on informal employment and employment in the informal sector

Regional estimates were also developed for the following indicators:

- agricultural informal wage employment as a share of total employment
- agricultural self-employment as a share of total employment
- employment in the informal sector
- informal wage employment outside of the informal sector
- informal wage employment
- informal self-employment comprised of
 - employers
 - own account workers
 - members of producers' cooperatives
 - contributing family workers
- informal employment by broad sector of activity (manufacturing, construction, trade, transportation, and other services)

The same approach used to estimate informal employment as a share of non-agricultural employment was used to generate predictions of similar indicators for each of the variables in the list above. The employment population ratio consistently lacked statistical significance in the regressions used for these detailed estimates, and this variable was dropped, with the exception of estimates of agricultural informal wage employment and agricultural self-employment. In some cases, insufficient estimates for the Middle East and North Africa region meant that the dummy variable for that region was dropped and no separate regional estimates were generated. For two of the indicators – employment in the informal sector and informal wage employment outside of the informal sector – the denominator of the dependent variable was total non-agricultural employment. For the two agricultural indicators, the denominator was total employment. For the remaining variables, the dependent variable was expressed as a percent of total non-agricultural *informal* employment.

Weighted averages were developed for each region using total employment, total non-agricultural employment or total non-agricultural informal employment as the basis for weighting as appropriate. In each case, separate estimates were developed for women and men. The full set of dependent variables used to construct the regional estimates are presented in table A1. The coefficients and standard errors for the full set of generalized linear model estimates are presented in table A2. Note that the numbered equations in table A2 correspond to the dependent variables listed in table A1.

Countries/Territories and Geographical Groupings

Latin America and the Caribbean

Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Uruguay, Venezuela, Dominican Republic, Haiti, Jamaica

Sub-Saharan Africa

Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo (Dem. Rep.), Congo (Rep.), Cote d'Ivoire, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, South Africa, Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia, Zimbabwe

North Africa and the Middle East

Algeria, Egypt, Iran, Iraq, Jordan, Lebanon, Libya, Morocco, Syrian Arab Republic, Tunisia, Turkey³⁸, West Bank and Gaza Strip

Eastern Europe and Central Asia

Albania, Armenia, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Georgia, Lithuania, FYR Macedonia, Rep. of Moldova, Romania, Russian Federation, Serbia, Ukraine, Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan

South Asia

Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka

East Asia, Southeast Asia, and the Pacific

Cambodia, Fiji, Indonesia, Lao PDR, Malaysia, Mongolia, Papua New Guinea, Philippines, Solomon Islands, Thailand, Timor-Leste, Vietnam

Note: China reported separately.

Table A1: Dependent Variables for the Regression Analysis Used to Produce Regional Estimates

Equation	Dependent Variable
(1)	Informal employment as % of non-agricultural employment
(2)	Informal wage employment as % of non-agricultural informal employment
(3)	Informal self-employment as % of non-agricultural informal employment
(4)	Employment in informal sector as % of non-agricultural employment
(5)	Informal employment outside informal sector as % of non-agricultural employment
(6)	Employers as % of non-agricultural informal employment
(7)	Own account as % of non-agricultural informal employment
(8)	Contributing family workers as % of non-agricultural informal employment
(9)	Manufacturing as % of non-agricultural informal employment
(10)	Construction as % of non-agricultural informal employment
(11)	Trade as % of non-agricultural informal employment
(12)	Transportation as % of non-agricultural informal employment
(13)	Other services as % of non-agricultural informal employment
(14)	Agricultural informal wage employment as % of employment
(15)	Agricultural self-employment as % of employment

³⁸While the ILO includes Turkey among the European countries, Turkey was included in the MENA region for purposes of these estimates, which have no grouping for European countries other than the transition countries of Eastern Europe (grouped together with the Central Asian countries); however, in Part III on Informal Employment in Developed Countries, Turkey is also included.

Table A2: Coefficients and Standard Errors, Generalized Linear Model (table A1 has descriptions of the dependent variables)

Estimates			Independent Variables*								
	Sex		c	ln GDP	e-pop	ssa	safrica	mena	eeca	sasia	seea
(1)	F	coef.	4.081	-0.436	-0.004	-0.038	-1.135	-1.309	-3.167	-0.065	-0.244
		st. error	1.139	0.125	0.008	0.373	0.346	0.334	0.297	0.457	0.266
	M	coef.	4.254	-0.449	-0.006	-0.655	-1.270	-0.590	-2.380	0.337	-0.077
		st. error	1.441	0.118	0.011	0.267	0.400	0.212	0.481	0.271	0.277
(2)	F	coef.	-1.573	0.159	---	-0.692	1.701	0.967	1.350	0.349	-0.051
		st. error	1.159	0.145	---	0.387	0.671	0.137	0.311	0.230	0.265
	M	coef.	1.607	-0.218	---	-0.789	1.144	0.899	0.087	-0.028	0.139
		st. error	1.019	0.129	---	0.321	0.481	0.138	0.246	0.318	0.215
(3)	F	coef.	1.573	-0.159	---	0.692	-1.701	-0.967	-1.350	-0.349	0.051
		st. error	1.159	0.145	---	0.387	0.671	0.137	0.311	0.230	0.265
	M	coef.	-1.607	0.218	---	0.789	-1.144	-0.899	-0.087	0.028	-0.139
		st. error	1.019	0.129	---	0.321	0.481	0.138	0.246	0.318	0.215
(4)	F	coef.	3.651	-0.499	---	-0.172	-0.837	---	-3.242	0.076	0.103
		st. error	0.832	0.100	---	0.334	0.247	---	0.372	0.329	0.397
	M	coef.	1.912	-0.280	---	-0.256	-0.563	---	-2.035	0.628	0.358
		st. error	0.919	0.113	---	0.299	0.359	---	0.224	0.261	0.365
(5)	F	coef.	-0.646	-0.082	---	-1.030	-0.042	---	-0.894	-0.367	-0.542
		st. error	0.915	0.110	---	0.362	0.165	---	0.530	0.359	0.203
	M	coef.	1.344	-0.389	---	-0.832	-0.302	---	-1.091	-0.856	-0.652
		st. error	0.930	0.113	---	0.337	0.183	---	0.267	0.252	0.317
(6)	F	coef.	-9.004	0.744	---	0.312	0.173	---	0.661	-0.443	1.853
		st. error	1.588	0.191	---	0.770	0.206	---	0.846	0.388	0.718
	M	coef.	-5.340	0.408	---	-0.323	0.807	---	-0.953	-0.185	0.861
		st. error	1.142	0.137	---	0.693	0.282	---	0.547	0.324	0.439
(7)	F	coef.	0.800	0.070	---	0.082	-0.027	---	-0.318	-0.887	-0.629
		st. error	1.152	0.146	---	0.498	0.323	---	0.472	0.227	0.514
	M	coef.	0.469	0.113	---	0.383	-0.676	---	0.414	0.133	-0.339
		st. error	0.880	0.111	---	0.314	0.149	---	0.495	0.187	0.245
(8)	F	coef.	0.568	-0.287	---	-0.305	-0.192	---	0.238	0.927	0.181
		st. error	1.286	0.167	---	0.541	0.295	---	0.355	0.226	0.332
	M	coef.	2.340	-0.599	---	-0.736	0.170	---	-0.073	-0.105	-0.152
		st. error	1.410	0.184	---	0.458	0.283	---	0.542	0.231	0.222

Table A2 (continued): Coefficients and Standard Errors, Generalized Linear Model (table A1 has descriptions of the dependent variables)

Estimates			Independent Variables*								
	Sex		c	ln GDP	e-pop	ssa	safrica	mena	eeca	sasia	seea
(9)	F	coef.	0.246	-0.013	---	-0.030	-0.068	0.195	0.047	0.323	0.024
		st. error	0.174	0.022	---	0.065	0.055	0.047	0.046	0.055	0.046
	M	coef.	0.396	-0.030	---	-0.034	-0.054	-0.015	-0.056	0.029	-0.015
		st. error	0.089	0.011	---	0.033	0.028	0.024	0.023	0.028	0.024
(10)	F	coef.	0.557	-0.782	---	-1.078	1.538	1.184	1.229	1.304	0.934
		st. error	3.124	0.405	---	0.902	0.363	0.336	0.515	0.721	0.720
	M	coef.	-0.627	-0.079	---	-0.980	0.133	0.397	0.869	-0.382	-0.236
		st. error	0.653	0.080	---	0.224	0.062	0.301	0.136	0.141	0.179
(11)	F	coef.	2.069	-0.307	---	-0.135	-0.298	-0.678	-0.375	-1.655	-0.185
		st. error	0.870	0.111	---	0.353	0.101	0.461	0.283	0.359	0.211
	M	coef.	-1.127	0.043	---	0.392	-0.203	0.056	-0.585	0.017	-0.168
		st. error	0.670	0.083	---	0.205	0.167	0.191	0.132	0.232	0.239
(12)	F	coef.	-5.103	0.101	---	0.025	-0.251	-0.414	0.094	-0.184	-0.048
		st. error	1.651	0.195	---	0.738	0.343	0.227	0.396	0.398	0.419
	M	coef.	-1.856	-0.012	---	-0.200	-0.235	-0.001	-0.221	-0.018	0.250
		st. error	0.826	0.106	---	0.255	0.146	0.210	0.234	0.168	0.304
(13)	F	coef.	-3.315	0.380	---	0.253	0.527	-0.184	0.120	-0.046	0.044
		st. error	0.750	0.093	---	0.455	0.106	0.226	0.219	0.182	0.155
	M	coef.	-3.283	0.219	---	0.783	0.581	-0.204	0.006	0.196	0.344
		st. error	0.579	0.070	---	0.343	0.147	0.139	0.235	0.249	0.141
(14)	F	coef.	-1.379	-0.389	---	-0.772	-0.056	1.163	-0.839	1.985	0.900
		st. error	2.161	0.270	---	0.809	0.609	0.277	0.498	0.606	0.422
	M	coef.	0.602	-0.406	---	-1.791	-0.466	-1.292	-2.211	-0.228	-0.341
		st. error	1.898	0.227	---	0.723	0.682	0.187	0.498	0.618	0.543
(15)	F	coef.	2.109	-0.555	---	1.585	0.084	1.099	0.986	1.495	0.936
		st. error	2.498	0.303	---	0.869	0.710	1.004	0.557	0.663	0.565
	M	coef.	3.004	-0.578	---	0.683	-0.719	-0.340	0.077	-0.067	0.273
		st. error	1.466	0.186	---	0.418	0.495	0.519	0.307	0.255	0.371

* The headings refer to the following: constant or intercept (c); GDP per capita (ln GDP); employment to working age population ratio (e-pop); Sub-Saharan Africa (ssa), southern Africa (safrica), Middle East and North Africa (mena), Eastern Europe and Central Asia (eeca), South Asia (sasia), and Southeast and East Asia (seea)

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