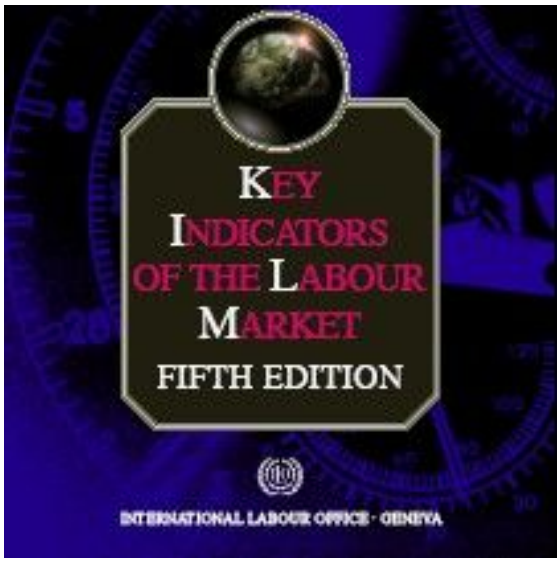

New ILO report says US leads the world in labour productivity, some regions are catching up, most lag behind [2 September 2007]
http://www.ilo.org/global/About_the_ILO/Media_and_public_information/Press_releases/lang--en/WCMS_083976/index.htm

Key resources
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* http://www.ilo.org/kilm
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Video - Interview with Lawrence J. Johnson on Key Indicators of the Labour Market (KILM), 5th Edition
*
http://www.ilo.org/global/About_the_ILO/Media_and_public_information/Broadcast_materials/Videointerviews/lang--en/docName--WCMS_083985/index.htm >
Video - East Asia is the growth productivity story of the decade, according to new figures from the Key Indicators of the Labour Market, released this week at a press conference in Geneva.
* <
http://www.ilo.org/global/About_the_ILO/Media_and_public_information/Broadcast_materials/B-rolls/lang--en/docName--WCMS_083987/index.htm >

Executive summary

The Key Indicators of the Labour Market programme

An important role of the International Labour Organization (ILO) is to identify global employment challenges where economic growth and decent work opportunities are most needed around the world.[1] The *Key Indicators of the Labour Market (KILM)* highlights global trends relating to the world of work using world and regional estimates and country-level data of labour force participation, employment, employment by sector, employment by status, unemployment, youth unemployment, employment elasticities and working poverty.

Defining effective labour market strategies at the country level requires first and foremost the collection, dissemination and assessment of the up-to-date and reliable labour market information.[2] Once a strategy is decided, continuing information and analysis are essential to monitor progress towards goals and to adjust policies where needed. Labour market information and analysis must be viewed as the cornerstone for developing integrated strategies to promote standards and fundamental principles and rights at work, productive employment, social protection and dialogue, as well as to address the cross-cutting themes of gender and development – this is where the KILM comes in.

In 1999 the ILO launched the KILM programme to improve the dissemination of information and analysis relating to key elements of the world's labour markets. The KILM is designed with two primary objectives in mind: (1) to present a core set of labour market indicators and analysis; and (2) to improve the availability of the indicators to monitor new employment trends. The KILM aims to meet these objectives by disseminating 20 "key" indicators of the labour market associated with the decent work initiative (listed in box 1): employment and variables relating to employment (status, sector, hours, etc.), the lack of work and the characteristics of jobseekers, education, wages and compensation costs, labour productivity and working poor. Taken together, the KILM indicators give a strong foundation from which to begin addressing key questions related to labour underutilization and decent work deficits.

In addition to presenting indicators for assessing labour market conditions, the KILM 5th Edition attempts to expand the knowledge base on the relationships between poverty, decent work deficits and labour underutilization through the use of these indicators.

Labour underutilization may be characterized, among other things, by lack of employment (unemployment or time-related underemployment), underutilization of skill, low income and low productivity. In other words, one way to look at labour underutilization is to consider those that are faced with decent work deficits, which at the very least includes the working poor. Suppose each person working and living on less than US$2 a day is either underemployed (working less than desired) or has a very low productivity job (working long hours but not efficiently because of lack of education or equipment). These conditions, which are not unlikely, indicate that these workers are underutilized as they are not in full, decent and productive employment. By adding the working poor to the unemployed, 1.5 billion people in the world – or 30 per cent of the world's working-age population – can be identified as labour supply that is potentially underutilized. This is just one way to

1. The *Global Employment Trends* (GET) series and topical GETs (youth and women) are available on website: http://www.ilo.org/trends.

2. For more detail on the necessity for labour market information with examples of how it can be used when formulating policies, see the section "Guide to understanding the KILM".

exemplify the use of KILM indicators to assess the pervasiveness of labour underutilization and thus decent work deficits. More examples are provided throughout this edition, particularly in Chapter 1.

Box 1. Key Indicators of the Labour Market (KILM), 5th Edition

1. Labour force participation rate
2. Employment-to-population ratio
3. Status in employment
4. Employment by sector
5. Part-time employment
6. Hours of work
7. Employment in the informal economy
8. Unemployment
9. Youth unemployment
10. Long-term unemployment
11. Unemployment by educational attainment
12. Time-related underemployment
13. Inactivity rate
14. Educational attainment and literacy
15. Manufacturing wage indices
16. Occupational wage and earning indices
17. Hourly compensation costs
18. Labour productivity and unit labour costs
19. Employment elasticities
20. Poverty, working poverty and income distribution

The KILM 5th Edition

The key issues in the labour market chapter (Chapter 1)

The first chapter of the KILM 5th Edition is dedicated to a more in-depth analysis of certain indicators with an emphasis on showing how the indicators can highlight vital issues that are associated with economic outcomes and provide recommendations. The "key issues" chapter of this edition contains three topics that have a recurring theme: the need to assess progress made towards full, decent and productive employment objectives – and thus reductions in labour underutilization – using a comprehensive set of indicators. The topics are: (1) "Decent employment and the Millennium Development Goals: Description and analysis of a new target"; (2) "Assessing vulnerable employment: The role of status and sector indicators"; and, (3) "Beyond the employment/unemployment dichotomy: Measuring the quality of employment in low income countries".

The first topic on decent employment and the Millennium Development Goals (MDGs) discusses the new target for MDG 1, which emphasizes the importance of full, decent and productive employment as the key element for poverty reduction. A set of four initial indicators was selected to assess progress made towards this target: employment-to-population ratios (KILM 2), vulnerable employment (identified using status in employment in KILM 3), working poverty (KILM 20) and

labour productivity (KILM 18). Regional trends for these four indicators are examined to verify which regions are on track towards achieving decent work objectives in the context of MDG 1. Even though users are discouraged from singling out any one indicator, taken together the four indicators provide an initial starting point for assessing labour underutilization and decent work deficits.

The second topic highlights the possibility of identifying vulnerable groups in the labour market using employment by status (KILM 3) in conjunction with other indicators and, in particular, employment by sector (KILM 4). Employed persons are identified as 'vulnerable' if they risk working under inadequate conditions – that is, if they are more at risk of lacking full, decent and productive employment. Given pervasive labour underutilization in developing countries, large segments of the employed are vulnerable, and the challenge is to identify these segments using standardized statistics that are readily available and can be generated by national statistical agencies. This part of Chapter 1 identifies vulnerable employment using the same indicator used to monitor vulnerable employment for the new target for MDG 1 (employment by status from KILM 3), and subsequently uses breakdowns of vulnerable employment based on employment by sector (KILM 4). The resulting cross tabulations, if used in conjunction with other information, provide a powerful tool to monitor labour markets in developing countries and to assess decent work deficits.

The last topic on the employment/unemployment dichotomy reflects some of the limitations of current indicators on job quality. The purpose is to evoke thought and discourse on how to better empirically capture the concept of job quality so as to inform employment policies, particularly for developing countries. In the meantime, this section supports two conclusions. First, in the absence of an all inclusive indicator, current indicators, despite their limitations, should be used to complement each other in an effort to provide a more detailed picture of job quality in developing countries. The KILM indicators discussed include employment-to-population ratios (KILM 2), status in employment (KILM 3), hours of work (KILM 6), employment in the informal economy (KILM 7), time-related underemployment (KILM 12) and working poverty (KILM 20). Many of these indicators are indeed used to analyse decent work deficits, particularly with the introduction of the new MDG target as discussed above. Second, qualitative indicators, while posing greater difficulty of measurement, serve as the only means by which to approximate the extent of inadequate employment and are, therefore, necessary to complement an analysis of labour markets in developing countries.

Again, the key message in Chapter 1 is that measuring progress towards full, decent and productive employment is a complex task that requires the use of multiple quantitative and qualitative indicators and information.

Highlights of current labour market trends

The KILM serves as a research tool for assessing labour market trends. This section provides some excerpts of noteworthy trends (by theme) that were identified in the KILM 5th Edition:[3]

Labour force participation (KILM 1)

- The global female labour force participation rate (aged 15 and over) was slightly lower in 2006 (52.5 per cent) than in 1996 (53.0 per cent), largely due to the decline in the participation of the youth cohort (aged 15-24) as their educational participation increased. Compared to the 78.9 per cent of males that are economically active, this indicates that there is still a large untapped and possibly underutilized female labour force supply.

3. For more information relating to the labour market concepts defined or more detail on the trends identified, see the KILM manuscript identified in parentheses.

- The largest gaps in the female and male labour force participation rates were in the Middle East, North Africa and South Asia. In all three regions the male labour force participation rate exceeded the female rate by more than 45 percentage points in 2006, although this represents some improvements in the gaps from 1996, especially in the case of the Middle East.

Employment and employment characteristics

- There is a stark contrast between the gap in female and male employment-to-population ratios in East Asia and the Developed Economies & European Union (where the gender gaps were 12.9 and 15.3 percentage points respectively in 2006) on the one hand and the Middle East, North Africa and South Asia on the other hand (where the gender gaps exceeded 40 percentage points). Still, while the national results are mixed, thus making it difficult to draw conclusions, the regional aggregates do provide evidence of increasing, albeit slowly, employment activity of women in some regions where their employment ratios are historically low. (KILM 2)

- The majority of workers in most developed economies are engaged in wage and salaried employment. In contrast, the majority in the developing economies of sub-Saharan Africa and South Asia continue to work as own account workers and contributing family workers – statuses that are more likely to be considered vulnerable when it comes to both economic risks and strength of the institutional arrangement that protect against such risks. High shares of the labour force in these categories of employment are thus indicative of the likelihood of decent work deficits. (KILM 3)

- The breakdown of status in employment by sex, points to major differences between the labour market position of men and women. Firstly, women are more likely than men to enter wage and salaried work. Secondly, women constitute the bulk of contributing family workers worldwide. Finally, women are less likely to work as employers in virtually all countries. (KILM 3)

- In recent years agriculture has lost its place as the main sector of employment and has been replaced by the service sector, which in 2006 constituted 42.0 per cent of world employment compared to 36.1 per cent for agriculture. As for the industrial sector, it represented 21.9 per cent of total employment, which is almost unchanged from 10 years ago. The services-producing sectors can provide many opportunities for decent and productive employment; however, not all work in these sectors is necessarily decent or productive. Employment in services ranges from well-paid salaried jobs of highly-skilled workers enjoying adequate working conditions to subsistence trade activities that are widespread on the streets in the developing world. Many workers in the latter situation may be underutilized even if they are working excessive hours battling for a meagre income. (KILM 4)

- Agriculture is still the main employer in the poorest regions in the world. In sub-Saharan Africa, almost seven out of 10 employed, work in this sector; in South Asia and South-East Asia & the Pacific it is almost five out of 10. (KILM 4)

Poverty and working poor (KILM 20)

- The countries with the highest incidence of poverty, i.e. where more than half of the country's population subsists on less than US$1 a day, are almost all in Eastern and Western Africa, which confirms the fact that a large part of the population on this continent faces extremely poor living conditions. Many people living in severe poverty work, sometimes long and hard, but very unproductively. They have no choice but to find some way to generate an income because they often have no other means of support for themselves or their families.

- The Asian regions saw a substantial reduction in the number of working women and men living on less than US$1 a day; the number of working poor in Asia decreased by as many as 148 million between 1996 and 2006, representing a drop of nearly 50 per cent. In contrast, sub-Saharan Africa's weak economic performance resulted in an increase of 24 million in the number of working poor. When looking at the share of working poor (US$1 a day) in the working population, however, one finds a slight decline in sub-Saharan Africa due to the fact that the working population grew slightly faster than the working poor population.

Unemployment

- The international definition of unemployment, for the purpose of collecting statistics, is being without work of at least one hour in the previous week. This means that many workers in the developing world, who have no regular work or income but, in the absence of any other means of support, must find a way to generate the means to survive, do not fall within the unemployed category. Bearing in mind this proviso, available information shows a wide dispersion of unemployment rates throughout the world. A review of country-level data showed that all regions but one (Central & South-Eastern Europe [non-EU] & CIS) were represented in the lowest grouping of unemployment rates (less than 5 per cent). The higher unemployment bands, however, were concentrated in countries in sub-Saharan Africa as well as Central & South-Eastern Europe (non-EU) & CIS. (KILM 8)

- Between 2005 and 2006 the unemployment rate slightly decreased for the world as a whole from 6.4 to 6.3 per cent, confirming a downward trend that has been observed over the last four years, during which time the global economy has grown rapidly. (KILM 8)

- One striking characteristic emerging from an examination of country-level information presented is that, invariably, youth unemployment rates are higher than adult unemployment rates. Indeed, youth unemployment rates are typically at least twice as high as adult rates and are sometimes much higher. (KILM 9)

- The distribution of unemployment is more concentrated among the least educated, at least in the developed countries. In 2005, a person in the developed economies (with available data) with only primary education was usually at least three times as likely to be unemployed as a person with tertiary education. The pattern reflects the increase in demand for more highly educated and skilled workers in developed economies and the declining demand for workers with low education. In eight of the developing economies with available data, it was the labour force with a secondary education that was the most likely to be unemployed, although never to a substantially larger degree than persons with primary education. The demand for workers with higher education was strong in the majority of the countries. (KILM 11)

Employment elasticities[4] (KILM 19)

- Between 1993 and 2005, the services sector was both the world's fastest-growing sector in terms of output and the sector with the most job-intensive growth. Indeed, for every 1 percentage point of growth in services sector value added, employment increased by 0.67 percentage points. However, in the industrial sector, and especially in the agriculture sector, growth of value added was driven more by gains in productivity than by gains in employment.

4. The employment elasticity is measured as the percentage-point change in the number of employed persons in a country or region associated with a 1 percentage point change in economic output, measured by gross domestic product (GDP). Annex 1 in Chapter 1, section B provides the methodology for the calculations of employment elasticities.

- In addition to the Developed Economies & European Union, a couple of developing regions are also experiencing structural transformation away from agriculture and into services (and, to a lesser extent, industry) – Central & South-Eastern Europe (non-EU) & CIS and Latin America & the Caribbean – as each experienced a decline in employment in agriculture despite positive growth in agriculture value added. The agricultural sector, however, continues to be an important source of livelihood, especially in sub-Saharan Africa, South Asia and South-East Asia % the Pacific.

- The very rapid growth that took place in agriculture, industry and services sectors in East Asia facilitated both robust employment generation as well as rapid productivity gains. This trend has resulted in a "virtuous cycle" of employment growth, productivity growth and poverty reduction in the region.

Productivity and unit labour costs (KILM 18)

- Productivity levels increased over the past decade for almost all regions, with the fastest increase observed in East Asia, where output per worker almost doubled. Considerable increases over this period were also seen in Central & South-Eastern Europe (non-EU) & CIS and South Asia, where productivity levels increased by around 50 per cent.

- The United States continued to show the highest labour productivity levels in 2006 measured as value added per person employed per year, at US$63,885; the United States was followed by Ireland (US$55,986) and Luxembourg (US$55,641) at a considerable distance. However, Norway showed the highest labour productivity level measured as value added per hour worked (US$37.99), followed by the United States (US$35.63) and France (US$35.08).

- The productivity gap (measured as value added per person employed) between the United States and most developed economies continued to widen, especially in more recent years. Exceptions were Ireland, which saw its gap decline steadily over time from almost 40 percentage points in 1980 to less than 13 in 2006. Since 2000, Finland, Sweden and the United Kingdom were also able to continue reducing productivity gaps as well as several new members of the European Union – Estonia, Latvia and Lithuania – although productivity gaps in the latter group remain considerable.

Hours of work

- There is a positive relationship between the female employment-to-population ratio and part-time employment, implying that an expansion of part-time work opportunities encourages females to join the workforce. (KILM 5)

- Annual hours worked per person surpassed 2,200 in six Asian economies – the Republic of Korea leads the group, followed by Bangladesh, Sri Lanka, Hong Kong, China, Malaysia, and Thailand. At the other end of the spectrum, most European Union countries had much lower hours, especially in Belgium, Denmark, France, Germany, the Netherlands and Sweden, where workers put in less than 1,600 hours per year. (KILM 6)

- The percentage of men and women working 40 hours or more varies between economies but, in almost all economies covered, men are more likely to work longer hours than women. (KILM 6)

- For half of the countries in Latin America & the Caribbean, at least one out of eight people employed is currently working on a part-time basis, but wanting to work additional hours – they are, therefore, underemployed. In contrast, countries in Central and Eastern Europe, along with a

few recent European Union countries, display the lowest shares of time-related underemployment. In almost all countries women in part-time employment are more likely to be seeking more hours than their male counterparts. This is particularly the case in the developed economies, where many women are at least twice as prone as men to find themselves underemployed. (KILM 12)

Education and illiteracy (KILM 14)

- There is a clear trend towards an increasingly educated labour force.
- For both sexes, the highest share of the labour force by educational attainment was those with either primary or secondary level education, which indicates that in most of the countries the bulk of labour supply is still workers with low- or medium-level skills. The supply element is a likely explanatory variable in the growing wage gap between low- and high-skilled occupations; the demand for workers with tertiary-level education and higher skills, which are in short supply, would push up their wages, and vice versa for workers with lower-level education.
- In the vast majority of countries with data, the illiteracy rate of adults was higher than that of youth, which suggests a positive trend, as young people make advances in literacy and, thus, gain a higher skills base than their parents.
- The adult female illiteracy rate was more than 25 percentage points higher than that of males in 14 countries – Afghanistan, Angola, the Central African Republic, Chad, the Democratic Republic of Congo, Ethiopia, India, Morocco, Mozambique, Nepal, Niger, Pakistan, Togo and Yemen. The trend continues, although to a lesser extent, in the younger generation: five countries had a gap in the female-male youth illiteracy rates in excess of 25 percentage points – Afghanistan, Benin, Chad, Niger and Yemen.

New developments

The KILM 5th Edition introduces several noteworthy developments:

Improved indicators

- A new harmonized series of employment-to-population ratios (table 2) reduces some of the limitations to comparability.
- All indicators have improved in terms of geographic coverage and the timeliness of information available, thanks in part to improvements in the processes of collecting and processing labour market information.

New world and regional estimates

- World and regional estimates are now available for status in employment (KILM 3) and labour productivity and unit labour costs (KILM 18).

Revised regional groupings

- The new regional grouping of Africa is comprised of two subregions – North Africa and sub-Saharan Africa, the latter of which retains its subgroups for Eastern, Middle, Southern and Western Africa. The Middle East is now its own regional grouping and does not consist of any subregions. The inside front cover of the printed KILM gives a graphical representation of the organization of the countries by major groupings.

Guide to understanding the KILM

The history of the KILM

Data needed for monitoring and assessing the current realities of the world at work is essential for any organization, institution or government that advocates labour-related strategies. In recognition of this, the International Labour Office (ILO) launched the Key Indicators of the Labour Market (KILM) programme in 1999 to complement the regular data collection programmes[1] and to improve dissemination of data on the key elements of the world's labour markets.

The KILM was originally designed with two primary objectives in mind: (1) to present a core set of labour market indicators; and (2) to improve the availability of the indicators to monitor new employment trends. The indicators were initially chosen in a collaborative effort involving the ILO Employment Sector and the Bureau of Statistics in consultation with experts from ILO field offices, the Organisation for Economic Co-operation and Development (OECD) and several national representatives from Ministries of Labour and national statistical offices. The selection of the indicators was based on the following criteria: (a) conceptual relevance; (b) data availability; and (c) relative comparability across countries and regions. The design and presentation of the core indicators has evolved since the first edition. Two new indicators were added in the second edition (2001-2002) – occupational wages and earning indices (KILM 16) and labour market flows (KILM 19). In the 4th edition KILM 19 was replaced with employment elasticities and world and regional estimates were introduced. The KILM 5th Edition maintains the 20 indicators presented in the previous edition and expands the availability of world and regional estimates (enhancements to the indicators and presentation are identified in the Executive Summary). Over time the objectives of the KILM have also shifted; the current role of the KILM is discussed in the next section.

The role of the KILM in labour market analysis

Identifying and quantifying inefficiencies (and best practices) in the labour market – such as labour underutilization and decent work deficits – is the first step in designing employment policies aimed at enhancing the well-being of workers while also promoting economic growth. This broad view of the world of work calls for a comprehensive

1. The question is often raised concerning the relationship between the KILM and the ILO *Yearbook of Labour Statistics*, which has been the ILO's main source of labour statistics for over 60 years. Since 1921, the ILO Bureau of Statistics has collected and disseminated labour statistics on the characteristics of the working population and on conditions of work and life throughout the world. Data are published annually in the *Yearbook* and also on the Internet at website: http://laborsta.ilo.org (see box 1 for more information). The KILM differs from the *Yearbook* in terms of scope and content: First, whereas the *Yearbook* is the best source of nationally-reported labour statistics, the KILM supplements this information with data from other sources when it is felt that other sources are more accurate or more complete and provide a better scope for international comparability. The latter point leads to the second difference, which is that the KILM, because it is not restricted to using the national data *as reported*, can and does take efforts to report indicator series that are more comparable across time and across countries. The KILM offers two series which are, in fact, "harmonized", meaning they offer a strictly comparable series: labour force participation rate series in table 1a and the inactivity rate in table 13. Other indicators are not yet strictly comparable, but efforts have been made to select sources and methodologies that provide a series that is as "clean" and comparable as possible, and where anomalies exist in terms of definitions and methodologies, they are listed clearly as such in the table notes. Finally, some indicators are provided in both the *Yearbook* and the KILM; however, the full list of indicators in each is not identical. For example, labour productivity and time-related underemployment are indicators in the KILM, but not in the *Yearbook*, whereas the *Yearbook* reports data on strikes and lockouts while the KILM does not. The KILM is also able to publish imputed estimates and combine them with real data (as reported) to come up with new indicators such as employment elasticities or working poverty.

collection, organization and analysis of labour market information. In this context, the KILM can serve as a tool in monitoring and assessing many of the pertinent issues related to the functioning of labour markets. The following are some examples of how the KILM can be used to inform policy in key areas of ILO research:

Promoting the ILO's Decent Work Agenda

The ILO's Decent Work Agenda aims to promote opportunities for women and men to obtain productive work, in conditions of freedom, equity, security and human dignity.[2] As a growing number of governments, employers and workers investigate options for designing policies that adhere to the principles of decent work, it is possible that policy-makers will look for possible ways of interpreting the term "decent". Applying the concept of "decent" to any form of economic activity is a matter for discussion; for example, personal perceptions of what constitutes a decent wage could differ significantly from person to person. That said, there are certain conditions relating to the world of work that are almost universally accepted as "bad" – working but earning an income that does not lift one above the poverty line or working under conditions where the fundamental principals and rights at work[3] are not respected, for instance.

Keeping in mind that careful empirical research as well as quantitative assessments of the realities of the world of work should precede policy formulation, the KILM, as a collection of a broad range of labour market indicators, can serve as a tool in assessing many of the pertinent questions relating to the ILO's Decent Work Agenda.

Monitoring progress towards the UN's Millennium Development Goals

The United Nations resolved to make the goals of full and productive employment and decent work for all a central objective of its national and international policies as well its national development strategies as part of its efforts to achieve the Millennium Development Goals (MDG).[4] Access to decent work that provides an adequate income for working men and women and their families is the surest route out of poverty and the best solution to meeting the MDG of halving the share of people living under the US$1 a day poverty line.[5] The KILM helps to identify where labour is underutilized and decent work is lacking, especially if measured not only in terms of people who are working yet still unable to lift themselves and their families above the poverty threshold (working poor – KILM 20) but also in terms of the quality of work or the lack of any work at all. The lack of any work at all could be identified using unemployment (KILMs 8 and 9) but also more broadly using inactivity (KILM 13). Lack of quality of work could be determined using sets of indicators; for example, by identifying which individuals are in vulnerable employment (using status and sector – KILMs 3 and 4 – see Chapter 1), working excessive hours (KILM 6), in informal employment

2. Since the publication of the *Report of the Director-General: Decent Work* (Geneva, ILO, 1999), the goal of "decent work" has come to represent the central mandate of the ILO, bringing together standards and fundamental principles and rights at work, employment, social protection and social dialogue in the formulation of policies and programmes aimed at "securing decent work for women and men everywhere".

3. The ILO Declaration on Fundamental Principles and Rights at Work aims to ensure that social progress goes hand in hand with economic progress and development. See http://www.ilo.org/declaration for more information.

4. United Nations: *2005 World Summit Outcome*, High-level Plenary Meeting of the 60th Session of the General Assembly (A/60/L.1), 20 September 2005, para. 47.

5. As part of the Millennium Declaration of the United Nations "to create an environment – at the national and global levels alike – which is conducive to development and the elimination of poverty", the international community has adopted a set of international goals for reducing income poverty and improving human development. A framework of eight goals, 18 targets and 48 indicators to measure progress was adopted by a group of experts from the United Nations Secretariat, ILO, IMF, OECD and the World Bank. The indicators are interrelated and represent a partnership between developed and developing economies. For further information on the Millennium Development Goals, see http://www.un.org/millenniumgoals/.

(KILM 7), underemployed (KILM 12) or in low productivity jobs (KILM 18).

In fact, the UN will adopt several KILM indicators to measure progress towards a new target under the UN MDG. The initial set of indicators includes employment-to-population ratios (KILM 2), vulnerable employment (identified using status in employment in KILM 3), working poverty (KILM 20) and labour productivity (KILM 18). Together these four indicators provide a starting point for assessing labour underutilization and decent work deficits. Chapter 1 provides more details on the new target.

Monitoring equity in the labour market

Women face specific challenges in attaining decent work. The majority of KILM indicators are disaggregated by sex, which allows for comparison of male and female labour market opportunities. Many of the "trends" analyses associated with individual indicators focus on the progress (or lack thereof) towards the goal of equal opportunity and equal treatment in the labour market.

Assessing employment in a globalizing world

Globalization has the potential of being beneficial to all, but to date the benefits are not reaching enough people. The goal, therefore, is to welcome globalization but in a way that shapes it to encourage creation of decent work opportunities for all.[6] One means of doing so is to make employment a central objective of macroeconomic and social policies. The KILM indicators can be useful in this regard by monitoring employment dynamics associated with globalization. For example, there are studies indicating that job loss/creation as well as changes in wages and productivity (and thus international competitiveness) are impacted by globalization.[7] If the indicators reflect negative consequences of globalization, one can seek ways of altering macroeconomic policies so as to minimize the costs of adjustment and to distribute the gains of globalization in a more equitable fashion.

ILO research in the latest *World Employment Report*,[8] which uses labour productivity, employment and unemployment information from the KILM, has gone some ways in monitoring these dynamics and developing policy interventions at the micro and macro level. The report shows that in the long run there need not be a trade-off between the growth of productivity and that of employment and calls for policy interventions in the short- and mid-term in order to mitigate any "adjustment costs" to workers. Again, as with globalization, macroeconomic policy that is managed with an eye towards a decent employment goal can mitigate any unnecessary short-term costs.

Identifying "best practices"

The KILM can help to identify best practice country examples on a number of issues: where the occupational gender wage gap is non-existent or minimal; where youth face disadvantages in terms of access to jobs; where labour productivity and labour compensation are balanced in such a way as to encourage international competitiveness; where economic growth has gone hand in hand with an expansion of employment opportunities; where a country reduces high unemployment; and many others. The key, then, is to identify policies that have led to the positive labour market outcome and to highlight these as possible best practices which could be implemented elsewhere.

6. World Commission on the Social Dimension of Globalization: *A Fair Globalization: Creating Opportunities for All* (Geneva, 2004); website: http://www.ilo.org/public/english/fairglobalization/index.htm.

7. See Chapter 1, section B for a review of the literature associated with the relationship between globalization and wages.

8. ILO: *World Employment Report 2004-05* (Geneva, ILO, 2005); website: http://www.ilo.org/public/english/employment/strat/wer2004.htm.

Box 1. The ILO Bureau of Statistics

From the outset, statistical activities have formed an integral part of the work of the International Labour Organization, as witnessed by the setting up in 1919 of a Statistical Section for "the collection and distribution of information on all subjects relating to the international adjustment of conditions of industrial life and labour" (Article 396 of the Versailles Treaty of Peace and article 10(1) of the Constitution of the ILO). Over the past 84 years, this Statistical Section (now an independent technical department called the Bureau of Statistics) has endeavoured to carry out its mandate in the face of an ever-changing world. Its continuing aim has been to increase the capacity of ILO member States to collect and use essential labour statistics through setting international standards and providing technical assistance, and to compile, analyse and disseminate these statistics.

Within the United Nations system, the ILO Bureau of Statistics is the focal point for labour statistics. Since the early 1950s, the Bureau has worked in close collaboration with the statistical departments of other international organizations, including the World Bank, OECD and the European Union.

The Bureau of Statistics has to cover a very broad range of subjects, relating not just to employment and working conditions, but also to living conditions. The link between social and economic policies and labour statistics is such that the Bureau's activities and interests at a particular point in time depend to a large extent on the requirements for those policies. As new needs emerge from new orientations in ILO and national programmes and policies, so the Bureau's activities evolve.

The ILO *Yearbook of Labour Statistics* was first issued in 1935, and contained time series on employment, unemployment, hours of work, wages, costs of living and retail prices, workers' family budgets, emigration and immigration, and industrial relations. Its coverage has changed over time to reflect current interests and developments. Topics such as food consumption, social security, occupational injuries, national income, international migration, economically active population, household income and expenditure, labour productivity and labour cost were added. Monthly or quarterly updates of the series published in the *Yearbook* were first issued in the *International Labour Review* and its statistical supplement, and since 1965 in the quarterly *Bulletin of Labour Statistics* and its supplement. The *Bulletin* also contains short articles on statistical practices and methods, and presentations of the results of special projects carried out by the Bureau of Statistics. Data and metadata from the *Yearbook*, as well as labour statistics from the *Bulletin* and other outputs of the Bureau of Statistics, are now available online in the LABORSTA database at http://laborsta.ilo.org.

Source: Adapted from ILO: "75 years of international labour statistics", in *Yearbook of Labour Statistics* (Geneva, 1994) and the Bureau of Statistics website at http://www.ilo.org/stat.

Labour market analyses using multiple KILM indicators

While more and more countries are producing national unemployment and aggregate employment data, users should be cautioned about the limitations of the statistics if used alone and are urged to take a broader view of labour market developments, necessitating a broader range of statistics. The advantage of using aggregate unemployment rates, for example, is their relative ease of collection and comparability for a significant number of countries. But looking at unemployment (or any other labour market indicator) alone ignores other elements of the labour market that are more difficult to quantify. It is important to realize that unemployment is only one aspect of labour force status.

The first step in labour market analysis, therefore, is to determine the breakdown of labour force status within the population.[9] The working-age population can be broken down into persons who are inactive (outside of the

9. For a specific country example of how to analyse labour markets using the KILM indicators, see Appendix F.

labour force, KILM 13), employed (KILM 2) or not working and seeking work (unemployed, KILM 8). A large share of the population in either unemployment or inactivity, or both, indicates substantial underutilization of the potential labour force and thus of the economic potential of a country. Governments facing this situation should, if possible, seek to analyse the reasons for inactivity, which in turn could dictate the policy choice necessary to amend the situation.

If the majority of the inactive population is made up of women who are not working because they have household responsibilities, the State might wish to encourage an environment that facilitates female economic participation through, for example, the establishment of day care centres for children or flexible working hours. Alternatively, programmes to promote the employment of the disabled could help to lower the inactivity rate if disability is a common reason for inactivity. It is more difficult to recapture persons who have left the labour market because they are "discouraged", i.e. because they feel that no suitable work is available, that they do not have the proper qualifications or because they do not know where to look for work, unless perhaps their confidence can be boosted by participation in training programmes and job-search assistance. Regardless, the correct mix of policies can only be designed by looking in detail at the reasons for inactivity.

Unemployment, as well, should be analysed according to sex (KILM 8), age (KILM 9), length (KILM 10) and education level (KILM 11) in order to gain a better understanding of the composition of the jobless population and therefore to target unemployment policies accordingly. Other characteristics of the unemployed not shown in the KILM, such as socio-economic background, work experience, etc., could also be important to analyse, if available, in order to determine which groups face particular hardships. Paradoxically, low unemployment rates may well disguise substantial poverty in a country (see KILM 20), whereas high unemployment rates can occur in countries with significant economic development and low incidence of poverty. In countries without a safety net of unemployment insurance and welfare benefits, many individuals, despite strong family solidarity, simply cannot afford to be unemployed. Instead, they must eke out a living as best they can, often in the informal economy or in informal work arrangements within the formal economy. In countries with well-developed social protection schemes or when savings or other means of support are available, workers can better afford to take the time to find more desirable jobs. Therefore, the problem in many developing economies is not so much unemployment, but rather the lack of decent and productive work opportunities for those who are employed.

This brings us to the need to dissect the total employment number as well in order to assess the well-being of the working population, under the premise that not all work is "decent work". If the working population consists largely of self-employed or contributing (unpaid) family workers (see KILM 3) then looking at the indicator on the total employed population (KILM 2) loses its value as a normative measure. Are these people employed? Yes, according to the international definition. Are they in decent employment? Possibly not. Although technically employed, some self-employed workers' or contributing family workers' hold on employment is tenuous and the line between employment and unemployment is very thin. If and when salaried jobs open up in the formal economy, this contingent workforce will rush to apply for them. Further assessment should also be undertaken to determine if such workers are generally poor (KILM 20), engaged in traditional agricultural activities (KILM 4), selling goods in the informal market with no job security (KILM 7), working excessive hours (KILM 6a) or wanting to work more hours (KILM 12).

In an ideal world an analysis of labour markets using a broad range of indicators such as those available in the KILM would be an easy matter because the data for each indicator would exist for each country. The reality, of course, is quite different. A glance at KILM table E2, which indicates the availability of

KILM data for each country, shows that despite recent improvements in national statistics programmes and in the efficiency of collection on the part of the KILM, many holes still exist whereby data are not available. No country listed has data for all 20 KILM indicators. The closest to perfect coverage are developed economies such as Canada, Denmark and Ireland, which are lacking only the data relating to the informal sector (KILM 7) and Mexico, which lacks coverage in the time-related underemployment indicator (KILM 12).

The coverage of KILM indicators is particularly low in African countries, which is understandable given the low priority that is likely to be placed on conducting labour force survey in countries overrun by poverty and political unrest. The paradox is that this is precisely the region where greater labour market information is needed in order that international donor money as well as national policies can be productively targeted to improving the possibility for the population to "work out of poverty".[10] Development of national statistical programmes is desperately needed in many developing economies. Therefore, we urge donors to consider aid in statistical capacity building a suitable and important use of funds, and also encourage governments to place priority on the development of statistical programmes.

KILM organization and coverage

The Statistics Division of the United Nations compiles statistics for approximately 230 countries, areas and territories.[11] For each edition of the KILM, the ILO has made an intensive effort to assemble data on the indicators for as many countries, areas and territories as possible. Where there is no information for a country, it is usually because the country involved was not in a position to provide information for the indicator. Even when information for an indicator was available, it may not have been sufficiently current or may not have met other qualifications established for inclusion in the KILM.

Regional classifications need to be reviewed and adjusted from time to time to improve validity and comparability with groupings defined by other international organizations.[12] Consequently, the KILM groupings in this edition are different from previous editions.

There are six major groupings, based on a combination of level of development and geography. It is important to note that the groupings developed for the KILM are intended exclusively for analytical convenience and are not intended to express judgement or appraisal as to a given country's current stage in the development process. There is one developmental grouping – Developed Economies and European Union – and four geographic groupings – Central and Eastern Europe (non-EU) and CIS, Asia and the Pacific, Latin America and the Caribbean, Africa and the Middle East. Each country appears in only one major grouping; for example, Japan is included in the Developed Economies grouping and is therefore excluded from Asia and the Pacific. The inside front cover of the printed KILM gives a graphical representation of the organization of the countries by major groupings. All but one major grouping (the Middle East) have been divided into smaller subgroups within the tables to facilitate analysis.

Owing to the limitations associated with presenting such a large volume of information

10. The ILO strongly advocates placing employment at the heart of poverty reduction strategies, noting, in particular, that "it is precisely the world of work that holds the key for solid, progressive and long-lasting eradication of poverty". ILO: *Working Out of Poverty*, Report of the Director-General, International Labour Conference, 91st Session (Geneva, 2003).

11. International Standard ISO 3166-1, *Codes for the representation of names of countries and their subdivisions* – Part 1: *Country codes*, 1997 (Geneva, International Organization on Standardization, 1997); website: http://www.un.org/Depts/unsd/methods/m49.htm.

12. For example, the groupings defined by the United Nations for the production of indicators relating to the Millennium Development Goals.

in printed form, information in the book is restricted to the years 1980, 1990, 1995 and/or the latest available subsequent five years. However, in the KILM interactive software, indicators are available for all years after, and including, 1980. Because of the time needed for typesetting and printing, the printed version may not be as up to date in terms of yearly coverage as the electronic version. Users of the interactive software will also be notified of, and granted access to, updates as soon as new information becomes available and can be assembled, analysed and posted.

If there was no available information for a given country or year at the time this volume was produced, that country or year is not shown in the relevant table. With few exceptions, the indicators are expressed as ratios or percentage changes (for example, labour force participation rates, proportions of part-time to total employment, unemployment rates, inactivity rates, and indices of manufacturing wages). Because of limitations of space, the actual numerators and denominators used to calculate the indicators are not always provided in the printed edition of KILM, but can be found in the software.

Finally, a note on translations: the International Labour Office makes every effort to provide the KILM in French and Spanish in addition to the original English. These other languages are provided in the KILM interactive software only. Users of the software are able to select their language – English, French or Spanish – from the file menu, and can switch between languages at any time.

Information repositories and methodological information

In compiling the KILM, the ILO concentrates on bringing together information from international repositories. In other words, the KILM team rarely collects information directly from national sources, but rather takes advantage of existing compilations held by various organizations, such as the following:

International Labour Office (Bureau of Statistics)

United Nations Statistics Division

Organisation for Economic Co-operation and Development (OECD)

World Bank

United Nations Industrial Development Organization (UNIDO)

Statistical Office of the European Union (EUROSTAT)

United Nations Educational, Scientific and Cultural Organization (UNESCO)

United States Bureau of Labor Statistics (BLS)

Information maintained by these organizations has generally been obtained from national sources or is based on official national publications.

Whenever information was available from more than one repository, the information and background documentation from each repository was reviewed in order to select the information most suitable for inclusion, based on an assessment of the general reliability of

the sources, the availability of methodological information and explanatory notes regarding the scope of coverage, the availability of information by sex and age, and the degree of historical coverage. Occasionally, two data repositories have been chosen and presented for a single country; any resulting breaks in the historical series are duly noted.

For countries with less-developed labour market information systems, such as those in the developing economies, information may not be easily available to policy-makers and the social partners, and even less so to international organizations seeking to compile global data sets. Many of these countries, however, do collect labour market information through household and establishment surveys, population censuses and administrative records, so that the main problem remains the communication of such information to the global community. In this situation, the ILO Labour Market Indicators Library (LMIL) programme can help. The LMIL is a system for sharing information between the ILO regional offices and headquarters. ILO regional offices are closer to the original micro-sources of data and have therefore been successful in filling in numerous gaps where data at headquarters – used in the production of the KILM – had not existed. It is an ongoing programme that continues to assist the KILM and other ILO publications and research programmes in the expansion of its country and yearly coverage of indicators. (See box 2 for more information on the LMIL.)

Box 2. The Labour Market Indicators Library (LMIL) Network

The ILO proposes to benefit from its field structure by enhancing the capabilities of its subregional offices to serve as regional labour market information collection centres. The KILM team, in collaboration with the Bureau of Statistics (STAT) and several subregional offices, has introduced a project entitled the Labour Market Indicators Library (LMIL) Network, which aims to compile, maintain and analyse labour market indicators and methodological information in an efficient and cost-effective manner. The project allows all the partners to share information resources and to gain access to information stored in the LMIL database for analysis and dissemination purposes. In the preparation of the KILM, the LMIL network has provided a comprehensive overview of the availability of labour market indicators, allowing team members to fill in gaps where information exists and to identify additional gaps in national and regional labour market information, thus devising a strategy to strengthen any weak points. Data repositories identified as "LMIL" in the tables indicate that the information was located at the field-office level and transmitted via the LMIL network to headquarters. This system of sharing information has significantly reduced the delay in the time between the gathering and dissemination of information at the national, regional and international level.

The LMIL network is supported by a system for electronically transferring information from the field to headquarters, and vice versa, in a manner that complies with ILO methodological standards. Indicators are compiled, together with meta-information, which is required to assess the accuracy of indicators and to analyse their comparability across economies and time. The system, which is shared among ILO offices, contains the entire KILM database as generated from searches of international information repositories (see the section on Information repositories) and additional variables from the ILO Bureau of Statistics' *Yearbook of Labour Statistics* as well as variables that are of interest to the field offices and the regions where they operate. The ILO field offices retain responsibility for identifying, soliciting and reviewing the information in order to fill gaps in the series contained in the LMIL dataset and to provide the latest information available from regional or national sources.

In the preparation of this and the three previous editions, the KILM team made use of the LMIL network to enlarge the set of information available. The LMIL network has contributed to improving the availability and timeliness of labour market information, while widening the geographical coverage, particularly for several countries in Africa, Asia, the Middle East, Central and Eastern Europe, Central and Latin America and the Caribbean regions. It is our hope that the LMIL Network will contribute to improving the assembly, analysis and dissemination of up-to-date and relevant labour market indicators so as to arm policy-makers with the proper information and tools for monitoring employment and making labour market policies.

Notes and "breaks"

The collection of labour market indicators presents a dilemma, namely, how to balance the desire to have the greatest degree of geographical coverage for a specified time period with the need to ensure the greatest level of comparability or harmonization? Achieving a harmonious balance between coverage and comparability is a difficult task; the only realistic way of dealing with the question is to provide as much methodological information as possible, while at the same time "flagging" the issues that challenge users who wish to make valid comparisons between countries whose statistical methodology and definitions may not match in every respect. Each indicator has a section on "limitations to comparability", and notes on methodology and sources are as explicit as possible in each table.

Historical continuity is important for many users of labour market information. Without overburdening the indicator tables, it is necessary to alert users to significant changes in the source, definition or coverage of the information from year to year. A "**B**" placed at the point of a chronological "break" denotes a change in the methodology, scope of coverage and/or type of source used within the country,[13] while a "**b**" denotes a change of repository which may, in fact, signify no actual change in methodology, scope of coverage or type of source used for a given country. If there has been a change in both methodology and repository for a given country for a given year, the notation of a change in methodology is given priority – that is, a "**B**" will appear, not a "**b**".

Whether the information has been obtained from other international repositories, regional labour market indicator sets or directly from official sources, a substantial effort has been made to develop and maintain the links to the source and the information provider. Wherever possible, the user will find a link to the information provider's sources, whether printed publications or web sites.

International comparability

As mentioned above, there will always be important caveats relating to the methodologies of measurement; these require time and effort to sort out before reasonable international comparisons can be made. Limitations to comparability are often indicator-specific; however, there are standard issues that require attention with every indicator. For example, the precision of the measurements made for each country and year, and systematic differences in the type of source, related to the methodology of collection, definitions, scope of coverage and reference period, will certainly affect comparisons.

In order to minimize misinterpretation, detailed notes are provided that identify the repository, type of source (household and labour force surveys, censuses, administrative records, and so on), and changes or deviations in coverage, such as age groups and geographical coverage (national, urban, rural, capital city and so on).[14] When analysing or making reference to a particular indicator, users are advised to examine closely the section "Limitations to comparability" and the notes to the data tables.

World and regional estimates

World and regional estimates are presented for the following indicators: labour force participation (KILM 1), employment-to-population ratio (KILM 2), status in employment (KILM 3), employment by sector (KILM 4), unemployment (KILM 8), youth unemployment (KILM 9), inactivity rate (KILM 13), labour productivity and unit labour

13. A break in series is not noted when a country-specific survey reference period has changed, although users should be aware that comparability issues do result from the frequency of data observations; the resulting methodology for calculating annual averages and a certain degree of seasonality can influence the results when a full year is not covered.

14. Despite best efforts to include concise and informative notes to the KILM tables, the notes are often limited in terms of the level of detail that was available from the various repositories. As the KILM project evolves, the ILO will continue to collect and refine the indicators and methodological information and work in close cooperation with the producers of the various repositories, with the particular aim of resolving irregularities and clarifying the notes for the indicators.

costs (KILM 18), employment elasticities (KILM 19) and the working poor (KILM 20). The estimates are presented in a box in each indicator's manuscript along with an analysis of the global and regional trends. The estimates are derived using one of three models which use multivariate regression techniques to impute missing values at the country level. The processes used in the ILO world and regional estimation models are described in detail in box 3.

International comparability

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Box 3. ILO methodology for producing world and regional estimates of labour market indicators

The biggest challenge in the production of aggregate estimates is that of missing data. In an ideal world, producing world and regional estimates of labour market indicators, such as employment, for example, would simply require summing up the total number of employed persons across all countries in the world or within a given region. However, because not all countries report data in every year and, indeed, some countries do not report data for any years at all, it is not possible to derive aggregate estimates of labour market indicators by merely summing across countries.

To address the problem of missing data, the ILO Employment Trends Unit has designed and actively maintains three econometric models which are used to produce estimates of labour market indicators in the countries and years for which no real data exist. The Global Employment Trends Model (GET Model) is used to produce estimates – disaggregated by age and sex – of unemployment, employment-to-population ratios, status in employment, employment by sector, labour productivity, employment elasticities and working poor (KILMs 2, 3, 4, 8, 9, 18, 19 and 20). The world and regional labour force estimates found in KILM 1 and KILM 13 are estimated using the Trends Labour Force Model (TLF Model), and finally, the working poor estimates in KILM 20 come from the Trends Working Poverty Model (TWP Model).

Each of these models uses multivariate regression techniques to impute missing values at the country level. The first step in each model is to assemble every known piece of real information (i.e. every real data point) for each indicator in question. It is important to note that only data that are national in coverage and comparable across countries and over time are used as inputs. This is an important selection criterion when the models are run, because they are designed to use the relationship between the various labour market indicators and their macroeconomic correlates (such as per-capita GDP, GDP growth rates, demographic trends, country membership in the Highly Indebted Poor Country (HIPC) Initiative, geographic indicators and country and time dummy variables) in order to produce estimates of the labour market indicators where no data exist. Thus, the comparability of the labour market data that are used as inputs in the imputation models is essential to ensure that the models accurately capture the relationship between the labour market indicators and the macroeconomic variables.

The last step of the estimation procedure occurs once the datasets containing both the real and imputed labour market data have been assembled. In this step, the ILO Trends Team aggregates the data across countries to produce the final world and regional estimates. For further information on the world and regional econometric models, readers can consult the technical background papers available at the following website: http://www.ilo.org/public/english/employment/strat/wrest.htm.

of the measurements made for each country and year, and systematic differences in the type of source, related to the methodology of collection, definitions, scope of coverage and reference period, will certainly affect comparisons.

In order to minimize misinterpretation, detailed notes are provided that identify the repository, type of source (household and labour force surveys, censuses, administrative records, and so on), and changes or deviations in coverage, such as age groups and geographical coverage (national, urban, rural, capital city and so on).[15] When analysing or making reference to a particular indicator, users are advised to examine closely the section "Limitations to comparability" and the notes to the data tables.

World and regional estimates

For the first time, the KILM 4th Edition includes world and regional estimates for the following indicators: labour force participation (KILM 1), employment-to-population ratio (KILM 2), employment by sector (KILM 4), unemployment (KILM 8), youth unemployment (KILM 9), employment elasticities (KILM 19) and the working poor (KILM 20). The estimates are presented in a box in each indicator's manuscript along with an analysis of the global and regional trends. The estimates are derived using one of three models which use multivariate regression techniques to impute missing values at the country level. The processes used in the ILO world and regional estimation models are described in detail in box 3.

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Summary of the 20 ILO Key Indicators of the Labour Market

The KILM 5th Edition provides indicators related to labour force, employment, unemployment, educational attainment, wages and compensation costs, productivity and labour costs, employment elasticities, and poverty. The 20 indicators have been organized by general topic into eight chapters. Each of the indicators is briefly described and defined below.

KILM 1. Labour force participation rate

The labour force participation rate is a measure of the proportion of a country's working-age population that engages actively in the labour market, either by working or looking for work; it provides an indication of the relative size of the supply of labour available to engage in the production of goods and services. The breakdown of the labour force by sex and age group gives a profile of the distribution of the economically active population within a country.

Table 1 contains labour force participation rate estimates by sex according to the following standardized age groups: 15+, 15-24, 15-64, 25-54, 25-34, 35-54, 55-64 and 65+. This series covers 191 countries over the years 1980 to 2006. The participation rates are harmonized to account for differences in national data collection and tabulation methodologies as well as for other country-specific factors such as military service requirements. The series includes both nationally reported and imputed data and include only estimates that are national, meaning there are no geographic limitations in coverage.

KILM 2. Employment-to-population ratio

The employment-to-population ratio provides information on the ability of an economy to create employment; for many countries the indicator is often more insightful than the unemployment rate. Although a high overall ratio is typically considered as positive, the indicator alone is not sufficient for

assessing the level of decent work or the level of a decent work deficit. Additional indicators are required to assess such issues as earnings, hours of work, informal sector employment, underemployment and working conditions. Employment-to-population ratios are of particular interest when broken down by sex, as the ratios for men and women can provide information on gender differences in labour market activity in a given country. Employment-to-population ratios, broken down by sex, are presented for persons of working age (ages 15 years and over) and youth (ages 15 to 24 years).

The employment-to-population ratio is defined as the proportion of a country's working-age population that is employed (the youth employment-to-population ratio is the proportion of the youth population – persons 15 to 24 years – that is employed). A high ratio means that a large proportion of a country's population is employed, while a low ratio means that a large share of the population is not involved directly in market-related activities, because they are either unemployed or (more likely) out of the labour force altogether.

KILM 3. Status in employment

Indicators of status in employment distinguish between three important and useful categories of the employed – (a) wage and salaried workers, (b) self-employed workers, and (c) contributing family workers – with each being expressed as a proportion of the total employed. Categorization by employment status can help in understanding both the dynamics of the labour market and the level of development of countries. Over the years, and with growth of the country, one would typically expect to see a shift in employment from the agriculture to the industry and services sectors, with a corresponding increase in wage and salaried workers and decreases in self-employed and contributing family workers, previously employed in the agricultural sector.

The method of classifying employment by status is based on the 1993 International Classification by Status in Employment (ICSE), which classifies jobs held by persons at a point in time with respect to the type of explicit or implicit employment contract the person has with other persons or organizations. Such status classifications reflect the degree of economic risk, an element of which is the strength of the attachment between the person and the job, and the type of authority over establishments and other workers that the person has or will have.

KILM 4. Employment by sector

This indicator disaggregates employment into three broad sectors – agriculture, industry and services – and expresses each as a percentage of total employment. The indicator shows employment growth and decline on a broad sectoral scale, while highlighting differences in trends and levels between developed and developing economies. Sectoral employment flows are an important factor in the analysis of productivity trends, because within-sector productivity growth needs to be distinguished from growth resulting from shifts from lower to higher productivity sectors. The addition of further sectoral detail in tables 4b and 4c is useful for demonstrating trends of employment within individual sectors of the economy.

The sectors of economic activity are defined according to the International Standard Industrial Classification of All Economic Activities (ISIC), Revision 2 (1968) and Revision 3 (1990). Appendix C contains both ISIC Revisions 2 and 3.

KILM 5. Part-time workers

There has been rapid growth in part-time work in the past few decades in the developed economies. This trend is related to the increase in the number of women in the labour market, but also to attempts to introduce labour market flexibility in reaction to changing work organization within industry and to the growth of the services sector.

The indicator on part-time workers focuses on individuals whose working hours total less than "full time", as a proportion of total employment. Because there is no agreed international definition as to the minimum

number of hours in a week that constitute full-time work, the dividing line is determined either on a country-by-country basis or through the use of special estimations. Two measures are calculated for this indicator: total part-time employment as a proportion of total employment, sometimes referred to as the "part-time employment rate"; and the percentage of the part-time workforce comprised of women.

KILM 6. Hours of work

The number of hours worked have an impact on the health and well-being of workers as well as on levels of productivity and labour costs of establishments. Measuring the level and trends in the hours worked in a society, for different groups of workers and for workers individually, is therefore important when monitoring working and life conditions as well as when analysing economic developments.

Two measurements related to working time are included in KILM 6 in order to give an overall picture of the time that the employed throughout the world devote to work activities. The first measure relates to the hours an employed person works per week (table 6a). The number of employed are presented according to the following hour bands: less than 20 hours worked per week, between 20 and 29 hours, between 30 and 39 hours, 40 hours and over and 50 hours and over, where available. The second measure is the average annual number of hours worked per person (table 6b).

KILM 7. Employment in the informal economy

Employment in the informal economy relates the estimated number of persons employed in the informal economy to the total number of employed persons. In terms of size and growth, the informal sector is an important part of economic, social and political life in most developing, as well as some developed economies. In countries with high rates of population growth or urbanization, the informal economy tends to absorb most of the growing labour force. The indicator represents an attempt to capture labour market situations that are inadequately covered by other indicators, such as the unemployment rate (KILM 8) and time-related underemployment (KILM 12).

The 15th ICLS defined the informal sector as units of production within unincorporated enterprises owned by households. Those employed in the informal economy comprise all persons who, during a given reference period, were employed in at least one production unit that meets these informal sector guidelines, irrespective of their status in employment and whether it was their main or a secondary job. The ICLS resolution makes allowances for some national variations. As a result, information for the indicator is often based on national definitions and measurements of the informal economy. However, to the greatest extent possible, data are grouped in the table according to the definitions and methodology used, so as to maximize comparability.

KILM 8. Unemployment

The unemployment rate is probably the best-known labour market measure and certainly one of the most widely quoted by the media in many countries. Together with the labour force participation rate (KILM 1) and employment-to-population ratio (KILM 2), it provides the broadest available indicator of economic activity and status in terms of labour markets for countries that regularly collect information on the labour force. The unemployment rate tells us the proportion of the labour force that does not have a job and is actively looking for work. It should not be misinterpreted as a measurement of economic hardship, however, although a correlation often exists.

The resolution concerning statistics of the economically active population, employment, unemployment and underemployment, adopted by the 13th ICLS, defines the unemployed as all persons above a specified age who, during the reference period, were without work, currently available for work and seeking work. However, it should be recognized that national definitions and coverage of unemployment can vary with regard to factors such as age limits,

criteria for seeking work, and treatment of, for example, persons temporarily laid off, discouraged about job prospects or seeking work for the first time.

KILM 9. Youth unemployment

Youth unemployment is an important policy issue for many countries, regardless of the stage of development. For the purpose of this indicator, the term "youth" covers persons aged 15 to 24, while "adults" are defined as persons aged 25 and over. The indicator presents youth unemployment in the following ways: (a) the youth unemployment rate; (b) the youth unemployment rate as a percentage of the adult unemployment rate; (c) the youth share in total unemployment; and (d) youth unemployment as a proportion of the youth population.

The KILM 9 measures should be analysed together; any of the four, when analysed in isolation, could paint a distorted image. For example, a country might have a high ratio of youth-to-adult unemployment but a low youth share in total unemployment. The presentation of youth unemployment as a proportion of the youth population recognizes the fact that a large proportion of young people enter unemployment from outside the labour force. Taken together, the four indicators provide a fairly comprehensive indication of the problems that young people face in finding jobs.

KILM 10. Long-term unemployment

Unemployment tends to have more severe effects the longer it lasts. Short periods of joblessness can normally be dealt with through unemployment compensation, savings and, perhaps, assistance from family members. Unemployment lasting a year or longer, however, can cause substantial financial hardship, especially when unemployment benefits either do not exist or have been exhausted. Long-term unemployment is not generally viewed as an important indicator for developing economies, where the duration of unemployment often tends to be short, due to the lack of unemployment compensation and the fact that most people cannot afford to be without work for long periods. Therefore, most of the information available for this indicator comes from the more developed economies.

The indicator on long-term unemployment makes the basic assumption that unemployment that lasts a full year or more is too long, and is thus a phenomenon worthy of special attention. Two separate measures of long-term unemployment are included: (a) those unemployed one year or more as a percentage of the labour force; and (b) those unemployed one year or more as a percentage of the total unemployed (the incidence of long-term unemployment).

KILM 11. Unemployment by educational attainment

This indicator can provide important insights into the relationship between the educational attainment of workers and unemployment in different countries. This allows researchers to discern a key characteristic of a country's or region's unemployed labour force and, in so doing, assists in identifying the likelihood of different groups of workers experiencing unemployment. The information in the indicator may also be used to draw inferences relating to changes in employment demand. By focusing on the education characteristics of the unemployed, the KILM 11 indicator can aid in analyses designed to shed light on how significant long-term events in the country, such as ongoing skills-based technological change, increased trade openness or shifts in the sectoral structure of the economy, alter the experience of high- and low-skilled workers in the labour market.

Information for this indicator is classified according to categories of schooling – less than one year, less than primary level, primary level, secondary level and tertiary level – and is presented as the proportion of total unemployed in each of these five categories. The categories used in the indicator are conceptually based on the levels of the International Standard Classification of Education (ISCED), contained in Appendix D. ISCED was designed by UNESCO to serve as an instrument for

assembling, compiling and presenting comparable indicators and statistics of education, both within countries and internationally.

KILM 12. Time-related underemployment

Underemployment reflects underutilization of the productive capacity of the labour force. Time-related underemployment, as the only component of underemployment, to date, that has been agreed on and properly defined within the international community of labour statisticians, is, therefore, the best available proxy of the underutilized labour force. The indicator is important for improving the description of employment-related problems, as well as assessing the extent to which available human resources are being utilized in the production process of the country. It also provides useful insights for the design and evaluation of employment, income and social programmes. The indicator includes two measures – time-related underemployment as a percentage of the labour force, and as a percentage of total employment.

The international definition of time-related underemployment was adopted in 1982 by the 13th ICLS and amended in 1998 by the 16th ICLS. It includes all persons in employment whose hours of work "are insufficient in relation to an alternative employment situation in which the person is willing and available to engage".

KILM 13. Inactivity rate

The inactivity rate is defined as the percentage of the population that is neither working nor seeking work (that is, not in the labour force). The inactivity rate of the age groups 15+, 15-24, 15-64, 25-54, 25-34, 35-54, 55-64 and 65+ are shown in table 13. The 25-54 age group can be of particular interest since it is considered to be the "prime-age" group, in which individuals are generally expected to be in the labour force; it is worthwhile investigating why these potential labour force participants are inactive, since they have normally completed their education but have not yet reached retirement age. The inactivity rates, when added to the labour force participation rate (KILM table 1) for the corresponding group, will equal 100 per cent.

The inactivity rate of women, in particular, tells us a lot about the social customs of a country, attitudes towards women in the labour force, and family structures in general.

KILM 14. Educational attainment and illiteracy

An increasingly important aspect of labour market performance and national competitiveness is the skill level of the workforce. Information on levels of educational attainment is currently the best available indicator of labour force skill levels. These are important determinants of a country's capacity to compete successfully in world markets and to make efficient use of rapid technological advances; they are also among the factors determining the employability of workers.

The KILM 14 indicator reflects the levels and distribution of the knowledge- and skills-base of the labour force and population. It includes two measures pertaining to educational levels, and a third measuring illiteracy in the adult population. The indicators cover the educational attainment of both women and men in the entire labour force. As with the indicator for unemployment by educational attainment (KILM 11), KILM 14 presents information in accordance with the ISCED (see Appendix D).

KILM 15. Manufacturing wage indices

Wages are a widely used measure of the general level of workers' income. Such information is often applied to formulate, implement and monitor economic policies and, more specifically, to address labour issues such as human resource planning, labour utilization, wage fixing, social security and labour costs. This indicator covers real wages in manufacturing (despite the fact that paid employment in manufacturing activities is not uniformly important across regions and over time, for reasons explained in detail within KILM 15).

Real wages in an economic activity are viewed as a major indicator of employees' purchasing power and as a proxy for their level of income, independent of the actual work performed in that activity. Significant differences in the purchasing power of wages, over time and between countries, reflect modern economic society, and comparisons of the movement of real wages can provide a measure of the material progress (or regression) of the working population.

KILM 16. Occupational wage and earning indices

While KILM 15 shows trends in average wages at the industry level (i.e. in manufacturing), KILM 16 looks at trends in, and differentials between, occupational wages (i.e. wage rates or earnings) in specific industry groups. Changes in average wages within an industry or sector may be due not only to changes in levels of wage rates or earnings but also to changes in the occupational composition of employment and in the proportion of men and women employed. Looking at wages of particular occupations avoids some of the limitations associated with using broad averages, where changes in the composition and structure of the workforce might be influencing the recorded changes in average wages.

Two tables of wage indices are presented for this indicator: one relating to nominal and real wage rates, and the other to nominal and real earnings. Nineteen occupations were selected to give a representative picture of the development of real wage rates and earnings for different types of occupations with varying skill levels in different sectors of activity.

KILM 17. Hourly compensation costs

Hourly compensation costs are only one factor in international competitiveness and, when used alone, can be misleading. However, in conjunction with other indicators, including labour productivity and unit labour costs (KILM 18), relative changes can be helpful in assessing trends in competitiveness. In addition, non-wage labour costs have become an important issue in debates on labour market flexibility.

For the purposes of this indicator, hourly compensation costs of manufacturing production workers are expressed in US dollars at market exchange rates; comparisons in index terms show the position of countries in relation to the United States (United States = 100). The indicator also shows non-wage labour costs as a percentage of total compensation costs – the sum of gross earnings and the employers' contributions to legally required insurance programmes, contractual and private benefit schemes (plans), and labour taxes – as well as the annual percentage change in total compensation costs over the period 1980-2005.

KILM 18. Labour productivity and unit labour costs

Productivity and unit labour costs, in combination with hourly compensation costs, can be used to assess the international competitiveness of a labour market. Economic growth in a country or sector can be ascribed either to increased employment or to more effective work by those who are employed. The latter can be described through data on labour productivity. Labour productivity, therefore, is a key measure of economic performance. An understanding of the driving forces behind it, in particular the accumulation of machinery and equipment, improvements in organization as well as physical and institutional infrastructures, improved health and skills of workers ("human capital") and the generation of new technology, is important in formulating policies to support economic growth.

Labour productivity is defined as output per unit of labour input, and unit labour cost is the labour cost per unit of output. Information is presented for the total economy and the manufacturing sector as well as two service sectors, transport and communication, and wholesale and retail trade. In addition, this edition of the KILM provides estimates of productivity in the agriculture, forestry and fisheries sector.

KILM 19. Employment elasticities

Employment elasticities provide a numerical measure of how employment growth varies with growth in economic output – i.e. how much employment growth is associated with 1 percentage point of economic growth. Employment elasticities can serve as a useful way to examine how growth in economic output and growth in employment evolve together over time. They can also provide insights into how employment generation varies for different population subsets in an economy and assist in detecting and analysing structural changes in employment over time. Taken together with other indicators such as economic growth rates, labour force growth, poverty, hours of work and wages, employment elasticities can provide important insights into labour market trends.

Two tables of employment elasticities are provided for this indicator. Table 19a gives the percentage point change in employment, by sex, associated with a 1 percentage point increase in total economic growth over three time periods: 1993 to 1997, 1997 to 2001 and 2001 to 2005. The second table provides sector employment elasticities, which indicate the percentage point change in employment within a given sector (agriculture, industry or services) associated with a 1 percentage point change in value added in the sector.

KILM 20. Poverty, working poverty and income distribution

Poverty can result when individuals are unable to generate sufficient income from their labour to maintain a minimum standard of living. The extent of poverty, therefore, can be viewed as an outcome of the functioning of labour markets. Because labour is often the most significant, if not the only, asset of individuals in poverty, the most effective way to improve the level of welfare is to increase employment opportunities and labour productivity though education and training.

An estimate of the number of people in poverty in a country depends on the choice of the poverty threshold. However, what constitutes such a threshold of minimum basic needs is subjective, varying with culture and national priorities. Definitional variations create difficulties when it comes to making international comparisons. Therefore, in addition to national poverty measurements, this indicator presents data relative to the World Bank international poverty lines of US$1 and US$2 per person per day. The poverty gap is included as an overall measure of the depth of poverty. The Gini index is also given, as it is a convenient summary measure of the degree of inequality based on either income or expenditure. Estimates of the "working poor" – defined as the proportion of employed persons living in a household whose members are estimated to be below the poverty line – are also available.

KILM interactive software

The ILO hopes to reach a wider audience by presenting KILM in software as well as in printed form, each of which corresponds to specific users' needs. As in previous editions, the electronic version of the KILM contains all the data sets for the indicators, together with interactive software through which users can select and query the indicators by country, year, type of source and other user-defined functions according to specific needs. It includes everything that is in the printed publication plus information for all years after 1980, as well as all the basic statistics used to calculate the indicators. Users can generate a multiple table grid, consolidating multiple indicators available for one country side by side. For example, a user may choose to generate a table with unemployment and employment estimates together. Data updates will be automatically downloaded each time a user opens the programme (if connected to the Internet). Users who do not have Internet access will be notified by email of the availability of updates, assuming they fill in the registration material. The KILM software will be updated approximately every six months so that users of the electronic product can feel confident that they will have access to the latest available labour market information.

A. Decent Employment and the Millennium Development Goals: Description and analysis of a new target[1]

1. Introduction

At the Millennium Summit in 2000, the international community, under the leadership of the United Nations, adopted the Millennium Development Goals (MDGs), the first of which is, by 2015, to halve the proportion of people living on less than US$1 a day. Consequently, many reports have focused on monitoring progress towards this goal and forecasting whether the world will achieve it.

It is now commonly accepted that realizing full and productive employment and decent work for all, is the main route for people to escape poverty. The ILO and the MDGs Technical Working Group on Employment have recommended indicators for a new target: *to make the goals of full and productive employment and decent work for all, including women and young people, a central objective of our relevant national and international policies and our national development strategies.*

The acceptance of this new target by the international community is a major achievement as it establishes the priority of decent and productive work as a vehicle for poverty reduction. From a practical viewpoint it brings new challenges to the ILO, most notably the responsibility of delivering indicators that measure progress towards the new target, and also explain the linkages between decent and productive work and poverty reduction.

This section of the chapter is intended to address both of these challenges. Following the introduction, part 2 explains the selection of indicators, their advantages and limitations. Part 3 provides regional trends based on these selected indicators while part 4 concludes. The background on the MDGs and the introduction of the new target are provided in Box A1 and A2, respectively.

2. The selection of indicators for the new target

Given the strict criteria for choosing the indicators, as mentioned in Box A1, but also the challenge of measuring a complex concept such as "*full and productive employment and decent work for all*" (especially those aspects most related to the quality of work), the ILO and the Interagency Technical Working Group on Employment proposed a set of indicators. Most of the indicators have a focus on the income component of decent work but, as discussed below, they are often indicative of other components. In addition, the fact that the MDG goal, under which this target is placed, stresses income poverty, justifies the focus on the income component of decent work. Given its limitations, however, the ILO is working on new ways to measure decent work to paint a clearer picture of this complex issue. Nonetheless, the initial set of four indicators includes:

Employment-to-population ratios for persons aged 15 years and over and youth (age 15 to 24 years) by sex

Employment-to-population ratios (KILM 2) indicate the efficiency of an economy to provide jobs for those who want to work.

[1] This section was prepared by Dorothea Schmidt of the ILO Employment Trends Team.

Employment-to-population ratios express the number of people in employment as a percentage of the population for the corresponding age group (either 15 years and over or youth). There is no "correct" employment-to-population ratio, but there are certain "rules" and favourable trends that have a positive impact on reducing decent work deficits in the short and long run. For example:

- Ratios should be lower for youth than for the overall population (15 years and over) as more young people (as a share of their age group) participate in education in comparison with adults, which means they are not employed (not counted in the numerator), but they are still in the population (denominator). Also, a reduction of employment-to-population ratios for young people can be seen as a positive sign if this is caused by an increase of them in education.
- Employment-to-population ratios should increase when unemployment is very high in a country (indicating that people are looking for work but not finding it).
- Ratios should also increase whenever they are low as a result of discouragement (indicating that people have probably given up hope of finding a job).
- Ratios for women can be lower than those for men as long as this is the result of women voluntarily staying at home and not participating in labour markets. However, if the difference is the result of involuntarily low labour force participation for women, ratios should increase over time.
- On the other hand, employment-to-population ratios should not be too high. Ratios above 80 per cent, for instance, often occur in very poor countries and usually indicate an abundance of low quality jobs.
- In addition, increases in employment-to-population ratios should be moderate as sharp increases could be the result of decreases in productivity.
- During the development process, employment-to-population ratios and poverty can both be high because people simply have to work to survive. The wealthier a country becomes the lower the ratios are because some people can increasingly afford not to work, particularly if conditions are not ideal. After a certain level of wealth, however, ratios have a tendency to increase again, mainly because of increases in the labour force participation rates for women.

Vulnerable employment

The indicator of status in employment (KILM 3) – used to identify people in vulnerable employment – distinguishes between three categories of the employed: (1) wage and salary workers; (2) contributing family workers; and, (3) self-employed workers, including self-employed workers with employees (employers), self-employed workers without employees (own-account workers) and members of producers' cooperatives. The share of vulnerable employment is calculated as the sum of contributing family workers and own-account workers as a percentage of total employment.

By definition, contributing family workers and own-account workers are less likely to have formal work arrangements, which allows the usage of the indicator on vulnerable employment to confirm or refute claims of an increasing informalization of labour markets. If the proportion of vulnerable workers is sizeable, it may be an indication of a large subsistence agriculture sector, lack of growth in the formal economy or widespread poverty. The poverty connection arises because workers in the vulnerable statuses lack the social protection and safety nets to guard against times of low economic demand and often are incapable of generating sufficient savings for themselves and their families to offset these times.

Indeed, Figure A1 shows the positive relationship between changes in working poverty at the US$1 a day level and changes in vulnerable employment share in the world's two poorest regions – South Asia and sub-

Box A1. Background on the MDGs

History of the MDGs and the concept of decent work[1]

The eight Millennium Development Goals (MDGs) – ranging from halving extreme poverty to halting the spread of HIV/AIDS and providing universal primary education, all by the target date of 2015 (see box A1 for more details) – form a blueprint agreed to by the world and its leading development institutions, which together have galvanized unprecedented efforts to address the needs of the world's poorest.

Each goal is accompanied by a set of targets that need to be met. Each target is measured using one or more indicators. These indicators are chosen based on specific criteria: indicators should measure progress made on each target, must be well established in the statistical community, easily available for many countries, comparable between countries and quantifiable. Furthermore, it must be possible to aggregate the data at the regional and world level. Lastly, there has to be a responsible agency for the production and analysis of the indicators.

These criteria insure that the indicators not only measure progress towards the targets but also that countries and regions can compare their progress. They also allow for the identification of best cases so that policy advice can be formulated.

Since the adoption of the Millennium Declaration and the MDGs, the UN system, through the coordination of the Department for Economic and Social Affairs (DESA), has produced annual reports on progress towards achieving the MDGs by 2015. The ILO has been part of the interagency technical team constructing the indicators. Over the course of the last six years the ILO has been working at the technical and political levels to integrate the decent work agenda into the UN Millennium Development Goals. Two MDG targets were directly related to employment: a gender employment target under goal 3 and a youth employment target under goal 8.

The MDGs

In September 2000, the United Nations' member States unanimously adopted the Millennium Declaration. After consultations among international agencies including the World Bank, the International Monetary Fund, the Organisation for Economic Co-operation and Development, and the specialized agencies of the United Nations, the UN General Assembly recognized the Millennium Development Goals as part of the road map for implementing the Millennium Declaration.

The goals, along with the specific targets set for each one, commit the international community to an expanded plan of action aimed at encouraging sustainable and equitable development, one that promotes human development as the cornerstone for sustaining social and economic progress, and recognizes the importance of creating a global partnership for development. The goals set out below together with the targets, have been commonly accepted as a framework for measuring development progress.

1. Eradicate extreme poverty and hunger
2. Achieve universal primary education
3. Promote gender equality and empower women
4. Reduce child mortality
5. Improve maternal health
6. Combat HIV/AIDS, malaria, and other diseases
7. Ensure environmental sustainability
8. Develop a global partnership for development

Source: http://www.un.org/millenniumgoals/

Box A1 - continued

The decent work agenda

With "decent work" the ILO introduced to the world a concept that, in a short period of time, received significant recognition and was cited by the international community, researchers and the media. It is now common conviction that only by giving people a decent job – not just any job – they get a chance to avoid and/or escape poverty. A decent job for all is thereby the alternative to what can be observed throughout the world: a large number of people looking for a job but who cannot find work; an even larger number of discouraged people, who gave up the hope of being able to participate in labour markets; and, most importantly the large number of people who work – often long hours and often under poor conditions – but with low productivity jobs that make it impossible for them and their families to escape poverty. In other words, the potential of these individuals is either ignored or underutilized, whereas they could be contributing significantly to economic development by being provided with decent and productive work.

These arguments are the main reasons why decent work for all is the principal goal of the ILO. But what is decent work? It is work that gives people the opportunity to earn enough for themselves and their families to escape poverty, not just temporarily but permanently. But the concept is not limited to the income component. A decent job provides social security and ensures protection by labour laws, and a voice at work through freely chosen workers' organizations. It gives the job a human face and makes sure that people can work in dignity and freedom.

The enabling conditions for the development of sustainable enterprises that create such jobs is especially important in times of rapid change as there is an increasing sense of insecurity associated with globalization. Underpinning the growth of more and better jobs in all countries are the ILO's fundamental principles and rights at work. Decent work reflects the aspiration of men and women everywhere to obtain productive work in conditions of freedom, equity, security and human dignity.[2]

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1. See http://www.unescap.org/stat/apex/2/APEX2_S.2_Report%20of%20FOC%20on%20MDGs.pdf.
2. For more details see: ILO: *Working out of Poverty*, Report of the Director-General Juan Somavia to the 91st International Labour Conference (Geneva, 2003): http://www.ilo.org/public/english/standards/relm/ilc/ilc91/pdf/rep-i-a.pdf. Also: World Commission on the Social Dimension of Globalization: A fair globalization: creating opportunities for all; ILO (Geneva, 2004): http://www.ilo.org/public/english/wcsdg/docs/report.pdf. For a list of publications on the topic see: http://www.ilo.org/public/english/bureau/integration/decent/publicat.htm

Saharan Africa. Only economies where working poverty at this level exists, and estimates are reliable, are shown. The bottom left quadrant shows that countries with larger decreases in the share of vulnerable employment – such as Angola, Botswana, China, Mozambique, Pakistan and Viet Nam – also had some of the largest decreases in their share of working poverty. Similarly, smaller declines in the share of vulnerable employment were associated with smaller decreases in working poverty share, as can be seen in Egypt, Niger, the Republics of Korea and Sudan, Malawi, Colombia, Uganda, Nicaragua, Peru and Bangladesh, among others. The figure also shows that there are no countries where decreases in vulnerable employment coincide with increases in working poverty, another fact underlining the strong positive correlation between the two indicators. However, the figure does display many outliers, usually for countries where increases in vulnerable employment were observed. This indicates that there are indeed many other factors affecting working poverty including the level of development, the pace of development, policies and institutions in place. In the future, it will be an important goal to identify peculiarities within each country in order to address them so that they no longer impact on the positive correlation between working poverty and vulnerable employment.

Box A2: Introduction of the new target relating to full, decent and productive work

Throughout the many discussions related to the MDGs, the ILO has always advocated that decent work is the primary means for individuals to lift themselves and their families out of poverty in a sustainable manner. It was the Secretary-General of the United Nations, Kofi Annan, who picked up this message, leading to paragraph 47 of the 2005 Summit Outcome document. In his last Secretary-General's Report to the General Assembly in August 2006, Mr Annan included the following text in paragraph 24 on the further development of the MDG targets,[1]

> *World leaders further agreed to several other important targets at the 2005 World Summit. I am therefore recommending the incorporation of these commitments into the set of targets used to follow up on the Millennium Declaration. This includes: a new target under Millennium Development Goal 1: to make the goals of full and productive employment and decent work for all, including for women and young people, a central objective of our relevant national and international policies and our national development strategies; …*

With the introduction of the Secretary General's Report to the General Assembly, the ILO now has strong support to bring the issue of decent and productive work to the forefront with respect to the MDGs initiative. Following the release of the report, members of the ILO Employment Trends Team and the Bureau of Statistics have been working with representatives from the various sectors within the ILO as well as DESA, UNSD, World Bank and various specialized agencies to develop a set of indicators to measure the new target. The set of indicators, which is discussed in detail in part 3, was accepted in early 2007.

1. See http://www.unmillenniumproject.org/documents/EXCERPTS_Report_Secretary_General.pdf.

The share of working poor (US$1 a day) in total employment

Working poor (KILM 20) are defined as individuals who work, but nevertheless live with their families in poverty on less than US$1 a day per family member. This total number is then divided by the total number of employed in a country to calculate the share of working poor. The ILO calculates upper- and lower-bound estimates of the working poor. Upper bound estimates are calculated using the equation: $(working\ poor_u = poverty\ rate * population_{15})$, where $population_{15}$ is equal to the population aged 15 and above. The lower-bound estimate of the working poor is calculated using the equation: $(working\ poor_l = poverty\ rate * labour\ force_{15})$, where $labour\ force_{15}$ is the labour force aged 15 and above. The key assumption behind these bounds is that all of the poor of working age, and in the labour force, are employed. This assumption is made because in countries where social safety nets do not exist, poor individuals must work in order to maintain a subsistence level. The working poor data is based on a weighted-average of the data derived using the two methodologies (i.e. a weighted average of the upper bound estimates and the lower bound estimates). The working poor definition is consequently based on poverty data (using the international poverty line at US$1 a day), but it also takes into account countries' specific labour market characteristics, such as the size of the working-age population and the labour force participation rate. By combining these labour market factors with poverty data, working poverty estimates give a clearer picture of the relationship between poverty and employment than that provided by using standard poverty data alone. Working poverty also gives an indication of the lack of decent work: if a person's work does not even provide an income high enough to lift them and their families out of extreme poverty, then these jobs, at the very least, do not fulfil the income component of decent work and it is likely that other components are not being fulfilled either. Within the development process, the working poor share would decrease which again would foster the development process.

Labour productivity

Given that the target to be evaluated is "*full decent and **productive** work for all*", labour productivity – measured as output per person employed – is by definition important. This indicator (KILM 18) can be used to assess the likelihood of the country's economic environment to create and sustain decent employment opportunities with fair equitable remuneration.

Also, there is empirical evidence that the link between productivity growth and poverty reduction is highest when productivity growth and employment growth go hand in hand.[2] Consequently, measuring growth in employment and productivity is needed to ensure that the development process is heading in the right direction. In addition, productivity increases often influence the social and economic environment positively, in turn often leading to poverty reduction through investment, sectoral shifts, trade, technological progress and increases in social protection. Increases in productivity do not guarantee improvements in these areas, but without productivity growth, and thereby induced economic growth, improvements are highly unlikely.

Figure A2 displays the negative correlation between changes in working poverty shares and changes in levels of labour productivity for the world's two poorest regions – South Asia and sub-Saharan Africa. The criteria used for figure A1 apply here as well. The bottom right quadrant clearly shows that countries with small declines in productivity – such as Ecuador, Guatemala, Fiji, Nepal and the Philippines, among others – had the smallest decreases in the share of working poor. Similarly, countries with large increases in productivity levels saw larger decreases in working poverty, with the most notable example being China. There are very few countries where increases in productivity coincided with increases in working poverty. This was mainly the case when productivity increases occurred during the most recent years or these were irregular over the 10-year period. In contrast, there were more cases where countries experienced decreases in both productivity and working poverty (bottom left quadrant), with most of these in Latin America & the Caribbean. As will be discussed in the regional analysis, this is the result of the employment intensive path – versus a productivity intensive path – taken by many countries in this region as a development approach. Finally, it is important to re-emphasize that the correlation is weaker than would be expected from a theoretical point of view, but as previously mentioned, there are additional factors affecting working poverty. In the case of productivity, one important factor – besides the level and pace of development, institutions and policy paths – is the distribution of income. In countries with more equal income distribution, the impact of productivity increases trickles down much quicker to low income groups, explaining the larger impact on working poverty. This is the main reason that the correlation between productivity and working poverty is stronger in Asia – where income is more equally distributed – than in Africa.

Figures A1 and A2 provide some evidence that these two measures of productive employment and decent work (i.e., labour productivity and vulnerable employment) have an impact on working poverty and thus on poverty. However, the figures also show that there are outliers and, therefore, more in-depth country-level analysis is necessary for adequate policy recommendations to be made.

2. For a detailed discussion see ILO: *World Employment Report* 2004-05 (Geneva, 2005).

Figure A1. Change in working poverty and vulnerable employment, selected economies, 1996-2006

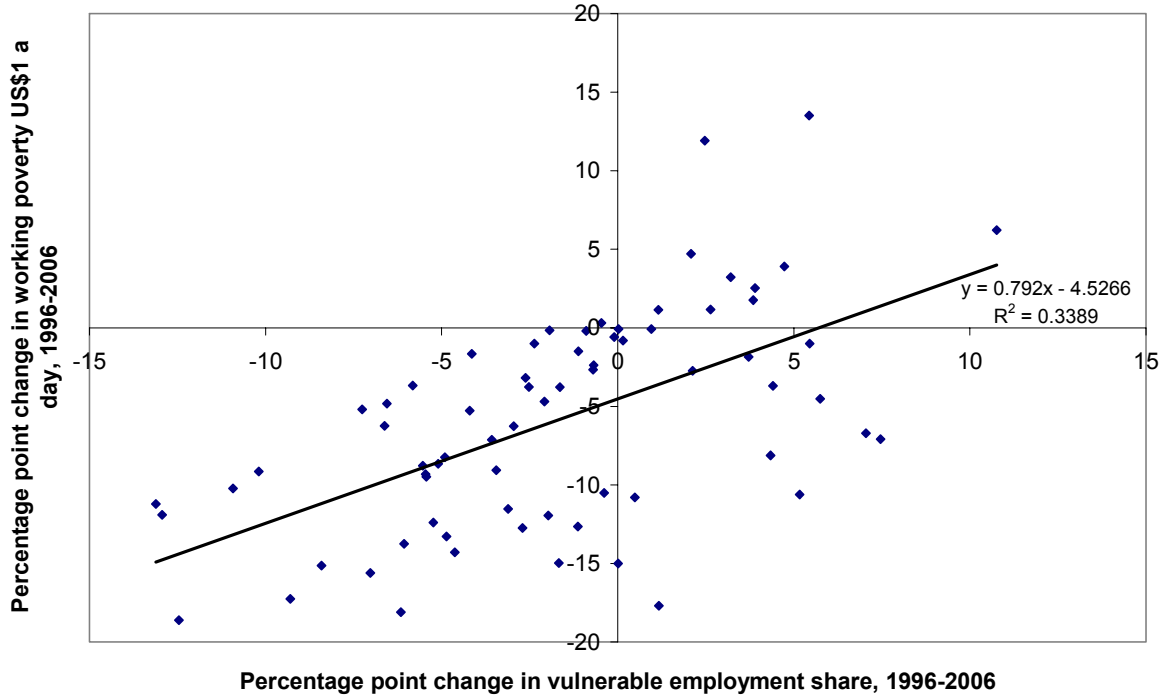
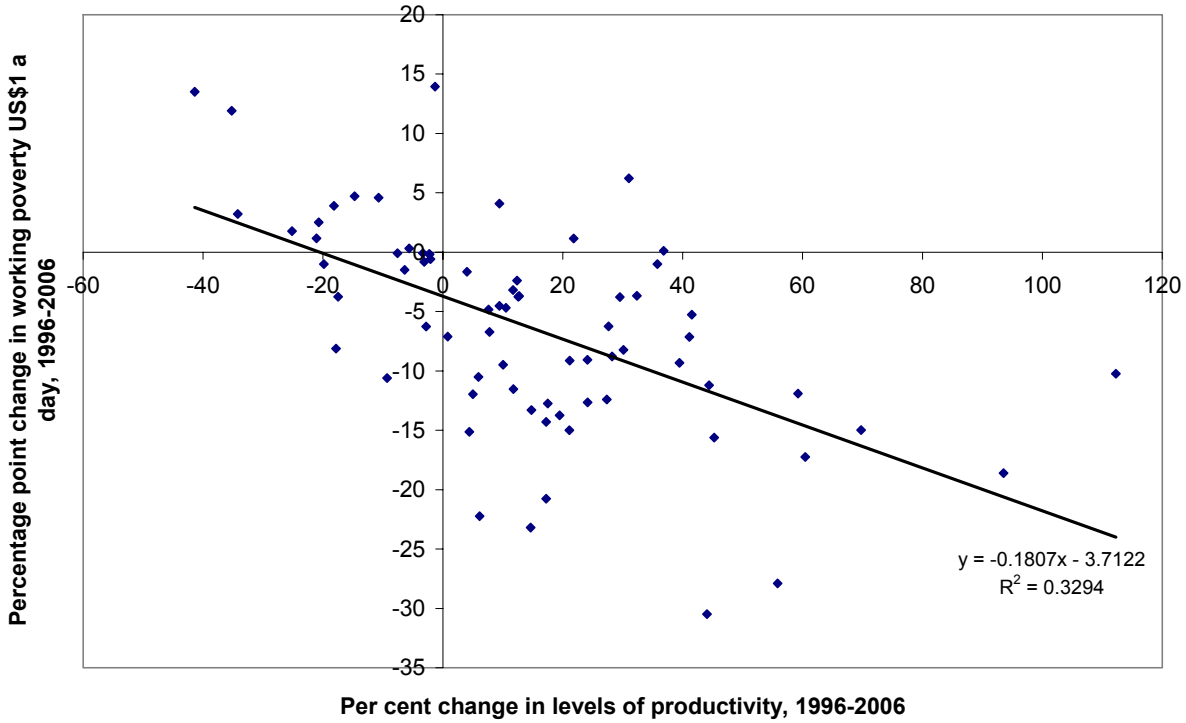


Figure A2. Change in working poverty and levels of productivity, selected economies, 1996-2006



3. Global and regional analysis of the indicators

To determine which regions are on their way to reaching the target, the trends for the four indicators have to be analysed together. Table A1 presents the figures for this analysis.[3]

Central & South-Eastern Europe (non-EU) & CIS

Employment-to-population ratios for young people, which have been very low even after the breakdown of the Soviet system, decreased further between 1996 and 2006. Although this could be interpreted as the result of an increase of youth in education, it is actually due to increased discouragement, as youth had given up hope of finding employment, especially in the earlier periods of the transition process. Employment-to-population ratios also decreased for the working-age population as a whole, which is also partly the result of increasing discouragement, as well as the result of high unemployment rates caused by the restructuring processes. In more recent years, employment-to-population ratios have been on the rebound, while labour productivity has been increasing. Between 1996 and 2006, productivity grew by over 50 per cent which is the second highest increase in the world. This increase was even higher in the last five years. It is a positive sign that the region has lately managed to find a balance between productivity and employment growth. Not only does higher productivity foster hope that more well-paid jobs are available, but it should also lead to a decrease in the share of the vulnerable employment. Unfortunately, so far this has not been the case as the share in vulnerable employment remained almost unchanged at 19.7 per cent in 2006 (compared to 19.9 per cent in 1996). Nevertheless, this is still the lowest share held by any region outside of the developed economies. Finally, there was a considerable decline in the share of working poor from 7.5 per cent in 1996 to only 1.9 per cent in 2006, with most of the decrease taking place in the most recent years. If the region can continue the trends of the last five years and start translating economic growth into decent employment growth, it could further reduce the decent work deficit.

East Asia

Along with exceptional annual GDP growth rates of close to 9 percentage points between 1996 and 2006, all four indicators in East Asia exhibit positive trends. The decrease in youth employment-to-population ratios, as well as in the overall employment-to-population ratios, was attributed to an increase of youth in education. Given that the region traditionally had the highest employment-to-population ratios in the world (with the exception of the former Soviet Union States before the collapse), a decrease towards levels such as the ones observed in many developed countries should be viewed as a positive trend. Unemployment rates are also comparably low and discouragement seems to be contained. Labour productivity has doubled within the 10-year period and the share of working poverty more than halved. Finally, the vulnerable employment share has decreased by almost 10 percentage points. The region has already reached the goal of halving the poverty share and will further proceed towards decreasing the decent work deficit. In fact, this region could likely face a labour shortage in the future. While there is scope for improvement in the quality of many jobs, nowadays, at least, most jobs allow workers to keep themselves and their families out of poverty.

3. Even though MDG Goal 1 is not targeted for the Developed Economies & EU, this region is included in the table because it is closest to reaching the target of full and productive employment and decent work for all and can, therefore, be used as a benchmark for comparison with other regions. In addition, the levels of employment-to-population ratios in the Developed Economies & EU were one criterion on the judgment of trends in employment-to-population ratios in other regions.

Table A1: Indicators for measuring progress towards *full and productive employment and decent work for all*

Region	Employment to Population Ratio				Labour Productivity (PPP, constant 2000 US$)		Vulnerable Employment Shares		Working Poor Shares (US $1/day)	
	Youth (15-24)		15+							
	1996	2006	1996	2006	1996	2006	1996	2006	1996	2006
WORLD	50.9	47.3	62.6	61.5	15,824	19,834	53.5	50.2	25.0	16.7
Developed Economies & European Union	45.0	44.5	55.9	56.5	52,876	62,952	11.2	9.4	0.1	0.0
Central & South- Eastern Europe (non-EU) & CIS	36.8	35.1	54.6	53.8	11,787	18,121	19.9	19.7	7.5	1.9
East Asia	69.0	62.3	75.0	71.9	6,347	12,591	64.8	56.2	19.5	9.5
South-East Asia & the Pacific	52.9	47.0	67.5	66.3	8,068	9,419	64.9	59.2	22.1	13.6
South Asia	44.9	42.5	58.4	56.7	5,418	7,998	81.4	78.2	56.6	33.5
Latin America & the Caribbean	47.3	44.6	58.4	59.9	17,652	18,908	31.2	32.7	12.1	8.0
North Africa	28.0	27.0	42.9	44.8	12,967	14,751	37.7	32.1	2.8	1.6
Sub-Saharan Africa	55.7	53.6	68.6	67.0	4,490	5,062	76.3	74.1	58.5	53.5
Middle East	29.5	31.8	46.0	49.6	22,130	21,910	37.7	33.3	2.3	4.9

South-East Asia & the Pacific

Development in South-East Asia & the Pacific has been less impressive than in East Asia. Nevertheless, the region has profited from the economic boom in China and India and the good economic performance of most developed economies in recent years. Employment-to-population ratios for youth, and the overall population, decreased considerably between 1996 and 2006. This is partly the result of more education. However, as a result of the Asian Crisis, the region also saw more discouragement and less available jobs. Since then unemployment rates have been higher than before, and despite still being comparably low and decreasing again in recent years, employment opportunities have not been created to the extent that the employment-to-population ratio has stopped decreasing. Labour productivity was stagnant and much slower than in other regions, with an average annual increase of only 1.6 per cent between 1996 and 2006. At least the reduction in the vulnerable employment share was considerable – down 5.7 percentage points – and the working poor share almost halved – down from 22.1 per cent in 1996 to 13.6 per cent in 2006.

Unlike other regions, South-East Asia's likelihood to reach the goal is not so much driven by increases in productivity, but more so by increases in decent jobs. In order not to fall behind other regions, in terms of productivity, but at the same time, use the potential of all those who. after the Asian crisis, have not participated in labour markets again, it is important to find the right balance between productivity and employment increases in years to come.

South Asia

Employment-to-population ratios in South Asia have traditionally been very low because of the low labour force participation rates of women. That they have decreased even further between 1996 and 2006 indicates that there has been little progress in this regard. Women are still a significant untapped potential in the region. Despite this negative trend, the region has seen other positive labour market developments. For instance, labour productivity increased, especially in more recent years and, in 2006, it was almost 50 per cent higher than in 1996. Working poverty decreased tremendously from 56.6 per cent in 1996 to 33.5 per cent in 2006, although this was not the result of reductions in vulnerable employment, as its share only slightly decreased from 81.4 per cent in 1996 to 78.2 per cent.

For the time being South Asia has an enormous deficit in decent work, but if the region can manage to develop, as it has in recent years, it can reach the goal of halving

poverty. It could also further increase productivity levels which, in turn, will possibly foster better jobs and hopefully further decrease its share of workers in vulnerable employment.

Latin America & the Caribbean

As one of the relatively more developed regions, all four indicators under investigation have quite different levels compared to the poorer regions, although a couple of them are catching up. In 1996 the productivity level was the third highest and above the world average, while the gap with the poorer regions was considerable. Ten years on, Latin America & the Caribbean remains in third position, although now below the world average, but Central & South-Eastern Europe (non-EU) & CIS has a comparable level of productivity, and East Asia and North Africa are also closing in. This rather slow growth in productivity was reflected in an increase of the vulnerability share, up from 31.2 per cent in 1996 to 32.7 per cent in 2006. Also the US$1 a day working poverty share decreased slightly from its already relatively low 12.1 per cent in 1996 to an even lower 8.0 per cent in 2006. The overall employment-to-population ratio increased over time as more women began to participate in labour markets and found work. Youth employment-to-population ratios declined but mainly because of increases in education.

The region is expected to reach the goal of halving the poverty by 2015, despite sluggish productivity growth, as a sufficient number of jobs are being created to give people the chance to work themselves and their families out of poverty.

North Africa

North Africa has the lowest employment-to-population ratio in the world, which as in the Middle East, is caused by the low economic activity rates of women. Less than one-third of the youth has a job, which is even less than 10 years ago, and overall not even one out of five people in the working-age population actually works. For those who are employed, labour productivity increased slightly from 10 years ago and, although not as impressive as in Asia, it was sufficient to further reduce the share of vulnerable employment down to 32.1 per cent in 2006 compared to 37.7 per cent in 1996. It is also promising that working poverty is now almost obsolete.

Given the low level North Africa began with, it is evident that reaching the goal of halving extreme poverty is not the most appropriate target. The region should rather focus on integrating more of the population into the labour force, particularly women, as well as increasing productivity, since its comparative advantage is not cheap labour.

Sub-Saharan Africa

Sub-Saharan Africa continues to have high employment-to-population ratios despite a slight decrease between 1996 and 2006. This is partly caused by the high incidence of poverty, which forces poor people to work, regardless of the quality of the job. Despite a decrease of 5 percentage points in the share of working poor from 1996 to 2006, more than half of the people employed still do not earn enough to lift themselves and their families out of poverty, by far the worst of all the regions. In addition, more than seven out of ten workers are considered to be in vulnerable employment, although this is slightly less than 10 years ago.

Despite many international and national efforts, sub-Saharan Africa still has a long way to go to reach the MDG 1. Hope is rising as productivity growth has been positive in recent years and employment has been created, although neither of these positive developments has yet had a significant impact on reducing poverty in the region.

Middle East

The Middle East experienced some worrisome trends between 1996 and 2006 as it is the only region where labour productivity decreased and the share of working poor doubled, although fortunately that share is

relatively low at 4.9 per cent in 2006. Nevertheless, employment-to-population ratios increased because of an increase in female economic activity, although these rates are still the second lowest in the world. Not even half of the working-age population actually works and given the high population growth in the region, the number of dependents per person employed is very high. Besides the increase in employment-to-population ratios, vulnerable employment also showed a positive trend as the share dropped slightly from 37.7 per cent in 1996 to 33.3 per cent in 2006.

Over the 10-year period, the region followed a highly employment intensive growth path (see KILM 18 for regional estimates on the employment elasticities). The type of employment created helped people to change their status, away from vulnerable work arrangements into wage and salary work. However, this is not likely to be sustainable in the long run as is indicated by the increasing share of working poor. The large increase in employment combined with slow productivity growth is often an indication that the jobs created are not decent. The region needs to find a balance between employment creation and increased productivity so that decent jobs are created – not just jobs – thus allowing for a decrease in the working poor and poverty, overall**.**

Summary of regional trends: Huge untapped potential in the world

Table A2 summarizes the results from the above analysis. Negative developments are indicated by a minus sign (-) while positive developments are indicated by a plus sign (+). When positive developments are particularly exceptional, these are indicated by two plus signs (++). Specifically, the following developments are considered worthy of two plus signs: labour productivity growth of at least 50 per cent, a decrease in the vulnerable employment share of at least 5 percentage points and a reduction in the share of working poverty of at least 5 percentage points. All changes refer to the period from 1996 to 2006.

Table A2: Results of the analysis

Region	Employment-to-Population Ratio	Labour Productivity	Vulnerable Employment Share	Working Poor Share ($1/day)	Overall judgment
Central & South-Eastern Europe (non-EU) & CIS	+ (more recently)	++	no change	++	Likely to reach goal
East Asia	+	++	++	++	Will reach goal
South-East Asia & the Pacific	neutral	+	++	++	Likely to reach goal
South Asia	-	++	+	++	Likely to reach goal
Latin America & the Caribbean	+	+	-	+	Likely to reach goal
North Africa	-	+	++	+	Likely to reach goal
Sub-Saharan Africa	-	+	+	+	Unlikely to reach goal
Middle East	-	-	+	-	Unlikely to reach goal

As demonstrated in the regional analysis section, it is impossible to determine if a change in the employment-to-population ratio is considered positive or negative simply based on its direction. Thus, the "rules" developed above were taken into account in the judgment of the employment-to-population ratio.

It is important to note that reaching full decent and productive work for all people in the world would mean a world without poverty, which, of course, is much more than the MDG goal 1 suggests. This is why the last column only indicates whether regions are on their way to reaching the goal of halving the share of US$1 a day poverty. As for the target of *full and productive employment and decent work for all*, even successful regions with regard to goal 1 could be far away from reaching the target.

To determine the progress made towards *full and productive employment and decent*

work for all, the four indicators should be examined as a set. This analysis showed that the different regions not only exhibit differences in their likelihood of reaching the MDG 1, but also face different challenges. It also became evident that all regions still have a huge untapped labour potential. It is not unrealistic to assume that each person working, but earning less than US$1 per day per family member is either underemployed (working less than desired) or has a very low productivity job (working long hours, but not efficiently because of lack of education or equipment) and is, therefore, an underutilized worker. Given this definition, 16.7 per cent of the working world is underutilized. If the US$2 a day level is used instead, and the number of unemployed people in the world, who want to work, but are unsuccessful in finding a job, are added, we find that potentially 1.5 billion people (or 30 per cent of the world's working-age population) is not used adequately. This estimate does not even include all those who are discouraged and considered inactive because they have lost hope of finding work.

4. Summary and Conclusion: The way forward to the year 2015

The regional analysis illustrated the strong relationship between working poverty, vulnerable employment and labour productivity. As for employment-to-population ratios, this indicator was shown to be important not only to measure "full" employment, but also to identify important overall trends within an economy. Is education increasing? Is discouragement the reason for low rates? What about female labour force participation? The results found at the regional level were also reflected at the country level. This is the first step towards using the results for more in-depth country level analysis and policy advice in the future.

The four indicators also show a strong link to the overall MDG goal 1 to halve the share of poverty in the world by 2015. The regions and countries that have demonstrated significant decreases in poverty rates are those that managed to register growth in productivity, reduce vulnerable employment share, see "healthy" developments in their employment-to-population ratios and, hence, reduce working poverty share.

These results underline that the set of indicators chosen to measure progress regarding *full and productive employment and decent work for all* was well chosen, even though it does not reflect all components of decent work.

In a preliminary first attempt, it was shown that the results found at the regional level were also reflected at the country level; the first step towards using the findings for deeper country level analysis and policy advice in the future. However, if this is to be done, there is a strong need to improve country level data availability. This is one of the big challenges for international agencies, international donors, national governments, line ministries, statistical agencies and social partners.

B. Assessing vulnerable employment: The role of status and sector indicators[1]

1. Introduction

Decent work, defined as being productive work for women and men in conditions of freedom, equity, security and human dignity, brings together multiple dimensions and goals in an integrated manner.[2] The multiple dimensions of decent work are reflected in the four pillars of the ILO's Decent Work Agenda:

- Employment creation and enterprise development
- Social protection
- Standards and rights at work
- Governance and social dialogue

Promotion of the Decent Work Agenda requires information on the extent to which decent work objectives are currently being achieved, whether progress is made on the global, regional, national and subnational levels, and what the effects of economic and labour market policies are in this context. To this end, the dimensions of decent work can be captured in sets of indicators and analysed over time. In other words, indicators can be used to shed light on progress towards achieving decent work objectives and to help understand critical elements associated with deficits.

For certain labour market segments such an assessment of decent work objectives is relatively straightforward. For example, in the case of the unemployed, the unemployment rate provides insight into the proportion of the labour force without employment (let alone decent employment). However, one of the drawbacks to an exclusive focus on the unemployment rate is that, used in isolation, it does not provide much insight beyond the fact that one segment of the population is without work and looking for work; this is insufficient to paint a clear picture regarding decent work. Furthermore, while the unemployment rate is an informative indicator of the overall state of the labour market in developed economies, this is often not the case in developing economies. Unemployment usually is only the tip of the iceberg of labour market challenges confronting developing economies, which most notably also include pervasive underutilization of labour. Even if individuals are employed, such employment may well be characterized by low productivity, low earnings, and the absence of social protection or meaningful social dialogue.

Hence, there is a need to assess decent work objectives using a more comprehensive set of indicators, both in developed and in developing economies.[3] There are several difficulties associated with such an approach. The most obvious one is the availability of comprehensive statistics with which to construct the indicators. Labour force surveys constitute a key source of information regarding labour markets, but regrettably many countries lack the resources and/or technical capacity to conduct surveys on a sufficiently regular basis. Moreover, a comprehensive set of indicators is more difficult to grasp for many users who often prefer one single

1. This section was prepared by Theodoor Sparreboom from the ILO Employment Trends Team.

2. See the *Toolkit for Mainstreaming Employment and Decent Work*, http://www.ilo.org/public/english/bureau/dgo/selec doc/2007/toolkit.pdf.

3. See R. Anker, I. Chernyshev, P. Egger, et al.: "Measuring decent work with statistical indicators", in *International Labour Review* (Geneva, ILO, 2003) Vol. 142, No. 2, pp. 147-177, for discussion of such a set.

indicator that appears to summarize labour market conditions. The strong desire to use the unemployment rate at national and international levels is, in part, explained by the need of policy-makers and politicians to support their message using only one indicator, which they believe the general public understands, as opposed to a range of indicators, some of which may be more difficult to grasp. More fundamentally, there are limitations in the use of the three-way categorization of the labour force framework, which underpins labour force surveys, and these limitations may hamper an assessment of decent employment objectives, in particular in developing economies.

The labour force framework applies best in situations where the dominant type of employment is "regular full-time employment".[4] Structural labour market conditions in the developing world are, however, such that only a minority of the labour force is in this situation. These conditions not only necessitate conducting labour force surveys on a sufficiently regular basis, but also imply that survey results will show a high degree of heterogeneity in terms of the characteristics of those classified as employed, unemployed or outside the labour force.

Heterogeneity within the categories of the labour force framework can be made explicit through the use of appropriate data differentiations. As noted by the ILO, the development of labour force concepts with the aim of better capturing labour market situations has contributed to both this heterogeneity and the need for data differentiations:[5]

> The general trend observed in the development of labour force concepts has been toward making the employed and unemployed categories as inclusive as possible, in order to deal with the diversity of types and degrees of economic activity of individuals in different national situations. The definition of economic activity to include certain non-market activities as well as all market activities, the priority rules and the associated one-hour criterion in the definition of employment, and the possibility of relaxing the seeking work criterion in the definition of unemployment, all contribute to the expansive nature of the labour force framework. This aspect, together with the restricted number of categories in the framework, makes the employment and unemployment categories to a greater or lesser degree heterogeneous. This in turn may necessitate further differentiations in data analysis. Appropriate differentiation, where necessary, should compensate for any oversimplification inherent in the three-category labour force framework. Identification of more homogeneous groups should not only improve interpretation of the resulting statistics, but also help to better understand changes over time.

In other words, appropriate data differentiations can be used to counter potential oversimplifications resulting from "all inclusive" labour force concepts. There are, however, limitations in the extent to which data differentiations can be used within the labour force framework to identify homogeneous groups in a heterogeneous labour market.[6] For example, in many labour force surveys, the employed are differentiated on the basis of the number of hours worked, and such breakdowns can be used to estimate time-related underemployment. Particularly in developing countries, the underemployed and the unemployed are sometimes aggregated to arrive at a broader measure of labour underutilization. However, hours of work are likely to be more accurately measured in situations in which the number of hours worked is regular (or even effectively regulated), than in situations in which hours of work are irregular, driven by seasonal factors and not subject to enforced regulations; the latter situations can be found in large parts of developing economies. To make matters worse, it is precisely these parts of economies, usually not covered by establishment surveys or administrative records, which actually

4. R. Hussmanns, F. Mehran and V. Verma: *Surveys of economically active population, employment, unemployment and underemployment*: An ILO manual on Concepts and Methods (Geneva, ILO, 1990), p. 44.

5. Ibid.

6. T. Sparreboom: "An assessment of labour market information systems in southern Africa", in *Africa Development*, 2001, Vol. XXVI, Nos. 3 & 4, pp. 167-202.

eliminate possibilities of using alternative sources of labour market information when they are most needed.

In the past twenty years, additional classifications and indicators have been developed to better address heterogeneity in labour markets, in particular in developing economies. Improvements in the methodology to measure status in employment (KILM 3) and time-related underemployment (KILM 12) can be seen in this light, as well as the introduction of measures of working poverty (KILM 20). The extent to which these classifications and indicators have been able to adequately deal with labour market heterogeneity is widely discussed. This section of Chapter 1 aims to contribute to this debate by exploring possibilities to identify vulnerable groups in the labour market using employment by status (KILM 3) in conjunction with other indicators and, in particular, employment by sector (KILM 4). The employed are "vulnerable" if they risk working under inadequate conditions, in other words if they are at risk of lacking decent employment.

The main focus of this section is on how these two indicators, which are standard ingredients of the economic development discourse, are interlinked empirically, and how they can be used to assess labour market vulnerability. It will be argued that cross tabulations of status and sector indicators, using statistics which are widely available, provide a powerful tool for the assessment of labour market vulnerability. Cross tabulations can be produced for most countries based on available statistics, and if used in conjunction with other information, they can enrich labour market analysis and inform decent employment policies.

Section 2 summarizes the definitions and use of KILM 3 and KILM 4, explores the role of these two indicators in economic theory, and discusses how they relate to decent employment objectives and vulnerability in general. This section uses surveys of the literature and recent country studies. Section 3 draws on the ILO/UNDP Labour Market Information and Analysis project in Pakistan to examine linkages between sector and status indicators and vulnerability. Section 4 concludes.

2. Development and employment: What do status and sector indicators show?

Defining status and sector

In line with the International Classification by Status in Employment (ICSE, 1993), the indicator of status in employment (KILM 3) distinguishes between three broad categories of the employed. These are: (a) wage and salaried workers (also known as employees); (b) self-employed workers; and (c) contributing family workers (also known as unpaid family workers). The self-employed group (b) is divided into three subcategories – self-employed workers with employees (employers), self-employed workers without employees (own-account workers) and members of producers' cooperatives. As explained under KILM 3, the basic criteria used to define the status groups are the types of economic risk they face in their work, an element of which is the strength of institutional attachment between the person and the job, and the type of authority over establishments and other workers that the jobholder has, or will have, as an explicit or implicit result of the employment contract.

The indicator for employment by sector (KILM 4a) divides employment into three broad groupings of economic activity: agriculture, industry and services. These broad groupings are based on aggregations of groupings of economic activity in accordance with the International Standard Industrial Classification System (ISIC), Revision 3 (1990), which distinguishes 18 tabulation categories (KILM 4b), and Revision 2 (1968), which divides employment into 10 major divisions (KILM 4c).

In this section, a distinction is made between wage and salaried workers, employers, own-account workers and

contributing family workers, thus abstracting from cooperatives, and Revision 2 is used to distinguish economic sectors in which workers are employed.

Economic development – standard discourse

A distribution of employment by status, typically showing large proportions of own-account workers and contributing family workers, points to a limited formal economy and a large agricultural sector and rural economy. Own-account workers in developing economies are associated with subsistence agricultural and other activities (e.g. petty trade), often providing an irregular source of earnings. Contributing family work is a form of labour – generally unpaid, although compensation might come indirectly in the form of family income – that supports production for the market. It is particularly common among women in developing countries.

In comparison with wage and salaried workers, contributing family workers, as well as own-account workers, are less likely to benefit from formal social protection, and more likely to face obstacles in engaging in meaningful social dialogue with a view to improving working conditions or ensuring rights at work. Contributing family workers are essentially dependent on the goodwill and generosity of family members to look after their interests and, in the absence of formal, written contracts, will have limited options for recourse to formal intermediation in case of labour disputes. Own-account workers are, in principle, masters of their own working conditions, but if these workers are engaged in subsistence activities, they are likely to lack the means to contribute to formal social protection schemes. In the absence of strong associations or sector bodies defending their interests, own-account workers also have limited bargaining power *vis-à-vis* the government (e.g. regarding public facilities or regulations affecting their business) or *vis-à-vis* the organized or corporate enterprise sector (e.g. regarding competition issues).

The standard development discourse suggests that, with economic growth, structural transformation with regard to both the economic and the employment structure, will occur. In the extensive literature on structural transformation, a number of factors driving this process have been identified:[7] (1) a less-than-unitary income elasticity of demand for agricultural goods that further declines with economic growth; (2) possibility of a substantial expansion of agricultural production with a constant or declining farm labour force; and, (3) demand and supply-side changes in output consumption, or price elasticity and substitution effects, further reinforcing changes in output consumption away from agricultural goods.

In terms of the structure of employment, structural transformation entails a shift of employment away from agriculture (major division 1) to the industry (major divisions 2-5) and the services sectors (major divisions 6-9). Structural transformation is also associated with changes in employment status. Agriculture, petty trade and other components of the "traditional" or subsistence sector are dominated by own-account workers and contributing family workers because of institutional arrangements such as the farming household being both a consumption and production unit. Structural transformation necessitates alternative arrangements in dedicated production units that allow for economies of scale, and organized production in line with an increasing specialization of the workforce. Accordingly, transformation brings a gradual phasing out of own-account work of the subsistence type.

In other words, a rise in the share of employees, and falling proportions of either the share of own-account workers or contributing family workers, can be expected to accompany structural transformation from a low-income situation with a large informal or rural sector to a higher-income situation: and a

7. B.F. Johnston: "Agriculture and structural transformation in developing countries: A survey of research", in *Journal of Economic Literature*, 1970, Vol. 8, No. 2, pp. 369-404.

high proportion of wage and salaried workers in a country may well signify advanced economic development. For the reasons highlighted before, it can also be expected that this textbook transformation path results in a reduction of labour market vulnerability. The rise in incomes implicit in "economic development" contributes to increasing wages and salaries, making a decent level of earnings more likely, while wage and salaried employees are more likely to benefit in terms of other dimensions of decent and productive employment as well. Last, but not least, development is strongly linked to gains in educational attainment and literacy, therefore improving the economic context of decent work.

Recent empirical evidence and deviations from the standard

The standard discourse summarized in the previous section has proven its usefulness in economic theory and practice. This discourse can be illustrated in recent country studies by the World Bank on Latvia and Croatia.[8] They document empirical evidence in support of structural transformation in these economies, in which the role of agriculture and employment is declining, and shifts are observed in employment status, as expected. In Latvia, for example, after the initial contraction of the economy in the early 1990s, it started growing rapidly and, between 1995 and 2005, total value added in the national economy doubled in real terms. During this period, the share of agriculture in national output fell from 6 to 4 per cent, and agricultural growth lagged behind the rapid growth in the industrial and services sectors. The World Bank study identifies wholesale and retail trade, followed by real estate and related activities as the key drivers of economic growth. The share of wage and salaried workers increased from 84.2 per cent in 2002 to 86.9 per cent in 2005 (among Latvians), and the share of employers increased from 3.0 to 3.4 per cent. In contrast, during the same period the share of own-account workers fell from 7.5 to 7.0 per cent, and the share of contributing family workers from 5.3 to 2.6 per cent in 2005.

The standard discourse, apart from its value, offers a highly stylized model of structural transformation, and countries experience a variety of actual multidimensional transformation paths that are influenced by policies as well as other factors.[9] A series of these paths, spanning several decades, are investigated by Osmani (2004).[10] He focuses on how labour markets respond to economic growth and serve as a transmission mechanism for poverty reduction in Armenia, Bangladesh, Indonesia, Vietnam and Uzbekistan. The research highlights that an increase in wage and salaried employment, and a reduction in own-account work, is not the only labour market response to economic growth. Other possibilities include: a reduction in unemployment and an increase in the overall employment-to-population rate (across all status in employment groups); a reduction in underemployment and working poverty, with or without changes in the unemployment rate; and higher wages and/or higher rates of return to own-account work resulting from either higher productivity or better terms of trade. These country experiences not only illustrate how economies may diverge from the standard discourse, but also that a full understanding of (reductions in) labour underutilization requires a comprehensive set of labour market indicators.

In a study of job creation in sub-Saharan Africa, Fox and Sekkel (2006) raise the

8. *Croatia: Living standards assessment, Volume 1: Promoting social inclusion and regional equity*, Report No. 37992 (Washington, D.C., World Bank, 2006), and *Latvia: Sharing the high growth dividend. Living standards assessment*, Report No. 38437-LV (Washington, D.C., World Bank, 2007).

9. Educational attainment, for instance, is likely to have contributed to the apparent smooth structural transformation in countries such as Latvia and Croatia in recent years, and is hampering transformation in many sub-Saharan African countries.

10. S.R. Osmani: *The Employment Nexus between Growth and Poverty: An Asian Perspective*, report prepared for SIDA and UNDP (University of Ulster, United Kingdom, 2004).

question of why economic growth did not translate into wage and salaried employment in many countries in this region.[11] The reasons identified include the relatively large size of the agricultural sector and the nature of adjustment policies adopted in sub-Saharan Africa. Furthermore, structural transformation often meant a shift in production and employment from agriculture to the services sector, while industrial employment in the manufacturing sector, usually an important source of employment creation in developing countries, remained at low levels (Africa's so-called "delayed structural transformation").

As suggested in the work by Osmani, an increase in the rate of return on own-account work is one way in which labour markets respond to economic growth. This finding also underlines the fact that not all own-account work in developing countries is of the subsistence type. Own–account workers are a highly heterogeneous group, often consisting of a mix of subsistence and entrepreneurial activities. Even in industrialized countries, in which fairly low proportions of the employed are own-account workers, the nature of this work remains a topic of research. For instance, research by the Organisation for Economic Co-operation and Development (OECD, 2000) suggests a "renaissance" of self-employment (including own-account work) during the 1990s, concentrated in the fastest-growing parts of the economy.[12]

3. Sector-status linkages and vulnerability in Pakistan

In line with the main thrust of the standard development discourse on structural transformation, this section adopts a two-way categorization of vulnerable employment in terms of status in employment. The status groups of own-account workers and contributing family workers are considered vulnerable, while employers and employees are considered less vulnerable. Linkages between vulnerability, employment by sector and other indicators are explored using detailed labour market information from Pakistan (see Box B1), including the types of errors that can be made in assessing vulnerability based on employment status, and the extent to which such errors can be reduced.

Recent economic and labour market developments

Pakistan's economy has gained momentum in recent years, benefiting from official and private transfers, textile exports and foreign investment, despite security and governance concerns. After registering employment growth below 4 per cent between 1999-2000 and 2001-02, growth accelerated to 4.7 per cent in 2002-03 and to more than 6 per cent since 2003-04, considerably above the average of 4.6 per cent during the 1990s.[13] A number of labour market indicators have improved in line with this high growth environment. The labour force participation rate increased by 2.6 percentage points, the employment-to-population ratio by 2.9 points and the unemployment rate decreased by 1.1 points between 1999-2000 and 2005-06. Most of the change in the value of these indicators occurred in the most recent survey year (2005-06). Women benefited in particular from the improvement in labour market conditions, with the female unemployment rate registering single digits for the first time in 2005-06.

However, the high proportion of the employed working "excessive" hours (more than 49 hours per week), at 41.5 per cent in 2005-06, as well as the share of the employed with less than one year formal education, at 46.5 per cent, suggest that not all is well with the Pakistani labour market. Both indicators are associated with low productivity and earning levels in much of the labour market. Educational attainment and literacy is rising

11. L. Fox and M. Sekkel: *Work in progress: Job creation and the quality of growth in Africa*', (Washington, D.C., World Bank, 2006, Discussion draft).

12. "The Partial Renaissance of Self-Employment", in *OECD Employment Outlook 2000* (Paris, OECD, 2000).

13. *Economic Survey 2005-06* (Islamabad, Government of Pakistan, Ministry of Finance, 2006).

Box B1. The LMIA project in Pakistan

This section draws on the UNDP/ILO Labour Market Information and Analysis (LMIA) project in Pakistan which started in August 2006 and ends in December 2007. The project supports the establishment of a LMIA Unit in the Ministry of Labour, Manpower and Overseas Pakistanis (MLMOP). The aim of the Unit is to provide up-to-date and timely LMIA that serves as an input into the formulation and monitoring of pro-poor, decent work and other policies as set out in the government's *Medium Term Development Framework 2005-10*, the *Poverty Reduction Strategy Paper II (2007-09)*, the *2002 Labour Policy* and other policy documents.

The LMIA system, which includes the Unit as well as institutional linkages with labour market stakeholders, addresses a number of specific challenges in the area of labour market information in Pakistan. These include:

- Limited integration of labour market analysis and policy development, in part due to the lack of coordination among institutions responsible for data collection and users of information and analysis.
- Low awareness of basic international concepts, classifications and definitions among policy-makers, social partners and other stakeholders.
- Lack of timely and focused analysis and interpretation of key labour market and related indicators.
- Lack of data pertaining to topics that are high on the policy agenda such as youth employment and local economic development.

The main outputs of the LMIA system are as follows:

(1) Production of labour market reports, *Pakistan Employment Trends*; these reports review labour markets in Pakistan in recent years in line with international best practice in statistical analysis and presentation.
(2) Capacity building of the LMIA Unit and other labour market stakeholders through on-the-job training and training workshops on topics such as labour market analysis and report writing; general and specific software for statistical analysis; and data management.
(3) Establishment of a LMIA database containing an internationally adopted set of key labour market indicators.
(4) Improvements in data collection in collaboration with the Federal Bureau of Statistics (FBS), in particular through refinement and extended coverage of the labour force survey.

Building on these outputs, a second phase of the LMIA Project is being prepared. The second phase, scheduled to start in 2008, will contribute to the monitoring of MDG-responsive pro-poor policies in collaboration with the UNDP, and inform the reforms of the technical and vocational education and training (TVET) system. Partly with a view to the demographic transition that is unfolding, and partly with a view to the low educational attainment of the labour force, the employment policy framework in Pakistan increasingly emphasizes human resource development and in particular TVET.

over time, but working hours are declining only slightly. The decline is explained by the large inflow of women into the labour market, who work shorter hours on average than men. The proportion of workers working excessive hours among males increased in recent years. The gender gap in hours of work is a manifestation of the overall gender gap in the labour market in Pakistan, which is reflected in many labour market indicators despite some recent narrowing in participation, employment and unemployment indicators between males and females.[13]

13. See *Pakistan Employment Trends* (Islamabad, Ministry of Labour, Manpower and Overseas Pakistanis, 2007, forthcoming), for a

Recent developments in employment by sector and status in employment

Agriculture is the largest sector in Pakistan, but its share in terms of both value added and employment is declining (Table B1). From 1999-2000 to 2005-06, the share in employment declined by more than 6 percentage points. Not surprisingly, given the high growth rates of manufacturing, this sector also registered the largest relative increase in employment during this period (2.5 points). Other important sectors in terms of employment creation have been trade, a large sector that expanded by 1.4 percentage points, transport (0.8), construction and community, social and personal services (both 0.5 percentage points). In brief, sectoral employment trends in Pakistan since the beginning of the decade are in line with the stylized facts highlighted in the previous section – structural change results in a shift in employment from agriculture to the industrial and services sectors.

Structural change in Pakistan was also accompanied by an increase of the proportion of workers in wage and salaried employment (employees) by 2.5 percentage points during 1999-2000 to 2005-06 (Table B2). Less predictable, however, is the increase in the share of contributing family workers by 4.4 percentage points. Apart from some change in the (very small) status of group of employers, the increasing shares of employees and contributing family workers were balanced by the large decrease in the share of own-account workers (6.9 percentage points).

An important part of the counterintuitive shift towards the employment status group of contributing family workers is "explained" by the inflow of women into the labour market. If only male employment, which makes up the overwhelming majority of total employment, is considered, structural change goes together with a considerable increase in wage employment at the expense of own-account employment, with a relatively minor increase in contributing family work. However, more than two-thirds of the female workers who entered employment during 1999-2000 to 2005-06 consisted of contributing family workers, while for males additional employment consisted of close to two-thirds of employees.

In other words, if vulnerable employment is considered as the aggregation of the status groups of own-account workers and contributing family workers, the textbook development path holds true for men and, as expected, reduces vulnerable employment in the process. In the case of women, however, recent industrialization in Pakistan resulted primarily in vulnerable employment.

Exploring linkages between vulnerability, status and sector

Table B3 presents cross tabulations of employment by sector and status. It can be seen that labour market vulnerability across all economic sectors was reduced by 2.5 percentage points between 1999-2000 and 2005-06, and in the case of males by 5.0 points. In line with the previous sections, female labour market vulnerability increased by 6.5 points.[14] The breakdown by economic sector shows that vulnerability is generally reduced in sectors leading recent employment growth. This is true for manufacturing, trade and construction, together accounting for more than a third of the employed in 2005-06. It also declined in small sectors such as mining and electricity. However, in transport, services and in particular financing, vulnerability increased in the latter sector by almost 18 percentage points, by far the largest change in the period under review.

detailed account of recent labour market developments in Pakistan.

14. For both males and females the effect of changes in the employment status group employers are negligible. Changes in vulnerability coincide with changes in the share of wage and salaried employees.

Table B1. Pakistan: employment by sector (per cent)

Employed 15+	1999-2000	2001-02	2003-04	2005-06	Change 1999-2000 to 2005-06 (percentage point)
Agriculture, forestry, hunting and fishing					
Both sexes	47.8	41.1	41.8	41.6	-6.2
Males	43.4	37.2	37.0	35.6	-7.8
Females	73.7	64.5	66.6	67.7	-6.0
Mining and quarrying					
Both sexes	0.1	0.1	0.1	0.1	0.0
Males	0.1	0.1	0.1	0.1	0.0
Females	0.0	0.0	0.0	0.0	0.0
Manufacturing					
Both sexes	11.5	13.8	13.8	14.0	2.5
Males	12.0	13.7	13.6	13.9	1.9
Females	8.0	14.4	14.6	14.6	6.6
Electricity, gas and water					
Both sexes	0.7	0.8	0.7	0.7	0.0
Males	0.8	1.0	0.8	0.9	0.1
Females	0.1	0.1	0.1	0.0	-0.1
Construction					
Both sexes	5.9	6.3	6.0	6.4	0.5
Males	6.9	7.2	7.2	7.8	0.9
Females	0.3	0.3	0.3	0.4	0.1
Wholesale and retail trade, restaurants and hotels					
Both sexes	13.6	15.1	15.1	15.0	1.4
Males	15.5	17.3	17.7	17.9	2.4
Females	2.5	2.0	1.8	2.2	-0.3
Transport, storage and communication					
Both sexes	5.2	6.1	5.9	6.0	0.8
Males	6.0	7.0	7.0	7.3	1.3
Females	0.2	0.4	0.1	0.4	0.2
Financing, insurance, real estate and business services					
Both sexes	0.9	0.9	1.1	1.2	0.3
Males	1.0	1.1	1.3	1.4	0.4
Females	0.2	0.1	0.1	0.2	0.0
Community, social and personal services					
Both sexes	14.4	15.8	15.4	14.9	0.5
Males	14.3	15.5	15.1	15.0	0.7
Females	14.9	18.3	16.4	14.5	-0.4
All activities					
Both sexes	100.0	100.0	100.0	100.0	
Males	100.0	100.0	100.0	100.0	
Females	100.0	100.0	100.0	100.0	

Source: Calculations based on *Pakistan Labour Force Survey* (Islamabad, Government of Pakistan, Federal Bureau of Statistics, various years).

The increase in vulnerability in the financial sector is likely to reflect an increase in own-account workers engaged in entrepreneurial activities, characterized by growth potential, as opposed to own-account workers engaged in subsistence activities.

Predominance of entrepreneurial activities is linked to the nature of the financial sector – well-regulated – with certain entry requirements including the possession of high-level, marketable skills and availability of some capital. However, even if the financial sector stands out in this regard, a mix of entrepreneurial and subsistence activities can be found in other sectors as well. A key issue in identifying vulnerable groups in the labour market is exactly how to distinguish between these two groups of activities.

One way is to take additional indicators into account, for example illiteracy. A high illiteracy rate, or a very low educational attainment level (less than one year of formal education), by itself does not preclude the possibility of securing decent employment. As previously noted, however, low educational attainment is certainly associated with low productivity and income levels. Because illiteracy hampers trainability, it also unduly limits labour market options for illiterate individuals. Illiteracy can, therefore, be considered an important indicator of the economic and social context of decent work, and can be used to help in identifying labour market segments that are at risk of lacking decent employment.

Table B2. Pakistan: status in employment (per cent)

Employed 15+	1999-2000	2001-02	2003-04	2005-06	Change 1999-2000 to 2005-06 (percentage point)
Employees					
Both sexes	35.9	40.4	38.5	38.4	2.5
Males	36.4	40.9	39.8	41.2	4.8
Females	33.1	37.1	31.5	26.6	-6.5
Employers					
Both sexes	0.8	0.9	0.9	0.9	0.1
Males	0.9	0.9	1.1	1.1	0.2
Females	0.1	0.3	0.1	0.1	0.0
Own-account workers					
Both sexes	43.7	39.9	38.6	36.8	-6.9
Males	48.2	43.8	42.9	41.5	-6.7
Females	16.8	16.5	17.0	16.2	-0.6
Contributing family workers					
Both sexes	19.5	18.8	22.0	23.9	4.4
Males	14.5	14.3	16.2	16.2	1.7
Females	49.9	46.1	51.4	57.0	7.1
All status groups					
Both sexes	100.0	100.0	100.0	100.0	
Males	100.0	100.0	100.0	100.0	
Females	100.0	100.0	100.0	100.0	

Source: Calculations based on *Pakistan Labour Force Survey* (Islamabad, Government of Pakistan, Federal Bureau of Statistics, various years).

Table B3. Pakistan: employment by sector and status (per cent)

Employed 15+	1999-2000		2005-06		Change 1999-2000 to 2005-06 Own-account workers & Contributing family workers (percentage point)
	Employees & Employers	Own-account workers & Contributing family workers	Employees & Employers	Own-account workers & Contributing family workers	
Agriculture, forestry, hunting and fishing					
Both sexes	12.8	87.2	9.8	90.2	3.0
Males	10.4	89.6	9.8	90.2	0.6
Females	21.4	78.6	9.7	90.3	11.7
Mining and quarrying					
Both sexes	94.3	5.7	94.6	5.4	-0.3
Males	93.9	6.1	94.5	5.5	-0.6
Females	100.0	0.0	100.0	0.0	0.0
Manufacturing					
Both sexes	64.0	36.0	68.8	31.2	-4.8
Males	65.7	34.3	74.1	25.9	-8.4
Females	49.4	50.6	47.0	53.0	2.4
Electricity, gas and water					
Both sexes	98.0	2.0	99.4	0.6	-1.4
Males	98.0	2.0	99.4	0.6	-1.4
Females	100.0	0.0	100.0	0.0	0.0
Construction					
Both sexes	90.1	9.9	92.6	7.4	-2.5
Males	90.1	9.9	92.6	7.4	-2.5
Females	91.3	8.7	89.8	10.2	1.5
Wholesale and retail trade, restaurants and hotels					
Both sexes	17.5	82.5	22.5	77.5	-5.0
Males	17.8	82.2	22.6	77.4	-4.8
Females	5.9	94.1	16.4	83.6	-10.5
Transport, storage and communication					
Both sexes	64.1	35.9	61.6	38.4	2.5
Males	64.0	36.0	61.5	38.5	2.5
Females	82.9	17.1	74.4	25.6	8.5
Financing, insurance, real estate and business services					
Both sexes	78.4	21.5	60.7	39.3	17.8
Males	78.5	21.5	60.0	40.0	18.5
Females	77.9	22.1	80.6	19.4	-2.7
Community, social and personal services					
Both sexes	74.9	25.1	74.3	25.7	0.6
Males	73.1	26.9	72.3	27.7	0.8
Females	84.7	15.3	83.4	16.6	1.3
All activities					
Both sexes	36.8	63.2	39.3	60.7	-2.5
Males	37.3	62.7	42.3	57.7	-5.0
Females	33.2	66.8	26.7	73.3	6.5

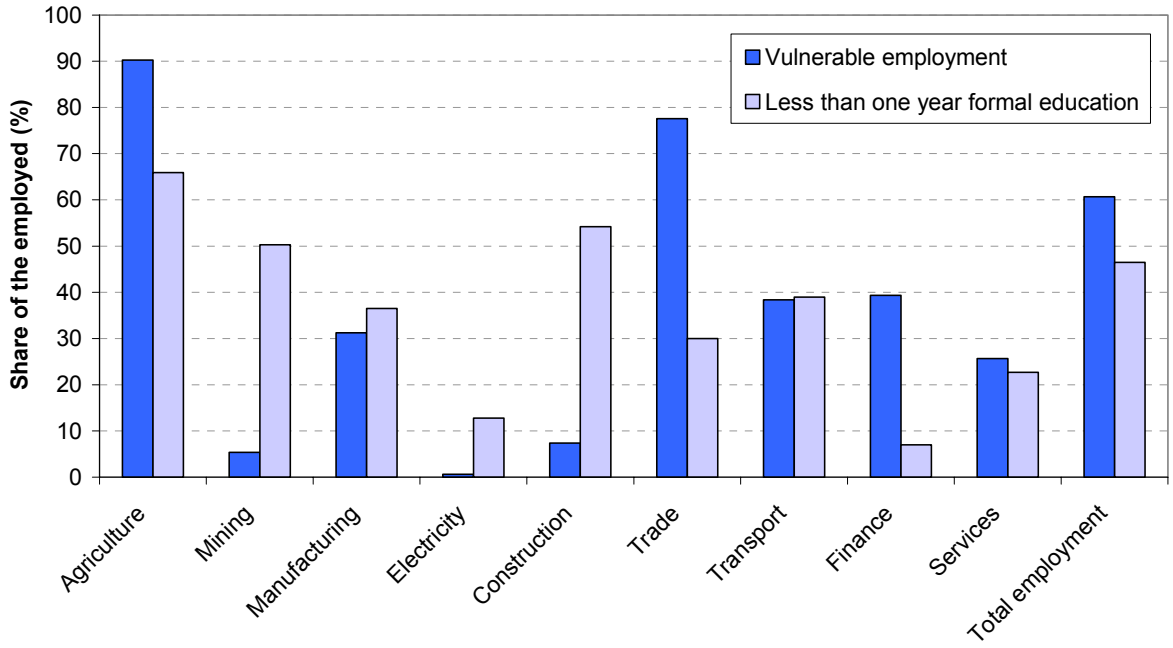
Source: Calculations based on *Pakistan Labour Force Survey* (Islamabad, Government of Pakistan, Federal Bureau of Statistics, various years).

Illiteracy is associated with vulnerability, measured on the basis of status in employment, at the national level in Pakistan, as the proportion of illiterates is significantly higher among own-account workers and contributing family workers (52.9 per cent) than among employers and employees (36.9 per cent). Illiteracy is also associated with vulnerability at the sectoral level, but there are nevertheless several sectors for which these two indicators show large differences (Figure B1). In mining, electricity and construction, there are relatively large proportions of illiterates, while in trade and finance these proportions are relatively small. The latter sector clearly stands out with the lowest proportion of illiterates among all economic sectors.

The very low illiteracy rate in the financial sector, and the nature of this sector previously highlighted, suggests that employment was wrongly identified as "vulnerable" using employment by status as a criterion. This is one of two types of errors that can be made if it is attempted to statistically capture labour market vulnerability (type A). The second type of error, type B, occurs if there is a failure to identify a truly vulnerable segment of the labour market while using a particular criterion (see Figure B2).

It could be tempting to use illiteracy as a criterion in assessing vulnerability in the first place. If this criterion is used in isolation from other indicators, the same two types of errors occur (not all illiterates are "vulnerable", in the sense of being at risk of lacking decent employment, and not all those at risk of lacking decent employment are illiterate), but the magnitude of each error will be different in comparison with the criterion of status in employment. If vulnerable employment is identified on the basis of the aggregation of labour market segments identified by status and illiteracy (i.e. vulnerable employment is considered as consisting of own-account workers and contributing family workers and, in addition, all illiterate workers regardless of their status in employment), error type B is reduced, but at the cost of increasing type A.

Figure B1. Pakistan: Selected indicators by economic sector, 2005-06



Source: Calculations based on *Pakistan Labour Force Survey* (Islamabad, Government of Pakistan, Federal Bureau of Statistics, various years).

If both criteria are used simultaneously (i.e. vulnerable employment is considered as consisting of illiterate own-account workers and illiterate contributing family workers), it can be established more firmly that a certain segment of the labour market is vulnerable (as reflected by the rectangular area in the middle of Figure B3). In this way error type A is reduced or even eliminated, depending on the exact shape of the area reflecting vulnerable employment in the figure, but at the cost of increasing the error of type B (reflected by all vulnerable employment outside the rectangular area).

Returning to the two-way categorization of vulnerable employment based on status in employment, another group of type B errors results from the definition of wage and salaried employment (employees). According to ICSE (1993), employees share the characteristic that their employment contracts give them basic remuneration that is not directly dependent upon the revenue of the unit for which they work. This characteristic allows for a diverse set of working agreements and, in the case of Pakistan, the status group employees can be differentiated further into four subgroups of workers, including not only "regular paid employee with fixed wage", but also "casual paid employee", "paid worker by piece rate or work performed", and "paid non-family apprentice".

Figure B2. Measuring labour market vulnerability using one indicator

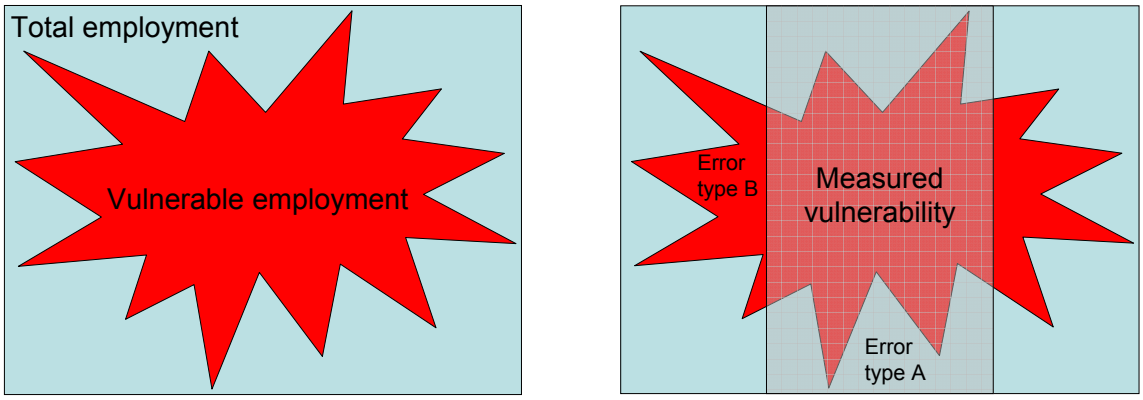
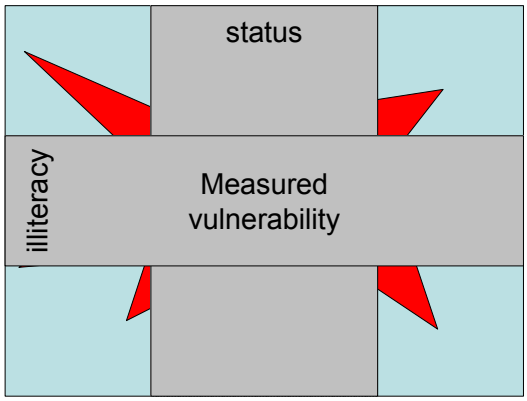


Figure B3. Measuring labour market vulnerability using two indicators

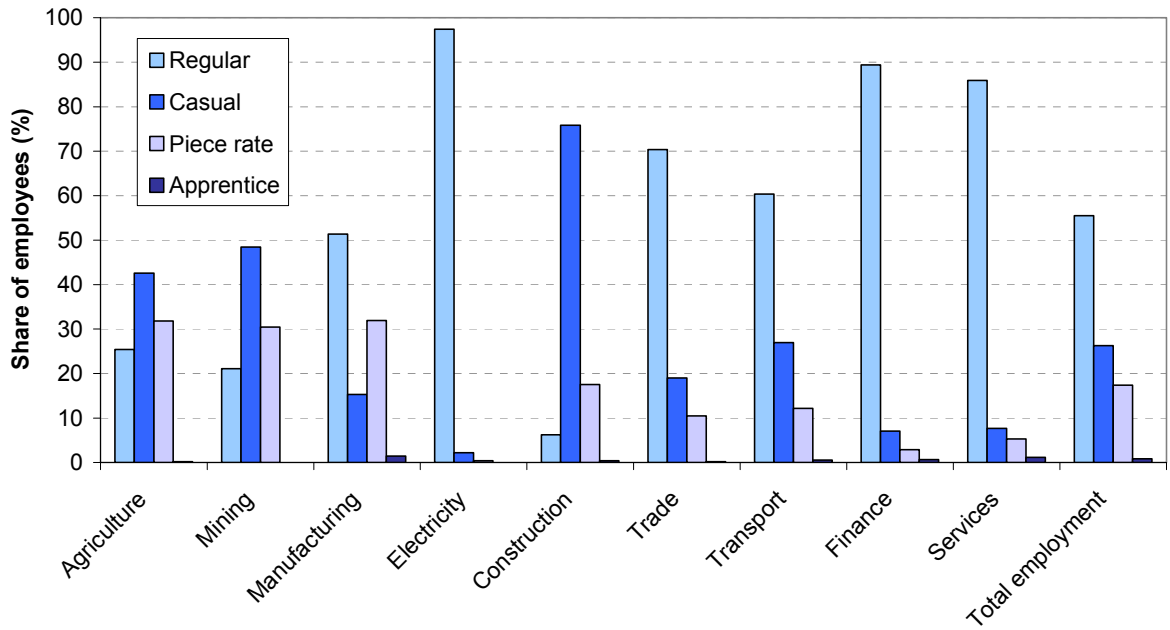


It can be argued that the last three subgroups not only face a greater risk of lacking decent employment than regular paid employees, but also that this risk may in fact be similar to that faced by an own-account worker engaged in subsistence activities. If this argument is accepted, the status group of employees should be considered too heterogeneous to identify non-vulnerable employment, or non-vulnerable employment should be restricted to include only regular paid employees. Although this differentiation is likely to better distinguish between decent and non-decent employment, it still leaves out many other dimensions of decent work. For example, those classified as regular paid employees do not necessarily have a written contract, and may fall short of decent work objectives in terms of protection against dismissal, social protection or rights at work.

Figure B4 shows the distribution of the four subgroups of employees by economic sector. It can be seen that in most sectors the majority of employees consist of regular paid employees (nationally this share is 56 per cent), which gives an indication of the magnitude of error type B. In the case of the electricity sector, this share is close to 100 per cent which, in combination with the low proportion of own-account workers and contributing family workers, makes it an unlikely sector to identify labour market segments at risk. In mining and construction, however, large proportions of employees consist of casual employees, and these were also the sectors in which illiteracy rates were high in comparison with the share of workers in vulnerable employment.

A similar approach to identifying vulnerable groups in the labour market based on cross tabulations of employment by sector and by status, can be adopted for other countries. Box B2 illustrates the case of Indonesia, where moderate economic growth in recent years resulted in an increase in vulnerable employment. Examination of data at the sector level can help in analysing the reasons for this increase.

Figure B4. Pakistan: Subgroups of employees by economic sector, 2005-06



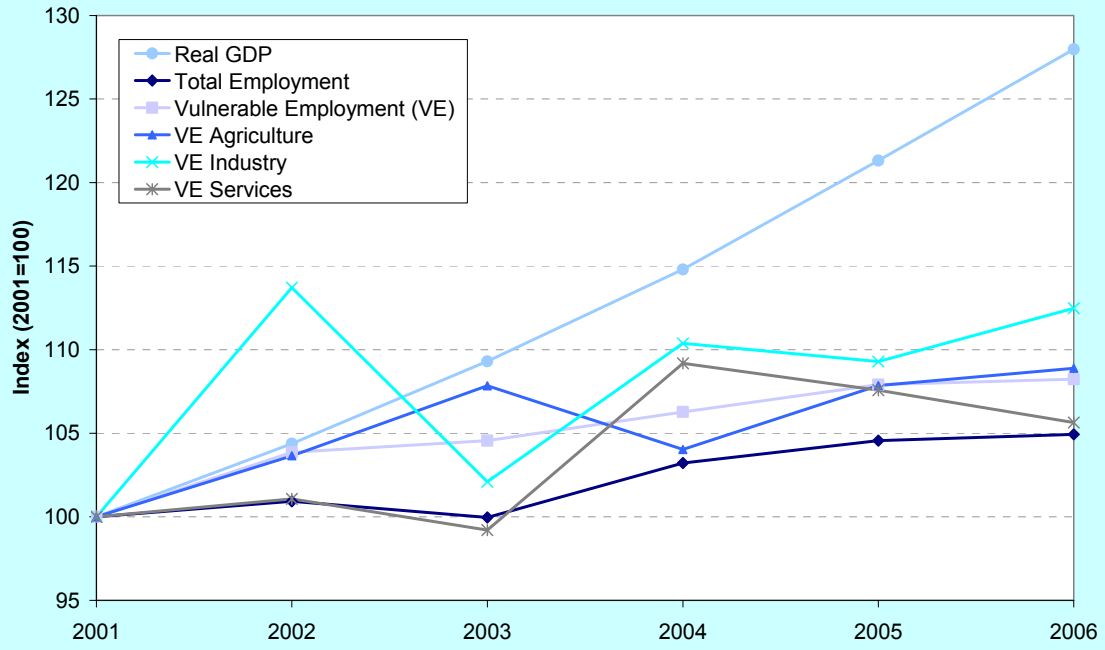
Source: Calculations based on *Pakistan Labour Force Survey* (Islamabad, Government of Pakistan, Federal Bureau of Statistics, various years).

Box B2. Vulnerable employment in Indonesia

A review of economic and labour market indicators in Indonesia suggests a complex picture, which cannot be seen in isolation from the recent history of the country. Only just recovering from the financial crisis in 1997-1998, Indonesia made a transition to democratic governance and faced an unusual series of natural disasters and other unfortunate events in the current decade.

Despite positive, albeit moderate, economic growth between 2001 and 2006, unemployment rose from 8.1 per cent to 10.4 per cent and the employment-to-population rate decreased from 62.3 to 60.7 per cent in this period, with little change in the labour force participation rate. The chart below shows that total employment is rising slowly in comparison with economic growth, and highlights the large swings in vulnerable employment in agriculture, industry and services.

Economic growth and vulnerable employment



Source: Calculations based on *SAKERNAS* (Jakarta, Government of Indonesia, Statistics Indonesia, various years, and *International Financial Statistics* (Washington, D.C., IMF).

4. Concluding remarks

In debates on the merits or demerits of particular indicators, it is easily overlooked that quantitative and qualitative information is complementary. The comparison with assessing the performance of a car can be instructive in this context. Without knowledge of the make of the car, year of build and conditions of the road, the readings of the instrument panel convey little information. Conversely, without such readings, it will be difficult to make a statement on the performance of a car that is well known. Similarly, it is very difficult to interpret labour market statistics if the country's economic context is not known, or to assess the performance of the labour market without proper labour statistics.

There seem to be at least three options to take forward the debate on the identification of vulnerable groups in the labour market. First, the search can be continued for the single best indicator to capture vulnerability. Given the

heterogeneity of labour markets, and the multidimensional nature of decent employment, the merit of this search lies in an increased understanding of labour markets, and not in the likelihood that the best indicator will necessarily be found. Assessing labour markets using one indicator inevitably captures only one aspect, and limiting the analysis in this way will result in certain errors. Data differentiations, such as the breakdown of the status group employees, can be used to reduce the margin of error, but do not suffice to eliminate errors altogether. Using more than one indicator to identify a single vulnerable group is not a solution for this problem either, as each indicator will have a certain margin of error, and it is difficult to eliminate all types of errors simultaneously.

The second option is to start with the recognition that decent employment is a multidimensional concept, and decent employment objectives, therefore, need to be assessed using a comprehensive set of indicators. This is clearly the preferred option, but does not allow for the identification of a single vulnerable segment of the labour market, or the production of a single statistic or indicator which reflects all decent work deficits. Furthermore, even if the production of a comprehensive set of indicators is feasible, given the state of statistical and other information systems, not all the indicators that form part of a comprehensive set necessarily allow for a clear-cut distinction between decent and non-decent. Assessments made on the basis of a comprehensive set of indicators may, therefore, become a complex task.

A third option is to use status in employment as a starting point to assess labour market vulnerability in developing countries, and use additional information and indicators to focus efforts on measuring or identifying decent work deficits. The survey of the literature shows that status and sector indicators, although clearly not sufficient to capture widely diverging labour market experiences at the country level, are nevertheless powerful tools in understanding labour market developments. Furthermore, sector and status data are readily available in most countries, even in those not conducting labour force surveys regularly.

The case study of Pakistan shows that vulnerable economic sectors can be identified based on cross tabulations of sector and status indicators in combination with other information. This process need not be limited to quantitative information, as qualitative assessments of, for example, hiring and firing regulations (by sector, as appropriate), or enforcement of such regulations, can inform decisions regarding the focus of statistical data collection and analysis. Conversely, careful analysis of quantitative data can be used to inform the need for a broader labour market analysis of particular sectors. Both quantitative and qualitative analysis can in this way inform country-specific policy development to reduce decent work deficits.

C. Beyond the employment/unemployment dichotomy: Measuring the quality of employment in low-income countries[1]

1. Introduction

Labour markets in developing countries are characterized by heterogeneity in the situations faced by their working-age population, ranging from unequal access to employment, differentials in returns to labour, as well as income and job security; all factors that constitute job quality. The current widely used employment and unemployment indicators were conceived with the intention of measuring the quantity of employment. However, not only are they poor measures of labour markets in developing countries and widely referred to in discussions of job quality, but in fact they reveal little about this heterogeneity. Over the years, attempts have been made to compensate for some of the shortcomings of these indicators by developing additional indicators to measure discouragement, underemployment and the working poor, as well as to elaborate schemas to better classify labour status. This paper explores the limitations of these attempts and their applications, particularly for developing economies, in an effort to motivate the search for additional indicators that can better measure job quality. It takes a closer look at job security, for example, as one of the common threads running through the various attempts to discern job quality.

Critics argue that the notion of job quality is based on a hierarchy of attributes that is largely subjective. Without a job, there is no opportunity for decent work. If core labour standards are not honoured then the job is a bad one and, while some jobs may respect these standards, they are still deemed unacceptable because earnings are below the amount needed to enable an average-sized family to attain an internationally-minimal standard of living.[2] There is debate among international organizations on what specifically constitutes a good quality job, but there is a consensus that discourse on labour markets ought to include discussions on job quality as well as quantity. From the ILO Director-General's report on *Decent Work*[3] presented to the 87th Session of the International Labour Conference in 1999, to Francis Bourguignon's discussion of *Development Strategies for More and Better Jobs,*[4] greater attention is now being paid to the quality of employment. However, there is still a need for more empirical work to be done to adequately measure different aspects of job quality, particularly in developing countries.

It is common knowledge that systems, if they exist at all, for gathering labour market information in low-income countries are deficient. Nonetheless, this discussion hopes to assist in paving the way for more accurate indicators as statistical capacity improves. While core labour standards are an essential component of a good job, a detailed discussion of these, is beyond the scope of this paper.[5] The intention here is to provoke thought and

1. This section was prepared by Sabina Dewan and Peter Peek. Sabina Dewan currently works as an independent consultant on issues pertaining to economic development and political economy. Peter Peek is a former director of the ILO Statistical Development and Analysis Unit. This section has been adapted from a forthcoming ILO working paper.

2. See G. Fields: "Decent work and development policies", in *International Labour Review* (Geneva, ILO, 2003) Vol.142, No. 2.

3. See ILO: *Decent work,* Report of Mr. Juan Somavia, ILO Director-General, International Labour Conference, 87th Session, Geneva 1999.

4. See F. Bourguignon: *Development strategies for more and better Jobs* (Washington D.C., World Bank, 2005).

5. For more information on international labour standards, please refer to Asian Development Bank/International Labour Office. 2006. *Core Labor Standards Handbook*. Manila: ADB; ILO: *Rules of the Game* (Geneva, 2005).

discourse on how best to capture empirically the concept of job quality, thereby informing development policies. This paper supports two conclusions: first, in the absence of an all inclusive indicator, current indicators, despite their limitations, should be used to compliment each other in an effort to provide a detailed picture of job quality in developing countries. Second, qualitative indicators, while posing greater difficulty of measurement, serve as the only means of approximating the extent of inadequate employment and are, therefore, necessary in an analysis of labour markets in developing countries.

This paper is divided into five sections. Following the introduction, the second section explores some of the key problems with the standard employment/unemployment indicators. The third section reviews some of the attempts made to move beyond the employment/unemployment dichotomy through elaboration of indicators, such as discouraged workers, underemployment and the working poor, as well as through the development of schemas to better delineate labour status, formality and informality, and explore their applicability in a developing country context. The fourth section goes beyond the discussion of labour status and income as a means of discerning job quality, drawing out in more detail the common element of security. It focuses on aspects of job and income security and the interplay between them. The final section concludes with a brief summary of the discussion, highlighting what remains to be done in the continuing struggle to capture, in empirical terms, heterogeneity in job quality.

2. The inadequacy of standard employment/unemployment indicators

In developing countries, standard employment/unemployment indicators are poor estimates of labour market tightness and further obscure heterogeneity. Therefore, the critique of this dichotomy is twofold: first, the employment/unemployment dichotomy serves as a reasonable proxy of labour market tightness in industrialized economies, but its application to developing countries is less appropriate; and, second, they do not give an indication of job quality. The two discussions are inextricably linked for two closely related reasons.

First, the aim to have a definition of employment, consistent with the system of national accounts, led to the one commonly used today (see KILM 2 for full definition); critics argue that this definition is overly inclusive. The definition encompasses marginal jobs, low-paid jobs of one or two hours a week, as well as full-time jobs with high earnings and generous employment benefits. Employment in the three-tiered labour force framework that gives precedence to employment over unemployment and unemployment over inactivity, when classifying economic activity, is broadly defined intentionally to cover various forms of work and the most number of people at work, even if only for one hour during a particular short reference period.[6] The one-hour criterion consequently allows for short-time work, casual labour, stand-by work, and other forms of irregular employment common, particularly in low-income economies. However, being employed for at least one hour in a reference period is not necessarily indicative of gainful employment.

An important reason behind the adoption of these definitions of employment and unemployment, based on the one-hour criterion, was to have a definition consistent with national accounts. The definition of unemployment as the total absence of work was prompted by the intention of measuring all labour that goes into production, and to ensure that employment and unemployment are entirely mutually exclusive, with priority given to employment. In theory, the production generated by all those working just a few hours could be large. It was considered of less importance whether those working only

6. See R. Hussmanns et al: *Surveys of economically active population, employment, unemployment and underemployment*: An ILO manual on Concepts and Methods (Geneva, 1990).

one hour thought of themselves as employed, or whether society held that view.

Ready access to informal employment provides ample opportunity for people to be employed at least one hour a day. In the large rural areas of most developing countries, agricultural workers, especially in family enterprises, form the bulk of this unorganized sector. Sharing of low-productivity work, especially in the so-called informal or unorganized sector, is common and widespread; many working only part of the time. While such workers are not faced with a total lack of work, many of them are underemployed. There is also the additional nuance of seasonal workers who work long hours during specific periods of the year in activities that include planting, harvesting, construction, tourism and holiday sales, but at other times remain idle. Although there are guidelines for the treatment of such workers, their classification can sometimes be ambiguous during the off-season.

The second reason that the employment/unemployment dichotomy is not a good proxy for labour market slackness in developing countries is that in countries plagued by poverty, with no social safety nets, open unemployment is not an option for the poor. In order to be considered unemployed, three criteria must be met simultaneously: completely without work, currently available to work, and seeking work.[7] In the absence of social safety nets and unemployment insurance, a total lack of work is only an option for those who are not poor and are themselves financially viable (or have access to family resources, for example). The open unemployment figure, therefore, tends to measure those who are economically "better off". In other words, in low-income economies, unemployment as measured, is a phenomenon of the relatively wealthier population.

The majority of people are compelled to engage in some form of economic activity, however insignificant or inadequate, according to Say's law of employment. The poor are often obliged to take jobs characterized by difficult working conditions and low wages and sharing of low-productivity work, frequently in agriculture, is common. Open unemployment in developing countries is, therefore, frequently low and can be seriously misleading as a measure of labour market slackness. Data shows that in 2003, the average (unweighted) rate of unemployment for the low-income countries (56 in total) was lower than the average for middle-income countries.

"Over the course of development, and reflecting the structural transformation of the economy, the concentration of unemployment shifts from underemployment to some form of more open unemployment".[8] Rising incomes and urbanization contribute to this process. This is not only because more people can afford to search for work, but also, in more modern economies, work is not organized in ways that facilitate work sharing or adjustment of hours as is possible in economies with a high degree of agricultural work and a large informal sector.[9]

Therefore, the employment/ unemployment dichotomy is not broad enough to capture the heterogeneity in labour markets. Changes in the unemployment rate do not serve as a good proxy for the variations in the composition of good and bad jobs in the labour market. There is a need to further delineate this heterogeneity of jobs to get a better understanding of the labour market.

7. See R. Hussmanns et al: *Surveys of economically active population, employment, unemployment and underemployment*: An ILO manual on Concepts and Methods (Geneva, 1990).

8. See World Bank: *World Development Report: Workers in an integrating world* (Washington D.C, 1995).

9. See World Bank:*World Development Report: Workers in an integrating world* (Washington D.C, 1995).

3. Attempts to improve the employment/unemployment dichotomy

Over the years, attempts made to adopt more nuanced approaches to classifying employment status were partly based on the assumption that this would also provide more information on job quality. Some of these approaches try to develop better measures of labour utilization and try to capture the real extent of idle labour time, hence the evolution of concepts such as discouraged workers and time-related underemployment. Others seek to go beyond the traditional employment/unemployment dichotomy by using income or the number of hours worked as indicators of job quality (working poor, income-related underemployment and time-related underemployment). This section briefly reviews some of the widely accepted, but more challenging to capture, indicators found in the literature today.

Discouragement

In labour markets where mechanisms for seeking work may not exist, such as some rural areas in developing countries, the "seeking work" criterion in the standard unemployment definition is of limited use. This was acknowledged early on and led to the formulation of a different unemployment definition in which this "seeking work" criterion was relaxed, yielding a new category of people within the unemployed "discouraged workers". While there is some variation in the definition across countries, generally, a discouraged worker is one who wants a job, is currently available to work, but has given up the search for employment because they believe it would be futile due to lack of employment opportunities. The concept of discouraged workers is not only somewhat ambiguous, but its inclusion in the unemployed is also an issue of debate, especially as discouragement is difficult to measure. The concept, therefore, was an attempt to relax the "seeking work" category of unemployment to counter inadequate labour absorption, as well as from the need to adequately capture potentially unutilized labour resources.[10]

The debate over the inclusion or exclusion of discouraged workers from the pool of unemployed has to do with their readiness, and likelihood, of entering the labour force should an opportunity present itself. Critics argue that measuring this form of labour attachment is difficult and would require additional study to ascertain how likely they are to enter the labour force, and whether their former activities included searching for a job. Supporters of their inclusion argue that, in addition to their willingness to work, their availability is an additional factor to be taken into consideration when analyzing the phenomenon of discouragement. Indeed, several labour force surveys ask whether they are "available and willing to work".

How relevant is the concept of discouraged workers to developing countries? The above argument that few can afford the option of being unemployed, helps explain why most empirical studies on discouraged workers were carried out in industrialized countries.[11] Thus, the indicator to capture discouraged workers attempts to facilitate a more accurate estimate of the potential reserves of labour – those that are willing and available to work, but have given up the search.

Underemployment

The International Conference of Labour Statisticians (ICLS) discussed defining and measuring underemployment on seven occasions: 1925, 1947, 1954, 1957, 1966, 1982 and in 1998 when the international statistical guidelines on the measurement of underemployment were revised. The recognition that measured unemployment is

10. See R. Hussmanns et al: *Surveys of economically active population, employment, unemployment and underemployment*: *An ILO manual on Concepts and Methods* (Geneva, 1990).

11. It may be that discouragement is a pervasive phenomenon among particular segments of a population, such as youth (15-24 year-olds) or women in a given developing country that may rely on extended family structures for support.

insufficient to understand the deficiencies of the labour market fuelled this exercise. This is particularly pertinent in developing countries where many do not suffer from a total lack of employment, but rather a partial lack of it; where underemployment hides under the guise of employment.

People were considered underemployed if they had a job during the reference period, but were willing and available to change their current work situation to increase their duration (visible underemployment) and productivity of work (other inadequate forms of underemployment). Indicators reflecting the productivity of work include hourly income and use of skills, but as these are far from measuring "invisible underemployment" as initially defined, the name of this dimension was changed in 1998 to "other inadequate forms of employment". Visible underemployment and other inadequate forms of underemployment are not mutually exclusive as a worker could be underutilized, both in terms of their hours of work and skills or hourly income. This further complicates the measurement of underemployment. It has repeatedly been recognized by the ICLS that, for operational reasons, the statistical measurement of underemployment may be limited to visible underemployment.[12] This limited scope for measurement meant that the true extent of underemployment, resulting from the underutilization of skill and low productivity, would unfortunately remain a matter of conjecture.

A number of countries have started calculating an unemployment rate, as well as an underemployment rate, mostly time-related (for example, see KILM 12), based on the ICLS guidelines. However, time-related underemployment (commonly defined as fifteen hours or less per week) does not paint an adequate picture of the situation in developing countries. In fact, in many low-income economies, people work longer hours, perhaps because of low wages and/or low productivity.[13] Therefore, long hours of work could be a sign of invisible underemployment, a fact not captured by the visible underemployment measure alone. Using data derived from national labour force surveys, an ILO study analysed the percentage of people working excessive hours (49 or more per week) in 43 countries (Figure 1). The study found that people in developing countries tend to work longer hours than those in transition or industrialized countries, possibly suggesting a higher incidence of underemployment related to low productivity or wages.[14]

Working poor

You are considered to be poor if your consumption or income falls below a minimum level to meet your basic needs; that is below the poverty line. The concept of working poor was introduced in the 1990s as a means to disaggregate total employment by linking it to (household or individual) earnings or consumption levels. Various definitions have since been developed. The World Bank's poverty estimates are based on household data that are then adapted to an individual headcount to give a poverty headcount ratio.[15] The World Bank, using data from household surveys, defines working poor as workers with earnings insufficient to maintain the median household above the poverty line. This benchmark may be the official poverty line, the US$1 or US$2 a day absolute poverty line or 50 per cent of median per capita consumption (expenditures). The ILO defines the working poor as the proportion of those employed living in a household whose members are estimated to be below the poverty line (see KILM 20)[16]. The household

12. See International Conference of Labour Statisticians (ICLS): *Report 1: The Measurement of Underemployment (*Geneva, ILO, 1998).

13. See D. Bescond et al.: "Seven indicators to measure decent work: An international comparison", in *International Labour Review,* (Geneva, ILO, 2003) Vol. 142, No. 2.

14. See D. Bescond et al.: "Seven indicators to measure decent work: An international comparison", in *International Labour Review,* (Geneva, ILO, 2003) Vol. 142, No. 2.

15. See N. Majid: *The size of the working poor population in developing countries* (Geneva, ILO, 2001).

16. For more information on the ILO's estimates of the working poor, also see S. Kapsos: *Estimating growth requirements for reducing working poverty: Can the world halve working poverty by 2015?* (Geneva, ILO,

is the unit of reference and the definition merely links household poverty to the number of employed persons in the household, rather than individual pay to the person employed.

Estimating household income based on wage data is problematic because there are other non-employment related components of income, such as property income and transfers. A number of studies exploring the development impact of migration and remittances for example, note that in many low-income countries, migrant remittances constitute a significant proportion of household incomes, especially among poorer groups.[17] It may, therefore, be feasible to actually have a reduction in the number of working poor without necessarily improving the labour market and associated wages. Working poor is a useful concept to describe the poverty among workers or, depending on the definition used, the number of workers with low pay, but it only addresses the low pay aspect without serving as a good proxy for other attributes related to job quality. The evidence on whether or not income serves as a good proxy for job quality is mixed and the debate remains open. Nonetheless, jobs where core labour standards are not respected cannot be considered of good quality, regardless of earnings. Working poor is, therefore, the only available indicator that comes close to relating remunerative returns from employment to poverty. The possibility of earning an income from labour that allows living above the poverty threshold is a core element of decent work.

Labour status

Moving beyond the use of income, scholars have elaborated detailed schemas to take a closer look at labour status and the associated variations in employment conditions. This exercise was partly fuelled by the need to examine shifting patterns of labour utilization in light of globalization and their implications for quality of employment.

Harriss, et al. (1990), in their study of Coimbatore, India, contend that, "in order to tackle issues of poverty and inadequate employment it is desirable to separate out different forms of labour utilization in a much finer way than is usually the case, identifying distinct – partly interacting – production systems with different labour implications".[18]

The authors, therefore, propose a method to measure labour status more effectively, to better capture the stratification and segmentation[19] of the labour market and its implications for policy.

Harriss, et al. define labour status as being composed of varying degrees of legal protection, regularity, reliability and autonomy; these elements are also dimensions of vulnerability that a worker is subject to. They identify 10 labour statuses distinguishing between wage labour and self-employed workers, apprentices and family workers (Table C1). KILM 3 distinguishes between three categories of the employed: (i) wage and salaried workers; (ii) self-employed workers, including employers, own-account workers and members of producers' cooperatives; and (iii) contributing family workers (also known as unpaid family workers).

Although based on a survey of the city of Coimbatore in India, the authors argue that this approach to defining labour status has a wider application; this method based on a priori reasoning is preferable to descriptive categories such as casual workers that are not always succinctly defined. While current labour force surveys do not generate

2004). For more information on the World Bank's poverty estimates, see S. Chen et al.: *How have the world's poorest fared since the early 1980s?* (Washington D.C., World Bank, 2004).

17. World Bank: *Global economic prospects 2006: Economic implications of remittances and migration* (Washington D.C., 2006,The International Bank for Reconstruction and Development).

18. See J. Harriss et al.: *Urban labour market structure and job access in India: A study of Coimbatore* (Geneva, 1990, International Institute for Labour Studies, ILO).

19. Stratification refers to the vertical division of the labour market according to differences in vulnerability. Segmentation can be found within or between these various strata; they are horizontal divisions defined by characteristics such as gender or race for example.

Table C1. Labour statuses distinguished in terms of protection, regularity, reliability and autonomy, Coimbatore, India

Wage Labour	
Protected regular workers	The least vulnerable
Unprotected regular long-term workers	
Unprotected regular short-term workers	
Independent workers	Lie between wage workers and self-employed in terms of autonomy
Self Employed	
Those with some capital, generating incomes comparable to or higher than the least vulnerable wage workers	
Those engaging in marginal activities	Comparable to the more vulnerable groups of wage workers
Apprentices	
Family Workers	
Unprotected irregular workers	The most vulnerable
Unemployed	

Source: Adapted from Hariss, John, K.P. Kannan and G. Rodgers. 1990. *Urban Labour Market Structure and Job Access in India: A Study of Coimbatore*. Geneva: International Institute for Labour Studies/ILO.

information in such a detail, and developing countries are clearly limited in their capacity for measuring such labour market indicators on a national scale, there is, nonetheless, value in conceptualizing a more nuanced approach to labour status to guide future work in this area.

Informality

Another way to further qualify employment is by using the informal/formal dichotomy. The distinction between formal and informal sector employment was recognized as early as the 1970s.[20] Attempts have since been made to define this distinction and to apply it to better understand the multiple facets of the types of work people engage in and the associated implications for security and variations in the quality of employment. Nevertheless, the nebulous nature of the unorganized sector, not only makes it particularly difficult to define, but empirical literature on informal employment has used so many definitions of informality that it is difficult to make meaningful international comparisons. Still, despite its heterogeneity, it is critical to note the usefulness of informality as a concept with respect to job security and applicability of labour law – aspects that will be discussed again later.

Informal sector employment presented in KILM 7 uses an enterprise-based concept to define informality. Accordingly, informal sector employment refers to all those who work in an informal sector enterprise including own-account enterprises (either all, or only those that are not registered). Enterprises owned by informal employers are also considered to be part of the informal sector and are defined on the basis of any of the following three criteria: (i) number of employees (to be determined according to national circumstances); (ii) non-registration of the enterprise; and (iii) non-registration of the employees. While some scholars have used the definition of firm size to define informality (Maloney, 2004), others have used variables such as access to social protection coverage, or

20. See ILO: *Women and men in the informal economy: A statistical picture* (Geneva, 2002).

contract status, and still others have used a combination of these three criteria.

In 2003, the participants of the 17th ICLS resolved to move to a status-based concept of informality. The ICLS adopted a wider definition of informal employment that included employment in the informal sector, as well as informal employment in the formal sector. The latter included several new categories of workers of which the most important was that of employees who have an informal job in formal sector enterprises. Employees were considered to have informal jobs, "… if their employment relationship is in law or in practice, not subject to standard labour legislation, income taxation, social protection, or entitlement to certain employment benefits (advance notice of dismissal, severance pay, paid annual or sick leave, etc.) …".[21] Representatives of workers' and employers' groups alike agreed upon this definition.

As a major share of the population in developing and transition countries is in the informal economy, and as is often argued, the informal economy harbours and conceals poor conditions of work, the ILO Bureau of Statistics, in collaboration with the Department for Statistics and Sociology of the Republic of Moldova, conducted another study seeking to operationalize the application of statistical methods for the measurement of informal employment based on the wider definition of the 2003 ICLS. The study[22] found that 18.4 per cent of those employed in the formal sector had informal jobs.[23]

However, rather than casting informality and formality as a dichotomy, the ILO's Socio-Economic Security Programme uses information from its People Security Surveys to present informality as a continuum based on five criteria: regularity status, contract status, workplace status, employment protection status and social protection status.[24] Hence, while there is a vast literature on informality, defining it is an arduous task that makes cross-country comparisons difficult.

Aside from the varying definitions of informality, another challenge in deciphering it and its implications for job quality is that earnings criteria are not part of the definition of the informal sector. Therefore, it may not be an appropriate measure for distinguishing between low and high-quality work, particularly with respect to income levels. Within the ILO's definition of informal sector employment for example, there may be jobs that span a wide range of income and productivity levels. The definition is broad to include not only those who eke out a subsistence living through very low productive work, but also those unable to find formal jobs, or who are displaced and waiting for better jobs. In such circumstances, informal sector employment merely acts as a safety net. The definition could also include those working in informal sector enterprises with much higher productivity levels, and earnings that are above the poverty line.

A debate continues to revolve around the assumption that the informal sector is necessarily characterized by a lack of benefits, irregular working conditions, high turnover and overall lower rates of remuneration. There is an opposing view contending, that in the face of international competition, firms reduce legislated or union induced rigidities as well as high labour costs by subcontracting production to unprotected workers.[25] This raises the

21. See Hussmanns, R. 2004. *Measuring the informal economy: From employment in the informal sector to informal employment*. Working Paper No. 53 (Geneva, ILO), p. 6.

22. See International Labour Office (ILO). 2004b. *Economic security for a better world* (Geneva). The study compares the employment conditions of workers in informal employment versus formal employment based on eight criteria: job permanency, employment contract, employer's social contributions, paid annual leave, paid sick leave, maternity leave, protection against dismissal and compensation in case of dismissal.

23. See International Labour Office (ILO). 2004a. *Employment in the Informal Economy in the Republic of Moldova*. ILO Bureau of Statistics with the Department for Statistics and Sociology of the Republic of Moldova (Geneva).

24. See International Labour Office (ILO): *Economic Security for a Better World* (ILO, Geneva, 2004)

25. See W. Maloney: *Informality revisited* (Washington D.C., World Bank, 2004).

question of whether informality is necessarily symptomatic of the poor health of the labour market or, in this era of change heralded by globalization, paves the way for instituting greater flexibility within the labour market? Perhaps income dispersion within the informal economy bares testament to the latter argument.

Therefore, while data certainly confirms that informality is often associated with lower earnings, income dispersion within the informal sector makes it particularly hard to clearly assess job quality with respect to income levels. Conversely, workers earning a minimum wage for example, are likely to have relatively formal working conditions; those without a signed contract may have a reasonable income level, helping to compensate for the lack of formality.[26] Thus, the distinction between the formal and informal sectors can only be helpful to a point. There is an additional need to examine differences in the quality of jobs within the informal sector itself. While earlier studies have demonstrated that average working conditions tend to be lower in the informal sector, little empirical evidence exists on their variation within the sector.

Additional indicators: Excessive hours of work, nature of contract and others

If one exercise is to capture variations in conditions that workers endure, by better delineating labour utilization and work-related income, another one is to measure specific attributes that help determine whether a given job is "decent or not". Based on the ILO's four pillars of decent work (acceptable productive employment, social protection, social dialogue and rights at work), its Statistical Development and Analysis Unit designed a series of pilot surveys to test the feasibility of measuring indicators of decent work. These indicators include hours of work for all jobs during the reference week, hourly pay among time-rated wage and salary earners, as well as informal employment among wage and salary workers.[27]

Examining the hours worked (see KILM 6) reveals information on the quality of employment in a variety of ways. For example, fewer hours of work could imply time-related underemployment (see KILM 12) and the underutilization of labour. Conversely, long hours of work could indicate low hourly wages and income-related underemployment. Additionally, the results suggest that there is a relationship between low hourly pay[28] and the number of hours worked[29], although this is not always the case.[30]

The pilot surveys designed to examine the feasibility of measuring indicators of decent work gauged informal employment based on the nature of the contract, the employer's contribution to a social security fund, and entitlements to paid sick leave or to paid annual leave A joint analysis of these four criteria yielded the following hierarchical

26. See K. Sehnbruch: *From the quantity to the quality of employment: An application of the capability approach to the Chilean labour market* (California, 2004, CLAS Working Papers, University of California, Berkeley).

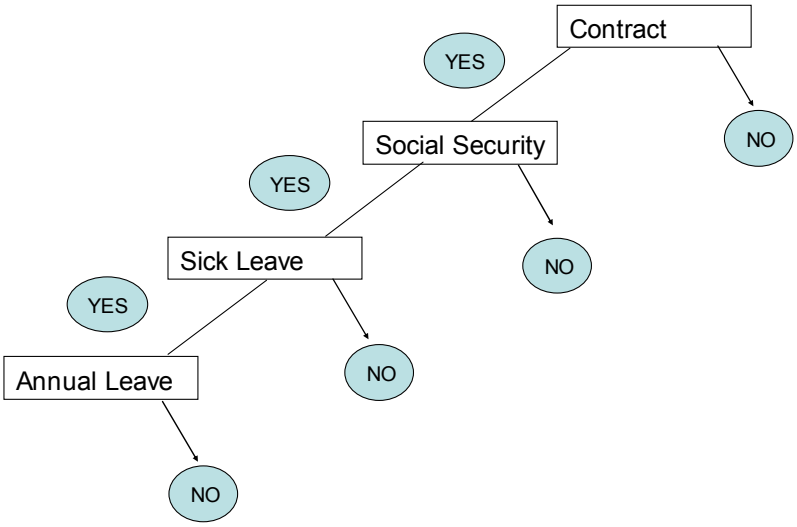
27. For a complete list and a more detailed analysis, see Mehran, F. 2005. Measuring excessive hours of work, low hourly pay, and informal employment through a labour force survey: A pilot survey in the Philippines (Geneva: ILO). This paper draws on two important findings from Mehran's study. First, the results of the Philippines pilot survey reinforce the idea that long hours rather than short hours are more characteristic of the employment problem in developing countries. Second, the study contends that the pattern of employees' benefits is hierarchical in nature, therefore, whether or not one has a contract could serve as a proxy to gauge the existence of other social benefits.

28. An adequate pay for statistical purposes is defined in relative terms as half the median value of the distribution of hourly pay among time-rated employees or an absolute minimum, whichever is greater. See R. Anker et al.: "Measuring decent work with statistical indicators" in *International Labour Review,* Vol. 142, No 2. (Geneva, 2003, ILO).

29. See F. Mehran: *Measuring excessive hours of work, low hourly pay, and informal employment through a labour force survey: A pilot survey in the Philippines* (Geneva, 2005, ILO).

30. The World Bank's 1995 World Development Report entitled *Workers in an integrating world* points to evidence from Ghana and Malaysia to make the point that low wages do not always mean long hours of work. Families in the bottom 40 per cent of the income distribution on average worked 15-20 fewer hours than individuals from the top 20 per cent. A lack of opportunities in rural areas is the likely culprit.

Figure C1. Hierarchical patter of employee's social benefits



Source: Adapted from Mehran, F. 2005. *Measuring excessive hours of work, low hourly pay, and informal employment through a labour force survey: A pilot survey in the Philippines* (Geneva: ILO).

pattern of employees' social benefits that signifies degrees of informality of employment (Figure 1). For self-employed workers, formality or informality was based on the nature of the economic unit – in operational terms, namely its size, registration of the unit or its employees.[31]

4. Indicators of the security dimension of job quality

In order to ascertain overall job quality, there are different ways, as illustrated by the examples in the preceding section, to conceptualize the heterogeneity in labour status, overall worker vulnerability in informal versus formal sector jobs, and the conditions of work. A common element underlying the discussion of many of the latter indicators is security. A criticism of the working poor approach is that it only refers to current work-related income and does not always paint an adequate picture of worker vulnerability, especially in terms of the sustainability of that income. At the heart of the discussion on labour status and the informality/formality of jobs, is the extent to which one enjoys protection and regularity of employment and income. All of these refer in one way or another to security: a key element in determining job quality.

There is general consensus that security is a critical component of job quality, but different types of work-related security[32] make matters complicated. An in-depth discussion of the different forms of work-related security is beyond the scope of this paper. Nonetheless, using somewhat broad definitions of job and income security, this section explores the interplay between security and job quality.

Employment security

Employment security focuses on the probability of retaining a job, which is, to a large extent, contingent upon macroeconomic conditions. In jobs with a degree of formality,

31. See F. Mehran: *Measuring excessive hours of work, low hourly pay, and informal employment through a labour force survey: A pilot survey in the Philippines* (Geneva, 2005, ILO).

32. See ILO: *Economic security for a better world* (Geneva, 2004a), p.14, for a more detailed discussion of the various forms of work-related security.

employment security also refers to the extent that employment protection regulation exists and is implemented. As far as employment security is relevant to the self-employed, it is the likelihood of losing independent work and/or business failure. The stability of the work relationship (permanent versus temporary jobs) is also central. The key characteristic of job security is that it is employment-based. That is, it pertains to the job only and is directly linked to labour status.

Examining job tenure is one method of trying to capture empirically the extent of job security. However, this method of measurement is fraught with problems. For example, ageing and employment growth affect average tenure as does the proportion of youth in the labour force. Since youth tend to have very short employment tenure, this can pull down the average and vice versa.[33]

Studying the existence of employment protection regulation is another way of trying to get at job security. However, this poses particular problems in developing countries. Employment protection regulation has been the subject of intense debate for decades. Supporters argue that it is an essential determinant of job quality, and they adopt a rights-based approach towards job security, whereas critics argue that employment security is a necessary trade-off for lower unemployment and greater flexibility in the labour market. However, in a developing country context, this debate is less relevant for two reasons. First, even though employment protection regulations may exist in some developing countries, they are often not enforced[34] and measuring the extent of their enforcement is an arduous task. Second, as noted earlier, since a significant proportion of the population in developing countries is in the informal economy, they are often beyond the reach of such regulation.

Job tenure and the existence and coverage of social protection legislation alone are not adequate indicators of employment security. Furthermore, in the context of developing countries it is not enough to look at employment security as the key representative of the element of security in assessing job quality.

Income security

Income security, however, "consists of an adequate level of income, a reasonable assurance that such an income will continue, a sense that the income is fair, relative to actual and perceived needs and relative to the income of others, and the assurance of compensation or support in the eventuality of a shock or crisis affecting income".[35] There are a number of variables that, when looked at together, can provide an indication of income security: level of incomes, access to benefits and services, such as education grants, healthcare, as well as the existence of measures assuring some kind of income support during times of need, like disability insurance and old age pensions.

In the absence of a single indicator that captures the varying job attributes, looking at income security is often seen as a good predictor of quality of work. Despite the different approaches, there is little disagreement that income security is perhaps the most fundamental determinant of worker vulnerability, although it is by no means the only one. In society, those groups that are more vulnerable, such as women, children, and other marginalized populations, are largely so because of their inability to generate income. The conclusion may be drawn that a higher income, perhaps decreasing in marginal value, reduces the level of vulnerability, thus giving the worker more control over relationships and events.

The sufficiency and stability of the income is, therefore, seen as a vital component of job quality, and this in particular points to one of the limitations of the working poor approach. It would be interesting to examine the compensability between current and future

33. See ILO: *Economic security for a better world* (Geneva, 2004a).

34. See J. Botero et al.: *The Regulation of labour* (New Haven, Yale University Press, 2004).

35. See ILO: *Economic security for a better world* (Geneva, 2004a), p. 55.

income. For example, "how many people would prefer to not pay their contributions, and rather run the risk of falling ill or growing old without protection, simply because they consider cash in hand now to be preferable to future income? In the case of Chile, 75 per cent of the self-employed take this view".[36]

Furthermore, the literature on income security is also frequently limited to old-age income security or income security in the event of a disability. An expansion of this discussion on the way in which income security reflects worker vulnerability at varying stages of life, can make a significant contribution to capturing some critical aspects of job quality.

There are many types of income: money income, full income and social income. Money income refers to wages, profits, rents or the proceeds from market sales.[37] In developing countries with large informal economies and often weak social protection systems, non-wage entitlements with a monetary value, such as subsidized food, paid leave, insurance, are frequently limited. Private investments and wealth transfers are also limited to the more affluent populations. Family and community transfers play a major role in the income security of most people in developing countries; however, these are problematic to measure.

In a discussion of income security, it is, nonetheless, critical to consider to the extent possible, different sources of income. Looking at one alone may mask poverty in terms of income security. For example, if a worker moves to an urban area for a higher paid job and, as a result, looses access to family or community transfers, his income insecurity may actually increase even if the new job provides a higher wage. Focusing on money incomes, as is the case with US$1 or US$2 poverty headcounts can, therefore, be misleading.

Nevertheless, while income security allows one to look beyond a certain degree of heterogeneity in labour status (it does not matter whether a worker is a wage or salary earner, self-employed, in the informal or formal economy, the critical determinant is their income security) measuring total income from different sources is a formidable task.

The interplay between employment security, income security and job quality

As noted earlier, the key characteristic of employment security is that it is employment-based.[38] That is, it pertains to the job only and is directly linked to labour status. Income security, however, relates more to the person doing the job. If it is assumed that with higher income security the worker is able to buy greater job security for example, through education to improve employability in a formal job, or through retraining in order to retain a job, then job security becomes a facet of income security. The critical question for researchers studying the element of security in job quality is to decide whether they are interested in examining the security attached to a specific job or rather the security of the jobholder.

An innovative way to examine the security of an individual may be to study the economic opportunities available. The Hope Street Group (www.hopestreetgroup.org), a US based non-profit organization, is compiling an Economic Opportunity Index (EOI) to quantitatively measure a person's ability to capitalize on their skills, talents and hard work, to achieve economic security for themselves and their families. The researchers

36. See K. Sehnbruch: *From the quantity to the quality of employment: An application of the capability approach to the Chilean labour market* (California, 2004, CLAS Working Papers, University of California, Berkeley).

37. See ILO: *Economic security for a better world* (Geneva, 2004a).

38. The definition of employment-based job security can also be expanded to include other forms of security in addition to employment protection regulations such as career protection by instituting barriers to skill dilution for example, protection against occupational accidents and illness at work through safety and health regulations, as well as regulations such as those regarding working time, and so on. These forms of security still refer to the protection given to those in work.

are doing so by examining how the availability of education, the extent of market competition, and additional factors such as these, might affect an individual's opportunities.

5. Conclusion

Recognizing that dualistic concepts of the labour market are too simplistic, Paul Streeten wrote in 1981:

> Employment and unemployment make sense only in an industrialized society where there are employment exchanges, organized and informed labour markets, and social security benefits for the unemployed who are trained workers, willing and able to work, but temporarily without a job … "Employment" as interpreted in industrial countries is not the appropriate concept … to afford to be unemployed, a worker has to be fairly well off. To survive, an unemployed person must have an income from another source … Indeed, the very poor are not unemployed but work very hard and long hours in unremunerative, unproductive forms of activity. This discovery drew attention to the informal sector…. The problem then was redefined as that of the working poor.[39]

The inadequacy of the employment/ unemployment dichotomy has, therefore, yielded attempts at more nuanced approaches in assessing the health of the labour market. Over time, this exercise gradually evolved to include a discussion on the concept of job quality so much so that discussions of the quantity and quality of employment have now become closely intertwined. Researchers keep trying to come up with indicators that provide finer and finer iterations of an individual's world of work, but job quality is a multifaceted concept that makes it difficult to grasp in empirical terms.

While indicators examining qualitative aspects of a job are particularly challenging to measure, it is critical to move beyond the employment/unemployment dichotomy and continue the quest to develop a set of job quality indicators that adequately capture the heterogeneity of labour markets, particularly for developing countries. The current limitations of data availability in the developing world are well known and it is important to use this as an impetus for increased attention to enhancing the statistical capacity in these countries. Additionally, however, this paper sites some studies that developed schemas to better capture job quality, such as Harriss, et al. (1990) and Mehran (2005). It also suggests indicators for measuring security as an important aspect of job quality. Using this information as a guideline, if data on these indicators were gathered and the aforementioned studies replicated for a wider range of countries, the understanding of job quality in the developing world could be significantly enhanced.

Critics argue that job quality is a subjective concept. The appeal of various job characteristics is based, to a large extent, on personal needs and circumstances.[40] With many different elements, any method of calculating a composite indicator with different weights would necessarily be subjective.[41] Indeed, this paper reflects some of the limitations of current indicators of job quality and it also illustrates that focusing on any one aspect of job quality neglects the others. Therefore, while there is no one indicator that can measure all aspects of job quality, current indicators, some of which are captured in the KILM, should be used to compliment each other in an effort to provide as detailed a picture of job quality in developing countries as possible.

39. Streeten, P. 1981. *First things first: Meeting basic human needs in the developing countries*. (World Bank, Oxford University Press, 1981).

40. See Sehnbruch, K. 2004. *From the quantity to the quality of employment: An application of the capability approach to the Chilean labour market.* (California, CLAS Working Papers, University of California, Berkeley).

41. See Sehnbruch, K. 2004. *From the quantity to the quality of employment: An application of the capability approach to the Chilean labour market.* (California, CLAS Working Papers, University of California, Berkeley) and Anker, R. et al. 2003. "Measuring decent work with statistical indicators", in International Labour Review, Vol. 142, No 2, (Geneva, ILO).

2. Participation in the world of work (KILM 1)

KILM 1. Labour force participation rate

Introduction

The labour force participation rate is a measure of the proportion of a country's working-age population that engages actively in the labour market, either by working or looking for work; it provides an indication of the relative size of the supply of labour available to engage in the production of goods and services. The breakdown of the labour force by sex and age group gives a profile of the distribution of the economically active population within a country.

The labour force participation rate is calculated by expressing the number of persons in the labour force as a percentage of the working-age population. The labour force is the sum of the number of persons employed and the number of unemployed. The working-age population is the population above a certain age, prescribed for the measurement of economic characteristics.

Table 1 contains labour force participation rate estimates by sex according to the following standardized age groups: 15+, 15-24, 15-64, 25-54, 25-34, 35-54, 55-64 and 65+.[1] This series covers 188 economies over the years 1980 to 2006. The participation rates in table 1 are harmonized to account for differences in national data and scope of coverage, collection and tabulation methodologies as well as for other country-specific factors such as military service requirements.[2] The series includes both nationally reported and imputed data and includes only estimates that are national, meaning there are no geographic limitations in coverage.

Use of the indicator

The indicator for labour force participation rate plays a central role in the study of the factors that determine the size and composition of a country's human resources and in making projections of the future supply of labour. The information is also used to formulate employment policies, to determine training needs and to calculate the expected working lives of the male and female populations and the rates of accession to, and retirement from, economic activity – crucial information for the financial planning of social security systems.

The indicator is also used for understanding the labour market behaviour of different categories of the population. According to one theory, the level and pattern of labour force participation depend on employment opportunities and the demand for income, which may differ from one category of persons to another. For example, studies have shown that the labour force participation rates of women vary systematically, at any given age, with their marital status and level of education. There are also important differences in the participation rates of the urban and rural populations, and among different socio-economic groups.

Malnutrition, disability and chronic sickness can affect the capacity to work and are therefore also considered as major determinants of labour force participation, particularly in low-income environments. Another aspect closely studied by demographers is the

1. The aggregate age groups 15-64 and 25-54 years are not displayed in the table but are available on the CD-ROM provided along with the publication and in the online database. The group 25-54 years corresponds to the "prime working age", or the age range in which people are generally expected to be economically active.

2. For further information on the methodology used to harmonize estimates, see S. Kapsos: "World and regional trends in labour force participation: Methodologies and key results" (ILO, 2007); website: http://www.ilo.org/public/english/employment/strat/wrest.htm.

relationship between fertility and female labour force participation. This relationship is used to predict the evolution of fertility rates, from the current pattern of female participation in economic activity.[3]

Comparison of the overall labour force participation rates of countries at different stages of development reveals a U-shaped relationship. In less-developed economies, labour force participation rates can decline with initial growth. Economic growth is associated with expanding educational facilities and longer time spent studying, a shift from labour-intensive agricultural activities to urban economic activities, and a rise in earning opportunities, particularly for the prime working age (25 to 54 years) male head of the family in relation to other members of the family so that other household members with lower earning potential may choose not to work. These factors together tend to lower the overall labour force participation rate for both men and women, although the effect is weaker for the latter and shows a wider variation.

At higher levels of development, the trend tends to reverse; labour force participation rates increase as employment opportunities for all grow and as both men and women demand a higher income. In many developed economies, this pattern continues to be observed for women, but not for men (except for young males), an indication that the U-shaped relationship is somewhat distorted at the highest level of development.[4]

It is also instructive to look at labour force participation rates for males and females by age group. Labour force activity among the young (15 to 24 years) reflects the availability of educational facilities, while labour force activity among older workers (55 to 64 years or 65 years and over) gives an indication of the attitude towards retirement and the existence of social safety nets for the retired.

Labour force participation is generally lower for females than for males in each age category. At the prime working age, the female rates are not only lower than the corresponding male values, but often exhibit a somewhat different pattern. During this period of their life-cycle, women tend to leave the labour force to give birth to and raise children, returning – but at a lower rate – to economically active life when the children are older. In developed economies, the profile of female participation is, however, increasingly becoming similar to that of men and the rates are also approaching male levels.

To some degree, the way in which the labour force is measured can have an effect on the extent to which men and women are included in the data counts. Unless specific probes are built into the data collection instrument, certain groups of workers may be underestimated – particularly the number of employed persons who (a) work for only a few hours in the reference period, especially if they do not do so regularly, (b) are in unpaid employment, or (c) work near or in their home, thus mixing work and personal activities during the day. Since women, more so than men, are found in these situations, it is to be expected that the number of women in employment (and thus the labour force) will tend to be underestimated to a larger extent than the number of men.

Definitions and sources

The labour force participation rate is defined as the ratio of the labour force to the working-age population, expressed as a percentage. The labour force is the sum of the number of persons employed and the number of persons unemployed.[5] Thus, the measurement

3. See, for example, ILO: "Female labour force participation rate and fertility", in *Key Indicators of the Labour Market, Third Edition*, Chapter 1 (Geneva, 2003).

4. G. Standing: *Labour Force Participation and Development* (Geneva, ILO, 1978).

5. Resolution concerning statistics of the economically active population, employment, unemployment and underemployment, adopted by the 13th International Conference of Labour Statisticians, Geneva, October 1982; website: http://www.ilo.org/public/english/bureau/stat/download/res/ecacpop.pdf (see box 2a for excerpts relating to employment and box 8a for excerpts relating to unemployment, the sum total of which equal the "labour force" (currently active population)).

of the labour force participation rate requires the measurement of both employment and unemployment. Employment should, in principle, include members of the armed forces, both the regular army staff and temporary conscripts.

The labour force participation rate is related by definition to other indicators of the labour market. The inactivity rate (KILM 13) is the reverse side of the labour force participation rate. The KILM table 13 shows the harmonized inactivity rates of persons according to the standardized age bands used in table 1. The employment-to-population ratio (KILM 2) is equal to the labour force participation rate after the deduction of unemployment from the numerator of the rate. The unemployment rate (KILM 8) is related to the labour force participation rate and employment-to-population ratio in such a way that two of them determine the value of the third.

A comprehensive source of data for determining the labour force participation rate and related indicators is specialized surveys of households or individuals, often referred to as labour force surveys. Such surveys can be designed to cover virtually all the civilian non-institutional population of the country, all branches of economic activity, all sectors of the economy and all categories of workers, including the self-employed, unpaid family workers, casual workers and multiple jobholders. In addition, such surveys generally provide an opportunity for the simultaneous measurement of the employed, the unemployed and the economically inactive in a coherent framework.

Population censuses are another major source of data on the labour force and its components. The labour force participation rates obtained from population censuses, however, tend to be lower, as the vastness of the census operation prohibits the recruitment of trained interviewers and do not allow detailed probing on the labour market activities of the respondents.

Table 1 includes both real (reported) labour force participation rates (when they meet the requirements to ensure comparability) as well as rates that were imputed from nationally representative, labour force or population census data by the ILO Trends Team using econometric modelling techniques.[6] GDP levels and growth rates, population age structure variables and dummy variables to capture time trends, region-specific trends and country fixed effects were among the explanatory variables used to generate the imputed labour force participation rates. Rates were estimated separately for each five-year age group as well as for the sexes.

Limitations to comparability

National data on labour force participation rates may not be comparable owing to differences in concepts and methodologies. The single most important contributor to data comparability is the nature of the data source. Labour force data obtained from population censuses are often based on a restricted number of questions on the economic characteristics of individuals, with little possibility of probing. The resulting data, therefore, are generally not consistent with corresponding labour force survey data and may vary considerably from one country to another, depending on the number and type of questions included in the census.

Establishment censuses and surveys can – by their nature – only provide data on the employed population, leaving out the unemployed and, in many countries, workers engaged in small establishments or in the informal economy who fall outside the scope of the survey or census.

For international comparisons of labour force data, the most comprehensive source is undoubtedly labour force surveys. National labour force surveys tend to be similar in several essential features, and data derived from them are likely to be more comparable than data obtained from other sources or from

6. See box 3 in "A Guide to Understanding the KILM" for more information.

Box 1a. World and regional estimates of labour force participation rates

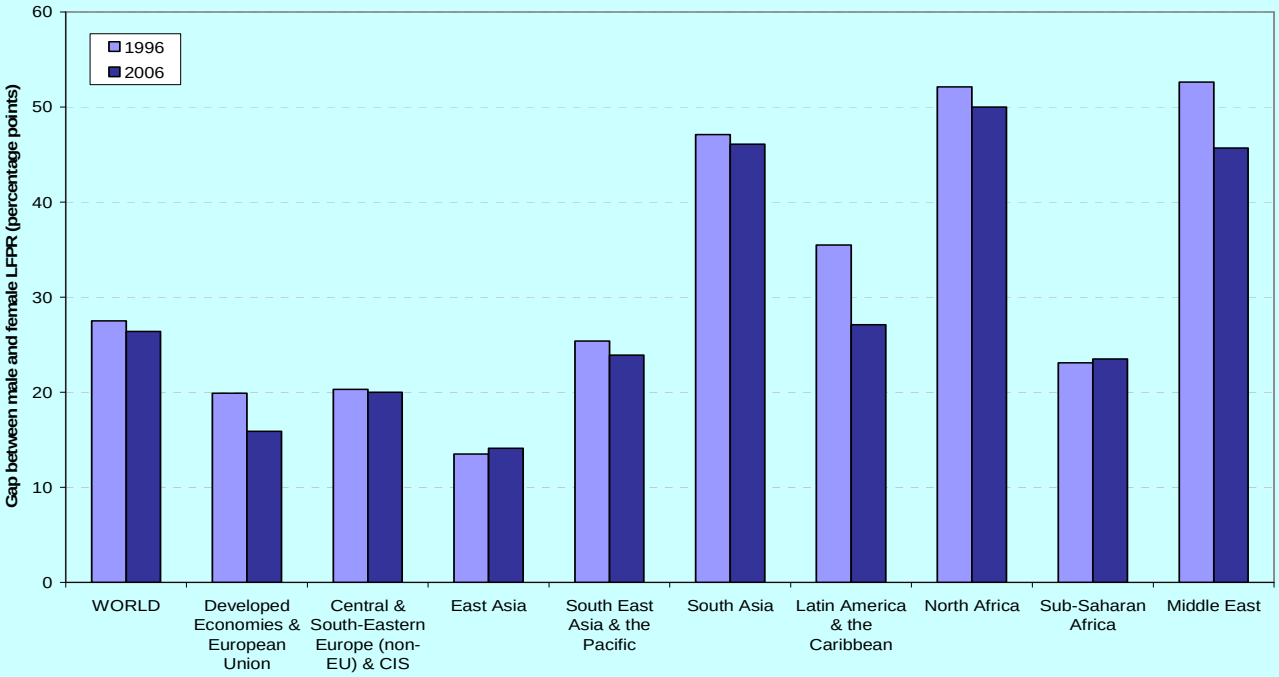
Labour force participation rate (%) - both sexes	1996	2002	2003	2004	2005	2006*
WORLD	66.7	66.0	65.8	65.8	65.7	65.7
Developed Economies & European Union	60.7	60.4	60.3	60.4	60.4	60.3
Central & South-Eastern Europe (non-EU) & CIS	60.6	58.9	58.4	58.9	58.9	59.0
East Asia	78.0	76.0	75.4	75.2	74.9	74.6
South East Asia & the Pacific	70.1	70.4	70.3	70.5	70.6	70.7
South Asia	61.2	60.3	60.3	60.0	59.9	59.8
Latin America & the Caribbean	63.4	65.1	65.4	65.4	65.5	65.6
North Africa	49.8	49.6	49.9	50.3	50.5	50.7
Sub-Saharan Africa	75.6	74.6	74.4	74.4	74.3	74.2
Middle East	52.6	54.7	55.1	55.6	56.0	56.4
Labour force participation rate (%) - males	**1996**	**2002**	**2003**	**2004**	**2005**	**2006***
WORLD	80.5	79.4	79.2	79.2	79.0	78.9
Developed Economies & European Union	70.9	69.6	69.2	69.1	68.8	68.5
Central & South-Eastern Europe (non-EU) & CIS	71.3	68.8	68.4	69.6	69.5	69.6
East Asia	84.6	82.7	82.2	82.0	81.7	81.5
South East Asia & the Pacific	83.0	83.1	82.9	82.8	82.8	82.8
South Asia	84.0	82.7	82.4	82.5	82.3	82.2
Latin America & the Caribbean	81.6	80.9	80.9	80.2	79.8	79.5
North Africa	76.0	74.9	74.9	75.7	75.7	75.8
Sub-Saharan Africa	87.4	86.7	86.4	86.4	86.3	86.2
Middle East	77.5	77.9	78.1	78.0	78.1	78.2
Labour force participation rate (%) - females	**1996**	**2002**	**2003**	**2004**	**2005**	**2006***
WORLD	53.0	52.6	52.5	52.5	52.5	52.5
Developed Economies & European Union	51.0	51.8	51.9	52.3	52.4	52.6
Central & South-Eastern Europe (non-EU) & CIS	51.0	50.1	49.5	49.5	49.5	49.6
East Asia	71.1	68.9	68.4	68.1	67.7	67.4
South East Asia & the Pacific	57.6	58.1	58.0	58.4	58.6	58.9
South Asia	36.9	36.5	36.7	36.1	36.1	36.1
Latin America & the Caribbean	46.1	50.0	50.7	51.3	51.8	52.4
North Africa	23.9	24.5	25.1	25.3	25.5	25.8
Sub-Saharan Africa	64.3	63.0	62.7	62.8	62.7	62.7
Middle East	24.9	29.1	29.8	30.9	31.7	32.5
Labour force participation rate (%) - youth	**1996**	**2002**	**2003**	**2004**	**2005**	**2006***
WORLD	58.1	57.5	57	56.7	56.1	55.6
Developed Economies & European Union	53.1	52.9	53.1	53	53.1	52.3
Central & South-Eastern Europe (non-EU) & CIS	45.8	45.3	44.9	43.8	42.5	42.1
East Asia	74.7	73.8	72.7	71.6	70.6	69.4
South East Asia & the Pacific	58.5	57.6	56.8	58.1	57.4	58.2
South Asia	49.9	49.5	49.2	48.8	48.5	48.3
Latin America & the Caribbean	55.4	55.8	56.2	56.2	55.8	55.3
North Africa	39.2	38.4	38.1	39.4	37.6	36.1
Sub-Saharan Africa	67.6	67.6	67.4	67.1	66.8	66.5
Middle East	39.3	39.6	39.8	40.1	40.4	40.8

Source: ILO Trends Labour Force Model (see box 3 in "A Guide to Understanding the KILM" for more information on estimation methodology).

* 2006 preliminary estimates

Box 1a (continued)

Gap between male and female labour force participation rates of persons aged 15 years and over, 1996 and 2006, by KILM region



In 2006, there were 3.1 billion people active in labour markets – they were either employed or unemployed and looking for work. This is 463 million more than ten years ago. However, labour force participation rates – the share of the labour force within the working-age population – slightly decreased by 1.1 percentage points over the last ten years, from 66.7 per cent in 1996 to 65.7 per cent in 2006. To some extent, this is due to the decrease in male labour force participation rates, which declined from 80.5 in 1996 to 78.9 in 2006. The major cause, however, is the decrease in labour force participation of young people (down from 58.1 per cent in 1996 to 55.6 per cent in 2006). Youth labour force participation rates have been decreasing in all regions largely due to the increasing participation of young people in education, especially in some of the Asian economies, and can therefore be seen as a positive development.[1] In the Central & South-Eastern Europe (non-EU) & CIS region, the decrease in the labour force participation of youth is additionally caused by the large amount of young people that have become discouraged as a result of the transition period. Fortunately, young as well as adult discouraged workers started re-entering the labour market as economic performance improved for many countries in the region in recent years.

During the 1980s and 1990s women's participation in labour markets worldwide grew substantially. This gave rise to expectations that increased opportunities and economic autonomy for women would bring greater gender equality. But as a matter of fact, this trend has reversed over the last ten years. Female labour force participation rates were slightly lower in 2006 (52.5 per cent) than in 1996 (53.0 per cent). As stated above, this is partly due to the increase in participation in education of young women, but stagnation in labour force participation in recent years also reflects that there is still a large untapped female potential for engagement in economic activity.[2]

The chart depicts the gap between male and female labour force participation rates across the nine major regions of the world. The largest gaps are observed in the Middle East, North Africa and South Asia. In all three regions the male labour force participation rate exceeded the female rate by more than 45 percentage points in 2006, although this represents some improvements in the gaps from 1996 especially in the case of the Middle East. Meanwhile, East Asia had the lowest labour force participation gaps of all the regions in the world, followed by the Developed Economies & European Union and Central & South-Eastern Europe (non-EU) & CIS. Latin America & the Caribbean showed the most improvement in terms of closing the gap, whereas East Asia and sub-Saharan Africa both experienced an increase in the gap over the last ten years.

[1] For more details see: ILO: *Global Employment Trends for Youth* (Geneva, 2006); website: http://www.ilo.org/trends.
[2] For more details see: ILO: *Global Employment Trends for Women, Brief* (Geneva, 2007); website: http://www.ilo.org/trends.

a combination of different sources. Nevertheless, despite their strength, labour force survey data may contain non-comparable elements in terms of scope and coverage, mainly because of differences in the inclusion or exclusion of rural areas, and the incorporation or non-incorporation of conscripts. Also, there are variations in national definitions of the labour force concept, particularly with respect to the statistical treatment of "contributing family workers" and "unemployed not looking for work".

Non-comparability may also arise from differences in the age limits used in measuring the economically active population. Some countries have adopted non-standard upper age limits for inclusion in the labour force, with a cut-off point at 65 or 70 years, which will affect broad comparisons as well as those at the higher age levels. Finally, differences in the dates to which the data refer, as well as the method of averaging over the year for data ostensibly referring to the same period, may contribute to the non-comparability of the resulting statistics.

To a large extent, these comparability issues have been addressed in the construction of the table as only labour force participation rates deemed sufficiently comparable across countries were used in its construction. To this end, only household labour force survey and population census data that are representative of the whole country (with no geographic limitation) were used in the construction of the estimates. In countries with more than one survey source, only one type of source was used. If a labour force survey was available for the country, labour force participation rates derived from these were chosen in favour of those derived from population censuses.

Trends

The economies in sub-Saharan Africa continue to have some of the highest female labour force participation rates, while the lowest female rates continue to be among economies in the Middle East & North Africa. For all but one economy (Mozambique) female labour force participation rates were lower than those of males, usually within 30-70 per cent versus 60-90 per cent for males. Sub-Saharan countries also had some of the highest rates for males so that many of the highest overall rates of participation were found in these countries (see figure 1). Poverty and working poverty (KILM 20) are widespread in this region and consequently joining the labour force is a necessity regardless of gender and age. Although a high labour force participation rate might seem positive, it is important to consider other relevant indicators in order to capture a more comprehensive picture of a country's labour market. For example, another factor to consider is the amount of the labour force that is underutilized – that is, unemployed (KILM 8), underemployed (KILM 12) or not in decent and productive work.

Given the high rates of participation for both males and females in many countries in sub-Saharan Africa, the gender gap for many of these countries was negligible (for example, Burundi and Mozambique). In contrast, the gap was substantial – more than 50 per cent – in Bahrain, Egypt, Iraq, Morocco, Oman, Qatar, Saudi Arabia, the United Arab Emirates and the West Bank and Gaza Strip. Figure 1b shows labour force participation rates for males and females therefore showing where the gender gaps are most significant (points furthest away from the diagonal line). For women, more so than men, demographic, social, legal and cultural trends and norms determine whether their activities are regarded as economic. In this sense, women have to overcome more hurdles than men to enter the labour market. In addition to the educational, institutional and cultural barriers that many women face, most women must also deal with the competing demands of household work (including childcare).

Relevant patterns can also be observed when looking at participation rates broken down by gender and age group. Whereas participation rates for males of prime working age (age 25-54) vary only slightly among

economies – almost always above 90 per cent – it fluctuates significantly among economies for females in the same age group, typically spanning into a much wider range of 40-90 per cent. Within economies, female participation rates by age group reveal an inverted U-shape, as illustrated for selected countries throughout the regions in figure 1c. The age group at which women's labour force participation peaked was somewhere in the prime working-age span of 25-54 years. Like all economies in the Middle East & North Africa for which data are available, female participation rates were highest for 25-34 year olds and then dropped significantly – from their already low rates – for 35-54 year-olds, indicating that many women probably did not rejoin the labour market after becoming mothers.

Figure 1a. Labour force participation rates, 2006

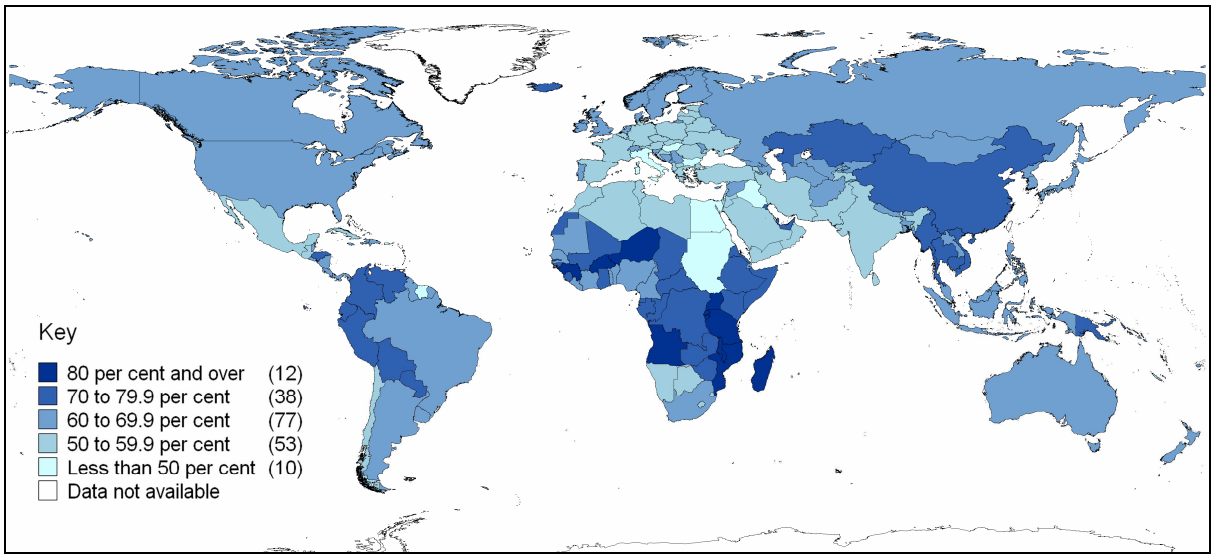


Figure 1b. Labour force participation rates by sex, 2006

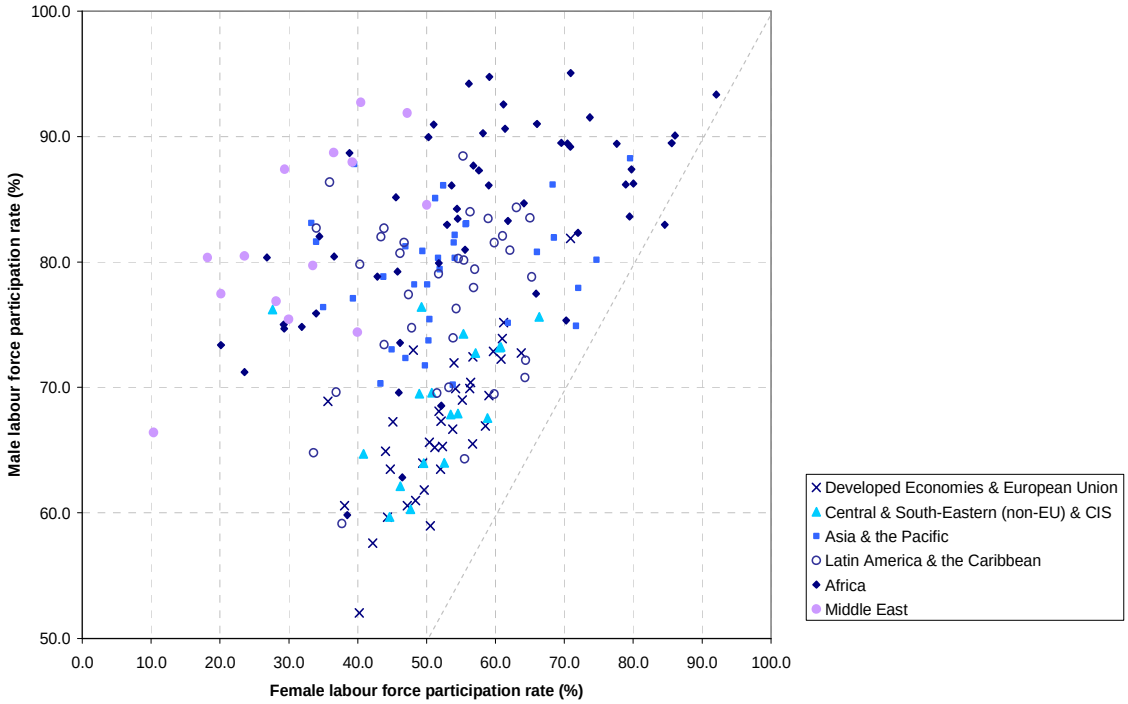
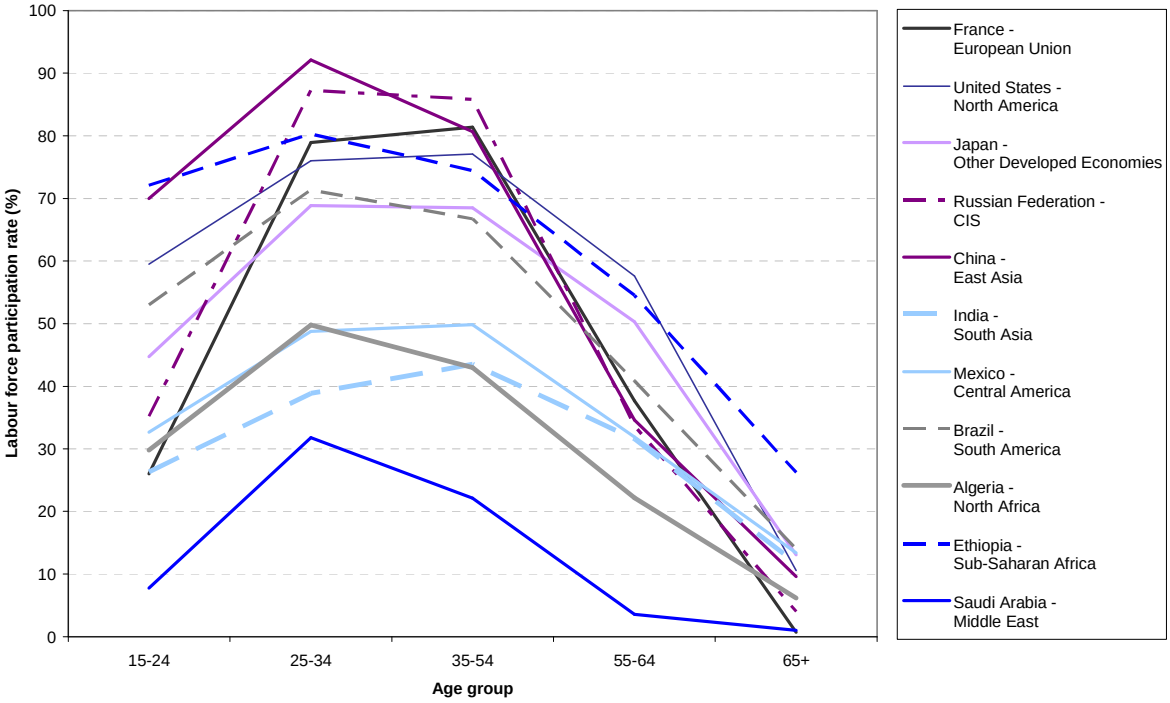


Figure 1c. Female labour force participation rates by age group, selected countries, 2006



3. Employment indicators (KILM 2-7)

Six of the 20 indicators are related to measures of employment. The importance of employment indicators should come as no surprise to analysts of labour markets, since employment and the lack of it (where employment is the goal) are largely what labour market policies are all about. It is not sufficient, however, to discuss the quantity of employment alone, especially given the ILO's framework of the decent work agenda (see Executive Summary) which brings quality aspects of employment into the picture. To better assess working conditions, one needs to understand that the underlying concept of work is broad and encompasses all forms of economic activity, including self-employment, economic unpaid family work and wage employment in both the informal and formal sectors. The indicators in this chapter capture the more specific characteristics of employment and provide a better framework for determining the "decency" of employment.

The six employment indicators, while not covering all possible characteristics of the quality of employment, reflect most of the important aspects of possessing a job and should be viewed together to give a more in-depth picture of the working lives of a population and to assess the progress made toward the goal of decent work. The indicators range from the overall employment ratio (KILM 2), through various characteristics of the employed (KILM 3-6), to a special category that is not always easy to measure or even identify, the informal economy (KILM 7). The employment characteristics include two of the three important job classifications: status in employment (KILM 3) and employment by sector (KILM 4). The third important classification, employment by occupation, is not addressed, but is likely to be taken up in a future edition of the KILM. There are two indicators relating to time spent by persons on their jobs: part-time workers (KILM 5) and hours of work (KILM 6). Taken together, these six indicators provide a broad and rich assessment of the employment picture of a country.

KILM 2. Employment-to-population ratio

Introduction

The employment-to-population ratio[1] is defined as the proportion of a country's working-age population that is employed. A high ratio means that a large proportion of a country's population is employed, while a low ratio means that a large share of the population is not involved directly in market-related activities, because they are either unemployed or (more likely) out of the labour force altogether.

Virtually every country in the world that collects information on labour market status should, theoretically, have the requisite information to calculate employment-to-population ratios; data on the working-age population – ideally, individuals aged 15 years and older – and total employment are required. Both components, however, are not always published or it is not always possible to get the age breakdown of a population, in which case data are provided for employment only with no accompanying ratio. Table 2 shows employment-to-population ratios for 176 economies for persons of working age (aged 15 years and over) and youth (aged 15 to 24 years). In comparison with the labour force participation rates (KILM 1), information on employment-to-population ratios is available for somewhat fewer economies[2] and for a shorter period (1991 forward).

Use of the indicator

The employment-to-population ratio provides information on the ability of an economy to create employment; for many countries the indicator is often more insightful than the unemployment rate. Although a high overall ratio is typically considered as positive, the indicator alone is not sufficient for assessing the level of decent work or the level of a decent work deficit.[3] Additional indicators are required to assess such issues as earnings, hours of work, informal sector employment, underemployment and working conditions. In fact, the ratio could be high for reasons that are not necessarily positive – for example, where education options are limited so that young people take up any work available rather than staying in school to build their human capital. For these reasons, it is strongly advised that indicators should be reviewed collectively in any evaluation of country-specific labour market policies.

1. Sometimes referred to as the "employment rate". In this text, we sometimes shorten the term to "employment ratio".

2. The economy count issue – and thus data availability may be a source of potential confusion to KILM users. Statistically, the labour force is the sum of employment and unemployment. Users may wonder, then, how it is possible for labour force participation rates (KILM table 1) to be presented for 195 economies while employment-to-population ratios (KILM table 2) and unemployment rates (KILM table 8a) are available for only 176 and 168 economies respectively. The answers lie in the procedures used by the ILO to estimate labour force participation rates; procedures that do not extend to the estimation of levels of labour force, employment and unemployment. The coverage should become more standard across the indicators in the future as the producers of the KILM work to produce a table containing all labour force components – employment, unemployment, labour force and population – based on the same source of information and with the same notes and methodology applied.

3. Since the publication of the ILO*: Decent Work*, Report of the Director-General, International Labour Conference, 87th Session, 1999 (Geneva, 1999), the goal of "decent work" has come to represent the central mandate of the ILO, bringing together standards and fundamental principles and rights at work, employment, social protection and social dialogue in the formulation of policies and programmes aimed at "securing decent work for women and men everywhere". For more information, see website: http://www.ilo.org/decentwork.

Employment-to-population ratios are becoming increasingly common as a basis for labour market comparisons across countries or groups of countries. Employment numbers alone are inadequate for purposes of comparison unless expressed as a share of the population who could be working. One might assume that a country employing 30 million persons is better off than a country employing 3 million persons, whereas the addition of the working-age population component would show another picture; if there are 3 million persons employed in Country A out of a possible 5 million persons (60 per cent employment-to-population ratio) and 30 million persons employed in Country B out of a possible 70 million (43 per cent employment-to-population ratio), then Country A has shown more efficiency in using its employment resources. The use of a ratio helps determine how much of the population of a country – or group of countries – is contributing to the production of goods and services.

Employment-to-population ratios are of particular interest when broken down by sex, as the ratios for men and women can provide information on gender differences in labour market activity in a given country. However, it should also be emphasized that this indicator has a gender bias in so far as there is a tendency to undercount women who do not consider their work as "employment" or are not perceived by others as "working". Women are often the primary child caretakers and responsible for various tasks at home, which can prohibit them from seeking paid employment, particularly if they are not supported by socio-cultural attitudes and/or family-friendly policies and programmes that allow them to balance work and family responsibilities.

Definitions and sources

The employment-to-population ratio is the proportion of a country's working-age population that is employed. The youth employment-to-population ratio is the proportion of the youth population – persons aged 15 to 24 years – that is employed.

Employment is defined in the resolution adopted by the 13th International Conference of Labour Statisticians (ICLS) as persons above a specified age who performed any work at all, in the reference period, for pay or profit (or pay in kind), or were temporarily absent from a job for such reasons as illness, maternity or parental leave, holiday, training or industrial dispute.[4] (See box 2a.) The resolution also states that unpaid family workers who work for at least one hour should be included in the count of employment, although many countries use a higher hour limit in their definition.

For most countries, the working-age population is defined as persons aged 15 years and older, although this may vary slightly from country to country. The ILO standard for the lower age limit is, in fact, 15 years. For many countries, this age corresponds directly to societal standards for education and work eligibility. However, in some countries, particularly developing ones, it is often appropriate to include younger workers because "working age" can, and often does, begin earlier. Some countries in these circumstances use a lower official bound and include younger workers in their measurements. Similarly, some countries have an upper limit for eligibility, such as 65 or 70 years, although this requirement is imposed rather infrequently (examples are Egypt (upper limit 64 years) and Finland (upper limit 74 years)).

Apart from issues related to age, the population base for employment ratios can vary across countries. In most cases, the resident non-institutional population of working age living in private households is used, excluding members of the armed forces and individuals residing in mental, penal or other types of institution. Many countries, however, include the armed forces in the population base for their employment ratios even when they do not include them in the employment figures.

4. Resolution concerning statistics of the economically active population, employment, unemployment and underemployment, adopted by the 13th International Conference of Labour Statisticians, Geneva, 1982; website: http://www.ilo.org/public/english/bureau/stat/download/res/ecacpop.htm.

Box 2a. Resolution concerning statistics of the economically active population, employment, unemployment and underemployment, adopted by the 13th International Conference of Labour Statisticians, October 1982 [relevant paragraphs]

Concepts and definitions

Employment (para. 9)

1. The "employed" comprise all persons above a specified age who during a specified brief period, either one week or one day, were in the following categories:
    a. "paid employment":
        i. "at work": persons who during the reference period performed some work for wage or salary, in cash or in kind;
        ii. "with a job but not at work": persons who, having already worked in their present job, were temporarily not at work during the reference period and had a formal attachment to their job. This formal job attachment should be determined in the light of national circumstances, according to one or more of the following criteria: (i) the continued receipt of wage or salary; (ii) an assurance of return to work following the end of the contingency, or an agreement as to the date of return; (iii) the elapsed duration of absence from the job which, wherever relevant, may be that duration for which workers can receive compensation benefits without obligations to accept other jobs;
    b. "self-employment":
        i. "at work": persons who during the reference period performed some work for profit or family gain, in cash or in kind;
        ii. "with an enterprise but not at work": persons with an enterprise, which may be a business enterprise, a farm or a service undertaking, who were temporarily not at work during the reference period for any specific reason.
2. For operational purposes, the notion of "some work" may be interpreted as work for at least one hour.
3. Persons temporarily not at work because of illness or injury, holiday or vacation, strike or lock-out, educational or training leave, maternity or parental leave, reduction in economic activity, temporary disorganization or suspension of work due to such reasons as bad weather, mechanical or electrical breakdown, or shortage of raw materials or fuels, or other temporary absence with or without leave should be considered as in paid employment provided they had a formal job attachment.
4. Employers, own account workers and members of producers' cooperatives should become considered as in self-employment and classified as "at work" or "not at work", as the case may be.
5. Unpaid family workers at work should be considered as in self-employment irrespective of the number of hours worked during the reference period. Countries which prefer for special reasons to set a minimum time criterion for the inclusion of unpaid family workers among the employed should identify and separately classify those who worked less than the prescribed time.
6. Persons engaged in the production of economic goods and services for own and household consumption should be considered as in self-employment if such production comprises an important contribution to the total consumption of the household.
7. Apprentices who received pay in cash or in kind should be considered in paid employment and classified as "at work" or "not at work" on the same basis as other persons in paid employment.
8. Students, homemakers and others mainly engaged in non-economic activities during the reference period, who at the same time were in paid employment or self-employment as defined in subparagraph (1) above, should be considered as employed on the same basis as other categories of employed persons and be identified separately, where possible.
9. Members of the armed forces should be included among persons in paid employment. The armed forces should include both the regular and the temporary members as specified in the most recent revision of the International Standard Classification of Occupations (ISCO).

In this table, employment is derived from nationally reported data and the harmonized labour force data used to calculate KILM table 1. The labour force data are harmonized to account for differences in national data and scope of coverage, collection and tabulation methodologies as well as for other country-specific factors such as military service requirements (see KILM 1 for further information). Nationally reported data are utilized only when these meet strict criteria in terms of international comparability and geographic coverage. Model estimates are used where national data are not available or satisfactory. Population data are also from the harmonized series used to calculate KILM table 1. The employment-to-population ratios are then calculated by expressing the number of persons in employment as a percentage of the population for the corresponding age group (either working-age or youth). Ratios may diverge slightly from nationally reported figures since the benchmarks differ.

Limitations to comparability

Comparability of employment ratios across countries is affected most significantly by variations in the definitions used for the employment and population figures, as described in the previous section. Perhaps the biggest differences result from age coverage, such as the lower and upper bounds for labour force activity. Estimates of both employment and population are likely to vary according to whether members of the armed forces are included. To a large extent, these comparability issues have been addressed in the construction of the table as employment and population figures are the harmonized series presented in KILM 1.

However, the use of nationally reported data in the construction of the estimates can also create issues with comparability due to the nature of the data source. National labour force surveys tend to be similar in several essential features, and data derived from them are likely to be more comparable than data obtained from other sources or from a combination of different sources. Nevertheless, despite their strength, labour force survey data may contain non-comparable elements in terms of scope and coverage or variations in national definitions of the employment concept.

An example of measurement differences that can arise has to do with the national treatment of particular groups of workers. The international definition, as stated above, calls for inclusion of all persons who worked for at least one hour during the reference period. The worker could be in paid employment or in self-employment or engaged in less obvious forms of work, each of which is dealt with in detail in the resolution, such as unpaid family work, apprenticeship or non-market production. The majority of exceptions to coverage of all persons employed in a labour force survey have to do with slight national variations to the international recommendation applicable to the alternate employment statuses. For example, some countries measure persons employed in paid employment only (United States Virgin Island) and some countries measure only “all persons engaged” (Albania until 2002, Lithuania until 1993, Malta until 1999), meaning paid employees plus working proprietors who receive some remuneration based on corporate shares. Additional, although of less significance, variations that apply to the “norms” pertaining to measurement of total employment include hours limits (beyond one hour) placed on contributing family members before inclusion. The United States, for example, includes only contributing family members who worked more than 15 hours per week during the reference period.[5]

5. The Republic of Korea excludes contributing family workers who worked less than 18 hours per week. Such exceptions are noted in the “Coverage limitation” field of all KILM tables relating to employment. The higher minimum hours used for contributing family workers is in keeping with an older international standard adopted by the International Conference of Labour Statisticians in 1954. According to the 1954 ICLS, contributing family workers were required to have worked at least one-third of normal working hours to be classified as employed. The special treatment was abandoned at the 1982 ICLS.

For most cases, household labour force surveys are used, and they provide estimates that are consistent with ILO definitional and collection standards. A small number of countries use other sources, such as population censuses or official estimates, which can cause problems of comparability at the international level.

Trends

Figure 2a shows that most countries in 2006 had employment ratios between 40 and 80 per cent. The only countries that had very high ratios – above 80 per cent – were the sub-Saharan African countries of Burkina Faso, Burundi, Guinea, the United Republic of Tanzania and Uganda. However, as has been discussed more thoroughly in Chapter 1, one simply cannot look at one indicator in isolation particularly when it comes to developing countries**.** People in this part of the world must work out of necessity – poverty and working poverty continue to be major obstacles for development within sub-Saharan Africa (see KILM 20). Naturally, the sector with the largest share of employment in the region remains agriculture (see KILM 4), which means that workers are rarely adequately paid or, alternatively, receive much in the way of profits, for their labour. This is particularly true for those in self-employment and contributing family work, undoubtedly the vast majority (see KILM 3). The large proportions of working poor and agricultural work typically mean that many people are not in decent, productive work.[6] According to international measurement standards,[7] most sub-Saharan Africans are indeed employed, however, several indicators suggest that many workers are underutilized.

At the other end of the spectrum, countries with very low employment-to-population ratios – below 40 per cent – also tend to appear in sub-Saharan Africa (namely, Lesotho, Namibia and Swaziland) but also in The former Yugoslav Republic of Macedonia and the Middle Eastern economies of Iraq and the West Bank and Gaza Strip. The low ratios for these two Middle Eastern countries are largely due to the extremely low female employment-to-population ratios, which are the lowest of all economies covered as shown in figure 2b. This is most likely because the economic contribution of women is severely constrained by social institutions such as laws, norms, codes of conduct and traditions. Other countries with low employment ratios, however, showed low ratios for both men and women, implying that in these countries few employment opportunities could be found for either women or men. The sub-Saharan African country of Namibia is an example of the latter situation where employment ratios were equally low for women and men.

Over the past decade, employment-to-population ratios increased for 74 economies, decreased for 65 economies, and showed little to no change – that is, changed by 1 percentage point or less – for 39 economies. In general, ratios for men declined in the past ten years while those for women rose. Increasing female employment ratios can be attributed to a multitude of factors, including increases in female enrolment in higher education, enactment of laws prohibiting discrimination on the basis of sex, and reductions in gender stereotyping in occupations and education. Despite falling male employment-to-population ratios and rising female ratios over the past decade, large differences remain between the genders, with males frequently much more likely to be employed than females (the only case where females have a higher employment ratio is in Mozambique and the difference is a mere 2.1 percentage points). Gender differences were minimal in the Eastern African countries of Burundi, Malawi, Mozambique, Rwanda and the United Republic

6. ILO: *African Employment Trends* (Geneva, April 2007); website: http://www.ilo.org/trends.

7. Resolution concerning statistics of the economically active population, employment, unemployment and underemployment, adopted by the 13th International Conference of Labour Statisticians, Geneva, October 1982; website: http://www.ilo.org/public/english/bureau/stat/download/res/ecacpop.pdf (see box 2a for excerpts relating to employment).

of Tanzania. In contrast, the differences tended to be much larger – more than 50 percentage points – in Egypt and the Middle Eastern countries of Bahrain, Oman, Qatar, Saudi Arabia and the United Arab Emirates, indicating that there is a large untapped potential of women in this part of the world.

While most of the changes in employment-to-population ratios have been driven by changing female ratios, these are also due to changes in youth ratios to some extent. Over the past decade, youth employment ratios decreased for the majority of the economies, which can be interpreted as a positive development since more youth are enrolling in education. The largest decreases, of at least 10 percentage points, were found in some of the new Member States of the European Union – the Czech Republic, Lithuania and Romania – as well as Luxembourg and several developing economies – Cape Verde, Chile, Lesotho, Macau (China), Mali and Thailand. The employment ratios in 2006 for these economies ranged from 22.0 per cent in Chile to 58.4 per cent in Mali. On the other hand, increases of at least 10 percentage points occurred mostly in developed economies – Finland, Iceland, Ireland and Netherlands – but also in Algeria and East Timor. Ratios in 2006 for these economies ranged from 33.1 per cent in Algeria to 68.8 in the Netherlands.

Figure 2a. Employment-to-population ratios, 2006

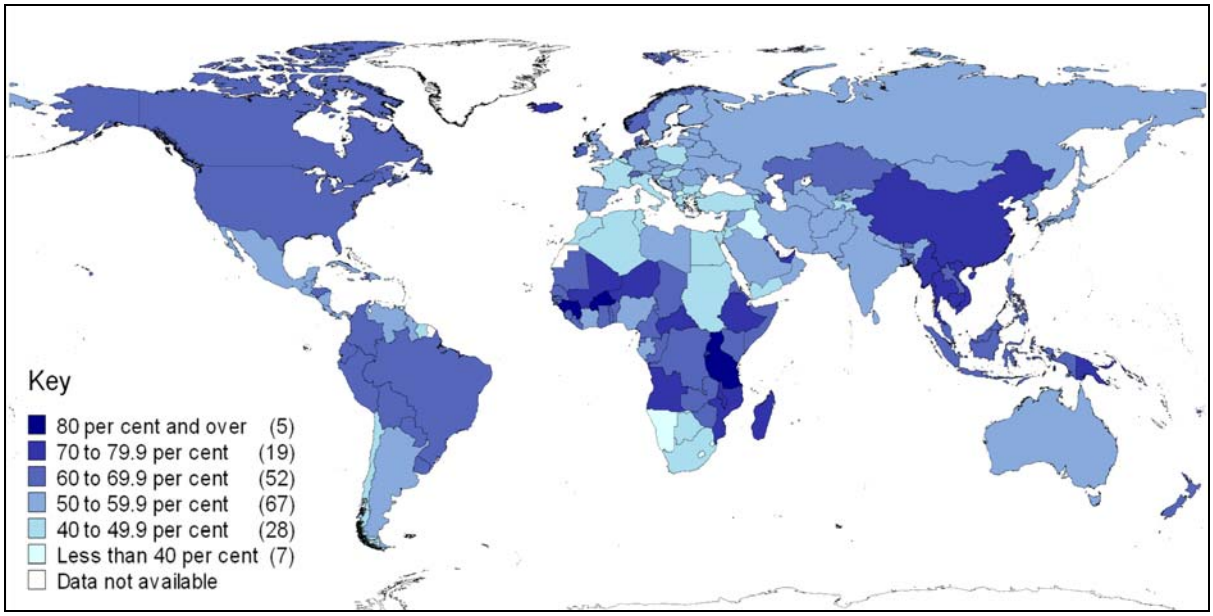
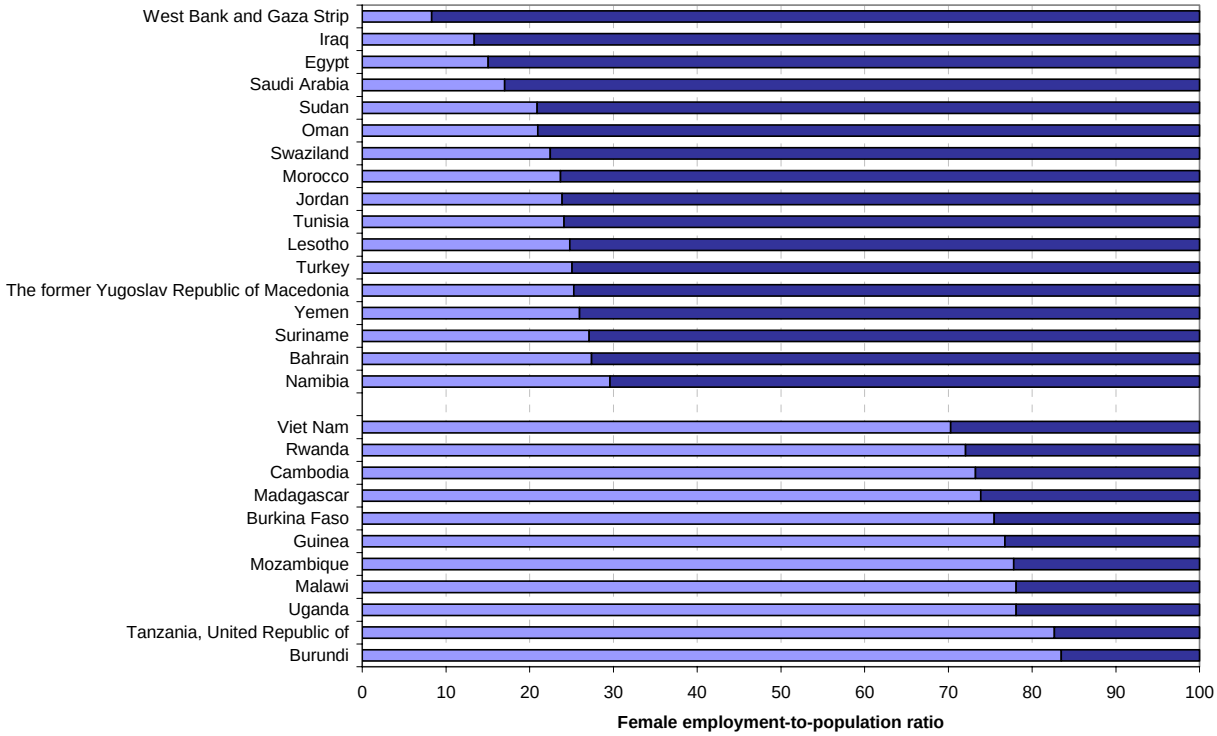


Figure 2b. Economies with female employment-to-population ratios below 30 per cent or above 70 per cent, 2006



Box 2b. World and regional estimates of employment-to-population ratios

Employment-to-population ratio (%) - both sexes	1996	2002	2003	2004	2005	2006*
WORLD	62.6	61.6	61.5	61.5	61.5	61.5
Global youth employment ratio	50.9	47.5	47.1	47.3	47.4	47.3
Developed Economies & European Union	55.9	56.0	55.8	56.1	56.2	56.5
Central & South-Eastern Europe (non-EU) & CIS	54.6	53.1	52.9	53.4	53.6	53.8
East Asia	75.0	73.0	72.6	72.4	72.1	71.9
South-East Asia & the Pacific	67.5	66.2	65.9	65.9	66.3	66.3
South Asia	58.4	57.3	57.4	56.8	56.7	56.7
Latin America & the Caribbean	58.4	59.3	59.7	59.9	59.9	59.9
North Africa	42.9	42.8	43.2	44.0	44.7	44.8
Sub-Saharan Africa	68.6	67.0	66.8	67.2	67.1	67.0
Middle East	46.0	47.6	48.3	49.1	49.2	49.6
Employment-to-population ratio (%) - males	**1996**	**2002**	**2003**	**2004**	**2005**	**2006***
WORLD	75.7	74.3	74.1	74.2	74.1	74.1
Global youth employment ratio - males	58.4	54.9	54.5	54.7	54.7	54.6
Developed Economies & European Union	65.8	64.7	64.2	64.3	64.3	64.3
Central & South-Eastern Europe (non-EU) & CIS	64.3	61.9	61.8	62.9	63.1	63.3
East Asia	81.0	79.1	78.7	78.6	78.3	78.2
South-East Asia & the Pacific	80.0	78.2	77.9	77.6	78.2	78.0
South Asia	80.3	78.8	78.7	78.4	78.3	78.2
Latin America & the Caribbean	76.3	75.1	75.2	74.9	74.4	74.0
North Africa	66.7	66.1	66.4	67.7	68.4	68.6
Sub-Saharan Africa	79.3	77.9	77.7	78.0	77.9	77.8
Middle East	69.0	69.1	69.7	70.0	69.9	70.0
Employment-to-population ratio (%) – females	**1996**	**2002**	**2003**	**2004**	**2005**	**2006***
WORLD	49.5	49.0	48.9	48.9	49.0	49.0
Global youth employment ratio - females	43.1	39.6	39.3	39.5	39.6	39.7
Developed Economies & European Union	46.7	47.9	47.9	48.4	48.6	49.0
Central & South-Eastern Europe (non-EU) & CIS	46.0	45.3	44.9	45.0	45.2	45.4
East Asia	68.8	66.7	66.2	66.0	65.6	65.3
South-East Asia & the Pacific	55.3	54.4	54.2	54.5	54.7	54.8
South Asia	34.9	34.3	34.7	33.8	33.9	34.0
Latin America & the Caribbean	41.2	44.3	45.0	45.6	46.2	46.6
North Africa	19.2	19.7	20.2	20.6	21.2	21.4
Sub-Saharan Africa	58.4	56.5	56.4	56.7	56.6	56.6
Middle East	20.5	23.9	24.7	26.0	26.5	27.2
Difference between the male and female ratios (percentage points)	**1996**	**2002**	**2003**	**2004**	**2005**	**2006***
WORLD	26.1	25.4	25.2	25.3	25.2	25.1
Youth	15.3	15.3	15.2	15.2	15.1	14.9
Developed Economies & European Union	19.0	16.8	16.3	15.9	15.6	15.3
Central & South-Eastern Europe (non-EU) & CIS	18.2	16.6	16.9	17.8	17.9	17.9
East Asia	12.1	12.4	12.5	12.6	12.7	12.9
South-East Asia & the Pacific	24.8	23.7	23.6	23.1	23.5	23.2
South Asia	45.4	44.5	44.0	44.6	44.4	44.2
Latin America & the Caribbean	35.1	30.9	30.3	29.3	28.1	27.4
North Africa	47.4	46.5	46.2	47.0	47.3	47.2
Sub-Saharan Africa	21.0	21.3	21.3	21.2	21.2	21.2
Middle East	48.6	45.2	45.0	44.0	43.4	42.8

Source: ILO Global Employment Trends Model (see box 3 in "A Guide to Understanding the KILM" for more information on estimation methodology). * 2006 preliminary estimates.

Box 2b (continued)

Employment-to-population ratios did not move considerably in the world as a whole over the last ten years. Compared to the world ratio of 61.5 per cent in 2006, there were five regions with considerably lower ratios (North Africa, the Middle East, Central & South-Eastern Europe (non-EU) & CIS, the Developed Economies & European Union and South Asia). Latin America & the Caribbean was close to the world average. South-East Asia & the Pacific, Sub-Saharan Africa and East Asia were the three regions with employment ratios that surpassed the global average.

Over the ten-year period four regions witnessed an increase in employment-to-population ratios: the Middle East (with the largest change of 3.2 percentage points), North Africa, Latin America & the Caribbean and the Developed Economies & European Union. All Asian regions as well as sub-Saharan Africa and Central & South-Eastern Europe (non-EU) & CIS witnessed a decrease.

When low employment-to-population ratios go hand in hand with high unemployment rates, there is a clear indication that there is a strong demand for more jobs. Countries in this situation should either focus policy goals on creating new employment opportunities or on offering other productive alternatives for parts of the population, an example of which would be to encourage enrolment in education. Increased education participation would lower the employment-to-population ratio, but in a positive way. The creation of additional employment opportunities, on the other hand, would result in an increase in the employment-to-population ratio, but it is important to keep in mind that expansion of employment opportunities is a positive development only if job quality can be deemed "decent".

Employment-to-population ratios for young people are naturally below those of adults since many young people are still in school. Regardless, the decrease in the youth employment-to-population ratio from 50.9 per cent in 1996 to 47.3 per cent in 2006 should be interpreted carefully. Over the last ten years, education shares have increased in all regions in the world, which can be viewed as a positive development. However, the fact that youth unemployment rates are far above adult unemployment rates in all regions (see box 9a in KILM 9), implying that despite gains in education young people have difficulty finding jobs when they leave school, it becomes clear that creating education facilities for young people cannot be the only solution in the youth employment challenge. Only a combination of better education for more young people plus the creation of decent employment opportunities for those who want to work will help to decrease the youth unemployment rates.

The gaps in employment ratios by sex continue to be drawn strikingly along regional lines. The entries in the table relating to the difference between the male and female employment ratios at the global and regional levels show a stark contrast between East Asia and the Developed Economies & European Union (where the gender gaps were 12.9 and 15.3 percentage points respectively in 2006) on the one hand and the Middle East, North Africa and South Asia on the other hand (where the gender gaps exceeded 40 percentage points). The latter are regions where the economic participation of women is dictated not by economic factors but, to a large extent, by non-economic factors that are largely culturally driven. Were paid employment analysed alone (excluding the employment category of contributing (unpaid) family work, which is made up almost entirely by women[1]), the difference between male and female employment ratios would be even more profound.

While the national results are mixed, thus making it difficult to draw conclusions, the regional aggregates do support the case for increasing employment activity of women in one of the regions where the employment ratio has been historically low – the Middle East. The female employment ratio in that region increased from 20.5 per cent in 1996 to 27.2 per cent in 2006. The female ratio in Latin America & the Caribbean also showed a remarkable increase from 41.2 to 46.6 per cent.

The gender gap of employment ratios for young people is considerably smaller than that of the overall population (14.9 percentage points in comparison with 25.1 percentage points). This indicates that existing discrimination patterns against young women with regard to employment increase as they enter adulthood.

[1] The suggestion to remove unpaid family work from any analysis of the economic role of women was made in the following recent OECD paper that aimed to measure women's discrimination: C. Morrison and J. Jütting: "Women's discrimination in developing countries: A new data set for better policies," in *World Development* (Elsevier Ltd.), 2005, Vol. 33, No. 7, pp. 1065-1081.

KILM 3. Status in employment

Introduction

The indicator of status in employment distinguishes between three categories of the total employed. These are: (a) wage and salaried workers (also known as employees); (b) self-employed workers; and (c) contributing family workers (also known as unpaid family workers). These three groups of workers are presented as percentages of the total employed for both sexes and for males and females separately. Information on the subcategories of the self-employed group – self-employed workers with employees (employers), self-employed workers without employees (own-account workers) and members of producers' cooperatives – is not available for all countries but is presented wherever possible.

The indicator on status in employment is available for most developed economies, as well as for many Central and Eastern European, Eastern Asian, Latin American and Caribbean countries. Unfortunately, there are only a few sub-Saharan African countries for which this indicator is available and, where coverage does exist, extensive time series are lacking. Currently, information is also unavailable for some large developing countries, such as China and India. Information for the indicator is included in table 3, at least to some extent, for 131 economies.

Use of the indicator

This indicator provides information on the distribution of the workforce by status in employment and can be used to answer questions such as what proportion of employed persons in a country (a) work for wages or salaries; (b) run their own enterprises, with or without hired labour; or (c) work without pay within the family unit? According to the International Classification of Status in Employment (ICSE), the basic criteria used to define the status groups are the types of economic risk that they face in their work, an element of which is the strength of institutional attachment between the person and the job, and the type of authority over establishments and other workers that the job-holder has or will have as an explicit or implicit result of the employment contract.[1] Employment status may be used to confirm or refute claims of an increasing informalization of labour markets, as indicated by a decline in numbers of employees with formal working agreements. Companies may try to create more flexible enterprises to meet fluctuating demands, using temporary labour rather than permanent staff. Examination of data on numbers of temporary workers in conjunction with this indicator could verify or refute claims that temporary jobs are crowding out more stable forms of employment.

Breaking down employment information by status in employment provides a statistical basis for describing workers' behaviour and conditions of work, and for defining an individual's socio-economic group.[2] A high proportion of wage and salaried workers in a country can signify advanced economic development. If the proportion of own-account workers (self-employed without hired employees) is sizeable, it may be an indication of a large agriculture sector and low growth in the formal economy. Contributing family work is a form of labour – generally unpaid, although compensation might come indirectly in the form of family income – that supports production for the market. It is particularly

1. Resolution concerning the international classification of status in employment, adopted by the 15th International Conference of Labour Statisticians, Geneva, 1993; website: http://www.ilo.org/public/english/bureau/stat/class/icse.htm.

2. United Nations: *Handbook for Producing National Statistical Reports on Women and Men*, Social Statistics and Indicators, Series K, No. 14 (New York, 1997), p. 217.

common among women, especially women in households where other members engage in self-employment, specifically in running a family business or in farming. Where large shares of workers are contributing family workers, there is likely to be poor development, little job growth, widespread poverty and often a large rural economy.

The indicator is strongly linked to the employment-by-sector indicator (KILM 4). With economic growth, one would expect to see a shift in employment from the agricultural to the industry and services sectors, which, in turn, would be reflected in an increase in the number of wage and salaried workers. Also, a shrinking share of employment in agriculture would result in a lower proportion of contributing family workers, who are often widespread in the rural sector in developing economies. Countries that show falling proportions of either the share of own-account workers or contributing family workers, and a complementary rise in the share of employees, accompany the move from a low-income situation with a large informal or rural sector to a higher-income situation with high job growth. The Republic of Korea is one such example, where large shifts in status in employment have accompanied economic growth.

Shifts in proportions of status in employment are generally not as sharp or as clear as shifts in sectoral employment. A country with a large informal economy, in both the industrial and services sectors, may tend to have larger proportions of both self-employed and contributing family workers than a country with a smaller sector. It may be more relevant to view status in employment within the various sectors in order to determine whether there has been a change in their relative shares, and such degree of detail is likely to be available for countries in the results of recently conducted labour force surveys or population censuses. Chapter 1 discusses the interplay of status in employment and employment by sector, and how these indicators can be used to identify vulnerable groups in the labour market.

Definitions and sources

International recommendations for the status in employment classification have existed since before 1950.[3] In 1958, the United Nations Statistical Commission approved the International Classification by Status in Employment (ICSE). At the 15th International Conference of Labour Statisticians (ICLS) in 1993, the definitions of categories were revised.[4] The 1993 revisions retained the existing major categories, but attempted to improve the conceptual basis for the distinctions made and the basic difference between wage employment and self-employment.

The 1993 ICSE categories and extracts from their definitions follow:

i. **Employees** are all those workers who hold the type of jobs defined as "paid employment jobs", where the incumbents hold explicit (written or oral) or implicit employment contracts that give them a basic remuneration that is not directly dependent upon the revenue of the unit for which they work.
ii. **Employers** are those workers who, working on their own account or with one or a few partners, hold the type of jobs defined as a "self-employment jobs" (i.e. jobs where the remuneration is directly dependent upon the profits derived from the goods and services produced), and, in this capacity, have engaged, on a continuous basis, one or more persons to work for them as employee(s).
iii. **Own-account workers** are those workers who, working on their own account or with one or more partners, hold the type

3. The Sixth International Conference of Labour Statisticians (1947) and the 1950 Session of the United Nations Population Commission both made relevant recommendations for statistics on employment and unemployment and on population censuses respectively.

4. Resolution concerning the international classification of status in employment, op. cit. The 1993 international classification is reproduced in full in Appendix B.

of jobs defined as a "self-employment jobs" [see ii above], and have not engaged on a continuous basis any employees to work for them.

iv. **Members of producers' cooperatives** are workers who hold "self-employment jobs" [see ii or iii above] in a cooperative producing goods and services.

v. **Contributing family workers** are those workers who hold "self-employment jobs" as own-account workers [see iii above] in a market-oriented establishment operated by a related person living in the same household.

vi. **Workers not classifiable by status** include those for whom insufficient relevant information is available, and/or who cannot be included in any of the preceding categories.

The status-in-employment indicator presents all six groups used in the ICSE definitions. The three major groups – self-employed, employees and contributing family workers – cover the three broad types of status in employment. The remaining three – employers (group ii); own-account workers (group iii); and members of producers' cooperatives (group iv) – are sub-categories of total self-employed. Please note that contributing family workers are also technically self-employed according to the classification and could therefore be combined with the other self-employed categories to derive the total self-employed. The choice to remove contributing family workers from among the self-employed group was made for the purpose of this publication in order to emphasize the difference between the two statuses, since the socio-economic implications associated with each status can be significantly varied. The number in each status category is divided by total employment to arrive at the percentages shown in table 3.

Most of the information for this indicator was gathered from three international repositories of labour market data: (a) the ILO Bureau of Statistics, Yearbook of Labour Statistics (LABORSTA) database;[5] (b) the Organisation for Economic Co-operation and Development (OECD); and the Labour Market Indicators Library (LMIL).

Limitations to comparability

The indicator on status in employment can be used to study how the distribution of the workforce by status in employment has changed over time for a particular country; how this distribution differs across countries; and how it has developed over the years for different countries. However, there are often differences in definitions, as well as in coverage, across countries and for different years, resulting from variations in information sources and methodologies that make comparisons difficult.

Some definitional changes or differences in coverage can be overlooked. For example, it is not likely to be significant that status-in-employment comparisons are made between countries using information from labour force surveys with differing age coverage. (The generally used age coverage is 15 years and over, but some countries use a different lower limit or impose an upper age limit.) In addition, in a limited number of cases one category of self-employed – the members of producers' cooperatives – are included with wage and salaried workers (Czech Republic and Poland). The effects of this non-standard grouping are likely to be small.

What is more important to note is that information from labour force surveys is not necessarily consistent in terms of what is included in employment. For example, the

5. Additional documentation regarding national practices in the collection of statistics is provided in ILO: *Sources and Methods*: *Labour Statistics*, Vol. 3: *Economically Active Population, Employment, Unemployment and Hours of Work (Household Surveys)*; Vol. 5: *Total and Economically Active Population, Employment and Unemployment (Population Censuses)*. The *Sources and Methods* are available online at the country level on website: http://laborsta.ilo.org.

information supplied by the OECD relates to civilian employment, which can result in an underestimation of "employees" and "workers not classifiable by status", especially in countries that have large armed forces. The other two categories, self-employed and contributing family workers, would not be affected, although their relative shares would be.

With respect to geographic coverage, information from a source that covers only urban areas or only particular cities cannot be compared fairly with information from sources that cover both rural and urban areas, that is, the entire country. It is, therefore, not meaningful to compare results from many of the Latin American countries with results from the rest of the world because employment-by-status information for most Latin American countries relates to urban areas only.[6] Similarly, for some sub-Saharan African countries – where very limited information is available anyway – the self-employed group often does not include members of producers' cooperatives, while for other countries it may.

For "wage and salaried workers" one needs to be careful about the coverage, noting whether, as mentioned above, it refers only to the civilian population or to the total population. Moreover, the status-in-employment distinctions used in this chapter do not allow for finer distinctions in working status – in other words, whether workers have casual or regular contracts and the kind of protection the contracts provide against dismissals, as all wage and salaried workers are grouped together.

6. When performing queries on this table and tables 4a-c on employment by sector, we strongly recommend removing countries that are not of national coverage from the selection when making comparisons across countries. On the software, this can be done by performing the query for all data and then refining the parameters to select the "national only" button under "Geographic coverage".

Trends

This figure of selected developing economies next to the developed economies shows the stark contrast in how people earn a living in developing versus developed economies (Figure 3a). A clear majority of workers are engaged in wage and salaried employment in the developed economies of Canada, the Netherlands and the United Kingdom while the majority of workers in the selected developing economies in sub-Saharan Africa and Asia continue to work as self-employed workers (including contributing family workers). As noted above, a country with a sizeable self-employed workforce is indicative of a country with a large agriculture sector, low growth levels in the formal sector and of widespread poverty. It is interesting to note the signs of different levels of development even within sub-Saharan Africa, as reflected in the indicator on employment status. The wealthier African countries of Botswana and Namibia are now reaching the shares of wage and salaried workers in total employment that are seen in the developed economies. These countries also show lower proportions of workers in agriculture and more in industry and services than the other African countries (see table 4a), which is also more in line with the developed economies with strong formal sectors.

There is generally a positive relationship between the level of development as measured by income per capita and the proportion of employers. For example, in all sub-Saharan African countries for which data is available, employers constituted less than 5 per cent of the employed, with the exception of the more affluent countries of Mauritius, Namibia and South Africa. Similarly, many of the recent member countries of the European Union had relatively low shares of employers in total employment in comparison with the older members (Figure 3b). However, the European Union also showed that factors other than income per capita are important in explaining employment status. In 2003, employers constituted 6 per cent of the employed in

Box 3a. World and regional estimates of status in employment

Total (%)	Wage and salaried worker		Employers		Own-Account Workers		Contributing family workers	
Employment shares by status (%) - both sexes	**1996**	**2006***	**1996**	**2006***	**1996**	**2006***	**1996**	**2006***
WORLD	43.1	46.9	3.4	2.9	30.8	33.0	22.7	17.2
Developed Economies & European Union	82.4	84.3	6.4	6.3	8.7	7.8	2.5	1.6
Central & South-Eastern Europe (non-EU) & CIS	77.1	76.6	2.9	3.8	14.2	16.1	5.7	3.6
East Asia	32.4	42.6	2.8	1.2	33.4	38.2	31.4	18.0
South East Asia & the Pacific	33.0	38.8	2.1	2.1	34.8	35.2	30.1	23.9
South Asia	17.1	20.8	1.5	1.0	45.6	47.4	35.8	30.8
Latin America & the Caribbean	64.4	62.7	4.4	4.7	24.5	27.1	6.7	5.5
North Africa	54.4	58.3	7.9	9.6	17.7	16.2	20.0	15.9
Sub-Saharan Africa	20.6	22.9	3.1	3.0	49.1	48.7	27.2	25.4
Middle East	58.5	61.5	3.9	5.2	28.6	22.6	9.0	10.6
Employment shares by status (%) - males	**1996**	**2006***	**1996**	**2006***	**1996**	**2006***	**1996**	**2006***
WORLD	44.5	47.4	4.2	3.6	36.9	37.6	14.4	11.4
Developed Economies & European Union	80.6	81.7	8.1	8.0	10.1	9.5	1.2	0.8
Central & South-Eastern Europe (non-EU) & CIS	75.9	75.4	3.4	4.2	17.1	18.2	3.7	2.3
East Asia	36.9	46.0	3.8	1.5	40.0	40.8	19.3	11.7
South East Asia & the Pacific	36.7	41.5	2.9	2.7	43.0	41.2	17.3	14.5
South Asia	20.0	23.4	1.9	1.3	56.9	56.8	21.2	18.5
Latin America & the Caribbean	62.3	60.6	5.6	6.1	26.3	29.0	5.8	4.4
North Africa	56.1	58.8	9.5	11.7	18.4	17.1	16.0	12.5
Sub-Saharan Africa	26.4	29.2	3.5	3.2	49.1	49.0	21.0	18.6
Middle East	59.4	64.4	4.6	6.5	30.1	23.8	6.0	5.3
Employment shares by status (%)- females	**1996**	**2006***	**1996**	**2006***	**1996**	**2006***	**1996**	**2006***
WORLD	41.1	46.0	2.1	1.9	21.5	26.2	35.4	26.0
Developed Economies & European Union	84.8	87.5	4.2	4.1	6.8	5.9	4.1	2.5
Central & South-Eastern Europe (non-EU) & CIS	78.7	78.0	2.4	3.2	10.7	13.5	8.3	5.3
East Asia	26.9	38.3	1.6	0.8	25.2	34.9	46.2	25.9
South East Asia & the Pacific	27.6	35.0	1.0	1.1	23.2	26.9	48.3	37.0
South Asia	10.2	14.6	0.4	0.4	17.8	24.4	71.6	60.6
Latin America & the Caribbean	68.2	65.8	2.2	2.6	21.3	24.3	8.3	7.3
North Africa	48.9	56.7	2.4	3.0	15.1	13.5	33.6	26.8
Sub-Saharan Africa	13.1	14.4	2.6	2.7	49.0	48.4	35.3	34.5
Middle East	55.2	53.5	1.0	1.5	23.3	19.3	20.5	25.8

Source: ILO Trends Labour Force Model (see box 3 in "A Guide to Understanding the KILM" for more information on estimation methodology).
* 2006 preliminary estimates.

In 2006, almost half of world employment was wage and salaried work, although at the regional level, the shares varied significantly – ranging from about one-fifth in sub-Saharan Africa and South Asia to almost 85 per cent in the Developed Economies & European Union. In sub-Saharan Africa and South Asia, the largest proportion of employed persons was instead own-account workers (just below 50 per cent) followed by contributing family workers (between 25 and 30 per cent). In other words, more than 70 per cent of workers in these two regions were in vulnerable employment. As discussed more fully in Chapter 1, own-account workers and contributing family workers are considered particularly vulnerable when it comes to both economic risk and strength of the institutional arrangement, two qualities which are closely intertwined and indicative of decent work deficits.

(continued)

Box 3a (continued)

Over the last ten years, the most noticeable changes in employment status patterns were observed in East Asia, where the impressive economic performance – especially in China – led to a 10.1 percentage point increase in the share of wage and salaried workers and a 13.3 point decrease in the share of unpaid contributing family workers. Other Asian regions and North Africa also experienced shifts from unpaid family work to wage and salaried work but to a lesser degree. Meanwhile, wage and salaried employment in sub-Saharan Africa barely increased from its very low share over the last ten years. This reflects the constant underutilization of employed persons in this region and consequently poverty reduction has been sluggish.

Status of employment is also useful for evaluating progress made by women in the world of work. Shifting status from an unpaid contributing family worker or a low paid own-account worker to a wage and salaried worker is a major step forward in terms of freedom and self-determination for many women. Nonetheless, it does not guarantee that these women are acquiring decent jobs right away. In 2006, 46.0 per cent of the world's working women were in wage and salaried employment compared with 41.1 per cent ten years earlier. The share of female own-account workers also increased from 21.5 per cent in 1996 to 26.2 per cent in 2006 while the share of contributing family workers dropped from 35.4 per cent to 26.0 per cent during the same period. Meanwhile, in the poorest regions of the world, the share of female contributing family workers in total employment was still much higher than the men's share meaning that women were much less likely to be wage and salaried workers. For example, in sub-Saharan Africa and South-East Asia & the Pacific, almost four out of ten working women were classified as contributing family workers and, in South Asia, six out of ten women had this status, whereas in all three regions less than two out of ten men were classified as contributing family workers.

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Ireland, as compared to 12 per cent in Italy, while the income per capita in the former was around 46 per cent higher than in the latter. Such differences in the share of employers may be explained by variations in economic growth strategies, for instance the promotion of large international corporations vis-à-vis small enterprise development.

The breakdown of status in employment by sex points to major differences between the labour market position of men and women. Firstly, women were more likely than men to enter wage and salaried work. In 55 of the 63 countries for which KILM 3 data are available for 2005, the proportion of female employees in female employment was more than the corresponding proportion for males. Secondly, women constituted the bulk of contributing family workers worldwide. Finally, women were less likely to work as employers in virtually all countries. The small proportion of female employers is illustrated by Figure 3c for selected countries in the European Union, both in comparison to the corresponding male proportion, and in comparison to the proportion of employees.

Figure 3a. The distribution of workers by status is highly reflective of the level of development, selected countries, latest year

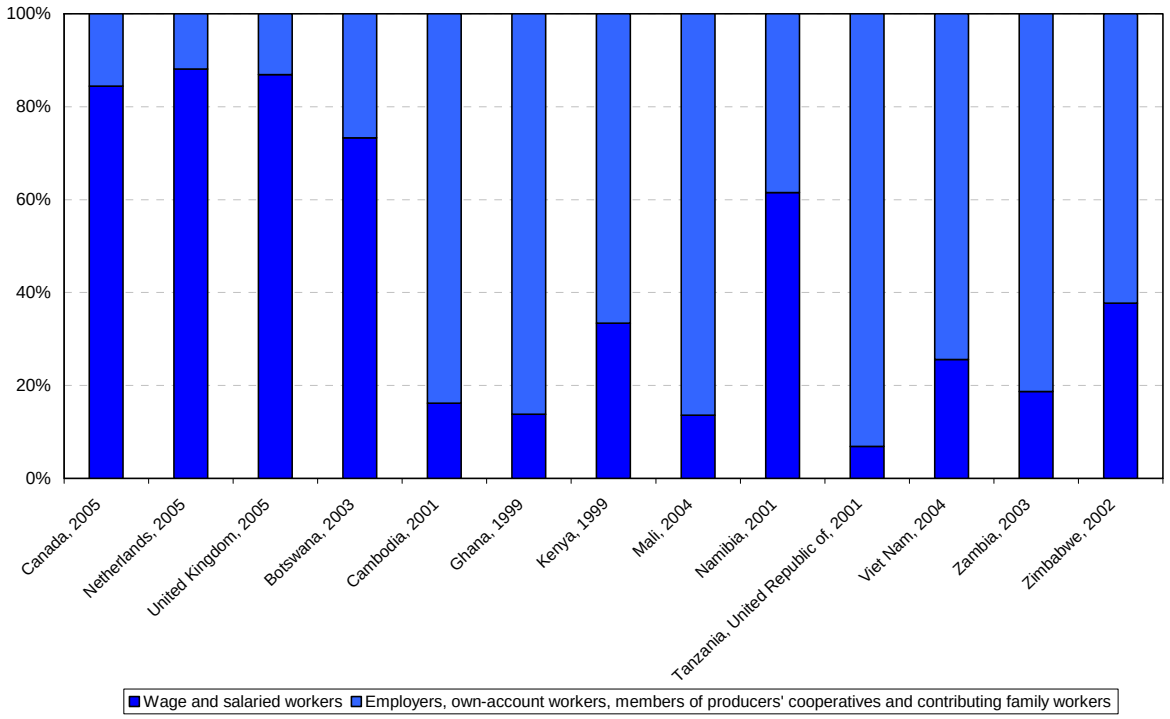


Figure 3b. The share of employers in total employment, selected countries in the European Union

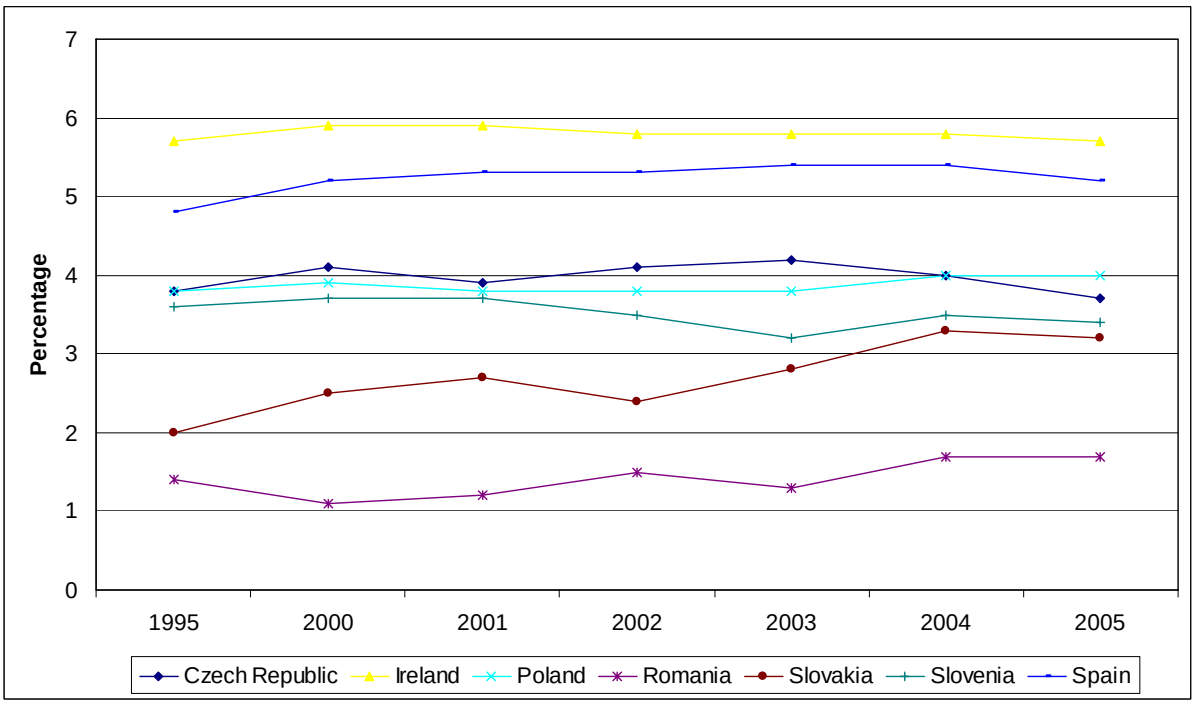
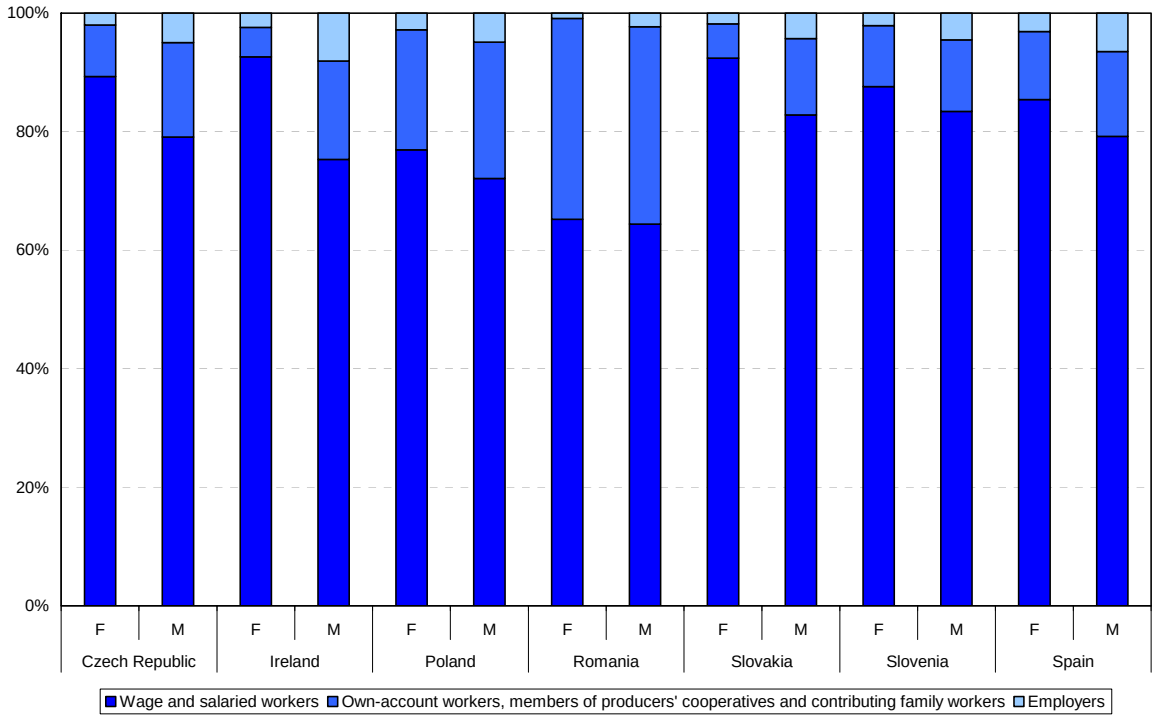


Figure 3c. The share of employers and employees in total employment, selected countries in the European Union, 2005



KILM 4. Employment by sector

Introduction

The indicator for employment by sector divides employment into three broad groupings of economic activity: agriculture, industry and services. Table 4a presents data for 130 economies for the three sectors as a percentage of total employment. Although data are limited to one or two years in the majority of economies in sub-Saharan Africa and the Middle East and North Africa, every region is covered. Because users may be interested in analysing trends in employment in greater sectoral detail, the KILM also includes two tables showing detailed breakdowns of employment by sector as defined by the International Standard Industrial Classification of all Economic Activities, Revisions 2 (1968) and 3 (1990). Table 4b presents employment by the latest revision, ISIC 3 tabulation category as a percentage of total employment, while table 4c presents employment by ISIC 2 major division as a percentage of total employment. (See box 4a for the list of 1-digit sector levels for each ISIC revision.) Percentage breakdowns are shown by sex for virtually all economies covered.

Use of the indicator

Sectoral information is particularly useful in identifying broad shifts in employment and stages of development. In the textbook case of economic development, labour flows from agriculture and other labour-intensive primary activities to industry and finally to the services sector; in the process, workers migrate from rural to urban areas. See Chapter 1 for a more detailed discussion of this process, and how the indicator on employment by sector can be used in conjunction with other indicators, in particular employment by status, to identify vulnerable groups in the labour market.

Classification into broad groupings may obscure fundamental shifts within industrial patterns. An analysis of tables 4b and 4c, however, allows identification of individual industries and services where employment is growing or stagnating. Teamed with information on job vacancies by sector, the more detailed 4b and 4c, viewed over time, should provide a picture of where demand for labour is focused and, as such, could serve as a guide for policy makers designing skills and training programmes that are aimed to improve the match between labour supply and demand. Of particular interest to many researchers is employment in the manufacturing sector (ISIC 3, tabulation category D and ISIC 2, major division 3). One could also investigate, for example, how employment in the hotel and restaurant sector (ISIC 3, tabulation category H) has evolved in countries such as Switzerland or in the Caribbean, where tourism provides a major portion of the national product. Or one may wish to see which sectors in the countries of Central and Eastern Europe (non-EU) and the CIS are experiencing recovery and employment expansion since the changeover to market economies in the early 1990s.

It is also interesting to study sectoral employment flows in connection with productivity trends (see KILM 18) in order to separate within-sector productivity growth (i.e. resulting perhaps from changes in capital or technology) from the productivity growth resulting from shifts of workers from lower- to higher-productivity sectors. Finally, the breakdown of the indicator by sex allows for analysis of gender segregation of employment by specific sector. Are men and women equally distributed in certain sectors, or is there a concentration of females among the services sector where wage rates are generally below those in the industrial sector? Women may be drawn into lower-paying service activities that allow for more flexible work schedules thus making it easier to balance family

Box 4a. International Standard Industrial Classification of all Economic Activities

Revision 2, 1968 – Major divisions

0	Activities not adequately defined
1	Agriculture, hunting, forestry and fishing
2	Mining and quarrying
3	Manufacturing
4	Electricity, gas and water
5	Construction
6	Wholesale and retail trade and restaurants and hotels
7	Transport, storage and communication
8	Financing, insurance, real estate and business services
9	Community, social and personal services

Revision 3, 1990 – Tabulation categories

A	Agriculture, hunting and forestry
B	Fishing
C	Mining and quarrying
D	Manufacturing
E	Electricity, gas and water supply
F	Construction
G	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods
H	Hotels and restaurants
I	Transport, storage and communications
J	Financial intermediation
K	Real estate, renting and business activities
L	Public administration and defence; compulsory social security
M	Education
N	Health and social work
O	Other community, social and personal services activities
P	Private households with employed persons
Q	Extra-territorial organizations and bodies
X	Not classifiable by economic activity

Revision 4, forthcoming

Revision 4 of ISIC was recently adopted by the Statistical Commission and its implementation is expected to be completed in 2009. The revision's objectives are to enhance its relevance and comparability with other standard classifications used around the world, while ensuring its continuity.

To preserve its relevance, ISIC Revision 4 incorporates new economic production structures and activities. Moreover, the structure differs significantly from ISIC Revision 3.1 in order to better reflect current economic organization throughout the world. Meanwhile, the proposed classification structure allows for improved comparison with other standards, such as the Classification of Economic Activities in the European Community (NACE), North American Industry Classification System (NAICS) and Australian and New Zealand Standard Industrial Classification (ANZSIC). Specifically, a comprehensive alignment has been retained with NACE at all levels of the classification, while clear links with NAICS and ANZSIC have been developed at the two-digit level.

(continued)

Box 4a (continued)

The following is a draft of the main tabulation categories of the new classification system:

A	Agriculture, forestry and fishing
B	Mining and quarrying
C	Manufacturing
D	Electricity, gas, steam and air conditioning supply
E	Water supply; sewerage, waste management and remediation activities
F	Construction
G	Wholesale and retail trade; repair of motor vehicles and motorcycles
H	Transportation and storage
I	Accommodation and Food service activities
J	Information and communication
K	Financial and insurance activities
L	Real estate activities
M	Professional, scientific and technical activities
N	Administrative and support service activities
O	Public administration and defence; compulsory social security
P	Education
Q	Human health and social work activities
R	Arts, entertainment and recreation
S	Other service activities
T	Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use
U	Activities of extraterritorial organizations and bodies

The detailed structure and explanatory notes for the proposed ISIC Revision 4 are available at http://unstats.un.org/unsd/cr/registry/docs/isic4-061120.pdf.

responsibilities with work life. Segregation of women in certain sectors may also result from cultural attitudes that prevent them from entering industrial employment.

Definitions and sources

For the purposes of the aggregate sectors shown in table 4a, the agriculture, industry and services sectors are defined by the International Standard Industrial Classification (ISIC) System (Revision 2 and Revision 3).[1] (Appendix C contains the structure for both ISIC Revisions.) The agriculture sector comprises activities in agriculture, hunting, forestry and fishing, in accordance with major division 1 of ISIC 2 or categories A and B of ISIC 3. The industry sector comprises mining and quarrying, manufacturing, construction and public utilities (electricity, gas and water), in accordance with major divisions 2 to 5 of ISIC 2 or categories C to F of ISIC 3. The services sector consists of wholesale and retail trade, restaurants and hotels, transport, storage and communications, finance, insurance, real estate and business services, and community, social and personal services. This sector

1. United Nations: *International Standard Industrial Classification of all Economic Activities*, Series M, No. 4, Rev. 3 (New York, 1989; Sales No. E.90.XVII.11). Also available in Arabic, Chinese, French, Russian and Spanish. All ISIC versions may be found on website: http://unstats.un.org/unsd/cr/registry/.

corresponds to major divisions 6 to 9 of ISIC 2 or categories G to P of ISIC 3. See the table below for a representation of how the aggregate sectors are calculated according to the different ISIC revisions: sectors are shown at the detailed 1-digit level according to ISIC 3 in table 4b and ISIC 2 in table 4c. In May 2002 ISIC Revision 3.1 superseded Revision 3.0; however, data do not yet reflect this latest update. Changes in Revision 3.1 pertain to the more detailed level of the classification hierarchy, that is, the 2- to 4-digit level; the 1-digit level data presented in table 4b would not change under the latest revision.

Aggregate sector	ISIC 2 major divisions	ISIC 3 categories
Agriculture	1	A+B
Industry	2+3+ 4+5	C+D+E+F
Services	6+7+8+9	G+H+I+J+K+L+M+N+O
Sector not adequately define	0	Q+X

Information for this indicator has been assembled from a number of international repositories and is derived from a variety of sources, including household or labour force surveys, official estimates and censuses. In a very few cases and only where other types of sources are not available, information is derived from insurance records and establishment surveys. The primary repositories used for the indicator are the ILO's LABORSTA database and the OECD's labour force statistics database (civilian coverage only). These sources are enhanced by various international and regional repositories, such as the ILO's regional database for the Caribbean and the ILO Labour Market Indicators Library (LMIL).

Limitations to comparability

Information on a country provided by the employment-by-sector indicator can differ according to whether the armed forces, the self-employed and contributing family members are included in the estimate. These differences introduce elements of non-comparability across countries. When the armed forces are included in the measure of employment they are usually allocated to the services sector; the services sector, therefore, in countries that do not include armed forces tends to be understated in comparison with countries where they are included. Information obtained from establishment surveys covers only employees (wage and salary earners); thus, the self-employed and contributing family members are excluded. In such cases, the employment share of the agriculture sector in particular is severely underrepresented in comparison with countries that report total employment without exclusion of status groups. If making strict comparisons, such records should not be used.[2] In table 4a, records from establishment surveys are found only for Belarus, Cambodia, Kenya, Mauritius and Thailand.

Where information is reported for total employment or civilian employment for the entire country, comparability across countries is reasonable for the employment-by-sector indicator, because of the similarity in coverage. Caution should be used, however, where the information refers only to employees[3] or only to urban areas. For some years in certain countries, the sectoral information relates only to urban areas, so that little or no agricultural work is recorded.

2. Establishment surveys can be unselected in the "Parameters" tab on the software.

3. Wage and salaried workers are covered only for some years in the following countries: Belarus, Brunei Darussalam, Cambodia, Ethiopia, Fiji, French Polynesia, Guam, Kazakhstan, Kenya, Mauritius, New Caledonia, Solomon Islands and Thailand.

Box 4b. World and regional estimates of employment by sector

	Employment in agriculture (%)		Employment in industry (%)		Employment in services	
Both sexes	**1996**	**2006***	**1996**	**2006***	**1996**	**2006***
WORLD	41.9	36.1	21.1	21.9	37.0	42.0
Developed Economies & European Union	6.2	4.2	28.5	24.7	65.3	71.2
Central & South-Eastern Europe (non-EU) & CIS	27.2	20.3	28.7	25.8	44.1	53.8
East Asia	48.5	40.9	24.3	25.6	27.2	33.5
South-East Asia & the Pacific	51.0	45.4	16.5	18.6	32.5	36.0
South Asia	59.7	49.4	15.2	21.0	25.1	29.6
Latin America & the Caribbean	23.1	19.6	20.7	20.8	56.1	59.6
North Africa	36.5	34.4	19.8	20.0	43.7	45.6
Sub-Saharan Africa	74.4	65.9	7.5	10.0	18.1	24.1
Middle East	21.2	18.1	25.2	25.6	53.7	56.3
Males	**1996**	**2006***	**1996**	**2006***	**1996**	**2006***
WORLD	40.5	35.2	23.8	24.9	35.8	39.9
Developed Economies & European Union	6.8	4.8	37.2	34.4	56.0	60.9
Central & South-Eastern Europe (non-EU) & CIS	27.1	20.5	33.7	32.3	39.2	47.1
East Asia	45.2	38.6	25.5	26.7	29.3	34.7
South-East Asia & the Pacific	49.8	45.8	18.5	20.1	31.7	34.1
South Asia	54.0	44.3	16.8	22.3	29.2	33.3
Latin America & the Caribbean	28.3	25.4	23.8	24.8	47.9	49.7
North Africa	37.3	34.4	20.0	21.5	42.6	44.1
Sub-Saharan Africa	72.1	63.5	9.6	12.5	18.2	24.0
Middle East	20.1	13.1	26.4	28.2	53.5	58.7
Females	**1996**	**2006***	**1996**	**2006***	**1996**	**2006***
WORLD	44.2	37.5	16.9	17.2	38.9	45.3
Developed Economies & European Union	5.3	3.4	17.0	12.7	77.7	84.0
Central & South-Eastern Europe (non-EU) & CIS	27.2	20.1	22.5	17.8	50.2	62.1
East Asia	52.5	43.8	22.8	24.2	24.7	32.0
South-East Asia & the Pacific	52.7	44.7	13.5	16.5	33.8	38.8
South Asia	73.7	61.9	11.3	17.8	15.0	20.3
Latin America & the Caribbean	14.0	10.8	15.3	14.6	70.8	74.6
North Africa	33.5	34.2	19.0	15.1	47.4	50.7
Sub-Saharan Africa	77.3	69.2	4.8	6.6	17.9	24.2
Middle East	25.3	32.3	20.4	18.2	54.3	49.5

Note: A = share of total employment in agriculture; I = share of total employment in industry; S = share of total employment in services.
Source: ILO Global Employment Trends Model (for more information on estimation methodology, see box 3 in "Guide to understanding the KILM").
* 2006 preliminary estimates.

Box 4b (continued)

In recent years agriculture has lost its place as the main sector of employment and has been replaced by the services sector, which in 2006 constituted 42.0 per cent of world employment compared to 36.1 per cent for agriculture. As for the industry sector, it represented 21.9 per cent of total employment, which is almost unchanged from ten years ago. Although textbook theory suggests that economic development entails a structural transformation with a shift away from agriculture to the industry sector, this no longer seems to be reflected in reality. Instead of moving into high-productivity jobs in the industry sector, people are moving directly into the services sector, which consists of both high- and low-productivity jobs. Therefore, it is unclear if the sectoral shift goes hand in hand with productivity increases and thereby a better utilization of the workforce.

Agriculture is still the main sector of employment in the world's poorest regions. Two-thirds of workers in sub-Saharan Africa and almost half of workers in South Asia and South-East Asia & the Pacific are in agriculture.

In most regions of the world, industry accounted for about one-fourth to one-fifth of all people employed in 2006, with the exception of sub-Saharan Africa and South-East Asia & the Pacific, which had the lowest proportions at 10.0 and 18.6 per cent, respectively.

In 2006, the share of employment in the services sector ranged widely from 71.2 per cent in the Developed Economies & European Union down to 24.1 per cent in sub-Saharan Africa. While all three Asian regions contained about one-third of employment in the services sector, the remaining regions had shares from 45.6 to 59.6 per cent.

Although the gender gap for sector employment is quite noticeable at the global level, it is even more prominent at the regional level for some sectors.[1] For example, in 2006 women had a much higher share of agricultural employment than men in East Asia and the Middle East and men had a higher share than women in Latin America & the Caribbean, whereas in all other regions the shares were relatively equal.

In all regions, women's share of employment in industry was lower than that of men in 2006. The difference was particularly striking in the Developed Economies & European Union, where only 12.7 per cent of women worked in this sector compared to 34.4 per cent of men. As for developing regions, the differences were considerable in Central & South-Eastern Europe (non-EU) & CIS, the Middle East and Latin America & the Caribbean.

Within services, women had a much higher share than men in Latin America & the Caribbean, the Developed Economies & European Union and Central & South-Eastern Europe (non-EU) & CIS while the shares were considerably lower for women than men in South Asia and the Middle East.

Segregation of occupations by sex is only slowly changing while stereotypes of women as caretakers and home-based workers still exist and are often being reinforced. Meanwhile within each sector women tend to occupy jobs with lower productivity. This may be perpetuated into the next generation if restricted and inferior labour market opportunities for women continue to lead to underinvestment in women's education, training and experience.

[1] For more details see: ILO: *Global Employment Trends for Women, Brief* (Geneva, 2007); website: http://www.ilo.org/trends.

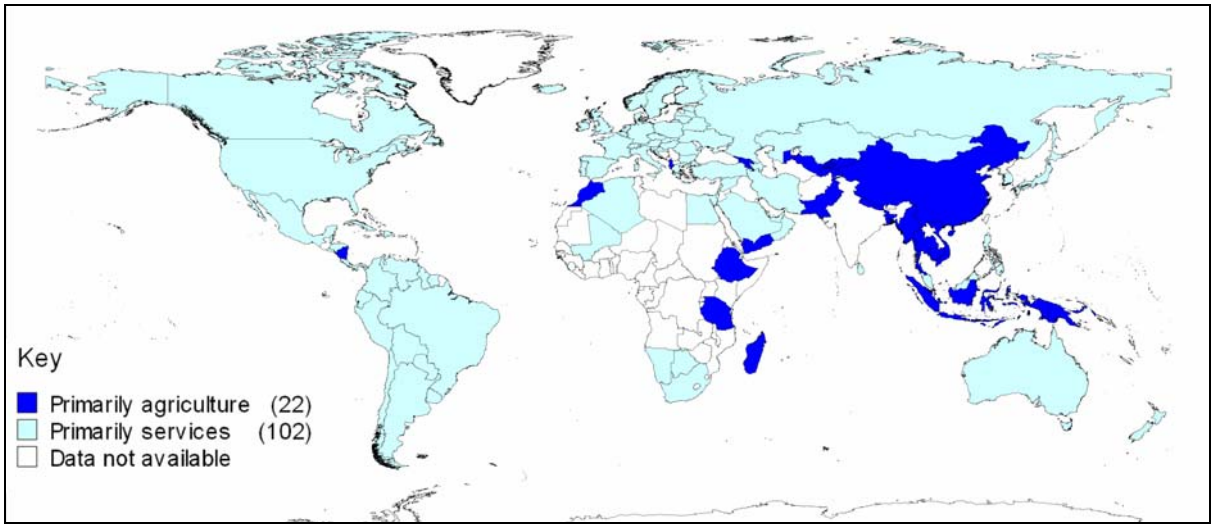
This is often the case for Latin American countries. Although this more partial information should not be used for cross-country comparisons, it is presented here as a useful indicator of recent trends in particular countries.[4]

Over the period since 1980, two different ISIC systems are in use coincidently – identified as ISIC 2 and ISIC 3 (see Appendix C). A slight majority of countries continue to use Revision 2 as opposed to Revision 3. The notes to table 4a show the version of the ISIC used for each country and year. On occasion, a

4. When performing queries on the employment by sector tables (4a-4c) and table 3 on status in employment, we strongly recommend removing countries that are not of national coverage from the selection when making comparisons across countries. On the software, this can be done by performing the query for all data and then refining the parameters to select the "national only" button under "Geographic coverage".

country may have continued to use ISIC 2 even after starting a new data series according to ISIC 3. In such cases, where two series based on different classification systems exist for the same year, the ISIC 3 classification is shown in table 4a. Although these different classification systems can have large effects at detailed levels of industrial classification, changes from one ISIC to another should not have a significant impact on the information for the three broad sectors presented in table 4a.

Figure 4b Employment by dominant sector, latest year



Trends

Global employment has been shifting from the sectors that produce goods (agriculture and industry) to the services-producing sectors. Figure 4a shows that for most economies in the world the services sector dominates total employment. Of the 130 economies with data available, the services sector is the largest in 108 economies and the agriculture sector is dominant in the remaining 22 economies. Where the services sector dominates, industry usually comes in second position, followed by a small agricultural sector (less than 10 per cent). The services-producing sectors can provide many opportunities for decent and productive employment, however, not all work in these sectors is necessarily decent or productive. Employment in services ranges from well-paid salaried jobs of highly-skilled workers enjoying adequate working conditions to subsistence trade activities that are widespread on the streets in the developing world. Many workers in the latter situation may be underutilized even if they are working excessive hours battling for a meagre income.

More data on developing economies, especially in sub-Saharan Africa, would allow for a richer analysis of the employment by sector indicator, but would not alter the fact that the services sector is responsible for at least half of total employment in the majority of economies worldwide. An interesting question is therefore which sectors are taking the lead in employment growth, especially in economies that already have a large services sector. Such information is important to policy-makers as they design employment policies, including policies to meet skills needs in growing sectors. Figure 4b ranks the services sector according to growth rates from 1995 to 2005 in 20 developed economies. The fastest growing sector in almost all economies

is real estate, renting and business activities (K), while in the majority of economies the sector hotels and restaurants (H) is in either second or third position. The bottom of the ranking is not as clear-cut. The sector with the slowest growth rate in seven economies is transport, storage and communications (I), and in seven other economies is public administration, defence and compulsory social security (L).

Figure 4b. Ranking of services sector by growth rate in selected developed economies, ISIC Rev. 3, 1995-2005

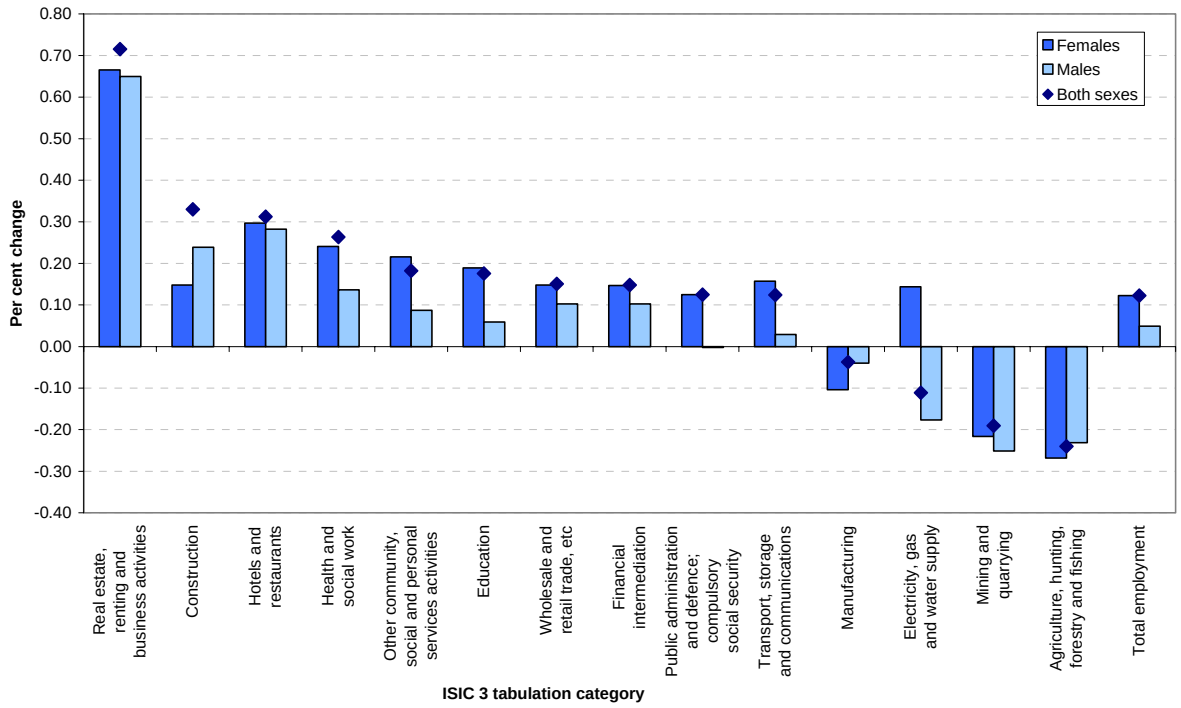
	Wholesale and retail trade, etc.	Hotels and restaurants	Transport, storage and communica-tions	Financial intermedia-tion	Real estate, renting and business activities	Public administra-tion and defence; compulsory social security	Education	Health and social work	Other community, social and personal services activities
Australia	9	4	7	8	1	5	6	2	3
Austria	7	3	8	5	1	9	6	2	4
Canada	4	7	8	6	1	9	5	3	2
Czech Republic	7	1	9	6	2	5	8	3	4
Denmark	7	6	9	4	1	8	3	5	2
Estonia	6	2	9	7	1	3	5	8	4
Finland	4	3	7	8	1	9	6	5	2
Germany	6	3	8	7	1	9	5	2	4
Greece	6	3	9	7	1	5	2	4	8
Hungary	3	2	9	5	1	7	6	4	8
Iceland	7	5	3	2	1	6	3	8	9
Ireland	6	5	2	4	1	9	8	3	7
Italy	7	2	5	8	1	9	6	4	3
Netherlands	8	3	4	6	1	9	5	2	7
Poland	4	3	6	7	1	2	5	9	8
Portugal	4	3	5	9	2	7	6	1	8
Slovakia	4	2	9	1	3	5	8	6	7
Slovenia	8	3	9	6	1	2	5	7	4
Spain	9	4	7	8	1	6	5	2	3
United Kingdom	7	8	5	9	1	3	2	4	6

Note: The tabulation category with highest growth rate between 1995 and 2005 in each country is ranked “1”, the category with the second highest growth rate is ranked “2”, etc

Figure 4c shows average growth rates from 1995 to 2005 for the same group of developed economies for all sectors in ISIC 3, and for both sexes as well as for males and females separately.[5] Not surprisingly, real estate, renting and business activities (K) shows the fastest growth rate across all economies in the sample, with an average growth of 72 per cent. In contrast, agriculture, hunting, forestry and fishing (A and B combined) shrank by 23 per cent. Employment growth rates for both men and women are substantial in real estate, renting and business activities (K), as well as hotels and restaurants (H). In other service sectors there are considerable gaps between growth rates for men and women, with the latter exceeding the former in all service sectors. These different growth rates in female and male employment reflect the reduction in the gender gap in employment-to-population ratios in developed economies during 1995-2005. Construction (F) is the only industrial sector with positive growth and, together with manufacturing (D), constitutes the industrial sectors in which employment growth for males exceeds growth for females.

[5] Growth rates are unweighted to reflect individual country experiences. Weighting, however, would not significantly change the results.

.Figure 4c. Sectoral growth rates in selected developed economies, 1995-2005



KILM 5. Part-time workers

Introduction

The indicator on part-time workers focuses on individuals whose working hours total less than "full time", as a proportion of total employment. Because there is no agreed international definition as to the minimum number of hours in a week that constitute full-time work, the dividing line is determined either on a country-by-country basis or through the use of special estimations. Two measures are calculated for this indicator: total part-time employment as a proportion of total employment, sometimes referred to as the "part-time employment rate"; and the percentage of the part-time workforce comprised of women. Table 5 contains information for 65 economies.

Use of the indicator

There has been rapid growth in part-time work in the past few decades in the developed economies. This trend is related to the increase in the number of women in the labour force market, but also to attempts to introduce labour market flexibility in reaction to changing work organization within industry and to the growth of the services sector. Of concern to policy-makers in the apparent move towards more flexible working arrangements is the implicit assumption that such working arrangements are less economically secure and less stable than full-time employment. Research seems to disprove the assumption; however, the final results are not yet available.[1]

In itself, the concept of part-time work should not be considered as negative. Part-time work may offer the chance of a better balance between working life and family responsibilities, and suits workers who prefer shorter working hours and more time for their private life. Policy-makers may promote part-time work as a means to redistribute working time in countries of high unemployment, thus lowering politically sensitive unemployment rates without requiring an increase in the total number of hours worked.[2]

Part-time employment, however, is not always a choice. A review of KILM 12, time-related underemployment, confirms that a substantial number of part-timers would prefer to be working full-time. While flexibility may be one advantage of part-time work, disadvantages may exist in comparison with colleagues who work full time. For example, part-time workers may face lower hourly wages,[3] ineligibility for certain social benefits and more restricted career and training prospects. Some governments have introduced measures to encourage part-time employment by offering firms financial and tax incentives meant to offset costs associated with bringing entitlements to social benefits for part-time workers in line with those of full-time workers.[4]

1. For a review of the debate, see P. Bollé: "Part-time work: Solution or trap?", in *International Labour Review* (Geneva, ILO), 1997/4; website: http://www.ilo.org/public/english/support/publ/revue/articles/97-4.htm.

2. ibid.

3. Wage differentials are likely to show high variation across occupations and skill levels. J. King: "Part-time workers' earnings: Some comparison", in *Compensation and Working Conditions*, Summer (Washington, DC, Bureau of Labor Statistics, 2000).

4. For a recent overview of part-time work practices in Europe, see A. Corral and I. Isusi: "Part-time work in Europe" (Dublin, European Foundation for the Improvement of Living and Working Conditions, 2004); website: http://www.eurofound.eu.int/publications/htmlfiles/ef0441.htm.

Looking at part-time employment by sex is useful to see the extent to which the female labour force is more likely to work part time than the male. Part-time work is often a characteristic of women's employment. Although not included as part of this indicator's coverage, age breakdowns are also significant and would probably demonstrate that young workers (aged 15 to 24 years) – especially those enrolled in school – and older workers (55 years and over) are more likely than those in the prime age group (25 to 54 years) to work part time. A suggested virtue of part-time work is that it facilitates the gradual entry of young persons into the labour force and the exit of older workers from the labour market.[5]

Definitions and sources

There is no official ILO definition of full-time work, largely because it is difficult to arrive at an internationally agreed demarcation point between full and part time given the national variations in what these terms mean. At the 81st Session of the International Labour Conference in 1994, the ILO defined "part-time worker" as "an employed person whose normal hours of work are less than those of comparable full-time workers".[6] Thus, the demarcation point is left to the individual countries to define. Some countries use worker interpretation of their own employment situation for distinguishing full-time versus part-time work; that is, survey respondents are classified according to how they *perceive* their work contribution. (See, for example, Estonia and Lithuania.) Other countries use a cut-off point based on weekly hours usually or actually worked. Dividing lines are typically somewhere between 30 and 40 hours a week. Thus, people who work, say, 35 hours or more per week may be considered "full-time workers", and those working less than 35 hours "part-time workers".

The definition of a standard work-week can, and often does, provide a legal or cultural basis for the establishment of starting-points for requirements of employee benefits, such as health care, and overtime premiums for hours worked in excess of the standard week. It should be recognized that what might be thought of as the "standard" work-week for a country could be higher than the official demarcation point for full-time work in a statistical sense. In other words, while a 35- to 40-hour work-week is the probable cut-off standard for full-time work for many industries and workplaces throughout much of the world, national statistical definitions for full-time work are often somewhere between 30 and 37 hours.

In 1997, the Organisation for Economic Co-operation and Development (OECD) initiated an analysis of part-time work definitions and concluded that a definition of part-time work based on a threshold of 30 hours would better suit the purposes of international comparisons.[7] Since then, the OECD has carried out work to harmonize data for its member countries, using a 30-hour cut-off. The OECD harmonized data set makes up the majority of table 5.

Of the countries with information on part-time work included in table 5, all but two derive their information from labour force surveys; the remaining two obtain their information from population censuses (British Virgin Islands and Saint Vincent and the Grenadines). Establishment-based surveys, in which information on employees comes directly from payroll records of establishments, are most unlikely to provide information on the number of hours that individuals work and thus

5. ibid.

6. The 81st Session adopted the Part-Time Work Convention (No. 175) and Recommendation (No. 182).

7. OECD: "The definition of part-time work for the purpose of international comparisons", in *Labour Market and Social Policy*, Occasional Paper No. 22 (Paris, 1997); website: http://www.olis.oecd.org/OLIS/1997DOC.NSF/LINKTO/OCDE-GD(97)121.

cannot be used as a reliable source for this indicator.[8]

One reason that labour force surveys are the preferred source of information for distinguishing between full- and part-time work is that a certain, varying proportion of workers in all countries possesses more than one job. In such cases, accounting for the primary jobs of survey respondents may result in their classification as part-time workers, but adding information on the second (and possibly third) jobs may boost their hours over the full-time mark. In other words, it is the total number of hours that an individual normally works in a week that determines full- or part-time status, not that person's job *per se*. Only labour force surveys (and population censuses with fairly extensive questions) can provide information on the total number of hours that individuals work. Nonetheless, many of the countries with information based on labour force surveys still report the number of hours worked on the main job only, thus disregarding the fact that a person may work the equivalent of full-time hours in multiple jobs.[9]

The table notes include the distinction between "usual" and "actual" hours worked. "Usual hours" indicates that it is the number of hours that people *typically* work in a survey week that determines their full- or part-time status, rather than the number of hours that they *actually* work. Usual hours comprise normal working hours as well as overtime or extra time usually worked, whether paid or not. Usual hours do not take into consideration unplanned leave. As an example, a person who usually works 40 hours a week, but who was sick for one day (eight hours) in the survey period, will nevertheless be classified as a full-time worker (for a country with a 35-hour break point for full-time work).

Limitations to comparability

Information on part-time work can be expected to differ markedly across countries, principally because countries use different definitions of full-time work and also because they may have different cultural or workplace norms. The age inclusions for labour force eligibility can also be an important source of variation. Entry ages vary across countries, as do upper age limits. If one country counts everyone over the age of 10 in the survey, while another starts at age 16, the two countries can be expected to have differences in part-time employment rates for this reason alone. Similarly, some countries have no upper age bounds for coverage eligibility, while others draw the line at some point, such as 65 years. Any cut-off linked to age will result in some people being missed among the "employed" counts, with the greater likelihood of those missed being part-time workers since part-time work is particularly prevalent among the older and younger cohorts. Yet another basis for variation stems from the definitions used for "unpaid family workers". Countries that have no hourly bound for inclusion (one hour or more) or a relatively low bound – for instance, 10 hours per week – can be expected to have more part-time workers than those with higher bounds such as 15 hours.

Use of the OECD data set, discussed in the previous section, while largely of benefit to cross-country comparisons, can also have some negative effects. These will depend on the individual situation for each country included in the set, as countries vary in terms of each of the following: the range of full-time/part-time hour cut-offs; standard work-weeks in general or in particular industries or occupations; individual conceptual frameworks for full- and part-time measurement; and the extent of

8. Additional documentation regarding national practices in the collection of statistics is provided in ILO: S*ources and Methods: Labour Statistics*, Vol. 3: *Economically Active Population, Employment, Unemployment and Hours of Work (Household Surveys)*; and Vol. 5: *Total and Economically Active Population, Employment and Unemployment (Population Censuses)*. The *Sources and Methods* are available online at the country level on website: http://laborsta.ilo.org.

9. Users will find information on jobs covered – all jobs, main job only, etc. – in the "job coverage" field.

information available to the OECD for the estimation and adjustment process.[10]

Although harmonized to the greatest extent possible, part-time measurement still varies according to the usual or actual hours criterion. A criterion based on actual hours will generally yield a part-time rate higher than one based on usual hours, particularly if there are temporary reductions in working time as a result of holiday, illness, etc. Therefore, seasonal effects will play an important role in fluctuations in actual hours worked. In addition, the specification of main job or all jobs may be important. In some countries, the time cut-off is based on hours spent on the main job; in others, on total hours spent on all jobs. Measures may therefore reflect usual or actual hours worked on the main job or usual or actual hours worked on all jobs.

Because of these differences, as well as others that may be specific to a particular country, cross-country comparisons must be made with great care. These caveats notwithstanding, measures of part-time employment can be quite useful for understanding labour market behaviour, more particularly for individual countries but also across countries.

Trends

Among developed economies, 15 of the 29 countries with sufficient yearly observations for time-trend analysis) showed an increase in part-time employment rates, four had a slightly downward trend – Iceland, Latvia, Slovakia and the United States – and the remaining ten did not exhibit a strong trend in either direction (see figure 5a for selected developed economies). Part-time employment rates vary significantly amid developed economies: the lowest rates (below 5 per cent) are found in some of the new Member States of the European Union – Czech Republic, Hungary and Slovakia – while the highest rates (above 25 per cent) are in Australia, Japan, the Netherlands and Switzerland.

A higher percentage of women work part time than men in almost all countries for which data are available. The few exceptions where men's shares are slightly larger are Belize, Grenada, Panama and Trinidad and Tobago, all countries in Latin America & the Caribbean, where the average female share of part-time employment hovers just above 50 per cent (see figure 5b). The difference between male and female shares of part-time employment is highest in the developed economies, where on average women make up three-quarters of all persons working part time. In fact, in some countries of the European Union, women make up almost all (more than 85 per cent) of part-time employment, as is the case in Austria, Germany and Luxembourg.

Figure 5c shows the relationship between female part-time employment rates, employment-to-population ratios (KILM 2) and time-related underemployment rates (KILM 12). While there is no real correlation between part-time employment rates and time-related underemployment, there is a positive relationship between the former and employment-to-population ratios. This implies that providing part-time opportunities encourages women to join the workforce; meanwhile, it will not necessarily have an impact on the number of women who consider themselves underemployed.

10. Users with a keen interest in these comparisons should examine OECD: "The definition of part-time work for the purpose of international comparisons", op. cit.

Figure 5a. Part-time employment rates, selected developed countries (usual hours, main job covered), 1990-2005

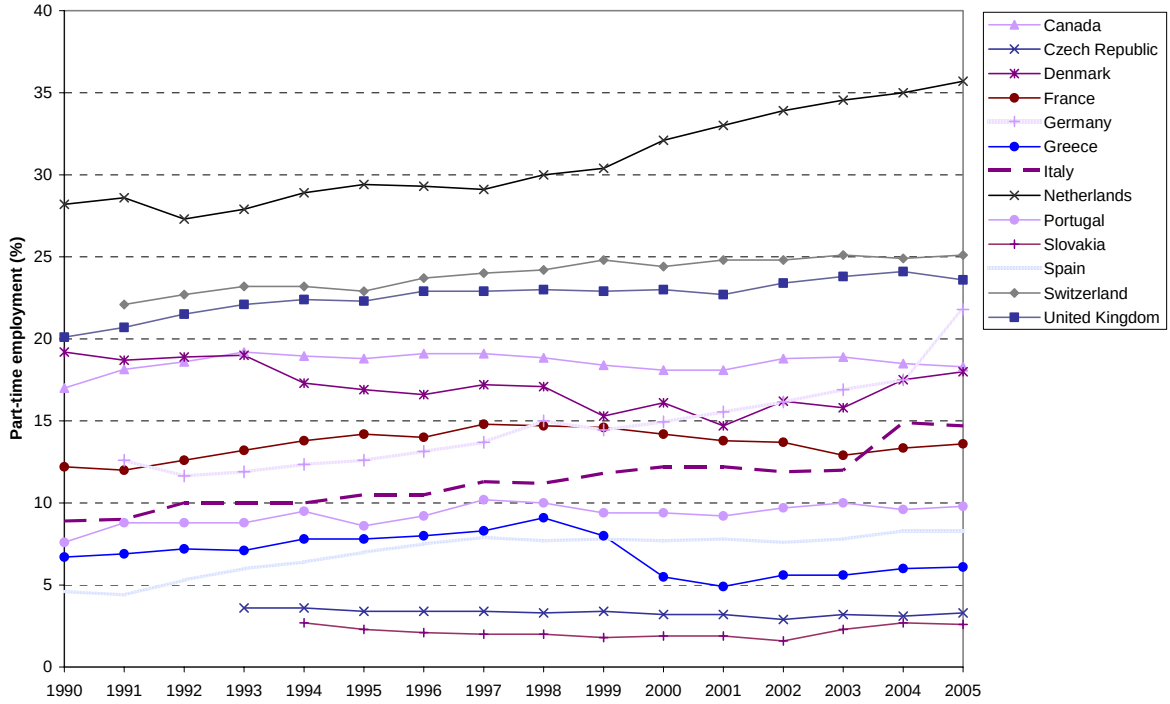
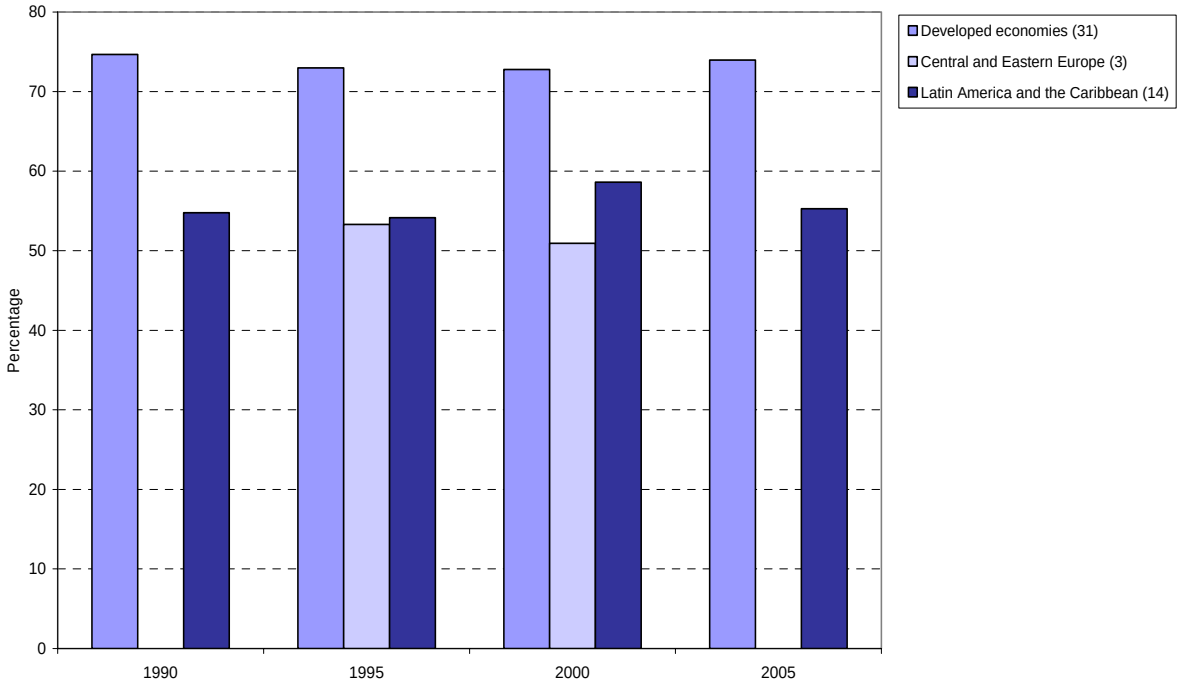
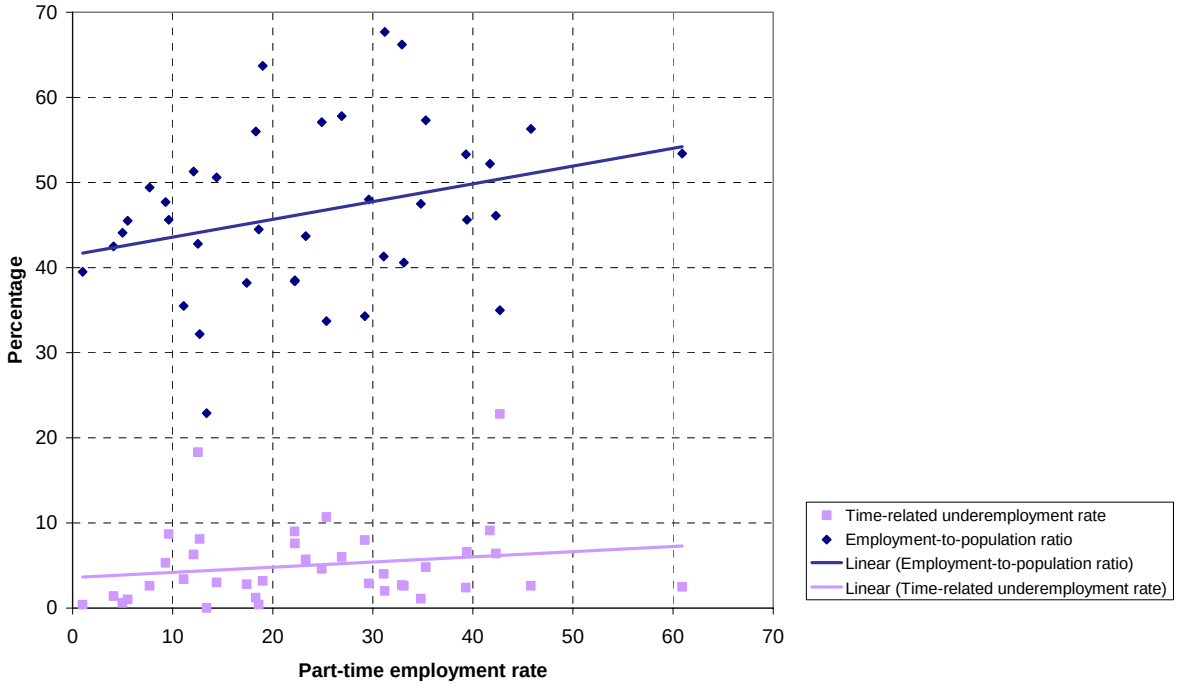


Figure 5b. Female share of part-time employment, regional averages, 1990, 1995, 2000 and 2005



Note: Numbers in parentheses indicate the number of economies used to calculate the average female share of part-time employment.

Figure 5c. Female part-time employment rates, employment-to-population ratios and time-related underemployment rates, latest years



KILM 6. Hours of work

Introduction

Two measurements related to working time are included in KILM 6 in order to give an overall picture of the time that the employed throughout the world devote to work activities. The first measure relates to the hours employed persons work per week (table 6a) while the second measure is the annual hours of work per person (table 6b). The statistics in both tables are presented separately for men and women whenever possible, and in 6a according to the following hour bands: less than 20 hours worked per week, between 20 and 29 hours, between 30 and 39 hours, 40 hours and over and 50 hours and over, as available. Generally the statistics come from national household surveys. Regional coverage is limited; no information relating to hours of work is available for the regions of sub-Saharan Africa, the Middle East or North Africa. Currently 53 economies are presented in table 6a and 50 economies in table 6b.

Use of the indicator

In recent years interest in issues related to working time has intensified. The number of hours worked has an impact on the health and well-being of workers.[1] Persons working full-time in some developed and developing economies have expressed concern about long working hours and their effects on family and community life.[2] At the same time the number of hours worked impacts productivity and labour costs of establishments. Measuring the level and trends in the hours worked in a society, for different groups of persons and for individuals, is therefore important when monitoring working and living conditions as well as when analysing economic developments.[3]

Employers have also shown interest in enhancing the flexibility of working arrangements and are increasingly negotiating non-standard working arrangements. Employees may work only part of the year or part of the week, work at night or on weekends, or enter or leave the workplace at different times of the day. They may have variable daily or weekly schedules, perhaps as part of a scheme that fixes total working hours over a longer period, such as one month or one year. Consequently, the daily or weekly working time of employed persons may show large variations, and a simple count of the number of people in employment or the weekly hours of work is insufficient to indicate the level and trend in the volume of work.

Table 6b, which presents estimates of actual annual hours of work, considers individual working schedules more fully. These estimates are particularly useful for investigating the extent to which reductions in weekly working hours are correlated with increases in the number of employed persons and reductions in the number of unemployed persons, and in estimating the net effect on the total number of hours worked by all employed persons.

"Excessive" hours of work, indicated by the share of persons working greater than 40

1. A. Spurgeon: *Working Time: Its Impact on Safety and Health* (Geneva, ILO, 2003); website: http://www.ilo.org/public/english/protection/condtrav/pdf/wtwo-as-03.pdf.

2. Policy suggestions that preserve health and safety, are family friendly, promote gender equality, enhance productivity and facilitate workers' choice and influence their working hours are provided in: S. Lee, D. McCann and J. Messenger: *Working Time Around the World* (Geneva, ILO, 2007).

3. A. Mata-Greenwood: "The hours that we work: The data we need, the data we get", in *Bulletin of Labour Statistics 2001-1* (Geneva, ILO), 2001; website: http://www.ilo.org/public/english/bureau/stat/download/articles/2001-1.pdf.

hours (50 hours and over is available for a limited number of countries), may be a concern when individuals work more than a normal workweek because of inadequate wages earned in the job or jobs they hold. Long hours can be voluntary or involuntary (imposed by employers). "Inadequate employment related to excessive hours", also called "over-employment", has been defined as "a situation where persons in employment wanted or sought to work less hours than they did during the reference period, either in the same job or in another job, accepting a corresponding reduction of income".[4] Few countries have measured "over-employment", therefore the measure of persons employed for more than 40 hours a week could be used as a proxy for persons in employment who usually work beyond what many countries consider "normal hours". However, whether or not this situation is actually desired cannot be assessed so nothing can be assumed about how many hours people might wish to work. Clearly, the number of hours worked will vary across countries and depends on, other than personal choice, such important aspects as cultural norms, real wages and levels of development.

Definitions and sources

Statistics on the percentage of persons in employment by hours worked per week are calculated on the basis of information on employment by usual-hour band provided primarily by household surveys which cover all persons in employment. Exceptions are identified in the notes to KILM 6. In all cases persons totally absent from work during the reference period are excluded. Annual hours of work are estimated from the results of both household-based and establishment surveys. For the most part, coverage comprises salaried employment and self-employment.[5]

"Usual hours of work" per week identifies the most common weekly working schedule of a person in employment over a selected period. While no international statistical definition of "usual hours of work" has yet been adopted, it has been defined as the hours worked in an activity during a typical week,[6] or more technically, as the modal value of the "hours actually worked" per week over a long period. This definition is applicable to all workers with regular schedules, even those who do not possess a working contract – for example, in small-scale or family enterprises and to self-employed workers. For persons who do not work regular schedules, a measure of average "hours actually worked" per week over a long period is sometimes used.

When compared with "normal hours of work", the "usual hours of work" includes the overtime that occurs systematically every day or week and excludes time not worked on a usual basis. This measure is not affected by unusual absence or by irregular or unusual overtime, whether worked for premium pay, regular pay, or without compensation.

"Hours actually worked" includes time spent at the workplace on productive activities and on other activities that are part of the tasks and duties of the job concerned (for example, cleaning and preparing working tools).[7] It also

4. ILO: *Final Report*, 16th International Conference of Labour Statisticians, Geneva, October 1998; website: http://www.ilo.org/public/english/bureau/stat/download/16thicls/repconf.pdf.

5. The present international definition of "hours actually worked", adopted in 1962 by the 10th ICLS, related only to workers in paid employment, mainly in manufacturing establishments; a serious limitation given the increasing importance of self-employment in many countries, and one of the reasons why it is currently being revised for presentation to the next ICLS in 2008. For the full text, see: website: http://www.ilo.org/public/english/bureau/stat/download/res/hours.pdf ("Resolution concerning statistics of hours of work", 10th International Conference of Labour Statisticians, Geneva, 1962).

6. ILO: *Surveys of Economically Active Population, Employment, Unemployment and Underemployment: An ILO Manual on Concepts and Methods* (Geneva, 1990).

7. Current international discussions are working towards a definition of "hours actually worked" that relates to all types of workers – whether in salaried or self-employment, paid or unpaid, and carried out in any location, including the street, field, home, etc. The proposal includes

includes time spent at the place of work when the person is inactive for reasons linked to the production process or work organization (for example, standby time), as during these periods paid workers remain at the disposal of their employer. "Hours actually worked" also includes short rest periods spent at the place of work because they are difficult to distinguish separately, even if workers are not "at the disposal" of their employer during those periods. Explicitly excluded are lunch breaks, as they are normally sufficiently long to be easily distinguished from work periods.

Annual hours worked, as presented in table 6b, is a measure of the total number of hours actually worked during a year per employed person. The measure incorporates variations in part-time and part-year employment, in annual leave, paid sick leave and other types of leave, as well as in flexible daily and weekly working schedules whereas conventional measures of employment and weekly hours worked (as in table 6a) do not. Household-based surveys are rarely able to measure accurately the hours actually worked by the population for a long reference period, such as a year.[8] Establishment surveys may use longer reference periods than household surveys but do not cover the whole working population unlike household surveys. Consequently, the "average annual hours" worked is usually estimated on the basis of statistics from both sources.

Two estimation procedures for average annual hours are commonly used. The first is based on statistics for time actually worked for each week of the year, derived from a continuous household survey. When used, statistics for a month or quarter need to be adjusted for the number of working days in that period. Further adjustments are made for public holidays and strike activity, normally on the basis of information obtained from administrative sources. The resulting estimates may then be added up to obtain the total annual "hours actually worked", which is then divided by the average number of employed persons during the year.[9]

The second procedure for estimating annual working time is based on information from legislation or collective agreements that concern "normal hours". It consists of multiplying the weekly "normal hours" by the number of weeks workers have been in employment during the year.[10] Annual leave and public holidays are subtracted to obtain a net amount of "annual normal time". Estimates of overtime obtained from sources such as household or establishment surveys are added, and estimates of time taken in substantial forms of absences, obtained from household surveys or administrative sources, are then subtracted. In practice, some additional adjustments may be needed when the "normal hours" vary over the year. Because of the complexity of calculation methodologies, the notes accompanying table 6b offer more detail than those associated with other indicators.

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time spent at the workplace directly on production, on activities to facilitate production that are part of the tasks and duties of the job concerned and some of the time spent in between the main activities or that enhance a person's performance.

8. Additional documentation regarding national practices by country in the collection of statistics is provided in ILO: *Sources and Methods: Labour Statistics*, Vol. 3: *Economically Active Population, Employment, Unemployment and Hours of Work (Household Surveys)* and available online at: http://laborsta.ilo.org.

9. An alternative measure often used by national accountants for the calculation of productivity (output per work-hour), according to the 1993 System of National Accounts, also currently being revised, is the "volume of employment" which relates to total hours worked by all persons employed in the year.

10. This is the method applied for the OECD estimates of annual hours worked for Austria, Belgium, Denmark, Greece, Ireland, Italy, the Netherlands (after 2002) and Portugal based on the European Labour Force Survey.

Box 6a. Resolution concerning statistics of hours of work, adopted by the 10th International Conference of Labour Statisticians, October 1962 [relevant paragraphs]

General objectives

1. This resolution applies to wage earners and salaried employees.

2. Each country should aim to develop a comprehensive system of statistics of hours of work in order to provide an adequate statistical basis for the analysis of conditions of work, the study of trends of economic activity, the analysis of partial employment and underemployment, the study of productivity, the computation of industrial accident rates and the computation of average hourly earnings.

3. These statistics should be developed in accordance with the specific needs of each country in the light of its social and economic structure and in accordance with international standards, in order to promote comparability among countries. Some countries will encounter difficulties in implementing this resolution at the present stage. These countries should envisage the resolution as a first attempt towards the improvement of international comparability in the field of statistics of hours of work. It is expected that at a later stage the resolution will be revised, taking into account the experience gained in its implementation.

Definitions

4. (1) Normal hours of work are the hours of work fixed by or in pursuance of laws and regulations, collective agreements or arbitral awards.

(2) Where not fixed by or in pursuance of laws and regulations, collective agreements or arbitral awards, normal hours of work should be taken as meaning the number of hours per day or week in excess of which any time worked is remunerated at overtime rates or forms an exception to the rules or custom of the establishment relating to the classes of workers concerned.

5. (1) Statistics of hours actually worked should include:

(a) hours actually worked during normal periods of work;
(b) time worked in addition to hours worked during normal periods of work, and generally paid at higher rates than normal rates (overtime);
(c) time spent at the place of work on work such as the preparation of the workplace, repairs and maintenance, preparation and cleaning of tools, and the preparation of receipts, time sheets and reports;
(d) time spent at the place of work waiting or standing by for such reasons as lack of supply of work, breakdown of machinery, or accidents, or time spent at the place of work during which no work is done but for which payment is made under a guaranteed employment contract;
(e) time corresponding to short rest periods at the workplace, including tea and coffee breaks.

(2) Statistics of hours actually worked should exclude:

(a) hours paid for but not worked, such as paid annual leave, paid public holidays, paid sick leave;
(b) meal breaks;
(c) time spent on travel from home to work and vice versa.

6. Because of the wide difference among countries with respect to wage payments for holidays and other periods when no work is performed, it does not seem feasible at this time to adopt international definitions of hours paid for. Many countries will find, however, that statistics of hours paid for, while not suitable as a substitute for hours actually worked, can be useful for internal purposes and that they will commonly be readily available from payrolls and other records.

Limitations to comparability

Statistics based on hours usually worked are not strictly comparable to statistics based on hours actually worked. A criterion using actual hours will generally yield a higher weekly average than usual hours, particularly if there are temporary reductions in working time as a result of holiday, illness, etc. that will have an impact on the measure of average weekly hours. Seasonal effects will also play an important role in fluctuations in actual hours worked. In addition, the specification of main job or all jobs may be an important one. In some countries, the time cut-off is based on hours spent in the main job; in others on total hours spent in all jobs. Measures may therefore reflect usual or actual hours worked in the main job or in all jobs. Because of these and other differences that may be specific to a particular country, cross-country comparisons in table 6a should be made with great care.[11]

The different estimation methods for annual hours of work depend to a large extent on the type and quality of the information available and may lead to estimates that are not comparable. All estimates presented are derivations from numbers gathered from surveys and other sources, usually produced within the national statistical agency. It is difficult to evaluate the impact of estimation differences on their comparability across countries.

The various data collection methods also represent an important source of variation in the hours of work estimates. Household-based surveys (including the population census) that obtain data from working persons or from other household members can and often cover the whole population, thus including the self-employed. As they use the information respondents provide, their response error may be substantial. On the other hand, the data obtained from establishment surveys depend on the type, range and quality of their records on attendance and payment. While consistency in reporting overtime may be higher, the information may contain undetected biases. Furthermore, their worker coverage is never complete, as these surveys tend to cover medium-to-large establishments in the formal sector with regular employees, and exclude managerial and peripheral staff as well as self-employed persons. (Hungary and the Republic of Korea are two countries that report on hours of wage and salaried employees only.) Comparability of statistics on hours of work is complicated even further by the fact that estimates may be based on more than one source – results may be taken primarily from a household survey and supplemented with information from an establishment survey (or other administrative source) or vice versa. In such cases, more than one survey type is noted in the corresponding column of the notes. For these reasons, the OECD, which provided the majority of the national estimates presented, is careful to note that "the data [on average annual hours worked per person] are intended for comparisons of trends over time; they are unsuitable for comparisons of the level of average annual hours of work for a given year, because of differences in their sources".[12] This also applies to data consistent with national accounts concepts (annotated with OECDNA as the source), for which the sources vary by country as well.

Trends

The percentage of men and women working 40 hours or more varied between economies but, in 52 of the 54 economies covered, men were more likely to work long hours than women (hence most data points fall below the 1:1 diagonal in figure 6a). The two exceptions were Aruba and Chile.

11. All developed economies in table 6a report usual hours of work with the exception of Australia, prior to 2000, and Poland. The majority of countries in Central America & the Caribbean report on actual hours of work per week.

12. OECD: *Employment Outlook 2005*, Statistical Annex (Paris, 2005), p. 256.

Most developed economies had decreases in the percentage of employed persons working at least 40 hours per week from 1996 to 2006 (see figure 6b). Among them was the Czech Republic, which maintained one of the highest percentages of employed persons working "excessive" hours (40 hours or more) despite a 9.1 percentage point decrease over the decade. Another two countries showed even larger shares of workers in the "excessive" hours category – Hungary (93.9 per cent) and Slovakia (87.4 per cent). Of the developed economies – excluding the new Member States of the EU – Luxembourg and the United States had the largest shares of persons working at least 40 hours (78.8 and 76.6 per cent, respectively). While lower than a decade ago for Luxembourg, this represented a slight increase for the United States. A majority of employed persons also worked 40 hours or more per week in many developed countries, with notable exceptions in Belgium, Denmark, France and Norway, where the majority of workers worked between 30 and 39 hours per week, probably as a result of stricter working hour legislation in these countries (see box 6b).

The share of persons working less than 20 hours per week varied from 0.6 per cent in Hungary and Slovakia to 33.5 per cent in the Netherlands. In all economies for which data are available, women had a higher percentage working less than 20 hours per week than men. More than 80 per cent of those working less than 20 hours were women in Belgium, Chile, Luxembourg and Switzerland.

Annual hours worked per person surpassed 2,200 in six Asian economies – the Republic of Korea leads the group, followed by Bangladesh, Sri Lanka, Hong Kong (China), Malaysia, and Thailand (see figure 6c). At the other end of the spectrum, most European Union countries (excluding new members) had much lower hours, especially in Belgium, Denmark, France, Germany, the Netherlands and Sweden, where workers put in less than 1,600 hours per year. There was a decreasing trend in the number of annual hours worked for most of the countries for which enough data are available for time trend analysis (35 out of 43). The largest of these decreases was found in the Republic of Korea, followed by Ireland, Japan, France and Spain. Six of the eight countries that exhibited an increasing trend are in Latin America & the Caribbean.

Box 6b. ILO Working time database

The ILO working time database is a searchable database providing information on the working time laws of more than 100 countries around the world. It covers laws that: protect the health and well-being of workers; facilitate a balance between work and family life; ensure workers have adequate time to devote to their other responsibilities and interests; and prevent discrimination against part-time workers. The database provides summaries of the primary working time laws in each country including:

- Hour limits: the number of hours a worker is permitted to perform each day, week or year.
- Overtime work: including limits on overtime hours, the amount of advance notice required, and the additional pay or time-off for overtime work.
- Rest periods: the amount of rest to which workers are entitled during the day, between working days and at weekends.
- Annual leave and public holidays: the number of holiday days and the entitlement to payment during these periods.
- Night work: prohibitions on performing night work and protection for night workers, including heath assessments and the right to transfer to day work; extra pay or time-off for night workers; and protection for specific groups, such as pregnant workers.
- Part-time work: rights for part-time workers to equal treatment with full-timers.
- Employee choice over working hours: rights for workers to influence the length and scheduling of their working hours, including to work part time.
- The database is available at website: http://www.ilo.org/travaildatabase/servlet/workingtime.

Figure 6a. Percentage of males and females working more than 40 hours per week, latest years

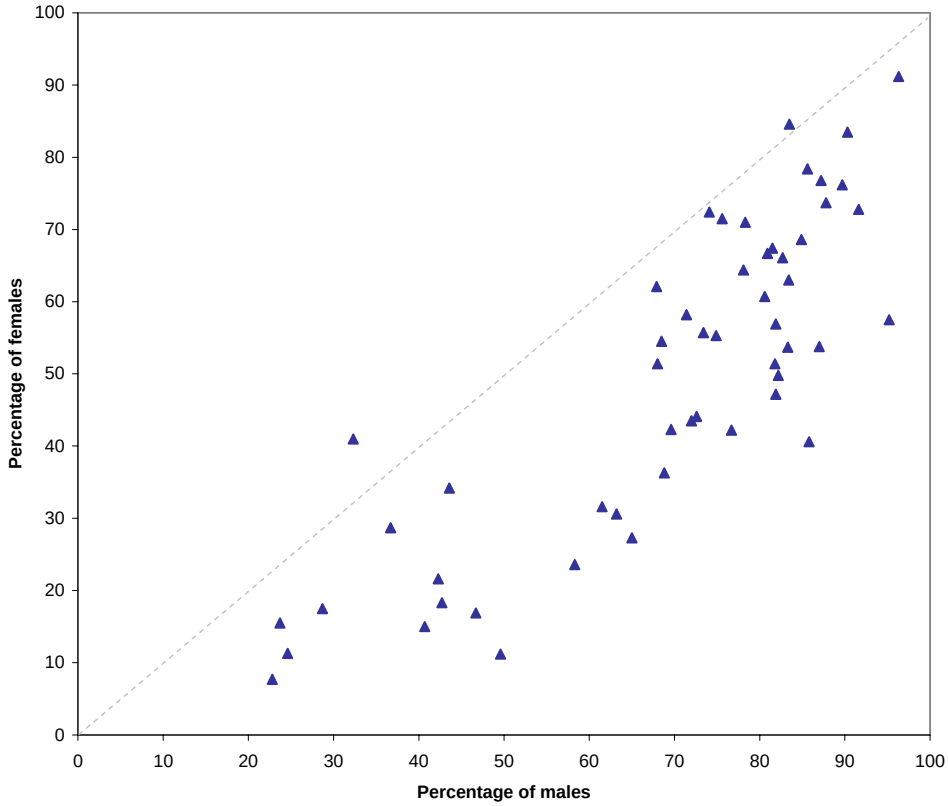


Figure 6b. Distribution of total employment by usual weekly hours worked, selected developed economies, 1996 and 2006

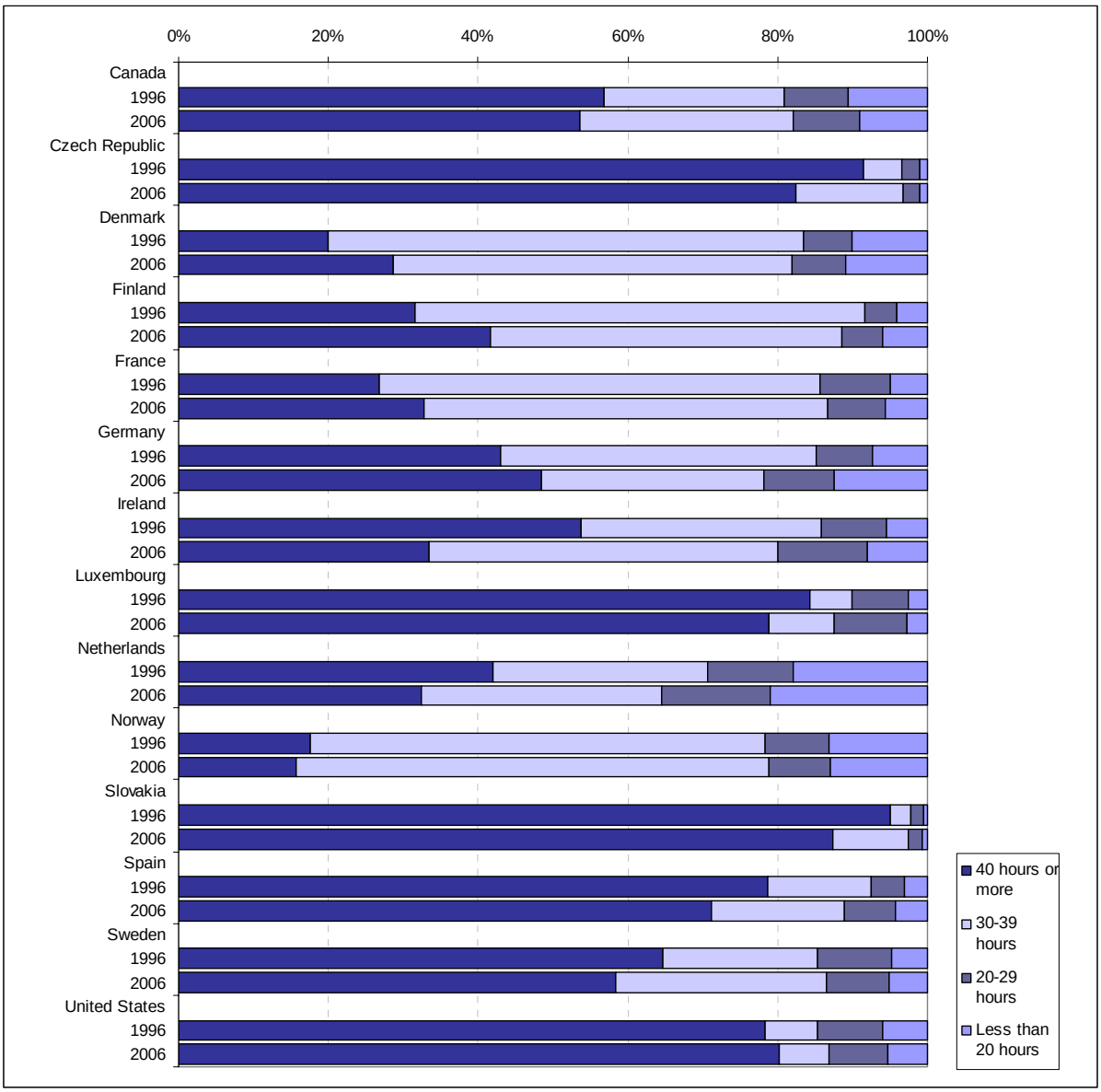
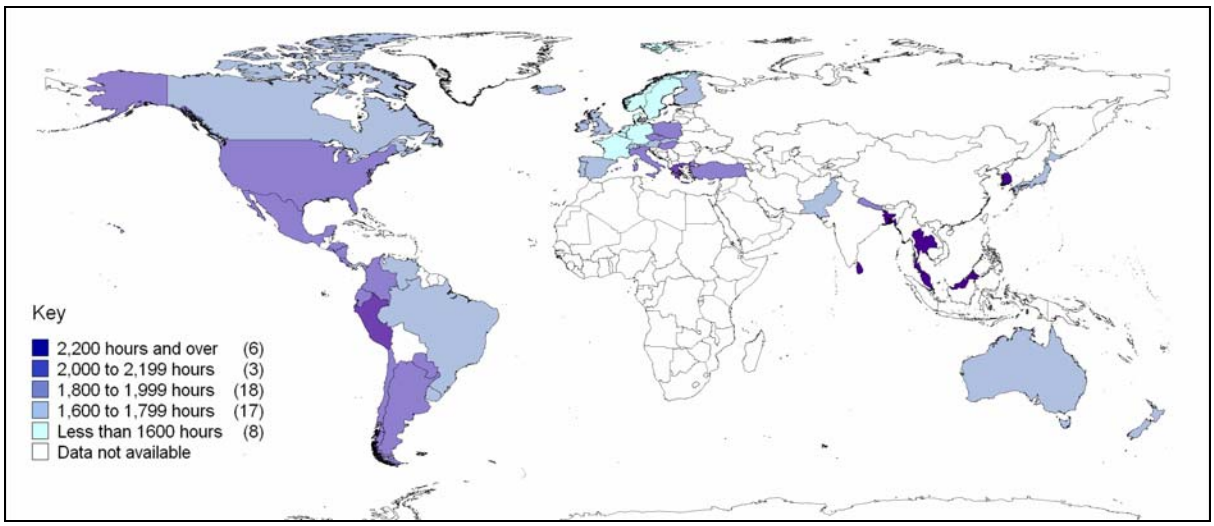


Figure 6c. Annual hours worked per person, latest years



KILM 7. Employment in the informal economy

Introduction

The KILM 7 indicator is a measure of employment in the informal economy[1] as a percentage of total employment, i.e. the ratio between the number of persons employed in the informal economy and the total number of employed persons. Because of the wide variations in definitions and methodology of data collection related to the informal economy, five series are presented in table 7. Series 1 includes measures of the informal economy according to a harmonized definition agreed upon by the Expert Group on Informal Sector Statistics (the Delhi Group); series 2 includes the measures of informal economy as defined on a nation-specific basis; series 3 includes data on employment in "small or micro-enterprises" presented according to national definitions; series 4 includes data for 12 Latin American countries, based on a harmonized definition of "small or micro-enterprises" from the ILO Regional Office for Latin America and the Caribbean; finally, series 5 presents information on the informal economy based on "related other concepts". Users are cautioned to make country-to-country comparisons only within the series based on harmonized definitions.

Table 7 contains information for 59 countries in total. Recent trends in the indicator can be monitored for approximately half of the countries, where comparable time-series data on informal economy employment are available. A gender-specific breakdown for the indicator is given where the data are available. In most cases, information on persons employed in the informal economy is given as absolute numbers and as a percentage of total employment, except for series 4 where only percentages are available. National, urban and rural figures are given when available; however, for some countries, statistical information is available for urban areas only.

Use of the indicator

The informal sector represents an important part of the economy, and certainly of the labour market, in many countries, especially developing economies, and plays a major role in employment creation, production and income generation. In countries with high rates of population growth or urbanization, the informal economy tends to absorb most of the expanding labour force in the urban areas. Informal economy employment is a necessary survival strategy in countries that lack social safety nets, such as unemployment insurance, or where wages – especially in the public sector – and pensions are low. In these situations, indicators such as the unemployment rate (KILM 8) and time-related underemployment (KILM 12) are not sufficient to describe the labour market completely. In other countries, the process of industrial restructuring in the formal economy is seen as leading to greater decentralization of production through subcontracting to small enterprises, many of which are in the informal economy. Global competition – so-called globalization – is also likely to have

1. In this manuscript and elsewhere in the KILM, the term "informal economy" is primarily used. In accordance with the conclusions concerning decent work and the informal economy, adopted by the Committee on the Informal Economy, International Labour Conference, 90th Session, 2002, the term "informal economy" is preferable to "informal sector" because the workers and enterprises in question do not fall within any one sector of economic activity, but cut across many sectors. However, "informal sector" is used historically in this text with reference to documents preceding the 2002 conclusions, and occasionally to avoid confusion with other nuances of the word "economy".

contributed to the informalization of the workforce in many countries. This is because global competition erodes employment relations by encouraging formal firms to hire workers at low wages with few benefits or to subcontract (outsource) the production of goods and services.[2]

The informal economy represents a challenge to policy-makers faced with the following goals: improving the working conditions, and legal and social protection of persons employed in the informal economy; increasing the productivity of informal economic activities; developing training and skills; organizing informal economy producers and workers; and implementing appropriate regulatory frameworks, governmental reforms, urban development, and so on. Poverty, too, as a policy issue, overlaps with the informal economy. There is a link – although not a perfect correlation – between working in the informal economy and being poor. This stems from the lack of labour legislation and social protection covering workers in the informal economy, and from the fact that informal economy workers earn, on average, less than workers in the formal economy.

Statistics on employment in the informal economy are essential to obtaining a clear idea of the contributions of all workers, women in particular, to the economy. Indeed, the informal economy has been considered as "the fallback position for women who are excluded from paid employment. ... The dominant aspect of the informal economy is self-employment. It is an important source of livelihood for women in the developing world, especially in those areas where cultural norms bar them from work outside the home or where, because of conflict with household responsibilities, they cannot undertake regular employee working hours".[3]

Definitions and sources

Changing employment arrangements require not only new ways of conceptualizing the informal economy but also new approaches to measuring its size and contribution to the overall economy. The ILO Bureau of Statistics has played a leading role in developing methods for the collection of data on the informal economy, in compiling and publishing official statistics in this area, and in providing technical assistance to national statistical offices to improve their data collection. In 1998 the Bureau established a database on the informal sector, which was subsequently used as the basis for table 7 of KILM. The database was updated in 2001 and contains available official national statistics and related methodological information for countries of Africa, Latin America and the Caribbean, Asia and the Pacific, and the transition economies of Central and Eastern Europe.[4]

In 1993, the 15th International Conference of Labour Statisticians (ICLS) adopted an international statistical definition

[2] ILO, Employment Sector: *Women and Men in the Informal Sector: A Statistical Picture* (Geneva, 2002); available on website: http://www.ilo.org/public/english/employment/infeco/download/menwomen.pdf. As part of the preparatory work for the general discussion on the informal economy at the 90th Session of the International Labour Conference in Geneva in 2002, the ILO, under the auspices of its Inter-Sectoral Task Force on the Informal Economy, commissioned a series of background papers, of which this is one. The series includes studies of regional trends, country-level studies and thematic investigations, aimed at identifying the latest data and trends in the informal economy around the world. All papers, which provide useful information for those readers interested in more than statistics, are available on the website www.ilo.org/infeco.

3. United Nations: *Handbook for Producing National Statistical Reports on Women and Men*, Social Statistics and Indicators, Series K, No. 14 (New York, 1997), p. 232.

4. All details of STAT's activities in the field of the informal economy are detailed in ILO: "ILO compendium of official statistics on employment in the informal sector", STAT Working Paper 2002 – No. 1 (Geneva, 2002). Readers can learn more about the ILO Bureau of Statistics from the box in the Overview and from the website: www.ilo.org/stat.

of the informal sector.[5] The definition was subsequently included in the revised System of National Accounts (SNA 1993), adopted by the United Nations Economic and Social Council on the recommendation of the United Nations Statistical Commission.[6] Inclusion in the SNA was considered essential, as it made it possible to identify the informal economy as a separate entity in the national accounts and hence to quantify the contribution of the informal economy to gross domestic product. Box 7a includes the relevant details of the ICLS-formulated concepts and definitions for the informal sector. Users should examine it carefully to gain a full understanding of the nuances and complexities involved in interpreting the concept of the "informal economy". A summary of the international definitions is provided here:

Employment in the informal economy: all jobs in informal economy enterprises or all persons who, during a given reference period, were employed in at least one informal enterprise, irrespective of their status in employment and whether it was their main job or a secondary job.

Criteria for informal economy enterprises:

- They are private unincorporated enterprises (excluding quasi-corporations), i.e. enterprises owned by individuals or households that are not constituted as separate legal entities independently of their owners, and for which no complete accounts are available that would permit a financial separation of the production activities of the enterprise from the other activities of its owner(s). Private unincorporated enterprises include unincorporated enterprises owned and operated by individual household members or by several members of the same household, as well as unincorporated partnerships and cooperatives formed by members of different households, if they lack complete sets of accounts.
- All or at least some of the goods or services produced are meant for sale or barter, with the possible inclusion in the informal economy of households producing domestic or personal services in employing paid domestic employees.
- Their size in terms of employment is below a certain threshold to be determined according to national circumstances, and/or they are not registered under specific forms of national legislation (such as factories acts or commercial acts, tax or social security laws, professional groups' regulatory acts, or similar acts, laws or regulations established by national legislative bodies as distinct from local regulations governing trade licences or business permits), and/or their employees are not registered.
- They are engaged in non-agricultural activities, including secondary non-agricultural activities of enterprises in the agricultural sector.

Most countries still adhere to national definitions of the informal economy and are not, therefore, always in line with the international statistical definition as adopted by the 15th ICLS and the SNA 1993. A major deviation from the international definition is that many countries, especially those using labour force or other household surveys to measure employment in the informal economy, do not yet use the criterion of legal organization of the enterprise (unincorporated enterprise). Data according to national definitions are reproduced as series 2 in table 7. Also countries often do not use the criterion of lack of a complete set of accounts in their national statistical definition of the informal economy; in other words, the data provided often refer to employment in small or micro-

5. Resolution concerning statistics of employment in the informal sector, adopted by the 15th International Conference of Labour Statisticians, Geneva, 1993; website: http://www.ilo.org/public/english/bureau/stat/res/infsec.htm (see box 7a).

6. Information on the System of National Accounts (SNA 1993) is available from the Statistics Division, United Nations, New York; website: http://unstats.un.org/unsd/nationalaccount/default.htm.

enterprises, including small corporations and quasi-corporations. Data referring to small or micro-enterprises according to national definitions are reproduced as series 3 in the table. The national definitions associated with series 2 and 3 are in the annex to table 7.

Another deviation from the international definition is that a number of countries that use an approximate definition (based on the size criterion only) to measure employment in the informal economy through labour force or other household surveys continue to exclude people engaged in professional and technical occupations, irrespective of the characteristics of their enterprise. Finally, not all countries for which this information is produced use the concept of "informal economy" (or "small and micro enterprises") in their statistics. Some apply alternative concepts that are closely related, such as household economic activities, household industry, unorganized sector, hidden activities or unregistered employment (see series 5 for data on "related other concepts").

Building on the framework set by the 15th ICLS and the SNA 1993, the international Expert Group on Informal Sector Statistics (see box 7b) recently formulated a set of guidelines relating to the international reporting of informal economy information and the harmonization of national definitions. The harmonized definition, which was used to produce the data in series 1, is based on the largest common denominator of currently used national definitions. The informal economy thereby includes "private unincorporated enterprises (excluding quasi-corporations), which produce at least some of their goods and services for sale or barter, have less than 5 paid employees, are not registered, and are engaged in non-agricultural activities (including professional or technical activities)."[7] Paid domestic employees are excluded.

Information sources for the numerator of the indicator – the number of persons employed in the informal economy – vary. The most common sources are labour force surveys and special informal economy surveys, based on a mixed household and enterprise survey approach or an economic or establishment census/survey approach. Other sources include multipurpose household surveys, household income and expenditure surveys, surveys of household economic activities or household industries, small and micro-enterprise surveys, and official estimates prepared by the countries themselves. For series 4, the data are estimates taken from the ILO Regional Database for Latin America and the Caribbean. The exact survey titles can be found in the annex to table 7. Information for the denominator of the indicator, the total number of employed persons, is usually obtained from labour force surveys or official employment estimates.[8] To the extent possible, the same qualifications – i.e. the same geographic areas, branches of economic activity, age limits, etc. – are applied to the total employment denominator as to the numerator.

For the time being, statistics on the informal economy are available on a regular basis at frequent intervals (e.g. every year) for only a few countries. In most countries, statistical information on the informal economy is collected on an ad hoc basis or with a less than annual periodicity. It is therefore not possible to update this indicator as frequently as others.

7. See ILO: "ILO compendium…", op. cit., p. 4.

8. Additional documentation regarding national practices in the collection of employment statistics is provided in ILO: *Sources and Methods*: *Labour Statistics*, Vol. 2: *Employment, Wages, Hours of Work and Labour Cost (Establishment Surveys)* (Geneva, 2003); Vol. 3: *Economically Active Population, Employment, Unemployment and Hours of Work (Household Surveys)* (Geneva, 2003); and Vol. 5: *Total and Economically Active Population, Employment and Unemployment (Population Censuses)* (Geneva, 2003).

Box 7a. Resolution concerning statistics of employment in the informal sector, adopted by the 15th International Conference of Labour Statisticians, January 1993 [relevant paragraphs]

Concept

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

(2) Production units of the informal sector have the characteristic features of household enterprises. The fixed and other assets used do not belong to the production units as such but to their owners. The units as such cannot engage in transactions or enter into contracts with other units, nor incur liabilities, on their own behalf. The owners have to raise the necessary finance at their own risk and are personally liable, without limit, for any debts or obligations incurred in the production process. Expenditure for production is often indistinguishable from household expenditure. Similarly, capital goods such as buildings or vehicles may be used indistinguishably for business and household purposes.

Operational definitions

Informal sector

6 (1) For statistical purposes, the informal sector is regarded as a group of production units which, according to the definitions and classifications provided in the United Nations System of National Accounts (Rev. 4), form part of the household sector as household enterprises or, equivalently, unincorporated enterprises owned by households as defined in paragraph 7.

(2) Within the household sector, the informal sector comprises (i) "informal own-account enterprises" as defined in paragraph 8; and (ii) the additional component consisting of "enterprises of informal employers" as defined in paragraph 9.

(3) The informal sector is defined irrespective of the kind of workplace where the productive activities are carried out, the extent of fixed capital assets used, the duration of the operation of the enterprise (perennial, seasonal or casual), and its operation as a main or secondary activity of the owner.

Household enterprises

7. According to the United Nations System of National Accounts (Rev. 4), household enterprises (or, equivalently, unincorporated enterprises owned by households) are distinguished from corporations and quasi-corporations on the basis of the legal organization of the units and the type of accounts kept for them. Household enterprises are units engaged in the production of goods or services which are not constituted as separate legal entities independently of the households or household members that own them, and for which no complete sets of accounts (including balance sheets of assets and liabilities) are available which would permit a clear distinction of the production activities of the enterprises from the other activities of their owners and the identification of any flows of income and capital between the enterprises and the owners. Household enterprises include unincorporated enterprises owned and operated by individual household members or by two or more members of the same household as well as unincorporated partnerships formed by members of different households.

Informal own-account enterprises

8 (1) Informal own-account enterprises are household enterprises (in the sense of paragraph 7) owned and operated by own-account workers, either alone or in partnership with members of the same or other households, which may employ contributing family workers and employees on an occasional basis, but do not employ employees on a continuous basis and which have the characteristics described in subparagraphs 5 (1) and (2).

(2) For operational purposes, informal own-account enterprises may comprise, depending on national circumstances, either all own-account enterprises or only those which are not registered under specific forms of national legislation.

(continued)

Box 7a (continued)

(3) Registration may refer to registration under factories or commercial acts, tax or social security laws, professional groups' regulatory acts, or similar acts, laws, or regulations established by national legislative bodies.

Enterprises of informal employers

9 (1) Enterprises of informal employers are household enterprises (in the sense of paragraph 7) owned and operated by employers, either alone or in partnership with members of the same or other households, which employ one or more employees on a continuous basis and which have the characteristics described in subparagraphs 5 (1) and (2).

(2) For operational purposes, enterprises of informal employers may be defined, depending on national circumstances, in terms of one or more of the following criteria:

(i) size of the unit below a specified level of employment;

(ii) non-registration of the enterprise or its employees.

(3) While the size criterion should preferably refer to the number of employees employed on a continuous basis, in practice, it may also be specified in terms of the total number of employees or the number of persons engaged during the reference period.

(4) The upper size limit in the definition of enterprises of informal employers may vary between countries and branches of economic activity. It may be determined on the basis of minimum size requirements as embodied in relevant national legislations, where they exist, or in terms of empirically determined norms. The choice of the upper size limit should take account of the coverage of statistical inquiries of larger units in the corresponding branches of economic activity, where they exist, in order to avoid an overlap.

(5) In the case of enterprises which carry out their activities in more than one establishment, the size criterion should, in principle, refer to each of the establishments separately rather than to the enterprise as a whole. Accordingly, an enterprise should be considered to satisfy the size criterion if none of its establishments exceeds the specified upper size limit.

(6) Registration of the enterprise may refer to registration under specific forms of national legislation as specified in subparagraph 8 (3). Employees may be considered registered if they are employed on the basis of an employment or apprenticeship contract which commits the employer to pay relevant taxes and social security contributions on behalf of the employee or which makes the employment relationship subject to standard labour legislation.

10. For particular analytical purposes, more specific definitions of the informal sector may be developed at the national level by introducing further criteria on the basis of the data collected. Such definitions may vary according to the needs of different users of the statistics.

Population employed in the informal sector

11 (1) The population employed in the informal sector comprises all persons who, during a given reference period, were employed (in the sense of paragraph 9 of resolution I adopted by the Thirteenth International Conference of Labour Statisticians) in at least one informal sector unit as defined in paragraphs 8 and 9, irrespective of their status in employment and whether it is their main or a secondary job.

Treatment of particular cases

14. Household enterprises, which are exclusively engaged in non-market production, i.e. the production of goods or services for own final consumption or own fixed capital formation as defined by the United Nations System of National Accounts (Rev. 4), should be excluded from the scope of the informal sector for the purpose of statistics of employment in the informal sector. Depending on national circumstances, an exception may be made in respect of households employing domestic workers as referred to in paragraph 19.

16. For practical reasons, the scope of the informal sector may be limited to household enterprises engaged in non-agricultural activities. With account being taken of paragraph 14, all non-agricultural activities should be included in the scope of the informal sector, irrespective of whether the household enterprises carry them out as main or secondary activities. In particular, the informal sector should include secondary non-agricultural activities of household enterprises in the agricultural sector if they fulfil the requirements of paragraphs 8 or 9.

17. Units engaged in professional or technical activities carried out by self-employed persons, such as doctors, lawyers, accountants, architects or engineers, should be included in the informal sector if they fulfil the requirements of paragraphs 8 or 9.

(continued)

Box 7a (continued)

18 (1) Outworkers are persons who agree to work for a particular enterprise, or to supply a certain quantity of goods or services to a particular enterprise, by prior arrangement or contract with that enterprise, but whose place of work is not within any of the establishments which make up that enterprise.

(2) In order to facilitate data collection, all outworkers should be potentially included in the scope of informal sector surveys, irrespective of whether they constitute production units on their own (self-employed outworkers) or form part of the enterprise which employs them (employee outworkers). On the basis of the information collected, self-employed and employee outworkers should be distinguished from each other by using the criteria recommended in the United Nations System of National Accounts (Rev. 4). Outworkers should be included in the informal sector, or in the population employed in the informal sector, if the production units which they constitute as self-employed persons or for which they work as employees fulfil the requirements of paragraphs 8 or 9.

19. Domestic workers are persons exclusively engaged by households to render domestic services for payment in cash or in kind. Domestic workers should be included in or excluded from the informal sector depending upon national circumstances and the intended uses of the statistics. In either case, domestic workers should be identified as a separate sub-category in order to enhance international comparability of the statistics.

Box 7b. Expert Group on Informal Sector Statistics (Delhi Group)

An international Expert Group on Informal Sector Statistics (Delhi Group), chaired by the Ministry of Statistics and Programme Implementation of India, was constituted in 1997 as one of the "city groups" reporting to the United Nations Statistical Commission. The ILO Bureau of Statistics is a member of the Delhi Group which adopted the following as its terms of reference: (i) to prepare an inventory of existing country practices in the development of informal sector statistics; (ii) to evaluate data collection procedures for informal sector statistics; (iii) to identify problems encountered within data collection procedures and recommend measures to improve response rates and data quality; (iv) to operationalize the international statistical definition of the informal sector in the light of country experiences in implementing the definition; (v) to recommend a minimum data set for informal sector statistics; (vi) to prepare guidelines directed at improving the international comparability of various aspects of informal sector data; (vii) to identify data needs of national accounts with respect to compiling data on gross output, value added, mixed income, etc. of informal sector enterprises; and (viii) to evaluate the usefulness of different sources of data on the informal sector for national accounts and other purposes.

In order to improve the international comparability of informal sector statistics, the Delhi Group has tried to harmonize national definitions of the informal sector on the basis of the framework set by the international definition. The issue was discussed in detail during the third meeting of the Group, and the following recommendation adopted: "Since the informal economy manifests itself in different ways in different countries, national definitions of the informal economy cannot be fully harmonized at present. International agencies should disseminate informal economy data according to the national definitions used. In order to enhance the international comparability of informal economy statistics, they should also disseminate data for the subset of the informal economy, which can be defined uniformly." The reports of all meeting of the Delhi Group are available at website: http://mospi.nic.in/infsec_000.htm.

For more information about the Delhi Group, refer to the websites: http://unstats.un.org/unsd/methods/citygroup/delhi.htm and http://mospi.nic.in/infsec_000.htm.

Limitations to comparability

The international comparability of the indicator is affected by national differences in definitions and coverage. Some of these differences are in line with the recommendations adopted by the 15th ICLS, which conceded some flexibility to countries in defining and measuring the informal economy. The numerical effect of such differences on the data is not always large, as the indicator is typically presented as a ratio, and countries were asked to ensure that the numerator and denominator were identical in coverage. Moreover, efforts have been made to harmonize definitions in cooperation with the statistical agencies of the countries concerned.

Problems with data comparability problems result especially from the following factors:

- differences in data sources;
- differences in geographic coverage;
- differences in the branches of economic activity covered, as indicated in the "coverage limitation" field of the table notes. At one extreme are countries that cover all branches of economic activity, including agriculture, while at the other are countries that cover only manufacturing;
- differences in the criteria used to define the informal economy, for example, size of the enterprise or establishment versus non-registration of the enterprise or the worker;
- different cut-offs used for enterprise size;
- inclusion or exclusion of paid domestic workers;
- inclusion or exclusion of persons who have a secondary job in the informal economy but whose main job is outside the informal economy, e.g. in agriculture or in public service.

Series 1 and 2 of table 7 use the criterion of non-registration of the enterprise, either alone or in combination with other criteria such as size of the enterprise, to define the informal economy. As indicated in the definitions that accompany the table, in most cases the criterion refers to the non-registration of the enterprise as a corporation, or to its non-registration with the tax authorities or for statistical purposes. Use of the concept of small or micro-enterprise (series 3 and 4) can lead to an overestimation of the size of the informal economy. In order to draw attention to such differences, countries are grouped according to the concept on which their statistics are based: informal economy, small or micro-enterprises, and other related concepts.[9]

As mentioned earlier, for many countries statistical information on employment in the informal economy is available for urban areas only. Because of national differences in the characteristics that distinguish urban from rural areas, the distinctions between them are not amenable to a single definition that would be applicable to all countries. In the absence of an international standard definition, the information for the indicator is based on national definitions of urban areas established by countries in accordance with their own needs.

The cut-off points for the size criterion differ among countries. However, there are very clear preferences for cut-off points such as "fewer than 5", "5 or fewer", "fewer than 10" or "10 or fewer". While most countries use the same size limit for all branches of economic activity, some use different size limits for different branches. Other differences among countries include whether the size criterion is applied to each establishment or to the enterprise as a whole, and whether it refers to the total number of people engaged or to the number of employees. The criterion of non-registration of the employees of the enterprise is used only by some of the transition economies of Central and Eastern Europe.

9. For more details on all concepts, see ILO: "ILO compendium …", op. cit.

National practices concerning the classification of paid domestic workers vary widely across countries and information sources. Among the countries using labour force or other household surveys for measuring employment in the informal economy, almost as many include paid domestic workers in the informal economy as exclude them. In contrast, countries that use surveys of the production units of the informal or similar sectors tend either to exclude all paid domestic workers or to include only those who consider themselves as self-employed. These differences tend to affect the international comparability of data for women more than for men.

If obtained from labour force or other household surveys, data on persons employed in the informal economy often refer only to those whose main or only job is in the informal economy and exclude those with a secondary job in the informal economy. The number of these people can be quite large in some countries, and it is therefore important to note such distinctions when carrying out cross-economy comparisons.

Despite the reservations concerning international comparisons mentioned above, it is believed that the available information will prove to be useful for analysing the labour market situation and trends over time in countries at the national level.

Trends

Six countries can be compared on the basis of the harmonized definition of employment in the informal economy. (See figure 7a.) Very high levels of informal economy employment (nearing 50 per cent) are evident in both Ethiopia and India. Informal employment rates are higher in rural than urban areas except in Georgia and the Russian Federation, where rates are relatively low to begin with.

Cross-country comparable time series are available only for the series based on employment in small or micro-enterprises in Latin American countries (series 4). As seen in figure 7b, rates ranged from 32 per cent in Chile to 58 per cent in Nicaragua. Most countries had decreases in the number of persons employed in small or micro-enterprises from 1993 to 2003, with the largest decrease in Mexico (-14 percentage points). Meanwhile, Honduras and Venezuela experienced an increase of a similar magnitude (+16 percentage points each).

Although rates should not be compared among countries when looking at the series based on national definitions, it is possible to assess how informal economy employment has changed over time in the same country. Figure 7c shows that rates decreased significantly from the earliest to latest year of data availability in Ethiopia and decreased only slightly in Benin, Mexico and Ukraine. On the other hand, rates increased significantly in Kazakhstan, Kyrgyzstan, Lithuania and Mali while increasing to a lesser degree in Brazil, Latvia and the United Republic of Tanzania.

Figure 7a. Employment in the informal economy (harmonized definition) as a percentage of total employment, latest years

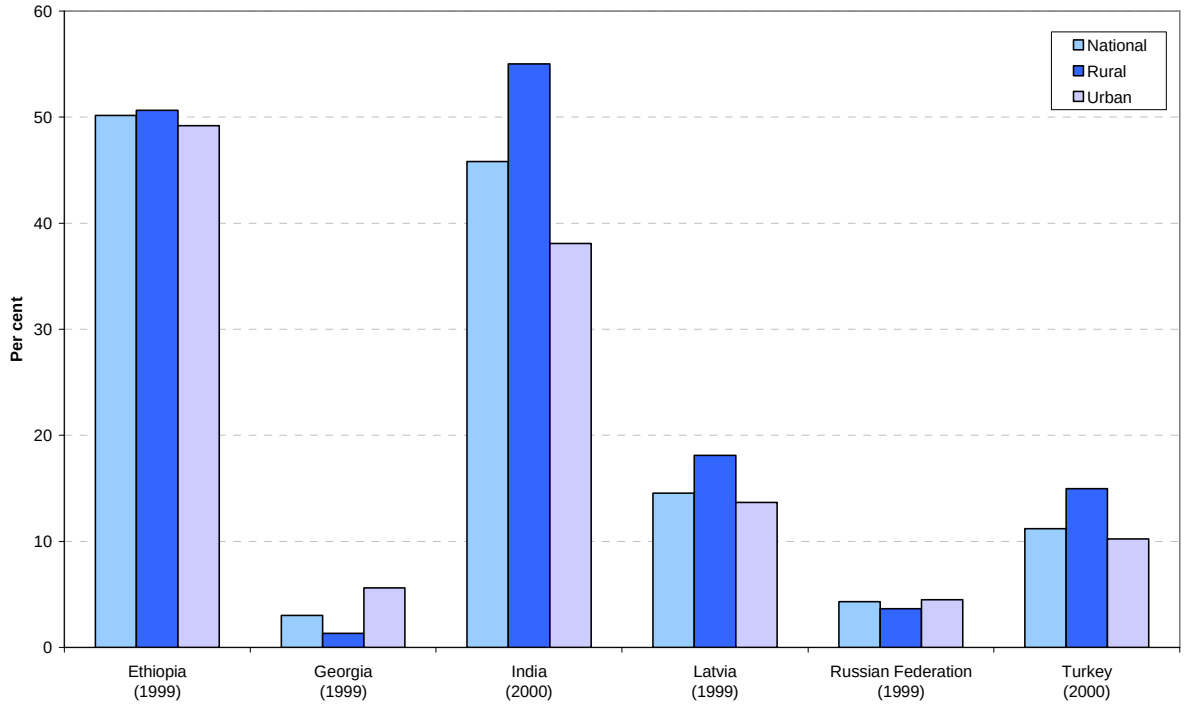


Figure 7b. Persons employed in small or micro-enterprises as a percentage of total employment, 1993 and 2003

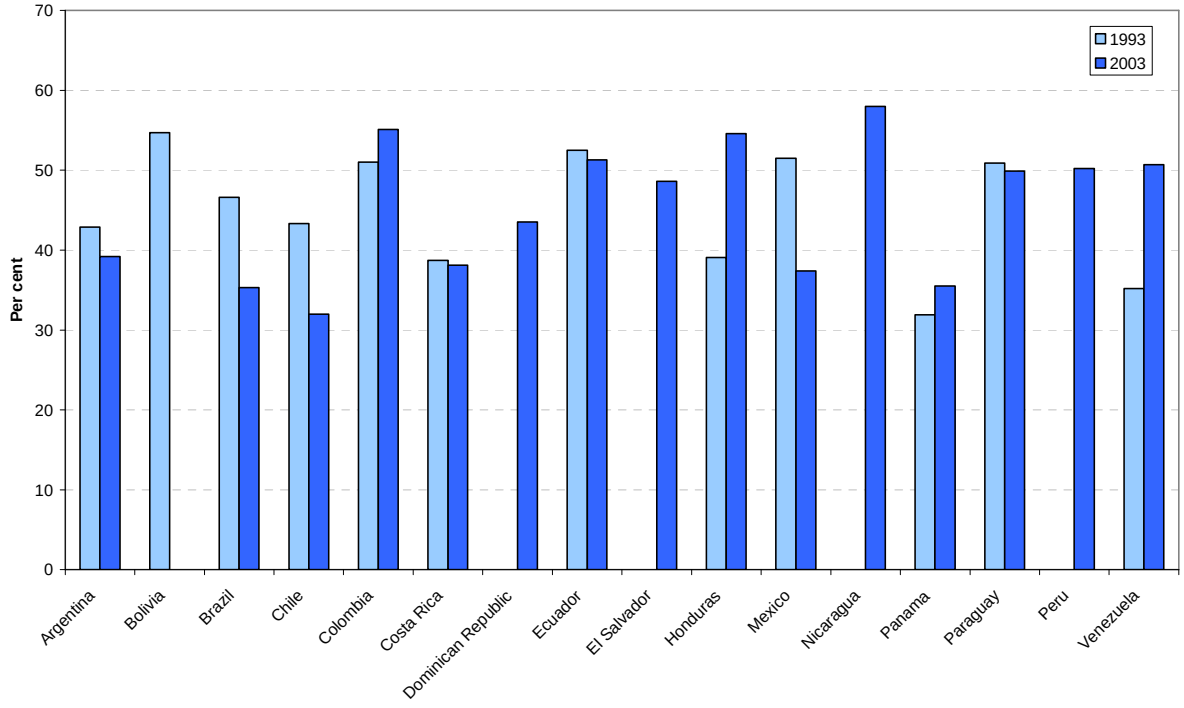
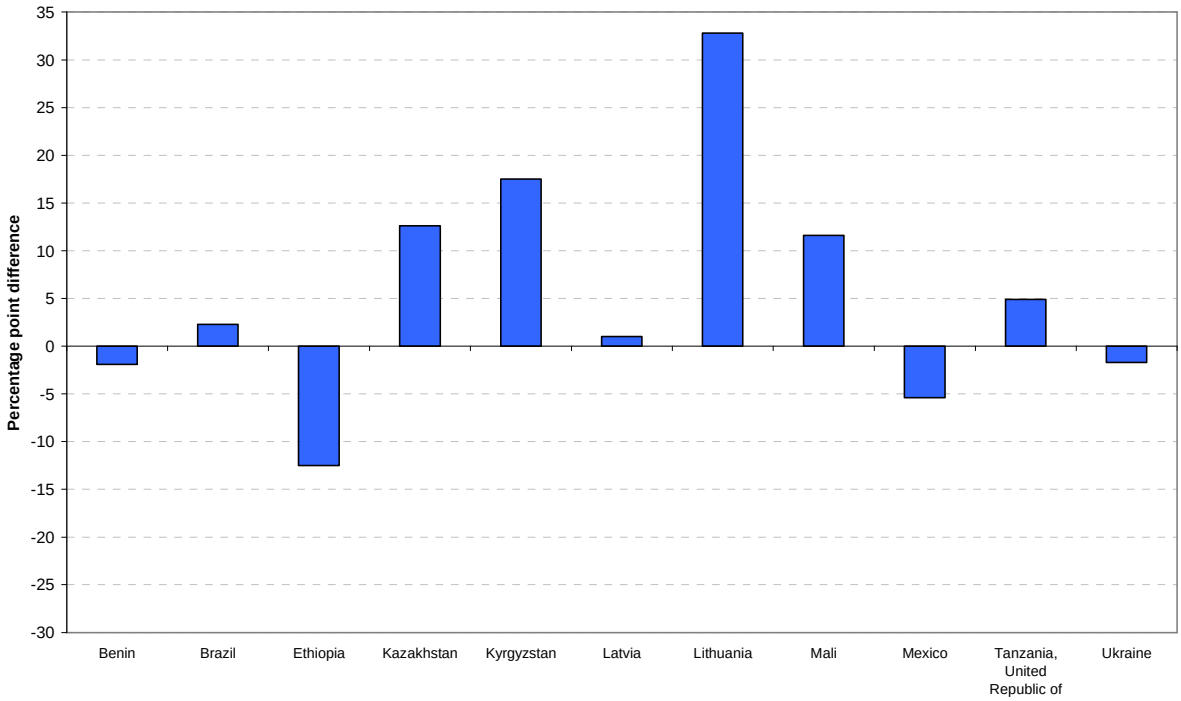


Figure 7c. Percentage point change in employment in the urban informal economy (national definitions), earliest to latest years



4. Unemployment, underemployment and inactivity indicators (KILM 8-13)

The indicators in this chapter cover not only aspects of being unemployed and characteristics of those who find themselves in this situation, but also the group of inadequately employed persons - the time-related underemployed - and the group of people who are not in the labour force.

This chapter begins with the most widely quoted of indicators, the unemployment rate (KILM 8). To supplement this overall rate of unemployment, other measures of the unemployment experience of two particular groups are presented: youth (KILM 9) and the long-term unemployed (KILM 10). These are followed by rates of unemployment according to level of education (KILM 11). The four indicators presented here are believed to reflect the lack of employment at national levels to the greatest and most meaningful extent.

The last two indicators in this chapter deal with the inadequacy of economic activity rather than unemployment itself, although the first of these indicators is sometimes combined with unemployment statistics in calculations of labour market underutilization. Time-related underemployment (KILM 12) is a measure indicating that the hours of work of an employed person are less than the person is willing and available to take. The last indicator is the inactivity rate (KILM 13), a measure of persons who are not in the labour force (that is, neither employed nor unemployed).

KILM 8. Unemployment

Introduction

The unemployment rate is probably the best-known labour market measure and certainly one of the most widely quoted by the media in many countries. Together with the employment-to-population ratio (KILM 2), it provides the broadest indicator of the labour market situation in countries that collect information on the labour force. The unemployment rate is available for a total of 167 economies in table 8a – total unemployment. Eighty-six countries in table 8b – registered unemployment – are available according to the limited concept of "registered unemployed". Information on the number of unemployed persons is available for additional countries in both tables, but the lack of statistics on total employment prevents the calculation of the unemployment rate for them. Table 8c – ILO-comparable unemployment rates – presents unemployment rates from labour force surveys that have been adjusted to make the estimates conceptually consistent with the strictest application of the ILO statistical standards. Comparable data are available for 29 countries.

Use of the indicator

The overall unemployment rate for a country is a widely used measure of its unutilized labour supply. If employment is taken as the desired situation for people in the economically active population (the labour force), unemployment becomes the undesirable situation. Still, some short-term unemployment can be both desirable and necessary for ensuring adjustment to economic fluctuations. Unemployment rates by specific groups, defined by age, sex, occupation or industry, are also useful in identifying groups of workers and sectors most vulnerable to joblessness.

While the unemployment rate may be considered the single, most informative labour market indicator reflecting the general performance of the labour market and the economy as a whole, it should not be interpreted as a measure of economic hardship or of well-being. When based on the internationally recommended standards (outlined in more detail under "Definitions and sources" below), the unemployment rate simply tells us the proportion of the labour force that does not have a job but is available and actively looking for work. It says nothing about the economic resources of unemployed workers or their family members. Its use should, therefore, be limited to serving as a measurement of the utilization of labour and an indication of the failure to find work. Other measures, including income-related indicators, would be needed to evaluate economic hardship.

An additional criticism of the aggregate unemployment is that it masks information on the composition of the jobless population and therefore misses out on the particularities of the education level, ethnic origin, socio-economic background, work experience, etc. of the unemployed. Moreover, the unemployment rate says nothing about the type of unemployment – is it cyclical or structural? – which is a critical issue for policy-makers in the development of their policy responses, especially given that structural unemployment cannot be addressed by boosting market demand only.

Paradoxically, low unemployment rates may well disguise substantial poverty[1] in a country, whereas high unemployment rates can occur in countries with significant economic development and low incidence of poverty. In countries without a safety net of unemployment insurance and welfare benefits, many individuals, despite strong family solidarity,

1. Information relating to poverty is provided by the indicator for poverty (KILM 20), which captures different aspects and dimensions of poverty, working poverty and inequality.

simply cannot afford to be unemployed. Instead, they must eke out a living as best they can, often in the informal economy or in informal work arrangements. In countries with well-developed social protection schemes or when savings or other means of support are available, workers can better afford to take the time to find more desirable jobs. Therefore, the problem in many developing countries is not so much unemployment but rather the lack of decent and productive work, which results in various forms of labour underutilization (i.e. underemployment, low income and low productivity).

A useful purpose served by the unemployment rate in a country, when available on at least an annual basis, is the tracking of business cycles. When the rate is high, the country may be in recession (or worse), economic conditions may be bad, or the country somehow unable to provide jobs for the available workers. The goal, then, is to introduce policies and measures to bring the incidence of unemployment down to a more acceptable level. What that level is, or should be, has often been the source of considerable discussion, as many consider that there is a point below which an unemployment rate cannot fall without the occurrence of intense inflationary pressures. Because of this supposed trade-off, the unemployment rate is closely tracked over time. The usual policy goal of governments, employers and trade unions is to have a rate that is as low as possible yet also consistent with other economic and social policy objectives, such as low inflation and a sustainable balance-of-payments situation. When using the unemployment rate as a gauge for tracking cyclical developments, we are interested in looking at changes in the measure over time. In that context, the precise definition of unemployment used (whether a country-specific definition or one based on the internationally recommended standards) does not matter nearly as much – so long as it remains unchanged – as the fact that the statistics are collected and disseminated with regularity, so that measures of change are available for study.

Internationally, the unemployment rate is frequently used to compare how labour markets in specific countries differ from one another or how different regions of the world contrast in this regard. (See box 8b for world and regional estimates of unemployment rates.)

This indicator may also be used to address issues of gender differences in labour force behaviour and outcomes. The unemployment rate has often been higher for women than for men. Possible explanations are numerous but difficult to quantify; women are more likely than men to exit and re-enter the labour force for family-related reasons; and there is a general "crowding" of women into fewer occupations than men so that women may find fewer opportunities for employment. Other gender inequalities outside the labour market, for example in access to education and training, also negatively affect how women fare in finding jobs.

Definitions and sources

The unemployment rate is defined mathematically as the quotient resulting from dividing the total number of unemployed (for a country or a specific group of workers) by the corresponding labour force, which itself is the sum of the total persons employed and unemployed in the group. It should be emphasized that it is the labour force or the economically active portion of the population that serves as the base for this statistic, not the total population. This distinction is not necessarily well understood by the public. Indeed, the terms "labour force" and "employment" are sometimes mistakenly used interchangeably.

According to the resolution adopted in 1982 by the 13th International Conference of Labour Statisticians (ICLS), the standard definition of unemployed persons is those individuals without work, seeking work in a recent past period, and currently available for

work.[2] (See box 8a.) Persons who did not look for work but have a future labour market stake (arrangements for a future job start) are counted as unemployed.

In many national contexts there may be persons not currently in the labour market who want to work but do not actively "seek" work because they view job opportunities as limited, or because they have restricted labour mobility, or face discrimination, or structural, social or cultural barriers. The exclusion of people who want to work but are not seeking work (often called the "hidden unemployed" or "discouraged workers") is a criterion that will affect the count of both women and men although women may have a higher probability of being excluded from the count of unemployed because they suffer more from social barriers overall that impede them from meeting this criterion. As stated in the resolution (paragraph 10.1.c.), there are situations where the conventional means of seeking work are of limited relevance – for example, in developing economies where the informal economy is rampant and where the labour force is largely self-employed. In such cases, the standard definition of unemployment would greatly undercount the untapped human resources of a country and would give a picture of the labour market that was more positive than reality would warrant. Labour market analysts, therefore, often promote the measurement of unemployment according to the "relaxed definition", meaning relaxing the criterion of seeking work.

Another factor leading to exclusion from the unemployment count concerns the criterion that workers be available for work during the short reference period. A short availability period tends to exclude those who would need to make personal arrangements before starting work, such as for care of children or elderly relatives or other household affairs, even if they are "available for work" soon after the short reference period. As women are often responsible for household affairs and care, they are a significant part of this group and would therefore not be included as unemployed as measured. Various countries have acknowledged this coverage problem and have extended the "availability" period to the two (or more) weeks following the reference period. Even then, women – more than men – tend to be excluded from unemployment, probably because this period is still not sufficiently long to compensate for constraints that are more likely to affect them.

Household labour force surveys are generally the most comprehensive and comparable sources for unemployment statistics. Other possible sources include population censuses and official estimates. Administrative records such as employment office records and social insurance statistics are presented in a separate table (8b) in this edition of KILM because of the limitation in coverage of such sources to "registered unemployed" only. A national count of either unemployed persons or work applicants that are registered at employment offices is likely to be only a limited sub-set of the total persons seeking and available for work, especially in countries where the system of employment offices is not extensive. This may be because of eligibility requirements that exclude those who have never worked or have not worked recently, or to other discriminatory impediments that preclude going to register.

On the other hand, administrative records can overstate registered unemployment because of double-counting, failure to remove people from the registers when they are no longer looking for a job, or because it allows inclusion of persons who have some work. Due to these measurement limitations, national unemployment data based on registered unemployed should be treated with care; registered unemployment data can serve as a useful proxy for the extent of persons without work in countries where data on total unemployment are not available and time-series of registered unemployment data by country can serve as a good indication of labour market

2 Resolution concerning statistics of the economically active population, employment, unemployment and underemployment, 13th International Conference of Labour Statisticians, Geneva, 1982); website: http://www.ilo.org/public/english/bureau/stat/download/res/ecacpop.pdf.

performance over time, but due to the limitation in comparability to "total unemployment", the two measures should not be used interchangeably and are therefore presented in separate tables (table 8a for total unemployment and 8b for registered unemployment).

Box 8a. Resolution concerning statistics of the economically active population, employment, unemployment and underemployment, adopted by the 13th International Conference of Labour Statisticians, October 1982 [relevant paragraphs]

Concepts and definitions

…

Unemployment (para. 10)

1. The "unemployed" comprise all persons above a specified age who during the reference period were:
   a. "without work", i.e. were not in paid employment or self-employment as defined in paragraph 9 (see box 2a in the KILM 02 manuscript);
   b. "currently available for work", i.e. were available for paid employment or self-employment during the reference period; and
   c. "seeking work", i.e. had taken specific steps in a specified recent period to seek paid employment or self-employment. The specific steps may include registration at a public or private employment exchange; application to employers; checking at worksites, farms, factory gates, market or other assembly places; placing or answering newspaper advertisements; seeking assistance of friends or relatives; looking for land, building, machinery or equipment to establish own enterprise; arranging for financial resources; applying for permits and licences, etc.
2. In situations where the conventional means of seeking work are of limited relevance, where the labour market is largely unorganized or of limited scope, where labour absorption is, at the time, inadequate or where the labour force is largely self-employed, the standard definition of unemployment given in subparagraph (1) above may be applied by relaxing the criterion of seeking work.
3. In the application of the criterion of current availability for work, especially in situations covered by subparagraph (2) above, appropriate tests should be developed to suit national circumstances. Such tests may be based on notions such as present desire for work and previous work experience, willingness to take up work for wage or salary on locally prevailing terms, or readiness to undertake self-employment activity given the necessary resources and facilities.
4. Notwithstanding the criterion of seeking work embodied in the standard definition of unemployment, persons without work and currently available for work who had made arrangements to take up paid employment or undertake self-employment activity at a date subsequent to the reference period should be considered as unemployed.
5. Persons temporarily absent from their jobs with no formal job attachment who were currently available for work and seeking work should be regarded as unemployed in accordance with the standard definition of unemployment. Countries may, however, depending on national circumstances and policies, prefer to relax the seeking work criterion in the case of persons temporarily laid off. In such cases, persons temporarily laid off who were not seeking work but classified as unemployed should be identified as a separate subcategory.
6. Students, homemakers and others mainly engaged in non-economic activities during the reference period who satisfy the criteria laid down in subparagraphs (1) and (2) above should be regarded as unemployed on the same basis as other categories of unemployed persons and be identified separately, where possible.

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Box 8b. World and regional estimates of unemployment rates

Unemployment rate (%) - both sexes	1996	2002	2003	2004	2005	2006*
WORLD	6.2	6.6	6.5	6.5	6.4	6.3
Developed Economies & European Union	7.8	7.3	7.4	7.2	6.9	6.4
Central & South-Eastern Europe (non-EU) & CIS	9.8	9.8	9.4	9.3	9.0	8.8
East Asia	3.8	3.9	3.8	3.7	3.7	3.6
South-East Asia & the Pacific	3.7	6.1	6.2	6.4	6.1	6.2
South Asia	4.6	5.1	4.8	5.4	5.3	5.1
Latin America & the Caribbean	7.9	8.8	8.7	8.3	8.4	8.6
North Africa	14.0	13.7	13.4	12.5	11.6	11.5
Sub-Saharan Africa	9.2	10.2	10.1	9.7	9.7	9.7
Middle East	12.4	13.0	12.4	11.7	12.2	12.1
Unemployment rate (%) - males	**1996**	**2002**	**2003**	**2004**	**2005**	**2006***
WORLD	6.0	6.4	6.3	6.3	6.2	6.1
Developed Economies & European Union	7.3	7.1	7.2	6.9	6.6	6.1
Central & South-Eastern Europe (non-EU) & CIS	9.9	10.0	9.7	9.6	9.3	9.0
East Asia	4.3	4.4	4.2	4.2	4.2	4.1
South-East Asia & the Pacific	3.5	5.9	6.1	6.3	5.6	5.7
South Asia	4.4	4.7	4.6	5.0	4.9	4.8
Latin America & the Caribbean	6.5	7.1	7.0	6.6	6.8	6.9
North Africa	12.3	11.7	11.3	10.6	9.6	9.6
Sub-Saharan Africa	9.2	10.2	10.1	9.7	9.7	9.7
Middle East	10.9	11.3	10.8	10.3	10.6	10.5
Unemployment rate (%) - females	**1996**	**2002**	**2003**	**2004**	**2005**	**2006***
WORLD	6.5	6.9	6.8	6.8	6.7	6.6
Developed Economies & European Union	8.4	7.6	7.6	7.5	7.2	6.7
Central & South-Eastern Europe (non-EU) & CIS	9.7	9.6	9.2	9.0	8.7	8.4
East Asia	3.2	3.3	3.1	3.1	3.1	3.0
South-East Asia & the Pacific	4.0	6.2	6.4	6.6	6.8	6.9
South Asia	5.2	5.9	5.5	6.3	6.1	5.9
Latin America & the Caribbean	10.4	11.5	11.3	11.0	10.8	11.0
North Africa	19.3	19.7	19.5	18.4	17.2	17.1
Sub-Saharan Africa	9.2	10.2	10.2	9.7	9.7	9.7
Middle East	17.7	17.8	17.0	15.9	16.5	16.3

Source: ILO Global Employment Trends Model (see box 3 in “Guide to understanding the KILM” for more information on estimation methodology).* 2006 preliminary estimates).

(continued)

Box 8b (continued)

Regional unemployment rates in 2006 ranged from 3.6 per cent in East Asia to 12.1 per cent in the Middle East. Only the three Asian regions had rates below the world average of 6.3 per cent. The regional estimates for both African regions were relatively high at 11.5 per cent for North Africa and 9.7 per cent for sub-Saharan Africa. Again, it should be noted that additional indicators could point to other decent work deficits, which are more pertinent to the analysis of labour markets than the unemployment rate alone, especially for developing economies (see Chapter 1). In the case of Africa, for example, also considering the amount of working poor would significantly increase the number of individuals that may be considered underutilized.

In recent years, the world unemployment rate decreased from 6.6 per cent in 2002 to 6.3 per cent in 2006 but remains almost unchanged compared with a decade ago. South-East Asia & the Pacific had a much higher unemployment rate than ten years ago although this increasing trend has come to a halt in recent years. On the other hand, North Africa and to a lesser extent the Developed Economies & European Union saw continuous declines in their unemployment rates over the last decade. For the remaining regions unemployment rates varied by one percentage point or less over the last ten years.

Female unemployment rates remained higher than male unemployment rates for the majority of the regions and for the world as a whole. The largest gender gaps in unemployment rates were found in North Africa (17.1 per cent for females versus 9.6 per cent for males) and the Middle East (16.3 per cent for females versus 10.5 per cent for males). Latin America & the Caribbean also stood out, with a female unemployment rate 4.1 percentage points higher than that of males. The only exception where male unemployment rates considerably exceeded those of women was in East Asia, where the male rate was 1.1 percentage points higher than the female rate in 2006.

The issue of comparability is particularly complex when looking at indicators for a large number of countries throughout the world, despite the division of concepts according to total and registered unemployed in this edition. In an effort to resolve this issue for its member countries – and building on work carried out by the United States Bureau of Labor Statistics in the 1960s – OECD publishes "standardized unemployment rates" adjusted to ILO concepts. The ILO has further extended the OECD series in country coverage and number of labour force measures. Table 8c shows historical data for 29 ILO Member States based on the ILO-comparable programme.[3]

This table presents unemployment rates from national labour force survey estimates that have been adjusted to make them conceptually consistent with the *strictest* application of the ILO statistical standards. This implies that participating countries and territories have provided detailed information on the composite elements of their labour forces. The unemployment rates obtained are based on the total labour force including the armed forces, while OECD standardized rates are now civilian-based. The rates are calculated from annual average estimates (or the period considered most representative over the year), thereby avoiding the variances that would occur if different reference periods were used. These unemployment rates, based on official national information, should provide the best basis currently available for making reasonable international comparisons and assumptions.

Limitations to comparability

A significant amount of research has been carried out over the years in the important area of producing unemployment rates that are fully consistent conceptually, in order to contrast unemployment rates of different countries for different hypotheses. Interested users can compare the "ILO-comparable" rates in table

3. Users will also find the comparable rates on the online database of the ILO Bureau of Statistics at website: http://laborsta.ilo.org/ as well as in ILO: "Comparable annual employment and unemployment estimates", *Bulletin of Labour Statistics* (Geneva), 2004-4 (with more detailed methodological information); website: http://www.ilo.org/public/english/bureau/stat/download/articles/2004-4.pdf.

8c with the information shown in table 8a. In a few cases the adjusted rates are the same as those found in table 8a; elsewhere they are quite different as the information in table 8a may be obtained from multiple sources, while the adjusted "ILO-comparable" rates are always based on a household labour force sample survey.

There are a host of reasons why measured unemployment rates may not be comparable between countries. A few are provided below, to give users some indication of the range of potential issues that are relevant when attempting to determine the degree of comparability for unemployment rates between countries. Users with knowledge of particular countries or special circumstances should be able to expand on them:

1. **Different sources**. To the extent that sources of information differ, so will the results. Comparability difficulties resulting from the difference between sources measuring registered unemployment and total unemployment has been removed by separating the two into different tables. The remaining sources in table 8a – labour force surveys, official estimates and population censuses – can still pose issues of comparability in cross-country analyses. Official estimates are generally based on information from different sources and can be combined in many different ways. A population census generally cannot probe deeply into labour force activity status. The resulting unemployment estimates may, therefore, differ substantially (either upwards or downwards) from those obtained from household surveys where more questions are asked to determine respondents' labour market situation. For more information regarding sources, users may also refer to the discussion of the pros and cons of various sources in the corresponding section of KILM 1 (labour force participation rates).

2. **Measurement difference.** Where the information is based on household surveys or population censuses, differences in the questionnaires can lead to different statistics – even allowing for full adherence to ILO guidelines. In other words, differences in the measurement tool can affect the comparability of labour force results across countries.

3. **Conceptual variation.** National statistical offices even when basing themselves on the ILO conceptual guidelines may not follow the strictest measurement of employment and unemployment. They may differ in their choices concerning the conceptual basis for estimating unemployment, as in specific instances where the guidelines allow for a relaxed definition, thereby causing the labour force estimates (the base for the unemployment rate) to differ. They may also choose to derive the unemployment rate from the civilian labour force rather than the total labour force or economically active population. To the extent that such choices vary across countries, so too will the information.

4. **Number of observations per year.** Statistics for any given year can differ depending on the number of observations – monthly, quarterly, once or twice a year, and so on. Among other things, a considerable degree of seasonality can influence the results when the full year is not covered.

5. **Geographic coverage.** Survey coverage that is less than national coverage – urban areas, city, regional – has obvious limitations to comparability to the extent that coverage is not representative of the country as a whole.[4] Unemployment in urban areas

4. When performing queries on this table and others, users have the option to omit records that are of sub-national geographic coverage. On the software, this can be done by performing the query

may tend to be higher than total unemployment because of the exclusion of the rural areas where workers are likely to work, although they may be underemployed or unpaid family workers, rather than seek work in a non-existent or small formal sector.

6. **Age variation.** The generally used age coverage is 15 years and over, but some countries use a different lower limit or impose an upper age-limit.

7. **Collection methodology.** Sample sizes, sample selection procedures, sampling frames, and coverage, as well as many other statistical issues associated with data collection, may make a significant difference. The better the sample size and coverage, the better the results. Use of well-trained interviewers, proper collection and processing techniques, adequate estimation procedures, etc. are crucial for accurate results. Wide variations in this regard can clearly affect the comparability of the unemployment statistics.

When viewing the unemployment rate as a gauge for tracking cyclical developments within a country, one would be interested in looking at changes in the measure over time. In this context, the definition of unemployment used (whether a country-specific definition or one based on the internationally recommended standards) does not matter as much – so long as it remains unchanged – as the fact that the statistics are collected and disseminated with regularity, so that measures of change are available for study. Still, for users making cross-country comparisons it will be critical to know the source of the data and the conceptual basis for the estimates. It is also important to recognize that minor differences in the resulting statistics may not represent significant real differences.

for all data and then refining the parameters to select the "national only" button under "Geographic coverage".

Two examples of substantial difference in household surveys may be useful for understanding some of the complexities of optimal comparisons. The first concerns "job search". The ILO conceptual framework assumes that persons looking for work must indicate one or more "active" methods – such as applying directly to employers or visiting an employment exchange office – in order to be counted as unemployed. Among the potential methods is the consultation of "newspaper advertisements". In many parts of the world, this may not be a common or readily available means. In others, newspapers are an excellent source of information about potential jobs, and many jobseekers do indeed consult them. However, some countries accept the mere reading or looking at advertisements as a search method, whereas others require that persons actually answer one or more advertisement before the newspaper search is counted as an acceptable method. The issue comes down to whether the "passive" versus the "active" search is allowed, and countries vary in their approach to this.

The second example relates to "discouraged workers": persons who are not currently looking for work but may have looked in the past and clearly desire a job "now" (see "Definitions" above). Most surveys do not include them in the unemployed counts, but some do. The ILO-comparable estimates strictly adjust for them; in the case of the Philippines, which participates in the programme, the national unemployment rate and ILO-comparable unemployment rate differ by slightly more than 1 percentage point for this reason. Inclusion of discouraged workers is fairly common in a number of countries (for example in the Caribbean), based on the relaxation of the ILO definition that is envisaged as part of the relevant guidelines. Users wishing to account for such a definitional difference would need to obtain relevant information (perhaps at the "micro" level) in order to adjust for differences in unemployment rates.

The above two examples illustrate aspects of conceptual variation and measurement difference. The degree of complexity of these

and other differences in the measurement and estimation of unemployment that can occur around the world serve as a reminder that great care should be taken in any attempt to draw exacting comparisons.

Trends

Unemployment rates for most economies fell in the range of 5 to 20 per cent. Figure 8a shows countries with total unemployment rates (excluding registered unemployment) in descending range of rates. Seven economies had relatively high rates – that is, in excess of 30 per cent: Armenia, The former Yugoslav Republic of Macedonia and the sub-Saharan African countries of Djibouti, Lesotho, Namibia and Seychelles. At the other end of the spectrum, relatively low unemployment rates – of less than 2 per cent – were found in Cuba, Kuwait, the Isle of Man, the South-East Asian countries of Cambodia, the Lao People's Democratic Republic and Thailand, and the sub-Saharan African countries of Chad, Rwanda and Malawi. It is interesting to note that while some countries in sub-Saharan Africa had the highest unemployment rates, others in the same region had some of the lowest rates in the world. The regional estimate for sub-Saharan Africa, seen in box 8b, reveals a comparatively high average of 9.8 per cent in 2006, making it the region with the third highest rate behind the Middle East and North Africa.

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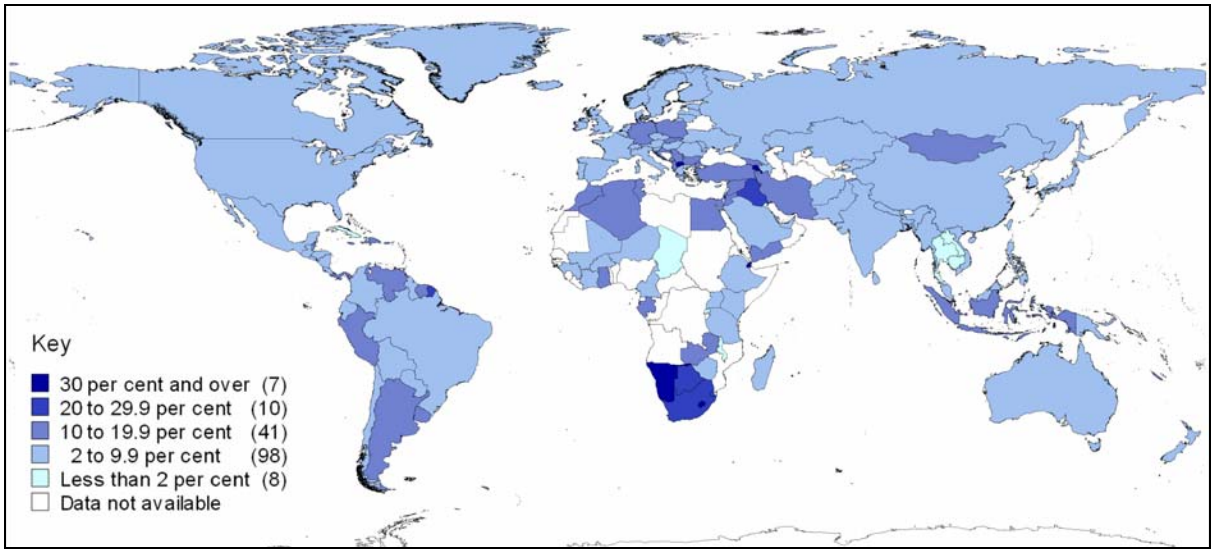
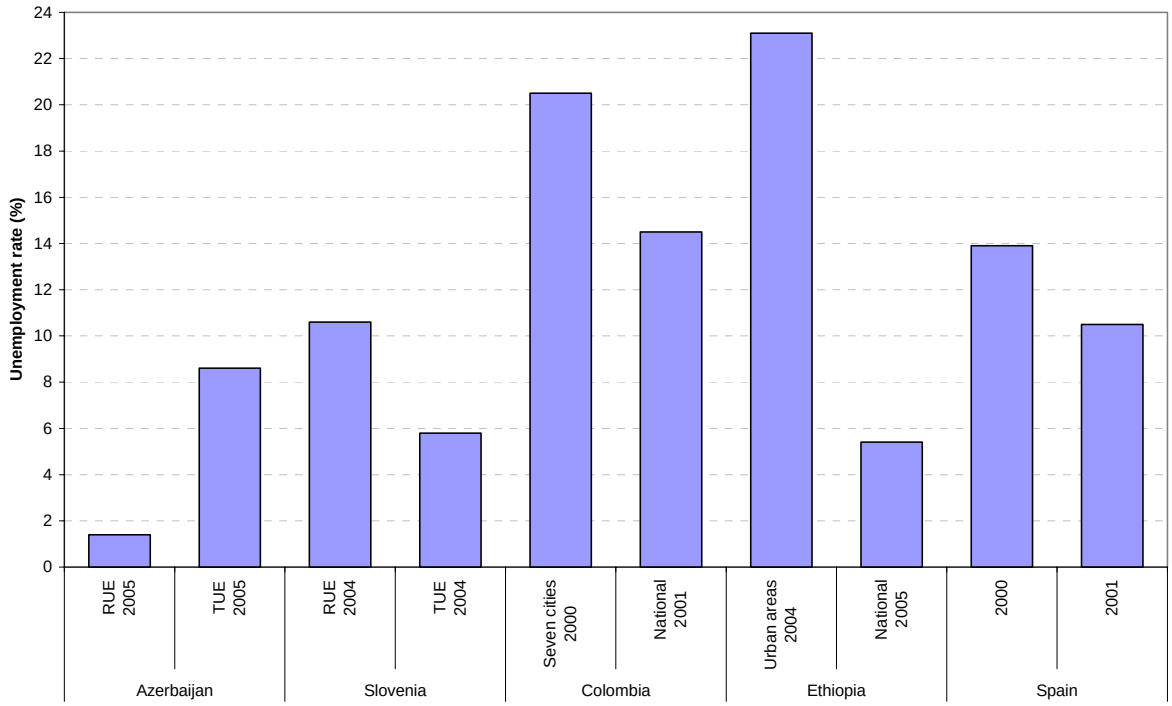
Figure 8a. Total unemployment rates, latest years



It should also be emphasized that a low unemployment rate does not necessarily indicate that a country's labour market is thriving. For example, although the unemployment rate in Mexico was relatively low at 3.5 per cent in 2005, it suggests that many Mexicans cannot afford to be unemployed so that they are instead employed (or more likely, underemployed) in low-paying jobs in the informal sector. As has been highlighted in Chapter 1, it is important to look at sets of indicators to capture a more accurate picture of labour market conditions, particularly when it comes to developing countries, as these could indicate that employed persons – not just the unemployed – are underutilized as a result of decent work deficits.

Figure 8b is intended to demonstrate how the application of different definitions and survey coverage dramatically affect the resulting unemployment rates and can lead to erroneous analysis. First, the figure shows the different rates given for a measure of unemployed persons who registered at an employment office (from table 8b, administrative records) next to the rates for total unemployment (from table 8a, household survey data) for two countries – Azerbaijan and Slovenia. One finds that the total unemployment rate in Azerbaijan in 2005 was six times that of the registered unemployment rate, while, on the contrary, the registered rate in Slovenia in 2004 exceeded that of the total unemployment rate. The temptation is to compare the two results in the hopes of making a statement as to the "success" of employment offices, but this should not be done because the definitions used in the collection of data by the different sources are completely different. Nor should cross-country analysis be made of one country's registered unemployment rate to another country's total unemployment rate.

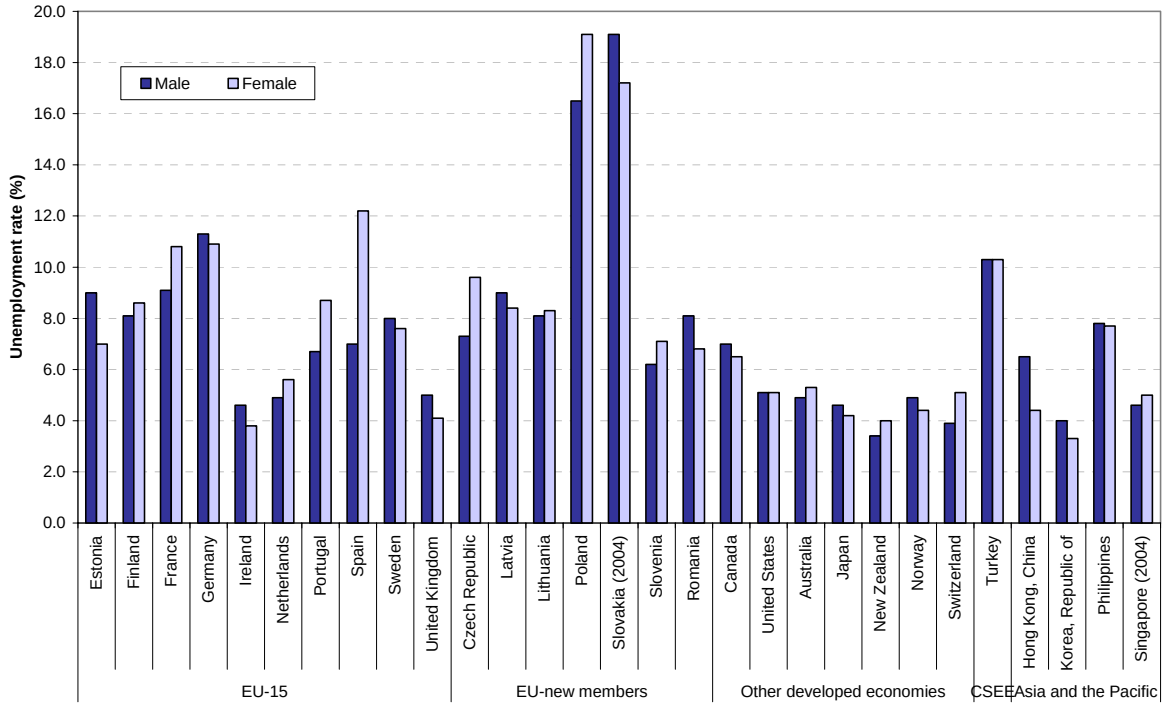
Figure 8b. How concepts and methodology affect results



The other three countries are included to demonstrate the effects of a break in time series – in two cases due to changes in geographic coverage from urban areas (Ethiopia) or seven cities (Colombia) to national coverage and one due to a revision in the definition of unemployment (Spain). The drops in the unemployment rates in each case are dramatic but should not be misinterpreted as "real" changes in the unemployment rate that result from policy implementation or economic growth. The unemployment rate in Colombia did not fall 6 percentage points between 2000 and 2001. The rate might have improved but there is no way of determining that from the rates given since the change is simply the result of a change in survey coverage from seven cities to national. In order to avoid mistakes in interpreting results, the user is urged to pay close attention to the notes presented in the "geographic limitation" field as well as remarks related to breaks in series.

To avoid the limitations of comparability that apply to statistics based on national estimates, one can make confident cross-country comparisons based on the series of ILO-comparable unemployment rates. This series, displayed in figure 8c, shows female and male unemployment rates below 10 per cent for most economies for which data are available. Two new Member States of the EU had relatively high unemployment rates – Poland and Slovakia – with male and female rates exceeding 16 per cent. For the majority of the economies, there were no significant differences in the unemployment rates of men and women in 2005. Exceptions include the Czech Republic, Poland, Portugal and Spain where female unemployment rates were at least 2.0 percentage points higher and Estonia and Hong Kong, China, where male rates were higher.

Figure 8c. ILO-comparable unemployment rates for males and females, 2005



Note: CSEE = Central and South-Eastern Europe (non-EU).

KILM 9. Youth unemployment

Introduction

Youth unemployment is generally viewed as an important policy issue for many countries, regardless of their stage of development. For the purpose of this indicator, the term "youth" covers persons aged 15 to 24 years and "adult" refers to persons aged 25 years and over. The indicator consists of four distinct measurements, each representing a different aspect of the youth unemployment problem. The four measurements are: (a) youth unemployment rate (youth unemployment as a percentage of the youth labour force); (b) ratio of the youth unemployment rate to the adult unemployment rate; (c) youth unemployment as a proportion of total unemployment; and (d) youth unemployment as a proportion of the youth population. Information on the youth unemployment rate is available for 126 economies. For the other three indicators, information is available, for at least one year, for 135 economies. In most cases, information is available separately for young men and women.

Use of the indicator

There is a growing recognition of the need to address youth employment issues with some urgency. At the 2005 International Labour Conference (ILC) discussion on youth employment, ILO constituents concluded that "[t]here are also too many young workers who do not have access to decent work. A significant number of youth are underemployed, unemployed, seeking employment or between jobs, or working unacceptably long hours under informal, intermittent and insecure work arrangements, without the possibility of personal and professional development; working below their potential in low-paid, low-skilled jobs without prospects for career advancement; trapped in involuntary part-time, temporary, casual or seasonal employment; and frequently under poor and precarious conditions in the informal economy, both in rural and urban areas."[1] The challenge of youth employment is showcased again as Goal 8, Target 16 of the UN Millennium Development Goals:[2] "In cooperation with developing countries, develop and implement strategies for decent and productive work for youth."

Recognizing that a failure to successfully integrate young people into the labour market has broader consequences for the country at large[3] ILO constituents designed and adopted an "ILO plan of action to promote pathways to decent work". One of the tasks assigned to the ILO is to expand its knowledge on the nature and dimensions of youth employment, unemployment and underemployment. The ILO report, *Global employment trends for youth*,[4] was a first attempt to quantify and

1. ILO: "Conclusions on promoting pathways for decent work for youth", paragraph 5, ILC, 93rd Session (Geneva, 2005); website: http://www.ilo.org/public/english/standards/relm/ilc/ilc93/pdf/resolutions.pdf.

2. A framework of eight goals, 18 targets and 48 indicators to measure progress towards the Millennium Development goals was adopted by a consensus of experts from the United Nations Secretariat and ILO, IMF, OECD and the World Bank. For more details on the UN Millennium Development Goals, see website http://www.un.org/millenniumgoals. Data for the indicators themselves are available on website: http://millenniumindicators.un.org/unsd/mi/mi_goals.asp.

3. In terms of loss of purchasing power, potential attraction of idle youth to illegal activities, undermining social cohesion, perpetuating the poverty cycle, and numerous other issues as identified in the ILC Conclusions as well as the ILO Report VI prepared for the ILC discussion: ILO: *Pathways to Decent Work*, Report VI, ILC, 93rd Session (Geneva, 2005); website: http://www.ilo.org/trends.

4. For more details see: ILO: *Global Employment Trends for Youth* (Geneva, 2004);

analyse the current labour market trends of young people. The report was updated in 2006.[5] Both reports identify indicators that help to quantify the situation of young workers. The need is not one of developing new indicators, but rather finding a way to make use of the indicators that already exist. In fact, the majority of indicators of interest already exist within the KILM database (labour force participation rates, employment ratios, unemployment rates, employment by status and by sector, long-term unemployment, underemployment, hours of work, poverty). The challenge, however, is that, as of now, the indicators cannot be applied to youth because most countries do not provide the data disaggregated by age. Given the recent "call to action", the ILO will intensify its efforts to gather the data by age groups and to add the youth dimension to as many KILM indicators as possible.

In the KILM 5th Edition, the only indicator relating specifically to youth remains KILM 9 on youth unemployment.[6] The KILM information on youth unemployment illustrates the different dimensions of the lack of jobs for young people. In general, the higher the four rates presented in table 9, the worse the employment situation of the young. These measurements are likely to move in the same direction, and should be looked at in tandem in order to assess fully the situation of young people within the labour market.

The indicator selected to measure progress towards target 16[7] of the Millennium Development Goal (MDG) is the youth unemployment rate, reproduced in table 9. The youth unemployment rate can serve as a useful proxy for the health of the labour market situation facing this group and a joint analysis of the four indicators presented here can throw light on the main characteristics of the youth unemployment problem in each country and constitutes a helpful guide for policy initiatives. For example, in a country where the youth unemployment rate is high and the ratio of the youth unemployment rate to the adult unemployment rate is close to one, it may be concluded that the problem of unemployment is not specific to youth, but is country-wide. When both indicators are high, young people suffer more difficulties in finding a job than do adults. The problem of unemployment is unequally distributed when, in addition to a high youth unemployment rate, the proportion of youth unemployment in total unemployment is high. In this case, employment policies might usefully be directed towards easing the entry of young people into the world of work.

Definitions and sources

Young people are defined as persons aged between 15 and 24; adults are those aged 25 and above. However, countries vary somewhat in their operational definitions. In particular, the lower age limit for young people is usually determined by the minimum age for leaving school, where this exists. Differences in operational definitions have implications for comparability, which is discussed below. The resolution concerning statistics of the economically active population, employment, unemployment and underemployment, adopted by the 13th International Conference of Labour Statisticians (ICLS), outlines the international standards for unemployment and youth unemployment. The resolution states that the unemployed comprise all persons above a specified age who, during the reference period, were: (a) without work; (b) currently available

website: http://www.ilo.org/public/english/employment/strat/download/gety04en.pdf.

5. For more details see: ILO: *Global Employment Trends for Youth* (Geneva, 2006); website: http://www.ilo.org/trends.

6. Labour force participation rates for youth are also available from KILM table 1, although youth are not the main focus of analysis.

7. Target 16 will be replaced with a new target under MDG 1, which highlights the importance of full and productive employment and decent work for all, including for women and young people. The initial set of indicators chosen to measure progress towards the new target, however, does not include the unemployment rate (see Chapter 1 for more details).

for work; and (c) actively seeking work.[8] As is the case for KILM 8, the unemployment rate is defined as the number of unemployed in an age group divided by the labour force for that group. In the case of youth unemployment as a proportion of the young population, the population for that age group replaces the labour force as the denominator.

As in KILM table 8a, information on unemployment is commonly obtained from one of three sources: household surveys of the labour force, official estimates and population censuses.[9] However, the information is generally derived from household surveys, the preferred type of source as it allows for the application of the ICLS resolution.[10]

Limitations to comparability

There are numerous limitations to the comparability of KILM 9 data across countries and over time; some are more significant than others.[11] One major limitation to comparability relates to the source used in deriving unemployment rates. The main difficulty with using population censuses as the source is that, owing to their cost, they are not undertaken frequently and the information on unemployment is unlikely to be up to date. On occasion, unemployment information is based on official estimates. Again, these are unlikely to be comparable and are typically based on a combination of administrative records and other sources. In any event, users should be aware of the primary source and take this into account when comparing data across time or across countries.

An additional point should be made regarding the definition of unemployment. For some countries – see, for example, Trinidad and Tobago, the unemployment figures exclude those who have not been previously employed (i.e. excluding first time jobseekers). This definition will tend to lower the level of reported youth unemployment.

Although less important than other factors, mention should be made of differences in the age groups utilized, because the age limits applied for both youth and adults may vary across countries. In general, where a minimum school-leaving age exists, the lower age limit of youth will usually correspond to that age. This means that the lower age limit often varies between 14 and 16 years (and for some countries is even lower than 14, for example, Haiti at 10 years), according to the institutional arrangements in the country. This should not greatly affect most of the youth unemployment measures. However, the size of the age group may influence the measure of the young unemployed as a percentage of total unemployment. Other things being equal, the larger the age group the greater will be this percentage.

In a few cases there is a larger discrepancy in the age limits applied. Six countries use 29 as the upper age limit: Colombia (1989-90), Costa Rica (1980-86),

8. Resolution concerning statistics of the economically active population, employment, unemployment and underemployment, adopted by the 13th International Conference of Labour Statisticians, October 1982; website: http://www.ilo.org/public/english/bureau/stat/download/res/ecacpop.pdf. Readers can find the excerpts pertaining to the definition of unemployment in box 8a in the manuscript for KILM 8 and may also wish to review the text in the "Definitions and sources" section in there as well.

9. Information relating to registered unemployment was not used in this table.

10. Additional documentation regarding national practices in the collection of statistics is provided in ILO: *Sources and Methods: Labour Statistics*, Vol. 3: *Economically Active Population, Employment, Unemployment and Hours of Work (Household Surveys)*; Vol. 4: *Employment, Unemployment, Wages and Hours of Work (Administrative Records and Related Sources)*; and Vol. 5: *Total and Economically Active Population, Employment and Unemployment (Population Censuses)*. The *Sources and Methods* are available online at the country level on website: http://laborsta.ilo.org.

11. For the sake of completeness, users should also review the corresponding discussion in KILM 8.

Honduras (1991-98), New Caledonia (1996), Panama (1983) and Suriname (1987). There are also differences in the operational definition of adults. In general, adults are defined as all individuals above the age of 25, but some countries apply an upper age limit. The upper age limit would obviously affect only the ratio of youth-to-adult unemployment rates and the effect is likely to be very small.

Finally, mention should be made of the reference period of the information reported. Because there will be a substantial group of school-leavers (either permanently or for the extended holiday break) in the reported figures, the level of youth unemployment is likely to vary significantly over the year as a result of different school opening and closing dates. Most of the information reported relates to annual averages.[12] In other cases, however, the figures relate to a specific month of the year (as with census data). The implications of the particular month chosen will vary across countries, owing to differences in institutional arrangements.

Trends

A recognized trend is that youth are generally predisposed to much higher unemployment rates than adults.[13] Youth unemployment rates surpassed adult rates for all 125 economies for which data are available, and by at least twice as much in most economies as revealed in figure 9a. Each KILM region is represented in the figure, however, the situation of young jobseekers in comparison to adults seems to be particularly hard in countries in Asia and the Middle East. For example, youth unemployment rates were more than five times those of adults and exceeded 25 per cent in Indonesia, Sri Lanka and the Syrian Arab Republic.

There are a number of reasons why one might expect the youth unemployment rate to be higher than that of adults. On the supply side, the initial experiences of young people in the labour market are likely to involve a certain amount of shopping around for an appropriate job. Moreover, because of the opening and closing of educational institutions over the course of the year and a higher degree of job changes, youth are far more likely to enter and exit the labour force.

On the demand side, the cost to establishments of releasing young people is generally lower than for older workers. Young workers tend to represent a smaller investment by establishments in training because most jobs that they hold are fairly easy to perform and require limited training. Consequently, making young people redundant involves a smaller loss to employers. Also, employment protection legislation usually requires a minimum period of employment before it applies, and compensation for redundancy usually increases with tenure. For obvious reasons, young people are likely to have shorter job tenures than older workers and will, therefore, tend to be easier and less expensive to dismiss. Finally, since they comprise a disproportionate share of new jobseekers, young people will suffer most from economically induced reductions or freezes in hiring by establishments.

A third aspect is that youth unemployment rates tend to fluctuate with adult unemployment rates so that one does not see wide fluctuations in the ratio of youth-to-adult unemployment over time. Figure 9b clearly demonstrates that youth and adult unemployment usually do shift in the same direction. This reflects the fact that changes in both youth and adult unemployment are largely caused by variations in aggregate demand in the country as a whole. Indeed, analyses that examine the question generally find that aggregate demand is far more important than other factors, such as the

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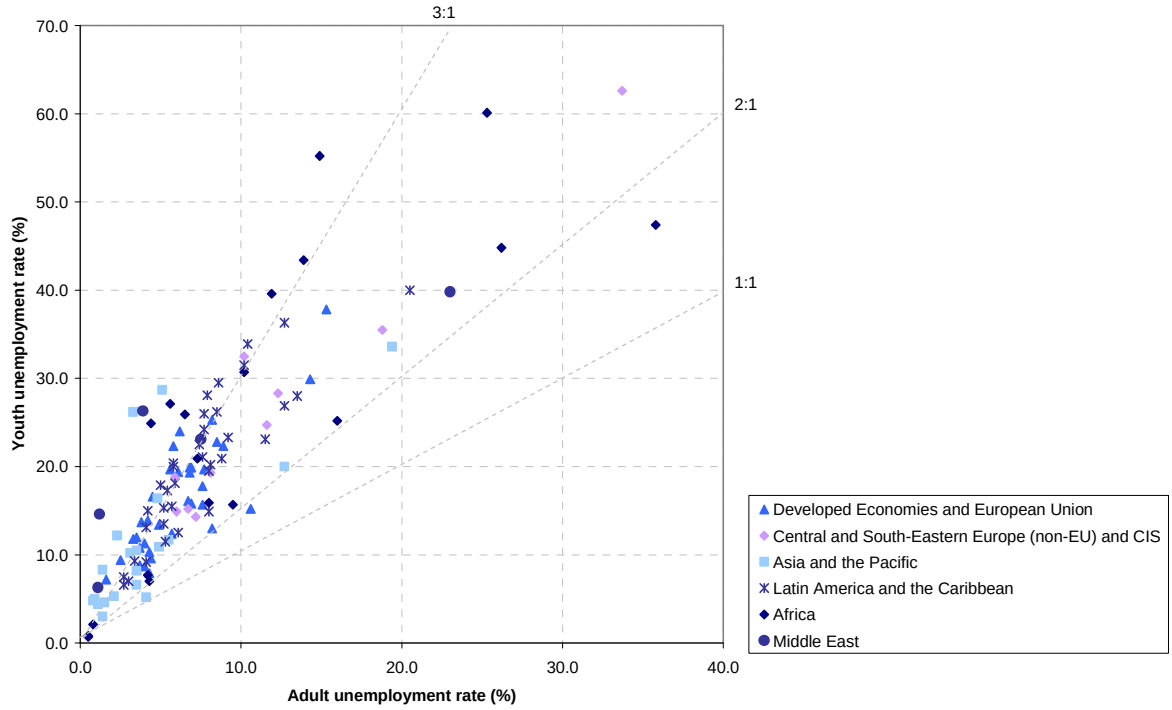
12. Signified by a blank in the Reference period column.

13. For more details see: ILO: *Global Employment Trends for Youth* (Geneva, 2006); website: http://www.ilo.org/trends.

Figure 9a. Youth and adult unemployment rates, latest year



relative wage level, in explaining the rate of youth unemployment.[14]

For the majority of the economies, youth unemployment rates have been increasing from the earliest to latest year available (see figure 9b). Rates increased by at least 10 percentage points in 13 countries – Argentina, Brazil, the Czech Republic, Finland, Greece, Indonesia, Peru, Poland, Saint Lucia, South Africa, Swaziland, Sweden and Venezuela. At the other end of the spectrum, 11 countries experienced decreases of the same magnitude – Bulgaria, Chile, Denmark, the Dominican Republic, Latvia, Lithuania, Morocco, the Netherlands, Nicaragua, Puerto Rico and Slovenia.

Female youth show higher rates of unemployment than their male counterparts in over half of the economies (78 out of 123 economies), a phenomenon even more common among adults. Where male youth unemployment rates are higher, the differences are not substantial, except in Albania, where male youth have almost twice the already high unemployment rate of female youth. Figure 9c shows countries where youth unemployment rates differ most between males and females. Many of these countries are in Latin America & the Caribbean, where significant differences among the genders are also seen in the unemployment rates for adults. Also noteworthy is that there is only one developed country where female youth unemployment rates are much higher than male youth rates – Greece.

14. See, for example, N. O'Higgins: "The challenge of youth unemployment", Employment and Training Papers, No. 7 (Geneva, ILO, 1997).

Figure 9b. Changes in youth and adult unemployment rates, earliest to latest year

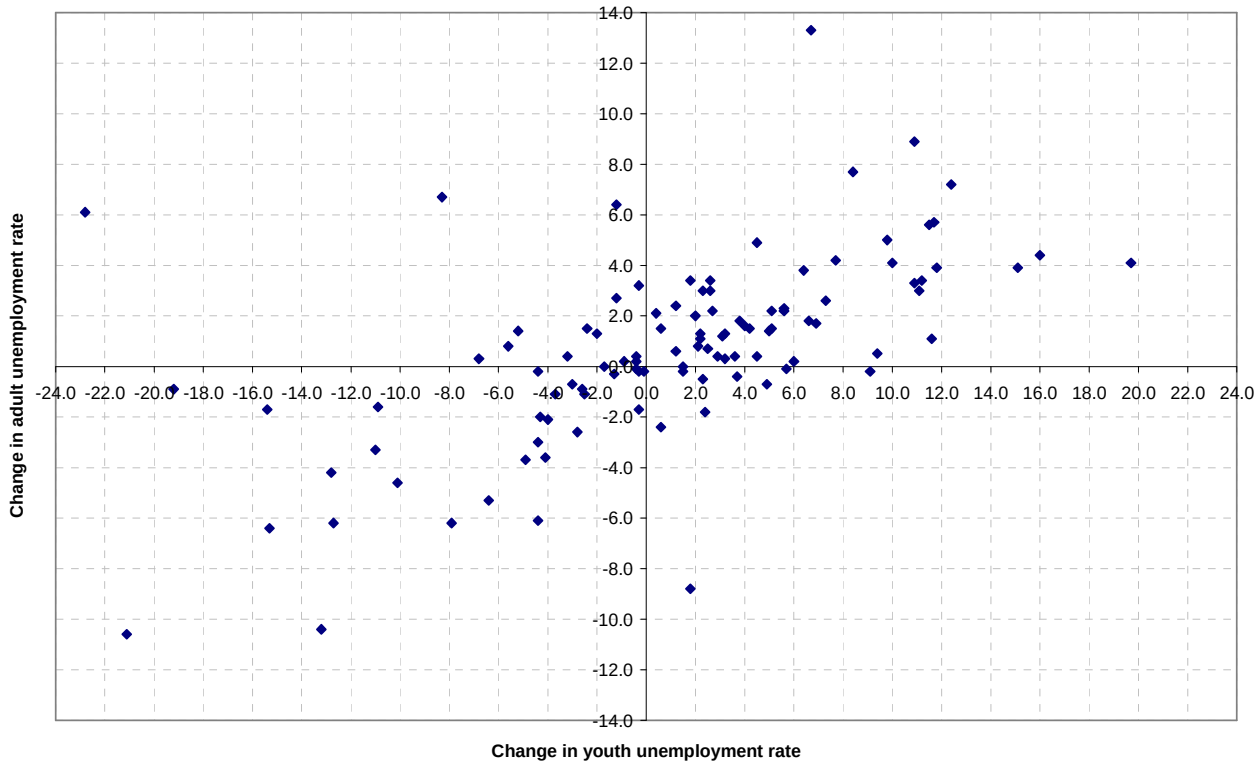
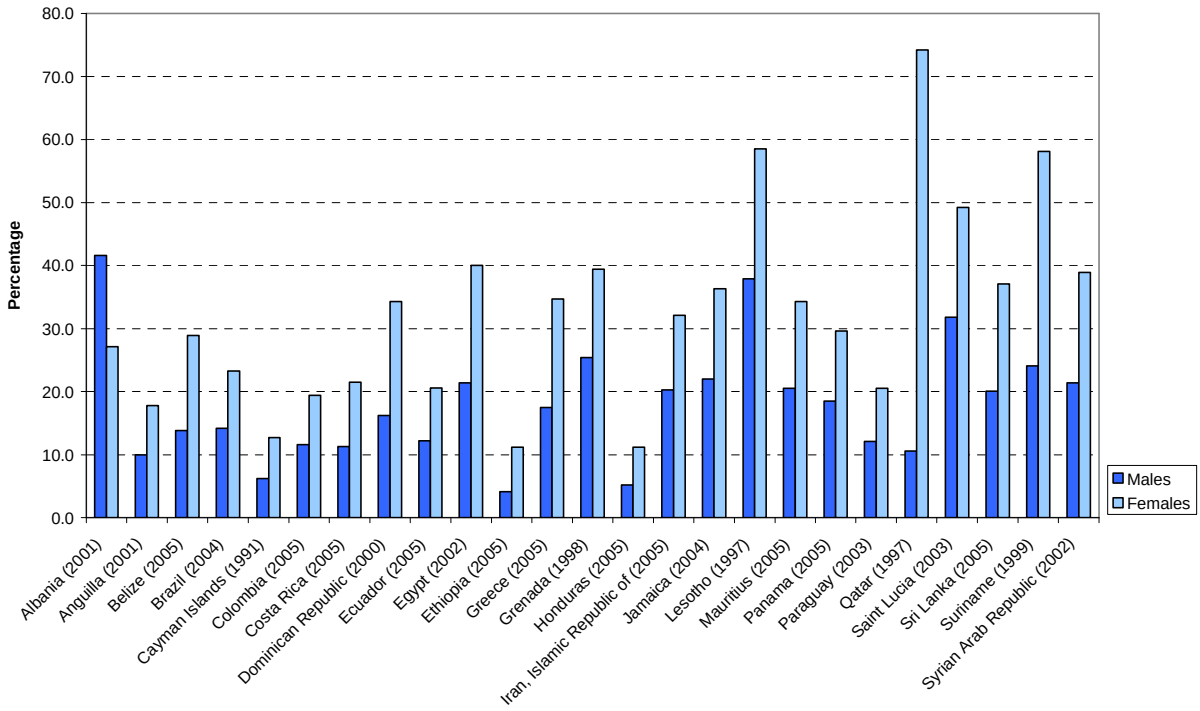


Figure 9c. Youth unemployment rates by gender for selected countries, latest years



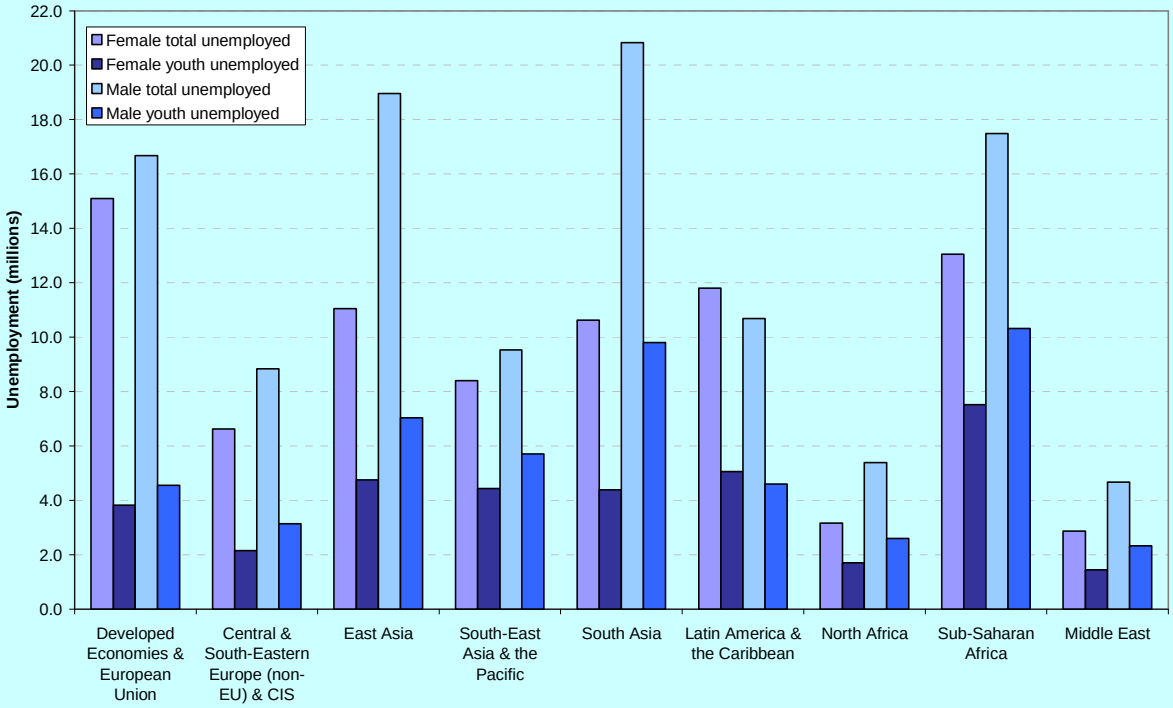
Box 9a. World and regional estimates of youth unemployment rates

Youth unemployment rate (%) - both sexes	1996	2002	2003	2004	2005	2006*
WORLD	12.4	13.9	13.8	13.7	13.3	13.2
Developed Economies & European Union	15.3	14.4	14.6	14.2	13.8	12.7
Central & South-Eastern Europe (non-EU) & CIS	19.5	19.7	19.2	18.8	18.2	18.5
East Asia	7.6	8.0	7.8	7.7	7.6	7.5
South-East Asia & the Pacific	9.6	16.2	16.7	17.3	15.9	16.5
South Asia	10.1	10.7	10.4	10.6	10.2	9.9
Latin America & the Caribbean	14.6	17.0	16.9	16.8	16.7	17.2
North Africa	28.6	29.0	28.8	27.5	25.6	25.7
Sub-Saharan Africa	17.6	18.7	18.6	17.8	17.8	17.8
Middle East	25.0	25.5	24.5	23.5	24.5	24.6
Youth unemployment rate (%) - males	**1996**	**2002**	**2003**	**2004**	**2005**	**2006***
WORLD	12.5	13.9	13.7	13.6	13.2	13.1
Developed Economies & European Union	15.1	14.9	15.3	14.6	14.5	13.0
Central & South-Eastern Europe (non-EU) & CIS	19.4	19.6	19.0	18.5	17.9	18.6
East Asia	8.9	9.3	9.0	8.9	8.8	8.7
South-East Asia & the Pacific	9.4	15.9	16.3	17.0	15.2	16.1
South Asia	9.8	10.3	10.1	10.3	10.0	9.7
Latin America & the Caribbean	12.0	13.8	13.6	13.5	13.6	14.0
North Africa	26.3	26.8	25.7	24.3	22.4	22.5
Sub-Saharan Africa	18.0	19.0	18.9	18.3	18.2	18.3
Middle East	22.4	22.6	21.7	20.9	21.7	21.7
Youth unemployment rate (%) - females	**1996**	**2002**	**2003**	**2004**	**2005**	**2006***
WORLD	12.4	14.1	14.0	13.8	13.5	13.4
Developed Economies & European Union	15.6	13.7	13.9	13.7	13.1	12.4
Central & South-Eastern Europe (non-EU) & CIS	19.7	19.9	19.5	19.2	18.7	18.3
East Asia	6.3	6.7	6.5	6.4	6.3	6.3
South-East Asia & the Pacific	9.9	16.7	17.3	17.8	16.9	17.0
South Asia	10.7	11.6	11.0	11.4	10.7	10.3
Latin America & the Caribbean	18.9	21.8	21.9	21.7	21.1	21.7
North Africa	34.2	34.4	36.4	35.3	33.4	33.6
Sub-Saharan Africa	17.1	18.2	18.1	17.2	17.3	17.3
Middle East	31.9	32.2	31.0	29.3	30.7	30.7
Ratio of youth-to-adult unemployment rates	**1996**	**2002**	**2003**	**2004**	**2005**	**2006***
WORLD	2.9	3.0	3.0	3.0	2.9	3.0
Developed Economies & European Union	2.4	2.3	2.3	2.3	2.4	2.3
Central & South-Eastern Europe (non-EU) & CIS	2.5	2.5	2.5	2.5	2.5	2.7
East Asia	2.8	2.7	2.7	2.7	2.8	2.8
South-East Asia & the Pacific	5.5	5.4	5.3	5.2	4.8	4.8
South Asia	3.6	3.3	3.3	2.9	2.7	2.7
Latin America & the Caribbean	2.6	2.7	2.7	2.9	2.7	2.7
North Africa	3.2	3.2	3.3	3.4	3.5	3.5
Sub-Saharan Africa	3.3	3.0	3.0	3.0	3.0	3.0
Middle East	3.1	3.0	3.0	3.1	3.1	3.1

Note: The world and regional aggregates presented here differ slightly from those published in the ILO: *Global Employment Trends for Youth* (Geneva, 2005). The differences are due to a change in the Global Employment Trends modelling procedure (described in box 3 in "Guide to understanding the KILM") as well as to revisions to IMF estimates of GDP growth used as input in the model, and in part due to the alteration of regional groupings.

Box 9a (continued)

Youth and total unemployment by region and sex (in millions), 2006

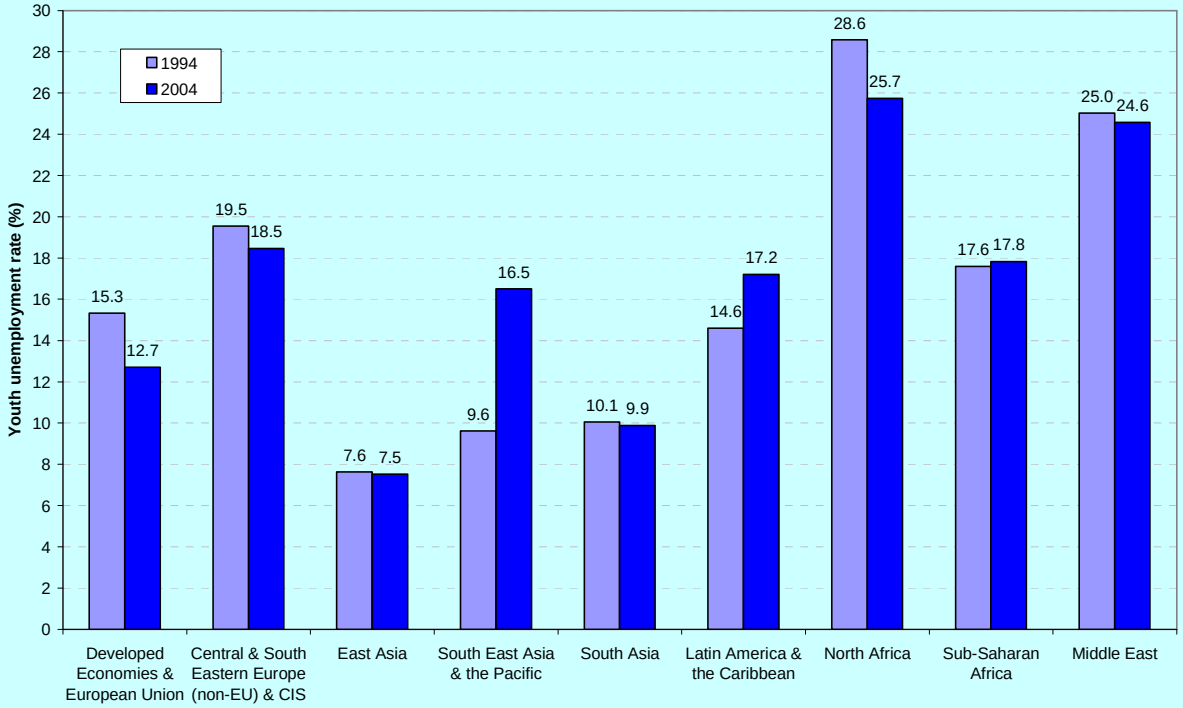


Increasing global unemployment continues to hit young people hard. The number of unemployed youth increased steadily from 1996 to a peak of 86.2 million in 2004, after which the number declined slightly to 85.3 million in 2006. This placed the youth share of the total unemployed at 44 per cent, a particularly troublesome figure given that youth make up only 25 per cent of the working-age population. The relative disadvantage of youth in the labour market is more pronounced in developing economies, where they make up a strikingly higher proportion of the labour force than in developed economies (22 per cent versus 13 per cent respectively in 2006). [Note: Developing economies are the sum of all regions except the Developed Economies & European Union. Labour force estimates are based on the ILO, Global Employment Trends Model.]

For all regions, youth unemployment rates in 2006 were much higher than adult unemployment rates. Whereas youth were twice as likely as adults to be unemployed in developed economies, they were more than three times as likely as adults to be unemployed in developing economies. The ratio between youth and adult unemployment rates stayed almost unchanged over the last ten years for the world as a whole. Considerable declines were only observed in South Asia and South-East Asia, although the latter region has persistently shown the highest ratio in the world and over the last ten years the total number of unemployed youth there almost doubled.

Box 9a (continued)

Youth unemployment rates, by region, 2006



North Africa had the highest youth unemployment rate in the world at 25.7 per cent in 2006 and also had the largest gender gap for youth unemployment rates. At the other end of the spectrum, East Asia had the lowest unemployment rate for young people at 7.5 per cent. The Developed Economies & European Union and North Africa both experienced declines in youth unemployment rates of more than 2.5 percentage points over the last ten years. In contrast, youth unemployment rates increased in Latin America and South-East Asia, where in the latter case the rate increased by a worrisome 6.9 percentage points.

Young women in North Africa have the highest risk in the world of being unemployed, with an unemployment rate of 33.6 per cent in 2006 (compared to an unemployment rate of 22.5 per cent for young men in the region). In Latin America & the Caribbean and the Middle East, the risk of being unemployed is also much higher for women than men. In North Africa and the Middle East this is particularly worrisome as the labour force participation of young women is already very low and the particularly high unemployment rates for young women could easily lead to even more frustration and discouragement amongst women in these regions.

KILM 10. Long-term unemployment

Introduction

The indicator on long-term unemployment looks at duration of unemployment, that is, the length of time that an unemployed person has been without work and looking for a job. The indicator, shown in table 10, includes two separate measures of long-duration unemployment: (a) the long-term unemployment rate – those unemployed one year or longer as a percentage of the labour force; and (b) the incidence of long-term unemployment – those unemployed for one year or longer as a proportion of total unemployed. Both measures are given for a total of 55 countries, with all but two of them having data for men and women separately. Unfortunately, there is limited regional coverage for this indicator; countries covered are almost exclusively in the developed economies and European Union region with limited coverage in Central and Eastern Europe, Central America and the Caribbean.

Use of the indicator

While short periods of joblessness are of less concern, especially when unemployed persons are covered by unemployment insurance schemes or similar forms of support, prolonged periods of unemployment bring with them many undesirable effects, particularly loss of income and diminishing employability of the jobseeker. Moreover, short-term unemployment may even be viewed as desirable when it allows time for jobless persons to find optimal employment; also, in employment systems where workers can be temporarily laid off and then called back, short spells of unemployment allow employers to weather temporary declines in business activity.

Reducing the duration of periods of unemployment is a key element in many strategies to reduce overall unemployment. Long-duration unemployment is undesirable, especially in circumstances where unemployment results from difficulties in matching supply and demand because of demand deficiency. The longer a person is unemployed, the lower his or her chance of finding a job. Drawing income support for the period of unemployment certainly diminishes economic hardship, but financial support does not last indefinitely. In any case, unemployment insurance coverage is often insufficient and not available to every unemployed person; the most likely non-recipients are persons entering or re-entering the labour market. Eligibility criteria and the extent of coverage, as well as the very existence of insurance, vary widely across countries.[1]

Research has shown that the duration of unemployment varies with the length of time that income support can be drawn. This occurs largely because jobless persons with long-duration unemployment benefits are able to extend their periods of joblessness in order to find the job most consistent with their skills and financial needs. It might also indicate simply that unemployment is caused by a long-term deficiency in the supply of jobs. Evidence of the

1. The United States Social Security Administration's Office of Research, Evaluation and Statistics publishes a useful report that details social security coverage by country: SSA: *Social Security Programs Throughout the World*; available by country on website: http://www.ssa.gov/policy/docs/progdesc/ssptw/index.html. Users should also refer to N. Meager and C. Evans: "The evaluation of active labour market measures for the long-term unemployed", Employment and Training Papers, No. 16 (Geneva, ILO, 1998); website: http://www.ilo.org/public/english/employment/strat/publ/etp16.htm.

effect of "generosity" – that is, a high level of income supplement benefits – on the duration of unemployment periods is less clear.

Before drawing conclusions about the effects of features of the benefit system on unemployment duration, it is necessary to analyse the qualifying and eligibility conditions as well as the extent of nominal and real income replacement. Nevertheless, experts and policy-makers agree that long-term unemployment merits special attention and even, at times, political action. There are concerns that unemployment statistics fail to record significant numbers of people who want to work but are excluded from the standard definition of unemployment because of the requirement that an active job search be undertaken in the reference period. Alternatively, one may wish to apply a broader statistical concept known as "long-term joblessness", covering working-age persons not in employment and who have not worked within the past one or two years. This measure of the long-term jobless includes "discouraged workers", that is, persons who are unemployed but not seeking work because they believe no work is available to them. If long-term joblessness is high then unemployment, as strictly defined, is less reliable as an indicator to monitor effective labour supply, and macroeconomic adjustment mechanisms may not bring unemployment down.

Long-term unemployment is clearly related to the personal characteristics of the unemployed, and often affects older or unskilled workers, and those who have lost their jobs through redundancy. High ratios of long-term unemployment, therefore, indicate serious unemployment problems for certain groups in the labour market and often a poor record of employment creation. Conversely, a high proportion of short-term unemployed indicates a high job creation rate and more turnover and mobility in the labour market. Such generalizations must be made with great care, however, as there are many factors, including the issue of unemployment benefit programmes cited above, that can influence the relationship between long-term unemployment and the relative health of a given country. Indeed, in the absence of some sort of compensatory income (or a limited period of support), unemployed workers may be obliged to lower their expectations and take whatever job is available, thereby shortening their period of unemployment.

Definitions and sources

The standard definition of long-term unemployment is all unemployed persons with continuous periods of unemployment extending for a year or longer (52 weeks and over); it is expressed as a percentage of the overall labour force (long-term unemployment rate) or of total unemployment (incidence of long-term unemployment). For more details on the international definition of unemployment, users should refer to the corresponding section in KILM 8.

Data on long-term unemployment are often collected in household labour force surveys and are typically obtained by sex. Some countries obtain the data from administrative records, such as those of employment exchanges or unemployment insurance schemes. In the latter instances, data are less likely to be available by sex; moreover, since many insurance schemes are limited in their coverage, administrative data are likely to yield different distributions of unemployment duration. In addition, the use of administrative data reduces, and may even totally preclude, the likelihood that ratios can be calculated using a statistically consistent labour force base. Therefore, all the data for this indicator come from labour force surveys, alternative sources having been eliminated as likely to cause inconsistency across the countries for which data are provided.[2]

2. Additional documentation regarding national practices in the collection of statistics is provided in ILO: *Sources and Methods: Labour Statistics*, Vol. 3: *Economically Active Population, Employment, Unemployment and Hours of Work (Household*

Because the data relate to the period of unemployment experienced by persons who are still unemployed they necessarily reflect persons in a "continuing spell of unemployment". Researchers are often interested in measuring the length of "completed spells of unemployment" as well.[3] Unfortunately, direct data are rarely, if ever, available on this important measure, which would require continuous tracking of the labour force week by week, as well as following the same persons continuously over time (although estimations have been made in some countries with a fair degree of success). This cannot be done in typical labour force surveys, which essentially measure "stocks", and administrative records of employment exchange registrants lose track of people once they are no longer reporting. However, countries with longitudinal labour force surveys are able to estimate the duration of completed spells. The results of one analysis of longitudinal data for European countries in the OECD Employment Outlook of 2002[4] may be of interest in this regard

Limitations to comparability

Because all the data presented in table 10 come from labour force surveys, fewer caveats need to accompany cross-country comparisons. Nevertheless, while data from household labour force surveys make international comparisons easier, as data from a variety of sources, they are not perfect. Questionnaire design, survey timing, differences in the age groups covered and other issues affecting comparability (see the discussion under KILM 8) mean that care is required in interpreting cross-country differences in levels of unemployment. Also, as mentioned above, users will want to know something about the nature of unemployment insurance coverage in countries of interest to them, as substantial differences in such coverage – especially the lack of it altogether – can have a profound effect on differences in long-term unemployment.

It should also be acknowledged that the length of time that a person has been unemployed is, in general, more difficult to measure than many other statistics, particularly when the data are derived from labour force surveys. When unemployed persons are interviewed, their ability to recall with any degree of precision the length of time that they have been jobless diminishes significantly as the period of joblessness extends. Thus, as it nears a full year, it is quite easy to say "one year", when in reality the respondent may have been unemployed between 10 and 14 months. If the household respondent is a proxy for the unemployed person, the specific knowledge and the ability to recall are reduced even further. Moreover, as the jobless period lengthens, not only is the likelihood of accurate recall reduced, but the jobless period is more likely to have been interrupted by limited periods of work (or of stopping searching), but either this is forgotten over time or the unemployed person may not consider that work period as relevant to his or her "real" unemployment problem (which is undoubtedly consistent with society's view as well).

All things considered, then, it must be clearly understood that data on the duration of unemployment are more likely to be unreliable than most other statistics in the labour market field. However, this problem ought not to diminish the importance of this indicator for individual countries. The fact remains that the indicator covers a group of individuals with serious difficulties in the labour market. Whether the period of joblessness is one year and longer or ten months and longer, the group

Surveys). The *Sources and Methods* are available online at the country level on website: http://laborsta.ilo.org.

3. For an analysis of the issue of measuring completed spells of unemployment, see W. Karr; "Conceptual problems in the understatement of long-term unemployment", Labour Market Research Topics, No. 21 (Nuremberg, Institute for Employment Research, 1997).

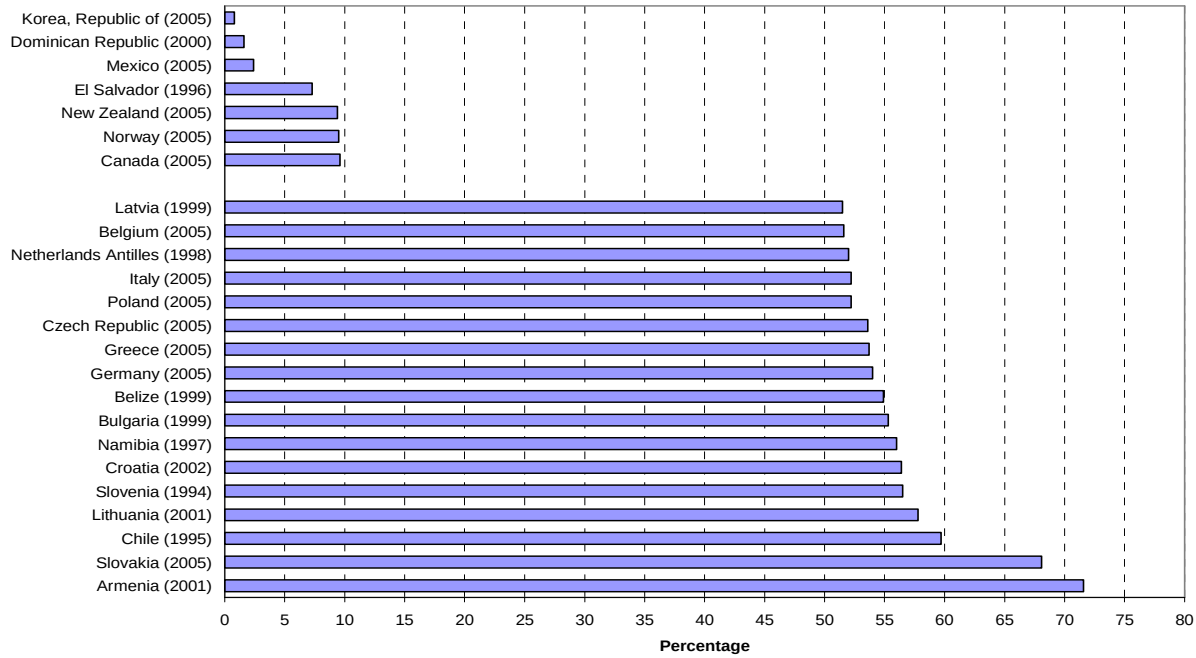
4. OECD: *OECD Employment Outlook* (Paris), 2002, Chapter 4.

taken as a whole is markedly afflicted by an undesirable, unwanted status.

Trends

Almost one-third of the countries with available data show incidences of long-term unemployment (long-term unemployment as a proportion of total unemployment) in excess of 50 per cent (see figure 10a). Six of these countries are recent members of the European Union and have been exhibiting an upward trend in recent years. Armenia had the highest incidence with 71.6 per cent in 2001, followed by Slovakia with 68.1 per cent in 2005. At the other end of the range, seven countries have an incidence of long-term unemployment below 10 per cent – Canada, the Dominican Republic, El Salvador, Mexico, New Zealand, Norway and the Republic of Korea.

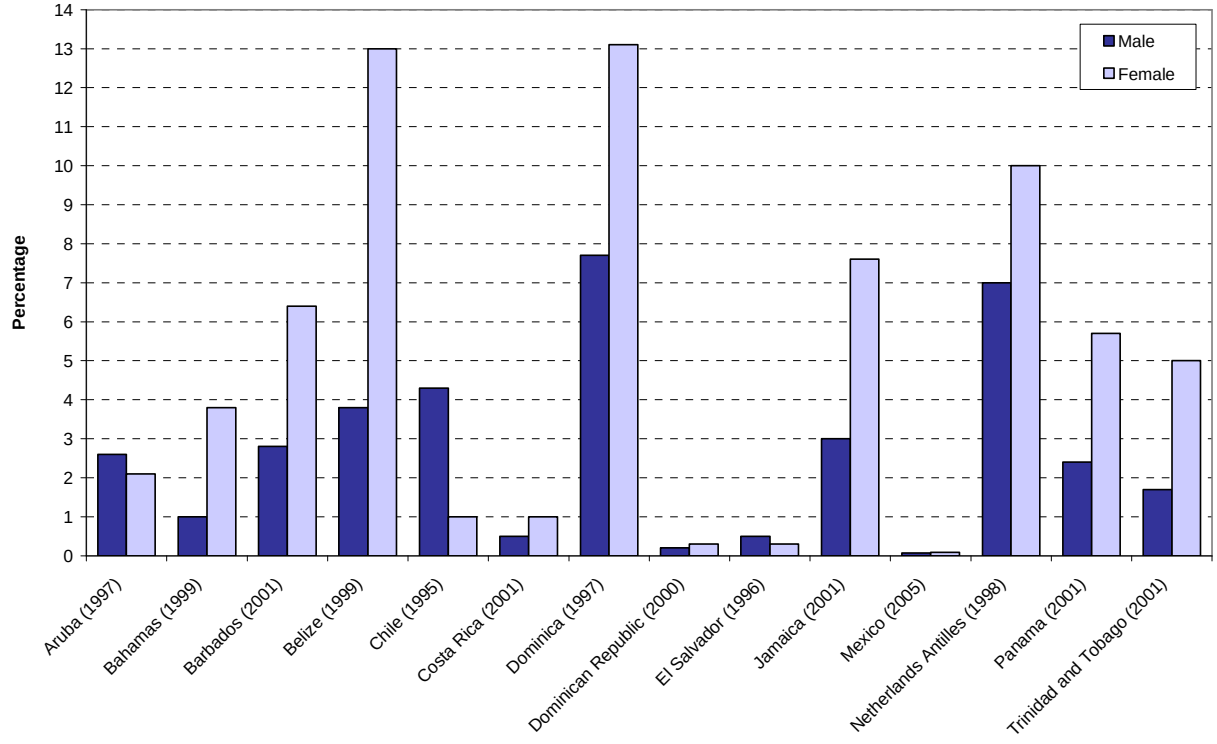
Figure 10a. Countries with incidence of long-term unemployment of 10 per cent or less or 50 per cent and over, latest years



Do unemployment benefit programmes at the country level explain incidences of long-term unemployment? Yes and no. The Republic of Korea, for example, which has the lowest incidence at 0.8 per cent, has limited unemployment benefits that last for a period ofonly three months so that Koreans cannot afford to be unemployed over a long period[5.] On the other hand, benefits in Norway can last up to two years, and are thus quite generous in comparison, but the country still has a low incidence of long-term unemployment at 9.5 per cent. This indicates that the existence or lack of social safety nets alone does not suffice as an explanatory determinant. Other factors to consider include the practice of active labour market policies that aim to retrain and find placement for long-term jobseekers, business cycles, levels of development and labour demand.

5. SSA: *Social Security Programs Throughout the World*; available by country on website: http://www.ssa.gov/policy/docs/progdesc/ssptw/index.html.

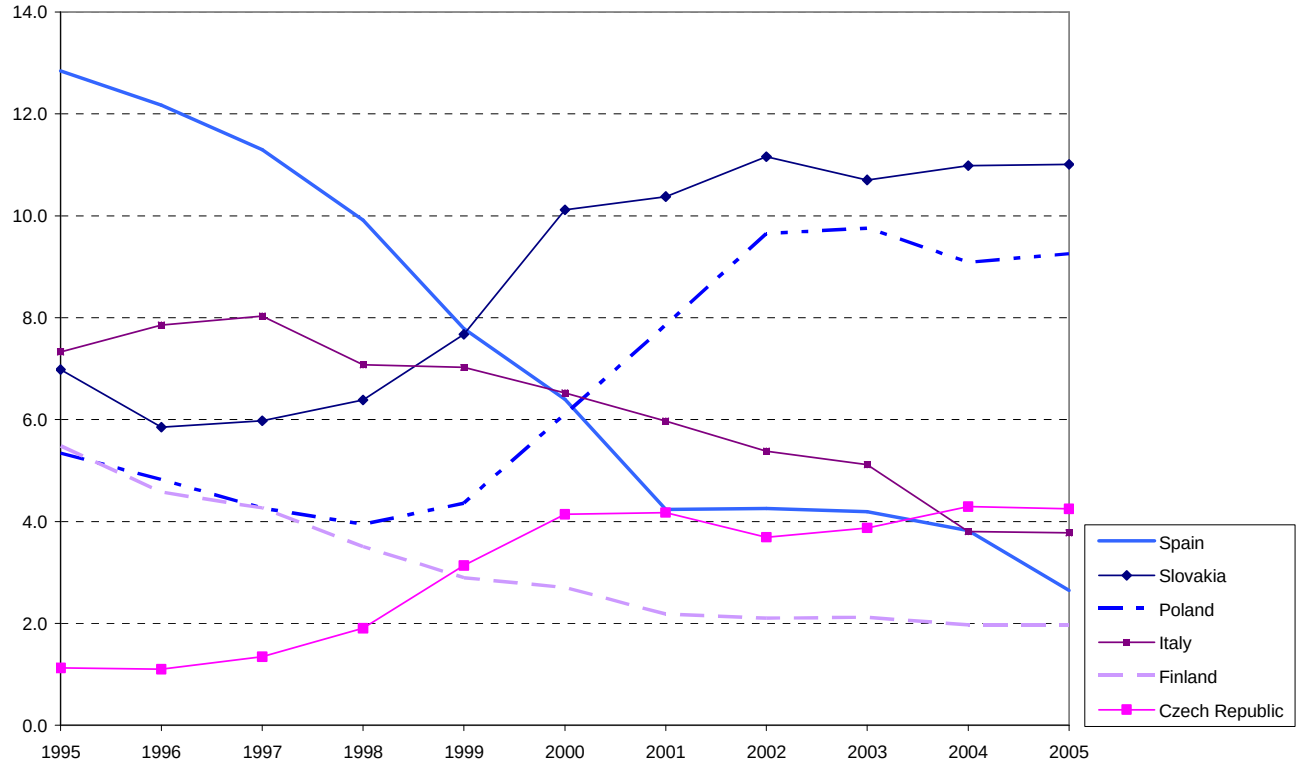
Figure 10b. Long-term unemployment rates by sex, selected countries in Latin America & the Caribbean, latest years



Women tend to have higher unemployment rates than men, as reflected in KILM 8, and the same can be said for long-term unemployment rates. In more than half of the countries with data, long-term unemployment rates are higher for females than males. This situation is most prominent in Latin America & the Caribbean where the long-term unemployment rates for women are more than triple that of men in the Bahamas and Belize, for example. In this region, males fare much worse in only one country – Chile (4.3 per cent for males versus 1.0 per cent for females). (See figure 10b). Other countries with noticeable differences among the genders in long-term unemployment rates include Greece, Italy and Spain.

Due to limited data coverage, time trends can only be analysed for developed economies. In the European Union, long-term unemployment rates have been on the decline over the past decade for most of the member countries. Long-term rates decreased most significantly from 1995 to 2005 – by at least 3.0 percentage points – in Finland, Ireland, Italy and Spain. In contrast, there were noticeable increases of the same magnitude over the period in the Czech Republic, Lithuania, Poland and Slovakia – all new member countries of the European Union. Figure 10c displays selected countries in the European Union where there have been significant changes over the period 1995 to 2005. In the remaining developed economies for which data are available, changes over the past decade were usually minimal.

Figure 10c. Long-term unemployment rates, selected countries in the European Union, 1995-2005



KILM 11. Unemployment by educational attainment

Introduction

This indicator focuses on unemployment among workers categorized by their level of educational attainment. Specifically, the indicator is the percentage distribution of a country's total unemployed according to five levels of schooling – less than one year, less than primary level, primary level, secondary level, and tertiary level. Information for the indicator is given in table 11 for 119 economies, to some extent. Coverage for the indicator is sparse for Africa and the Middle East and many countries of Asia & the Pacific are missing as well. For a minority of the countries presented, observations for one year only have been obtained; for most, however, several years are shown.

Use of the indicator

This indicator can provide important insights into the relationship between the educational attainment of workers and unemployment in different countries. This allows researchers to discern a key characteristic of a country's or region's unemployed labour force and, in so doing, assists in identifying the likelihood of different groups of workers experiencing unemployment. The information in the indicator may also be used to draw inferences relating to changes in employment demand. By focusing on the education characteristics of the unemployed, the KILM 11 indicator can aid in analyses designed to shed light on how significant long-term events in the country, such as ongoing skill-based technological change, increased trade openness or shifts in the sectoral structure of the economy, alter the experience of high- and low-skilled workers in the labour market.

The information provided can have important implications for both employment and education policy. If it is confirmed that persons with low education levels are at a higher risk of becoming unemployed, the political reaction may be either to seek to increase their education level or to create more low-skill occupations within the country. Alternatively, a higher share of unemployment among persons with higher education could indicate a lack of sufficient professional and high-level technical jobs. In many countries, qualified jobseekers are being forced to accept employment below their skill level. Where the supply of qualified workers outpaces the increase in the number of professional and technical employment opportunities, high levels of skills-related underemployment (see the manuscript for KILM 12 for more information) are inevitable. A possible consequence of the presence of highly educated unemployed in a country is the "brain drain", whereby educated professionals migrate in order to find employment in other areas of the world.

An important policy question is whether unemployment by educational attainment affects women and men differently. A substantially higher level of women's unemployment at any education level could be a reflection of discrimination in the labour market, or of a mismatch between skills required and those supplied (which a measure of educational attainment alone cannot reveal). On the other hand, it could mean that married women, protected by the spouse's earnings, can afford to be choosier in searching for a job. Research has shown, however, that women with higher education generally have more labour market opportunities than women with less education so that the opportunity costs for them of withdrawing from the labour force or undertaking an extensive job search is higher.

Definitions and sources

Table 11 presents information on educational attainment based on the following categories of schooling – less than one year, less than primary level, primary level, secondary level, and tertiary level. The table shows the proportions of total unemployed in each educational attainment category. With few exceptions, the indicator includes distributions for males and females.

The international definition of those counted as unemployed is all persons above a specified age who have no job and are currently available for and seeking work.[1] The categories of educational attainment used in the indicator are conceptually based on the ten levels of the International Standard Classification of Education (ISCED). ISCED was designed by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in the early 1970s to serve as an instrument suitable for assembling, compiling and presenting comparable indicators and statistics of education both within countries and internationally. The original version of ISCED (ISCED-76) classified educational programmes by their content along two main axes: levels of education and fields of education. The cross-classification variables were maintained in the revised ISCED-97, however, the rules and criteria for allocating programmes to a level of education were clarified and tightened and the fields of education were further elaborated.[2] Most countries continue to classify education levels according to the levels of ISCED-76, but countries are gradually beginning to progress to the nine levels and ten subcategories of ISCED-97. Both ISCED revisions are shown in Appendix D, but the main education levels are also summarized in the table below.

The major attainment levels used in the KILM 11 indicator are primary, secondary and tertiary education. Primary education aims to provide the basic elements of education (for example, at elementary or primary school and middle or lower secondary school) and corresponds to ISCED levels 1 and 2. Curricula are designed to give students a sound basic education in reading, writing and arithmetic, along with an elementary understanding of other subjects, such as history, geography, natural science, social science, art, music and, in some cases, religious instruction. Some vocational programmes, often associated with relatively unskilled jobs, as well as apprenticeship programmes that require further education, are also included. Students generally begin primary education at 5 to 7 years of age and end at 13 to 15 years. Literacy programmes for adults are also classified under primary education.

Secondary education is provided at high schools, teacher-training schools at this level, and schools of a vocational or technical nature. General education continues to be an important constituent of the curricula, but separate subject presentation and more specialization are found. Secondary education consists of ISCED levels 3 and 4 (level 3 only in ISCED-76), which students generally begin between 13 and 15 years of age and finish between 17 and 18 years. It should be noted that the KILM classifications of primary and secondary education differ from the classifications used in UNESCO publications, in which level 2 is termed “lower secondary education”.

1. Resolution concerning statistics of the economically active population, employment, unemployment, and underemployment, adopted by the 13th International Conference of Labour Statisticians, October 1982; website: http://www.ilo.org/public/english/bureau/stat/download/res/ecacpop.pdf. The official ILO definition of unemployment is repeated in box 8a in the manuscript of KILM 8.

2. For further details about ISCED see UNESCO: *International Standard Classification of Education/ISCED 1997* (Paris, 1998); website: http://uis.unesco.org. The 1997 document can be downloaded at: http://portal.unesco.org/uis/TEMPLATE/pdf/isced/ISCED_A.pdf.

Education classifications used in KILM table 11

KILM Level	ISCED-97 Level	ISCED-76 Level	Description
Less than one year	X: No schooling	X: No schooling	Less than one year of schooling
Pre-primary	0: Pre-primary education	0: Education preceding the first level	Education delivered in kindergartens, nursery schools or infant classes
Primary	1: Primary education or first stage of basic education	1: First level	Programmes are designed to give students a sound basic education in reading, writing and arithmetic. Students are generally 5-7 years old. Might also include adult literacy programmes.
	2: Lower secondary or second stage of basic education	2: Second level, first stage	Continuation of basic education, but with the introduction of more specialized subject matter. The end of this level often coincides with the end of compulsory education where it exists. Also includes vocational programmes designed to train for specific occupations as well as apprenticeship programmes for skilled trades.
Secondary	3: Upper secondary education	3: Second level, second stage	Completion of basic level education, often with classes specializing in one subject. Admission usually restricted to students who have completed the 8-9 years of basic education or whose basic education and vocational experience indicate an ability to handle the subject matter of that level.
	4: Post-secondary non-tertiary education		Captures programmes that straddle the boundary between upper-secondary and post-secondary education. Programmes of between six-months and two years typically serve to broaden the knowledge of participants who have successfully completed level 3 programmes.
Tertiary	5: First stage of tertiary education (not leading directly to an advanced research qualification); subdivided into:		
	5A	6: Third level, first stage leading to a first university degree	Programmes are largely theoretically based and are intended to provide sufficient qualifications for gaining entry into advanced research programmes. Duration is generally 3-5 years.
	5B	5: Third level, first stage, leading to an award not equivalent to a first university degree	Programmes are of a typically “practical” orientation designed to prepare students for particular vocational fields (high-level technicians, teachers, nurses, etc.).
	6: Second stage of tertiary education (leading to an advanced research qualification)	7: Third level, second stage	Programmes are devoted to advanced study and original research and typically require the submission of a thesis or dissertation.
Not definable		9: Education not definable by level	Programmes for which there are no entrance requirements.
Not stated	?: Level not stated	?: Level not stated	

Tertiary education is provided at universities, teacher-training colleges, higher professional schools and sometimes distance-learning institutions. It requires, as a minimum condition of admission, the successful completion of education at the secondary level or evidence of the attainment of an equivalent level of knowledge. It corresponds to ISCED levels 5, 6 and 7 (levels 5A, 5B and 6 in ISCED-97 and levels 5, 6 and 7 in ISCED-76).

In addition to primary, secondary and tertiary education, KILM 11 also covers three other categories of educational attainment which correspond to ISCED levels: less than one year of schooling (ISCED level X); less than primary (ISCED level 0); and education not defined by level (ISCED-76 level 9).

The information for KILM 11 on unemployment and educational attainment was obtained from the ILO *Yearbook of Labour Statistics*, the Caribbean Labour Statistics Dataset and the Labour Market Indicators Library. Information on unemployment and educational attainment is obtained through household surveys, official estimates, population censuses and employment office statistics.[3]

Limitations to comparability

A number of factors can limit the appropriateness of using the indicator for comparisons between countries or over time. First, it should be noted that all of the limitations to the international or historical comparability of unemployment rates that have been raised in the KILM 8 and 9 sections on comparability apply to this indicator as well. These include issues of sources, collection methods, survey timing, sample sizes and coverage, and so on. Differences in definitions of unemployment and sources of unemployment data across countries are indicated in the notes to table 11.

A potential problem of comparability for this particular indicator, both internationally as well as historically, arises because of differences or changes in how individuals are assigned to education levels. Many countries have difficulty establishing links between their national classification and ISCED, especially with respect to technical or professional training programmes, short-term programmes and adult-oriented programmes (ranging around levels 3 and 5 of ISCED-76 and levels 3, 4 and 5 of ISCED-97). Another difficulty stems from the qualification of classification by level. While in some countries completion of an education level is required for a person to be classified as having attained that level of education, other countries may define the education level by the highest level attained, whether completed or not. It should also be noted that in a few countries ISCED levels are combined; for instance, levels 1 and 2 may refer to level 1 only (as in Poland, Slovakia and many countries in Latin America and the Caribbean) or to level 2 only (as in Australia, Azerbaijan and Estonia). It is necessary to pay close attention to the notes – specifically, the notes given in the column "Level note" – in order to ascertain the actual distribution of education levels before making comparisons.

Another issue of international comparability, affecting several countries in the European Union, originates from the way in which those who have received their highest level of education in apprenticeship systems are classified. The classification of apprenticeship in the "secondary level" – despite one or more years of study and training beyond the conventional length of secondary schooling in other countries – can lower the reported proportion of the unemployed labour force with tertiary education. This

3. Additional documentation regarding national practices in the collection of statistics is provided in ILO: *Sources and Methods: Labour Statistics*, Vol. 3: *Economically Active Population, Employment, Unemployment and Hours of Work (Household Surveys)*; Vol. 4: *Employment, Unemployment, Wages and Hours of Work (Administrative Records and Related Sources)*; and Vol. 5: *Total and Economically Active Population, Employment and Unemployment (Population Censuses)*. The *Sources and Methods* are available online at the country level on website: http://laborsta.ilo.org.

classification issue substantially holds down the tertiary education levels reported by Austria, for instance, where the participation of young people in the apprenticeship system is widespread.

Trends

There is no clear division between the likelihood of being unemployed according to educational attainment along development lines. The range of unemployed with primary education in the selected developed economies was between 19 per cent in the United States and 54 per cent in Spain; whereas the share of unemployed with primary education in the selected developing countries was even wider, ranging from 11 per cent in Ukraine to 64 per cent in Costa Rica. (See figure 11a.) Half of the countries had the highest share of unemployed with primary education. (Keep in mind that less than primary level is not included here so that the sum of shares may not total 100 per cent.). Only one country had the largest share of unemployed with tertiary-level education as opposed to primary and secondary: the United States. The lack of commonalities across regions or state of development suggests that labour market policies designed to assist the unemployed need to be tailored to the specific circumstances of countries.

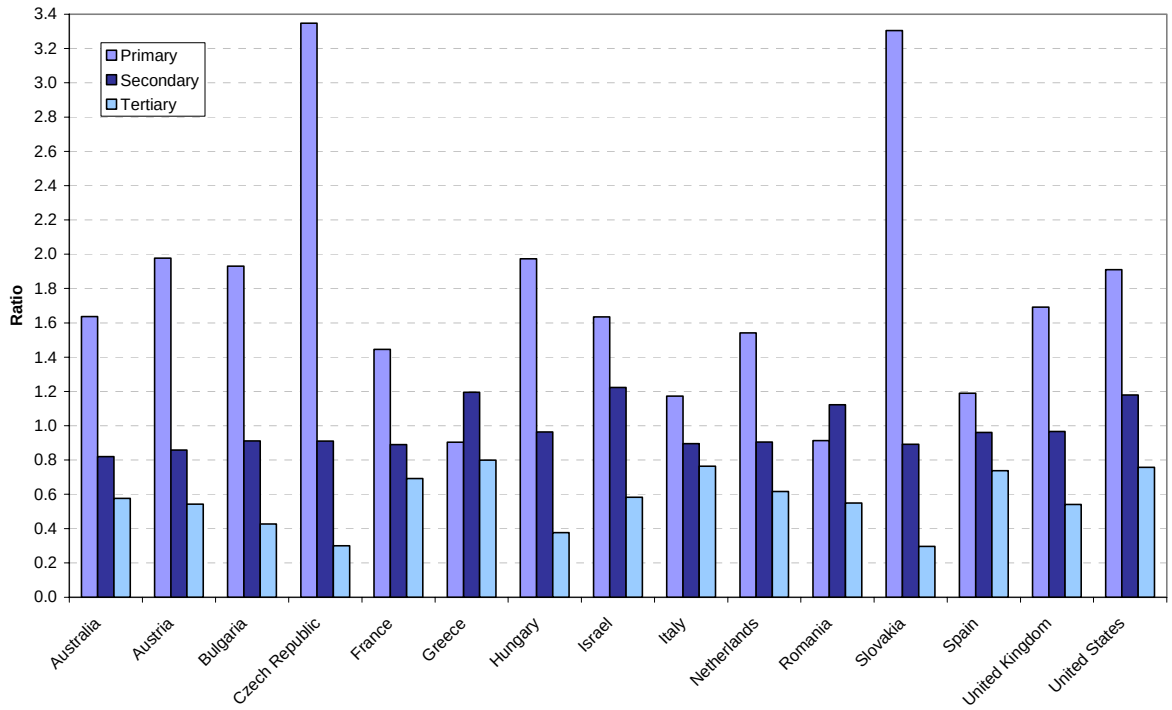
The same countries shown in figure 11a are repeated in figures 11b and 11c in order to demonstrate how the differences in the incidence of unemployment are generally differences in the composition of the labour forces themselves. KILM 11 can be compared to KILM 14 on the size of the labour force by educational attainment in order to relate a given level of unemployment by educational attainment to the actual size of the labour force having that level of education and to gain a better understanding of how unemployment is distributed in the country. For example, take two countries – the United States (in figure 11b) and Croatia (in figure 11c) – that had almost 20 per cent of all unemployed with primary education in 2005. In Croatia, those with only primary education accounted for about 20 per cent of the total labour force, whereas they accounted for just 10 per cent of the labour force in the United States. Therefore, in Croatia, the ratio between the share of unemployed with primary education to the share of the labour force with primary education was equal to 1.0. In comparison, it becomes evident that the labour force with primary education in the United States suffered from unemployment to a greater extent than the labour force with higher levels of education as reflected in the ratio of 1.9. In fact, the statement regarding the United States having the largest share of unemployed with tertiary-level education is misleading. The US labour force also had the largest share of its labour force with tertiary education in 2005 and the ratio between the share of unemployed with tertiary education to the share of the labour force with tertiary education was actually less than 1.

While diversity of country-specific circumstances prevails, some patterns emerge from using the KILM 11 and 14 indicators to analyse the distribution of unemployment by educational attainment. Comparing the unemployment share at a given level of educational attainment with that level's share of the labour force gives a ratio above, at, or below unity. A ratio below unity would imply that the population with the given education level is faring better in employment terms than its share of the labour force might imply. Figure 11b shows that the distribution of unemployment is more concentrated among the least educated, at least in the developed economies. In 2005, a person in the developed economies (with data available) with only primary education was usually at least three times as likely to be unemployed as a person with tertiary education. The likelihood was highest in the Czech Republic and Slovakia, where a person with only primary education was 11 times more likely to be unemployed than a person with tertiary education. A person with primary-level education was twice as likely to be unemployed than a person with a secondary-level education in half of the developed economies.

Figure 11a. Share of total unemployment by level of educational attainment in selected developed and developing economies, 2005

Developed economies				Developing economies			
	Primary	Secondary	Tertiary		Primary	Secondary	Tertiary
Australia	51.4	29.1	19.3	Argentina	40.3	39.8	18.4
Austria	35.2	55.0	9.6	Belize	52.7	17.4	5.3
Bulgaria	38.6	51.0	10.3	Costa Rica	64.0	20.5	12.0
Czech Republic	24.1	72.0	4.1	Croatia	18.5	72.6	9.0
France	40.6	39.4	18.7	Hong Kong, China	46.3	39.7	12.6
Greece	30.8	49.7	19.1	Iran, Islamic Republic of	41.8	34.7	19.6
Hungary	30.2	62.2	7.6	Korea, Republic of	17.4	53.2	29.4
Israel	20.6	48.7	25.9	Macau, China	62.7	15.7	8.8
Italy	48.1	39.4	10.7	Mauritius	48.6	44.9	5.4
Netherlands	40.7	39.1	17.9	Mexico	51.7	24.4	21.5
Romania	23.1	69.1	6.6	Morocco	51.1	22.4	21.6
Slovakia	27.1	68.3	4.5	Panama	31.7	38.4	29.1
Spain	53.9	22.1	23.1	Philippines	15.2	45.2	38.9
United Kingdom	36.7	46.1	16.2	Turkey	54.3	28.1	11.4
United States	19.1	35.5	45.4	Ukraine	10.9	53.2	35.8

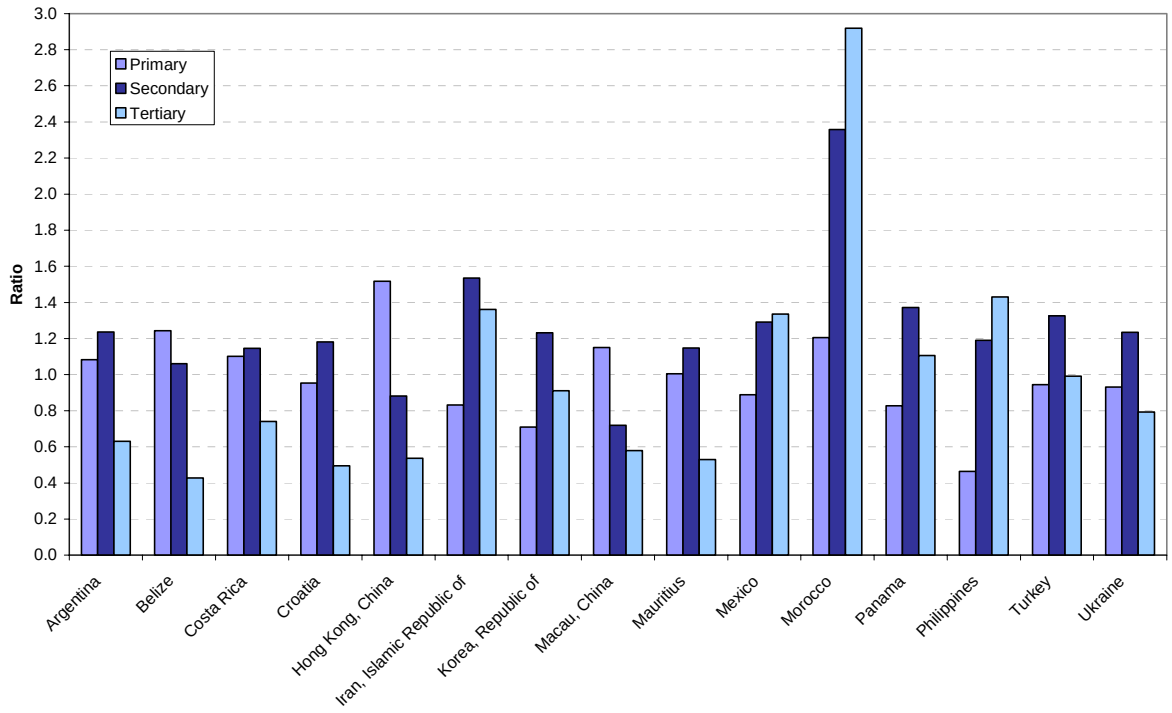
Figure 11b. Ratio of share of unemployed to share of the labour force, by level of educational attainment, selected countries in the Developed Economies & European Union region, 2005



The pattern in figure 11b reflects the fact that demand for more highly educated and skilled workers has increased in developed economies while demand for workers with low education has decreased.

Figure 11c shows a different story for developing economies. In eight of the economies shown, it was the workforce with a secondary education that was the most likely to be unemployed, although never to a substantially larger degree than persons with primary education. At the same time, the demand for workers with higher education was strong in the majority of the countries, as reflected in the ratios below unity for most countries, with the exceptions being in the Islamic Republic of Iran, Mexico, Morocco, Panama, the Philippines and Turkey. In Morocco, the job situation for persons with tertiary education looked particularly gloomy: In 2005, a person holding a tertiary degree was more than twice as likely to be unemployed as a person with primary education. The "educated unemployed" phenomenon is particularly worrisome to many countries of the Middle East and South Asia because of the potential consequences of skilled migration and political unrest.

Figure 11c. Ratio of share of unemployed to share of the labour force, by level of educational attainment, selected developing economies, 2005



KILM 12. Time-related underemployment

Introduction

This indicator relates to the number of employed persons whose hours of work in the reference period are insufficient in relation to a more desirable employment situation in which the person is willing and available to engage. The indicator was previously known as "visible underemployment". Two time-related underemployment rates are presented: one gives the number of persons in time-related underemployment as a percentage of the labour force, and the other as a percentage of total employment. The information presented in table 12 covers 56 countries and all KILM groupings. All information is based on results from household surveys.

Use of the indicator

Underemployment reflects under-utilization of the productive capacity of the labour force. The concept of "underutilization" is a complex one with many facets. In order to draw a more complete picture of underutilization in relation to the decent work deficit, one needs to examine a set of indicators which includes but is not limited to labour force, employment-to-population ratios, inactivity rates, status in employment, working poverty and labour productivity. Utilizing a single indicator to paint a picture of underutilization will often provide an incomplete picture.

Underemployment has been broadly interpreted and has come to be used to imply any sort of employment that is "unsatisfactory" (as perceived by the worker) in terms of insufficient hours, insufficient compensation or insufficient use of one's skills. The fact that the judgement about underemployment is based on personal assessment that could change daily at the whim of the respondent makes it a concept that is difficult to quantify and to interpret. It is better to deal with the more specific (more quantifiable) components of underemployment separately; the "visible" underemployment can be measured in terms of hours of work (time-related underemployment) whereas "invisible" underemployment, which is measured in terms of income earned from the activity, low productivity, or the extent to which education or skills are underutilized or mismatched, are much more difficult to quantify. Time-related underemployment is the only component of underemployment to date that has been agreed on and properly defined within the international community of labour statisticians.

Statistics on time-related under-employment are useful as a supplement to information on employment and unemployment, particularly the latter, as they enrich an analysis of the efficiency of the labour market in terms of the ability of the country to provide full employment to all those who want it. Thus this indicator can provide insights for the design, implementation and evaluation of employment, income and social policies and programmes. Particularly in developing economies people only rarely fall under the clear-cut dichotomy of either "employed" or "unemployed".[1] Rather, the vast majority of the population will be the underemployed who eke out a living from small-scale agriculture and other types of informal activities. As noted in a study on the subject in Namibia,[2] very few persons working only a few hours per week on their small plots or guarding goats considered themselves to be

1. Refer to chapter 1c for a discussion on moving beyond the employment-unemployment dichotomy.

2. S. Wolf, "Simplified measurement of underemployment: Results of a labour force sample survey in Namibia", in *Bulletin of Labour Statistics* (Geneva, ILO), 1994-3; website: http://www.ilo.org/public/english/bureau/stat/download/articles/1994-3.pdf.

employed, particularly since the earnings, in cash or kind from these activities were minimal. They were, however, classified as employed by the labour force survey according to the international definition of employment. In such situations, where the majority of the population do not consider themselves to be gainfully employed, an attempt should be made to distinguish between the fully employed and the underemployed.

Whereas unemployment is the most common indicator used to assess the performance of the labour market, in isolation it does not provide sufficient information for an understanding of the shortcomings of the labour market in a country. For example, in the situation above, employment as measured by the standard labour force survey would be high and unemployment low. Low unemployment rates in these countries, however, do not necessarily mean that the labour market is effective. Rather, the low rates mask the fact that a considerable number of workers work fewer hours, earn lower incomes, use their skills less and, in general, work less productively than they could do and would like to do. As a result, many are likely to be competing with the unemployed in their search for alternative jobs. Adding an indicator of time-related underemployment can assist in building a better understanding of the true employment situation.

Definitions and sources

The international definition of time-related underemployment was adopted by the 16th International Conference of Labour Statisticians in 1998.[3] The international definition is based on three criteria: it includes all persons in employment who, during a short reference period, were (a) willing to work additional hours, (b) available to work additional hours and (c) had worked less than a threshold relating to working time. Each of these criteria is defined in further detail in the resolution itself (see Box 12a). Regarding the first criterion, for example, workers should report that they want another job or jobs in addition to their current employment, that they want to replace any of their current jobs with another job or jobs with increased hours of work, that they want to increase the hours of work of any of their current jobs or that they want a combination of these three possibilities. This criterion also encompasses those persons who actively seek to work additional hours, using for this purpose the same definition of job search as in the measurement of unemployment.

The current international definition of time-related underemployment includes all workers who report a desire to work additional hours. This contrasts with the definition of unemployment, which includes non-employed persons who would like to work only if they report having actively sought work. There is evidence that the number of time-related underemployed persons would decrease significantly if the definition were to include only those who report having actually sought to work additional hours. This change would almost certainly result in a greater decrease for women than for men and would, therefore, illustrate the fact that women tend not to look for additional work even if they actually want it, perhaps because the time required for job seeking would compete with the time needed for activities related to the gender role assigned to them by society, that of caring for their households and family members, for example.

Despite the improvements in the clarity of the definition of underemployment over the last 20 years,[4] still, few countries apply the

3. Resolution concerning the measurement of underemployment and inadequate employment situations, adopted by the 16th International Conference of Labour Statisticians, Geneva, 1998; website: http://www.ilo.org/public/english/bureau/stat/download/res/underemp.pdf (see box 12a).

4. Underemployment was first addressed in resolution III adopted by the 11th International Conference of Labour Statisticians concerning measurement and analysis of underemployment and underutilization of manpower (1966), and in resolution I adopted by the 13th International Conference of Labour Statisticians concerning statistics of the economically active population,

definition consistently because the criteria on which it is specified are still not entirely precise. (There is a similar problem of an imprecise definition for full-time/part-time cut-offs, as discussed in KILM 5.) This lack of precision has discouraged the production of regular statistics on the subject and has made it difficult to compare the levels of time-related underemployment between countries. For example, countries differ according to whether actual or usual hours are used to identify persons working less than the normal duration, an issue also touched upon in KILM 5.

The indicator, as shown in table 12, reflects the variety of interpretations of the standard definition of time-related underemployment. The national definitions are grouped according to the following three common concepts (or definition code):[5]

(1) Persons in employment who reported that they were working part-time or whose hours of work (actual or usual) were below a certain cut-off point, and who also reported involuntary reasons for working fewer than full-time hours – these are also known as "involuntary part-time workers".
(2) Persons in employment whose hours of work (actual or usual) were below a certain cut-off point and who *wanted* to work additional hours.
(3) Persons in employment whose hours of work (actual or usual) were below a certain cut-off point and who *sought* to work additional hours.

It is possible to compare countries that apply the strictest definition (code 3) with countries that apply a wider definition (codes 1 or 2) to see to what extent the definition applied affects the count of underemployed workers. The hours cut-off information shown in the notes table is the number of hours of work (actual or usual) at which a person is no longer counted in the underemployment estimate.

As mentioned above, statistics for this indicator are based exclusively on household surveys. They were obtained mainly from the OECD's labour statistics database.[6] For non-OECD countries, national publications were used.

Limitations to comparability

National definitions of time-related underemployment vary significantly between countries. Based on a review of country practices, most national definitions include workers who want to work additional hours (definition code 2). Many other definitions include only workers who report involuntary reasons either for not working more hours or for working the current number of hours (definition code 1). The specific reasons considered as "involuntary", however, vary significantly across countries. A certain number of countries, mostly those classified as developed, obtain this information in two stages. The first stage identifies workers who usually work less than a threshold for involuntary reasons, while the second stage identifies workers whose actual hours are below their usual hours for economic or technical reasons. The reasons considered as "involuntary" are not equivalent for the two groups of workers identified, however. Few economies apply the definition requiring workers to seek to work additional hours (definition code 3; currently applies to Hong Kong (China), Israel, Pakistan and Romania).

Most definitions include persons whose "hours actually worked" during the reference week were below a threshold. Some definitions include persons whose "hours usually worked" were below a threshold and other definitions include both groups of workers. Perhaps because no international definition of "part

employment, unemployment and underemployment (1982),

5. Researchers should consult the notes to table 12 to clarify which definition applies to each country.

6. The OECD Statistics Directorate maintains a major database of annual labour force statistics that provides, for each member country, the basic statistics on population, labour force, employment and unemployment (website: http://www.oecd.org/topicstatsportal/0,2647,en_2825_495670_1_1_1_1_1,00.html).

time" exists, national determinations of hourly thresholds do not always agree. In a few countries the threshold is defined in terms of the legal hours or the usual hours worked by full-time workers. Some countries enquire directly as to whether workers work part time, or define the threshold in terms of the worker's own usual hours of work. As a consequence, the threshold used varies significantly from country to country. The hours cut-off for Costa Rica, for example, is the full-time equivalent of 47 hours, whereas most OECD countries report involuntary part-time only, meaning persons working at or below 30 hours a week.

It should be clear from the foregoing discussion concerning the wide variety of possibilities for measuring time-related underemployment that failure to isolate the definitional components will greatly limit comparability between countries. Despite the fact that all the information for this measurement comes from household surveys, a variety of other potential limitations to comparability result from differences in the timing of surveys, sampling procedures, collection questionnaires, and so on. A succinct description of such limitations is provided in the section in the manuscript for KILM 8 on "Limitations to comparability".

Trends

For half of the countries in Latin America & the Caribbean, at least one out of eight people employed is currently working on a part-time basis but wanting to work additional hours – he/she is underemployed. In contrast, countries in Central and Eastern Europe, along with a few recent European Union countries, display the lowest shares of time-related underemployment.

Figure 12a. Time-related underemployment for males and females, latest years

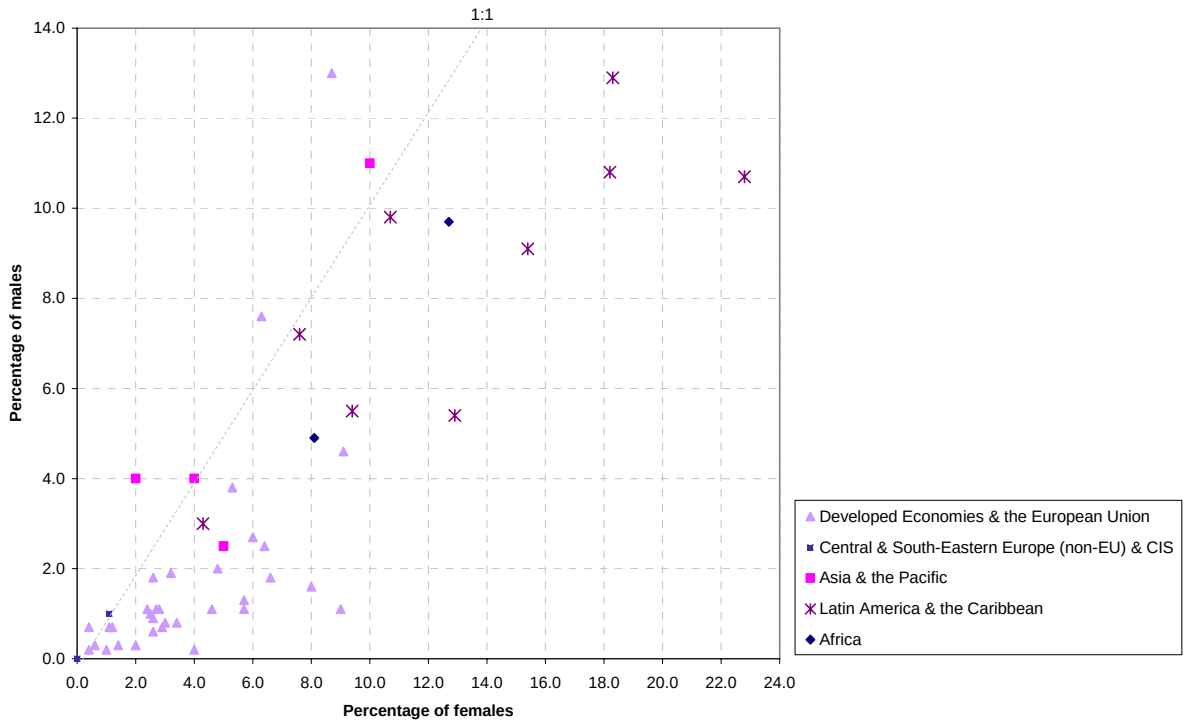
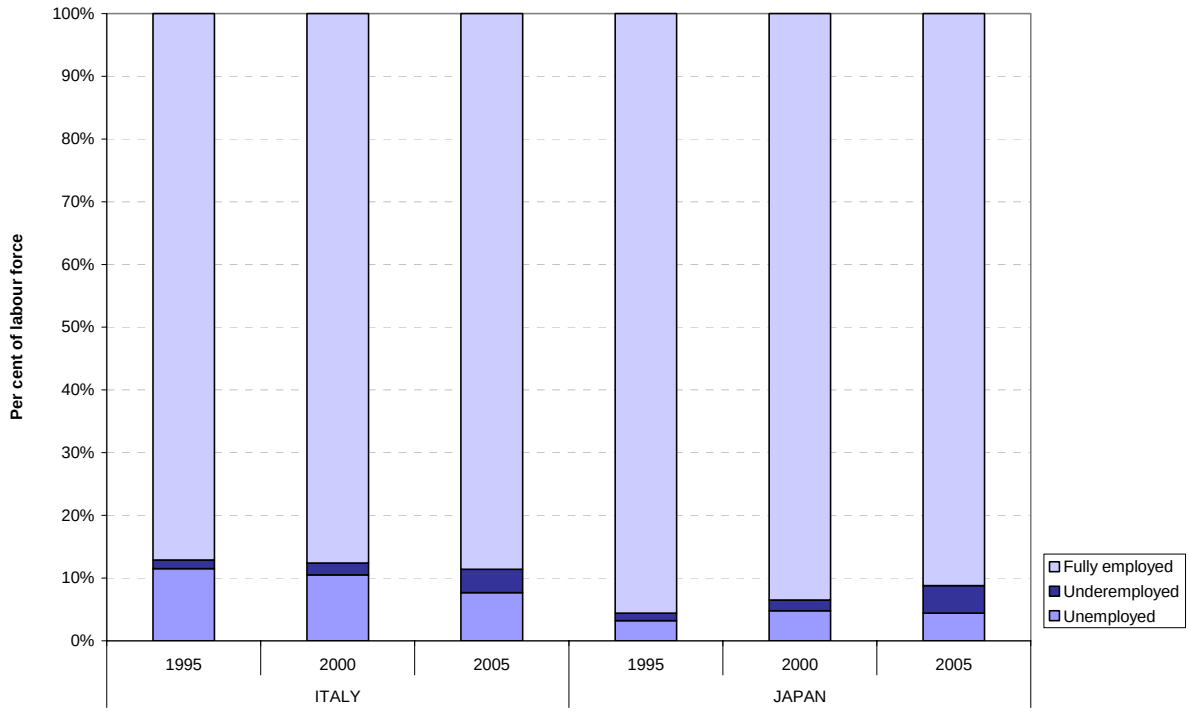


Figure 12a clearly shows that in almost all countries women in part-time employment are more likely to be seeking more hours than their male counterparts (indicated by the points to the right of the diagonal line). This is particularly the case in the developed economies, where many women are at least twice as prone as men to find themselves underemployed.

Adding the underemployment component to an analysis of labour market performance can prove quite valuable. If one were to look at the basic labour market indicators – employment and unemployment – the conclusions could differ from the assessment based on a division of employment into "fully employed" (measured as total employment less time-related underemployment) and "underemployed". For example, total employment could increase while unemployment decreases, implying an improvement in labour market prospects; at the same time the number of fully employed persons could decrease as the number of persons who work part time for involuntary reasons increases. Figure 12b shows how in Italy most of the decrease in the unemployment rate is offset by an increase in the underemployment rate so that the rate of underutilized labour only slightly decreased between 1995 and 2005. Overlooking this underemployment component could thus be misleading.

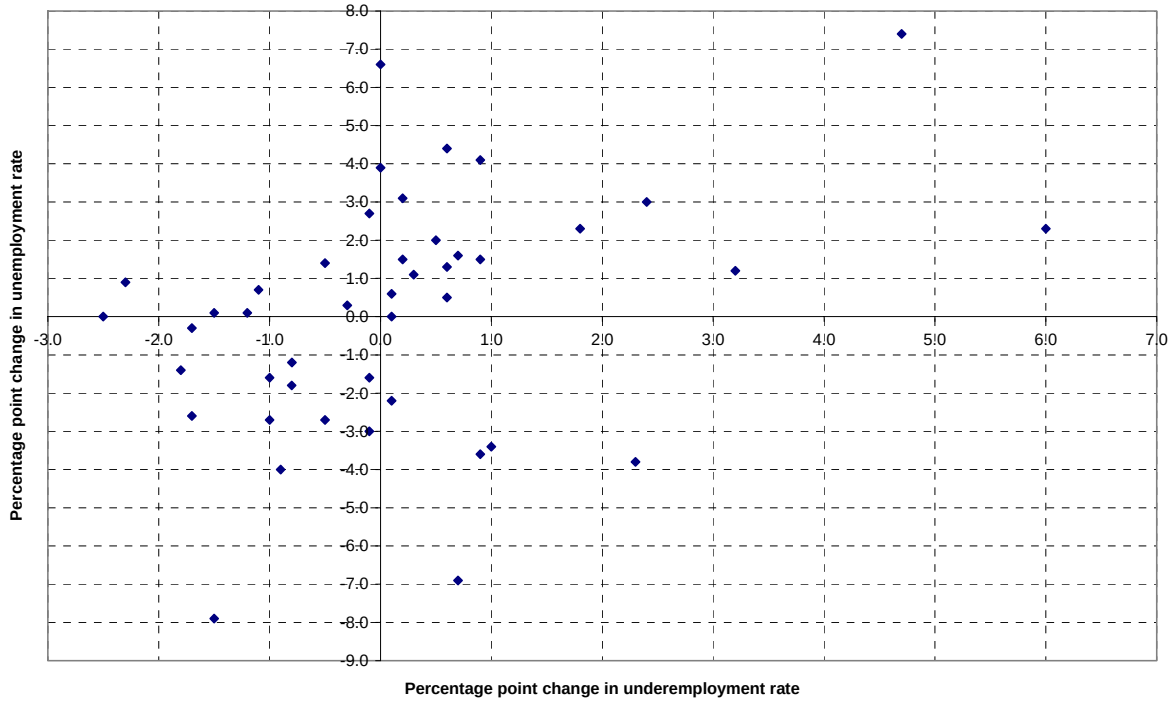
Figure 12b. Distribution of labour force status – fully employed, unemployed or underemployed – in Japan and Italy, 1995, 2000 and 2005



While not technically unemployed, the underemployed are often competing for available jobs. Because of the way in which unemployment figures are defined and measured, these workers will not be included even though they may behave and regard themselves as unemployed in many ways and may be actively seeking other work while currently employed. Consequently, a clearer picture of the underutilization of the productive potential of the country's labour force can be gained by adding the number of underemployed to the number of unemployed as a share of the overall labour force. As seen in figure 12b, the rate of underutilized labour in Japan reached 8.8 per cent in 2005, double the rate in 1995. The rate of underutilized labour could be significant in developing countries where opportunities for full employment are fewer, however, the limited availability of data in these countries makes the exact rate impossible to quantify.

Figure 12c demonstrates how some countries – Australia, Denmark, Italy, Latvia, Nicaragua and Spain – have had this combination of decreasing unemployment rates and increasing time-related underemployment rates (lower right quadrant). The two measures do not always move in the same direction or even in the opposite direction. Furthermore, the changes in the two rates are not usually of the same magnitude. Unemployment rates tend to vary to a greater extent than underemployment rates. For example, unemployment rates changed by more than 3.0 percentage points from 1995 to 2005 in the Czech Republic, Poland, Slovakia and the United Kingdom, whereas the underemployment rate in these countries remained somewhat unchanged – differing by less than 1.0 percentage point – over the same period.

Figure 12c. Percentage point change in underemployment and unemployment rates, earliest (after 1994) to latest years



Box 12a. Resolution concerning the measurement of underemployment and inadequate employment situations, adopted by the 16th International Conference of Labour Statisticians, October 1998 [relevant paragraphs]

Objectives

1. The primary objective of measuring underemployment and inadequate employment situations is to improve the analysis of employment problems and contribute towards formulating and evaluating short-term and long-term policies and measures designed to promote full, productive and freely chosen employment as specified in the Employment Policy Convention (No. 122) and Recommendations (Nos. 122 and 169) adopted by the International Labour Conference in 1964 and 1984. In this context, statistics on underemployment and indicators of inadequate employment situations should be used to complement statistics on employment, unemployment and inactivity and the circumstances of the economically active population in a country.

2. The measurement of underemployment is an integral part of the framework for measuring the labour force established in current international guidelines regarding statistics of the economically active population; and the indicators of inadequate employment situations should as far as possible be consistent with this framework.

Scope and concepts

3. In line with the framework for measuring the labour force, the measurement of underemployment and indicators of inadequate employment should be based primarily on the current capacities and work situations as described by those employed. Outside the scope of this resolution is the concept of underemployment based upon theoretical models about the potential capacities and desires for work of the working-age population.

4. Underemployment reflects underutilization of the productive capacity of the employed population, including those which arise from a deficient national or local economic system. It relates to an alternative employment situation in which persons are willing and available to engage. In this resolution, recommendations concerning the measurement of underemployment are limited to time-related underemployment, as defined in subparagraph 8(1) below.

5. Indicators of inadequate employment situations that affect the capacities and well-being of workers, and which may differ according to national conditions, relate to aspects of the work situation such as use of occupational skills, degree and type of economic risks, schedule of and travel to work, occupational safety and health and general working conditions. To a large extent, the statistical concepts to describe such situations have not been sufficiently developed.

6. Employed persons may be simultaneously in underemployment and inadequate employment situations.

Measures of time-related underemployment

7. Time-related underemployment exists when the hours of work of an employed person are insufficient in relation to an alternative employment situation in which the person is willing and available to engage.

8(1) Persons in time-related underemployment comprise all persons in employment, as defined in current international guidelines regarding employment statistics, who satisfy the following three criteria during the reference period used to define employment:

(a) "willing to work additional hours", i.e. wanted another job (or jobs) in addition to their current job (or jobs) to increase their total hours of work; to replace any of their current jobs with another job (or jobs) with increased hours of work; to increase the hours of work in any of their current jobs; or a combination of the above. In order to show how "willingness to work additional hours" is expressed in terms of action which is meaningful under national circumstances, those who have actively sought to work additional hours should be distinguished from those who have not. Actively seeking to work additional hours is to be defined according to the criteria used in the definition of job search used for the measurement of the economically active population, also taking into account activities needed to increase the hours of work in the current job;

(b) "available to work additional hours", i.e. are ready, within a specified subsequent period, to work additional hours, given opportunities for additional work. The subsequent period to be specified when determining workers' availability to work additional hours should be chosen in light of national circumstances and comprise the period generally required for workers to leave one job in order to start another;

(c) "worked less than a threshold relating to working time", i.e. persons whose "hours actually worked" in all jobs during the reference period, as defined in current international guidelines regarding working-time statistics, were below a threshold, to be chosen according to national circumstances. This threshold may be determined by e.g. the boundary between full-time and part-time employment, median values, averages, or norms for hours of work as specified in relevant legislation, collective agreements, agreements on working-time arrangements or labour practices in countries.

KILM 13. Inactivity rate

Introduction

Although labour market economists tend to focus on the activities and characteristics of people in the labour force, there has been continued, if less visible, interest in individuals outside of the labour market, especially those who want to work but are not currently seeking work. Much of this growing interest stems from concern over improving the availability of decent and productive employment opportunities in developing and developed economies alike. Individuals are considered to be outside the labour force, or inactive, if they are neither employed nor unemployed, that is, not actively seeking work. There are a variety of reasons why some individuals do not participate in the labour force; such persons may be occupied in caring for family members; they may be retired, sick or disabled or attending school; they may believe no jobs are available; or they may simply not want to work.

The inactivity rate is the proportion of the working-age population that is not in the labour force. When added together, the inactivity rate and the labour force participation rate (see KILM 1) will add up to 100 per cent. Information on this indicator is given for 188 economies for all standardized age groupings provided in KILM table 1: 15+, 15-24, 15-64, 25-54, 25-34, 35-54, 55-64 and 65+. Because the inactivity rates in table 13 are derived from table 1, the estimates are also harmonized (as in table 1) to account for differences in countries' data collection and tabulation methodologies as well as for other country-specific factors such as military service requirements. The series includes both country reported and imputed data.

Use of the indicator

For countries that monitor performance of the labour market by labour force participation rates, the inactivity rate may not be of great interest. This indicator, however, takes on greater importance if analysed by age group and sex. In most cases, a low inactivity rate is preferable to a high rate because it shows that countries are providing potential workers with sufficient labour market activity. High rates of inactivity may reflect low levels of educational attainment; the incidence of inactivity is typically higher with lower levels of education. There are still other reasons – sickness or disability, cultural norms, among others – that may explain why some groups have higher rates of labour force inactivity.[1]

In some situations, a high inactivity rate for certain groups should not necessarily be viewed as "bad"; for instance, a relatively high inactivity rate for women aged 25 to 34 years may be due to their leaving the labour force to attend to family responsibilities such as child bearing and childcare. Using the data in KILM 13, users can investigate the extent to which motherhood relates to the labour force patterns of women. It has long been recognized that aspects of household structure are associated with labour market activity. For example, female heads of households tend to have relatively high inactivity rates. Among married-couple families, husbands typically have low inactivity rates, especially if there are children in the family. However, a low rate of female inactivity could coincide with a high rate for men, i.e. the husband, if the male is completing

1. A study by the US Bureau of Labor Statistics analysed data on the 15.8 million US individuals, aged 25 to 54 years, who did not work or look for work in 1996. The vast majority of this group – about three in every four – were women. Reasons for not working were very different for men and women, with men most likely to cite ill health or disability and women most likely to cite home responsibilities. See "Who's not working", in *Issues in Labor Statistics* (Washington, DC), Summary 98-4, May 1998; website: http://www.bls.gov/opub/ils/pdf/opbils19.pdf.

his education or is physically unable to work, thus making the wife the primary wage earner.

A subgroup of the inactive labour force comprises those known as discouraged workers, defined as persons not in the labour force, who are available for work but no longer looking for work because they think they will not find any. This is typically for personal reasons associated with their perception of lack of job availability. Regardless of their reasons for being discouraged, these potential workers are generally considered underutilized. The presence of discouraged workers is confirmed if the measured labour force grows when unemployment is falling. People who were not counted as unemployed (because they were not actively searching for work) when there were few jobs to be had may change their mind and look for work when the odds of finding a job improve. Furthermore, when numbers of discouraged workers are high, policy-makers may attempt to "recapture" members of this group by improving job placement services.

Definitions and sources

There are several aspects of the definition to consider for the inactivity indicator. Foremost is the fact that estimates must be made for the entire population, either through labour force surveys, population censuses, or similar means. Typically, determinations are made as to the labour force status of the relevant population. The labour force is defined as the sum of the employed and the unemployed. The remainder of the population is the number of persons not in the labour force.

Only labour force participation rates and population figures deemed sufficiently comparable across countries were used in the construction of table 13.[2] To this end, only labour force survey and population census-based data were used in the construction of the estimates. In countries with more than one survey source, only one type of source was used. If a labour force survey was available for the country, inactivity rates derived from these were chosen in favour of those derived from a population census. Only inactivity rates that are sufficiently representative of the standardized age groups (15+, 15-24, 15-64, 25-54, 25-34, 35-54, 55-64 and 65+) were used in the construction of the series.

Table 13 includes both real (country reported) inactivity rates as well as rates that were imputed using econometric modelling techniques. GDP levels and growth rates, population age structure variables and dummy variables to capture time trends, region-specific trends and country fixed effects were among the explanatory variables used to generate the imputed labour force participation rates in KILM table 1, which were then used in the construction of table 13. These rates were estimated separately both for each age group as well as for the sexes.

Limitations to comparability

The usual comparability issues stemming from differences in concepts and methodologies according to types of survey, variations in age groups, geographic coverage, etc. do not apply in the case of table 13. The table is derived from the harmonized labour force participation rates in table 1, where only data deemed sufficiently comparable across countries were used, which makes table 13 harmonized (and comparable) by default. The selection criteria for creating the harmonized data set were explained in the previous section.

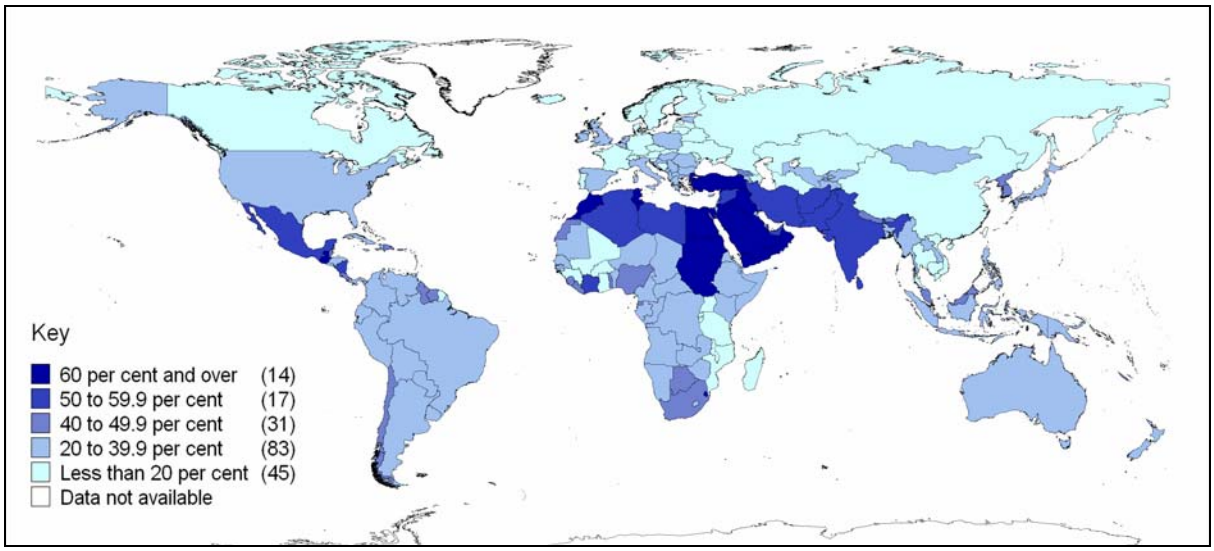
Trends

Labour force inactivity rates for men of prime working-age (aged 25 to 54 years) are relatively uniform across countries. For prime working-age women, however, figure 13a clearly demonstrates the variation of inactivity

2. See the corresponding section of the KILM 1 manuscript for details on the construction of the harmonized table 1. Since table 13 is the inverse of table 1, the same methodologies for construction apply.

rates across countries. The highest rates were mostly found in North African and Middle Eastern economies where inactivity rates usually exceeded 50 per cent. For instance, more than 70 per cent of the female prime working-age population was economically inactive in Egypt, Iraq, Saudi Arabia, Sudan, Turkey and the West Bank and Gaza Strip, indicating that many women were probably underutilized in these economies due to constraints by social institutions such as laws, norms, codes of conduct and traditions. With high rates among women, total inactivity rates (men and women combined) among these economies were also some of the highest (figure 1a in KILM 1 shows the low labour force participation rates for these countries).

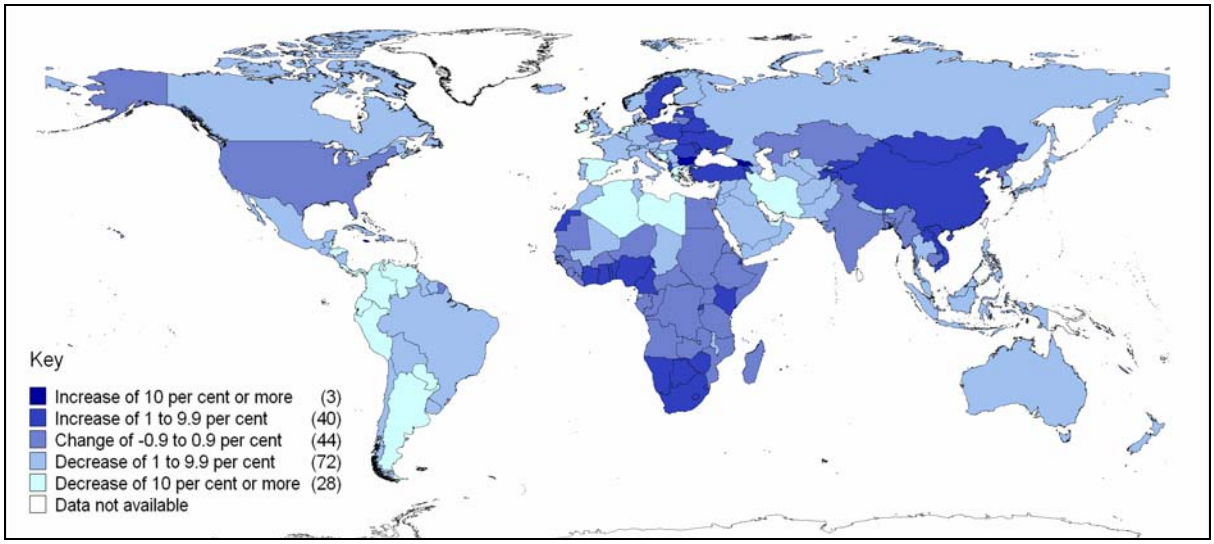
Figure 13a. Inactivity rates for the population aged 25 to 54 years, 2006



Over the past ten years, there have been noticeable changes in inactivity rates of the population aged 15 years and over for many economies. These changes were mostly driven by changes in the inactivity rates of prime-aged females and to a lesser extent, to that of youth and older individuals. Generally, rates for prime-aged males were stable (most economies had changes of less than 5.0 percentage points). Significant increases, however, were often noted for recent European Union members and countries in Central & South-Eastern Europe (non-EU) & CIS, due to rising inactivity rates for both men and women. Many of the largest declines occurred in South American countries, due to falling inactivity rates for women and youth. Figures 13b to 13d show the inactivity rate trends for 1996 to 2006 for the prime working-age female, young and older populations, respectively. Figure 13b confirms the expected decline in female economic inactivity for the majority of economies (120 out of 189).

Figure 13c illustrates that youth rates increased in most economies (122 out of 189), with notable increases in many new member countries of the European Union – Czech Republic, Latvia, Lithuania and Romania – and also in developing countries such as Cape Verde and Thailand, among others. The increasing inactivity of youth is typically attributed to one of two factors: first, education, meaning more young people are enrolling in education as an alternative to entering the labour force and more young people are staying in the education system for

Figure 13b. Percentage change in the inactivity rates of the young population aged 15 to 24 years, 1996-2006



longer periods of time; or second, increased discouragement, i.e. the assumption that more young people are neither working nor looking for work because they feel "discouraged" (in the belief that there are not any jobs out there or that there are no jobs out there that are worth having). Neither driver of change – increased education or increased discouragement – has yet been sufficiently defined in terms of empirical evidence, although the ILO is currently undertaking research to do so[3].

Although increasing over time, youth inactivity rates remain significantly lower in many low-income economies of the world than in higher-income economies. The 2006 rate in sub-Saharan Africa was 34.7 per cent compared to 49.0 per cent in the Developed Economies & European Union (see box 1a in KILM 1). The assumption has always been that, in low-income economies, young people do not have the option of staying in education due to lack of education infrastructure or education fees, and also because the opportunity costs of doing so are too high. It does not always pay off to stay in school. Young people must take on any job in order to maintain a subsistence level of support for themselves and their families. Labour force participation of young people in these regions is not a matter of choice, but necessity. Discouragement is hence not an option. Instead of focusing on declining participation rates (and increasing inactivity rates), therefore, it would be more revealing to focus on what type of activities young people in low-income economies are engaged in and under what conditions. The ILO will undertake more research on this topic in the future.

There is growing concern that an ageing population in the developed economies will result in an excessive burden on the State as

3. To assist countries in improving the strategy of youth employment policies and programmes, the ILO designed the School-to-Work Transition Survey (SWTS) as a statistical tool. Specifically, the survey allows for analysis of both quantitative and qualitative variables that define the relative ease or difficulty of young people's transition from school-to work-life. Among such variables are young people's education and training experience; their perceptions and aspirations in terms of employment; the job search process, barriers to and supports for entry into the labour market; the preference for wage employment or self-employment; attitudes of employers towards hiring young workers; working conditions and earnings, etc. Survey reports are currently available for Indonesia, Viet Nam, Sri Lanka and Kosovo at http://www.ilo.org/public/english/employment/yett/swts.htm.

the number of persons working, and thus paying into the social security system, shrinks while the number of older persons outside of the labour force, and thus drawing resources from the social security system of the State, increases. As a counterbalance to the discussion of young workers above, figure 13d investigates the trend in the participation of older workers (aged 65 years and over) in the labour market since 1996. More countries in the world saw increases in the inactivity rate of the older population in the past decade than decreases. Contrary to common belief, however, there is not yet a strong trend towards increases in the number of retirees in the developed economies. In fact, the inactivity rates of older persons showed slight declines over the period – implying that older workers are staying longer in the labour force – in one-third of the developed economies: Australia, Canada, Denmark, Estonia, Finland, Germany, Latvia, the Netherlands, New Zealand, Norway, Portugal, Slovenia, Sweden, the United Kingdom and the United States. The strongest increases in the inactivity rate of older persons – in excess of 10 per cent – were seen in Bangladesh, East Timor and Rwanda.

Figure 13c. Percentage change in the inactivity rates of the older population aged 65 years and over, 1996-2006

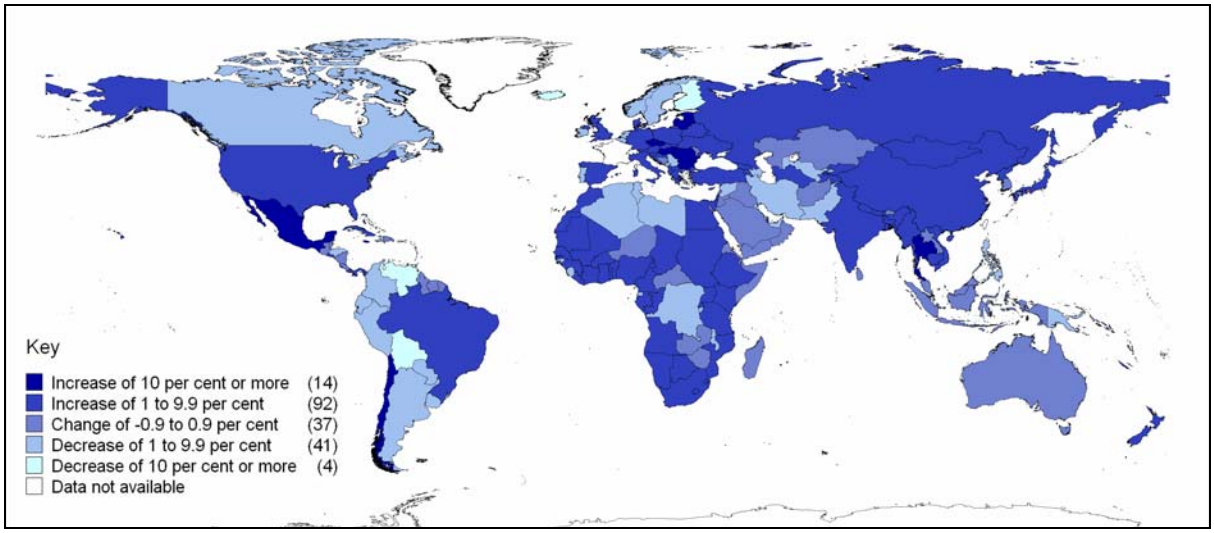
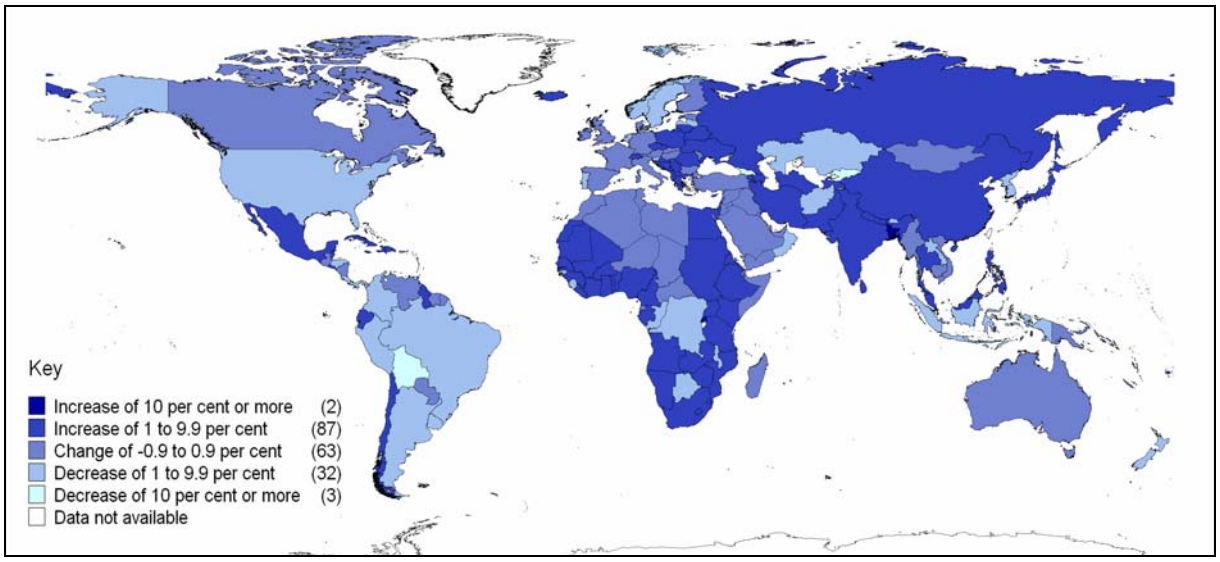


Figure 13d Percentage change in the inactivity rates of the older population aged 65 years and over, 1996-2006



Box 13a. World and regional estimates of inactivity rates

Inactivity rate (%) – both sexes	1996	2002	2003	2004	2005	2006*
WORLD	33.3	34.0	34.2	34.2	34.3	34.3
Developed Economies & European Union	39.3	39.6	39.7	39.6	39.6	39.7
Central & South Eastern Europe (non-EU) & CIS	39.4	41.1	41.6	41.1	41.1	41.0
East Asia	22.0	24.0	24.6	24.8	25.1	25.4
South East Asia & the Pacific	29.9	29.6	29.7	29.5	29.4	29.3
South Asia	38.8	39.7	39.7	40.0	40.1	40.2
Latin America & the Caribbean	36.6	34.9	34.6	34.6	34.5	34.4
North Africa	50.2	50.4	50.1	49.7	49.5	49.3
Sub-Saharan Africa	24.4	25.4	25.6	25.6	25.7	25.8
Middle East	47.4	45.3	44.9	44.4	44.0	43.6
Inactivity rate (%) – males	**1996**	**2002**	**2003**	**2004**	**2005**	**2006***
WORLD	19.5	20.6	20.8	20.8	21.0	21.1
Developed Economies & European Union	29.1	30.4	30.8	30.9	31.2	31.5
Central & South Eastern Europe (non-EU) & CIS	28.7	31.2	31.6	30.4	30.5	30.4
East Asia	15.4	17.3	17.8	18.0	18.3	18.5
South East Asia & the Pacific	17.0	16.9	17.1	17.2	17.2	17.2
South Asia	16.0	17.3	17.6	17.5	17.7	17.8
Latin America & the Caribbean	18.4	19.1	19.1	19.8	20.2	20.5
North Africa	24.0	25.1	25.1	24.3	24.3	24.2
Sub-Saharan Africa	12.6	13.3	13.6	13.6	13.7	13.8
Middle East	22.5	22.1	21.9	22.0	21.9	21.8
Inactivity rate (%) – females	**1996**	**2002**	**2003**	**2004**	**2005**	**2006***
WORLD	47.0	47.4	47.5	47.5	47.5	47.5
Developed Economies & European Union	49.0	48.2	48.1	47.7	47.6	47.4
Central & South Eastern Europe (non-EU) & CIS	49.0	49.9	50.5	50.5	50.5	50.4
East Asia	28.9	31.1	31.6	31.9	32.3	32.6
South East Asia & the Pacific	42.4	41.9	42.0	41.6	41.4	41.1
South Asia	63.1	63.5	63.3	63.9	63.9	63.9
Latin America & the Caribbean	53.9	50.0	49.3	48.7	48.2	47.6
North Africa	76.1	75.5	74.9	74.7	74.5	74.2
Sub-Saharan Africa	35.7	37.0	37.3	37.2	37.3	37.3
Middle East	75.1	70.9	70.2	69.1	68.3	67.5
Inactivity rate (%) - youth	**1996**	**2002**	**2003**	**2004**	**2005**	**2006***
WORLD	41.9	44.8	45.4	45.2	45.4	45.4
Developed Economies & European Union	46.9	48.6	49.7	48.8	48.9	49.0
Central & South Eastern Europe (non-EU) & CIS	54.2	58.3	59.8	57.3	57.2	56.9
East Asia	25.3	31.7	32.7	32.4	32.6	32.6
South East Asia & the Pacific	41.5	42.3	42.8	43.6	43.6	43.7
South Asia	50.1	51.9	52.2	52.5	52.7	52.9
Latin America & the Caribbean	44.6	44.9	44.9	45.4	45.8	46.1
North Africa	60.8	63.9	63.6	63.4	63.5	63.6
Sub-Saharan Africa	32.4	33.8	34.3	34.4	34.6	34.7
Middle East	60.7	58.7	58.3	58.2	58.0	57.8

Source: ILO Trends Labour Force Model (see box 3 in "Guide to understanding the KILM" for more information on estimation methodology).* 2006 preliminary estimates.

(continued)

Box 13a (continued)

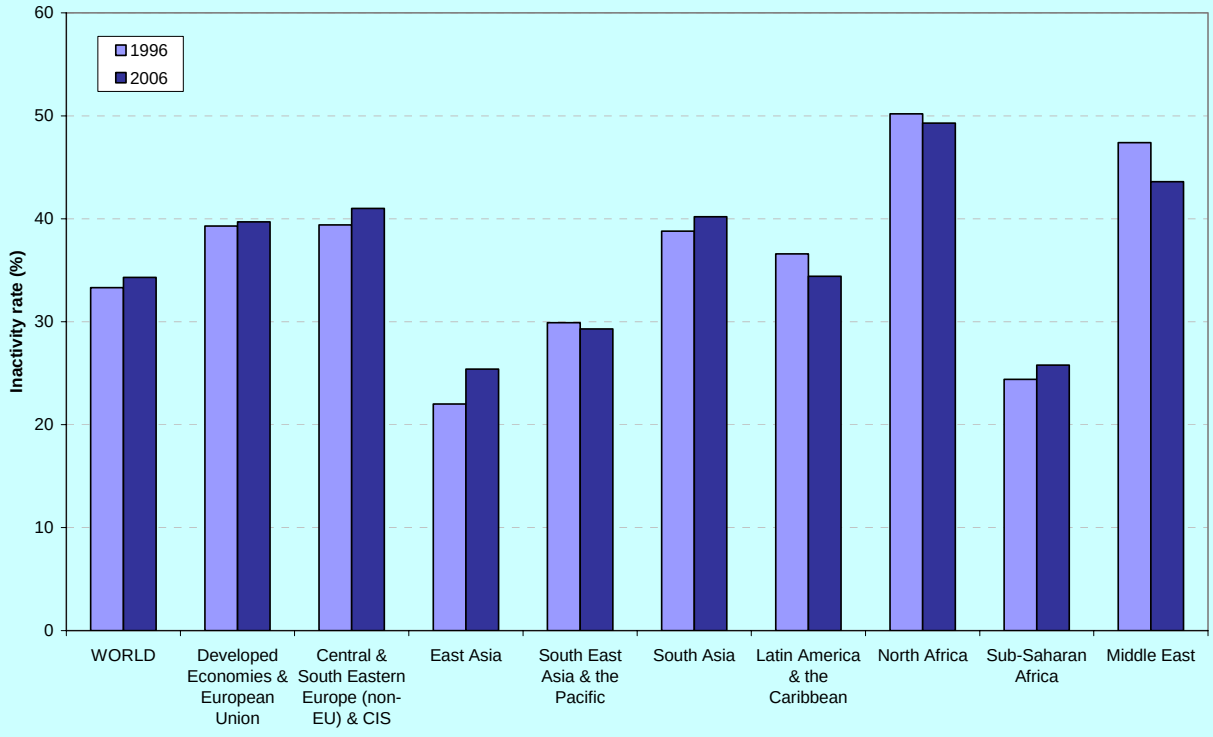
The world's total inactivity rate increased slightly from 33.3 per cent in 1996 to 34.3 per cent in 2006. Two broad trends have helped shape this outcome: increasing inactivity among young people and increasing inactivity among adult males (particularly among older males).

Globally, the youth inactivity rate rose from 41.9 to 45.4 per cent between 1996 and 2006. Youth labour force participation decreased – thereby inactivity increased – in all regions with the exception of the Middle East. The increases in inactivity are largely due to the growing participation of young people in education, especially in some of the Asian economies, which can be seen as a positive development. However, in some countries, particularly in the Central & South-Eastern Europe (non-EU) & CIS region, the increase in economic inactivity among youth, which fortunately came to a halt in recent years, is also caused by the large number of young people that have become discouraged and have withdrawn from labour markets since the beginning of the transition period.

Total inactivity rates for males rose in every region over the past decade, again with the exception of the Middle East. This trend reflects more youth entering education and a growing number of individuals leaving labour markets at an earlier stage in life. Inactivity rates among females also increased for half of the regions and the world as a whole, mainly because of higher inactivity rates among young women. However, it is still a worrisome trend seeing as almost half of the world's female working-age population is inactive – compared to one-fifth of the male working-age population – indicating that there is still a large untapped labour potential. Inactivity may be the result of personal choice – as is certainly the case for youth who enter education or persons retiring earlier – but it can also be associated with labour underutilization since it encompasses discouraged workers and individuals that may be restricted by social institutions but would otherwise contribute to labour markets. Unfortunately, it is hard to quantify how much of the economically inactive population is underutilized.

The largest increase in inactivity for women occurred in East Asia, where the female inactivity rate grew by 3.8 percentage points between 1996 and 2006. In contrast, the largest decrease in female inactivity was observed in the Middle East; however, almost 70 per cent of females in this region still did not participate in the labour market in 2006. Latin America & the Caribbean also saw a considerable decrease in female inactivity of over 6 percentage points.

Inactivity rates, 1996 and 2006, by KILM region



5. Educational attainment and illiteracy indicator (KILM 14)

KILM 14. Educational attainment and illiteracy

Introduction

KILM 14 reflects the levels and distribution of the knowledge and skills base of the labour force. The indicator includes two measures pertaining to educational level of the labour force, and a third measure estimating illiteracy in the youth and adult population. The indicator covers the educational attainment of both women and men in the entire labour force, and also focuses on the proportion of young workers (aged 25 to 29 years) having completed tertiary education.

Table 14a shows the distribution of the educational attainment of the labour force aged 15 years and above for 98 countries. Table 14b, showing the labour force aged 25 to 29 years with completed tertiary education, provides an additional perspective on the possibilities for further development of educational capital. Table 14b covers 74 economies. Table 14c presents information on youth and adult illiteracy rates – the percentage of the youth or adult population that is illiterate – for 139 countries, although data are available for one point in time per country only.

Use of the indicator

In all countries, human resources represent, directly or indirectly, the most valuable and productive resource; countries traditionally depend on the health, strength and basic skills of their workers to produce goods and services for consumption and trade. The advance of complex organizations and knowledge requirements, as well as the introduction of sophisticated machinery and technology, means that economic growth and improvements in welfare increasingly depend on the degree of literacy and educational attainment of the total population. The population's predisposition to acquire such skills can be enhanced by experience, informal and formal education, and training.

Although the natural endowments of the labour force remain relevant, continuing economic and technological change means that the bulk of human capital is now acquired, not only through initial education and training, but increasingly through adult education and enterprise or individual worker training, within the perspective of lifelong learning and career management. Unfortunately, quantitative data on lifelong learning, and indicators that monitor developments in the acquisition of knowledge and skills beyond formal education, are sparse. Statistics on levels of educational attainment, therefore, remain the best available indicators of labour force skill levels to date. These are important determinants of a country's capacity to compete successfully and sustainably in world markets and to make efficient use of rapid technological advances. They also should affect the employability of workers.

The ability to examine educational levels in relation to occupation and income is also useful for policy formulation, as well as for a wide range of economic, social and labour market analyses. Statistics on levels and trends in educational attainment of the labour force can: (a) provide an indication of the capacity of countries to achieve important social and economic goals; (b) give insights into the broad skill structure of the labour force; (c) highlight the need to promote investments in education for different population groups; (d) support analysis of the influence of skill levels on economic outcomes and the success of different policies in raising the educational level of the workforce; (e) give an indication of the degree of inequality in the distribution of education resources between groups of the population, particularly between men and women, and within and between countries; and (f) provide an indication of the skills of the existing labour

force, with a view to discovering untapped potential.

Growing wage disparity between low-skilled and high-skilled workers in many countries provides strong evidence of increasing returns on education. (See Chapter 1, section B, for additional information on wages according to the low-skill/high-skill distinction.) The distribution of educational attainment can thereby play a significant role in determining a country's income distribution. A highly unequal distribution of educational attainment could lead to an increasingly unequal income distribution within a country, while a more equal distribution of educational attainment can work towards a significant reduction in inter-household income disparities. A more balanced distribution of educational attainment across the primary, secondary and tertiary levels also allows for greater flexibility in adopting new technologies, and increases the ability to compete in the world economy across a broader range of industries.

While not a labour market indicator in itself, the illiteracy rate of the population may be a useful proxy for basic educational attainment in the potential labour force. Literacy and numeracy are increasingly considered to be the basic minimal skills necessary for entry into the labour market.

Definitions and sources

Educational attainment

The seven categories of educational attainment used in KILM 14 are conceptually based on the ten levels of the International Standard Classification of Education (ISCED). The ISCED was designed by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in the early 1970s to serve as an instrument suitable for assembling, compiling and presenting comparable indicators and statistics of education, both within countries and internationally. The original version of ISCED (ISCED-76) classified educational programmes by their content along two main axes: levels of education and fields of education. The cross-classification variables were maintained in the revised ISCED-97; however, the rules and criteria for allocating programmes to a level of education were clarified and tightened, and the fields of education were further elaborated.[1] Most countries continue to classify education levels according to the levels of ISCED-76, but countries are gradually beginning to progress to the nine levels and ten subcategories of ISCED-97 and a few countries are classified as such in tables 14a and 14b. Both ISCED revisions are shown in Appendix D, but the main education levels are also summarized in the table below.

The major attainment levels in KILM 14 are primary, secondary and tertiary education. Primary education aims to provide the basic elements of education (for example, at elementary or primary school and lower secondary school) and corresponds to ISCED levels 1 and 2. Curricula are designed to give students a sound basic education in reading, writing and arithmetic, along with an elementary understanding of other subjects such as history, geography, natural science, social science, art, music and, in some cases, religious instruction. Some vocational programmes, often associated with relatively unskilled jobs, as well as apprenticeship programmes that require further education, are also included. Students generally begin primary education between the ages of 5 and 7 years and end at 13 to 15 years. Literacy programmes for adults, similar in content to programmes in primary education, are also classified under primary education.

Secondary education is provided at high schools, teacher-training schools at this level, and schools of a vocational or technical nature. General education continues to be an important constituent of the curricula, but

1 For further details about the ISCED see UNESCO: *International Standard Classification of Education/ISCED 1997* (Paris, 1998); website: http://uis.unesco.org. The document can be downloaded at: http://portal.unesco.org/uis/TEMPLATE/pdf/isced/ISCED_A.pdf.

KILM Level	ISCED-97 Level	ISCED-76 Level	Description
Less than one year	X: No schooling	X: No schooling	Less than one year of schooling
Pre-primary	0: Pre-primary education	0: Education preceding the first level	Education delivered in kindergartens, nursery schools or infant classes
Primary	1: Primary education or first stage of basic education	1: First level	Programmes are designed to give students a sound basic education in reading, writing and arithmetic. Students are generally 5-7 years old. Might also include adult literacy programmes.
	2: Lower secondary or second stage of basic education	2: Second level, first stage	Continuation of basic education, but with the introduction of more specialized subject matter. The end of this level often coincides with the end of compulsory education where it exists. Also includes vocational programmes designed to train for specific occupations as well as apprenticeship programmes for skilled trades.
Secondary	3: Upper secondary education	3: Second level, second stage	Completion of basic level education, often with classes specializing in one subject. Admission usually restricted to students who have completed the 8-9 years of basic education or whose basic education and vocational experience indicate an ability to handle the subject matter of that level.
	4: Post-secondary non-tertiary education		Captures programmes that straddle the boundary between upper-secondary and post-secondary education. Programmes of between six-months and two years typically serve to broaden the knowledge of participants who have successfully completed level 3 programmes.
Tertiary	5: First stage of tertiary education (not leading directly to an advanced research qualification); subdivided into:		
	5A	6: Third level, first stage leading to a first university degree	Programmes are largely theoretically based and are intended to provide sufficient qualifications for gaining entry into advanced research programmes. Duration is generally 3-5 years.
	5B	5: Third level, first stage, leading to an award not equivalent to a first university degree	Programmes are of a typically “practical” orientation designed to prepare students for particular vocational fields (high-level technicians, teachers, nurses, etc.).
	6: Second stage of tertiary education (leading to an advanced research qualification)	7: Third level, second stage	Programmes are devoted to advanced study and original research and typically require the submission of a thesis or dissertation.
Not definable		9: Education not definable by level	Programmes for which there are no entrance requirements.
Not stated	?: Level not stated	?: Level not stated	

separate subject presentation and more specialization are also found. Secondary education consists of ISCED levels 3 (designated "upper secondary education") and 4 (designated "post-secondary non-tertiary education"), and students generally begin between 13 and 15 years of age and finish between 17 and 18 years of age. It should be noted that the KILM classifications of primary and secondary education differ from the classifications used in UNESCO publications, in which level 2 is termed "lower secondary education".

Tertiary education is provided at universities, teacher-training colleges, higher professional schools and sometimes distance-learning institutions. It requires, as a minimum condition of admission, the successful completion of education at the secondary level or evidence of the attainment of an equivalent level of knowledge. It corresponds to ISCED levels 5 6 and 7 (levels 5A, 5B and 6 in ISCED-97 and levels 5, 6 and 7 in ISCED-76).

In addition to primary, secondary and tertiary education, KILM 14 also covers three other categories of educational attainment that correspond to ISCED levels: less than one year of schooling (level X); less than primary (level 0); and education not defined by level (ISCED-76 level 9).

The statistics on educational attainment were obtained from the ILO's *Yearbook of Labour Statistics*, *Bulletin of Labour Statistics* and the Caribbean Labour Statistics Dataset.[2] Information on educational attainment is typically collected through household surveys, official estimates and population censuses conducted by national statistical services.

Illiteracy rates

Literacy is defined as the skills to read and write a simple sentence about everyday life; hence, the semi-literate – those who can read but not write – is sometimes included in the definition as well. Persons for whom the level of literacy is not known are excluded from the calculation of illiteracy rates. The source of information for illiteracy rates of youth and adults is UNESCO's Institute for Statistics (UIS).[3] The estimates are either national, based on data collected during national population censuses and household surveys, or, if no more recent national estimates were available, based on the UIS assessment of July 2002. The UIS model estimates are based on national literacy data that refer to censuses and surveys conducted prior to 1995. Information about the model estimation methodology is available on the UIS website (see footnote 3). The UIS does not provide annual estimates on illiteracy because "adult literacy rates do not fluctuate significantly over the short term and therefore year-to-year estimates of short-term change can be unreliable in the absence of observed data".

The illiteracy rate of youth or adults, shown in table 14c, is the number of illiterates of the selected age group divided by the total population in the corresponding age group. The population estimates are from the UN Population Division population estimates (2002 Revision).

Limitations to comparability

A number of factors can limit the appropriateness of using the indicator for comparisons of statistics on education between countries or over time. First, it should be noted that the same limitations relating to comparability of other indicators based on labour force apply here as well. The discussion in the corresponding section of the KILM 1 manuscript (labour force participation rates) should be read for additional details on the caveats relating to comparability.

2. For more information on these ILO publications and databases, see websites: http://www.ilo.org/stat and http://www.ilocarib.org.tt/.

3. The UNESCO literacy and illiteracy estimates are available at website: http://www.uis.unesco.org/. The data used in table 14e are based on the August 2005 edition of UIS estimates.

In addition to the differences associated with varying information sources, how individuals in the labour force are assigned to educational levels can also severely limit the feasibility of cross-country comparisons. Many countries have difficulty establishing links between their national classification and ISCED, especially with respect to technical or professional training programmes, short-term programmes and adult-oriented programmes (ranging around levels 3 and 5 of ISCED-76 and levels 3, 4 and 5 of ISCED-97). In numerous situations, ISCED classifications are not strictly adhered to; a country may choose to include level 3 (secondary) with levels 5, 6 and 7 (tertiary), e.g. Botswana; or levels 1 or 2 (primary) may include levels 0 (less than one year) and 1 (less than primary), e.g. Canada. It should also be noted that in a few countries ISCED levels are combined in different way; for instance, levels 1 and 2 may refer to level 1 only (as in many countries in Latin America and the Caribbean) or to level 2 only (as in Australia and Austria). It is necessary to pay close attention to the notes – specifically, the notes given in the column "Level note" – in order to ascertain the actual distribution of education levels before making comparisons.

An issue that affects several countries in the European Union subgroup of the Developed Economies originates from the way in which those who have received their highest level of education in apprenticeship systems are classified. The classification of apprenticeship in the "secondary" level – despite the fact that this involves one or more years of study and training beyond the conventional length of secondary schooling in other countries – can lower the reported proportion of the labour force or population with tertiary education, compared with countries where the vocational training is organized differently. This classification issue substantially holds down the levels of tertiary education reported by Austria and Germany, for instance, where the participation of young people in the apprenticeship system is widespread.

Limitations to comparability of information on illiteracy rates, as given in table 14c, exist because of variations in the definition of illiteracy. The most common definition is the inability to read and write a simple statement about everyday life. However, different countries have different social and cultural contexts, different definitions and standards of literacy, and different methodologies for collecting and compiling the literacy data, as well as variations in the quality of data collected, and caution is needed in comparing the literacy situations among countries and regions. Some countries define illiteracy, not by reading and writing aptitude, but by the years of schooling attained. For example, a person is categorized as illiterate in Saint Lucia who has less than seven years of schooling, or in Israel who has less than primary level education. These countries, therefore, should not be compared against, say, Togo, where illiterate persons are defined as those who cannot easily read a letter or a newspaper.

Trends

The data seem to show that the economically active population is no longer biased towards the highly educated male. On the contrary, in most countries (44 of the 50 with comparable data shown in figure 14a) a higher proportion of the female labour force than the male labour force has attained tertiary education. It is important to add that the large share of highly educated females in the labour force should not necessarily be viewed as a sign of progress in the fight for equality in the world of work, since it is liable to mean only that more educated women are more likely to be economically active than less educated women. In fact, economic empowerment and education often go hand in hand; women who are restricted in their education opportunities are likely to be those who are restricted in their choice to work. Men in the labour force were also slightly more likely than women to have attained only primary education, whereas the distribution of persons with secondary education was fairly equal between the sexes.

For both sexes, the highest shares of the labour force by educational attainment were those with either primary- or secondary-level

education, which indicates that in most of the countries the bulk of labour supply is still workers with low- or medium-level skills. The supply element is a likely explanatory variable in the growing wage gap between low-skilled and high-skilled occupations identified; the demand for workers with tertiary-level education and higher skills, which are in short supply, would push up their wages, and vice versa for workers with lower-level education. Only five countries had the highest shares of the labour force with tertiary education in 2005 – Ireland, Israel, the Russian Federation, Ukraine and the United States.

Figure 14b shows countries – with similar definitions of illiteracy – that reported an illiteracy rate for either youth or adults, or both, in excess of 30 per cent. In almost all countries shown, the illiteracy rates of adults are higher than those of youth, which suggests a positive trend as young people make advances in literacy and thus gain a higher skills base than their parents. The only exception where the illiteracy rate of youth exceeded that of adults was for males in the Democratic Republic of the Congo. Another interesting trend highlighted in the table is how much higher female illiteracy is compared to that of males. The adult female illiteracy rate was more than 25 percentage points higher than that of males in 14 countries – Afghanistan, Angola, the Central African Republic, Chad, the Democratic Republic of the Congo, Ethiopia, India, Morocco, Mozambique, Nepal, Niger, Pakistan, Togo and Yemen. The trend continues, although to a lesser extent in the younger generation: five countries had a gap in the female-male youth illiteracy rates in excess of 25 percentage points – Afghanistan, Benin, Chad, Niger and Yemen. Female adult illiteracy remains very high in many African countries. At least three-quarters of the female adult population can neither read nor write in Benin, Burkina Faso, Chad, Ethiopia, Guinea, Mali, Mozambique, Niger and Sierra Leone. The highest proportion of illiterate adult females, however, was in a South Asian country – Afghanistan – with 87.4 per cent of women unable to read or write.

Figure 14a. Distribution of male and female labour force by level of educational attainment, 2005

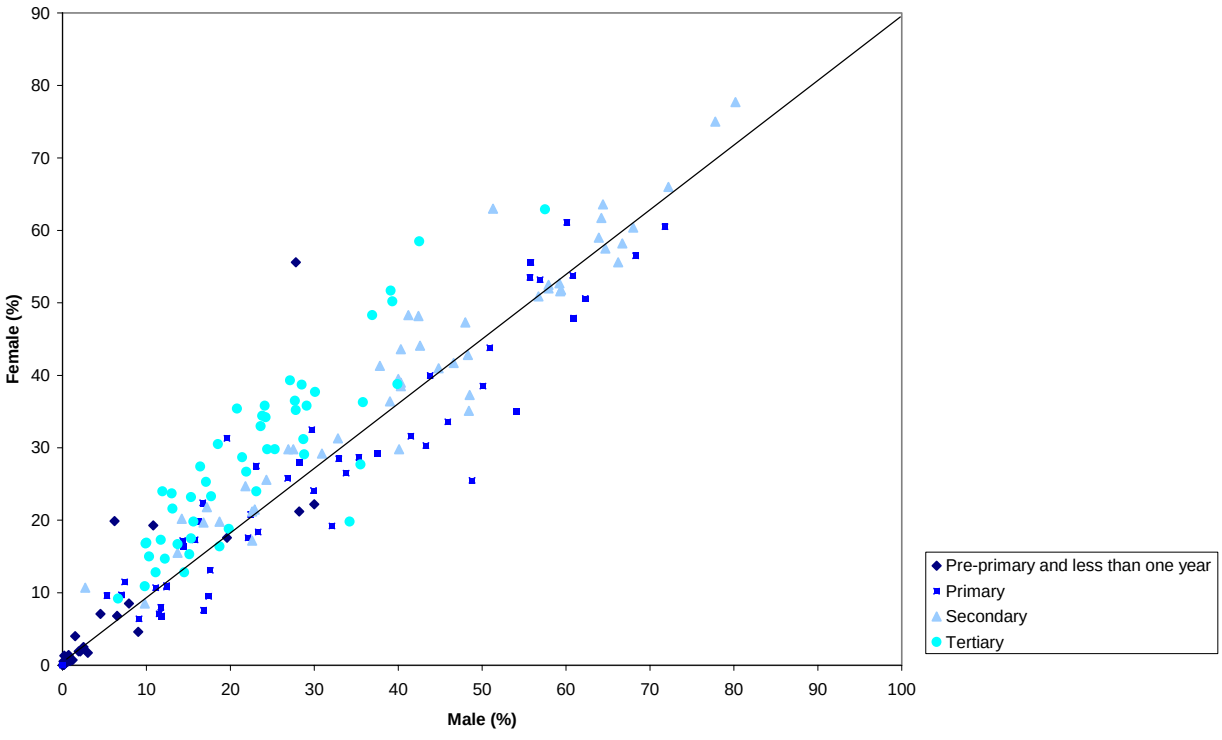


Figure 14b. Countries with youth or adult illiteracy rates* in excess of 30 per cent, by sex

	Youth illiteracy rate (%)		Adult illiteracy rate (%)	
	Male	Female	Male	Female
Asia & the Pacific				
Afghanistan	49.2	81.6	56.9	87.4
Bangladesh	32.8	39.7	46.1	59.2
Cambodia	12.1	21.1	15.3	35.9
India	15.8	32.3	26.6	52.2
Lao People's Democratic Republic	17.4	25.3	23.0	39.1
Nepal	19.4	39.9	37.3	65.1
Pakistan	23.3	46.9	35.9	64.6
Papua New Guinea	30.9	35.9	36.6	49.1
Central America				
Belize	23.9	23.3	29.7	29.7
Guatemala	13.6	21.6	24.6	36.7
North Africa				
Algeria	5.9	13.9	20.4	39.9
Egypt	9.9	21.1	17.0	40.6
Morocco	19.2	39.5	34.3	60.4
Sudan	15.4	28.6	28.9	48.2
Tunisia	3.6	7.8	16.6	34.7
Sub-Saharan Africa				
Angola	16.3	36.8	17.1	45.8
Benin	40.8	66.8	52.1	76.7
Burkina Faso	59.6	73.5	68.6	83.4
Burundi	23.2	29.6	32.7	47.8
Cameroon			23.0	40.2
Central African Republic	29.7	53.1	35.2	66.5
Chad	44.3	76.8	59.2	87.2
Congo, Democratic Republic of	22.0	36.9	19.1	45.9
Côte d'Ivoire	29.2	47.9	39.2	61.4
Ethiopia	37.8	61.5	50.0	77.2
Ghana	24.1	34.5	33.6	50.2
Guinea	41.3	66.3	57.4	81.9
Kenya	20.2	19.3	22.3	29.8
Liberia	34.7	30.5	41.7	54.3
Madagascar	41.1	43.5	36.7	45.2
Malawi	17.9	29.3	25.1	46.0
Mali			67.3	84.1
Mozambique	40.5	63.4	45.2	75.0
Niger	47.6	76.8	57.1	84.9
Nigeria	13.0	18.7	21.8	39.9
Rwanda	21.5	23.1	28.6	40.2
Senegal	41.5	59.0	48.9	70.8
Sierra Leone	40.4	62.6	53.3	75.8
Tanzania, United Republic of	19.1	23.8	22.5	37.8
Togo	16.3	36.4	31.3	61.5
Uganda	17.3	28.8	23.2	42.3
Zambia	27.4	33.8	23.7	40.2
Middle East				
Iraq	11.1	19.5	15.9	35.8
Yemen	9.3	41.1	26.9	65.3

* Illiteracy rate is defined as the number of illiterate persons as a percentage of the total population.

6. Wage and labour cost indicators (KILM 15-17)

This chapter presents three distinct and complementary indicators. The first, KILM 15, shows trends in average real wages in the manufacturing industry for 118 economies, while the second, KILM 16, presents the evolution of nominal and real wage rates for 19 occupations within specific industry groups for 86 countries and/or earnings for 63 countries. The third indicator, KILM 17, presents the trends and structure of employers' average compensation costs for the employment of production workers in manufacturing, available for 33 countries.

These three indicators differ in their nature and primary objectives. The first two are important from the workers point of view and represent a measure of the level and trend of their purchasing power and an approximation of their standard of living, while the third indicator provides an estimate of employers' expenditure on the employment of production workers. The indicators are, nevertheless, complementary in that they reflect the two main facets of existing wage measures; one aiming to measure the income of employees, the other showing the costs incurred by employers for employing them.

The information presented in KILM 15 and 17 is limited to the manufacturing industry; even more specifically, KILM 17 is only for production workers in manufacturing. While corresponding measures are also relevant and desirable for the total economy, such figures are not as widely available as those for manufacturing. These measures are particularly useful for assessing and analysing labour input as a proportion of total operating or production costs in an industry, which, by definition, produce industrial goods that enter into international trade; i.e. wages and labour costs can be used as a measure of competitiveness in the production of manufacturing goods meant for export. However, it should be noted that wages and labour costs may vary across sectors, and the value of these indicators in manufacturing is only an approximation of the corresponding measures in other sectors of the economy.

For most employees, wages – the income they receive from paid employment – represent the main part of their total income. Information on workers' wages is a valuable economic indicator for planners, policy-makers, employers and workers themselves. All statistical series collected and stored in the ILO's LABORSTA database, and most series from other international and regional sources that have been used as a basis for KILM 15, show gross nominal wages, which represent the total due to workers before deductions are made for their contributions to health insurance, unemployment, pension and other schemes, as well as for personal income taxes. KILM 16 presents both wage rates and earnings, the latter including some elements of remuneration such as overtime and some bonuses that are not counted as part of wage rates, for 19 occupations.

From the employers' standpoint, wages are only one component of the cost of employing labour, which is usually referred to as labour costs (according to the ILO concept), employment costs or compensation costs. Other cost elements include employers' expenditure on social security benefits, provided either as direct payments to the employees or as contributions to funds set up for the purpose, as well as the cost of various benefits, services and facilities (such as housing, vocational training and welfare provisions) which are primarily intended to benefit workers. The level and structure of labour costs and the way they change over time can play a central role in wage negotiations and in implementing and assessing employment, wages and other social policies. Information on labour cost per unit of labour input (that is, per time unit) is particularly useful in the analysis of certain industrial problems, as well as in the field of international economic cooperation, international trade and competitiveness.

Limitations to comparability between the indicators

Making comparisons of wage rates, earnings or labour costs over time and between countries is probably one of the most difficult tasks for the users of the information presented in this publication. (The same remark applies to comparisons of labour productivity and unit labour cost presented in KILM 18.) Users should, in particular, be aware of the following issues:

- Within each of the indicators, the information may be affected by differences in sources; that is, there may not be a close correspondence between the concepts and definitions used, the scope and coverage, the methods used for compilation, and the ways in which the information is presented. KILM 15 is based on unadjusted national estimates that reflect these differences. KILM 16 is based on national respondents' answers to an ILO questionnaire concerning occupational wage rates, earnings and hours of work. In KILM 17, a number of adjustments have been made by the United States Bureau of Labour Statistics to ensure a high level of comparability between countries; however, some disparities may still exist. Users should take account of the notes to the tables for each indicator.

- Care should be taken when comparing trends in KILM 15 and 16 and those in KILM 17 for the same countries. In addition to the general remark made above, it should be noted that wages and total compensation costs are not substitutes for each other. The difference between the two may be affected by factors such as the rapid growth (or the freeze) of nominal wages and the development of non-wage benefits, changes over time in the nature of social security schemes and benefits, the relative contributions of employers, employees and the State to such schemes, tax systems and rates, and so on.

- Finally, it should be noted that the index series presented in KILM 15 and 16 show the trends in real wages based on information expressed in national currency, while KILM 17 shows the levels and trends of hourly compensation costs and their structure in US dollars. In the first indicator, account has been taken of the influence of cost-of-living growth rates in each country, while in KILM 17, nominal national data have been converted into US dollars and are thus affected by variations, over time and between countries, in the US dollar exchange rates.

As long as users are alert to these issues, the wage and labour cost indicators presented here can provide valuable insights for socio-economic analyses.

KILM 15. Manufacturing wage indices

Introduction

KILM 15 presents trends in average real wages in manufacturing. The selection of this indicator was prompted by several considerations. First, information on average wages represents one of the most important branches of labour market information. Wages are a substantial form of income, accruing to a high proportion of the economically active population, namely persons in paid employment (employees). Information on wage levels is essential to evaluate the living standards and conditions of work and life of this group of workers in both developed and developing economies. There is a particular need for information on average wages in planning economic and social development, establishing income and fiscal policies, regulating minimum wages and collective bargaining, and fixing social security contributions and benefits. In addition, international standards were long ago developed, adopted and implemented for the concepts, scope and methods of collection, compilation and classification of wages statistics. This should, in principle, facilitate international comparisons.

The second consideration relates to the choice of economic activity, namely manufacturing. Obviously, information on wages is equally relevant and important for other economic activities or sectors, and for the country as a whole, and the proportion of employees in manufacturing compared with total paid employment or total employment is not uniform across countries and regions or over time. Nevertheless, wage statistics for manufacturing employees are more widely available than statistics for other industries and sectors. Traditionally, wage statistics (and the relevant standards) are first developed for the industrial sector; developing economies that initiate a programme of employment and wage statistics generally start implementing it in the manufacturing industry (often complementing it with statistics on employment and wages in mining and quarrying, and construction). Even nowadays, some developed economies limit their regular programme of wage statistics to the industrial sector – particularly when the information is derived from establishment surveys or censuses. At all times, statistics on manufacturing and its characteristics, including wages, have been considered as indicative of the level of a country's industrial development, a sign of its state of health, and a determinant in international trade relations. It follows that this industry plays a significant role in international comparisons.

The indicators presented here are based on statistics of average wages in manufacturing, which generally cover the formal or "modern" sector of an economy. They do not shed light on self-employment income or informal sector activities.[1]

The third consideration in the selection of the manufacturing wage indicator relates to its nature, that is, the choice of real wage indices. Series of wage statistics are generally available in nominal terms, whether in the form of absolute figures in local currency or in the form of index numbers. There are, however, two major factors that hamper comparisons of these series over time and across countries:

- In a given country, nominal wages serve as one of the indicators of employees' standard of living, but they do not shed light on changes in the amount of goods and services that can be purchased with wages, in other words, the purchasing power of employees. This purchasing power is influenced by, among other factors, increases (or decreases) in prices of

1. For additional information on self-employment or the informal economy, see KILM 3 (status in employment) and KILM 7 (employment in the informal sector).

goods and services that employees acquire, use or pay for – in other words, by the inflation rate. The purchasing power of wages may therefore differ greatly over time and between different regions within a country as well as between various countries with differing inflation rates.

- At the international level, comparisons of nominal wages are hampered by variations in exchange rates between countries and the relative value of currencies. Money wages converted to a common currency using official exchange rates are not reliable indicators of the purchasing power of wages in different countries. In order to alleviate these constraints and to allow for comparisons of trends, the wage data are combined with consumer price data in the form of two series of indices, yielding an index of real wages. Although the real wage index does not give an indication of the relative levels of real wages, it provides, for each country, a useful estimate of the trend or percentage change over time in the level of wages, while at the international level it is unaffected by fluctuations in exchange rate and currency adjustments.

Table 15 shows series based on the ILO Database of Labour Statistics (LABORSTA), complemented with wage data from national sources and other databases including the Industrial Statistics Database of the United Nations Industrial Development Organization (UNIDO).[2] Altogether, 118 economies are covered. Information is available by sex for about one-third of these. Wherever possible, index numbers are shown on the basis of 2000 = 100, in conformity with international recommendations for a standard reference year.

2. The ILO Database of Labour Statistics (LABORSTA) is available at the ILO website: http://laborsta.ilo.org. The UNIDO Database of Industrial Statistics can be found at website: http://www.unido.org/.

Use of the indicator

Index Index numbers of wages measure trends or changes in the level of wages, and are useful for a number of purposes:

(1) Real wages in an economic activity are a major indicator of employees' purchasing power and a proxy for their level of income, independent of the actual work performed in that activity.[3] Real wage trends are, therefore, useful indicators both within countries and across them. Significant differences in the purchasing power of wages, over time and between countries, reflect the modern world economy, and comparisons of the movement of real wages can provide a measure of the material progress (or regression) of the working population.

(2) When used together with other economic variables such as employment, production, and income and consumption, real wage indices are valuable indicators in the analysis of seasonal variations, business cycles, and so on, as well as in economic planning and forecasting.

(3) In collective bargaining and wage indexation, a fundamental concern of employees and trade unions is to protect the purchasing power of wages, particularly in periods of high inflation, and this is often done by linking wages to consumer price indices and compensating for differences in living costs over time and between places.

(4) At the international level, comparisons between countries of the movement of real

3. Real wages can also be viewed as remuneration for a given contribution in time, skills, and so on, to determine differences in wages received for the same or similar work. This approach requires the identification of similar jobs, occupations, or skill groups, within industries or between countries, and the availability of detailed data on occupational wages, prices of goods and services consumed by specific groups of workers, and so on. This analysis goes beyond the scope of the present indicator.

wages over time can be relatively objective, since the indices are free from the influence of currencies and exchange rates. When used in conjunction with nominal or real wages in absolute figures, information on trends may be used to establish wage, price and tariff policies, and are valuable for economic analysis and forecasting. At a time of increasing international economic activity, exchanges and migrations, governments, social partners and international organizations are interested in obtaining – and providing to interested parties – data on the relative purchasing power of wages in various countries. Finally, in evaluating its social policy and the well-being of its population, every country is interested in comparing the levels and trends of its real wages with those of others, with a view to assessing employment and wage policies or planning future strategies. While in developed economies the health of the labour market is mainly assessed by unemployment indicators, real wage trends are often considered better as a means of diagnosis for developing economies.

It should, however, be noted that, while the levels and trends of real wages of employees are an indication of the evolution of their purchasing power, they are only an approximation to changes in the standard of living of the population, as the two concepts are not identical.

- Real wages are a monetary concept, in other words, they are based on a wage measure expressed in monetary terms and on a series of prices of goods and services commonly purchased by employees. The standard of living concept is broader and includes not only goods and services consumed but also factors such as education, use of leisure time, climate or access to electricity or a car, some of which cannot be purchased or are intangible.

- The level of consumption by employees' families is determined by the total income from all sources (including income from self-employment, property and investment income, transfers, and so on), of which wages form only a part. The consumption patterns of employees and of the population as a whole are determined by various factors (such as socio-economic structures and cultural influences) and not merely by wages.

- The consumer price index (CPI), used to calculate real wages, measures the average change over time of the cost of a fixed basket of goods and services of constant quality and quantity. It can provide only an approximation to a true cost-of-living measure that takes into consideration changes in prices, tastes, the environment and consumers' reaction to price changes.

- Statistics of real wages are generally based on gross earnings (before deduction of income tax, social insurance contributions, and so on), while the amounts of goods and services consumed by individuals and their families are determined by spendable income, in other words, total income from all sources minus deductions for taxes and contributions.

In fact, the monetary concept that most closely approximates the standard of living is that of real income, which relates the total income of individuals or families to the cost of goods and services they purchase.

A common misuse of information on trends in real wages is that of measuring changes in labour costs in real terms. Wages represent only part of total labour costs and the movements over time of average wages are not necessarily identical to those of total labour costs. (See KILM 17 (hourly compensation costs) and KILM 18 (unit labour costs) for a discussion of labour cost information.)

Finally, it should be kept in mind that trends in average real wages for manufacturing as a whole may not be representative of trends in specific industry groups.

Definitions and sources

Statistics of real wages are not primary statistics. They result from the combination of

two types of primary statistics – wages and prices. The computation of real wage trends, therefore, requires some preliminary explanation of what is meant by real wages, and the method followed to compute them.

"Real wages" have been defined in the ILO resolution adopted by the Eighth International Conference of Labour Statisticians (ICLS) in 1954, as "the goods and services which can be purchased with wages or are provided as wages".4 This definition establishes a useful basis for the computation of real wages and their comparison from one period of time to another, or between one country and another. The information required for the computation of real wages includes: (a) a wage measure expressed in monetary terms; (b) a series of prices of goods and services commonly purchased by employees; and (c) information on the consumption pattern of employees. Thus, in a given country, to provide an indication of changes in the purchasing power of wages resulting from changes in prices of consumer goods and services, the wage information – item (a), above – is combined with a consumer price index which, in principle, reflects items (b) and (c).

Different types of wage data correspond to different concepts of wages. The ILO resolution concerning an integrated system of wages statistics, adopted by the 12th ICLS (1973), contains – among other things – the definitions of "wage rates" and "earnings".5 It also endorses the concept and definition of "labour costs" adopted by the 11th ICLS (1966).6 Another wage measure, "compensation of employees", is used in connection with the national accounts.7 Guidelines were also adopted by the 16th ICLS (1998) for measuring the full income related to paid and self-employment.8 All these measures are designed to cover different aspects of wages and employment-related income. While wage rates are similar to price quotations for labour and measure the basic remuneration per time unit or unit of output, compensation of employees and labour cost correspond to a concept of cost to the employer and include components that do not actually represent an income to employees (see KILM 17). The wage measure that best corresponds to the concept of income to employees is that of earnings, as defined by the 12th ICLS (see box 15a). The 1954 resolution concerning the international comparison of real wages already indicated that "[a]s a point of departure for the purpose of computing ratios of real wages, wages should be average earnings ...".

The price element is composed of two sets of data – a series of prices of goods and services commonly purchased by the reference population, and data on the consumption pattern of that population, that is, the quantities consumed which serve as an indication of the relative importance of the different goods and services at a given point in time. These two sets of data are present in a consumer price index (CPI), the definition of which is contained in the ILO resolution concerning consumer price indices (box 15b).[9]

4. Resolution concerning the international comparison of real wages, adopted by the Eighth International Conference of Labour Statisticians, Geneva, 1954.

5. Resolution concerning an integrated system of wages statistics, adopted by the 12th International Conference of Labour Statisticians, Geneva, 1973; website: http://www.ilo.org/public/english/bureau/stat/download/res/wages.pdf.

6. Resolution concerning statistics of labour cost, adopted by the 11th International Conference of Labour Statisticians, Geneva, 1966; website: http://www.ilo.org/public/english/bureau/stat/download/res/labcos.pdf (see box 17b in KILM 17).

7. For information regarding the ICLS, see the chapter on the KILM Conceptual Framework.

8. Resolution concerning the measurement of employment-related income, adopted by the 16th International Conference of Labour Statisticians, Geneva, 1998; website: http://www.ilo.org/public/english/bureau/stat/download/res/empinc.pdf.

9. Resolution II concerning consumer price indices, adopted by the 17th International Conference of Labour Statisticians, Geneva, November-December 2003; website: http://www.ilo.org/public/english/bureau/stat/download/res/cpi2.pdf. Resolution II replaces the first

Ideally, for the purposes of real wage computation, the two sets of data (wages and prices) should cover the same reference population (in the present case, the same employee group or category) and have similar geographic and industrial coverage and reference period.

Real manufacturing wage indices presented in KILM 15 were calculated by the ILO, based on a statistical series of annual averages of nominal wages and CPI contained in several data repositories. While the target data for this indicator are earnings statistics, other concepts – wage rates and compensation of employees, for example – are sometimes used where earnings data are not available.

In these series, average wages (wage rates, earnings or compensation of employees) are usually obtained by dividing the total amount of wages by either the number of persons covered by the survey (for example, wage earners or all employees), thus providing average annual or monthly wages, or by the total number of hours of work (hours actually worked or hours paid for) during the reference period, thus yielding estimates of hourly, daily or weekly earnings. The weights correspond to the population within the geographic and industrial scope of the survey or inquiry in each country and are, in principle, already taken into account in the computation of these nominal wage data.

The CPI series show measures of change over time in the general level of prices paid by consumers for goods and services. They combine information about consumption patterns at a given point in time and price changes. Whenever possible, the general CPI series were used (the all-items index). Exceptions are noted in the notes to table 15. Where the original CPI series were not uniformly based on an index of 2000 = 100, they have been recalculated by dividing the index for each data set shown by the index for the year 2000 and multiplying the quotient by 100. Where data are not available for 2000, indices are presented with the year closest to 2000 as the base. This operation does not involve any change in the weighting systems used by the various countries.

The computation of real wage indices involves two steps:

(a) A nominal wage index (NR_i) is first calculated for year *i* by expressing the value for year *i* as a percentage of the value for the base year (2000), by means of the following formula:

$$NR_i = (W_i / W_0) * 100$$

where W_0 is the nominal wage for the base year (2000) and W_i the nominal wage for year *i*.

(b) The real wage index (Ri) is then computed by dividing, for each year i, the nominal wage index (NRi) by the corresponding CPI (Pi):

$$Ri = (NRi / Pi) * 100$$

All data are unadjusted for seasonal variations, and index numbers are shown with 2000 = 100, in conformity with international recommendations for a standard reference year.

There can be a number of difficulties in constructing the real wage index, particularly when there are many revaluations of the exchange rate in a country and when there are doubts about the methods used by a country to collect prices. Another problem is in standardizing the reference period (e.g. hourly, daily, weekly, monthly) and the data sources (e.g. establishment survey, household survey and insurance records). A last difficulty with this indicator is the missing values. Many countries have not been reporting the data, especially for men and women separately. That is why any comparison between the evolution of the manufacturing wages for men and women in the world should be made carefully.

The table comprises information on wages derived from a variety of sources, depending on

resolution on CPI that was adopted by the ICLS in 1987.

Box 15a. Resolution concerning an integrated system of wages statistics, adopted by the 12th International Conference of Labour Statisticians, October 1973 [relevant paragraphs]

8. The concept of earnings, as applied in wages statistics, relates to remuneration in cash and in kind paid to employees, as a rule at regular intervals, for time worked or work done, together with remuneration for time not worked, such as for annual vacation, other paid leave or holidays. Earnings exclude employers' contributions in respect of their employees paid to social security and pension schemes and also the benefits received by employees under these schemes. Earnings also exclude severance and termination pay.

9. Statistics of earnings should relate to employees' gross remuneration, i.e. the total before any deductions are made by the employer in respect of taxes, contributions of employees to social security and pension schemes, life insurance premiums, union dues and other obligations of employees.

10. (i) Earnings should include: direct wages and salaries, remuneration for time not worked (excluding severance and termination pay), bonuses and gratuities and housing and family allowances paid by the employer directly to his employees.

(a) Direct wages and salaries for time worked, or work done, cover: (i) straight-time pay of time-rated workers; (ii) incentive pay of time-rated workers; (iii) earnings of piece-workers (excluding overtime premiums); (iv) premium pay for overtime, shift, night and holiday work; (v) commissions paid to sales and other personnel. Included are: premiums for seniority and special skills, geographical zone differentials, responsibility premiums, dirt, danger and discomfort allowances, payments under guaranteed wage systems, cost-of-living allowances and other regular allowances.

(b) Remuneration for time not worked comprises direct payments to employees in respect of public holidays, annual vacations and other time off with pay granted by the employer.

(c) Bonuses and gratuities cover seasonal and end-of-year bonuses, additional payments in respect of vacation period (supplementary to normal pay) and profit-sharing bonuses.

(ii) Statistics of earnings should distinguish cash earnings from payments in kind.

each country's objectives and capacity to conduct statistical surveys or use administrative and other sources. Each type of source has its own characteristics and provides certain types of data. The preferred sources for the real indices are censuses and surveys of establishments and industries. Many countries conduct establishment surveys of employment, earnings and hours of work on a regular basis for the purpose of gathering information on cash payments for normal hours, overtime pay, paid leave (public holidays, annual vacation, sick leave), and cost-of-living allowances.[10] The information often includes end-of-year bonuses and other special premiums. Occasionally, payments in kind are also included. Most establishment surveys are limited to registered establishments in the "modern" or formal sector and exclude small enterprises.[11] They do not include casual workers, contributing family members or the informal sector. Many are limited to the private sector.[12]

10. Detailed information regarding national practices in the collection and compilation of wage statistics is provided in ILO: *Sources and Methods: Labour Statistics*, Vol. 2: *Employment, Wages, Hours of Work and Labour Cost (Establishment Surveys)* and Vol. 9: *Transition Countries*. The *Sources and Methods* are available online at the country level on website: http://laborsta.ilo.org.

11. R.J. Pember and M. Dupré: "Statistical aspects of minimum wage determination", in *Bulletin of Labour Statistics* (Geneva, ILO), 1997-2003.

12. ILO: *Measurement of Income from Employment*, Report II, 16th International Conference of Labour Statisticians, Geneva, October 1998; website: http://www.ilo.org/public/english/bureau/stat/techmeet/16thicls/report2.htm.

Box 15b. Resolution concerning consumer price indices, adopted by the 17th International Conference of Labour Statisticians, November-December 2003 [relevant paragraphs]

The nature and meaning of a consumer price index

1. The CPI is a current social and economic indicator that is constructed to measure change over time in the general level of prices of consumer goods and services that households acquire, use or pay for consumption.

2. The index aims to measure the change in consumer prices over time. This may be done by measuring the cost of purchasing a fixed basket of consumer goods and services of constant quality and similar characteristics, with the products in the basket being selected to be representative of households' expenditure during a year or other specified period. Such an index is called a fixed-basket price index.

3. The index may also aim to measure the effects of price changes on the cost of achieving a constant standard of living (i.e. level of utility or welfare). This concept is called a cost-of-living index (COLI). A fixed basket price index, or another appropriate design, may be employed as an approximation to a COLI.

The uses of a consumer price index

4. The CPI is used for a wide variety of purposes, the two most common ones being: (i) to adjust wages as well as social security and other benefits to compensate, partly or completely, for changes in the cost of living or in consumer prices; and (ii) to provide an average measure of price inflation for the household sector as a whole, for use as a macro-economic indicator. CPI subindices are also used to deflate components of household final consumption expenditure in the national accounts and the value of retail sales to obtain estimates of changes in their volume.

Scope of the index

8. The scope of the index depends on the main use for which it is intended, and should be defined in terms of the type of households, geographic areas, and the categories of consumer goods and services acquired, used or paid for by the reference population.

Basket and weights

19. Decisions on the composition of the basket and the weights follow directly from the scope, as well as from the choice between the "acquisition", "use" or "payment" approaches.

Collection

54. Prices to be collected are actual transaction prices, including indirect taxes and nonconditional discounts, that would be paid, agreed or costed (accepted) by the reference population. Where prices are not displayed or have to be negotiated, where quantity units are poorly defined or where actual purchase prices may deviate from listed or fixed prices, it may be necessary for the price collectors to purchase products in order to determine the transaction prices. A budget may be provided for any such purchases. When this is not possible, consideration may be given to interviewing customers about the prices actually paid. Tips for services, where compulsory, should be treated as part of the price paid.

Industrial censuses and surveys are designed to collect aggregate information on inputs (compensation of employees and other inputs such as materials, energy, and so on), outputs and value added – wage statistics being a by-product of the industrial statistics (as part of compensation of employees). Such censuses and surveys do not usually provide detail about the components of earnings, the nature of employment or the characteristics of workers.

In a few cases, earnings statistics are obtained from household or labour force sample surveys.[13] These surveys, (the primary objective of which is to provide information on levels and trends of employment, unemployment and sometimes underemployment) very often give information on earnings and hours of work for the main and secondary activities of individual members. Household surveys usually encompass a greater range of jobs and workers than establishment surveys, including seasonal, temporary and casual workers, as well as multiple-job holders.

For a number of countries, wage statistics are obtained from secondary sources, the most common of which are social security or insurance records, which generally have a wide coverage of formal, or registered, employees. Wage statistics compiled from social security statistics are generally influenced by the concepts and definitions required by legislation, and certain groups of employees (such as low-income workers or short-hour employees) may be excluded. Other secondary sources occasionally used are records of collective agreements, which provide information on wage rates.

National accounts provide annual information on compensation of employees, including a component for wages and salaries, which may be used together with information about employment and hours to calculate wages and salaries per employee or per hour.[14] In a few cases, data are official estimates provided by the countries concerned.

Consumer price indices are usually computed according to the following methodology: prices of selected goods and services are regularly collected from a sample of localities and outlets; special techniques for price collection are used in respect of such items as electricity, medical care, education, transport, communication, and so on. The source of the weights (the types and quantities of goods and services consumed) used for the index is generally a household expenditure survey (or a household budget survey or household income or expenditure survey). As far as national resources permit, such surveys are representative in terms of household size, income level, regional location, socio-economic group and any other factors which have a bearing on household expenditure patterns. In a few cases, the weights are obtained from the national accounts or other sources, such as surveys of production, exports and imports, and retail trade. Administrative sources may also be used to obtain an estimated consumption pattern. In a large majority of countries, CPI series cover the whole territory and the entire population. In a few cases, the CPI is limited to urban areas (for example, in some Latin American countries).[15]

Limitations to comparability

This indicator was originally based on a variety of statistical series of wages and consumer price indices, and few adjustments have been made to the original series.

13. OECD: The 1993 OECD-EUROSTAT Compendium of Sources of Earning Statistics, Labour Market and Social Policy Occasional Papers, No. 13 (Paris, 1994), p. 2.

14. D. Grubb: Statistics of Annual Earnings in OECD Countries, Labour Market Occasional Paper, No. 4 (OECD, Paris, 1990), Annex B, p. 28.

15. Detailed information regarding national practices in the compilation of consumer price indices is provided in ILO: Sources and Methods: Labour Statistics, Vol. 1: Consumer Price Indices. The Sources and Methods are available online at the country level on website: http://laborsta.ilo.org.

Consequently, users should be aware of some important comparability issues arising from alternative national statistics, as well as different international sources. This is not meant to discourage potential users from employing wage indices. Rather, these issues are discussed in the hope of encouraging more informed use of the indicator.

A comparison of real wages over time (that is, time trends) within a given country raises fewer difficulties than comparisons of trends across countries, since, at least in the short run, the structure of employment, wages, and consumer preferences and expenditures are relatively stable. In addition, except in unusual circumstances, there is a tendency for the major economic variables to move together over the business cycle. This basic homogeneity makes it possible to use the existing wages and CPI series as estimates of the movement over time of real wages in each country. It should be remembered that the indices give no indication of the relative levels of real wages at any date, but merely show the relative percentage change.

When making comparisons of real wage trends between countries, one should keep in mind that this indicator is based on country-specific series of wages and CPIs, which themselves reflect the concepts, sources and methods used by each country, as well as different consumption patterns.

As mentioned earlier regarding information on wages, country-specific practices differ with respect to the sources and methods used for data collection and compilation, which in turn have an influence on the results. The main sources of information (establishment censuses and surveys, and household surveys) usually differ in terms of objectives, scope, collection and measurement methods, survey methodology, and so on. The scope of the information may vary in terms of geographical coverage (in some cases, information is not available for the whole country but only for urban areas or certain selected cities), workers' coverage (for example, permanent or full-time workers only in some establishment surveys, all employees including seasonal or casual employees and multiple-job holders in household surveys, or even all persons employed[16]) and establishment and enterprise coverage (for instance, establishment censuses and surveys often include only medium-sized and large enterprises, or are limited to the private or public sector). While household surveys encompass a greater range of jobs and workers than establishment surveys, they tend to experience problems associated with self-reporting of earnings and industrial classification.

Even when using the same concept of wages (for example, earnings), there are likely to be differences with regard to the inclusion or exclusion of various components (such as periodic bonuses and allowances, or payments in kind). Earnings statistics show fluctuations that reflect the influence of both changes in wage rates and supplementary payments. In addition, daily, weekly and monthly earnings are dependent on variations in hours of work (in particular, hours of paid overtime or short-time working), while hourly earnings are influenced by the concept of hours of work – hours actually worked, hours paid for, or normal hours of work – used in the computation. Information pertaining to wage rates does not reflect the influence of changes in wage supplements or of variations in hours of work.

Fluctuations in average earnings (and compensation of employees) are also influenced by changes in the employment structure – the relative importance of men and women, unskilled and skilled labour, full- and part-time workers, and so on – between various reference periods, whereas information on wage rates, which is usually compiled using the employment structure of a given year as weights, does not reflect such changes.

16. It should be noted here that wage series covering all persons employed should not be directly compared with series covering employees only, since a bias may be introduced with the inclusion of working proprietors and contributing family members.

In a few cases information is not available for manufacturing, so that broader categories of the industrial sector had to be used (for example, including mining and quarrying). Another inconsistency occurs where manufacturing excludes handicrafts.

Another significant factor influencing international comparisons of real wages and employees' purchasing power is the fact that average wage statistics correspond to a concept of wages accruing to employees, which may not actually be received by them. This may be particularly important in some Central & South-Eastern European (non-EU) & CIS countries, such as the Republic of Moldova or the Russian Federation, where cash-strapped industries have had to use non-monetary forms of remuneration, substituting benefits in kind (not always covered by the wage statistics) for money wages, or have simply been in arrears in paying their workers' wages.

Measures of real wages will obviously be affected by the choice of the price deflator, that is, the CPI. This involves two components – changes in prices and patterns of consumption. Differences exist across countries in the calculation of the CPI.17 The scope of CPIs can vary not only in terms of the types of household or population groups covered, but also in terms of the geographical coverage. Country-specific practices also differ regarding the treatment of certain issues relating to the computation of CPIs, including the treatment of seasonal items, new products and quality changes, durable goods and owner-occupied housing, the inclusion or exclusion of financial services and indirect taxes, and so on. In particular groups of countries, such as some transition countries, the computation of the CPI before 1990 was generally limited to state-controlled prices, while after that period free market prices and import prices were generally also included.

17 Resolution concerning consumer price indices, op. cit.

There are also differences in the methods used for collecting prices and compiling the indices. The price data for the different items are normally weighted in order to take into account the relative importance of each item with respect to total consumption expenditure. In most countries, the indices are computed in a derived form such as weighted arithmetic averages of prices for a selected number of representative items between the period under consideration and the base period, using a form of Laspeyres' formula or Laspeyres' chain index.

If workers and their families in all countries consumed the same goods and services in the same proportions and if this pattern of consumption did not change over time, determination of the purchasing power of wages would be relatively simple. But the main problem is that workers in different countries consume different goods and services, and consume them in proportions that do not follow a standard pattern. Differences in country-specific socio-economic structures lead to differences in the market basket of goods and services that people expect or hope to attain. Largely dissimilar consumption patterns are often a feature of countries with markedly different socio-economic structures. Such differences are encountered in comparisons between highly developed economies and developing economies, and between population groups with different social organization, different consumption habits and different philosophies of life.

Other factors may influence the comparability of real wage trends – and therefore purchasing power – across countries. One is the reference period of both wages and CPIs. Annual averages of hourly or monthly wages may be averages of information based on weekly, monthly or quarterly reference periods. In some cases, they are based on the whole calendar or financial year. On the other hand, the CPI data are annual averages of an index that is compiled, in most cases, monthly, or in a few cases quarterly or biannually. In computing the real wage indices, this may raise a problem for certain countries (for example, in Latin America or Asia)

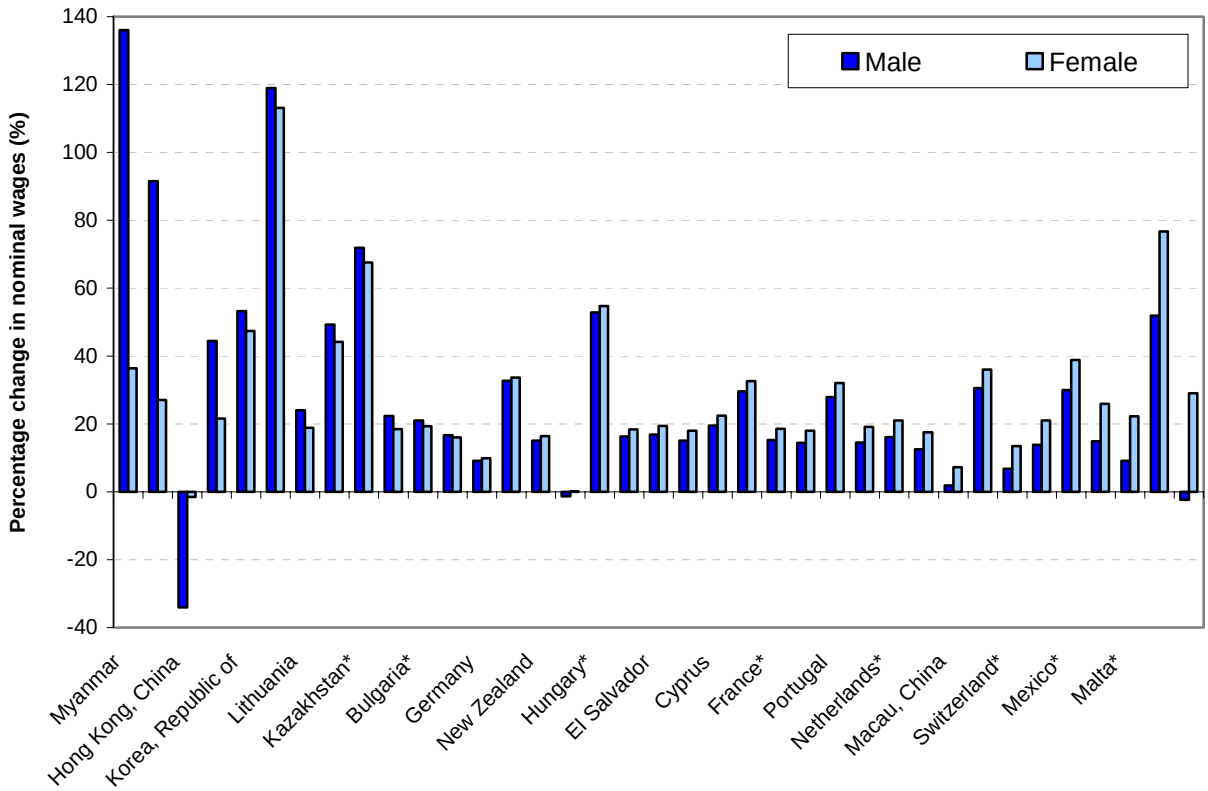
experiencing rapid inflation, when nominal wages and CPI information do not refer to exactly the same period.

In spite of these comparability issues, which are inherent in the underlying statistical series, every effort has been made to choose information that is both compatible for the countries (in particular, where limitations applied to the original series in terms of workers' coverage or geographical scope) and comparable across countries, so that this indicator could provide a useful estimate of the relative percentage changes in the level of wages in the countries concerned.

Trends

Nominal manufacturing wages increased in recent years for men and women for all but three of the economies for which data are available. Manufacturing nominal wages for males in Bahrain and Japan and both male and female wages in Hong Kong, China, declined from 2000 to 2005 although only the drop in male wages in Hong Kong, China, was significant. See figure 15a which shows the growth from 2000 to 2005 in male and female manufacturing wages sorted according to the difference between female and male wage growth.

Figure 15a. Percentage change in nominal wages, selected countries, 2000-2005



Note: Data with an asterisk represent the percentage change from 2000-2004.

Figure 15b. Real manufacturing wage indices, selected developed and European countries, 1995 to latest year available

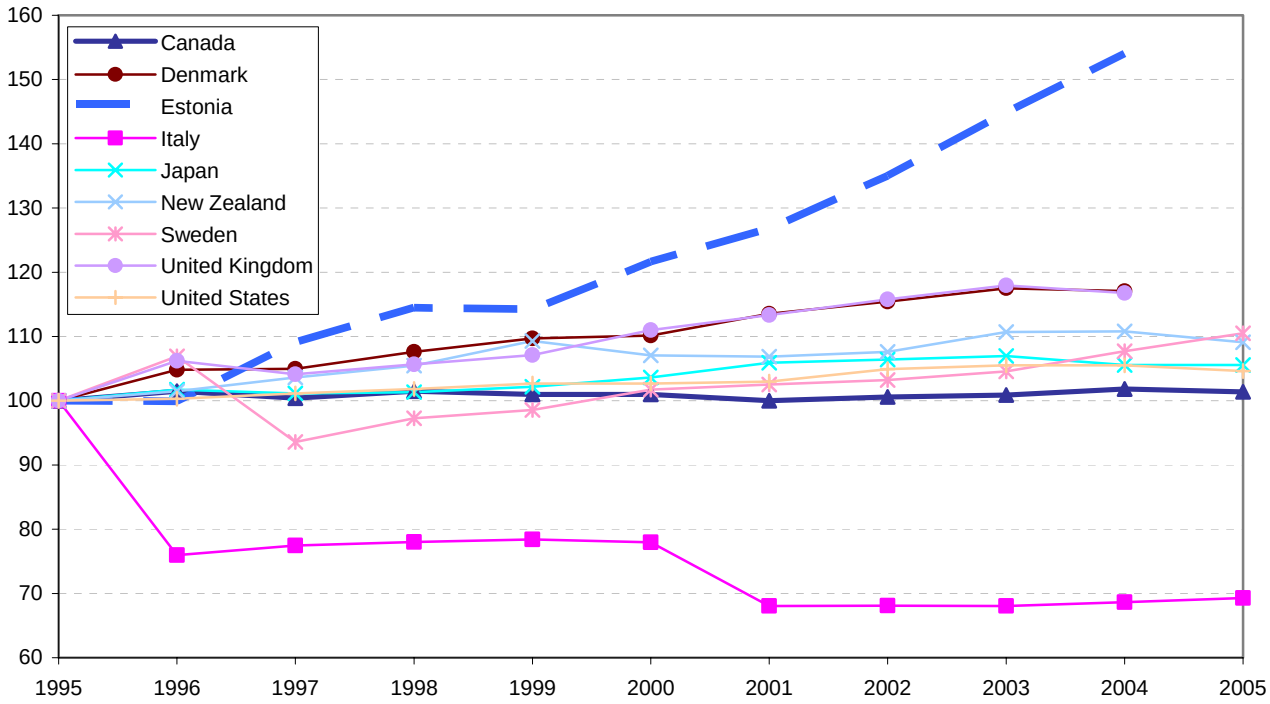


Figure 15c. Real manufacturing wage indices, selected Asian economies, 1995 to latest available years

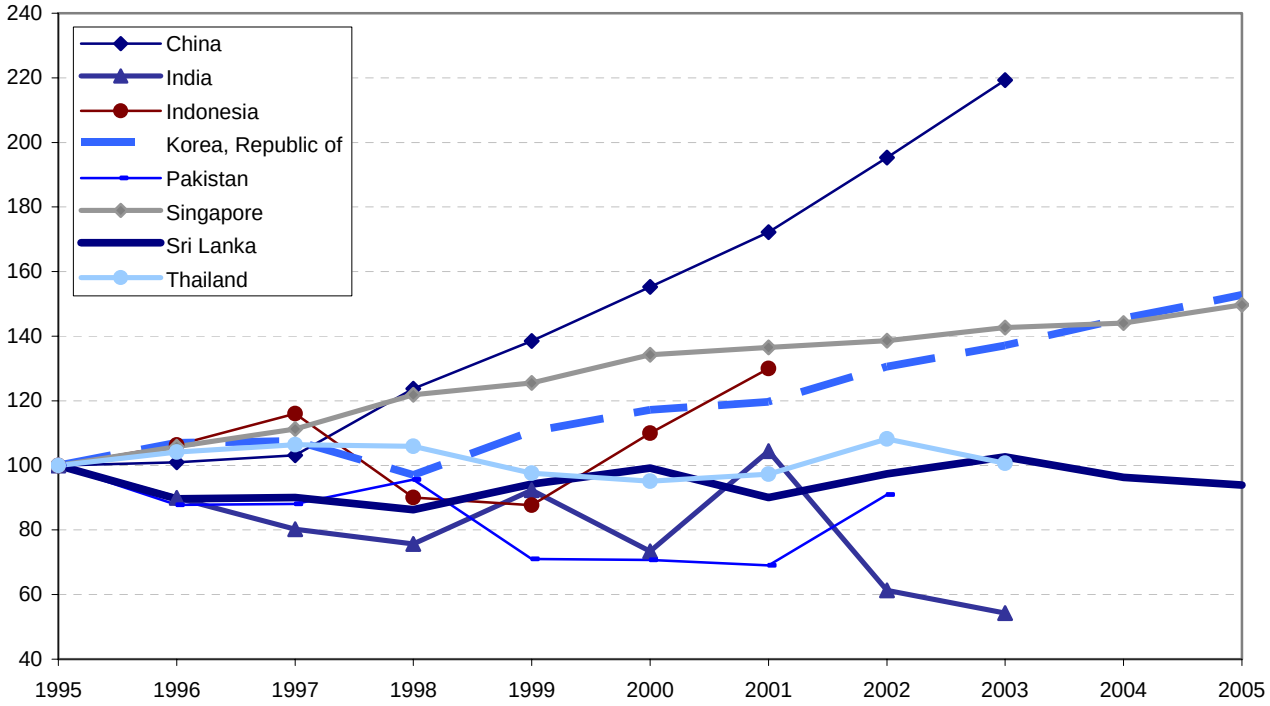
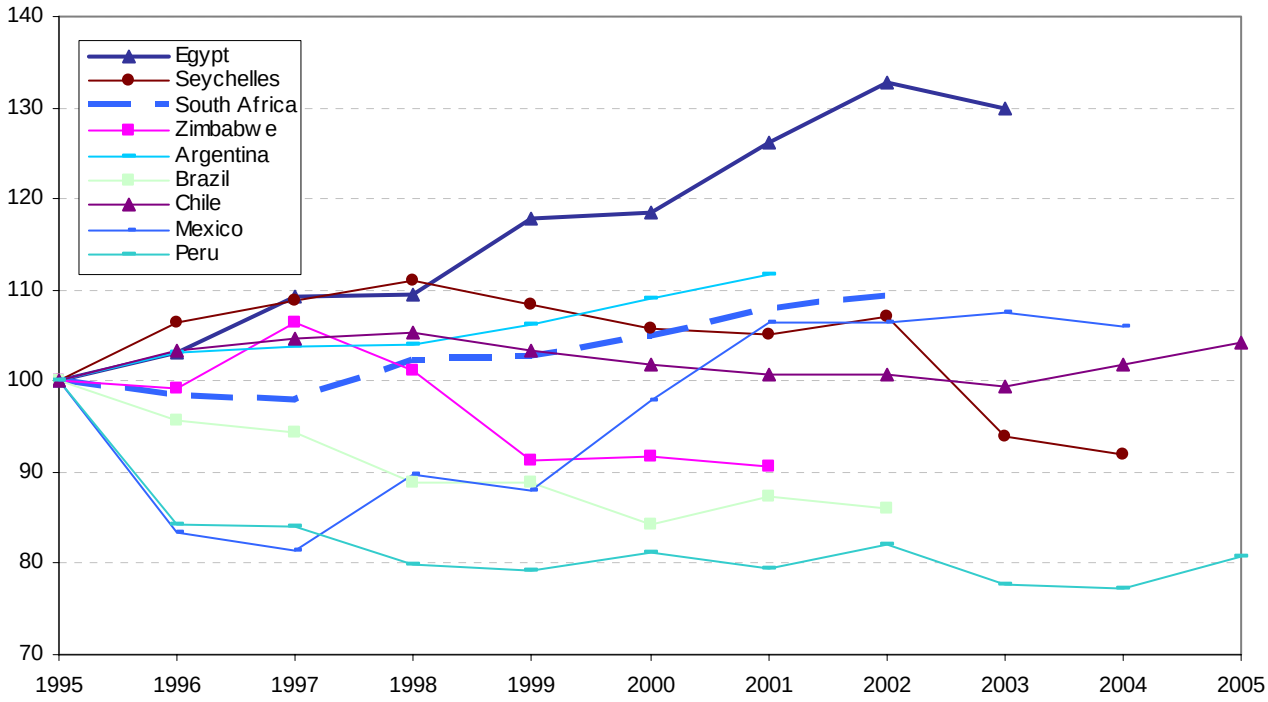


Figure 15d. Real manufacturing wage indices, selected sub-Saharan African and Latin American countries, 1995 to latest available years



For example, countries on the left-hand side of the figure had higher growth in male wages than female wages, while countries on the right-hand side had higher growth in female wages.

In the majority of the economies with available data, female nominal wages grew at a more rapid pace than male wages. The faster gains in female wages aid in reducing gender gaps in pay which are still prevalent in many countries. In the developed economies that make up the European Union, part of the gains in female wages can be attributed to the specific policies enacted as part of the Lisbon strategy to eliminate gender biases in the workplace. It is noticeable that in many of the new EU Member States as well as Central & Eastern European & CIS countries (former transition economies) female nominal wage growth lagged behind their male counterparts. This is mainly because these countries had very low gender gaps in terms of pay and other labour market characteristics prior to the transition period. Therefore, the unequal growth was likely to be the result of labour market adjustments to a market economy.

Faster gains in female wages for some of the Asian economies may be the result of the predominance of women in the exported-oriented manufacturing industries that are so important for growth in this region. Alternatively, in the Middle Eastern countries cultural factors attributing to gender inequities in education, skill development and female participation in the labour market play a strong role in contributing to the lag in female wages.

Real manufacturing wage growth over the past decade shows a more subdued picture than recent trends in nominal wages described above. For most developed economies, real manufacturing wages followed a gradual upward trend since 1995 (see figure 15b). The growth in real wages was particularly notable in Estonia, which showed an increase of over 50 per cent between 1995 and 2004. Only in Italy did real wages decline over the past decade, remaining at 70 per cent of its 1995 level.

Unlike real wage levels in the developed economies, however, those in the Asian economies have been more disparate (see figure 15c). Three economies in particular had real wages showing significant growth since 1995. In China, real wages for workers more than doubled (between 1995 and 2003), while in the Republic of Korea and Singapore the growth in real wages was around 50 per cent (between 1995 and 2005). In other Asian economies real wages were considerably less stellar.

Figure 15d shows real wages in selected countries of sub-Saharan Africa and Latin America which have, in general, shown considerably less wage growth than in the Asian countries and the developed economies. Of the nine countries, only Egypt experienced a steady upward increase in real wages, reaching 30 per cent above its 1995 level by 2003. Conversely, Brazil and Peru showed gradual downward trends in real wages. The remaining six countries had relatively small changes – less than 10 per cent – over the past decade, albeit in a positive direction except for the Seychelles and Zimbabwe.

KILM 16. Occupational wage and earning indices

Introduction

While KILM 15 shows trends in average wages at the industry level (i.e. in manufacturing), KILM 16 looks at trends in, and differentials between, occupational wages (i.e. wage rates or earnings) in specific industry groups. It is generally established that wages for individual occupations provide much more interesting and insightful material for analysis than do broad averages covering many, or all, occupations within an industry. The use of occupational wages narrows the scope of coverage and provides a focus on particular types of workers and often on a particular industry or economic activity. It is also often desirable to look at wages of men and women in the same occupation separately, since there may be different factors affecting each.

Two tables of wage indices are presented for this indicator. Table 16a shows nominal and real wage rates, and table 16b nominal and real earnings. Earnings include some elements of remuneration such as overtime and some bonuses that are not counted as part of wage rates (for the relevant definitions of the two concepts, see below under "Definitions and sources"). Which is the most appropriate definition of wages to use for analysis depends on the precise set of questions being asked, but in practice there is often little choice but to accept whatever information is available from national sources. Henceforth, the term "wages" is used in this section to describe both wage rates and earnings.

Nineteen occupations are included in tables 16a and 16b. They have been selected, together with their corresponding nominal wages, from the ILO October Inquiry to give a representative picture of the development of real wage rates and earnings for different types of occupations with varying skill levels in different sectors of activity. The October Inquiry is a worldwide examination of wage rates, earnings and hours of work for a possible set of 159 occupations differentiated in 49 industry groups (together with information on retail prices of 93 food items) and conducted with reference to the month of October of each year.[1]

The second and third editions of the KILM database contained only six occupations – welder, labourer, accountant, computer programmer in insurance, first-level education teacher and professional nurse. Although useful, these six occupations did not provide enough depth in coverage for an adequate analysis of wage trends across occupation types, sectors, or between sexes. For this reason, the KILM 4th Edition was expanded to cover 19 occupations that represent a range of skill levels and representation across sectors. The expanded coverage is retained in this edition to allow for both cross-section and time-series analysis on wage differentials within countries for: high-skilled/high-paid occupations compared to low-skilled/low-paid occupations; occupations mainly in trade-affected sectors compared to occupations in sectors not influenced by trade; and male-dominated occupations compared to female-dominated occupations and gender-mixed occupations.

1. The October Inquiry is discussed further below, but at this stage it should be noted that not all countries differentiate occupational coverage by sector of industry. Thus there are some exceptions to the public/private sector distinctions; the United States, for instance, does not differentiate between sectors of employment or industries when reporting average weekly earnings for computer programmers; the figures used for "programmers in insurance" in the United States therefore include those which could have been reported separately as "programmers in public administration". Additional information can be obtained at http://laborsta.ilo.org/.

The selected occupations are (1) labourer in construction, (2) welder in metal manufacturing, (3) professional nurse, (4) first-level education teacher, (5) computer programmer in the insurance sector, (6) accountant in the banking sector, (7) field crop farm worker, (8) garment cutter in apparel manufacturing, (9) sewing-machine operator in apparel manufacturing, (10) stenographer-typist in printing and publishing, (11) office clerk in printing and publishing, (12) power distribution and transmission engineer in electric and power, (13) salesperson in grocery wholesale trade, (14) salesperson in grocery retail trade, (15) hotel receptionist, (16) room attendant or chambermaid, (17) motor bus driver, (18) urban motor truck driver and (19) refuse collector. These occupations are described in detail in box 16a. The majority of occupations are found in the private sector – construction labourers, welders, computer programmers in insurance, office clerk, room attendant, accountants in banking, etc. Only first-level education teachers and professional nurses could be said to be definitively employed in the public sector. Information for this indicator is provided for wages within specific occupational groups for 86 countries and/or earnings for 63 countries although not all genders or occupations are available for each country covered.

Use of the indicator

Most indicators on wages cover all employees grouped by industry, industry group or sector, or, in a few cases, all employees for the whole country. KILM 15, for example, provides indices of real wages in manufacturing obtained by dividing an index of average wages in manufacturing by an appropriate consumer price index (CPI). Basically, both KILM 15 and KILM 16 are constructed on the same model: indices of nominal wages are constructed on the basis of information on average wages in absolute terms as provided by countries, and real wage indices are obtained by dividing the index of average nominal wages by an appropriate consumer price index (CPI).[2] However, KILM 15 provides indices at the industry level (manufacturing), while KILM 16 shows wage indices at the level of specific occupations within an industry.

The first set of indices – KILM 15 – is therefore a useful indicator of what is happening to the average wages of large groups of employees in different occupations in the same industry or sector of economic activity. However, one limitation of averages by economic activity/industry is that the information includes a wide range of employees and occupations, without providing any insight into the nature of these occupations (in terms of skills, for instance) or their relative importance in terms of employment. The larger the group of employees covered by changes in an average wage figure, the greater the chance that there will be differences in the changes in the averages of distinct subgroups that are not reflected in the overall total. Changes in average wages within an industry or sector may be due to changes in the occupational composition of employment or in the proportions of men and women employed. Looking at wages for separate occupations avoids some of the limitations associated with using broad averages where changes in the composition and structure of the workforce might be influencing the recorded changes in average wages.

As part of the ILO's efforts to promote decent work, the ILO seeks to define a core set of decent work indicators. One suggested indicator is the average wages in selected occupations.[3] The October Inquiry data allow such comparisons in theory, although, to date, the only possible comparison of wages is for the 19 selected occupations in this chapter.

There are three main issues of interest when analysing occupational wage indicators:

2. For more details about the construction of wage indices, see the manuscript for KILM 15.

3. See R. Anker, et al.: "Measuring decent work with statistical indicators", in *International Labour* Review (ILO, Geneva), 2003, Vol. 142, No. 2.

1. The comparison of trends – how indices of nominal (expressed as simple monetary amounts) and real wages have changed over a period of time for different occupations – can show whether wage rates and earnings for different types of workers have changed at the same rate or whether some have grown faster than others. Different rates of change of nominal wages may reflect different supply and demand conditions in the labour market for different types of workers and may indicate that there are some serious shifts in occupational supply and demand requiring, for instance, more training facilities for certain occupations. Changes in wage rates or earnings over time can be related to other indicators, such as the number employed in the occupation, to see whether changes in wages are affected by changes in the volume of employment. Indices of real wages show which occupational groups have become better off over time, and which have undergone a reduction in their standard of living as measured by their average remuneration.

2. Occupational wage structure and differentials often reflect differences in levels of skill, education and training, qualifications, and amount and type of effort involved in different types of work, as well as, perhaps, different relative supply and demand conditions for the occupations. The issue of occupational wage structure and differentials is of interest at both the national and international levels. At the national level, comparisons of trends in wage rates and earnings between two or more occupations may be used to assess the wage drift, i.e. the extent to which earnings over a period of time have changed more (or less) than basic wage rates. They may also be used to analyse the skill differential, i.e. the differences between the wages of more skilled and less skilled workers. At the international level, wage differentials for the same occupations in different countries can be compared to see whether similar skill groups receive similar premium (positive) differentials or discounted (negative) differentials, or whether there are differences by type of economy. Changes in wage structures over time may also illustrate changing economic conditions in the different occupational labour markets or may reflect government action if public-sector employees are involved.

3. Where information on occupational wages is provided for men and women separately it is possible to compare wages by sex in the same occupation. This is a useful indicator of the gender wage gap, i.e. the differential between men's and women's wages. It should be noted, however, that gender wage differential is not synonymous with gender wage discrimination and that there can be non-discriminatory reasons for differences in men's and women's wages in an occupation in a given country. Occupations can be taken as a proxy for similar or comparable levels of education, training and skills, if not work experience or seniority in the job, and can therefore cover some of the factors accounting for wage differentials.

Additional factors affecting the wage gap may include: factors related to human capital and productivity – such as a worker's age, experience in the enterprise (seniority), experience in the labour market, hours of work and health; factors related to the labour market – such as size of establishment or firm, sector (whether public or private) and sub-sector of industry, region (high or low wage areas), city size, as well as wage payment systems (e.g. regular incremental progression based on years of service versus merit increments) and unionization/collective bargaining. Occupational segregation by sex – that is, the different proportions of men and women employed in different occupations and jobs – also plays an important direct role in men's and women's wage differentials.4 In the absence of details on all these factors,

4. R. Anker: *Gender and Jobs* (Geneva, ILO, 1998).

information on occupational wages can show the difference between men's and women's wages much better than averages by economic activity.

Definitions and sources

While box 16a gives descriptions of the 19 occupations selected for KILM 16 according to the ILO October Inquiry, the following table provides further insight into the educational levels and professional qualifications which are expected of the person performing the tasks and duties of each occupation, as described in the International Standard Classification of Occupations (ISCO-88):

Occupation	ISCO skill level	Major ISCO group and description
• Accountant • Power distribution and transmission engineer • Computer programmer • First-level education teacher • Professional nurse	4th (University degree required)	*Professionals (2)*: This major group includes occupations whose main tasks require a high level of professional knowledge and experience in the fields of physical and life sciences, or social sciences and humanities. The main tasks consist of increasing the existing stock of knowledge, applying scientific and artistic concepts and theories to the solution of problems, and teaching about the foregoing in a systematic manner.
• Stenographer-typist • Office clerk • Hotel receptionist	2nd (Secondary education and/or formal training such as on-the-job training and experience, or apprenticeships)	*Clerks (4)*: This major group includes occupations whose main tasks require the knowledge and experience necessary to organize, store, compute and retrieve information. The main tasks consist of performing secretarial duties, operating word processors and other office machines, recording and computing numerical data, and performing a number of customer-oriented clerical duties, mostly in connection with mail services, money-handling operations and appointments.
• Salesperson (Wholesale); • Salesperson (Retail)	2nd (Secondary education and/or formal training such as on-the-job training and experience, or apprenticeships)	*Service workers and shop and market sales workers (5)*: This major group includes occupations whose main tasks require the knowledge and experience necessary to provide personal and protective services, and to sell goods in shops or at markets. The main tasks consist of providing services related to travel, housekeeping, catering, personal care, protection of individuals and property, and to maintaining law and order, or selling goods in shops or at markets.
• Field crop farm worker	2nd (Secondary education and/or formal training such as on-the-job training and experience, or apprenticeships)	*Skilled agricultural and fishery workers (6)*: This major group includes occupations whose tasks require the knowledge and experience to produce farm, forestry and fishery products. The main tasks consist or growing crops, breeding or hunting animals, catching or cultivating fish, conserving and exploiting forests and – especially in the case of market-oriented agricultural and fishery workers – selling products to purchasers, marketing organizations or at markets.

Occupation	ISCO skill level	Major ISCO group and description
• Garment cutter • Sewing-machine operator • Welder	2nd (Secondary education and/or formal training such as on-the-job training and experience, or apprenticeships)	*Craft and related trades workers (7)*: This major group includes occupations whose tasks require the knowledge and experience of skilled trades or handicrafts which, among other things, involves an understanding of materials and tools to be used, as well as of all stages of the production process, including the characteristics and the intended use of the final product. The main tasks consist of extracting raw materials, constructing buildings and other structures and making various products as well as handicraft goods.
• Motor bus driver • Urban motor truck driver	2nd (Secondary education and/or formal training such as on-the-job training and experience, or apprenticeships)	*Plant and machine operators and assemblers (8)*: This major group includes occupations whose main tasks require the knowledge and experience necessary to operate and monitor large scale, and often highly automated, industrial machinery and equipment. The main tasks consist of operating and monitoring mining, processing and production machinery and equipment, as well as driving vehicles and driving and operating mobile plant, or assembling products from component parts.
• Labourer	1st (Primary school education)	*Elementary occupations (9)*: This major group covers occupations that require the knowledge and experience necessary to perform mostly simple and routine tasks, involving the use of hand-held tools and in some cases considerable physical effort, and, with few exceptions, only limited personal initiative or judgement. The main tasks consist of selling goods in streets, doorkeeping and property watching, as well as cleaning, washing, pressing, and working as labourers in the fields of mining, agriculture and fishing, construction and manufacturing.

1 Given the international character of the occupational system of classification, only four broad skill levels were defined in ISCO-88. Each grouping was given operational definitions in terms of the educational categories and levels that appear in the International Standard Classification of Education (ISCED). The use of ISCED categories to define the four skill levels does not imply that the skills necessary to perform the tasks and duties of a given job can be acquired only through formal education. The skills may be, and often are, acquired through informal training and experience. See the manuscript for KILM 14 for more information concerning ISCED.

The ILO October Inquiry

The ILO October Inquiry, published annually as *Statistics on Occupational Wages and Hours of Work and on Food Prices*, a special supplement to the *Bulletin of Labour Statistics* provides a unique collection of wage and earnings data for 159 specified occupations.[5] The occupations are defined at the four-digit level in the ISCO-88[6] and allocated to industries and subdivisions of industries as defined in the United Nations International Standard Industrial Classification of all Economic Activities (Revision 2, 1968 or Revision 3, 1988).[7] Occupations may be repeated across industries. For example, "labourers" can be found in industry groups "spinning, weaving and finishing textiles", "printing, publishing and allied industries", "manufacture of industrial chemicals", and five others. Computer programmers appear only twice, once in "insurance" and again in "public administration". Respondents are asked to supply data relating to adult full-time employees who are fully qualified, that is, employees who have acquired the training and experience normally necessary for the occupation in question, and who are working on a full-time basis. It is possible, though, that some countries include part-time workers as well. The types of information sought (which are defined in the relevant resolutions of the International Conferences of Labour Statisticians (ICLS) with the exception of hours paid for, for which there is no internationally accepted definition[8]) are as follows:

- *Average wage or salary rates.* Wage or salary rates are the rates paid for normal time of work, comprising basic wages and salaries, cost-of-living allowances and other guaranteed and regularly paid allowances. The following should be excluded: overtime payments, bonuses and gratuities, family allowances, other social security payments made by the employer directly to employees and *ex gratia* payments in kind, supplementary to normal wage and salary rates.

- *Average earnings.* Earnings are the remuneration in cash and in kind paid to employees, as a rule at regular intervals, for time worked or work done, together with remuneration for time not worked, such as for annual vacation, other paid leave or holidays, and including those elements of earnings that are usually received regularly, before any deductions are made by the employer in respect of taxes, contributions of employees to social security and pension schemes, life insurance premiums, union dues and any other obligations of employees. The following should be excluded: contributions paid by employers on behalf of employees to social security and pension schemes, and also the benefits received by employees under these schemes; severance and termination pay; irregular bonuses such as year-end and other one-time bonuses that accrue over a period longer than a pay period.

- *Normal hours of work per week.* Normal hours of work are the hours of work fixed by, or in pursuance of, laws or regulations, collective agreements or

5. For further information, see ILO: *Statistics on Occupational Wages and Hours of Work and on Food Prices: October Inquiry Results, 2002-2003* (Geneva, 2004); the latest results are also available in CD-ROM format (Geneva, 2005) and on the website: http://laborsta.ilo.org.

6. ILO: *International Standard Classification of Occupations: ISCO-88* (Geneva, 1990); website: http://www.ilo.org/public/english/bureau/stat/isco/index.htm; see also the Resolution concerning future work on the International Standard Classification of Occupations, adopted by the 17th International Conference of Labour Statisticians, Geneva, December 2003, in which the ILO committed to make available an updated version of ISCO-88 by the end of 2007; website: http://www.ilo.org/public/english/bureau/stat/download/res/futisco.pdf.

7. ISIC-Rev. 3 is available on the website: http://unstats.un.org/unsd/cr/registry/default.asp, while both Revisions are shown in appendix C of this publication.

8. See website: http://www.ilo.org/public/english/bureau/stat/res/index.htm.

arbitral awards, or the number of hours in excess of which any time worked is remunerated at overtime rates.

- *Average hours of work per week.* (a) "Hours actually worked" are the hours actually worked during normal periods of work, time worked in addition to normal periods of work and generally paid at higher rates (overtime), time spent at the place of work in other activities that are part of the tasks and duties of the job concerned (for example, cleaning working tools and preparing time sheets), and time spent corresponding to short rest periods at the workplace, including tea or coffee breaks. The following should be excluded: hours paid for but not worked (see below), such as paid leave, paid meal breaks and time spent travelling between the home and the workplace. (For more details on hours worked, see the manuscript for KILM 6.) (b) "Hours paid for" are generally the hours actually worked (see above) plus the hours paid for but not worked, such as paid annual leave, paid public holidays, paid sick leave, paid meal breaks and time spent travelling between the home and the workplace.

In completing the October Inquiry questionnaire, countries use a number of different types of sources. In general, the minimum wage rates and normal hours of work shown are taken from the relevant laws or regulations, collective agreements or arbitral awards. Sample surveys of establishments, such as occupational or industry wage surveys, are usually the source of information on average earnings and hours of work. In some cases, administrative records of bodies such as social security agencies are used.

Recent research by Freeman and Oostendorp provided details on the rich, but oftentimes problematic, data in the October Inquiry database, including the following:[9]

- Countries respond to the ILO's request in inconsistent ways because countries report data from a variety of national sources. Consequently, recorded wages in different occupations are sometimes not even comparable in the same country for the same year.
- Countries do not report consistently from year to year. During the 1983-99 period, only five out of 158 countries reported wages every year. Moreover, some countries do not provide national data but report data from particular regions instead.
- The October Inquiry does not cover all components of earnings (annual bonuses for example are missing).
- Even with the ILO's detailed specification of skills, the work performed in a given occupation can vary from one country to another.
- There is a difference in the quality of the data coming from different sources (government agencies, collective agreements). This is why the ILO deems 15 per cent of the data as being of "poor quality".
- Because of the different ways to report wages (minimum wage rates, average, prevailing wage by hours, days, weeks, months, earnings for men, women, both), only 5.7 per cent of the observations are directly comparable.

Given these limitations, the data used in KILM 16 were extracted from the October Inquiry based on four strict selection criteria: reliability, comparability, geographical coverage and availability of data by sex. All efforts were made to ensure comparability between occupations within countries as well as cross-countries. But, in spite of the strict criteria for selecting occupations to include in the KILM 16, the data extracted still required "cleaning" in order to address some of the problems inherent in the October Inquiry. Thus, the following steps were taken to better harmonize the nominal occupational wages:

9. R. Freeman and R.H. Oostendorp: "The occupational wages around the world data file", in *International Labour Review* (Geneva, ILO, 2001). The OWW database as well as other studies on occupational wages is available from the NBER website at http://www.nber.org/oww/.

- Countries reporting minimum or maximum wage rates for occupations are excluded from the database.
- Double reporting of wages and earnings were eliminated.
- Erratic movements were investigated for incorrect reporting, adverse price fluctuations and currency changes.
- Reporting periods were standardized (e.g. weekly, monthly, yearly).
- Estimates based on large cities are minimized.
- Notes are added to the database when data are not comparable.

Statistics of real wages are not primary statistics. They result from the combination of two types of primary statistics – wages and prices. Users should refer to KILM 15, "Definitions and sources" for in-depth definitions of both. Ideally, for the purposes of real wage computation, the two sets of data (wages and prices) should cover the same reference population (in the present case, the same employee group or category) and have similar geographic and industrial coverage, and reference period.

The computation of real wage indices involves two steps:

a) A nominal wage index (NRi) is first created for year i by expressing the value for year i as a percentage of the value for the base year (1990), by means of the following formula:

$$NR_i = (W_i / W_0) * 100$$

where W_0 is the nominal wage for the base year (1990) and W_i the nominal wage for year *i*.

b) The real wage index (R_i) is then computed by dividing, for each year (i), the nominal wage index (NR_i) by the corresponding CPI (P_i), by means of the following formula:

$$R_i = (NR_i / P_i) * 100$$

Again, for greater detail, users should refer to the corresponding section of KILM 15.

Additionally, comparability across countries was maximized by converting nominal wages into US dollars using constant value consumption purchasing power parities (PPPs). The constant value consumption PPPs take into consideration both the exchange rate and price changes. They are based on the price of a basket of consumption goods specific to each country, which allows comparisons of the standard of living in each country relative to the United States in a specific base year (in this case 1996). Thus, PPP consumption wages are a better indicator of the standard of living than wages based simply on exchange rate conversions to US dollars (which better reflect competitiveness).[10] Additionally, because they take into consideration the relative prices in the country, real wages based on PPPs give higher wage rates than those based on exchange rates. The real wages in PPP dollars were calculated as follows:

(1) $PPW_i = NW_i / CPPP_i$, *where*

(2) $CPPP_i = (PC_i / 100) * XRAT_i$

where PPW_i are wages in PPP for the base year 1996, NW_i are nominal wages, $CPPP_i$ are consumption PPPs, PC_i are price level of consumption, and $XRAT_i$ are exchange rates for year *i*. The price level of consumption and exchange rate data needed to calculate the consumption PPPs are taken from the Penn World Tables 6.1.[11] Consumption PPPs are

10. For further information on the use of PPPs to convert wages, see N. Majid: "What is the effect of trade openness on wages?", Employment Strategy Paper , No. 18 (Geneva, ILO, 2004); website: http://www.ilo.org/public/english/employment/strat/download/esp18.pdf, and R.H. Oostendorp and M. Przybyla: "Comparing standards of living across occupations and countries using the ILO October Inquiry", ILO mimeo (Geneva, 2002).

11. The Penn World Tables are available at http://pwt.econ.upenn.edu/php_site/pwt_index.php. For further discussion of consumption PPPs see the Data Appendix for a Space-Time System of National Accounts: Penn World Table 6.1 (PWT 6.1) at the same link.

more appropriate for transforming wages than using the general PPPs because they omit expenditures for government and investment goods.

Limitations to comparability

The introduction to the published October Inquiry states: "Care should be taken when using and interpreting the results, particularly for making international comparisons. Despite efforts to promote the comparability and continuity of the data, there are some unavoidable differences between the concepts used, specifications of occupations and items, reference periods, types of sources and methods of data collection in the various countries. As much information as possible is provided in the tables in the form of footnotes, and this should be taken into consideration by users."[12] It is important to bear this advice in mind when using published information, as there can be differences in definition, coverage or measurement for different occupations in the same country in the same year, as well as changes from year to year.

When using the October Inquiry data, particular attention should be paid to the types of wage rates presented. Some are the minima fixed by laws, regulations, collective agreements or arbitral awards; others are the average rates paid, or the prevailing rates, or rates predominantly paid. In a few cases ranges of minimum-to-maximum rates are shown. Similarly, the average hours of work may be hours actually worked or hours paid for; the figures for normal hours are usually the number of hours due to be worked by a full-time worker before overtime payments are made, but in a few cases they are the average number of normal hours actually worked by members of that occupation.

Another concern in the construction of real wage indices is the use of minimum wage rates by some countries. Minimum wages may be very close to the wages actually paid, but in some cases the actual minimum wage may be only a small percentage of the total actual weekly wages. For this reason, KILM limits the construction of the indicators to those countries providing average or prevailing wage rates and earnings. Minimum and minimum-to-maximum rates have not been used for the construction of the indices.

Generally speaking, most of the limitations to comparability pointed out in KILM 15 apply to the construction of nominal and real indices of wage rates and earnings as well, in terms of types of sources, concepts, and collection and measurement methods, including the choice of the price deflator (CPI). Other limitations are specific to the source of the information: as mentioned earlier, an occupation may appear more than once in the October Inquiry if it is listed for more than one subdivision of economic activity. Some countries provide details for an occupation by subdivision, while others do not distinguish different sectors of economic activity below the major division level. In the latter case, the wage figures do not necessarily refer only to members of the occupation in the specified subdivision of economic activity but to members of that occupation in a major division or broad sector of economic activity. Users are advised to review carefully the table notes associated with the indicators. There are numerous cases where a country does not adhere strictly to the definitions of the October Inquiry, and users should take careful note of "anomalies" before attempting cross-country comparisons.

Grouping members of an occupation by broad division of economic activity may limit the ability to make comparisons. Where main divisions of industry are used there must always be some uncertainty as to whether observed changes in wage levels for an occupation represent an increase in average wages for a similar group of workers or whether the change reflects a change in the composition of the broad group of workers, so as to include relatively more or fewer workers from higher- or lower-paying sub-sectors. Even with information based on the ILO

12 .ILO: *Statistics on Occupational Wages and Hours of Work and on Food Prices*, op. cit.

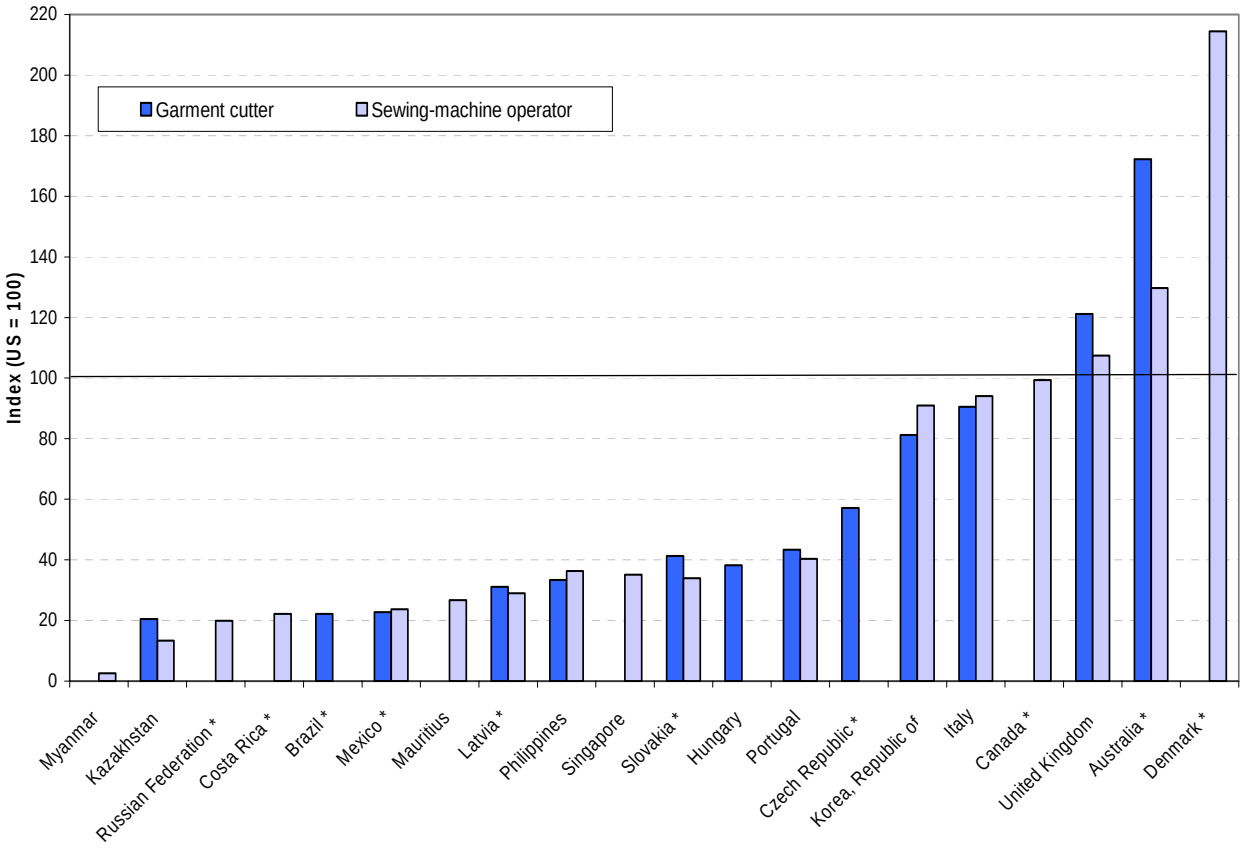
industry-specific definitions there may still be problems related to changes in the composition of the employees covered in an occupation. Different proportions of employees from higher- or lower-paying areas or establishments can affect the occupation average from one survey to the next without any change in the rate of pay.

A final limitation arises not from the nature of the information itself but from the infrequency of collection. Relatively few countries provide information on a consistent basis for a number of years. Spasmodic or occasional reporting, while providing some useful information for snap-shot one-year comparisons, prevents the construction of time-series which are often the most useful data for determining what is happening.

Trends

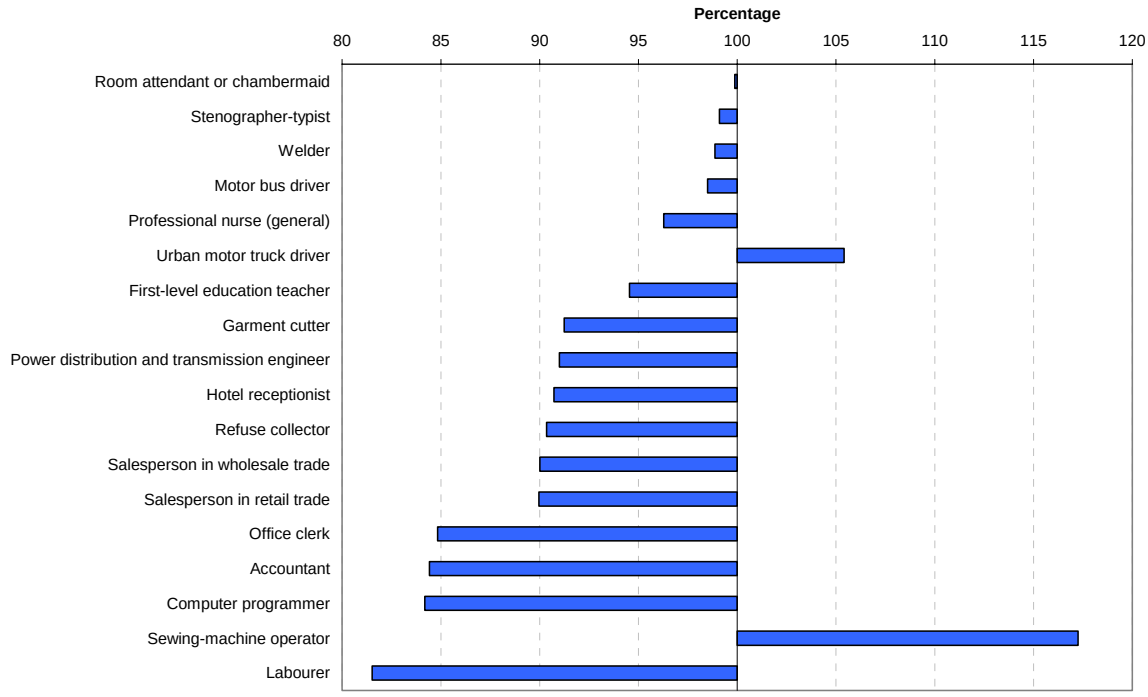
Two occupations that are particularly interesting to focus on from a developing economy perspective are garment cutters and sewing-machine operators. These are occupations which are often found in labour-intensive industries where developing economies have a particular comparative advantage. Figure 16a compares wages converted at PPP rates in the two occupations in the textile industry in 2004 relative to the United States. Wages based on exchange rates reflect the price of labour in an international market and provide an indication of cost competitiveness. However, to gain an

Figure 16a. Wages and earnings in textile occupations relative to the United States (2004 US$ PPP basis), 2004



Note: Countries with an asterisk represent earnings.

Figure 16b. Female occupational wages as a percentage of male wages, Finland, 2004



understanding of the standard of living of workers across countries, wages in PPP are a better measure because they take into consideration the relative prices and costs of living in the country. In developing economies, where the cost of living is often much less than in developed economies, PPP wages are often higher than wages based on exchange rates. Thus, although a garment worker in the Philippines may earn one-eighth of the wages of a US worker on an exchange rate basis, when one takes into consideration the relative cost of living, the share of the Philippine workers' wages compared to those of workers in the United States rises significantly to one-third. Figure 16a shows that wages and earnings for textile workers in Australia and Denmark were considerably higher relative to the United States and relatively comparable in the Czech Republic, Italy, the Republic of Korea and the United Kingdom. As expected, wages and earnings for workers in developing countries were only a fraction of those earned by US workers, usually ranging from one- to two-fifths

Figure 16b shows that female wages in Finland lagged behind those of males in all occupations in 2004 except for urban motor truck drivers and sewing-machine operators. The gender wage gap was almost negligible – less than 5 per cent – for room attendant chambermaids, stenographers-typists, welders, motorbus drivers and professional nurses. For the remaining occupations, wages were not as equitable among the genders, with women generally making 10 to 15 per cent less than their male counterparts. The gender gap was most substantial for labourers, where females earned less than 85 per cent of male earnings, and for sewing-machine operators, where the reverse was true.

Box 16a. ILO October Inquiry, descriptions of the occupations

These descriptions are provided with the October Inquiry questionnaire to help identify the scope of an occupation and the types of workers covered.

Occupation 2. Field crop farm worker – Agricultural production – Field crops

Performs, by hand or machine, a variety of tasks in the propagation, cultivation and harvesting of field crops, under the supervision of the farm supervisor:
ploughs, harrows and fertilizes soil; sows seeds and plants seedlings; weeds, thins and sprays crops; irrigates fields; harvests crops; threshes and winnows grain, bales and stacks straw; uses a variety of farming equipment, including animal-drawn and motorized equipment; assists in maintaining and repairing farm buildings, fences, machinery and other equipment; attends to other tasks assigned to him. Should be designated according to type of work done and type of crop.

Occupation 29. Garment cutter – Manufacture of wearing apparel (except footwear)

Cuts single or multiple layers of material (other than leather) into parts for making up into clothing, by hand or using machine-cutting tools or devices:
builds up layers of material as required, affixing marked-out pattern to top layer; switches on hand cutter or band knife; guides shears or hand cutter around each pattern piece, or along line marked on lay, or manipulates lay against blade of band knife to cut out garment parts; cuts notches in edges of parts to mark them for assembly; removes cut material.

Occupation 30. Sewing-machine operator – Manufacture of wearing apparel (except footwear)

Operates standard or specialized single- or multiple-needle sewing machine to sew fabric in making garments:
secures suitable needle in machine as necessary; places bobbins or spools of thread in required colours on machine; passes thread through machine guides, tensioners and eye of machine needle; adjusts machine toadapt tension and type, depth and size of stitch according to sewing work to be done; where appropriate, places together fabric parts to be joined; positions fabric to be sewn under or opposite needle and lowers

Box 16a (continued)

pressure foot on to material; starts machine and guides material under needle, regulating sewing speed as required; gathers, hems, reinforces or adds decorative trim to articles; removes fabric when sewing is completed and cuts thread where necessary; replaces empty bobbins and damaged needles.

Occupation 45. Stenographer-typist – Printing, publishing and allied industries

Takes direct dictation of correspondence, reports and other papers by hand or machine, and transcribes dictated materials into typewritten form:
records in shorthand, by hand or shorthand-writing machine, dictated letters, memoranda, reports or other matter; types matter from shorthand notes, written drafts, recordings on dictating machine or other sources and cuts stencils; uses manual, electric or electronic typewriter, or word-processor; may perform limited clerical duties.

Occupation 46. Office clerk – Printing, publishing and allied industries

Performs a variety of clerical tasks, such as those which follow, depending on nature and size of office in which employed:
examines incoming mail referred to him for attention and assembles information needed for preparation of reply; composes letters in reply to correspondence or telephone inquiries, or to obtain information, and initiates other routine correspondence; calculates and checks factors for costing, estimating, valuing or other purposes; collates sales records and gives instructions for preparation of invoices and other documents in connection with sales and deliveries; receives and interviews clients, employees, sales personnel or other callers, and arranges appointments and directs inquiries to appropriate persons or departments; keeps and balances accounts of financial transactions and prepares statements of accounts; computes time, output or other factors and calculates earnings or payments due; receives payments of accounts and issues receipts; receives, counts, and pays out cash; prepares loss or damage reports and insurance claims; prepares, issues, receives or checks forms and documents in connection with the

Box 16a (cont.)

administration of national, regional or local government legislation or other matters; determines material and production requirements; prepares operational scheduled orders or received orders for material and merchandise; files vouchers, receipts, letters and other documents; arranges for the transport of freight and prepares relevant documents; deals with complaints; compiles statistical information; records issues of stationery and equipment to staff and maintains records as required.

Occupation 67. Welder – Manufacture of metal products (except machinery and equipment)

Welds metal parts by means of oxy-acetylene, other gas flame or electric arc:
ascertains job requirements from drawings and other specifications; examines parts to be welded to determine best method to use; places parts (work pieces) in position; selects torch nozzle and attaches it to blow-pipe, or selects electrode and inserts it into portable holder; lights torch and adjusts flame by regulating flow of gases, or connects welding unit cable to work piece and switches on power supply; heats parts until they begin to melt and fuses them by applying molten metal from a welding rod, or holds electrode a short distance from work piece to form electric arc, adjusting voltage or amperage as necessary; runs flame and welding rod along joint, or guides electrode along line of weld to deposit metal from electrode and fuse parts together and regulates supply of electricity to control deposit of metal; allows metal to cool, cleans and smoothes welded parts, examines weld visually and rectifies any defects.

Occupation 76. Power distribution and transmission engineer – Electric light and power

Undertakes a variety of engineering activities such as research, design, feasibility studies, application studies, technical liaison and consultancy in the field of power transmission and distribution systems and equipment, and supervises the development, construction, maintenance and repair of those systems and equipment:
studies operating requirements for electric power distribution and transmission equipment and systems; advises employers, associates and clients on power distribution and transmission matters; consults with specialized electrical engineers, electronics, civil and mechanical engineers, physicists and industrial designers, as necessary; designs systems and equipment, prepares working drawings and specifications indicating materials to be used; surveys areas to determine installation of power lines and directs erection of distribution lines; estimates labour, material and other costs of manufacture, installation,

Box 16a (continued)

operation, maintenance and repair; supervises installation, maintenance and repair of electrical equipment and checks completed work to ensure compliance with specifications and safety standards; undertakes activities in the field of coordination of generation and distribution of power between power stations, substations and users.

Occupation 90. Labourer – Construction

Assists building and civil engineering craftsmen in the performance of their tasks on construction sites or projects. Performs one or more manual tasks requiring a minimum of training, little or no previous experience and mainly physical effort:
loads materials, equipment and tools on to, and unloads from, vehicles; transports materials and equipment to and from work areas using wheelbarrow, driving dumper or hoist, or secures load to be moved by crane driver; digs trenches, foundations and other excavations using pick and shovel or powered hand equipment; lays and levels hard core to form foundation for concrete; mixes concrete to specified consistency manually or operates or assists in operating mixing machines; assists with erection of ladders, scaffolding and working platforms; cleans equipment and tools; performs other manual tasks as directed

Occupation 93. Salesperson – Wholesale trade – Grocery

Sells goods in a wholesale establishment to retailers and large-scale consumers:
talks to customers on sales floor, ascertaining from them the type of goods desired; advises on range of goods available and shows samples or catalogue illustrations or products to prospective buyers, explains their merits, characteristics and quality and emphasizes their saleable features; arranges demonstration of goods, if necessary; where appropriate, weighs, measures out or selects goods from stock and quotes prices and credit and discount terms; takes orders, prepares sales slip or invoice and passes them to

Box 16a (cont.)

appropriate section for action; assists wholesale dealer in stock-taking and other matters connected with running of wholesale establishment.

Occupation 96. Salesperson – Retail trade – Grocery

Sells goods in a shop or similar retail trade establishment:
handles sales transactions; ascertains from customer the nature, quality and price range of product required; advises on range of goods available, assists customer in choice by demonstrating and describing characteristics of products available; where appropriate, weighs, measures out or selects goods from stock, packs and arranges delivery of purchases; replenishes or arranges goods on display stands, shelves or counters; calculates cost and prepares sales slip or invoice.

Occupation 97. Hotel receptionist – Restaurants and hotels

Receives and registers guests at hotels and similar establishments, allocates accommodation and performs a variety of services for them on arrival, departure and during their stay:
controls advance bookings, makes reservations and keeps records of rooms allocated; receives and registers guests on arrival, ascertains their requirements and assigns rooms; provides information on hotel facilities and services, tourist and other local services and amenities; transmits incoming mail and messages for guests; notifies hotel staff concerned of dates of arrival and departure of guests; keeps records, prepares statements for guests and collects payment; arranges for clearance of baggage and departure.

Occupation 100. Room attendant or chambermaid – Restaurants and hotels

Cleans and services guest rooms in hotels and other lodging establishments:
cleans floors, furniture, bathrooms and toilets of guest rooms; removes litter and waste from guest rooms; makes beds and changes linen; replenishes supplies of soap, toilet paper, towels, stationery and other guests' supplies; arranges for laundry and dry-cleaning services at the guests' request; answers guests' summons; undertakes the evening checks of guest rooms; may clean and service common guest areas.

Occupation 111. Motor bus driver – Passenger transport by road

Drives single- or double-deckered motor bus over fixed or predetermined route to transport local or long-distance passengers:
before commencing journey, ensures that vehicle is in good running order by checking fuel, oil, water, lights, brakes, etc., and that it is provided with tools and documents as required by law; drives vehicle over fixed or predetermined route with due regard to other traffic, traffic regulations, signals from conductor and time schedules; starts and stops bus at recognized stops or on request to allow passengers to board or alight; changes destination indicators as required; on one-man bus: collects fares, issues tickets, observes regulations concerning number of passengers carried and carriage of animals and parcels, completes way-bill, balances cash with way-bill at end of duty and hands cash and way-bill to cashier; assists passengers in an emergency; keeps records of defects noticed in bus.

Occupation 112. Urban motor truck driver – Freight transport by road

Drives a motor truck to transport materials, merchandise, equipment, etc. to and from specified destinations over short distances (excluding roundsmen):
before journey, ensures that vehicle is in good running order, and checks oil, fuel, water, lights, brakes, etc. and that vehicle is provided with the necessary tools and documents as required by law; attends to, or assists with, loading and unloading; checks that load is evenly distributed, properly secured and protected where necessary; drives truck between depot and loading and unloading points, with due regard to other traffic, traffic regulations and time schedules; maintains record of journey times, mileage and hours worked.

Occupation 129. Accountant – Banks

Plans and administers accounting services and examines, analyses, interprets and evaluates accounting records for the purpose of giving advice on accountancy problems or preparing statements and installing or advising on systems of recording costs or other financial and budgetary data:

Box 16a (cont.)

plans, installs and advises on budgetary, accounts controlling and other accounting systems; assists in formulation of budget policies and advises on financial problems, management, accountancy, administration and organization; keeps record of all taxes, fees, etc. to be paid by the bank in which engaged and ensures that they are paid in time and kept up to date; prepares or reviews tax returns and contests claims before tax officials; plans and directs work of book-keepers, cashiers and book-keeping clerks and supervises workers undertaking routine phases of audit and all other accounting activities; advises on, organizes and supervises the installation and implementation of manual, mechanized and computerized accounting, book-keeping and related systems; conducts financial investigations in matters such as suspected fraud, insolvency and bankruptcy; prepares and certifies financial statements for presentation to board of directors, executives, shareholders or statutory or other bodies; verifies balance sheets, prepares reports including those on profit forecasts and budgets; generally advises on other matters requiring accountancy knowledge.

Occupation 133. Computer programmer – Insurance

Prepares programmes to control automatic processing of data by computer:
studies programme intent, output requirements, nature and sources of raw input data, internal checks and other controls required, or, where available, uses specifications and instructions prepared by systems analyst; breaks down problems delineated by systems analyst into their simplest elements; prepares, fromthis breakdown, detailed logical flow charts and diagrams to establish the order in which data are to be processed, the points where decisions must be made between alternative courses of action, and the sequence of operations involved; converts flow charts and diagrams into computer programme (the list of instructions which control the operation of the computer) using programme language; converts the programme, or directs its conversion, into code form to derive machine-processable instructions suited to type of computer in use; conducts trial run with sample data to test validity and logic of programme; amends programme as necessary; compiles written instructions for computer-operating staff; corrects programme errors by such methods as altering programme steps and sequence; analyses, reviews and rewrites programmes to increase operating efficiency or adapt to new requirements.

Occupation 144. Refuse collector – Sanitary services

Collects refuse from business and private premises on designated route with municipality and dumps refuse from containers on to truck:
conveys rubbish and waste material in dustbins or other containers from premises to refuse vehicles

Box 16a (continued)

manually or using trolley; empties rubbish and waste material into vehicle manually or secures bin to mechanical tipping device and operates controls to tip contents into vehicle; returns container to premises.

Occupation 150. First-level education teacher – Education services

Teaches primary academic subjects and elementary principles of social behaviour to children in an establishment of primary education:
prepares annual programme of work in reading, writing, arithmetic, history, geography, nature study and other primary academic subjects, within limitations of specified or standard curriculum, for class in establishment of primary education; gives instruction in primary academic subjects, conducts discussions and supervises work in class; maintains discipline in class and instructs pupils in elementary principles of social behaviour; prepares, assigns and corrects exercises undertaken by pupils; sets tests and marks pupils' work; keeps children's work performance, attendance and other records, and reports on their academic progress and social adjustment to, and discusses with, head teacher and parents.

Occupation 154. Professional nurse (general) – Medical and dental services

Provides professional nursing services and advice in hospitals, clinics and other establishments which provide medical care and treatment:

gives professional nursing care and advice to ill, injured, infirm and obstetric patients and new-born infants in hospitals, clinics and other establishments which provide medical care and treatment; assists

Box 16a (cont.)

physicians and surgeons in examination and operation of patients and accompanies medical staff on rounds, noting changes in treatment prescribed and giving assistance as required; administers medicines and drugs, applies surgical dressings and gives other forms of treatment prescribed by physicians and surgeons; observes, evaluates and records symptoms, reactions and progress and general conditions of patients, and takes and records temperatures, pulse and respiration rates; prepares patients for operations; removes stitches, clips, etc.; gives first-aid treatment in emergencies and attends seriously ill patients; helps patients to become adjusted to place and methods of treatment; washes and bathes patients and attends to their physical needs in general and makes beds; helps to maintain healthy and hygienic environment for patients and takes preventive measures to check spread of communicable diseases in ward; as appropriate, prepares, serves and distributes food and feeds helpless patients; attends women in childbirth and cares for new-born infants; gives instructions and advice regarding care of patients during convalescence; assists charge nurse or sister in the organization of work, the control of more junior nursing staff and non-medical staff, and the tuition of student and pupil nurses; performs other professional nursing tasks, including supervision of rehabilitation exercises for patients or instruction in the use of orthopaedic aids.

Source: ILO, October Inquiry, Annex 1: Wages and hours of work, descriptions of the occupations (unpublished).

KILM 17. Hourly compensation costs

Introduction

The indicators within KILM 17 are concerned with the levels, trends and structures of employers' hourly compensation costs for the employment of production workers in manufacturing in selected economies. The data on cost levels are expressed in absolute figures in US dollars, and a comparison in percentage terms shows the position of countries relative to the United States (on the basis of US = 100). KILM 17 also shows the amount of non-wage labour costs as a percentage of total compensation costs (table 17a), as well as the annual percentage change in total compensation costs over the period 1980-2005 (table 17b). This international comparison encompasses 33 economies, 26 among the Developed Economies & European Union, five in the Asian & Pacific region, and Mexico and Brazil from the Latin American & the Caribbean region. Data are not available by sex.

Average hourly compensation cost is a measure intended to represent employers' expenditure on the benefits granted to their employees as compensation for an hour of labour. These benefits accrue to employees, either directly – in the form of total gross earnings – or indirectly – in terms of employers' contributions to compulsory, contractual and private social security schemes, pension plans, casualty or life insurance schemes and benefit plans in respect of their employees. This latter group of benefits is commonly known as "non-wage benefits" or "non-wage labour costs" when referring to employers' expenditure.

Compensation cost is closely related to labour cost, although it does not entirely correspond to the ILO definition of total labour cost contained in the 1966 ILO resolution concerning statistics of labour cost, adopted by the 11th International Conference of Labour Statisticians (ICLS),[1] in that it does not include all items of labour costs (see box 17a). In particular, the costs of recruitment, employee training, and plant facilities and services, such as cafeterias, medical clinics and welfare services, are not included. It is estimated that the labour costs not included in hourly compensation costs account for around 1 to 2 per cent of total labour costs for those countries for which information is presented. This measure is also closely related to the "compensation of employees" measure used in the system of national accounts,[2] which can be considered a proxy for total labour costs.

Use of the indicator

Information on hourly compensation costs, like total labour costs, is valuable for many purposes. The level and structure of the cost of employing labour and the way costs change over time can play a central role in every country, not only for wage negotiations but also for defining, implementing and assessing employment, wage and other social and fiscal policies that target the distribution and redistribution of income. At both the national and international levels, labour costs are a crucial factor in the abilities of enterprises and countries to compete. This is why governments and the social partners, as well as researchers

1. ILO: Resolution concerning statistics of labour cost, adopted by the 11th International Conference of Labour Statisticians, Geneva, 1966; website: http://www.ilo.org/public/english/bureau/stat/download/res/labcos.pdf (see box 17a).

2. United Nations: *System of National Accounts 1993*, prepared under the auspices of the Inter-Secretariat Working Group on National Accounts, Brussels/Luxembourg, New York, Paris, Washington, DC, 1993. Additional information relating to the SNA is available from the United Nations, Statistics Division, New York; website: http://unstats.un.org/unsd/sna1993/introduction.asp.

Box 17a. Resolution concerning statistics of labour cost, adopted by the 11th International Conference of Labour Statisticians, October 1966 [relevant paragraphs]

The 11th ICLS (Geneva, 1966) adopted a resolution concerning statistics on labour cost, recommending the following International Standard Classification of Labour Cost:

I. Direct wages and salaries
1. Straight-time pay of time-related workers
2. Incentive pay of time-rated workers
3. Earnings of piece-workers (excluding overtime premiums)
4. Premium pay for overtime, late shift and holiday work

II. Remuneration for time not worked
1. Annual vacation, other paid leave, including long-service leave
2. Public holidays and other recognized holidays
3. Other time off granted with pay (e.g. birth or death of family members, marriage of employees, functions of titular office, union activities)
4. Severance and termination pay where not regarded as social security expenditure

III. Bonuses and gratuities
1. Year-end and seasonal bonuses
2. Profit-sharing bonuses
3. Additional payments in respect of vacation, supplementary to normal vacation pay and other bonuses and gratuities

IV. Food, drink, fuel and other payments in kind

V. Cost of workers' housing borne by employers
1. Cost for establishment-owned dwellings
2. Cost for dwellings not establishment-owned (allowances, grants, etc.)
3. Other housing costs

VI. Employers' social security expenditure
1. Statutory social security contributions (for schemes covering old age, invalidity and survivors, sickness, maternity, employment injury, unemployment, and family allowances)
2. Collectively agreed, contractual and non-obligatory contributions to private social security schemes and insurances (for schemes covering old age, invalidity and survivors, sickness, maternity, employment injury, unemployment and family allowances)

3a. Direct payments to employees in respect of absence from work due to sickness, maternity or employment injury, to compensate for loss of earnings

3b. Other direct payments to employees regarded as social security benefits

4. Cost of medical care and health services
5. Severance and termination pay where regarded as social security expenditure

VII. Cost of vocational training, including fees and other payments for services of outside instructors, training institutions, teaching material, reimbursements of school fees to workers, etc.

VIII. Cost of welfare services
1. Cost of canteens and other food services
2. Cost of education, cultural, recreational and related facilities and services
3. Grants to credit unions and cost of related services for employees

IX. Labour cost not elsewhere classified, such as costs of transport of workers to and from work undertaken by employer (including reimbursement of fares, etc.), cost of work clothes, cost of recruitment and other labour costs

X. Taxes regarded as labour cost, such as taxes on employment or payrolls, included on a net basis, i.e. after deduction of allowances or rebates made by the State.

and national and international institutions, are interested in labour cost information that can be compared between countries and industries.[3] Also, the measurement and analysis of non-wage labour costs have become an important issue in debates on labour market flexibility, employment policies, analyses of cost disparities and comparisons of productivity levels among countries.

Not all countries compile statistics on total labour costs as defined in the relevant ILO resolution.[4] This is because special surveys are required, which tend to be costly and burdensome, particularly for employers. Although guidelines are given to ILO constituents with regard to the type of information to be compiled and published, ILO information on average labour costs in manufacturing – as seen in table 5b of the ILO *Yearbook of Labour Statistics* as well as table 15 of the KILM – is derived from various sources. It is expressed in different time units, and information on hours of work – required to calculate hourly labour costs – is not always available from the countries covered. International comparisons are thus hampered by a lack of harmonization in terms of definitions, methodology and measurement units. National definitions of earnings differ considerably, earnings do not include all items of labour compensation and the omitted items of compensation may represent a large proportion of total compensation.[5]

For these reasons, KILM 17 is based on another source of information, namely the estimates of hourly compensation costs for production workers in manufacturing as compiled by the United States Bureau of Labor Statistics (BLS). The BLS series adjusts published earnings data for items of compensation not included in earnings and although these estimates do not entirely correspond to the ILO definition of total labour costs, they are closely related to it and account for nearly all labour costs in any country presented within the indicator, resulting in the most reliable available series in terms of international comparability. The BLS also computes comparative measures for 22 component manufacturing industries.[6]

Still, when using the information to make comparisons of international competitiveness, it should be borne in mind that differences in hourly compensation costs are only one factor in competitiveness and therefore, when used alone, may be misleading. It is also important to remember that this indicator measures compensation of production workers specific to manufacturing and is significant only in so far as countries strive to compete in the manufacturing sector. However, when used in conjunction with other indicators, such as labour productivity and unit labour costs (KILM 18), relative changes can be helpful in assessing trends in competitiveness.

It should also be noted that non-wage compensation costs as a per cent of total compensation costs may vary as a result of the different structures that governments use to finance social insurance programmes that benefit workers. Programmes financed through employer contributions that are based on the level of employment or payroll are considered part of hourly compensation costs. Programmes financed through general taxation are not chargeable to employers, but represent expenditures by the State, and are therefore excluded from hourly compensation costs. The extent to which the State, employers and employees participate to finance wage-related social security schemes varies from one country to another.

Care should also be taken not to interpret hourly compensation costs as the equivalent of the purchasing power of worker incomes, for

3. ILO: *World Labour Report 1995* (Geneva, 1995), Ch. 1, "Controversies in labour statistics".

4. Resolution concerning statistics of labour cost, op. cit.

5. P. Capdevielle and M. Sherwood: "Providing comparable international labor statistics", in *Monthly Labor Review* (Washington, DC, BLS), June 2002; website: http://www.bls.gov/opub/mlr/2002/06/art1full.pdf.

6. BLS: *Hourly Compensation Costs for Production Workers in Manufacturing, 33 Countries or Areas, 22 Manufacturing Industries, 1992-2005*, website: http://www.bls.gov/fls/flshcindnaics.htm.

two reasons. The first relates to the components and nature of compensation costs. In addition to the payments made directly to the workers, compensation includes employers' payments to funds for the benefit of workers. Such "non-wage" compensation can include current social security benefits such as family or dependants' allowances, deferred benefits, as in payments to retirement and pension funds, or various types of insurance entitlements, such as unemployment and health benefit funds, which will represent income to workers only under certain conditions. In a few countries, non-wage costs also include some taxes paid by employers – or deductions for subsidies received – for the employment of labour, such as taxes on employment or payroll.

The second reason for differentiating hourly compensation costs from the concept of workers' purchasing power lies in the fact that the prices of goods and services vary greatly among countries, and the commercial exchange rates used here to convert national figures into a single currency do not indicate relative differences in prices. A more meaningful international comparison of the relative purchasing power of workers' income would involve the use of purchasing power parities (PPPs), that is, rates at which the currency of one country must be converted into the currency of another in order to buy an equivalent basket of goods and services. For this reason, the indicators in KILM 16a and b, which measure wages by occupation in PPP, are more suited to examining the purchasing power of workers.

Information on compensation or labour costs is not generally available separately for men and women. Many establishments from which this information is collected do not maintain separate data by sex for non-wage benefits, even when they do so for the earnings portion of compensation costs. In addition, the distribution of male and female workers according to occupation, levels of skill and supervisory responsibilities are often dissimilar within an industry, between establishments and among countries. Therefore, comparisons of compensation cost information between men and women based on an allocation of costs proportional to the respective number of persons or the amount of earnings could lead to erroneous conclusions. The same remarks apply to the measurement of total labour costs, where it is even more difficult to allocate the cost of certain components, such as welfare services or vocational training, between men and women. With these difficulties in mind, the ILO resolution concerning statistics of labour cost did not recommend the compilation of labour cost statistics according to sex.

Definitions and sources

Hourly compensation costs for production workers in manufacturing are estimates compiled by the BLS based on national statistics from establishment and labour cost surveys.[7] Earnings statistics are obtained from country-specific surveys of employment, hours and earnings, or from manufacturing surveys or censuses. Total compensation is computed by adjusting each country's average earnings series for items of direct pay not included in earnings and for employers' social security expenditure and labour taxes (i.e. "non-wage benefits"). Where countries measure earnings on the basis of "hours paid for", the figures are also adjusted in order to obtain estimates of earnings based on "hours actually worked".

Adjustment factors are obtained from various sources, such as periodic labour cost surveys (interpolated on the basis of other information for non-survey years), annual tabulations of employers' social security contribution rates, and information on contractual and legislated changes in fringe benefits. The statistics are further adjusted, where necessary, to take account of major differences in workers' coverage, industrial classification systems and changes over time in survey coverage or frequency. Detailed information on survey sources and on some special estimation procedures is available in the BLS report, *International comparisons of*

7. Bureau of Labor Statistics, Division of Foreign Labour Statistics, United States Department of Labor; website: http://www.bls.gov/fls/.

hourly compensation costs for production workers in manufacturing.[8]

A country's compensation costs are computed in national currency units and converted into US dollars at prevailing commercial market currency exchange rates.[9] The foreign currency exchange rates used in the calculations are the average daily exchange rates for the reference period, as published by either the US Federal Reserve Board or the International Monetary Fund. They do not indicate relative living standards of workers or the purchasing power of their income. Prices of goods and services vary greatly among countries, and commercial market exchange rates are not reliable indicators of relative differences in prices.

Total hourly compensation costs include (1) hourly direct pay for time worked and time not worked but paid for, in cash and in kind, and (2) non-wage compensation costs, i.e. employers' social insurance expenditure and, in some countries, labour taxes.

Hourly direct pay includes all payments made directly to the worker, before any deductions for workers' contributions to social security and pension schemes, life and health insurance premiums, union dues and other obligations, income-tax liabilities, and so on. This definition is the equivalent of the ILO concept of "gross earnings", which consists of (a) pay for time worked, including basic time and piece rates, overtime premiums, shift differentials, other premiums and bonuses paid regularly each pay period, and cost-of-living adjustments, and (b) other direct pay, such as pay for time not worked (vacations, annual holidays and other paid leave for personal or family reasons, civic duties, and so on, except sick leave), seasonal or irregular bonuses and other special payments, selected social allowances and the cost of payments in kind.

Non-wage compensation costs refer to social insurance expenditures and other labour taxes and include (a) employers' expenditure for legally required insurance programmes and contractual and private benefit plans (retirement and disability pensions, health insurance, income guarantee insurance and sick leave, life and accident insurance, occupational injury and illness compensation, unemployment insurance and family allowances) and, for some countries (b) labour taxes – that is, taxes on payrolls or employment or reductions to reflect subsidies – even if they do not finance programmes that benefit workers directly.

Production workers (also referred to as manual workers or blue-collar workers) generally include employees engaged in fabrication, assembly and related activities, material handling, warehousing and shipping, maintenance and repair, janitorial and guard services, auxiliary production (such as power plants), and other services closely related to the above activities. Working supervisors are generally included, while apprentices and other trainees are generally excluded.

Limitations to comparability

In spite of the various adjustments made to the series in order to ensure a high level of comparability across countries and over time, some differences may still be found in the information presented. Attention should be paid to the table notes, and the following major causes of disparities should be noted:

(1) The average earnings series used as a basis for these estimates may be influenced by changes over time in the industrial structure, that is, the growth or decline of establishments, levels of activity and changes in the structure of the workforce employed (changes in the relative proportions of men and women, skilled and unskilled labour, full-time and part-time workers, and so on). All these factors

8. BLS: *International Comparisons of Hourly Compensation Costs for Production Workers in Manufacturing, 1975-2005*, website: http://www.bls.gov/fls/hcompsupptabtoc.htm.

9. Compensation costs for members of the euro area are expressed in the national currency used in each country prior to the implementation of the euro for 1992-98, and in euros for 1999-2005.

influence the levels of earnings and workers' benefits within a country.

(2) Hourly compensation costs are partly estimated, and each year the most recent information is subject to revision by the BLS. For example, in 2001 the hourly compensation costs series were revised for the United States from 1997 onwards to incorporate results on non-wage costs from an annual survey of manufacturers. In 2006, data for Mexico were revised back to 1999 to incorporate benchmark data from an industrial census and data for Ireland and Norway were revised back to 2001 to incorporate non-wage compensation costs from the 2004 labour cost surveys.

(3) The comparative-level figures are averages for all manufacturing industries and are not necessarily representative of all component industries. In some countries, such as the United States and Japan, differentials in hourly compensation cost levels by industry group are quite wide, while other countries, such as Germany and Sweden, have narrower differentials.[10]

(4) Changes over time in relative compensation cost levels in US dollars are also affected by (a) the differences in underlying national wage and benefit trends measured in national currencies, and (b) frequent and sometimes sharp changes in relative currency exchange rates.

Trends

As seen in figure 17a, in 2005, hourly compensation costs in 14 countries were higher than that of the United States. This list includes six countries – Belgium, Denmark, Germany, Norway, Sweden and Switzerland – which also had compensation costs higher than the United States in 2000. Over the last five years (2000 to 2005), however, an additional eight countries moved from having lower compensation costs to higher compensation costs than the United States. Many of these gains can be attributed to the depreciation of the US dollar vis-à-vis the euro and other currencies. The disparity in compensation costs between countries continued to be wide in 2005; compensation costs in each of the six highest compensation costs countries were at least five times as high as the six countries with the lowest compensation costs.

Over the last five years, the upward trend in compensation costs was particularly pronounced – 8 per cent annual growth or more – in the majority of developed economies in the database, owing in part to the appreciation of the euro and other currencies relative to the US dollar (see figure 17b). The largest increases, however, were in the recent European Union member countries of Hungary and the Czech Republic, which experienced large increases in hourly compensation costs in the national currency in addition to strong appreciation of the national currency against the US dollar.

In contrast, several economies such as Taiwan (China), Hong Kong (China), Singapore, Israel and Brazil witnessed lesser increases in compensation costs, while Japan was the only country to exhibit negative average annual growth during the 2000 to 2005 period.

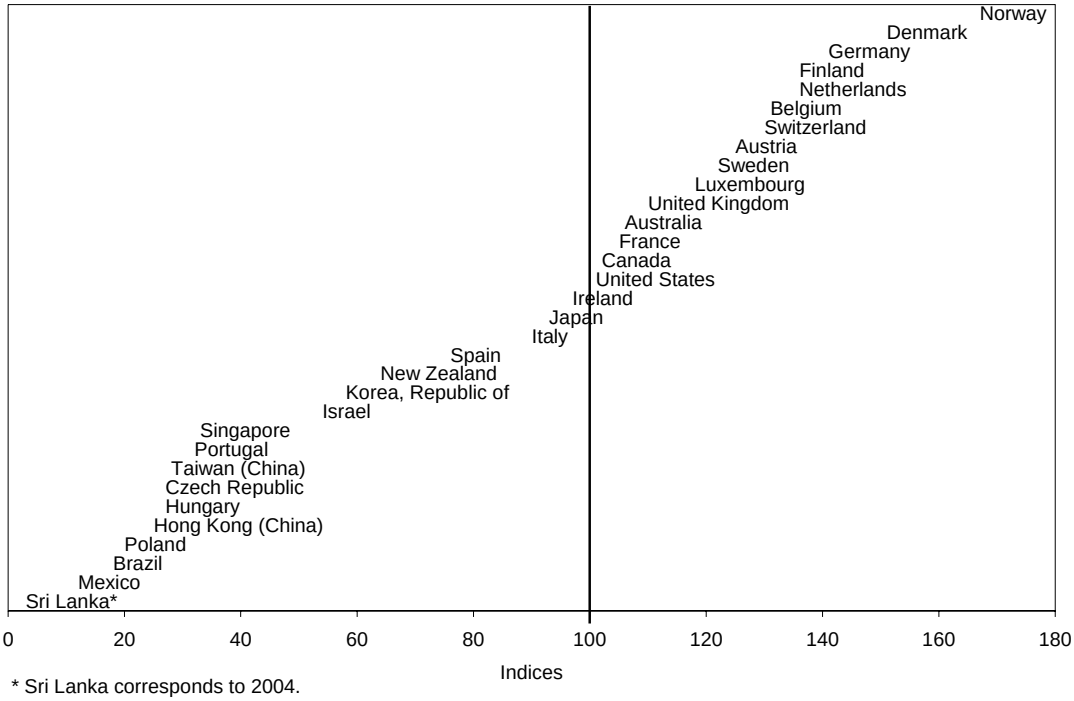
Figure 17c shows total hourly compensation costs in 2005 broken down into hourly direct pay and non-wage compensation costs. Non-wage compensation costs represent a much larger portion of compensation costs in Brazil (32 per cent), Italy (31 per cent), France (31 per cent) and Belgium (30 per cent) compared to the countries of New Zealand (4 per cent), Hong Kong (China) (8 per cent), Denmark (10 per cent) and Mexico (11 per cent) where the non-wage portion is much smaller. In this respect, care should be taken when using total compensation costs as a proxy for direct pay, particularly in cases where non-wage costs such as the contributions by employers to insurance and social security schemes are high, because they may

10. For more information on compensation costs at the industry component level, see BLS: *Hourly Compensation Costs for Production Workers in Manufacturing, 33 Countries or Areas, 22 Manufacturing Industries*, op. cit.

significantly overstate the actual wages received by workers.

Figure 17c illustrates how including components of compensation costs not normally included in wages can greatly influence the relative rankings of countries. For example, Ireland had higher hourly direct pay (US$19.86) than Australia, Canada, the United States and France (US$19.85, US$19.21, US$18.32 and US$16.93, respectively). However, when total hourly compensation costs are compared, Ireland has a lower rate (US$22.76) than Australia, France, Canada and the United States (US$24.91, US$24.63, US$23.82 and US$23.65, respectively) because employer contributions to social insurance programmes are much lower in Ireland than the four aforementioned countries and thus Ireland's non-wage compensation costs are significantly less.

Figure 17a. Relative hourly compensation costs (US = 100), 2005



* Sri Lanka corresponds to 2004.

Figure 17b. Annual per cent change in hourly compensation costs, 2000-2005

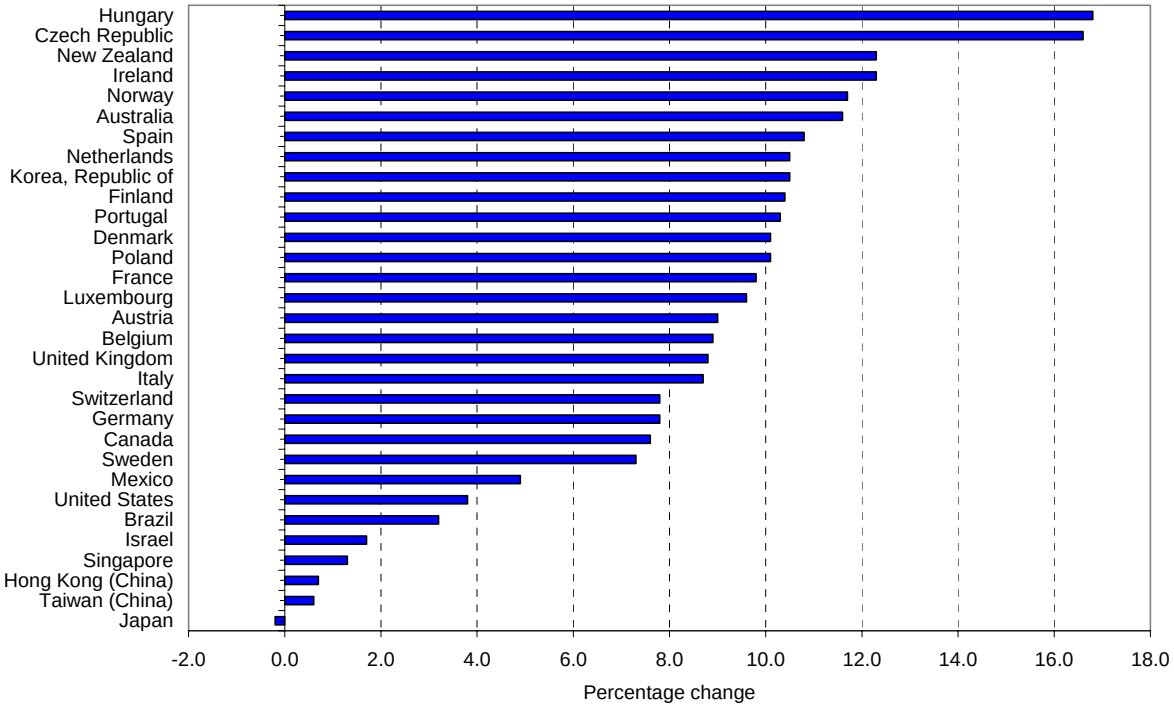
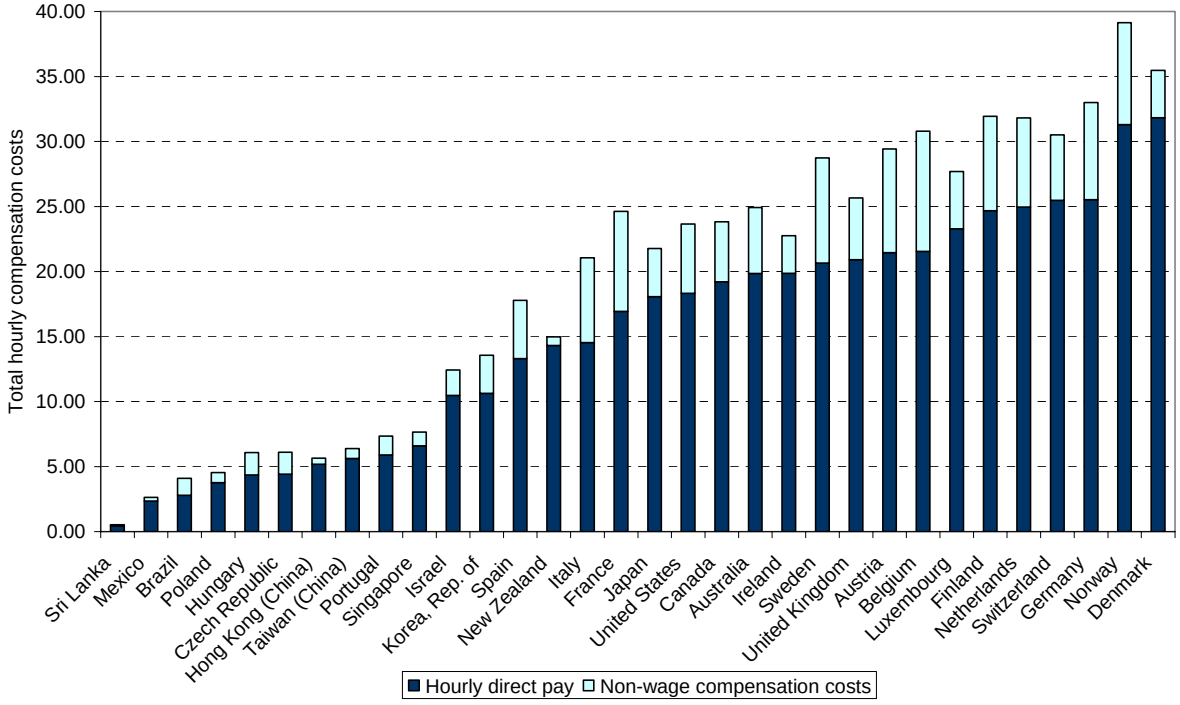


Figure 17c. Proportion of hourly direct pay and non-wage costs to total compensation costs, 2005



Box 17b. Collaboration between the ILO and BLS for country expansion

The ILO Employment Trends Team and the BLS Division of Foreign Labor Statistics have begun a collaboration project to expand the number of countries covered by the hourly compensation costs KILM indicator. This project is designed to be beneficial to both organizations: the BLS gains access to ILO regional and national expertise along with easier access to the necessary information, and the ILO uses BLS technical expertise and resources to expand the number of countries covered to be more in line with the other KILM indicators.

The BLS does initial research into the availability of data and relevant methodological documents to identify data gaps and methodological questions that the BLS is unable to answer using normal channels. The ILO then uses its connections with national statistical agencies around the world to assist the BLS in acquiring experts on the local statistical system in the country of interest. These local experts help the BLS gain an in-depth understanding of the country's surveys and data and procure statistical publications or unpublished data needed to construct hourly compensation costs estimates.

Thus far, the collaboration has successfully led to the additions of Hungary and Poland to the hourly compensation costs series.

7. Labour productivity and unit labour costs indicator (KILM 18)

KILM 18. Labour productivity and unit labour cost

Introduction

This chapter presents information on labour productivity for the aggregate economy (table 18a), manufacturing (table 18b), transport and communication (table 18c), trade – including sales and repairs of motor vehicles, wholesale, retail, hotels and restaurants – (table 18d) and agriculture, forestry and fisheries (table 18e). Labour productivity is defined as output per unit of labour input (persons employed or hours worked). For a substantial number of economies, the productivity measures for the total economy and manufacturing are complemented with measures of unit labour cost, which stands for labour cost per unit of output.

This chapter provides estimates of growth rates of labour productivity and unit labour cost, as well as levels expressed in US dollars. All estimates are made according to the national accounts conventions to ensure that labour productivity for individual sectors can be compared. Hence, the selection of economies is based on the availability of consistent series of output in both national currencies and PPP (purchasing power parity)-converted US dollars and labour input. There are significant limitations in the availability of reliable data for these indicators, particularly when international comparability is the main criterion on the basis of which the estimates are constructed. In particular the estimates for the two service industries and the agricultural, forestry and fisheries sector are of an experimental nature largely because of the difficulty in obtaining adequate PPP measures for each country to convert services GDP to US dollars.

The productivity indicator for the aggregate economy covers 125 economies with coverage extending to all KILM regional groups (table 18a). Together, these economies represent more than 96 per cent of the world population and more than 99 per cent of world GDP. For a subset of economies (mostly in Europe and North America, with some in Asia and South America), separate measures are provided for manufacturing (31 economies), transport and communication (18 economies) and trade (15 economies). For agriculture, forestry and fisheries, estimates include as many as 113 economies. Unit labour cost estimates for the aggregate economy and for manufacturing are provided for a somewhat smaller group of economies.

Use of the indicator

Economic growth in a country or a sector can be ascribed either to increased employment or to more effective work by those who are employed. The latter effect can be described through statistics on labour productivity. Labour productivity therefore is a key measure of economic performance. The understanding of the driving forces behind it, in particular the accumulation of machinery and equipment, improvements in organization as well as physical and institutional infrastructures, improved health and skills of workers (“human capital”) and the generation of new technology, is important for formulating policies to support economic growth. Such policies may focus on regulations on industries and trade, institutional innovations, government investment programmes in infrastructures as well as human capital, technology or any combination of these.

Labour productivity estimates can serve to develop and monitor the effects of labour market policies. For example, high labour productivity is often associated with high levels or particular types of human capital, indicating priorities for specific education and training policies. Likewise, trends in productivity estimates can be used to understand the effects of wage settlements on rates of inflation or to ensure that such settlements will compensate workers for (part of) realized productivity improvements.

Finally, productivity measures can contribute to the understanding of how labour market performance affects living standards. When the intensity of labour utilization – the average number of annual working hours per head of the population – is low, the creation of employment opportunities is an important means of raising *per capita* income in addition to productivity growth.[1] In Europe, for example, where, given lower *per capita* income levels, productivity levels are relatively close to the United States, labour utilization may be increased by encouraging a higher labour force participation rate or by encouraging everyone to work more hours, e.g. by creating more decent and productive employment opportunities for economic activity. In contrast, when labour intensity is already high, for example in East Asia, productivity will be the sole key to improving living standards. In any case, increasing labour force participation is at best a transitional source of growth depending on the rate of population growth and the age structure. In the long run only the productivity of labour determines the rise in per capita income.

The second measure presented in this chapter, unit labour cost, represents a direct link between productivity and the cost of labour used in generating output. On the one hand, a rise in an economy's unit labour cost represents an increased reward for labour's contribution to output. On the other hand, however, a rise in labour cost higher than the rise in labour productivity may be a threat to a country's competitiveness, if other costs are not adjusted in compensation. As a competitiveness indicator, unit labour cost is particularly relevant for the manufacturing industry where many internationally tradable products are produced.

Clearly, unit labour cost should not be interpreted as a comprehensive measure of competitiveness, but as a reflection of cost competitiveness. For example, in the case of durable consumer and investment goods, competitiveness between advanced economies is also determined by other factors, such as improvement of product quality, customization or improved after-sales service. Furthermore, unit labour cost measures deal exclusively with the cost of labour. Even though labour costs are an important determinant of competitiveness between advanced and developing economies, the cost of capital can also be a crucial factor in comparisons of cost competitiveness between economies.

In this chapter we provide unit labour cost measures for the total economy and the manufacturing sector, but not for the agricultural sector and services sectors. In agriculture, labour cost is largely made up of the income of the farmers, and is best treated as the bottom line revenue on each year's farm operation which in turn is dependent on the quantity and price of farm output in each single year. For non-tradable industries in, for example, the services sector the usefulness of the measure derives from identifying the source from which a rise in unit labour cost originates. For example, an increase can result from upward wage pressure. Alternatively, the increase in unit cost may be due to a slowdown in productivity growth. At the aggregate level a rise in unit labour cost may be due to the rise in the sectoral share of the services sector, as seen in many developed (industrialized) economies. In many services sectors, productivity grows more slowly than

1. It is clear that living standards do not equal *per capita* income, but the latter can still be viewed as a reasonably good proxy of the former, even though the link is not automatic. For example, the United Nations Development Programme (UNDP) *Human Development Report 2006* (website: http://hdr.undp.org/) reveals that, out of 177 economies with information on both the human development index (HDI) and GDP per capita (at PPP) in 2004, 102 rank higher in HDI than in GDP, one ranks the same and 74 rank higher in GDP than in HDI.

in manufacturing, whereas the development of labour costs is often less diverse across sectors. The causes of changes in unit labour cost outside the tradable sector, therefore, have important policy implications for labour market and trade policies.

Definitions and sources

Output and labour productivity

Productivity represents the amount of output per unit of input. In this chapter, output is measured as "value added", which is the total production value minus the value of intermediate inputs, such as raw materials, semi-finished products, services purchased and energy inputs. Value added, called "gross domestic product" (GDP) in the national accounts, represents the compensation for input of services from capital (including depreciation) and labour directly engaged in the production. The GDP concepts for the aggregate economy were expressed at market prices, which reflects the market value of the output produced. For the individual sectors, GDP at market prices was adjusted to basic price level, i.e. indirect taxes on products were subtracted and subsidies on products were added. The adjusted GDP, therefore, represents the amount receivable by the producer for a unit of good or service produced.

For developing countries, value added in basic prices, which is a relatively new concept introduced in the latest revision of the System of National Accounts (1993), is generally not available and therefore these figures are mostly expressed at factor costs. The factor cost concept represents the overall gross income from operating activities.[2] These differences in valuation concepts do affect the consistency of the levels of output by sector in national currency or US dollars, which therefore cannot be added up without further adjustments. But the valuation concept has little impact on comparisons of growth rates of output and productivity as the percentage differences between output at various valuation concepts do not change much over time.

Labour productivity growth may be due to either increased efficiency in the use of labour, without more of other inputs, or because each worker works with more of the other inputs, such as physical capital, human capital or intermediate inputs. More sophisticated measures, such as "total factor productivity", which is the output per combined unit of all inputs, are not included in KILM 18.[3] Estimated labour productivity may also show an increase if the mix of activities in the economy or in an industry has shifted from activities with low levels of productivity to activities with higher levels, even if none of the activities have become more productive.

For a constant "mix" of activities the best measure of labour input to be used in the productivity equation would be "total number of annual hours actually worked by all persons employed". In many cases, however, this labour input measure is difficult to obtain or estimate reliably. For this reason, the labour productivity measures presented here show both gross value added per person employed and gross value added per hour worked.

2. The United Nations System of National Accounts, 1993 (see website: http://unstats.un.org/unsd/nationalaccount/default.htm) recommends the use of the basic price concept, but for manufacturing a distinction between net indirect taxes on products and production can not always be made. For the United States, the value-added concepts for agriculture and services are also at factor cost.

3. For recent OECD-wide estimates of total factor productivity growth, see: OECD: *The Sources of Economic Growth* (Paris, 2003). For the EU-15 countries, see M.P. Timmer and B. van Ark: "Does information and communication technology drive productivity growth differentials? A comparison of the European Union countries and the United States", Oxford Economic Papers (2005). Estimates at the industry level can be obtained from the *EU KLEMS Growth and Productivity Accounts* (http://www.euklems.net). For estimates including developing countries, B. Bosworth and S. Collins: "The empirics of growth: An update," Brookings Papers on Economic Activities (Washington, DC, Brookings Institution, 2003).

To compare labour productivity levels across economies, it is necessary to convert gross value added to US dollars on the basis of adjusted purchasing power parity (PPP). A PPP represents the amount of a country's currency that is required to purchase a standard set of goods and services worth one US dollar. Through the use of PPPs one takes account of differences in relative prices between countries. Had official currency exchange rates been used instead, the implicit assumption would be that there are no differences in relative prices across countries. The total economy estimates of gross value added used for KILM 18 are expressed in terms of 1990 US dollars, as the 1990 PPP made it possible to compare the largest set of countries. For the individual sectors the base year is 1997. This year was chosen due to the availability of a new set of multilateral PPPs by industry for this benchmark year. The agricultural sector PPPs were originally for 1995, but have been extrapolated to 1997 to enhance the comparability between sectors.

Unit labour cost

Unit labour cost is defined as labour compensation per unit of gross value added produced. Total labour compensation is measured to include not only gross wages and salaries of employees, but also other costs of labour that are paid by employers, including employers' contributions to social security and pension schemes. In addition to employees' compensation, estimated labour costs of the self-employed are included where possible, mostly imputed on the assumption that the labour compensation per self-employed person equals that of an employee. Therefore, this adjustment can only be made when the number of self-employed persons is known separately.[4]

For comparisons of unit labour cost levels between countries, labour compensation is converted to US dollars on the basis of the nominal exchange rate. Labour compensation estimates are obtained from the national accounts estimates so that value added (GDP) and labour costs are compatible. However, the national accounts of developing economies often do not provide estimates of labour compensation which explains the limited number of developing countries for which unit labour cost estimates in this dataset are available.

Sources for the aggregate economy estimates (KILM 18a)

The estimates for the aggregate economy (KILM 18a) presented here are derived from the Total Economy Database of The Conference Board (TCB) and the Groningen Growth and Development Centre (GGDC) (University of Groningen, the Netherlands). TCB and GGDC have long-standing expertise in developing and analysing data on productivity performance, focusing in particular on comparisons of levels of productivity by sector and industry. This database also includes measures of labour compensation to obtain unit labour cost. A full documentation of sources and methods by country and underlying documentation on the use of PPPs, etc. can be downloaded from the website of the Groningen Growth and Development Centre.[5]

The aggregate economy estimates for OECD countries, most of which are included in the KILM tables under the headings of "major Europe" and "major non-Europe", GDP (after 1990) and labour compensation for the aggregate economy are mostly obtained from OECD: *National Accounts*, Volumes I and II (annual issues) and the Eurostat New Chronos database. Maddison (2003) has been extensively used to cover the period 1980-1990.[6] Employment estimates for the

4. For the Latin American countries (except for Brazil and Mexico), we provide comparisons of unit labour cost exclusively for employee compensation.

5. Website: http://www.ggdc.net/. See also M.P. Timmer, G. Ypma and B. van Ark: *PPPs for industry output: A new dataset for international comparisons*, GGDC Research Memorandum GD-82 (2007) (http://www.ggdc.net/pub/online/gd82(online).pdf).

6. A. Maddison: *The World Economy: Historical Statistics* (Paris, OECD Development Centre, 2001). See also Maddison's homepage: http://www.ggdc.net/maddison/. Some OECD

aggregate economy are mostly taken from OECD: *Labour Force Statistics* (annual issues), Eurostat and the Bureau of Labor Statistics (BLS): *Comparative Civilian Labour Force Statistics*. The estimates of annual hours worked for total economy and manufacturing were obtained from various sources for OECD countries, in particular Scarpetta et al. (2000)[7] and the *OECD Employment Outlook*. These were extrapolated on the basis of trends on hours derived from the OECD and BLS databases.[8]

For other countries outside of the OECD, the national accounts and labour statistics which were assembled from national sources by international organizations such as the World Bank, the Asian Development Bank, the Food and Agriculture Organization (FAO), the ILO and the United Nations Statistical Office were mostly taken as the point of departure.[9] These series were complemented by the series from Maddison (2003) in particular to cover the period 1980-90. Maddison (1995) also provides benchmark estimates of annual hours worked for a significant number of non-OECD economies.[10] In individual cases use has also been made of national accounts statistics for the individual countries.

The total economy series (KILM 18a) are linked to a benchmark estimate of GDP at market prices in US dollars for 1990 from Maddison (2003).[11] Maddison's dollar estimates are based on purchasing power parities for GDP. The original PPPs were obtained from the International Comparisons Program (ICP) which uses specific expenditure price surveys that were coordinated across economies by international agencies, such as Eurostat, the OECD, the United Nations and the World Bank.[12]

The PPPs for the total economy used by Maddison represent multilaterally weighted PPPs. Multilateralization implies that the weights of all economies are used to obtain the aggregate PPPs, which makes comparisons between economies fully transitive, i.e. comparisons between economies A and B and economies B and C equal a comparison between economies A and C. The year 1990 was chosen because it is still the latest for which a reasonably comprehensive and reliable set of PPPs can be obtained for a largest possible range of economies in the world economy.[13] The multilateral weighting system for the aggregate economy was the Geary-Khamis system, which essentially weighs PPPs for each country on the basis of its relative size in terms of GDP.[14]

countries, for example, the Czech Republic and Hungary, fall in the "transition economies" group. The Republic of Korea (Eastern Asia) and Mexico (Central America) are OECD countries as well.

7. See S. Scarpetta, A. Bassanini, D. Pilat and P. Schreyer: "Economic growth in the OECD area: Recent trends at the aggregate and sectoral level", Economics Department Working Papers, No. 248, OECD, Paris (2003).

8. OECD: *Employment Outlook* (various issues); BLS databases on foreign labour statistics and manufacturing unit labour costs (available on website: http://www.bls.gov/fls/).

9. World Bank: *World Development Indicators* (various issues); Asian Development Bank: *Key Indicators of Developing Asian and Pacific Countries* (annual issues); ILO: *Yearbook of Labour Statistics* (annual issues); United Nations: *National Account Statistics: Main Aggregates and Detailed Tables* (annual issues).

10. A. Maddison: *Monitoring the World Economy 1820-1992* (Paris, OECD Development Centre, 1995).

11. Maddison (2003), op. cit.

12. For a comprehensive account of the PPP methodology, see I.B. Kravis, A. Heston and R. Summers: *World Product and Income* (Baltimore: John Hopkins, 1982). More recent developments in the programme on purchasing power parities can be obtained from the websites of the OECD (http://www.oecd.org/topicstatsportal/0,2647,en_2825_495691_1_1_1_1_1,00.html#500300) and the United Nations (http://unstats.un.org/unsd/methods/icp/). See also the website of the Center for International Comparisons at the University of Pennsylvania (CICUP) (http://pwt.econ.upenn.edu/cic_intro.html).

13. A new set of worldwide PPPs from the International Comparisons Program is expected to be published by the World Bank by the end of 2007 (www.worldbank.org/data/icp/).

14. Except for the EU-15 countries which are internally weighted at EKS PPPs, which does not apply GDP weights for individual member States.

Sources for the sectoral estimates (KILM 18b to 18e)

For the individual sectors (KILM 18b to 18e) figures for European Union countries, the United States and Japan come from the EU KLEMS Growth and Productivity Accounts, which is a recently launched database constructed from a consortium of research institutes across Europe.[15] The EU KLEMS data are to a large extent based on the National Accounts of the individual countries. Canada and Australia are based on the GGDC 60-industry database, while the GGDC 10-sector database provided information about the Asian and Latin American countries. The estimates were originally obtained from national statistical offices and, where possible, were harmonized for differences in concepts and industry classifications, and have been supplemented, where necessary, with national accounts statistics obtained directly from the individual economies.

For sectors – agriculture, manufacturing, transport and communication and trade – appropriate currency conversion factors at output price level are not readily available, as there are no specific international surveys to construct output PPPs by industry of origin. However, over the past two decades sectoral PPPs have been constructed as part of an academic research programme, named the International Comparisons of Output and Productivity (ICOP) programme at the Groningen Growth and Development Centre.[16] The PPP measures for manufacturing, wholesale and retail trade, and transport and communication used here are derived from a new dataset of multilateral PPPs for 26 mostly OECD countries for 1997.[17] The industry-of-origin PPPs are mostly based on unit value ratios (UVRs). The unit values represent sales values divided by quantities for similar products or product groups, derived from national production censuses or industry surveys, which are matched between economies. In practice, unit value ratios have been complemented with selected expenditure PPPs for individual expenditure categories from the ICP programme, in particular for industries and products for which no reliable UVRs were available. These expenditure PPPs have been adjusted from market prices to basic prices using the margins for transport and distribution and sales and value added taxes.[18]

For the manufacturing sector (KILM 18b) in European countries unit values have been largely derived from Eurostat's Prodcom database which contains detailed information on quantities and sales values of individual products. The unit value ratios for European countries were benchmarked on Germany, which in turn was matched with unit values from the US 1997 *Census of Manufactures*. UVRs for other OECD countries were also obtained by direct comparisons with the United States. For several manufacturing

15. EU KLEMS database. Downloadable from: http://www.euklems.net. See also M.P. Timmer, M. O'Mahony and B. van Ark: *The EU KLEMS growth and productivity accounts: An overview* (University of Groningen and University of Birmingham, March 2007); see website: http://www.euklems.net/data/eu_klems_productivity_report_overview.pdf.

16. The industry-level comparisons are brought together under the International Comparisons of Output and Productivity (ICOP) project at the University of Groningen. See: http://www.ggdc.net/dseries/icop.html for an overview, as well as A. Maddison and B. van Ark: "The international comparison of real product and productivity", in A. Maddison, D.S. Prasada Rao and W.F. Shepherd (eds.): *The Asian Economies in the Twentieth Century* (Cheltenham, Edwar Elgar, 2002, pp. 5-26); B. van Ark and M.P. Timmer: "Purchasing Power Parity adjustments for productivity-level comparisons", in D.S. Prasada Rao (ed.): *Purchasing Power Parities of Currencies, Recent Advances in Methods and Applications* (Cheltenham, Edwar Elgar, 2005) and van Ark and Monnikhof, op. cit.

17. This dataset includes the former EU-15, as well as Australia, Canada, the Czech Republic, Hungary, Japan, the Republic of Korea, Norway, Poland, Slovakia, Taiwan (China) and the United States. For a more detailed description of these data, see: M.P. Timmer, G. Ypma and B. van Ark (2007): "The 1997 ICOP industry-of-origin PPP dataset", Research Memorandum GD-82 (Groningen Growth and Development Centre, 2005); website: http://www.ggdc.net/pub/online/gd82(online).pdf.

18. See Timmer, Ypma and van Ark (2007), op. cit.

industries, expenditure PPPs (adjusted for trade and transportation margins and taxes) were used to fill gaps. At the industry level, the manufacturing PPPs were made transitive using the Elteto-Koves-Szulc (EKS) weighting system, which differs from the Geary-Khamis (GK) system in the sense that countries are not weighted according to their relative size in industry output. The unit value ratios by industry are then aggregated to the level of total manufacturing by using gross output weights.

The benchmark year estimates for transport and communication (KILM 18c) and wholesale and retail trade (KILM 18d) are also obtained from the new 1997 ICOP industry-of-origin PPP dataset. Limitations in the available national accounts statistics that are internationally comparable and the complexity of the procedures to obtain PPPs limit the number of economies that can be compared. Essentially, the measures are based on the same methodology as for manufacturing, making use of industry-specific unit value ratios.[19] At the lowest level of aggregation the estimates for transport and communication (KILM 18c) are based on quantity measures such as rail and air freight (usually measured in ton-kilometres) and rail or air passenger transport (mostly measured in passenger kilometres), pieces of mail delivered or local, cellular and international telephone calls. The unit value ratios for transport and communication are aggregated to national accounts level in 1997.

For the distribution sector (KILM 18d), which includes wholesale and retail trade, separate PPPs for the sales and purchases of the goods are required, because the purchase value makes up most of the total sales value in the trade sector. Ignoring the differences in purchase and sales PPP in this sector might therefore significantly distort the PPP for value added in the distribution sector. The approach used derives retail input PPPs (for purchases) from retail sales PPPs (obtained from ICP expenditure PPPs) using the trade and transportation margins for the sector. Similarly, wholesale output PPPs (for sales) are obtained from PPPs for wholesale input, again adjusted for margins, which are based on UVRs for manufacturing products. The currency conversion estimates that result from this procedure are aggregated to national accounts level following the same procedures as for manufacturing.

The estimates for agriculture, forestry and fisheries (AFF) are based on measures of PPPs which are from a database of the Food and Agriculture Organization (FAO). These PPPs reflect genuine producer prices, as they are based on prices received by farmers for about 180 products in 1995. The prices refer to farm-gate prices or the first-point-of-sale prices and in principle do not include any transport costs or the profit margins that generally accrue to middle men. The PPPs for the farm sector are assumed to be representative for the fisheries and forestry industries. As for the aggregate economy, the PPPs for this sector are also of a multilateral nature, using a Geary-Khamis weighting system. To make the series comparable with the other sectors the benchmark estimates for AFF are updated to 1997.

Limitations to comparability

The limitations to the international and historical comparability of the estimates are summarized under the following four headings.

Output measures in national currencies

Output measures are obtained from national accounts and represent, as much as possible, GDP at market prices for the aggregate economy and value added at basic prices for the individual sectors. However, despite common principles that are mostly based on the United Nations System of National Accounts, there are still significant

19. See, for example, B. van Ark, E. Monnikhof and N. Mulder: "Productivity in services: An international comparative perspective", *Canadian Journal of Economics* (Montreal, University of Montreal), April 1999, Vol. 32, No. 2, pp. 471-499.

problems in international consistency of national accounts estimates, in particular for economies outside the OECD. Such factors include:

(a) *different treatment of output in services sectors*. In a considerable number of economies, especially for non-market services, output is often estimated on the basis of inputs, such as total labour compensation, or on an implicit assumption concerning productivity growth; in other cases – where output measures were available – quality changes are often insufficiently reflected in the measures of output volume.

(b) *different procedures in correcting output measures for price changes, in particular the use of different weighting systems in obtaining deflators*. Traditionally output trends in constant prices have been weighted at values that are kept fixed for several years. Fixed weights usually imply an overestimation of volume growth rates, creating a bias that increases the further one moves away from the base year. Most economies therefore change weights every five or ten years. Over the past year an increasing number of OECD countries are shifting to using annual chain weights. Another important source of methodological difference between countries is the use of deflators for ICT products. Price declines of these goods are often insufficiently chosen with traditional price measurement methods. The United States has introduced a range of hedonic price deflators for ICT goods, which measure the price change of a commodity on the basis of changes in the major characteristics that impact the price. Many other countries are introducing this type of price measures in their national accounts, but at a much slower pace than the United States. In the estimates for the manufacturing sector the latter problem has been tackled by using harmonized deflators for ICT industries, based on hedonic deflators for the United States, for those countries that have no adequate ICT deflator themselves.

(c) *different degree of coverage of informal economic activities in developing economies and of the underground economy in developed (industrialized) economies in national accounts*. Some economies use data from special surveys for "unregistered activities", or indirect estimates from population censuses or other sources to estimate these activities, and large differences in coverage between economies remain.[20]

In addition to such inconsistencies there are significant differences in scope and quality of the primary national statistics and the staff resources available for the preparation of the relevant national estimates.

Purchasing power parities

The International Comparison Program (ICP) price surveys to obtain PPPs are carried out for selected benchmark years only. Not all estimates are for the same year, so that it was necessary in Maddison (1995) to carry some data forward to 1990 with the use of national price indices. The precise nature of the ICP price surveys can differ across economies, principally for non-OECD countries. The ICP pricing procedures have been criticized for lack of comparability and reflection of the specified items between economies. Furthermore, the multilateral character of the estimates is affected by the fact that the PPPs were, in fact, estimated for six different regions, and "globalized" with particular interregional (binary) links. Finally, within each of the regions, the aggregation procedures of the PPPs differ. For example, for 1990 the country PPPs within the European Union are unweighted for size of GDP (using the so-called EKS procedure), whereas the PPPs for non-European OECD countries are combined with those for the European Union and weighted for size of GDP.[21]

20. For an overview of methods, see, for example, OECD: *Measuring the Non-Observed Economy. A Handbook* (Paris, 2002).

21. For more information about the latest developments in the ICP programme; website: http://worldbank.org/data/icp/.

Box 18a. World and regional estimates of productivity

Productivity levels (Output per worker, constant US$2000 at PPP)	1996	2002	2003	2004	2005	2006*
WORLD	15,824	17,626	18,019	18,613	19,150	19,834
Developed Economies & European Union	52,876	58,642	59,588	60,749	61,759	62,952
Central & South-Eastern Europe (non-EU) & CIS	11,787	14,215	15,281	16,148	17,088	18,121
East Asia	6,347	9,345	9,965	10,745	11,552	12,591
South-East Asia & the Pacific	8,068	8,202	8,520	8,860	9,067	9,419
South Asia	5,418	6,353	6,662	7,111	7,531	7,998
Latin America & the Caribbean	17,652	17,337	17,228	17,758	18,250	18,908
North Africa	12,967	13,962	14,174	14,159	14,292	14,751
Sub-Saharan Africa	4,490	4,618	4,677	4,806	4,935	5,062
Middle East	22,130	20,990	21,273	21,119	21,630	21,910
Yearly change rates in productivity	**1996**	**2002**	**2003**	**2004**	**2005**	**2006***
WORLD	2.5	2.2	3.3	2.9	3.6	3.3
Developed Economies & European Union	2.2	1.6	1.9	1.7	1.9	2.1
Central & South-Eastern Europe (non-EU) & CIS	4.0	7.5	5.7	5.8	6.0	5.8
East Asia	7.1	6.6	7.8	7.5	9.0	8.5
South-East Asia & the Pacific	2.3	3.9	4.0	2.3	3.9	3.5
South Asia	2.3	4.9	6.7	5.9	6.2	5.8
Latin America & the Caribbean	1.4	-0.6	3.1	2.8	3.6	2.9
North Africa	-0.6	1.5	-0.1	0.9	3.2	3.2
Sub-Saharan Africa	0.4	1.3	2.8	2.7	2.6	3.2
Middle East	-0.5	1.3	-0.7	2.4	1.3	1.2

Source: ILO Global Employment Trends Model (see box 3 in "Guide to understanding the KILM" for more information on estimation methodology).
* 2006 preliminary estimates.

Productivity levels increased between 1996 and 2006 for almost all KILM regions although growth rates varied widely amongst regions. The fastest increase was observed in East Asia where the output per worker almost doubled. Considerable increases over this period were also seen in Central & South Eastern Europe (non-EU) & CIS and South Asia where productivity levels increased by around 50 per cent. The slowest increase was observed in Latin America & the Caribbean with around 7 per cent while productivity remained rather unchanged in the Middle East.

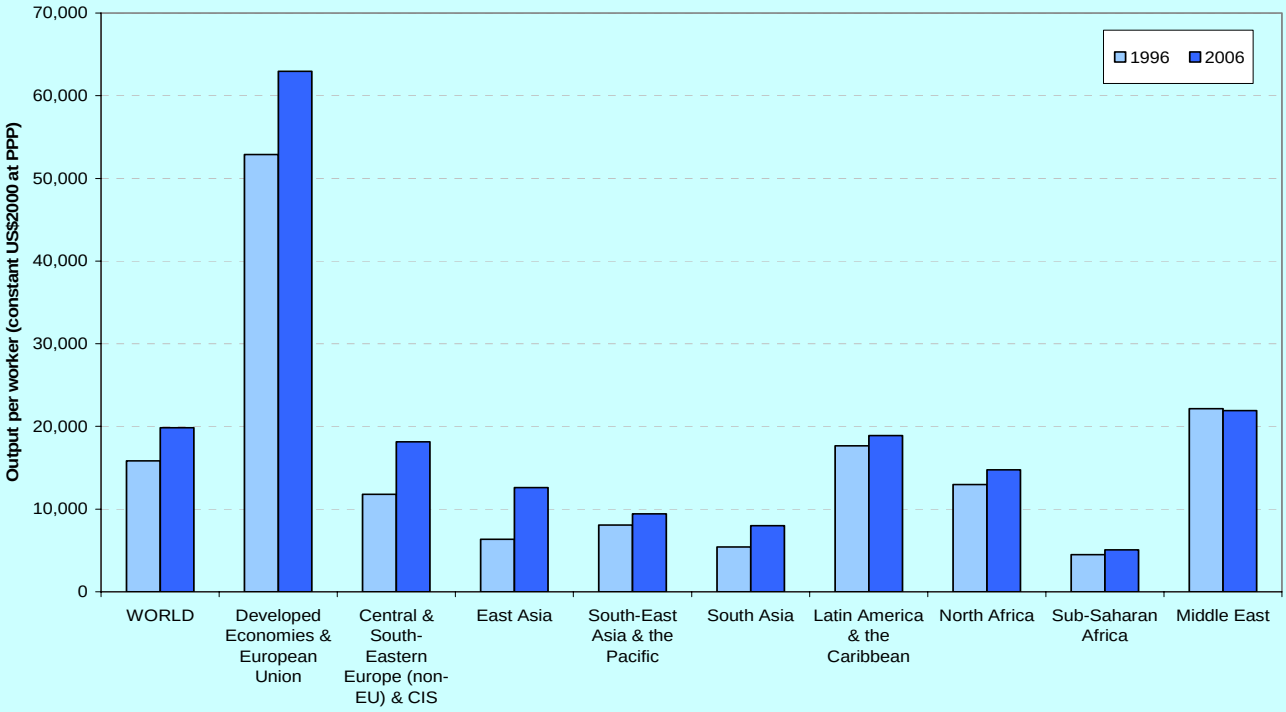
Differences in productivity levels between regions remained considerable. For example, a worker in the Developed Economies & European Union produced over ten times more than a worker in sub-Saharan Africa; and despite the big increases in productivity in East Asia, a worker in the Developed Economies & European Union still produced five times more than a worker in East Asia. The productivity gap with levels in the Developed Economies & European Union widened between 1996 and 2006, with the exceptions being East Asia, South Asia and Central & South-Eastern Europe (non-EU) & CIS.

(continued)

Box 18a continued

There are only two regions where productivity levels are above the world average: most obviously the Developed Economies & European Union but also the Middle East, although the level for this region is much lower than the latter. The lowest levels of productivity can be found in the two poorest regions of the world: sub-Saharan Africa and South Asia. Over the last five years, productivity in South Asia has increased at higher rates than in earlier years and to a lesser degree this has also been the case in Sub-Saharan Africa over the last four years. These are encouraging trends given the high linkage between productivity increases and poverty reduction.[1]

Productivity measured as output per person employed (constant US$2000 at PPP) by region, 1996 and 2006



[1] The linkage between productivity and poverty reduction is explained in ILO: *World Employment Report 2004-05 – Employment, productivity and poverty reduction* (Geneva 2005); website: http://www.ilo.org/trends.

Even though the industry by origin PPPs for manufacturing, transport and communication and wholesale and retail trade are assumed to be a proxy of relative producer prices, the comparability of these measures suffers from biased sample coverage. Moreover, due to the "unit value" characteristics of part of the information, the method takes, in many cases, insufficient account of quality differences across economies.

Employment

Estimates of employment are, as much as possible, for the average number of persons with one or more paid jobs during the year. Particularly for low- and middle-income economies in Asia and Latin America, statistics on the number of self-employed and family workers in agricultural and informal manufacturing activities are probably less reliable than those for paid employees. As in the case of output estimates, the employment estimates are sensitive to under-coverage of informal or underground activities, which harbour a substantial part of labour input. In some cases, informal activities are not included in the production and employment statistics at all. In agriculture the labour force estimates include a substantial part of (part-time and seasonal) family workers. However, the estimates presented for the economies in this data set are meant to cover all economic activity.

Working hours[22]

Estimates of annual working hours are often unavailable or are relatively unreliable. Even for developed (industrialized) economies, annual working hours are not consistently defined across economies. For example, statistics on working hours often refer to paid hours rather than to hours actually worked, implying that no adjustments are made for paid hours that are not worked, such as hours for paid vacation or sickness, or for hours worked that are not paid for. Moreover, statistics on working hours often are only available for a single category of the workforce (in many cases, only employees), or only for a particular industry (such as manufacturing), or for particular types of establishments (for example, those above a certain size or in the formal sector). As always, these problems are particularly serious for a substantial number of low-income economies. Whether and how the estimates of annual hours worked have been adjusted for such weaknesses in the primary statistics is often undocumented.

22. Readers may wish to review the corresponding section relating to the comparability issue for working hours in the KILM 6 manuscript.

Trends

The United States continues to show the highest labour productivity levels in 2006 measured as value added per person employed per year, at US$63,885, followed by Ireland (US$55,986) and Luxembourg (US$55,641) at a considerable distance. However, Norway showed the highest labour productivity level measured as value added per hour worked (US$37.99), followed by the United States (US$35.63) and France (US$35.08). The difference in rankings can be explained by the fact that annual working hours per person employed are considerably higher in the United States than in the majority of European economies; therefore, each US worker is able to produce more, leading to higher labour productivity when measured based on per person employed.

Consequently, the productivity gap (measured as value added per person employed) between the United States and most developed economies continued to widen, especially in more recent years. Exceptions were Ireland, which saw its gap decline steadily over time from almost 40 percentage points in 1980 to less than 13 points in 2006. Since 2000, Finland, Sweden and the United Kingdom were also able to continue reducing their productivity gaps as well as several new members of the European Union – Estonia,

Latvia and Lithuania – although productivity gaps in the latter group remain considerable.

Labour productivity declined from 1980 to 2005 in half of the countries in Latin America & the Pacific and increased only slightly in the remaining countries. With very little to no improvement over the past two decades, labour productivity levels for countries in this region have diverged from those of the developed economies. (See figure 18a, which displays economies with significant changes – 10 percentage points or more.) For example, in 2005, the comparative level of output per person employed in Venezuela was 42 per cent of the United States level, compared to 77 per cent in 1980. In contrast, economies in Asia & the Pacific, although generally having lower labour productivity levels than Latin American countries, showed significantly better catch-up performance relative to the developed economies. For instance, the overall productivity growth rate in China increased at 5.7 per cent per year on average since 1980 while it increased at 4.8 per cent per year in the Republic of Korea. This placed the Republic of Korea at 68 per cent of the US productivity level in 2005 compared to 28 per cent in 1980.

Figure 18b shows that, for almost all countries in the data set, manufacturing productivity growth between 1980 and 2005 has been faster than that for the total economy. However, the growth differential between manufacturing and the total economy was larger for the United States than for most other economies and was to a large extent driven by the relatively large size of the information and communication technologies producing industry in the United States. In most cases, therefore, the manufacturing productivity gap, measured against the United States, has widened over this period, in particular since the mid 1990s, and is bigger than for the aggregate economy. For example, the gap in manufacturing GDP per person employed relative to the United States increased from 1995 to 2005 by over 25 percentage points in Canada, Italy and Spain.

Manufacturing productivity growth in most Asian countries has been quite rapid, in particular in China and the Republic of Korea. In contrast, manufacturing productivity gaps between Brazil and Mexico on the one hand and the United States on the other widened substantially. While the manufacturing productivity gap between China and the United States narrowed from 5 per cent of the US level in 1980 to 12 per cent in 2005, the productivity level in Brazilian manufacturing dropped from 19 per cent of the US level in 1980 to only 5 per cent in 2005.

It has often been suggested that the potential for productivity growth in the services sector is quite limited, but this is not confirmed by the estimates for transport and communication and wholesale and retail trade (including hotels and restaurants). In many instances, productivity growth in transport and communication was even faster than in manufacturing. Much of that improvement stems from the acceleration in productivity growth in telecommunications. In trade, productivity growth is even higher, in particular in the developed economies, where the use of information and communication technology and the introduction of new business models, for example in the retail sector, have significantly accelerated productivity growth. Figure 18c shows that comparative levels of productivity in transport and communications and in the wholesale and retail trade differed at least as much between countries as for manufacturing. It should be emphasized, however, that the estimates for services are of an experimental nature and may, amongst other things, not be sufficiently adjusted for differences in the quality of the services provided in each of the countries.

Figure 18a. Labour productivity (value added per person employed) as a percentage of the US level, total economy, 1980 and 2005

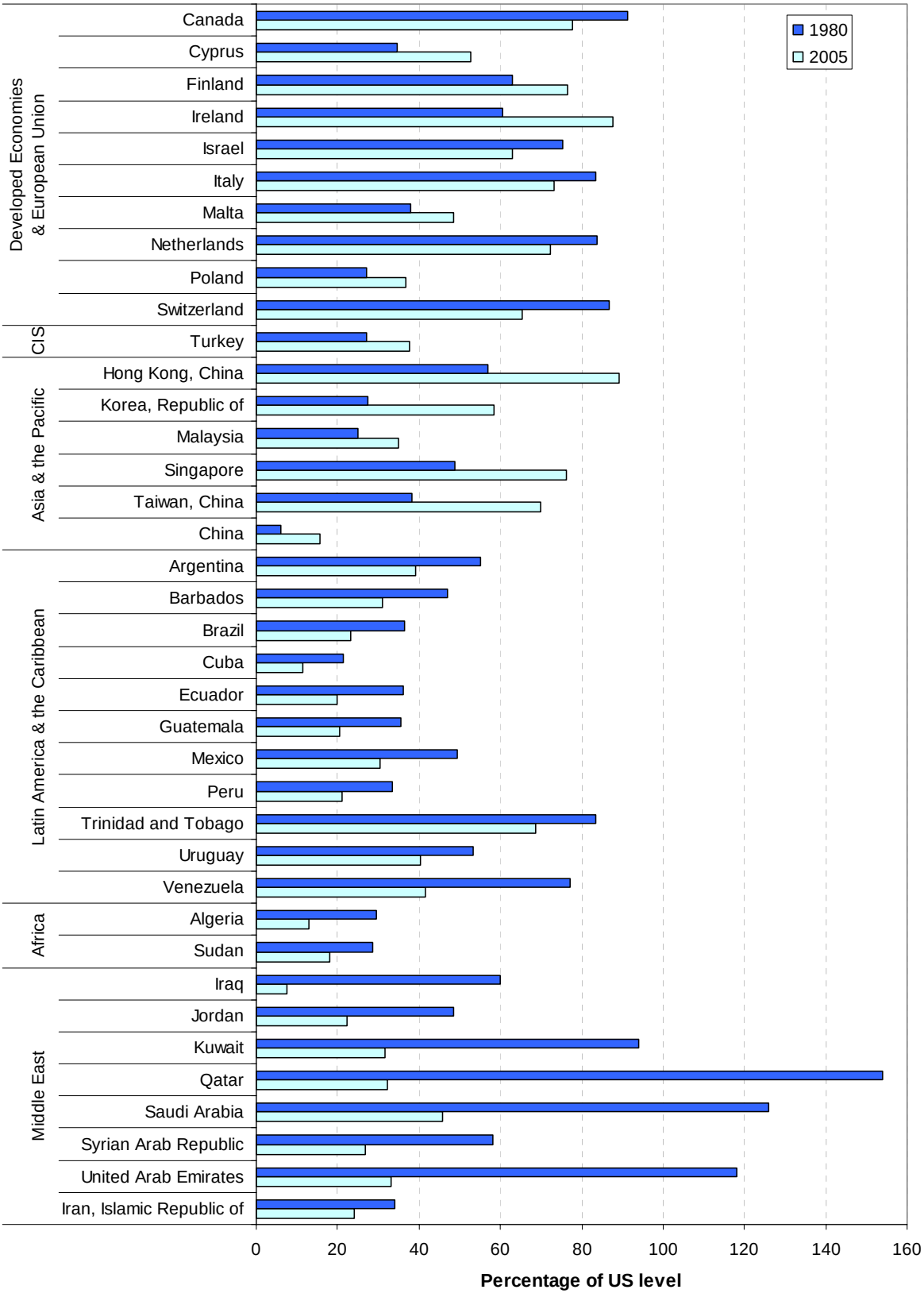


Figure 18b. Labour productivity annual average growth rates, 1980-2005

	Total economy		Manufacturing		Agriculture, forestry and fisheries	Transport and communi-cations	Wholesale and retail trade, including hotels and restaurants
	Value added per person employed 1980-2005	Value added per hour worked 1980-2005	Value added per person employed 1980-2005	Value added per hour worked 1980-2005	Value added per person employed 1980-2005	Value added per person employed 1980-2004	
Developed Economies & European Union							
European Union							
Austria	1.8 a	2.4 a	3.7	4.2	2.3		
Belgium	1.5 a	1.8 a	3.7	3.9	-4.8	3.1	
Bulgaria	1.4 c				2.2		
Cyprus	2.3 c	2.0 c			2.7		
Czech Republic	1.9 c	2.1 c	6.1 e	6.3 e	2.6	0.8 f	
Denmark	1.7 a	1.9 a	2.7	2.6			
Estonia	3.6 c	3.4 c					
Finland	2.5 a	2.8 a	5.4	5.7	-4.0	4.0	6.4
France	1.5 a	2.2 a	3.5	4.0	4.2	3.1	5.0
Germany	1.4 c	1.8 c	2.8 h	2.9 h	5.0 h	4.7 t	2.1 t
Germany, Federal Republic of (Western)	1.8 g	2.8 g	1.7 s	2.8 s	3.6 s	1.9 s	3.5 s
Greece	1.4 a	1.5 a	1.5	1.5	2.5		
Hungary	2.9 c	2.9 c	6.7 e	6.4 e	5.6		
Ireland	3.1 a	3.8 a	8.1	8.5	2.5		
Italy	1.1 a	1.4 a	2.0	2.0	6.0		
Latvia	2.8 c	2.9			4.3		
Lithuania	1.4 c	1.0			3.5		
Luxembourg	1.7 a	2.2 a	3.8	3.8	2.0		
Malta	2.1 c	2.2 c					
Netherlands	1.1 a	1.8 a	2.8	3.2	3.0	2.9	3.7
Poland	4.0 c	3.8 c	7.6 e	7.0 e	2.5		
Portugal	1.4 a	1.9 a	2.6	3.0	2.9		
Romania	2.6 c				-1.6		
Slovakia	3.5 c	3.8 c	10.2 e	10.0 e	5.4 d		
Slovenia	2.7 c	3.1 j			5.1 d		
Spain	1.2 a	1.7 a	2.0	2.4	5.0		
Sweden	2.0 a	1.8 a	4.7	4.3	3.3	2.9	5.9
United Kingdom	2.1 a	2.4 a	3.8	3.8	2.8	4.1	7.0
North America							
Canada	1.0 a	1.1 a	0.8	0.7	2.6	2.6	1.9
United States	1.7 a	1.7 a	4.1	4.0	4.1	2.6	4.2
Other Developed Economies							
Australia	1.5 a	1.6 a	2.3	2.2	3.4	2.0	1.7
Israel	0.9				1.2		
Japan	1.8 a	2.5 a	3.8	4.1	2.2	2.2	2.4
New Zealand	1.3 a	1.5 a			3.2		

Figure 18b continued

	Total economy				Manufacturing				Agriculture, forestry and fisheries		Transport and communi-cations		Wholesale and retail trade, including hotels and restaurants	
	Value added per person employed 1980-2005		Value added per hour worked 1980-2005		Value added per person employed 1980-2005		Value added per hour worked 1980-2005		Value added per person employed 1980-2005		Value added per person employed 1980-2004			
Western Europe (non-EU)														
Iceland	1.4	a	1.5	a										
Norway	2.0	a	2.5	a	2.1		2.3		4.5					
Switzerland	0.5	a	0.9	a					0.9					
Central & South-Eastern Europe (non-EU) & CIS														
Central & South-Eastern Europe														
Albania	4.5	k							2.9					
Bosnia and Herzegovina	7.8	k												
Croatia	0.1	c												
Serbia and Montenegro	-1.6	k												
The former Yugoslav Republic of Macedonia	-0.7	k												
Turkey	3.1	a	3.2	a					1.4					
Commonwealth of Independent States (CIS)														
Armenia	4.0	k												
Azerbaijan	1.5	k												
Belarus	2.6	k							4.7	d				
Georgia	-2.3	k							3.1	i				
Kazakhstan	-0.1	k							-2.8	l				
Kyrgyzstan	-2.1	k							-0.8	m				
Republic of Moldova	-3.5	k												
Russian Federation	-0.1	k							0.7	d				
Tajikistan	-4.1	k							-6.7	l				
Turkmenistan	-2.4	k							3.6	l				
Ukraine	-1.8	k							0.5	d				
Uzbekistan	-0.3	k							7.1	l				
Asia & the Pacific														
Eastern Asia														
China	5.7				7.9				4.0					
Hong Kong, China	3.5		3.6											
Korea, Republic of	4.7	a	5.4	a	7.4		8.0		6.3		5.4		3.4	
Taiwan, China	4.1		4.8		4.7		5.4				5.9		4.3	
Pacific Islands														
Papua New Guinea									1.1					
South Asia														
Bangladesh	2.2								-0.1					
India	3.7				3.4				1.5		4.6			

Figure 18b continued

	Total economy		Manufacturing		Agriculture, forestry and fisheries	Transport and communi-cations	Wholesale and retail trade, including hotels and restaurants
	Value added per person employed 1980-2005	Value added per hour worked 1980-2005	Value added per person employed 1980-2005	Value added per hour worked 1980-2005	Value added per person employed 1980-2005	Value added per person employed 1980-2004	
Nepal					1.5		
Pakistan	2.9				2.0		
Sri Lanka	2.3				1.1		
South-East Asia							
Cambodia	1.3				1.5		
Indonesia	2.1		3.6		2.3	0.3	1.3
Malaysia	3.1				3.4		
Myanmar	-0.1				3.0		
Philippines	-0.1				0.3		
Singapore	3.5	3.6			1.5		
Thailand	3.9				2.7		
Viet Nam	4.1				2.9		
Latin America & the Caribbean							
Caribbean							
Barbados		-0.7 h					
Cuba	-0.8				-0.1		
Dominican Republic	1.4				2.4		
Haiti					-1.9		
Jamaica	-0.2	0.2 n					
Puerto Rico	1.2						
Saint Lucia	2.8	2.5 l					
Trinidad and Tobago	0.9	2.8 h					
Central America							
Costa Rica	0.6				2.2		
El Salvador					-0.2		
Guatemala	-0.6				0.1		
Honduras					0.7		
Mexico	-0.1 a	-0.3 a	0.7	0.5	1.5	0.5	-2.6
Nicaragua					-1.1		
Panama					2.4		
South America							
Argentina	0.3	0.4			2.9		
Bolivia	-0.7				1.9		
Brazil	-0.1	0.2	-0.9		3.6	-1.1	-3.4
Chile	1.6	1.5			5.3		
Colombia	0.7	1.0			1.2		
Ecuador	-0.7				3.2		
Paraguay					1.4		
Peru	-0.2				2.0		
Uruguay	0.5				3.1		
Venezuela	-0.8	-0.7			0.1		

Figure 18b continued

	Total economy		Manufacturing		Agriculture, forestry and fisheries	Transport and communi-cations	Wholesale and retail trade, including hotels and restaurants
	Value added per person employed 1980-2005	Value added per hour worked 1980-2005	Value added per person employed 1980-2005	Value added per hour worked 1980-2005	Value added per person employed 1980-2005	Value added per person employed 1980-2004	
Africa							
North Africa							
Algeria	-1.6				1.6		
Egypt	-2.2				2.6		
Morocco	1.0				1.8		
Sudan	-0.2				4.2		
Tunisia	0.3				2.2		
Sub-Saharan Africa							
Eastern Africa							
Burundi					-0.6		
Ethiopia	1.7						
Kenya	0.9				-0.3		
Madagascar	-0.2				-1.5		
Malawi	-1.9				0.9		
Mozambique	0.4				1.3		
Rwanda					-0.3		
Tanzania, United Republic of	1.0				1.7		
Uganda	1.3				1.1		
Zambia	1.9				0.4		
Zimbabwe	-1.1				-0.9		
Middle Africa							
Angola							
Cameroon					2.3		
Chad					1.4		
Congo, Democratic Republic of					-1.3		
Southern Africa							
South Africa	0.7				2.0		
Western Africa							
Benin					3.3		
Burkina Faso	2.1						
Côte d'Ivoire	-3.7				-1.5		
Ghana	0.2				0.8		
Guinea					1.6		
Mali	-0.2				1.8		
Niger	1.8				0.0		
Nigeria	-2.4				6.3		
Senegal	-0.4				-0.4		
Middle East							
Bahrain	0.5						

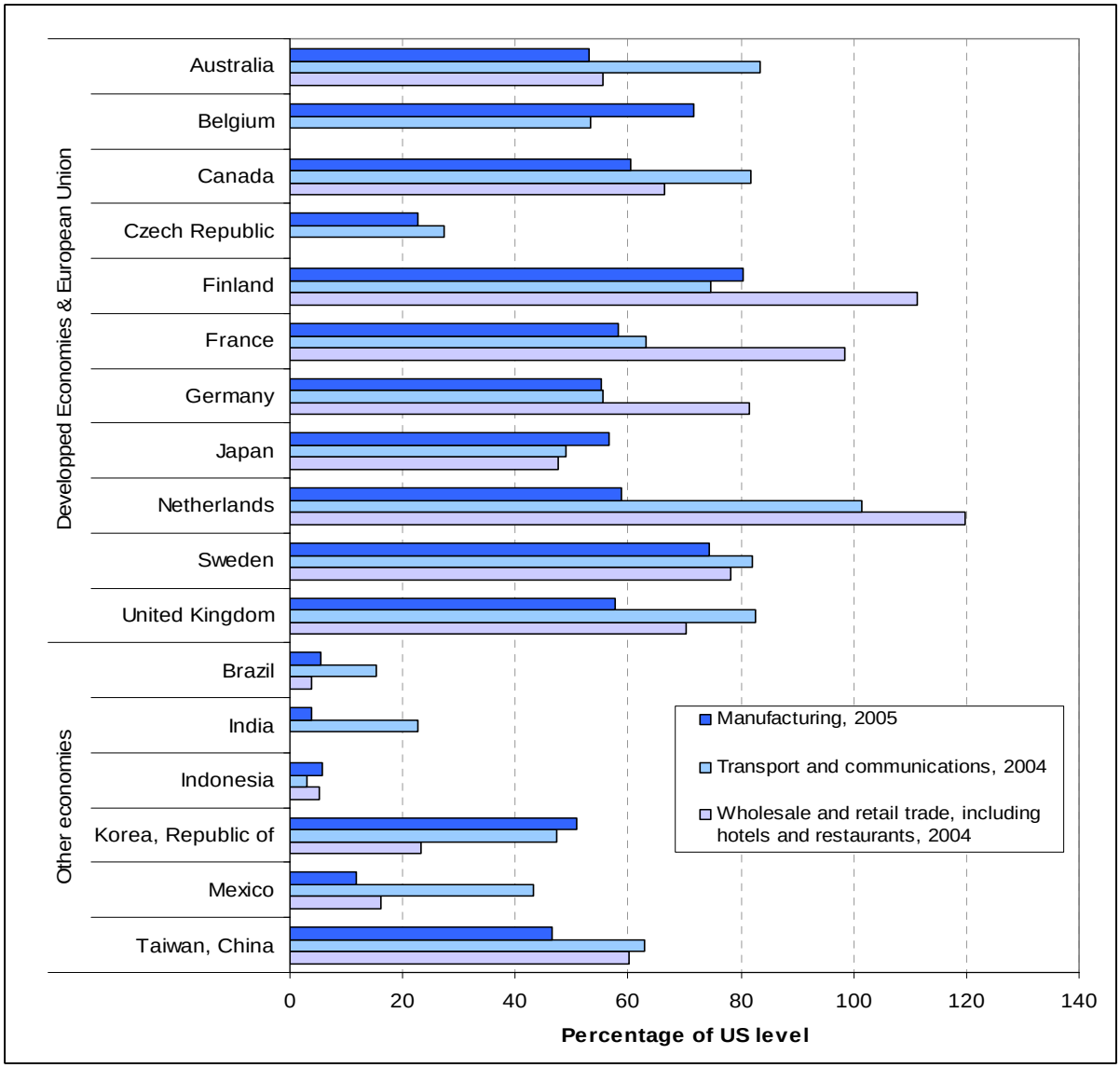
Figure 18b continued

	Total economy		Manufacturing		Agriculture, forestry and fisheries	Transport and communi-cations	Wholesale and retail trade, including hotels and restaurants
	Value added per person employed 1980-2005	Value added per hour worked 1980-2005	Value added per person employed 1980-2005	Value added per hour worked 1980-2005	Value added per person employed 1980-2005	Value added per person employed 1980-2004	
Iran, Islamic Republic of	0.3				3.0		
Iraq	-6.5				4.3		
Jordan	-1.5				-0.9		
Kuwait	-2.7						
Oman	1.9						
Qatar	-4.5						
Saudi Arabia	-2.4				8.6		
Syrian Arab Republic	-1.4				0.8		
United Arab Emirates	-3.4						
Yemen	-0.1				1.0 k		

Notes: The growth rates are average annual compounded rates. The figures for total economy have a 1990 US$ base year, while those for the sectors have a 1997 US$ base year. Therefore, the total economy figures are not strictly comparable with those of the sectors.

a. 1980-2006; b. 1987-2006; c. 1989-2006; d. 1990-2005; e. 1993-2005; f. 1993-2004; g. 1980-1997; h. 1991-2005; i. 1992-2005; j. 1990-2006; k. 1989-2005; l. 1985- 2005; m. 1987-2005; n. 1986-2005; o. 1990-1998; p. 1980-2003; q. 1980-2004; r. 1987-2003; s. 1980-1991; t. 1991-2004.

Figure 18c. Labour productivity (value added per person employed) as a percentage of the US level, manufacturing, transport and communication and trade, latest year



8. Employment elasticities indicator (KILM 19)

KILM 19. Employment elasticities

Introduction

Employment elasticities provide a numerical measure of how employment growth varies with growth in economic output. Though discussed less frequently than other key labour market indicators, employment elasticities can provide important information about labour markets. In their most basic use, they serve as a useful way to examine how growth in economic output and growth in employment evolve together over time. They can also provide insight into trends in labour productivity and employment generation for different population subsets in a country, and assist in detecting and analysing structural changes in employment over time.

KILM 19 includes six types of employment elasticities, corresponding with three demographic groups (females, males and the total employed population), and the employed population in the three economic sectors (agriculture, industry and services). The total employment elasticity shows how total employment in a country has varied with total economic output. An elasticity of 1 implies that every 1 percentage point of GDP growth is associated with a 1 percentage point increase in employment. An elasticity of 0.4 implies that every 1 percentage point of GDP growth is associated with employment growth of 0.4 percentage points, and so forth. The female and male employment elasticities show how employment among women and men in a given country has varied with total economic output. These three elasticities are presented for three time periods, 1993 to 1997, 1997 to 2001 and 2001 to 2005 in table 19a. The three sector employment elasticities indicate how employment in a given economic sector has varied with value added in the same sector. The data on sector employment elasticities in table 19b are given for one time period, 1993 to 2005.

Use of the indicator

When it comes to employment elasticities, there is no universally accepted "ideal" figure to which countries' historical elasticities should be compared. The degree of "employment intensity" required by a country depends on several variables including the country's rate of economic growth, the amount of surplus labour and labour force growth rate, the unemployment and labour force participation rates, the level and growth rate of labour productivity, and the poverty rate (especially among workers). All else being equal, countries with relatively high economic growth rates do not require an employment elasticity that is as high as those in countries experiencing lower rates of economic growth. Countries with high labour force growth – or with large reserves of workers – require higher employment elasticities. Given that the extreme poor often rely exclusively on their own labour for survival, countries with large numbers of impoverished workers may need to achieve relatively higher employment elasticities than less labour-abundant, more developed economies, in order to provide sufficient employment opportunities for the working poor. To this end, developing economies often require higher employment elasticities for a given rate of economic growth than developed economies, as the former tend to have a surplus of labour. Accordingly, employment elasticities tend to gradually fall as a country becomes more developed and more labour scarce.

When GDP and employment for a given elasticity are measured for the same group (e.g. total output and total employment, or agriculture value added and employment in agriculture), employment elasticities provide information regarding trends in employment *and* labour productivity. Box 19b shows that globally, the world's aggregate employment elasticity was between 0.32 and 0.33 during

the three time periods between 1993 and 2005. This implies that for every 1 percentage point of additional GDP growth, total employment has grown between 0.32 and 0.33 percentage points during the three periods between 1993 and 2005. Because changes in

Box 19a. Interpreting employment elasticities [1]

		GDP growth	
		Positive GDP growth	**Negative GDP growth**
Employment elasticity (ε)	ε < 0	(-) employment growth (+) productivity growth	(+) employment growth (-) productivity growth
	0 ≤ ε ≤ 1	(+) employment growth (+) productivity growth	(-) employment growth (-) productivity growth
	ε > 1	(+) employment growth (-) productivity growth	(-) employment growth (+) productivity growth

- The upper-left box shows that in countries with positive GDP growth, negative employment elasticities (represented as " ") correspond with negative employment growth and positive productivity growth. For instance, in an economy growing at 2 per cent per annum with an employment elasticity of -0.2, the average rate of employment growth is approximately -0.4 per cent, while the average rate of productivity growth is 2.4 per cent.

- The middle-left box shows that in countries with positive GDP growth, employment elasticities between 0 and 1 correspond with positive employment and productivity growth, but the higher the elasticities within this range, the more employment-intensive (lower productivity) is growth. Hence, an economy growing at 2 per cent per annum with an employment elasticity of 0.6 is experiencing average annual employment growth of about 1.2 per cent and average annual productivity growth of 0.8 per cent. This box typically represents the ideal growth-employment-productivity balance, whereby job growth is occurring hand-in-hand with gains in productivity.[2]

- The lower-left box shows that in countries with positive GDP growth, elasticities greater than 1 correspond with positive employment growth and negative productivity growth.

- The three boxes in the right column indicate that the interpretation of employment elasticities vis-à-vis employment growth and productivity growth is exactly the opposite in cases in which the corresponding GDP growth rate is negative.

[1] This table corresponds to interpretations that can be made when output exactly corresponds with employment (e.g. total output and total employment, or agriculture value added and employment in agriculture). The relationships between productivity, employment and output may not hold in cases in which employment corresponds to a population sub-group (i.e. women or men) and where total output is used instead of output for the population sub-group.

[2] A ILO study by Kahn (2001) claimed that employment elasticities in developing economies should ideally be around 0.7 until these economies attain upper-middle-income status. Kahn demonstrated that employment elasticities gradually fall as a country becomes more developed and more labour scarce. Labour-abundant economies, he argued, and especially those with relatively high incidences of poverty, need to achieve relatively higher employment intensity than do less labour-abundant economies. See A. Kahn: "Employment policies for poverty reduction", Recovery and Reconstruction Department (Geneva, ILO, 2001).

GDP growth are equal to the sum of changes in employment growth and changes in labour productivity growth, one can also conclude from this global employment elasticity that around two-thirds of the world's economic growth between 1993 and 2005 can be attributed to gains in productivity, while around one-third resulted from increased employment.

Box 19a summarizes the inferences that can be drawn from examining employment elasticities and GDP growth rates together.

Several issues related to the use of employment elasticities as an analytical tool should be borne in mind before attempting to draw inferences from them regarding employment performance. First, employment elasticities only take into account information pertaining to historical employment and output growth. This past relationship may not be a good predictor of future trends. Furthermore, elasticities do not provide information as to how other variables influence employment or overall economic performance. As a result, taken alone, employment elasticities are likely to give an over-simplified view of the relationship between output and employment growth. The results should thus be interpreted as evidence of correlation rather than of causality.

Second, employment elasticities within a given country or even at the regional level can display a large degree of volatility from one period to the next. Volatility in the estimates has several potential sources including real changes in the relationship between employment growth and output growth, changes in only one of these two variables, or mere statistical "noise". The first case is not worrisome, as it is indicative of real changes in the underlying relationship between the variables under examination. The second case applies especially in situations where output growth is very small. Indeed, countries with GDP growth close to zero may exhibit large swings in employment elasticities arising from relatively small changes in the underlying variables. It is therefore important to keep the country's or region's relative GDP performance in mind when interpreting elasticities. The third case arises mainly due to small sample size issues. Because the elasticities calculated for the KILM are for relatively short time periods, the fairly small number of observations for each period in each country can result in statistical "noise" and thus in a lower degree of certainty in the elasticity estimates themselves. It is therefore important to stress that the individual country-level elasticities do have a degree of statistical uncertainty.

Lastly, there is a danger in terms of assuming that seemingly favourable trends in employment intensity are indicative of positive overall macroeconomic performance in a given country or region. While it is indeed crucial to get the employment-side of the macroeconomic picture right, success in this regard by no means automatically translates into other favourable outcomes, such as poverty alleviation. It is therefore important to assess trends in employment elasticities together with other important macroeconomic variables, such as trends in output growth, inequality, real wages, poverty rates, and others.

Definitions and sources

The employment elasticity is defined as the average percentage point change in employment for a given employed population group (total, female, male, agriculture, industry or services) associated with a 1 percentage point change in output (represented by total output or value added in a given sector) over a selected period.

The underlying country-level employment data for the total, female and male elasticities shown in table 19a are taken from the Global Employment Trends (GET) Model,1 which combines unemployment data from KILM tables 8 and 9 together with

1. For more information on the Global Employment Trends Model, see box 3 in "Guide to understanding the KILM".

Box 19b. World and regional estimates of employment elasticities [1]

	Employment elasticities			Average annual GDP growth rates		
Employment elasticities	1991-1995	1995-1999	1999-2003	1991-1995	1995-1999	1999-2003
WORLD	0.34	0.38	0.30	2.9	3.6	3.5
Developed Economies and European Union	0.25	0.34	0.21	2.2	3.1	2.1
Central and Eastern Europe (non-EU) and CIS	0.28	0.21	0.10	-7.8	0.5	6.2
East Asia	0.14	0.14	0.18	11.6	7.4	7.7
South-East Asia and the Pacific	0.39	0.20	0.42	7.4	1.6	4.8
South Asia	0.40	0.49	0.36	6.0	5.8	5.1
Latin America and the Caribbean	0.64	0.68	0.41	3.4	2.8	1.4
Middle East and North Africa	0.66	1.01	0.70	3.1	3.7	4.3
Sub-Saharan Africa	0.73	0.82	0.53	1.1	3.2	3.2

Source: ILO Global Employment Trends Model. See box 3 in "A Guide to Understanding the KILM" for more information on estimation methodology.

The table above reveals that for every 1 percentage point of additional GDP growth, total global employment grew between 0.30 and 0.38 percentage points during the three periods between 1991 and 2003. This implies that around two-thirds of the economic growth realized between 1991 and 2003 can be attributed to gains in productivity, while one-third resulted from employment growth. Of the three periods, employment growth was strongest from 1995 to 1999, which was also the period with the strongest global economic growth. Significantly, during the most recent period there was a slight decline in the rate of GDP growth coupled with a marked reduction in the employment intensity of growth.

In the Developed Economies and European Union region, total employment elasticities ranged between 0.21 and 0.34. The most employment-intensive and the most rapid growth period was between 1995 and 1999, while the least employment-intensive growth occurred in the latest period, 1999 to 2003. It is clear that countries in the Central and Eastern Europe (non-EU) and CIS region underwent substantial labour market and macroeconomic adjustments between 1991 and 2003. Between 1991 and 1995, the region experienced a tremendous decline in economic growth together with falling employment and declining labour productivity. The second period from 1995 to 1999 saw a marginal increase in growth together with a slight recovery in employment and productivity. The most recent period has witnessed a large rebound in growth and an employment elasticity of 0.10, indicating that growth has resulted mainly from labour productivity growth rather than employment growth. Latin America and the Caribbean achieved modest to moderate rates of economic growth from 1991 to 2003. One result in Latin America and the Caribbean that was similar to the world as a whole was that the region experienced a decline in the employment intensity of growth between 1999 and 2003, which coincided with a decline in output growth.

In East Asia, total employment elasticities have remained quite low in comparison with the global figures. Combined with high GDP growth rates, this implies that the region has experienced robust productivity growth. However, unemployment rates (see box 8a) in the region have remained fairly steady. Consequently, the region's growth has been sufficiently employment-intensive, while allowing for rapid increases in living standards through productivity growth. South-East Asia experienced a large degree of volatility in overall economic and employment performance over the three periods. From 1991 to 1995, the region's output grew by over 7.4 per cent and the overall employment elasticity of 0.39 was high enough to translate into a reduction in total unemployment. In the period corresponding with the Asian financial crisis, the region's overall employment elasticity fell, indicating that the reduction in output was met with a greater relative decline in employment growth than in productivity growth. The most recent period has witnessed a substantial increase in employment intensity in the region, coupled with a more moderate rise in output. Taking South Asia's total employment elasticities, which ranged from 0.36 to 0.49, together with the region's rapid output growth, gives a clear picture of very favourable labour market developments in the region since 1991, with fast labour productivity growth and substantial growth in employment.

Box 19b (continued)

The most employment-intensive growth was registered in the Middle East and North Africa and sub-Saharan Africa. Taking this together with the regions' relatively low output growth reveals that labour productivity growth has remained extremely low. One encouraging sign is that, in both regions, the fastest growth in output and the most balanced growth – as reflected in the regions' employment elasticities – occurred in the most recent period. Thus, there is reason to hope that gains in output, employment and labour productivity will lead to poverty reduction.

Sectoral employment elasticities and average annual value-added growth rates	Agriculture		Industry		Services	
	Elasticity	Value-added growth	Elasticity	Value-added growth	Elasticity	Value-added growth
WORLD	0.41	2.0	0.28	2.1	0.57	3.0
Developed Economies and European Union	-0.43	1.2	0.28	1.3	0.56	2.9
Central and Eastern Europe (non-EU) and CIS	-0.24	-0.1	0.29	-0.4	0.25	1.5
East Asia	0.23	3.7	0.06	12.5	0.50	8.8
South-East Asia and the Pacific	0.20	2.1	0.68	5.4	0.99	4.6
South Asia	0.71	2.9	0.37	5.9	0.36	6.9
Latin America and the Caribbean	-0.32	2.5	0.51	2.2	1.04	2.7
Middle East and North Africa	1.06	3.3	0.35	2.0	0.73	4.4
Sub-Saharan Africa	0.82	2.3	0.90	2.0	0.79	2.8

The final table provides a picture of historical sectoral employment elasticities and value-added growth by economic sector between 1991 and 2003. These two figures taken together can be useful indicators for measuring broad historical structural economic changes. Globally, the services sector was both the fastest growing sector and the sector with the most job-intensive growth. Indeed, for every 1 percentage point of growth in services sector value added, employment increased by 0.57 percentage points (while the corresponding growth in productivity was 0.43 percentage points). On the other hand, in the agriculture sector, and especially in the industrial sector, value-added growth has been driven more by gains in productivity than by gains in employment.

Regions experiencing structural economic change away from agriculture and into services (and,to a lesser extent, industry) include the Developed Economies and European Union and Latin America and the Caribbean, as each experienced a decline in employment in agriculture despite positive growth in agriculture value added. On the other hand, the Middle East and North Africa experienced greater growth in employment in agriculture than in value added growth in the sector, which meant that the region's agricultural labour productivity declined. It is clear that the agriculture sector also continues to be an important source of livelihood in sub-Saharan Africa and South Asia.

1 See Chapter 1, section A, for additional discussion of employment elasticitites with subregional comparisons.

labour force data from table 1. The employment by sector data utilized to calculate the sector employment elasticities in table 19b are taken from KILM table 4. For the calculation of employment elasticities, only employment data generated from household labour force surveys or population censuses are utilized.

All national GDP and sector value added figures used in the construction of this series are expressed in constant 2000 US dollars. These figures come from the World Bank's *World Development Indicators* database.

Limitations to comparability

Comparability of employment elasticities across countries is affected most significantly by differences in the definitions used for the employment figures. For this indicator, the

employed population is defined as persons aged 15 years and older who satisfy the official ILO definition of employed, as set out in the 13th International Conference of Labour Statisticians (ICLS) and described in the manuscript for KILM 2.[2] Some countries use a lower age bound than 15 years, while some others have an upper limit for eligibility, such as 65, 70 or 74 years. The variations on age bands can affect the comparability of employment estimates across countries, although not to a significant degree.

Two sources of potential comparability limitations are eliminated in the two elasticities tables. First, because employment data are only used if they come from labour force surveys or population censuses, measurement variances are likely to be smaller than if other sources were used as well, for example, administrative records. Second, the main criterion for inclusion of employment data into KILM 19 is that the underlying employment figure is representative of the entire country, thus eliminating comparability issues stemming from geographic limitations (e.g. coverage of urban areas only).

Trends

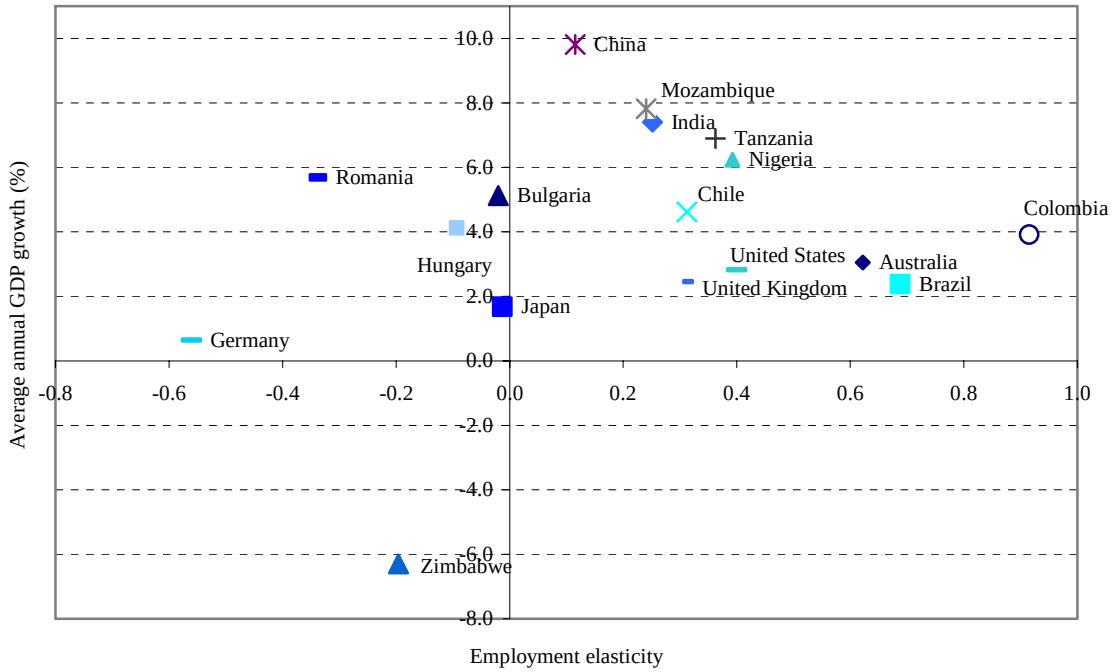
Figure 19a shows the wide variation in employment elasticities among countries. China, with its very high rate of economic growth, experienced relatively low employment elasticities, reflecting the country's robust labour productivity growth. India also grew fairly rapidly between 2001 and 2005, but, owing primarily to its rapid labour force growth, it requires a higher employment elasticity than China in order to avoid increasing unemployment. Many developed economies such as Australia, the United Kingdom and the United States had employment elasticities between 0 and 0.7. The two latest new EU Member States, Bulgaria and Romania, experienced negative employment elasticities over the period from 2001 to 2005. The same was true for Hungary, Japan and even more so for Germany. The negative elasticities, together with positive rates of economic growth in these countries, indicate that employment decreased over the period while labour productivity grew faster than overall GDP. Brazil and Colombia's relatively high employment elasticities and low GDP growth indicate that these countries did not experience robust growth in labour productivity between 2001 and 2005, whereas in Chile, higher GDP growth was shared more equally between employment growth and labour productivity growth. Great differences exist between countries in sub-Saharan Africa, yet Mozambique, Nigeria and the United Republic of Tanzania each experienced relatively robust GDP growth, together with both employment and productivity gains between 2001 and 2005.

Figures 19b through 19d depict trends in the employment intensity of growth in each of the three economic sectors (agriculture, industry and services) together with trends in value-added growth in the respective sectors. The placement on the vertical axis shows a given country's sector employment elasticity (the average percentage point change in employment in the sector over the period of 1993-2005 given a 1 percentage point change in value-added growth in the sector). The horizontal axis shows the average annual growth rate in value added in the sector.

Readers should notice the greater dispersion in agriculture employment elasticities relative to the employment elasticities in industry and services. This, together with the large number of countries in the lower-right quadrant in figure 19b, graphically depicts the structural economic change that is taking place in many developing countries, as they experienced growth in agriculture value added but also an overall decline in employment in agriculture. Also

2 Resolution concerning statistics of the economically active population, employment, unemployment and underemployment, adopted by the 13th International Conference of Labour Statisticians, Geneva, 1982; website: http://www.ilo.org/public/english/bureau/stat/download/res/ecacpop.htm.

Figure 19a. Employment elasticities and GDP growth rates, selected countries, 2001-2005



many of the countries that faced this combination of effects (shown in the lower-right quadrant) were in the Developed Economies & European Union, where less and less people work in agriculture while technical progress increases productivity in the sector. It is also important to note, however, that the largest share of countries in figure 19b fell in the upper-right quadrant, whereby both output and employment grew in agriculture. This emphasizes the fact that for many countries in developing regions, such as North Africa, sub-Saharan Africa, South-East Asia, South Asia and the Middle East the agriculture sector continues to be an important sector in terms of employment.

Figure 19c shows that a large number of countries in the Central and Eastern Europe (non-EU) & CIS region are now in the upper-right quadrant. In the early years of the transition from the Communist system, most of them were found in the upper-left quadrant. This move was caused by the positive development in both output and employment in the region recovering from the disintegration of the former Soviet Union, which had a particularly strong negative impact on the region's industrial base in the early 1990s. The vast majority of countries in the other regions are also found in the upper-right quadrant, whereby industrial output and employment grew hand-in-hand. In contrast, some countries – especially in the Developed Economies & European Union and Latin America & the Caribbean – had negative employment elasticities combined with positive changes in value added, which can be explained partially by outsourcing and increased cost pressure in the industrial sector as a result of globalization.

The relationship between employment elasticities and value-added growth in the services sector, which is shown in figure 19d, underscores the dynamism of this sector in many countries. In many parts of the world, the services sector grew rapidly while creating employment opportunities at the same time.

Figure 19b. Agriculture employment elasticities and agriculture value-added growth rates, 1993-2005

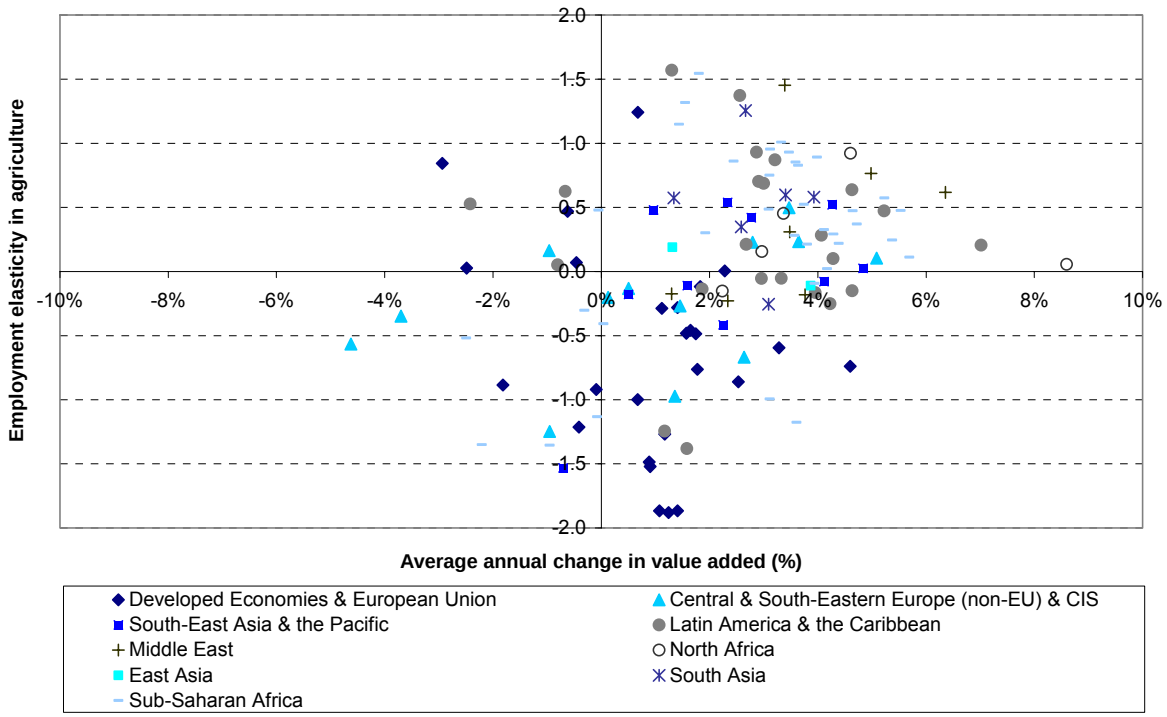


Figure 19c. Industry employment elasticities and agriculture value-added growth rates, 1993-2005

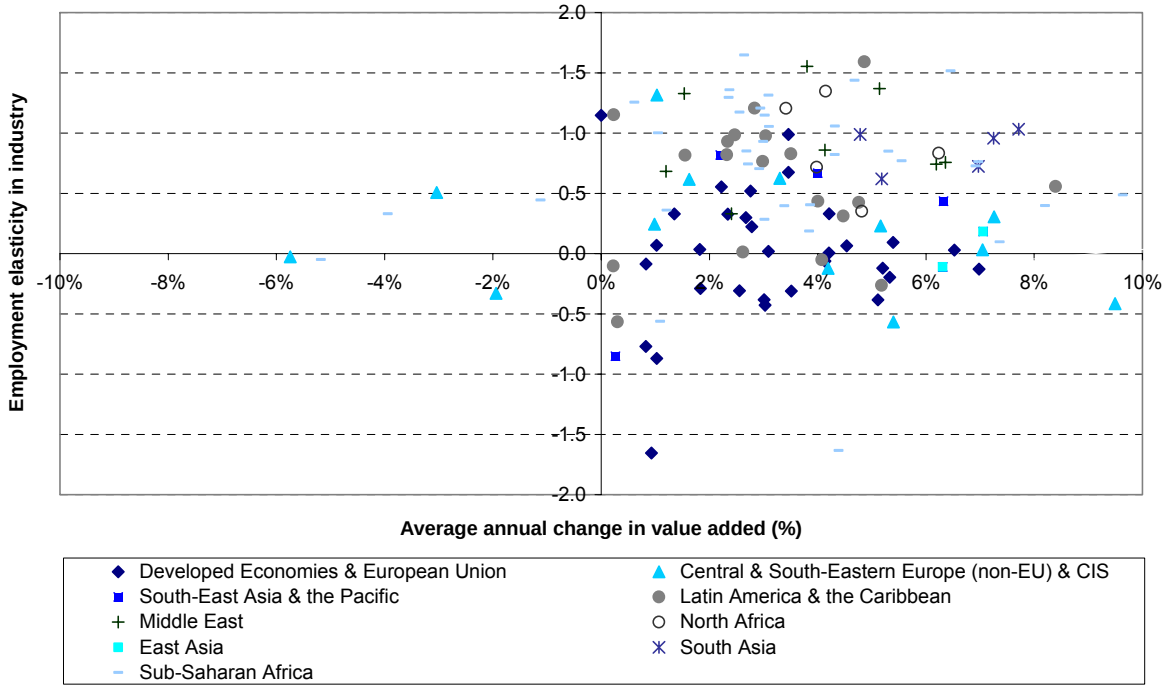
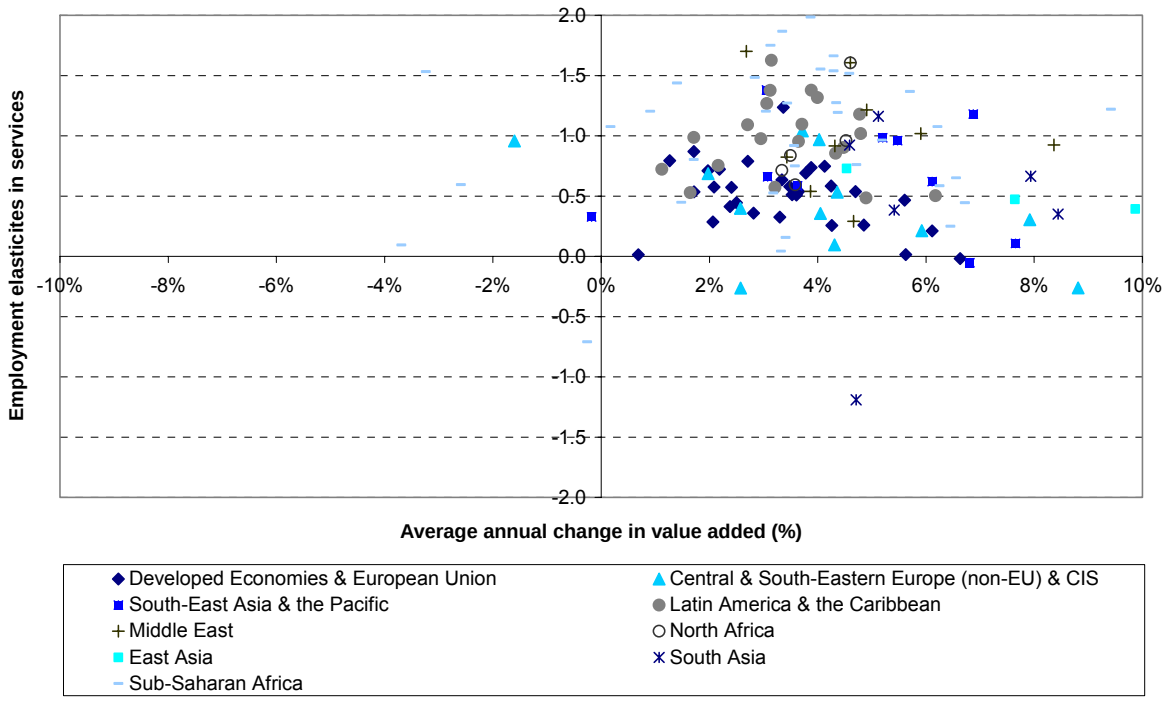


Figure 19d. Services employment elasticities and services value-added growth rates, 1993-2005



9. Poverty, working poor and income distribution indicator (KILM 20)

KILM 20. Poverty, working poor and income distribution

Introduction

Table 20 reproduces the indicators used for monitoring poverty reduction and progress toward the first UN Millennium Development Goal (MDG), namely the estimates of the population living below the international poverty lines of US$1 and US$2 a day. This is supplemented by other poverty measures, including the estimates of the population living below a nationally defined poverty line, and a new measure relating to the number of persons who work yet still live in a household whose members are estimated to be below the US$1 or US$2 a day poverty line, i.e. the "working poor". Finally, the Gini index is included as a measure of income distribution. Separate estimates for men and women are not feasible, as it is not possible to estimate the actual distribution of consumption or income within the household from large-scale consumption surveys.

Information on poverty in table 20 relates almost entirely to developing economies because similar data simply do not exist for most high-income economies, where extreme poverty is a more rare occurrence. Eighty-three economies have at least one estimate of people living below the national poverty line from 1991 to present while 96 economies have an estimate of the US$1 a day international poverty line for one year from 1991 up to present (70 from 2000 or later). However, only 31 countries in table 20 have complete figures for the national poverty lines (national, urban, rural) for two years, making it difficult to discern trends over time. Estimates based on the US$1 and US$2 a day international poverty lines are of relatively more recent origin and are only available for a few years for most countries.[1] The Gini index is shown only for the countries where poverty information is available; however, this statistic is also available for many high-income economies from the original data repository (the World Bank). Estimates of the "working poor" – defined as the proportion of employed persons living in a household whose members are estimated to be below the poverty line – are also available 96 economies.

Use of the indicator

The value of measures of poverty and income distribution lies in the information they provide on the outcome of economic processes at the national level, that is, as a reflection of the access of different groups of people to goods and services. The information relating to poverty shows the absolute number and the proportion of the population that has "unacceptably" low consumption or income levels, while the inequality series shows the disparity between different groups of people within a country in terms of consumption or income levels. Thus, the measurement of poverty is extremely important as an indication of the well-being and living conditions in a country. In addition, a poverty line helps focus the attention of governments and civil society on the living conditions of the people in poverty and can be used to gauge the need to devise public policies and programmes to reduce poverty and enhance the welfare of individuals within a society. Analysing information on poverty over time, when comparable, is crucial to monitoring any

1. When compiling the poverty data for table 20, a few observations on the international poverty line were discarded when the overall trend for a country series was deemed inconsistent over time.

increase or decrease as well as to assessing the results of poverty reduction programmes. Any assessment of poverty can also contribute to explaining its possible causes, an important step in finding a solution.

During the 1990s, a decade characterized by increased globalization and an increase in the number of market-based economies, poverty was increasingly recognized as a major challenge for the international community. The first of the UN MDGs[2] is to "eradicate extreme poverty and hunger", with the specific target of halving the share of people in the world living on less than US$1 a day between 1990 and 2015.[3]

While poverty in the developed world is often associated with unemployment, the extreme US$1 a day poverty that exists throughout much of the developing world is largely a problem associated with persons who are employed. Recent research on the concept of the "working poor" – defined as the proportion of employed persons living in a household whose members are estimated to be below the poverty line – in developing economies has shown that the majority of people in poverty must work in order to survive and support their families in a context where no efficient social protection schemes or social safety nets exist. (See box 20a for the world and regional estimates of the working poor.) For these poor workers, the problem is typically one of poor employment *quality*, including low wages and productivity. Thus, reducing overall poverty rates in line with the MDG necessitates fostering an enabling environment in which the employment opportunities and incomes of the working poor are improved.[4]

The poverty, working poor and inequality measures presented here focus on only one aspect of absolute and relative deprivation. They concentrate on personal income or private consumption and do not directly address deprivation related to other spheres, such as access to health care, education, employment, and social and political participation. A comprehensive analysis of poverty and inequality should include a link to these other dimensions, which are captured at least partially in some of the other KILM indicators. It might also be useful to look at information on poverty and inequality alongside estimates of per capita gross domestic product (GDP), to establish the extent to which low income levels are associated with, and compounded by, widespread poverty and inequality.

Definitions and sources

Because of the multiple dimensions of poverty, there are various theoretical conceptions of measurement. Three are described below:

2. As part of the Millennium Declaration of the United Nations "to create an environment – at the national and global levels alike – which is conducive to development and the elimination of poverty", the international community has adopted a set of international goals for reducing income poverty and improving human development. A framework of eight goals, 18 targets and 48 indicators to measure progress was adopted by a group of experts from the United Nations Secretariat, ILO, IMF, OECD and the World Bank. The indicators are interrelated and represent a partnership between developed and developing economies. For further information on the Millennium Development Goals, see http://www.un.org/millenniumgoals/.

3. The Millennium Development Goal on poverty is expressed in terms of shares. That is, the goal is to reduce by half the proportion of people living below US$1 a day. Because populations tend to rise over time, a falling share of the poor population will not necessarily translate into a decline in the actual number of poor people.

4. The ILO advocates placing employment at the heart of poverty reduction strategies, noting, in particular, that "it is precisely the world of work that holds the key for solid, progressive and long-lasting eradication of poverty". ILO: *Working Out of Poverty*, Report of the Director-General, International Labour Conference, 91st Session (Geneva, 2003). For information on how the ILO's Decent Work Agenda is essential to the achievement of the MDGs, see website: http://www.ilo.org/public/english/bureau/exrel/mdg/.

1. One common approach is to analyse information on monetary income or personal consumption as opposed to human development. The underlying information relates, in most cases, to personal consumption expenditure and, in only a few cases, to personal income. This is because obtaining information on income from surveys can be difficult and because such information may not fully reflect the "real" living standard of households. A drawback of measuring poverty in this manner is that household surveys often vary across countries and over time, thus reducing the comparability of the information (see "Limitations to comparability" below).

   A key feature of using income or personal consumption as measures of poverty is the establishment of a poverty line, the predetermined level of income or consumption below which a person (or household) is considered to be poor. The incidence of poverty is typically measured as the fraction of the population whose consumption expenditure falls below this predetermined level. Many countries have adopted national income poverty lines, using thresholds based on the amount of income necessary to buy a specified quantity of food. Measurement of poverty using internationally comparable poverty lines is also useful because it allows poverty estimates to be developed on a global basis. The World Bank has established two international poverty lines, at US$1 and US$2 of consumption per person a day. The income distribution indicator, the Gini index, is a well known direct measure of inequality in income or consumption. It looks at the cumulative distribution of income or consumption (represented by the Lorenz curve) and estimates the extent to which it deviates from perfect equality.

2. A second perspective relies upon a "basic needs" approach and reflects deprivation in terms of material requirements for minimally acceptable fulfilment of human needs, including food and employment. The concept goes beyond the lack of income because it takes into account the need for basic health care and education, as well as essential services such as access to safe water. In addition to its Human Development Index, the United Nations Development Programme (UNDP) in 1997 introduced the concept of the Human Poverty Index (HPI) for developing economies.[5] The HPI is a composite index that aims to capture the extent of deprivation in human life. It combines three dimensions – limitations of life expectancy, illiteracy and overall standard of living – for which information is available and comparable across countries.

3. The third approach, which combines elements of the two previous perspectives, is related to the capabilities required for a person to function in a particular society, under the assumption that a minimally acceptable level of such capabilities exists. This approach covers a wide range of capabilities, and can vary from the capability of being well nourished in a low-income economy to more complex social achievements in a high-income economy, such as the capability of gaining computer literacy (on the assumption that a person lacking computer literacy is likely to face difficulties in entering the labour market in a developed economy). Poverty is defined in terms of being out of the mainstream of a society, notably being outside the labour market. Poverty analysis from this angle has led to development of the concept of "social exclusion".

5. For more information, see UNDP: *Human Development Report 2005* (New York, 2005); website: http://www.undp.org/hdro/.

Box 20a. World and regional estimates of working poor

US$1 working poor ('000s)	1996	2002	2003	2004	2005	2006*
WORLD	622'029	571'129	550'441	528'534	513'924	486'612
Central & South-Eastern Europe (non-EU) & CIS	11'267	5'306	4'821	4'403	3'535	3'133
East Asia	140'822	125'668	109'598	95'191	86'279	75'970
South-East Asia & the Pacific	48'837	41'707	40'792	39'672	38'599	36'683
South Asia	266'889	227'281	221'648	214'942	209'407	195'469
Latin America & the Caribbean	22'955	25'070	24'111	22'560	21'222	19'006
North Africa	1'202	1'005	992	965	954	927
Sub-Saharan Africa	128'636	143'221	146'080	148'363	151'135	152'222
Middle East	931	1'473	2'112	2'192	2'580	3'016
US$2 working poor ('000s)	**1996**	**2002**	**2003**	**2004**	**2005**	**2006***
WORLD	1'374'506	1'364'759	1'344'172	1'318'384	1'304'737	1'287'003
Central & South-Eastern Europe (non-EU) & CIS	49'518	41'996	38'711	37'523	36'213	34'889
East Asia	459'048	380'497	358'501	336'564	320'671	299'841
South-East Asia & the Pacific	136'288	139'990	139'599	139'263	139'041	137'259
South Asia	433'734	464'909	467'039	463'738	463'287	469'007
Latin America & the Caribbean	65'367	72'629	70'431	65'231	63'735	60'596
North Africa	22'088	24'423	24'664	25'186	25'442	24'494
Sub-Saharan Africa	192'772	223'174	228'695	234'453	240'086	245'043
Middle East	9'755	11'871	11'813	11'968	11'957	11'780

US$1 working poor share in total employment (%)	1996	2002	2003	2004	2005	2006*
WORLD	25.0	20.9	19.8	18.7	17.9	16.7
Central & South-Eastern Europe (non-EU) & CIS	7.5	3.4	3.1	2.8	2.2	1.9
East Asia	19.5	16.4	14.2	12.2	10.9	9.5
South-East Asia & the Pacific	22.1	16.8	16.2	15.4	14.6	13.6
South Asia	56.6	42.4	40.3	38.6	36.8	33.5
Latin America & the Caribbean	12.1	11.4	10.7	9.8	9.1	8.0
North Africa	2.8	2.0	1.9	1.8	1.7	1.6
Sub-Saharan Africa	58.5	56.2	55.9	55.0	54.6	53.5
Middle East	2.3	2.8	3.8	3.8	4.3	4.9

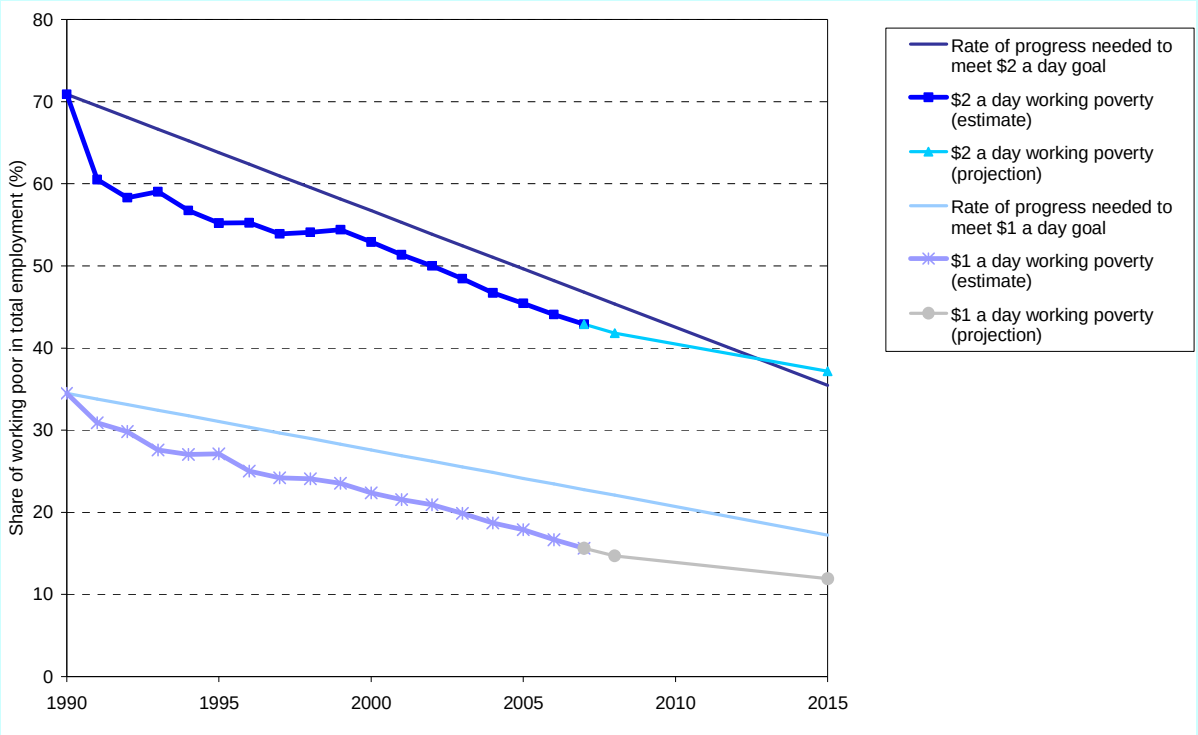
US$2 working poor share in total employment (%)	1996	2002	2003	2004	2005	2006*
WORLD	55.3	50.0	48.5	46.7	45.4	44.1
Central & South-Eastern Europe (non-EU) & CIS	32.8	27.2	25.0	23.8	22.7	21.7
East Asia	63.7	49.8	46.4	43.0	40.6	37.6
South-East Asia & the Pacific	61.6	56.4	55.3	54.1	52.6	51.0
South Asia	92.0	86.8	85.0	83.3	81.4	80.5
Latin America & the Caribbean	34.3	33.1	31.3	28.4	27.2	25.4
North Africa	51.7	48.6	47.4	46.4	45.1	42.2
Sub-Saharan Africa	87.7	87.6	87.5	86.9	86.7	86.2
Middle East	23.8	22.6	21.4	20.7	20.0	19.0

Source: ILO Trends Working Poverty Model (see box 3 in "Guide to understanding KILM" for more information on estimation methodology).
* 2006 preliminary estimates.

The MDG on poverty is to halve the share of people living on less than US$1 a day in the total global population by 2015. The UN Millennium Development Goals Report 2006 acknowledges that despite significant increases in total poverty in sub-Saharan Africa, the improvements in extreme poverty numbers elsewhere, particularly in Asia, are substantial enough to indicate that the world is more or less on track to meet the poverty target set forth in this MDG. Given the strong correlation between poverty and working poverty, the figure below uses the ILO working poverty estimates to show that a goal of halving working poverty gives a similar result. Substantially more progress will be necessary to meet the target, however, to halve the share of working persons living below US$2 a day, as is evident in the gap between the real US$2 a day working poor share and the rate of progress necessary to meet this goal. At the current rate of progress – assuming no change – in 2015, the share of US$2 working poor in total employment will be 5 percentage points above the target of 36 per cent.

Box 20a (continued)

Share of global working poor at US$1 and US$2 a day in total employment, 1990-2015

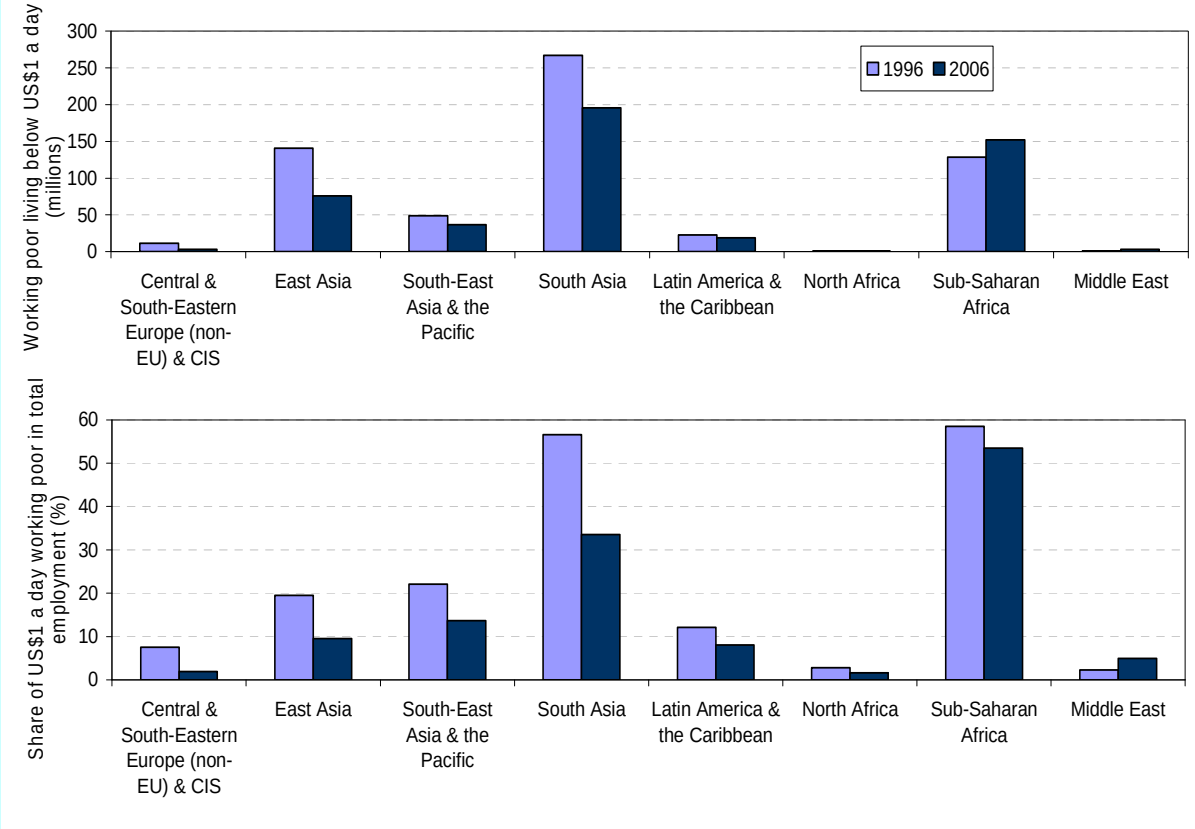


Based on the regional estimates given above, the trends in working poverty over the last decade point to a change in which regions are suffering the most from extreme working poverty. The Asian regions have seen a substantial reduction in the number of working persons living on less than US$1 a day: as many as 148 million Asian citizens withdrew from the working poor category over the ten-year period, representing a drop of nearly 50 per cent. (See the figure below.) Meanwhile, sub-Saharan Africa's weak economic performance has resulted in an increase to the working poor number of almost 24 million over the last ten years. When looking at the share of working poor (at US$1 a day) to the total employed population, however, one finds a slight decline in sub-Saharan Africa due to the fact that the employed population grew slightly faster than did the working poor population. The number of persons living on less than US$1 a day also increased significantly in the Middle East, where that number more than tripled from 1996 to 2006. Although this represented a jump in the share of working poor from 2.3 to 4.9 per cent, the Middle East still maintained a relatively low share of working poor (at US$1 a day) compared to other regions.

One way to look at labour underutilization is to consider those that are faced with decent work deficits, which at the very least includes the working poor. Suppose each working poor living on less than US$1 a day is either underemployed (working less than desired) or has a very low productivity job (working long hours but not efficiently because of lack of education or equipment). These conditions, which are probable (see Chapter 1), indicate that these workers are underutilized as they are not in full and productive employment. Given this definition, labour underutilization would constitute 16.7 per cent of the working world. By extending the definition to using the US$2 a day working poverty line and adding the unemployed, 1.5 billion people in the world – or 30 per cent of the world's working-age population – is labour supply that is potentially underutilized. (Note that this rough estimate excludes those who are inactive but could participate in the labour market – most notably discouraged workers, although these are harder to quantify.)

Box 20a (continued)

Working poor living on less than US$1 a day, number and share in total employment, by region, 1996 and 2006



The data presented for national and international poverty lines and the Gini index were obtained from the set of World Bank development indicators.[6] Three of the four data sets included in table 20 involve the use of poverty lines, with poverty rates calculated as the percentage of the population living below the line. National poverty lines are based on the World Bank's country poverty assessments, while international poverty lines are based on nationally representative primary household surveys conducted by national statistical offices or private agencies under government or international agency supervision, and obtained from government statistical offices and World Bank country departments. Estimates of the Gini index are also based on these sources and supplemented by the Luxembourg Income Study database for high-income economies.[7]

6. National poverty lines were extracted from the World Bank: *World Development Indicators 2007*, CD-Rom (Washington, DC, 2007); website: http://www.worldbank.org/data/wdi2007/. International poverty lines and the Gini index were downloaded from PovcalNet, an interactive web-based computational tool managed by the World Bank that allows users to replicate the calculations by the World Bank's researchers in estimating the extent of absolute poverty in the world. PovcalNet is available online at http://iresearch.worldbank.org/povcalnet/. It is important to note that alternatives to World Bank estimates of poverty do exist and the issue of "best" poverty estimation is a topic of debate in the research community. See, for example, the ILO study on alternative estimates of poverty, M. Karshenas: *Global Poverty: New National Accounts Consistent and Internationally Comparable Poverty Estimates*, ILO mimeo (Geneva, 2002).

7. For additional information regarding the Luxembourg Income Study, see website: http://www.lisproject.org/.

The **national, urban and rural poverty lines** are specific to each country. Several factors may have influenced the choice of poverty threshold, such as nutritional requirements, basic consumption needs or minimum acceptable consumption levels. The population below country-specific poverty lines cannot readily be compared between countries. Also, over time, these poverty lines may have been changed to take account of new developments or new data, casting doubts on comparability over time as well.

The **international poverty lines** use a sum of money in constant US dollars, converted into a sum of money for the country concerned using purchasing power parity (PPP) rather than the exchange rate. A good example is the widely cited poverty line of US$1 a day at 1993 international prices.[8] This is converted into an equivalent amount in the currency of the country in question, using the PPP measure. This measure has the virtue of allowing comparisons over space and time, but it may be too low (or too high) in the context of a particular country.

The third data set for the indicator, the **Gini index**, is a convenient and widely used measure of the degree of income inequality. It measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within a country deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative percentages of recipients, starting with the poorest individual or household. The Gini index measures the area between the Lorenz curve and the hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line.[9] The Gini index has a value of zero for perfect equality of incomes and 100 for perfect inequality. As with all summary measures, it cannot fully capture differences between countries and over time in the cumulative share of different clusters (fractals) of the population in income or consumption, which is represented by the Lorenz curve.

Finally, the **working poor** are defined as individuals who are working but who also fall below an accepted poverty line. The ILO calculates upper- and lower-bound estimates of the working poor. Upper bound estimates are calculated using the equation: ($working\ poor_u$ = $poverty\ rate$ * $population_{15}$), where $population_{15}$ is equal to the population aged 15 and above. The lower-bound estimate of the working poor is calculated using the equation: ($working\ poor_l$ = $poverty\ rate$ * $labour\ force_{15}$), where $labour\ force_{15}$ is the labour force aged 15 and above. The key assumption behind using labour force in the lower-bound estimate is that all of the poor of working age and in the labour force are employed. This assumption is made because in countries where social safety nets do not exist, poor individuals must work in order to maintain a subsistence level of living.[10] The working poor data presented in the KILM table 20 are based on a weighted-average of the data derived using the two methodologies (i.e. a weighted average of the upper bound estimates and the lower bound estimates).

The working poor definition is consequently based on poverty data (the international poverty line at US$1 or US$2 a day as shown in table 20), but it also takes into account countries' specific labour market characteristics, such as the size of the working-age population and the labour force

8. The international poverty lines are US$1.08 a day and US$2.15 a day at 1993 international prices (equivalent to US$1 and US$2 at 1985 prices, adjusted for purchasing power parity (PPP) by the World Bank).

9. Readers may wish to consult other sources for additional information and alternative measures of inequality. See, for example, H. Tabatabai: *Statistics on Poverty and Income Distribution: An ILO Compendium of Data* (Geneva, ILO, 1996); and the World Income Inequality Database (WIID) of the United Nations University at website: http://www.wider.unu.edu/wiid/wiid.htm.

10. For more information on ILO working poverty estimates, see S. Kapsos: "Estimating growth requirements for reducing working poverty: Can the world halve working poverty by 2015?", Employment Strategy Paper, No. 14 (Geneva, ILO, 2004);website: http://www.ilo.org/public/english/employment/strat/download/kps01.pdf.

participation rate. By combining these labour market factors with poverty data, working poverty estimates give a clearer picture of the relationship between poverty and employment than that provided by using standard poverty data alone. Because of the important linkages between employment and poverty, evaluating these two components side by side also provides a more detailed view of the incidence of poverty throughout the world.

Limitations to comparability

Cross-country comparisons should not be made using national poverty lines, as these do not reflect any single agreed-upon international norm on poverty. However, when the focus is narrowed to one country and the same poverty line has been used consistently over time, analyses of trends and patterns of poverty may be safely undertaken.

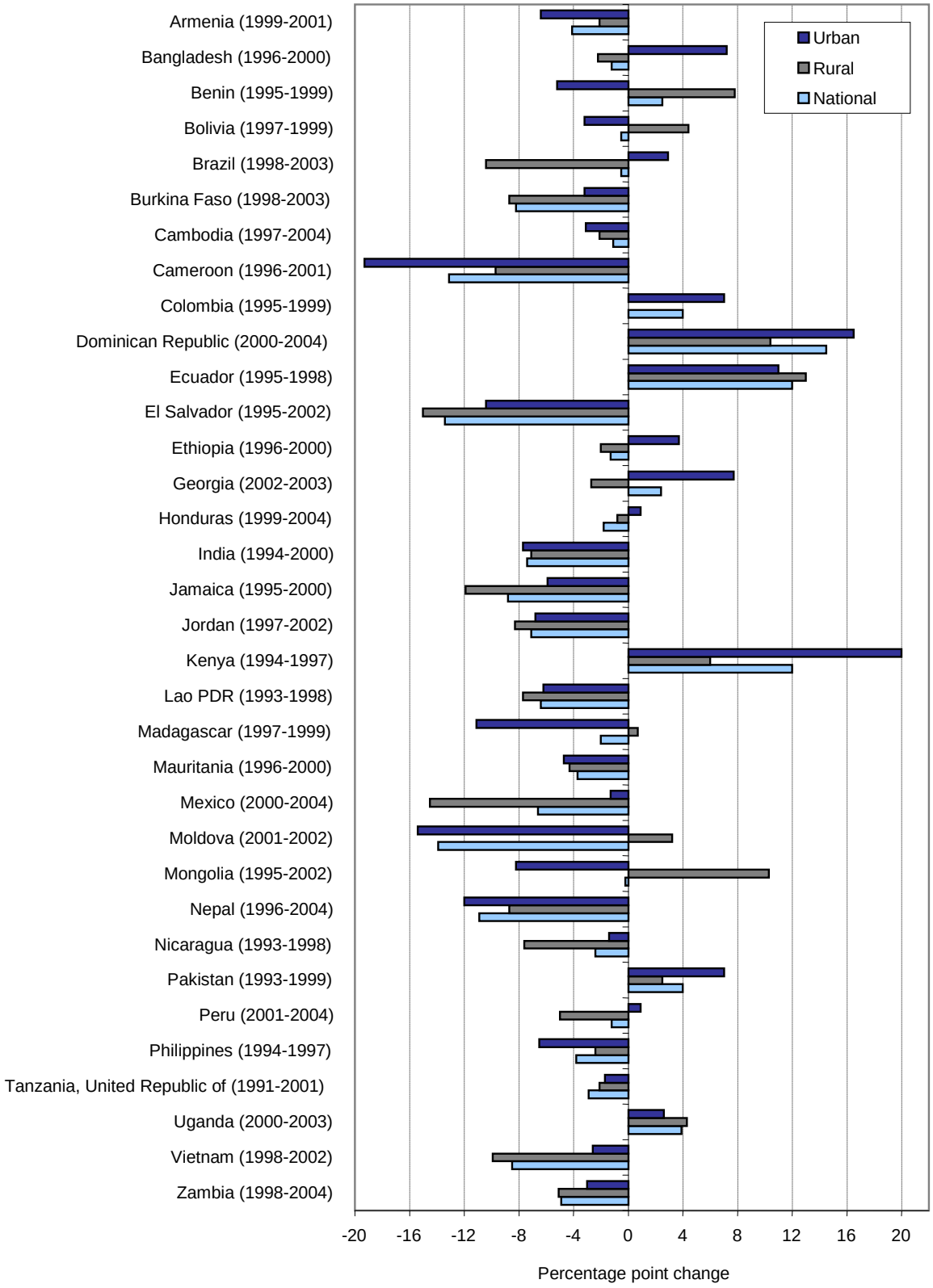
At the country level, comparisons over time may be affected by such factors as changes in data collection procedures or fluctuations in levels of economic activity due to poor harvests, natural disasters or other short-term factors. Again, several country studies have shown that poverty does indeed vary, with both agricultural conditions and the occurrence of natural and economic disasters, and that the membership of the poor group may change from year to year, as some individuals climb out of poverty while others fall into it.

In the case of estimates based on an international poverty line, the use of PPP, rather than exchange rates, ensures that the prices of non-traded goods are taken into account. However, it cannot be categorically asserted that two people in two different countries, consuming at US$1 (or US$2) a day, face the same degree of deprivation or have the same degree of need. Apart from the well-known problems in economics in making interpersonal comparisons of welfare, there are other problems, such as rural-urban price differentials, which may or may not have been taken into account. One estimate may relate to consumption and the other to income, and a daily income of US$1 (or US$2) may permit less consumption than a daily consumption expenditure of the same amount. The adjustments that are often made to convert income estimates into consumption estimates also impart bias to the resulting consumption distributions. Again, the extent of non-market activity and the way in which non-market production and consumption are valued in the two hypothetical countries could substantially hamper comparability.

Even if measurements of poverty using international poverty lines were perfect, several unanswered questions would remain. For example, is a person with a particular consumption level (say US$1 a day) in a poor country better or worse off than a person with the same consumption level in a rich country? Or is a person receiving US$1 a day worse off if he or she lives in a country that has high inequality?

The Gini index, in principle, makes it possible to compare inequality levels in different countries and over time, without defining a particular poverty line, national or international. In practice, however, it involves other problems of comparability. The index is calculated from survey data, which may relate to income or consumption. It is well known that, if both consumption and income information were available in the requisite detail, the Gini index would show greater inequality of income than of consumption. Whether the index is based on income or consumption is made clear in the notes to the tables, and it is important for users to bear the distinction in mind when attempting to make comparisons. The cumulative distributions of consumption or income used in constructing the index relate to per capita levels, and the percentiles are of population, not households. Apart from possible weaknesses in the quality of the underlying consumption or income data, the adjustments made to convert the index into a cumulative distribution of the population may introduce additional bias or error into the estimates. Nevertheless, despite these numerous imperfections, the index is very useful for studying trends in inequality across space and time.

Figure 20a. Percentage point change in proportion of population living below the national poverty line, earliest to latest years



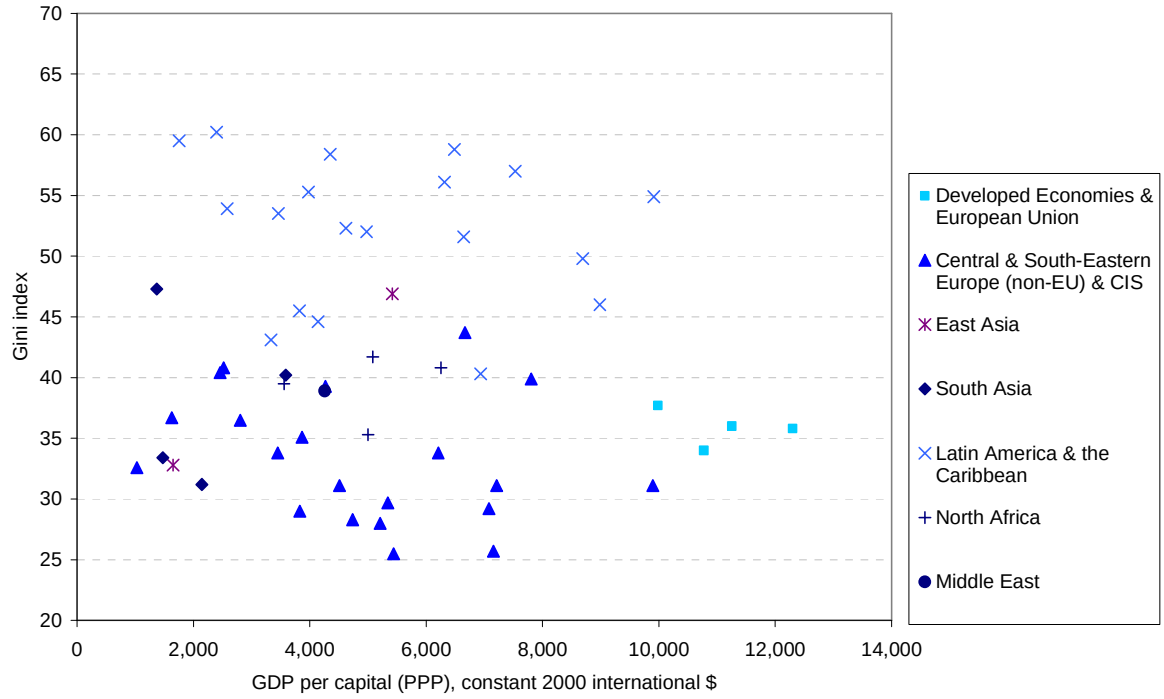
Trends

Of the 31 countries for which multiple observations are available, the national population living below the national poverty line increased in eight countries. The largest increase in national poverty – 14.5 percentage points – was seen in the Dominican Republic between the years 2000 and 2004. More heartening results, however, were evident in the decreases in poverty seen in the remaining countries for the same period. Poverty decreased by more than 10 percentage points in Nepal, Cameroon, El Salvador and Moldova. While the share of the population below the poverty line remained higher in rural than in urban areas in the majority of countries, the percentage point changes of the rural-urban specific rates suggest a pattern of improvement between the urban and rural zones in recent years, whereby poverty is falling more in rural areas than in urban centres.

Figure 20b. Countries with "severe" or "severe-to-moderate" poverty, with working poor estimates and the Gini index, latest years (2000 onwards)

		Population (%) below international poverty line	Working poor (%)	Gini Index
Severe poverty : more than 50 per cent of the population living below US$1 a day	Uganda (2002)	82.3	87.4	45.8
	Nigeria (2003)	71.2	82.9	43.6
	Cambodia (2004)	66.0	75.4	42.9
	Madagascar (2001)	61.0	70.4	47.5
	Rwanda (2000)	60.3	71.7	46.7
	Tanzania, United Rep. of (2000)	57.0	62.9	34.6
	Haiti (2001)	52.9	68.6	59.5
	Zambia (2004)	60.0	75.5	50.7
Severe to moderate poverty : more than 75 per cent of the population living below US$2 a day	Uganda (2002)	95.7	95+	45.8
	Nigeria (2003)	92.3	95+	43.6
	Tanzania, United Rep. of (2000)	90.2	94.8	34.6
	Cambodia (2004)	89.8	93.2	42.9
	Rwanda (2000)	87.8	95+	46.7
	Madagascar (2001)	85.1	92.4	47.5
	Zambia (2004)	84.9	95+	50.7
	Bangladesh (2000)	84.2	91.1	33.4
	Nicaragua (2001)	81.6	91.3	43.1
	Swaziland (2000)	77.7	95+	50.7
	Haiti (2001)	77.6	89.8	59.5
	Ethiopia (2000)	76.6	88.1	30.0

Figure 20c. GDP per capita at purchasing power parity (PPP) and the Gini index, by regional grouping



The incidence of "severe" poverty, where people have to live on less than US$1 a day, was above 50 per cent in eight countries for which at least one observation was available after 1999. All countries with severe poverty are in Eastern and Western Africa (except Haiti and Cambodia), which confirms the fact that a large part of the population on the African continent faces extremely poor living conditions. It is also interesting to note that in seven of these eight countries the Gini index was above 42 – meaning a 42 point deviation from perfect equality on a scale from zero to 100. As seen in this table, 13 countries had more than 75 per cent of the population facing "severe-to-moderate" poverty, i.e. living on less than US$2 a day. These countries are located in Eastern and Western Africa, South-East and Central Asia, and Central America.

Considerable inequalities in consumption levels exist, especially in Latin America & the Caribbean and sub-Saharan Africa. Most countries with a Gini index above 40, which characterizes relatively high inequality, are located in these regions (as well as in a few countries in Asia & the Pacific and the Commonwealth of Independent States). In sub-Saharan Africa, the incidence of inequality tends to be high even though GDP per capita is low at below US$3,000 (at constant 2000 international dollars) in most countries. It is difficult to discern a trend in the GDP per capita of a country and how income is distributed across the country. There is great dispersion in Gini indices at similar levels of wealth, implying that different consumption levels within a country cannot be explained by the size of available national income alone.

Appendix B. International Classification by Status in Employment (ICSE-1993)

The United National Statistical Commission approved in 1958 the following classification:[1]

(a) *Employer:* a person who operates his or her own economic enterprise, or engages independently in a profession or trade, and hires one or more employees. Some countries may wish to distinguish among employers according to the number of persons they employ.

(b) *Own-account worker:* a person who operates his or her own economic enterprise, or engages independently in a profession or trade, and hires no employees.

(c) *Employee:* a person who works for a public or private employer and receives remuneration in wages, salary, commission, tips, piece-rates or pay in kind.

(d) *Unpaid family worker:* usually a person who works without pay in an economic enterprise operated by a related person living in the same household. Where it is customary for young persons, in particular, to work without pay in an economic enterprise operated by a related person who does not live in the same household, the requirement of "living in the same household" may be eliminated. If there are a significant number of unpaid family workers in enterprises of which the operators are members of a producers' cooperative who are classified in category (e), these unpaid family workers should be classified in a separate subgroup.

(e) *Member of producers' cooperative:* a person who is an active member of a producers' cooperative, regardless of the industry in which it is established. Where this group is not numerically important, it may be excluded from the classification, and members of producers' cooperatives should be classified under other headings, as appropriate.

(f) *Persons not classifiable by status:* experienced workers whose status is unknown or inadequately described and unemployed persons not previously employed (i.e. new entrants). A separate group for new entrants may be included if information for this group is not already available elsewhere.

The 15th International Conference of Labour Statisticians adopted, in January 1993, a resolution concerning the ICSE which states *[extract]:*[2]

II. THE ICSE-93 GROUPS [3]

4. The ICSE-93 consists of the following groups, which are defined in section III:

1. employees; among whom countries may need and be able to distinguish "employees with stable contracts" (including "regular employees");

2. employers;

3. own-account workers;

4. members of producers' cooperatives;

5. contributing family workers;

6. workers not classifiable by status.

III. GROUP DEFINITIONS

5. The groups in the ICSE-93 are defined with reference to the distinction between "paid employment" jobs on the one side and self-employment jobs on the other. Groups are defined with reference to one or more aspects of the economic risk and/or the type of authority which the explicit or implicit employment contract gives the incumbents or to which it subjects them.

6. *Paid employment jobs* are those jobs where the incumbents hold explicit (written or oral) or implicit employment contracts which give them a basic remuneration which is not directly dependent upon the revenue of the unit for which they work (this unit can be a corporation, a non-profit institution, a government unit or a household). Some or all of the tools, capital equipment, information systems and/or premises used by the incumbents may be owned by others, and the incumbents may work under direct supervision of, or according to strict guidelines set by, the owner(s) or persons in the owners' employment. (Persons in "paid employment jobs" are typically remunerated by wages and salaries, but may be paid by commission from sales, by piece-rates, bonuses or in-kind payments such as food, housing or training.)

7. Self-employment jobs are those jobs where the remuneration is directly dependent upon the profits (or the potential for profits) derived from the goods and services produced (where own consumption is considered to be part of profits). The incumbents make the operational decisions affecting the enterprise, or delegate such decisions while retaining responsibility for the welfare of the enterprise. (In this context "enterprise" includes one-person operations.)

8. Employees are all those workers who hold the type of job defined as "paid employment jobs" (cf. paragraph 6). *Employees with stable contracts* are those "employees" who have had, and continue to have, an explicit (written or oral) or implicit contract of employment, or a succession of such contracts, with the same employer on a continuous basis. "On a continuous basis" implies a period of employment which is longer than a specified minimum determined according to national circumstances. (If interruptions are allowed in this minimum period, their maximum duration should also be determined according to national circumstances.) *Regular employees* are those "employees with stable contracts" for whom the employing organization is responsible for payment of relevant taxes and social security contributions and/or where the contractual relationship is subject to national labour legislation.

9. *Employers* are those workers who, working on their own account or with one or a few partners, hold the type of job defined as a "self-employment job" (cf. paragraph 7), and, in this capacity, on a continuous basis (including the reference period) have engaged one or more persons to work for them in their business as "employee(s)" (cf. paragraph 8). The meaning of "engage on a continuous basis" is to be determined by national circumstances, in a way which is consistent with the definition of "employees with stable contracts" (cf. paragraph 8). (The partners may or may not be members of the same family or household.)

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[1] United Nations Statistical Office: *Supplementary principles and recommendations for population and housing censuses.* Statistical Papers; doc. ST/ESA/STAT/SER./M/67/Add.1 (New York, United Nations, 1990).

[2] ILO: *15th International Conference of Labour Statisticians, Report of the Conference*. CLS/15/1D.6 (Rev. 1) (Geneva, International Labour Office, 1993).

[3] For linguistic convenience the group titles and definitions have been formulated in a way which corresponds to the situation where each person holds only one job during the reference period.

10. *Own-account workers* are those workers who, working on their own account or with one or more partners, hold the type of job defined as "a self-employment job" (cf. paragraph 7), and have not engaged on a continuous basis any "employees" (cf. paragraph 8) to work for them during the reference period. It should be noted that during the reference period the members of this group may have engaged "employees", provided that this is on a non-continuous basis. (The partners may or may not be members of the same family or household.)

11. *Members of producers' cooperatives* are workers who hold a "self-employment" job (cf. paragraph 7) in a cooperative producing goods and services, in which each member takes part on an equal footing with other members in determining the organization of production, sales and/or other work of the establishment, the investments and the distribution of the proceeds of the establishment amongst their members. (It should be noted that "employees" (cf. paragraph 8) of producers' cooperatives are not to be classified to this group.)

12. *Contributing family workers* are those workers who hold a "self-employment" job (cf. paragraph 7) in a market-oriented establishment operated by a related person living in the same household, who cannot be regarded as a partner, because their degree of commitment to the operation of the establishment, in terms of working time or other factors to be determined by national circumstances, is not at a level comparable to that of the head of the establishment. (Where it is customary for young persons, in particular, to work without pay in an economic enterprise operated by a related person who does not live in the same household, the requirement of "living in the same household" may be eliminated.)

13. *Workers not classifiable by status* include those for whom insufficient relevant information is available, and/or who cannot be included in any of the preceding categories.

IV. STATISTICAL TREATMENT OF PARTICULAR GROUPS

14. This section outlines a possible statistical treatment of particular groups of workers. Some of the groups represent subcategories or disaggregations of one of the specific ICSE-93 categories. Others may cut across two or more of these categories. Countries may need and be able to distinguish one or more of the groups, in particular group (a), and may also create other groups according to national requirements:

(a) *Owner-managers of incorporated enterprises* are workers who hold a job in an incorporated enterprise, in which they: (a) alone, or together with other members of their families or one or a few partners, hold controlling ownership of the enterprise; and (b) have the authority to act on its behalf as regards contracts with other organizations and the hiring and dismissal of persons "in paid employment" with the same organization, subject only to national legislation regulating such matters and the rules established by the elected or appointed board of the organization. Different users of labour market, economic and social statistics may have different views on whether these workers are best classified as in "paid employment" (cf. paragraph 6) or as in "self-employment" (cf. paragraph 7), because these workers receive part of their remuneration in a way similar to persons in paid employment while their authority in and responsibility for the enterprise corresponds more to persons in "self-employment", and in particular to "employers". (Note, for example, that to classify them as "employees" will be consistent with their classification in the "System of National Accounts", while they may be best classified as "employers" or "own-account workers" for labour market analysis.) Countries should, therefore, according to the needs of users of their statistics and their data collection possibilities, endeavour to identify this group separately. This will also facilitate international comparisons.

Appendix C. International Standard Industrial Classification of all Economic Activities (ISIC - Rev. 2, 1968)[1]

Major Division 1. Agriculture, hunting, forestry and fishing

11 Agriculture and hunting
- 111 Agricultural and livestock production
- 112 Agricultural services
- 113 Hunting, trapping and game propagation

12 Forestry and logging
- 121 Forestry
- 122 Logging

13 130 Fishing

Major Division 2. Mining and quarrying

21 210 Coal mining
22 220 Crude petroleum and natural gas production
23 230 Metal ore mining
29 290 Other mining

Major Division 3. Manufacturing

31 Manufacture of food, beverages and tobacco
- 311-312 Food manufacturing
- 313 Beverage industries
- 314 Tobacco manufactures

32 Textile, wearing apparel and leather industries
- 321 Manufacture of textiles
- 322 Manufacture of wearing apparel, except footwear
- 323 Manufacture of leather and products of leather, leather substitutes and fur, except footwear and wearing apparel
- 324 Manufacture of footwear, except vulcanized or moulded rubber or plastic footwear

33 Manufacture of wood and wood products, including furniture
- 331 Manufacture of wood and wood and cork products, except furniture
- 332 Manufacture of furniture and fixtures, except primarily of metal

34 Manufacture of paper and paper products, printing and publishing
- 341 Manufacture of paper and paper products
- 342 Printing, publishing and allied in dustries

35 Manufacture of chemicals and chemical, petroleum, coal, rubber and plastic products
- 351 Manufacture of industrial chemicals
- 352 Manufacture of other chemical products
- 353 Petroleum refineries
- 354 Manufacture of miscellaneous products of petroleum and coal
- 355 Manufacture of rubber products
- 356 Manufacture of plastic products n.e.c.

36 Manufacture of non-metallic mineral products, except products of petroleum and coal
- 361 Manufacture of pottery, china and earthenware
- 362 Manufacture of glass and glass products
- 369 Manufacture of other non-metallic mineral products

37 Basic metal industries
- 371 Iron and steel basic industries
- 372 Non-ferrous metal basic industries

38 Manufacture of fabricated metal products, machinery and equipment
- 381 Manufacture of fabricated metal products, except machinery and equipment
- 382 Manufacture of machinery except electrical
- 383 Manufacture of electrical machinery apparatus, appliances and supplies
- 384 Manufacture of transport equipment
- 385 Manufacture of professional and scientific and measuring and controlling equipment n.e.c., and of photographic and optical goods

39 390 Other manufacturing industries

Major Division 4. Electricity, gas and water

41 410 Electricity, gas and steam
42 420 Water works and supply

Major Division 5. Construction

50 500 Construction

Major Division 6. Wholesale and retail trade and restaurants and hotels

61 610 Wholesale trade
62 620 Retail trade
63 Restaurants and hotels
- 631 Restaurants, cafés and other eating and drinking places
- 632 Hotels, rooming houses, camps and other lodging places

Major Division 7. Transport, storage and communication

71 Transport and storage
- 711 Land transport
- 712 Water transport
- 713 Air transport
- 719 Services allied to transport

72 720 Communication

Major Division 8. Financing, insurance, real estate and business services

81 810 Financial institutions
82 820 Insurance
83 Real estate and business services
- 831 Real estate
- 832 Business services except machinery and equipment rental and leasing
- 833 Machinery and equipment rental and leasing

Major Division 9. Community, social and personal services

91 910 Public administration and defence
92 920 Sanitary and similar services
93 Social and related community services
- 931 Education services
- 932 Research and scientific institutes
- 933 Medical, dental, other health and veterinary services
- 934 Welfare institutions
- 935 Business, professional and labour associations
- 939 Other social and related community services

94 Recreational and cultural services
- 941 Motion picture and other entertainment services
- 942 Libraries, museums, botanical and zoological gardens, and other cultural services n.e.c.
- 949 Amusement and recreational services n.e.c.

95 Personal and household services
- 951 Repair services n.e.c.
- 952 Laundries, laundry services, and cleaning and dyeing plants
- 953 Domestic services
- 959 Miscellaneous personal services

96 960 International and other extra-territorial bodies

Major Division 0. Activities not adequately de fined

00 000 Activities not adequately defined

n.e.c. Not elsewhere classified.

[1]This Classification consists of "major divisions" (one-digit codes), "divisions" (two-digit codes), " major groups" (three-digit codes) and "groups" (four-digit codes); the last are not shown separately in this annex. For full details, see United Nations: *Statistical Papers*, Series M, No. 4, Rev. 2 (New York, 1968); website: http://unstats.un.org/unsd/cr/registry/.

Appendix C (continued). International Standard Industrial Classification of all Economic Activities (ISIC - Rev. 3, 1990)[1]

Tabulation category A: Agriculture, hunting and forestry

01 Agriculture, hunting and related service activities
02 Forestry, logging and related service activities

Tabulation category B: Fishing

05 Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing

Tabulation category C: Mining and quarrying

10 Mining of coal and lignite; extraction of peat
11 Extraction of crude petroleum and natural gas; service activities incidental to oil and gas extraction, excluding surveying
12 Mining of uranium and thorium ores
13 Mining of metal ores
14 Other mining and quarrying

Tabulation category D: Manufacturing

15 Manufacture of food products and beverages
16 Manufacture of tobacco products
17 Manufacture of textiles
18 Manufacture of wearing apparel; dressing and dyeing of fur
19 Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear
20 Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
21 Manufacture of paper and paper products
22 Publishing, printing and reproduction of recorded media
23 Manufacture of coke, refined petroleum products and nuclear fuel
24 Manufacture of chemicals and chemical products
25 Manufacture of rubber and plastics products
26 Manufacture of other non-metallic mineral products
27 Manufacture of basic metals
28 Manufacture of fabricated metal products, except machinery and equipment
29 Manufacture of machinery and equipment n.e.c.
30 Manufacture of office, accounting and computing machinery
31 Manufacture of electrical machinery and apparatus n.e.c.
32 Manufacture of radio, television and communication equipment and apparatus
33 Manufacture of medical, precision and optical instruments, watches and clocks
34 Manufacture of motor vehicles, trailers and semi-trailers
35 Manufacture of other transport equipment
36 Manufacture of furniture; manufacturing n.e.c.
37 Recycling

Tabulation category E: Electricity, gas and water supply

40 Electricity, gas, steam and hot water supply
41 Collection, purification and distribution of water

Tabulation category F: Construction

45 Construction

Tabulation category G: Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods

50 Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel
51 Wholesale trade and commission trade, except of motor vehicles and motorcycles
52 Retail trade, except motor vehicles and motorcycles; repair of personal and household goods

Tabulation category H: Hotels and restaurants

55 Hotels and restaurants

Tabulation category I: Transport, storage and communications

60 Land transport; transport via pipelines
61 Water transport
62 Air transport
63 Supporting and auxiliary transport activities; activities of travel agencies
64 Post and telecommunications

Tabulation category J: Financial intermediation

65 Financial intermediation, except insurance and pension funding
66 Insurance and pension funding, except compulsory social security
67 Activities auxiliary to financial intermediation

Tabulation category K: Real estate, renting and business activities

70 Real estate activities
71 Renting of machinery and equipment without operator and of personal and household goods
72 Computer and related activities
73 Research and development
74 Other business activities

Tabulation category L: Public administration and defence; compulsory social security

75 Public administration and defence; compulsory social security

Tabulation category M: Education

80 Education

Tabulation category N: Health and social work

85 Health and social work

Tabulation category O: Other community, social and personal service activities

90 Sewage and refuse disposal, sanitation and similar activities
91 Activities of membership organizations n.e.c.
92 Recreational, cultural and sporting activities
93 Other service activities

Tabulation category P: Private households with employed persons

95 Private households with employed persons

Tabulation category Q: Extra-territorial organizations and bodies

99 Extra-territorial organizations and bodies

Additional category X: Not classifiable by economic activity

n.e.c. Not elsewhere classified.

[1] For full details see United Nations: *Statistical Papers*, Series M, No. 4/ Rev. 3 (New York, 1990); website: http://unstats.un.org/unsd/cr/registry/.

Appendix D. International Standard Classification of Education (ISCED-97)

X: No schooling
Less than one year of schooling

Level 0: Pre-primary education
Programmes are designed primarily to introduce children, aged at least three years, to a school-type environment; they are school- or centre-based.

Level 1: Primary education or first stage of basic education
Programmes are designed on a unit or project basis to give students a sound basic education in reading, writing and mathematics along with an elementary understanding of other subjects such as history, geography, natural science, social science, art and music; religious instruction may also be featured. The customary or legal age of entrance is between five and seven years. This level covers in principle six years of full-time schooling. Literacy programmes for adults are also included at this level.

Level 2: Lower secondary or second stage of basic education
Programmes are designed to complete the provision of basic education begun at Level 1. They are usually on a more subject-oriented pattern, often with teachers conducting classes in their field of specialization. The end of this level often coincides with the end of compulsory education where it exists.
Programmes can be subclassified according to the subsequent education or destination for which they have been designed:
2A: direct access to Level 3 (3A or 3B) in a sequence leading ultimately to tertiary education;
2B: direct access to Level 3C;
2C: direct access to the labour market.
Programmes at Level 2 can also be subdivided into three categories according to their orientation: (i) general education, mainly designed to lead to a deeper understanding of a subject or group of subjects, especially (but not necessarily) in preparation for further education; (ii) pre-vocational or pre-technical education, designed as a preparation for entry into vocational or technical education programmes; (iii) vocational or technical education, mainly designed to lead to the acquisition of skills necessary for employment in a particular occupation or trade, the successful completion of which leads to a labour-market-relevant vocational qualification.

Level 3: Upper secondary education
Educational programmes typically require the completion of 9 years of full-time education (since the beginning of Level 1) and the completion of Level 2 for admission; the entrance age is thus typically 15 or 16 years. More specialization may be observed and teachers more qualified or specialized.
As at Level 2, programmes can be subclassified according to the subsequent education or destination for which they have been designed:
3A: direct access to Level 5A;
3B: direct access to Level 5B;
3C: not designed to lead directly to Levels 5A or 5B, but rather to the labour market or to Level 4 or other Level 3 programmes.
The programme orientation categories are the same as for Level 2.

Level 4: Post-secondary non-tertiary education
Level 4 captures programmes that straddle the boundary between upper-secondary (Level 3) and post-secondary education. Due to their content they cannot be considered as tertiary programmes as they are often not significantly more advanced than Level 3 programmes but serve to broaden the knowledge of participants who have successfully completed Level 3 programmes. They have a typical full-time equivalent duration of between six months and two years. Programmes can be subclassified into two categories according to the subsequent education or destination for which they have been designed:
4A: preparation for entry to Level 5;
4B: not giving access to Level 5 (primarily designed for labour market entry).
The programme orientation categories are the same as those for Levels 2 and 3.

Level 5: First stage of tertiary education (not leading directly to an advanced research qualification)
Entry to Level 5 programmes normally requires the successful completion of Level 3A or 3B or a similar qualification at Level 4A. Level 5 programmes are subdivided into two distinct categories:
5A: Programmes are largely theoretically based and are intended to provide sufficient qualifications for gaining entry into advanced research programmes and professions with high skill requirements (e.g. medicine, dentistry, architecture, etc.). They have a minimum cumulative theoretical duration of three years full-time equivalent, although typically they are four or more years.
5B: Programmes are practically oriented/occupationally specific and mainly designed to permit the acquisition of the practical skills and know-how necessary for employment in a particular occupation or trade; successful completion usually provides participants with a labour-market-relevant qualification. Programmes are typically shorter than in 5A with a minimum duration of two years full-time equivalent and they do not provide direct access to advanced research programmes.

Level 6: Second stage of tertiary education (leading to an advanced research qualification)
Programmes are devoted to advanced study and original research and are not based on course-work only. They typically require the submission of a thesis or dissertation of publishable quality which is the product of original research and represents a significant contribution to knowledge.

?: Level not stated

Notes

[1] The full text of ISCED-97 is available in English, French, Spanish and Russian on UNESCO's website (www.uis.unesco.org).

[2] In order to maintain parallel structure to the educational and labour market destinations at Level 3, it has been proposed that Level 4 be split into 3 sub-categories, 4A, 4B and 4C. Although not formally part of ISCED-97 a sub-category 4C is used in the joint UNESCO/OECD/EUROSTAT Data Collection on Education Systems.

Appendix D (continued). International Standard Classification of Education (ISCED-76)

X No schooling

Less than one year of schooling.

Level 0: Education preceding the first level

Education delivered in kindergartens, nursery schools or infant classes attached to primary schools.

Level 1: First level

Programmes are designed to give the students a sound basic education in reading, writing and arithmetic along with an elementary understanding of other subjects such as national history, geography, natural science, social science, art, music and religious instruction. Children enter these programmes when they are 5 to 7 years old. Literacy programmes for adults are also to be classified under Level 1.

Level 2: Second level, first stage

The basic programmes constituting the first level are continued, but usually on a more subject-oriented pattern. Some small beginnings of specialization may be seen at this level with some students having the opportunity to direct their attention more particularly to certain types of subjects, e.g. commercial or technical subjects. Vocational programmes designed to train for a specific occupation and often associated with relatively unskilled jobs, as well as apprenticeship programmes for skilled trades and crafts that provide further education as part of the programme, are also included.

Level 3: Second level, second stage

General education continues to be an important constituent of the programmes, but separate subject presentation and more specialization are found at this level. Also to be classified under Level 3 are programmes consisting of subject matter mainly with a specific vocational emphasis on apprenticeship programmes, an entrance requirement of eight full years of education, or a combination of basic education and vocational experience that demonstrates the ability to handle subject matter of that level.

Level 5: Third level, first stage, leading to an award not equivalent to a first university degree

Programmes of this type are usually "practical" in orientation in that they are designed to prepare students for particular vocational fields in which they can qualify as high level technicians, teachers, nurses, production supervisors, etc.

Level 6: Third level, first stage, leading to a first university degree or equivalent qualification

Programmes of this type comprise those leading to typical first university degrees such as a "Bachelor's degree", a "Licence", etc., as well as those which lead to first professional degrees such as "Doctorates" awarded after completion of studies in medicine, engineering, law, etc.

Level 7: Third level, second stage

Programmes leading to a post-graduate university degree or equivalent qualification. Programmes of this type generally require a first university degree or equivalent qualification for admission. They are intended to reflect specialization within a given subject area.

Level 9: Education not definable by level

Programmes for which there are no entrance requirements.

?: Level not stated

Appendix F. Using the KILM for labour market analysis in a country – an example

This appendix is intended to demonstrate how to use the KILM to generate a detailed analysis of the labour market situation in one country, in this case, Chile. It should, in particular, show that a review of a single indicator alone might give a misleading picture, and that it is only through the combined analysis of as many indicators as possible that one can get the whole picture of "health" of the labour market.

Let us look in depth at the labour market in Chile. First, a look at the distribution of the working-age population (in this case 15 years and over) from KILM tables 1c, 2 and 8a shows that in 2003 only half of the population in Chile that could be working was actually employed. (See figure F1.) A comparison with other countries in KILM table 2 reveals that this is a fairly low employment-to-population ratio. The regional average in Latin America and the Caribbean in the same year was 60 per cent while the world average was 62 per cent (see box 2a in the KILM 2 manuscript). The share of the working-age population that was economically inactive is high, especially among women, which indicates that a large source of productive potential, namely the female population, remains untapped. The question remains, however, as to whether the inactive population is largely voluntarily or involuntarily so? Voluntary (and positive) reasons for remaining outside of the labour force include remaining in school. In fact, the labour force participation rate of youth (aged 15-24) was indeed much lower at 31 per cent (with an inactivity rate, therefore, of 69 per cent) than the prime working-age population (aged 25-54) at 72 per cent (28 per cent inactivity). That the labour force participation rate of women remained at 50 per cent even at the prime working age range of 25 to 54 years hints to the fact that female inactivity is indeed one source of labour market underutilization in Chile.

Turning our attention to unemployment, we see in figure F2 that unemployment was not abnormally high at 7.4 per cent for both sexes, 6.9 per cent for males, and 8.3 per cent for females in 2003, although these rates represent a substantial increase from those of a decade earlier (4.5 per cent, 4.2 per cent and 5.1 per cent for both sexes, males and females, respectively). Data on long-term unemployment in KILM table 10 for 1995 indicated that only 3.4 per cent of those unemployed were seeking work for an extreme length of time of one year or longer. Unemployment of young people, however, was as much as three times higher than adults overall, and almost four times higher for young females. A higher unemployment rate among young jobseekers is to be expected given their lack of experience and the fact that they might willingly "shop around" in the job market before settling into their career, but the fact that young people have more than three times greater difficulty in finding a job than adults can be considered excessive and a good indication that both integrated and targeted policies aimed at easing the transition of youth into the labour market could be warranted in Chile.

Now let us turn to the employment-related indicators in search of clues as to whether Chilean workers are facing good working conditions. In 2003, 68 per cent of the total working population were employed in a job where they earned a salary, 3 per cent were self-employed and had employees of their own, 27 per cent were self-employed and working alone (own-account) and only 2 per cent were contributing (unpaid) family workers. (See figure F3 for employment by sector and by status.) The majority of the Chilean workforce was employed in services (63 per cent), although the agricultural sector, employing 14 per cent of Chile's workers in 2003, is still very much present. One

difference between male and female workers was that relatively more female workers were wage and salaried workers and contributing family workers, whereas relatively more males were own-account workers. In addition, women were more likely than men to work in the services sector whereas the industrial and agricultural sector continued to employ approximately half of the male workforce.

Employment in the informal economy is difficult to define; however, it is clear that a dominant aspect of the informal economy is self-employment, specifically self-employment without employees (own-account workers). The large share of Chilean own-account workers hints to the presence of a substantial informal economy. This is backed up by the figures in KILM table 7d, which show that in 1995 as many as 45 per cent of workers in Chile were employed in the informal economy.[1] The negative implications associated with working in the informal economy include lack of social protection in terms of health care, unemployment insurance and pensions; low wages; little job security; long hours or insufficient hours. The informal economy is often linked to poverty; however, in the case of Chile, poverty does not affect a large share of the population, implying that informal economy workers in Chile are able to sufficiently support themselves and their families with their earnings; the share of US$2 working poor in total employment in Chile was only 10 per cent in 2000 (KILM table 20).

Although informal economy employment in Chile is not strongly linked to poverty, it could very well be linked to long hours, as is seen in table F1. Working less than full time in Chile seems to be hardly considered as an option. In 2000, only 5 per cent of employment was part time (less than 20 hours). The clear preference (or need) is to work 40 hours or longer (with 84 per cent of workers falling in this category). In fact, only four countries with data available in KILM table 6a showed higher shares of total employment in excess of 40 hours per week (the Czech Republic, Hungary, the Republic of Korea and Slovakia). Of course it would be improper to say that all those working more than 40 hours per week are working "excessive hours" since many could be perfectly happy in doing so and might even welcome more hours. There is no way of gauging preference for working hours here, however, it is fair to say that 84 per cent of the workforce at 40 hours or more per week is much higher than was seen in most other countries (the average for OECD countries was 60 per cent) and does imply that the majority of workers in Chile are working long hours.

Finally, a well-rounded analysis of labour market conditions in a country should take into consideration the labour market indicators that have significant macroeconomic impacts for long-run sustainable growth, namely employment elasticities, wages, labour productivity and unit labour costs. KILM table 19a showed that the fastest period of economic growth in Chile between 1991 and 2003 was 1991-95 (annual GDP growth rate of 8.9 per cent) with subsequent slow downs in 1995-99 (4.3 per cent) and 1999-2003 (3.2 per cent). How did the slower economic growth affect employment? KILM table 19a shows that even in the period of high annual GDP growth in the early 1990s, it had not been reflected in high employment growth. The employment intensity of growth in the early period was 0.4, meaning that a 1 percentage point increase in economic output was associated with an increase in employment of 0.4 percentage points. The employment elasticity was even lower in the subsequent periods of slower economic growth (0.2 in 1995-99 and 0.3 in 1999-2003).[2]

Looking at the sectoral employment elasticities over the period 1991-2003 in KILM table 19b, we find the following: a 1 percentage point growth in value added in

1. In this case, the informal economy includes all own-account workers (excluding professionals and technicians), unpaid family workers and employers and employees working in establishments with less than five or 10 persons.

2. As noted in Chapter 1, section A, employment elasticities below 0.25 are considered low while elasticities between 0.26 and 0.75 are considered moderate.

agriculture resulted in a negative loss of 0.5 percentage points in agricultural employment; a 1 percentage point growth in industrial value added brought no change to employment in industry; and a 1 percentage point growth in value added in the services sector brought a growth of 0.6 percentage points in employment in services.

So, in Chile, economic growth did not translate into a substantial increase in jobs (or vice versa), except in the services sector. This is not surprising, however, given that labour productivity (overall and in each sector) was rising over the same period, meaning that increased output was mostly due to a growing efficiency of labour – perhaps due to the increased use of technologies – rather than an increase of labour inputs. This situation is indicative of a country undergoing shifts of employment from labour-intensive agrarian activities into services, which is exactly what happened in Chile over the period; the share of total employment in agriculture decreased by 30 per cent between 1990 and 2003 while employment in services increased by 14 per cent (KILM table 4a). Employment in manufacturing also decreased slightly – the share of manufacturing employment in total employment declined from a peak of 17 per cent of 1989 to 14 per cent in 2003.

The next logical step would be to ask if labour productivity gains were beneficial to workers in terms of higher compensation. Real manufacturing wages did increase slightly over the period (KILM table 15). However, given that only 14 per cent of the total employment is in manufacturing, it is not possible to generalize that wage gains were common to all. A better indication that wages increased over the period is labour compensation per person employed, which can be deduced from the unit labour cost indicator in KILM table 18a. Labour compensation, in simple terms, is the cost to employers of engaging workers. The majority of costs are the gross wages and salaries of employees, but they also include other costs of labour that are paid by employers, including employers' contributions to social security and pension schemes. Unit labour costs, which take labour compensation per person employed as the numerator and GDP per person employed (i.e. labour productivity) as the denominator, are a measure of economic competitiveness since they measure how much it costs to produce a unit of output. The traditional assumption is that the lower the cost, the better, so that cheaper goods and services can be placed on the world market, although a more well-rounded approach would recognize that increased competitiveness in the world market should not come at the expense of workers.

The fact that unit labour costs increased by almost 70 per cent between 1990 and 1997 in Chile (see figure F4) despite the country's increase in labour productivity (the denominator), implies that labour compensation (the numerator) increased to an even greater extent than labour productivity. The conclusion: labour compensation increased substantially in the early to late 1990s. This might have been a positive consequence for workers – keeping in mind that improved wages accrued only to those employed in the formal economy,[3] assuming that the increased cost of labour and insufficient demand did not lead some establishments to shed labour, which seems to have been the case, since the unemployment rate in 1997 of 5.3 per cent was lower than that of 1990 (5.7 per cent) and the employment elasticity was moderate at 0.4 (1991-95).

After 1997, unit labour costs began to fall while labour productivity continued to increase. Also in this period, unemployment rose to a high of 8.9 per cent in 1999 and then fell back down to 7.8 per cent in 2002. In short, in recent years in Chile, unit labour costs are declining and labour productivity is growing, both of which are good omens for economic growth. However, there remains a great deal of uncertainty about the "health" of the labour market; the inactivity rate is higher than almost all other countries with data; young people have more than three times greater difficulty in finding a job than adults; many Chileans are working in the informal

3. However, as discussed above, the large size of the informal economy in Chile should not be ignored.

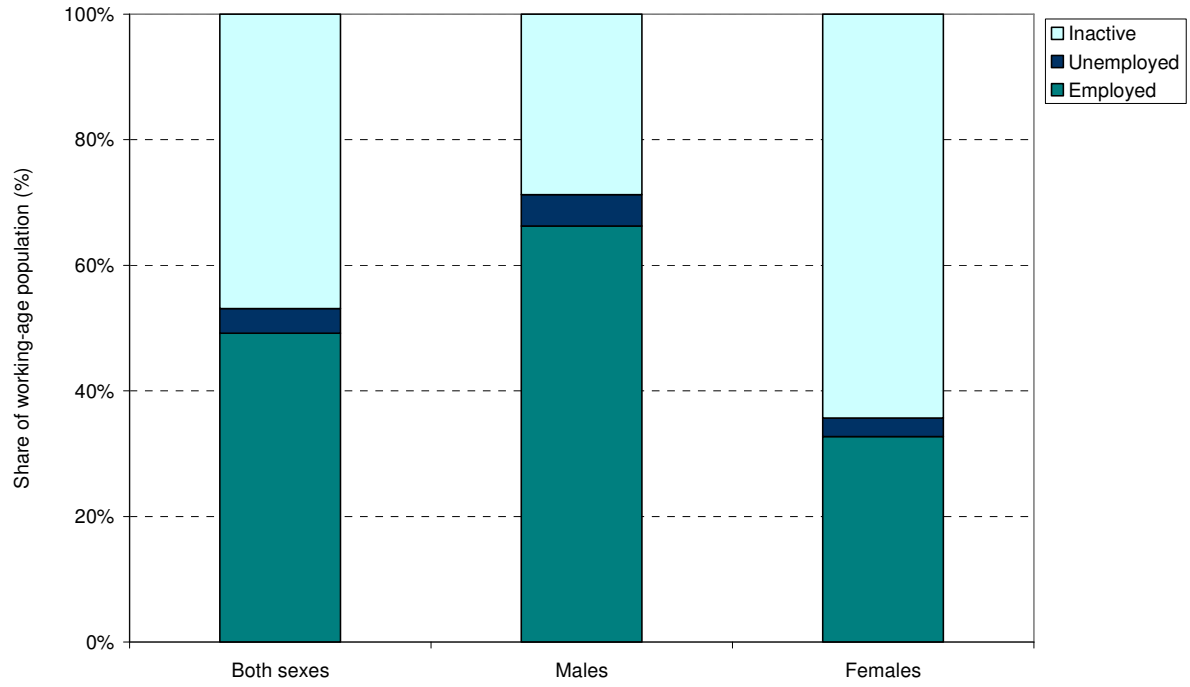
economy; the female employment-to-population ratio is extremely low at 32.7 per cent in 2003; employment in agriculture is falling which begs the question of whether or not employment creation in services will be sufficient to absorb the migrating agricultural worker. Each of these developments should be investigated in detail by policy-makers with an eye towards addressing the problem of an underutilized labour force and towards enhancing the decent work opportunities for all.

Table F1. Share of total employment by hours worked, 2000

Hours band	Both sexes	Males	Females
<20	4.8	4.9	4.8
20-29	4.8	5.3	4.7
30-39	6.0	6.2	5.9
>40	84.4	83.5	84.6

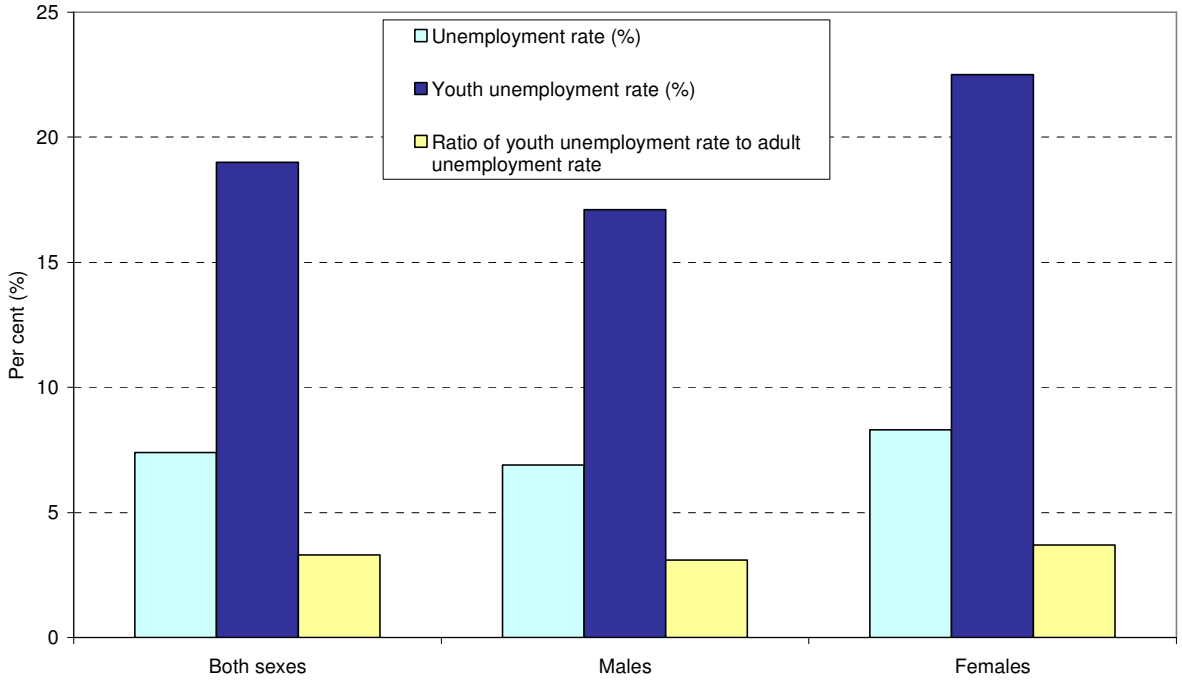
Source: KILM table 6a.

Figure F1. Distribution of the working-age population in Chile, 2003



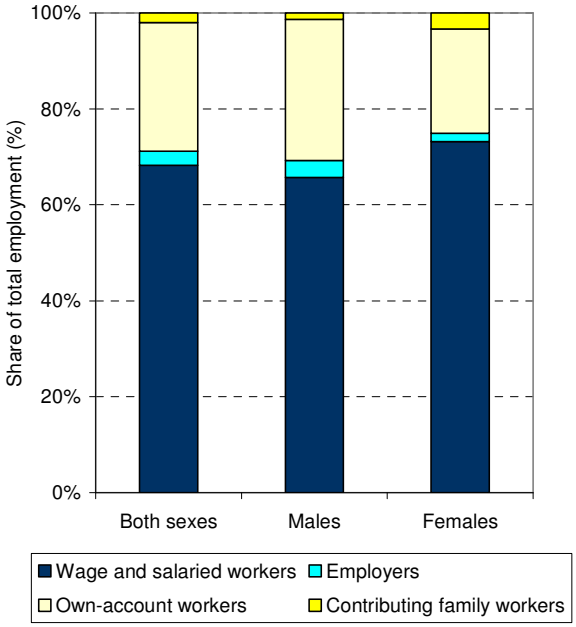
Sources: KILM table 1c (labour force participation), table 2 (employment) and table 8a (unemployment).

Figure F2. Total and youth unemployment, 2003

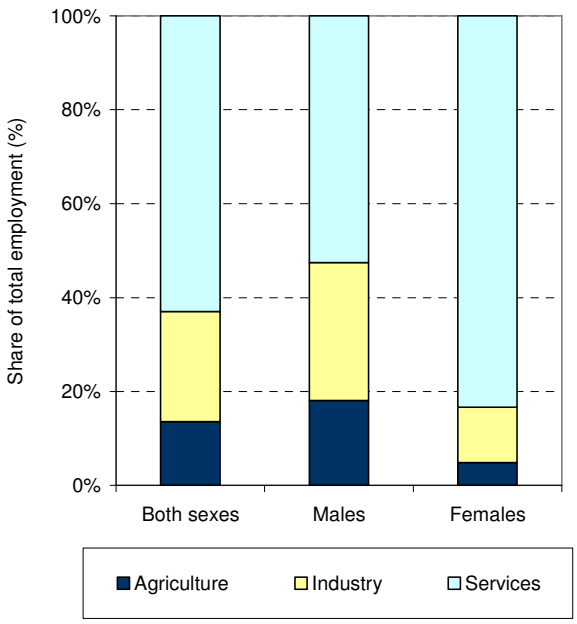


Sources: KILM table 8a (unemployment) and table 9 (youth unemployment).

Figure F3. Status in employment and employment by sector, 2003



Source: KILM table 3.



Source: KILM table 4a.

Figure F4. Labour productivity and unit labour costs, total economy, 1990-2002

Source: KILM table 18a.