Chapter 5

Enhancing job quality in emerging economies

This chapter provides the first comprehensive analysis of job quality in emerging economies. It extends the OECD Job Quality Framework to better suit the countries considered, while maintaining its fundamental principles and its three broad dimensions: earnings quality, labour-market security and quality of the working environment. The analysis delivers a detailed cross-country picture of job quality across emerging countries and socio-demographic groups, placing particular attention on the gap between formal and informal occupations. Moreover, using panel data from a selection of countries, it presents an in-depth dynamic analysis of transitions in and out of informal jobs, with the aim to investigate whether such occupations may be considered stepping stones or traps leaving permanent scars on workers' career prospects. Finally, the chapter outlines a set of policy orientations to foster high-quality jobs in emerging economies.

Key findings

This chapter provides the first comprehensive analysis of job quality in emerging economies based on the new *OECD Job Quality Framework* (OECD, 2014, Chapter 3). The countries considered are: Argentina, Brazil, Chile, (urban) China, Colombia, Costa Rica, India, Indonesia, Mexico, the Russian Federation, South Africa, and Turkey.

The *main contribution* of the chapter is to adapt the implementation of the *OECD Job Quality Framework* to the most salient features of the labour markets of emerging economies, while maintaining its fundamental principles and its three dimensions: earnings quality, labour market security and the quality of the working environment. Two main adjustments are made:

● The *labour market (in)security* dimension is enriched by a complementary risk measure, namely the risk of falling below a subsistence level of earnings while employed. Indeed, in most emerging economies, open unemployment[1] is often low because workers simply cannot afford to be unemployed, partly due to the absence (or weakness) of social security – unemployment protection in particular. Their exposure to insecurity is thus better captured by the risk of falling below a threshold of extreme low pay, often in the informal, unprotected sector.

● The *quality of the working environment* dimension is proxied by the incidence of very long working hours. This adjustment is required as information on working conditions is typically scarce and limited in scope in emerging economies. This allows for broader coverage of emerging economies, as well as a breakdown between formal and informal jobs. The available data also supports this approach, as they indicate a strong positive correlation between job strain and long hours across a broad group of countries where both measures are available.

The *second contribution* of the chapter is to provide a detailed picture of cross-country differences in job quality along each dimension. The following findings emerge:

● The main issue for emerging economies is not the lack of jobs, as such, since open unemployment tends to be low. Rather, it is the lack of quality jobs that raises the greatest concerns. This partly reflects the inadequacy of social security, which pushes workers into subsistence-level occupations.

● Earnings quality is generally lower in emerging economies compared with OECD countries. This difference is due to both a wide gap in average earnings and considerably higher levels of inequality. Among the countries considered, earnings quality is lowest in India and South Africa and highest in Chile and the Russian Federation.

● Labour market insecurity due to unemployment is similar to the OECD average for most emerging economies. However, the risk of falling into extreme low pay while employed, which reaches peaks of 25% in Indonesia and 33% in India, represents a second significant source of insecurity. As a result, overall labour market insecurity tends to be higher in emerging economies than in more developed economies.

- The quality of the working environment is generally lower in emerging economies compared with the OECD. The incidence of working very long hours is remarkably high in many of the economies considered in the chapter. Of the four countries for which the incidence of job strain can be computed (Mexico, South Africa, Turkey and the Russian Federation), three perform worse than the OECD average, Mexico being the exception.

The *third contribution* of the chapter is to compare job quality for workers with different socio-demographic characteristics and identify which groups are most at risk of low-quality employment, thus providing new insights on labour market inequalities:

- Young people and low-skilled workers face the most dramatic challenges. They tend to experience poor performance in terms of both job quantity (i.e. low employment rates) and job quality (i.e. lower earnings quality, higher insecurity and lower quality of the working environment, as captured by working long hours).

- Women face some clear disadvantages. Sizeable gender gaps exist for both employment rates and earnings quality. Women also face higher labour market insecurity, as captured by the risk of extreme low pay, but are not exposed to a significantly higher risk of unemployment. The share of employed women who work extreme long hours is much lower than the corresponding share for men.

- Workers with informal jobs tend to do worse on all dimensions of job quality. Informal jobs display lower earnings quality, higher insecurity and lower quality of the working environment (as captured by a higher incidence of long hours).

Given the high incidence of informality in emerging economies and the relatively poor job quality outcomes associated with informal jobs, it is important to know how easily workers in informal jobs are able to move into formals jobs. Accordingly, the chapter examines workers' transitions into and out of informality. This analysis, which helps to clarify the role of informal jobs in social mobility and potential persistent effects on workers' careers, is limited to four countries for which the necessary data are available (urban China, urban Colombia, South Africa and Turkey). The results show that:

- While these countries display high mobility rates in and out of informality, most outflows from informal jobs are to unemployment and inactivity, rather than to formal employment. This finding casts doubt on the hypothesis that informality constitutes a reliable stepping stone towards better jobs.

- In urban China and urban Colombia, informal workers who transit to formality tend to move to temporary jobs, with a high probability of falling back into informality. This suggests some workers may become trapped in a vicious circle, cycling between informal jobs and non-standard (lower-quality) formal jobs.

- Starting a career with an informal job may have negative consequences for future labour market prospects.

Finally, the analysis conducted in the chapter has important implications for the design of policies to foster high quality jobs in emerging economies. They can be summarised as follows:

- *More effective social protection systems and labour laws can enhance the quality of existing jobs.* Policy makers should consider placing a high priority on promoting job quality. Among the most important policy objectives are the development of adequate and effective social protection systems (e.g. unemployment compensation, social assistance programmes, such as cash transfers, and health care benefits) and the promotion of

effective labour laws. In designing social protection schemes, an important challenge is to ensure an adequate balance between workers' protection and work incentives. The latter encompass incentives to participate and, crucially, to choose formal over informal employment. In the context of a large informal economy and often weak enforcement, another important area for policy action is improving the effectiveness of labour laws in protecting workers (e.g. working-time regulations, health and safety legislation, employment protection legislation).

● *It is important to assist workers to find high quality jobs early in their careers.* Given the possible deep scars that bad jobs can leave on future careers, it is important to help workers get onto a good career path early in their working lives. This is particularly important for low-skilled workers, who face the highest risk of being trapped in undesirable jobs with limited career prospects. Policy interventions in this area are very diverse and include a strengthened academic and vocational education, quality training and apprenticeship programmes, as well as carefully designed active labour market programmes.

● *Policies to curb informality can reduce the incidence of low quality jobs.* Policy interventions to reduce informality should follow a comprehensive approach that rests on three pillars: increasing the benefits of formality, decreasing the costs of formalisation and improving enforcement methods.

Introduction

Labour is often the only asset people own and their only source of income. Having a job is thus a fundamental determinant of well-being. Conversely, unemployment and under-employment in low-paid, onerous and unstable jobs have been widely documented as important sources of distress. At a time when the world economy is yet to recover from the global economic crisis, job creation remains a primary concern for policy makers. However, focusing exclusively on *how many* jobs an economy generates delivers a very partial picture of the situation, since workers' well-being also depends crucially on *how good* their jobs are. This observation appears all the more important in the context of emerging economies, where jobs are often characterised by low-pay, high risks, strenuous or hazardous working conditions and long working hours. This is particularly true for the large share of the labour force employed in the informal economy, outside the reach of regulation and without access to social protection.

In light of these considerations, the chapter adapts the implementation of the *OECD Job Quality Framework* for measuring job quality, which was first presented and applied to OECD countries in the 2014 *OECD Employment Outlook*, to take into account the characteristics of labour markets in emerging economies. The adjusted framework is then used to produce a comparative analysis of job quality across twelve emerging economies. The correlation between workers' characteristics and job quality is also explored in order to identify the groups with the lowest quality jobs. Particular attention is devoted to the quality gap between formal and informal jobs, since the latter constitute a very large share of employment in most of these economies. The chapter then investigates mobility into and out of informal employment, in order to assess whether informality is a trap or a stepping stone in workers' careers. Finally, the chapter reviews policy options to promote high-quality jobs in emerging economies.[2]

The *OECD Job Quality Framework* encompasses three key dimensions that capture the respective contributions of *earnings, security* and *work environment* to workers' well-being.

While these building blocks are broad enough to capture job quality in countries at all stages of development, this chapter adapts their empirical implementation so as to reflect the most salient features of labour markets in emerging economies. Most notably, when assessing labour market security, the risk of unemployment is complemented by a measure of the risk of falling below a subsistence level of earnings while employed. Indeed, in most of these economies, open unemployment is often low, because workers simply cannot afford not to work, partly due to the absence (or weaknesses) of social security (and unemployment protection in particular). Their exposure to insecurity is thus better captured by the risk of falling below a threshold of extreme low pay while employed, often in the informal sector. In this regard, it is important to emphasise that the analysis does not treat informality as a component of job quality. Rather informality is analysed as a potential determinant of job quality. That is the evidence about the quality of informal jobs relative to the quality of formal jobs is allowed to speak for itself.

The chapter provides a broad picture of job quality for twelve emerging economies, including OECD emerging economies and accession countries, G20 emerging economies and OECD Key Partners. More specifically, suitable data could be found for the following countries: Argentina, Brazil, Chile, Colombia, (urban) China, Costa Rica, India, Indonesia, Mexico, the Russian Federation, South Africa and Turkey.[3] Data limitations precluded including other key emerging economies in the analysis.

The chapter is structured as follows. Section 1 adapts the implementation of the *OECD Job Quality Framework* to take account of the main characteristics of labour markets in emerging economies. It then uses the adjusted framework to assess job quality in twelve emerging countries and compare job quality across socio-demographic groups within the workforce. Section 2 explores the quality gap between formal and informal jobs, and investigates mobility out of informal employment. Section 3 highlights the main policy implications that emerge from the empirical analysis.

1. Job quality in emerging economies: A cross-country analysis

What makes a quality job? Adapting the OECD Job Quality Framework to emerging economies

Job quality is an inherently multi-dimensional concept that refers to those job characteristics that contribute to the well-being of workers. Following the influential report by the Stiglitz-Sen-Fitoussi Commission (Stiglitz et al., 2009), which identified eight dimensions of well-being, the *OECD Job Quality Framework* is structured around three of those dimensions that are closely related to people's employment situation, namely: material living standards, insecurity of an economic as well as physical nature and personal activities including work.[4] Drawing on the existing literature in economics, sociology and occupational health, empirical implementations of these three aspects of job-related well-being were used to define the three dimensions of the *OECD Job Quality Framework*, which was first presented and applied to OECD countries in the 2014 *OECD Employment Outlook*. This chapter adapts that framework to emerging economies, by taking account of both the more limited data available for these countries and their labour market specificities, notably the weakness of social protection (inadequacy of benefits or low coverage of social insurance schemes), high incidence of informality and high rates of working poverty.

The three dimensions of the OECD Job Quality Framework, which also builds on previous work by other international organisations,[5] are: earnings quality, labour market security and quality of the working environment (OECD, 2014, Chapter 3). Moreover, the framework follows two of the guiding principles of the broader well-being agenda (Stiglitz et al., 2009), in line with the OECD Better Life Initiative (OECD, 2013); notably, it focuses on: i) outcomes experienced by workers (e.g. low-pay and work-related hazards), as opposed to drivers of job quality (e.g. regulation and compliance); and ii) individuals, by defining all indicators at an individual level and using microdata for measurement. The framework relies on objective features of job quality (as opposed to subjective perceptions of "job satisfaction", due to the all-encompassing nature of the latter and to the difficulty of relating them to specific features of the workplace).[6] Figure 5.1 provides a schematic representation of the job quality framework, in relation to job quantity outcomes and overall well-being.

Figure 5.1. **Job quantity, job quality and well-being**
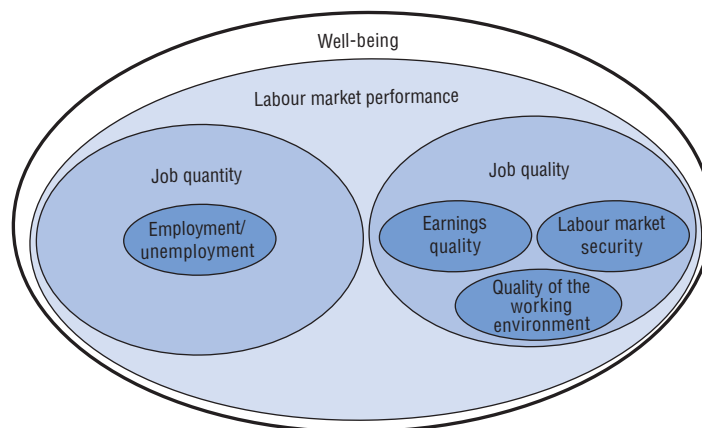
Earnings quality

The first dimension of job quality, *earnings quality*, refers to the extent to which employment contributes to the material living standards of workers and their families. While the average level of earnings provides a key benchmark for assessing the degree to which having a job ensures good living conditions, the way earnings are distributed across the workforce also matters greatly for well-being. Therefore, the first building block of job quality is measured by a composite indicator that accounts for both *average earnings* and *earnings inequality*. Since emerging economies are characterised by considerably larger earnings inequality than OECD countries, this approach appears to be particularly well suited to assess workers' well-being in these countries. This approach is also in line with a growing body of research showing that both absolute and relative earnings matter for well-being, and that individuals display a certain degree of inequality aversion in their preferences (see OECD, 2014, Chapter 3 for a full discussion).

Following OECD (2014, Chapter 3), the indicator selected to measure the degree of earnings quality at the aggregate level makes use of the general means framework proposed by Atkinson (1970) and Foster et al. (2013). Using the general mean, a weighted average of individual earnings, as the main indicator of earnings quality differs from

calculating the simple (arithmetic) mean because it allows different relative importance (weights) to be attached to different parts of the earnings distribution, through the choice of a single parameter. This exponent is referred to as the *coefficient of inequality aversion* and in the current analysis it is set to a value below one as a way of focusing predominantly on the bottom part of the distribution (see Box 3.3 in Chapter 3 of the 2014 *OECD Employment Outlook* for a full discussion). For a given earnings distribution, higher inequality aversion leads to lower earnings quality. This approach also delivers a measure of inequality, calculated as the relative wedge between the general and the arithmetic mean of earnings.[7] In a situation of perfect equality, the arithmetic and the general mean have the same value and inequality, thus calculated, is equal to 0. This approach is necessarily normative, as it rests on prior judgment with respect to the undesirability of inequality. In this chapter, different levels of inequality aversion are considered (e.g. 0, -1 and -3). The intermediate level (moderate risk-aversion), which corresponds to the *harmonic mean* of the distribution, amounts to placing most (around two-thirds) of the weight on the bottom tercile of the distribution, a smaller but still significant weight on the second tercile (one quarter) and a relatively small weight on the top tercile (10%).[8] The more extreme value (-3) places an even heavier weight on the very bottom of the distribution.

Labour market security

The second building block of the *OECD Job Quality Framework*, *labour market security,* captures those aspects of economic security that are related to the risks workers face in the labour market. In OECD countries, becoming and staying unemployed is the most significant risk for a worker. The set-up presented in the 2014 *OECD Employment Outlook* thus defined labour market insecurity in terms of the expected earnings loss associated to unemployment, as a function of the risk of becoming unemployed, the expected duration of unemployment and the degree of income protection provided by unemployment benefit systems. While open unemployment may also be significant in emerging economies (e.g. South Africa or, more generally, in urban areas), it is often lower than in OECD countries. This is partly due to the absence or weakness of social insurance schemes, which makes unemployment unaffordable and pushes many workers into jobs of "last resort" (commonly jobs with very low and often uncertain earnings). A useful and complementary dimension of insecurity is thus the risk of falling into such undesirable jobs, defined here by a threshold of "extreme low pay". This chapter, therefore, develops a supplementary measure of labour market risk that measures the risk of falling below such threshold. In sum, two distinct components of labour market security are analysed in this chapter: security against the risk of unemployment and security against the risk of extreme low-pay while employed. The former is constructed as in the 2014 *Employment Outlook* (except for the fact that here the risk of becoming unemployed is approximated by the unemployment rate, due to limited data availability), while the latter deserves some additional discussion.

The extreme low-pay threshold is set as an absolute value and corresponds to net hourly earnings of one US dollar, after purchasing power parity adjustments. Low-pay status defined in this way translates to a disposable per capita income of USD 2 (PPP-adjusted) per day in a typical household containing a single earner who works full-time (Bongaarts, 2001), and suggests absolute material deprivation for those concerned.[9] This is a departure from the relative-deprivation approach commonly adopted in OECD studies, but it appears to be more appropriate in the context of this analysis. Crucially, a

measure of relative deprivation (e.g. earnings below two-thirds or one-third of the median) would fail to account for the large differences in average living standards that exist across emerging economies and, more significantly, between emerging economies and advanced ones. That would be unsatisfactory, since workers at the bottom of the distribution in rich countries with a functioning welfare state are generally in a far better position than workers with the same relative standing in emerging countries. Focusing on an *absolute* threshold provides a common benchmark for all countries and has the advantage of clearly distinguishing the labour market security dimension of job quality from the earnings quality dimension, because the latter directly incorporates inequality and hence places the emphasis on workers' relative standing in the economy.

Ideally, the risk of falling below the low-pay threshold would be estimated by means of balanced panel datasets where the earnings of the same individuals are observed over multiple time periods. As panel data of this kind are not systematically available, the analysis relies on a novel methodology proposed by Dang and Lanjouw (2013), who extend the work by Dang et al. (2011) to estimate transition probabilities using repeated representative cross-sections. The procedure amounts to estimating the persistence of individual earnings based on the behaviour of cohort averages over time. This makes it possible to calculate the joint probability, for each worker type, of being in (or out of) low-pay status in either of the two periods surveyed. With this information, one can produce an estimate of the probabilities of falling into and climbing out of low-paid employment from one period to the next – the combination of which determines the overall risk of extreme low pay.[10] The average incidence of low-pay in a given population can be interpreted as the average share of time a person in that population can reasonably expect to spend in low-paying jobs. The fact that earnings risk is constructed using multiple cross-sections is another element that contributes to distinguishing this dimension of job quality from the earnings quality one, which is entirely static.

Finally, the analysis also takes into account the buffering effects of social security on labour market risks. In line with Chapter 3 of the 2014 *OECD Employment Outlook*, the risk-mitigating effects of all unemployment benefits and social assistance transfers that the active population may be eligible for are considered. This is done here by collecting all available information on transfer recipiency from the micro-level sources used in the analysis, rather than by using aggregate national statistics (such as the number of benefit recipients in a country) or model-based estimates (such as replacement rates by household type), as was previously done. While there are important differences across countries in terms of the generosity and comprehensiveness of social security systems, the national labour force and household surveys used here perform well in identifying recipients of benefits from the main available schemes.[11] The use made of this information on transfer recipiency varies depending on the specific aspect of labour market insecurity being considered. For unemployment risk, these data are used to calculate the effective (net) replacement rate of social insurance for the unemployed – defined as the ratio of the average net income of the unemployed relative to the median net earnings among the employed – in order to determine the net monetary cost of unemployment (much like it was done for the 2014 *OECD Employment Outlook*).[12] As for earnings risk, the assessment of the risk-mitigating effects of social transfers consists in comparing how the transition probabilities into and out of low-pay status, as well as the resulting risk estimates,

change when social transfers are ignored (compared to the main analysis, where such transfers are taken into account).

Quality of the working environment

The third dimension of job quality, *quality of the working environment* (QWE) captures non-economic aspects of job quality and includes factors that relate to the nature and content of the work performed, working-time arrangements and workplace relationships. The analysis carried out in the 2014 *OECD Employment Outlook* presented an innovative and comprehensive approach based on the literature on occupational health (notably job strain models), which establishes strong links between the quality of the working environment and workers' well-being. In particular, the "Job Demands-Job Resources Model" proposed by Bakker and Demerouti (2007) was used to identify those work-related stress factors, such as time pressure and exposure to physical health risk that represent a major hazard for workers when combined with insufficient job resources, such as work autonomy, learning opportunities or good workplace relationships.[13] The QWE dimension was then implemented via three synthetic indices: i) an additive measure of various job demands; ii) an additive measure of various job resources; and iii) a synthetic index accounting for the buffering effect of job resources on the relationship between job demands and well-being at work. The incidence of jobs that involve considerable job strain – that is, jobs which combine a high level of demands with few resources – was used as the overall measure of QWE.

It is not possible to adopt the same QWE indicators for most of the emerging economies analysed in this chapter, because information on working conditions is often scarce and limited in scope.[14] Even focusing on simpler proxies of quality of working environment (QWE), such as physical accident rates and sickness rates, is not a viable solution, since the relevant information is either not available at the country level (e.g. work accident rates reported by the ILO[15]) or not comparable across-countries (e.g. sickness rates[16] or absence sickness rates[17]). To overcome these limitations, the chapter measures quality of the working environment through data on the incidence of very long working hours. Numerous studies on occupational health have investigated the impact of working long hours on workers' well-being. While evidence is mixed regarding the relationship between long work hours and life satisfaction (Hewlett and Luce, 2006; Gray et al., 2004), results suggest that working very long hours impairs workers' physical and mental health, particularly when employees have little control on the number of hours they work and/or on their work schedule (Bassanini and Caroli, 2015; Frijters et al., 2009; Dembe et al., 2005, Burke et al., 2009; Caruso et al., 2004). Using long hours as a proxy for working conditions allows for broader coverage of emerging economies, as well as a breakdown between formal and informal jobs. The available data also support this approach, as they indicate a strong positive correlation between job strain and long hours across a broad group of countries where both measures could be constructed.[18]

One important caveat is the potentially limited validity of long hours as an indicator of low-quality working conditions for self-employed workers. This group typically has some discretion in choosing their work schedule and working long hours may thus reflect a voluntary choice, rather than an imposition. This observation is particularly important in emerging economies, where the self-employed constitute a large share of the labour force. The concern is more general, however, because the applicability of the job demands-resources model to self-employment has been questioned. While the relevance of job strain models for *employees* has been validated both theoretically and empirically,[19] its

applicability to the self-employed is still debated. Indeed, some drivers of job strain according to this theory, such as decision latitude or working intensity, appear *a priori* to be inappropriate for the self-employed.[20] More generally, the reliability of job strain models for informal workers has not been explored in depth. However, a few studies have put forth convincing arguments in support of this approach (and of the survey instruments it relies upon, such as job content questionnaires) as a valid tool to measure the QWE of informal jobs [e.g. see de Araujo and Karasek (2008) for Brazil]. In light of these caveats, the results in the next section report the incidence of long hours separately for employees and self-employed workers, and the results for the latter should be interpreted with caution.

How do emerging countries compare?

The following portrait of job quality across the twelve emerging economies analysed in this chapter is based on cross-sectional data from nationally representative labour force and household surveys.[21] For the sake of consistency, both across the sampled countries and with Chapter 3 of the 2014 *OECD Employment Outlook*, the analysis takes 2010 as the reference year.[22]
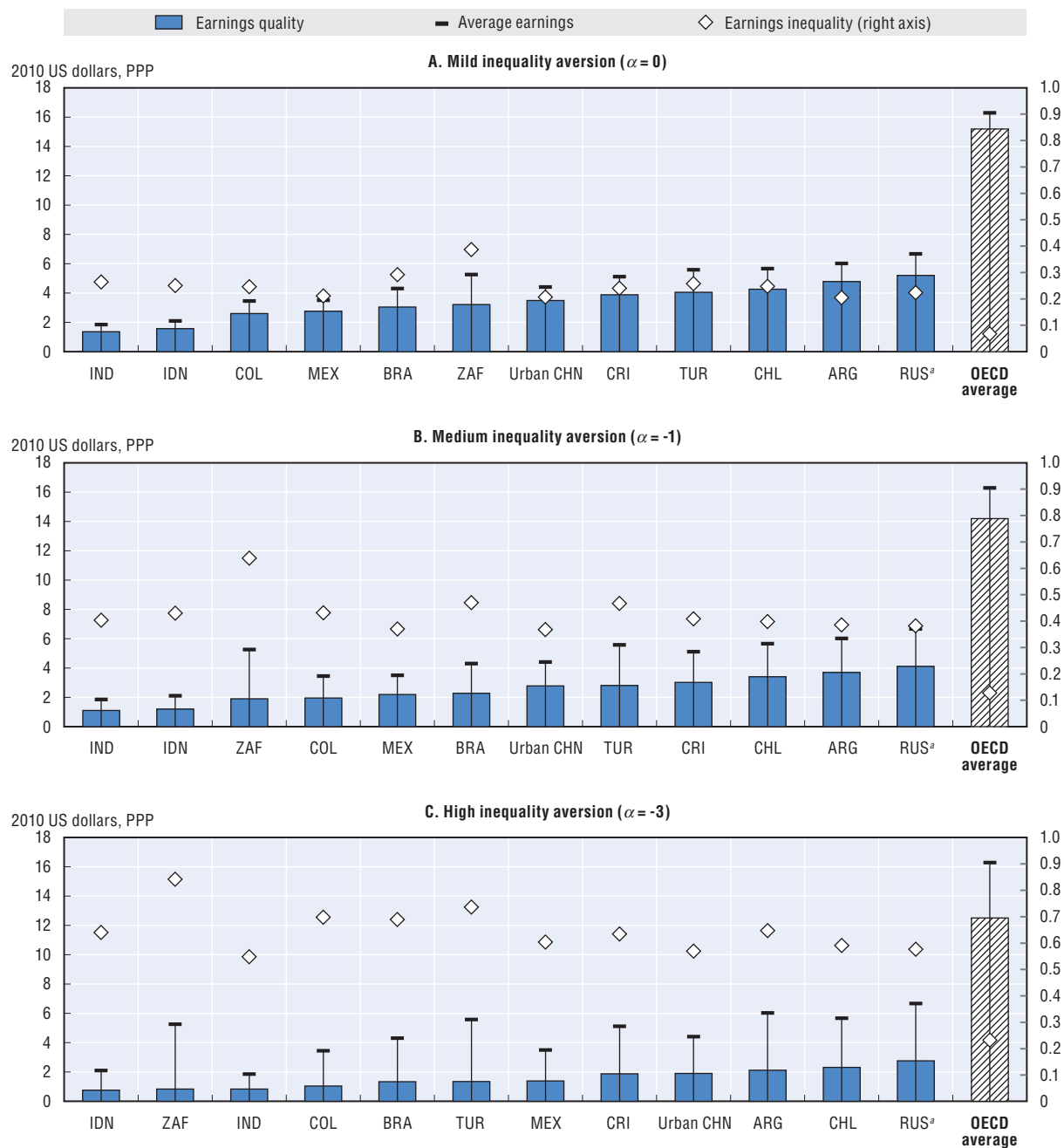
Earnings quality is low compared to OECD countries, and inequality weighs heavily on it

Figure 5.2 plots *earnings quality* across countries, using data on (net) hourly earnings. Each panel shows the general mean and its two sub-components (average earnings and earnings inequality) for a specific level of inequality aversion. As inequality aversion increases (from Panel A to Panel C), higher levels of inequality more strongly reduce the general mean and tend to lower earnings quality. This can be seen clearly in the case of South Africa, where earnings quality drops dramatically as a higher weight is placed on inequality. The levels of earnings inequality recorded in emerging economies are generally more than twice as high as in OECD countries (OECD, 2014, Chapter 3). Emerging economies also exhibit less cross-sectional variation (in relative terms), which makes the country ranking more stable across different specifications. At the highest level of inequality aversion (-3), earnings quality is highest in Argentina, Chile and Russia, while it is lowest in Colombia, Indonesia, India and South Africa.

The risk of unemployment is close to the OECD average in most countries…

Turning to the second dimension of job quality, Figure 5.3 plots labour market security against unemployment, showing separately the risk of transitioning to unemployment and the effective replacement rate of unemployment insurance. The former is constructed following the same principles as in OECD (2014, Chapter 3), conceiving unemployment risk as the share of time workers can expect to spend in unemployment due to job loss.[23] Unemployment insurance, on the other hand, captures the degree of loss absorption through government transfers – unemployment benefits and social assistance – that accrue to workers in the event of unemployment. It is calculated from survey data as the ratio of the average benefit level (among the unemployed) to the median net earnings (among the employed). As such, it captures the combined effect of benefit recipiency and generosity, and is generally consistent with the effective (net) replacement rate concept used for Chapter 3 of the 2014 *OECD Employment Outlook*. Figure 5.3 shows that the risk of unemployment is below the OECD average in most countries. As concerns unemployment insurance, the average effective individual replacement rate is much lower in emerging economies than in the average OECD country, despite the large number of different

Figure 5.2. **Earnings quality**

US dollars (PPPs), 2010

■ Earnings quality   — Average earnings   ◇ Earnings inequality (right axis)

A. Mild inequality aversion ($\alpha = 0$)

B. Medium inequality aversion ($\alpha = -1$)

C. High inequality aversion ($\alpha = -3$)

Note: Calculations are based on net hourly earnings and concern 2010 values, except for Brazil (2009), Chile (2009), China (2009) and India (2011). The OECD average is a simple cross-country average of earnings quality, as calculated in the *OECD Employment Outlook 2014*.

a) The figures for Russia are based on imputed data on households' disposable income from information on income brackets, and therefore include the effect of net transfers. Individual hourly income for two-earner households was calculated using available information on partners' employment status and working hours.

Source: OECD calculations based on national household and labour force surveys (EPH: Argentina, PNAD: Brazil, CASEN: Chile, UHS: China, GEIH: Colombia, ENHAO: Costa Rica, NSS: India, SAKERNAS: Indonesia, ENIGH: Mexico, NIDS: South Africa), the EU-SILC national files (Turkey) and the *European Social Survey* (Russia). Figures for OECD averages are taken from Chapter 3 of the *OECD Employment Outlook* 2014.

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Figure 5.3. **Labour market insecurity due to unemployment**
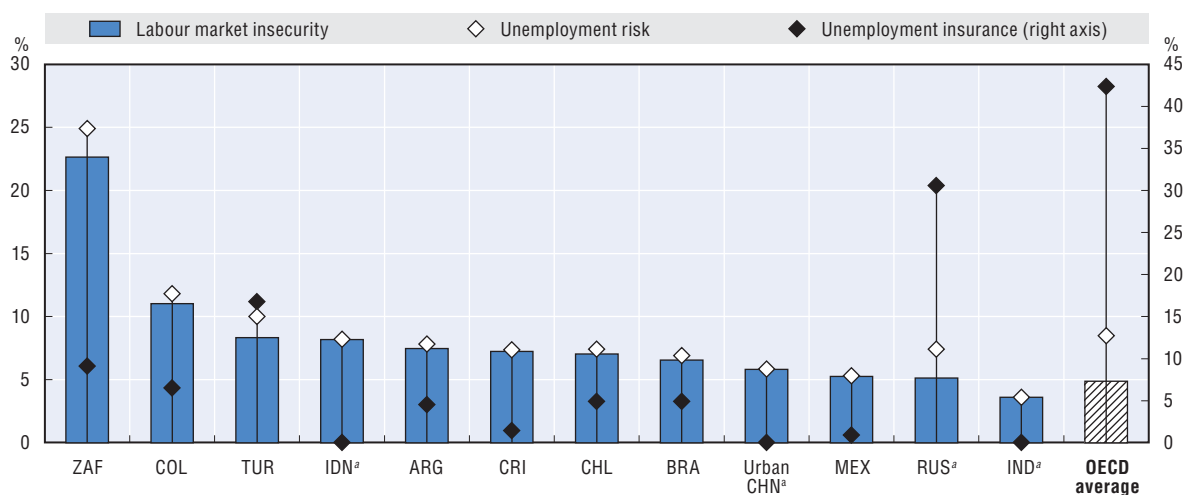
Note: Unemployment risk denotes the (scaled transformation of the) probability of becoming unemployed times the expected duration of unemployment, which may be interpreted as the average expected earnings loss associated with unemployment as a share of previous earnings. Unemployment insurance captures the average effective net individual replacement rate of unemployment and social assistance benefits in terms of previous earnings, for the median earner. Labour market insecurity is calculated as unemployment risk times one minus unemployment insurance and may be interpreted as the expected earnings loss associated with unemployment as a share of previous earnings.

The risk of unemployment is approximated by the unemployment rate, due to the lack of satisfactory data to calculate flows into and out of unemployment in the countries analysed. In a steady-state economy with a relatively low level of unemployment, the two approaches yield very similar results. The OECD average is a simple cross-country average of labour market security as calculated in the *Employment Outlook 2014*.

Calculations are based on 2010 data, except for Brazil (2011), Chile (2011), China (2009) and Turkey (2011).

a) The data for China, India and Indonesia do not contain transfers, so an insurance rate of 0% is assumed. For Russia, individual replacement rates were backed out from household-level replacement rates based on the assumption that all earners in a household have the same earnings.

Source: OECD calculations based on national household and labour force surveys (EPH: Argentina, PNAD: Brazil, CASEN: Chile, UHS: China, GEIH: Colombia, ENHAO: Costa Rica, NSS: India, SAKERNAS: Indonesia, ENIGH: Mexico, NIDS: South Africa), the EU-SILC national files (Turkey) and the *European Social Survey* (Russia). The figure for the OECD average is taken from Chapter 3 of the *OECD Employment Outlook 2014*.

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schemes operating in many of these countries.[24] Double-digit replacement rates are estimated only for Russia and Turkey, whereas the other countries provide minimal effective insurance for the unemployed – due to either very low coverage rates (as in Argentina or Colombia), or very low replacement rates for covered persons (as in South Africa), or a combination of both (as in Brazil, Chile, Costa Rica or Mexico). Altogether, the combination of low unemployment risk and very limited unemployment insurance causes labour market insecurity from unemployment in most emerging economies to be comparable to that in a typical OECD country. Given such low levels of social protection, the low unemployment risk in most emerging countries is likely to reflect the sheer unaffordability of unemployment when social insurance is so low. This suggests that many workers may need to accept very low quality jobs when better jobs are not available. The most striking example is India, which is seen to have the lowest level of labour market insecurity due to unemployment (lower than the OECD average), but a large proportion of workers in subsistence-level jobs.

... but the risk of falling into extreme low pay is high and social transfers are unable to reduce it...

Figure 5.4 plots the risk of extreme low-pay estimated using the methodology proposed by Dang et al. (2011) and extended by Dang and Lanjouw (2013). This methodology, discussed in Annex 5.A1, delivers an estimate of upward mobility (the probability of transitioning out of low pay) and an estimate of downward mobility (the probability of transitioning into low pay). The two can be combined to derive a measure of the long-term incidence of low pay, which can be interpreted as the risk that a random worker in the economy will be in a low-paying occupation at a given point in time. The results show substantial variation in the risk of extreme low-pay among the countries analysed. The rate is highest in India, Indonesia and Mexico, and lowest in Chile, China and the Russian Federation. While this largely reflects differences in average living standards, countries with similar levels of GDP per capita may display different patterns of mobility and risk. For instance, Turkey, Chile and South Africa have very similar levels of average earnings (Figure 5.2), but the risk of extreme low pay faced by the average Turkish and South African worker is respectively three and four times higher than their counterparts in Chile. The estimates in Figure 5.4 take into account the cushioning effects of social insurance by incorporating all public transfers in the measure of earnings. However, since most such transfers are not designed to reduce the specific risk of falling into extreme low pay, social insurance accounts for only a very small reduction in the risk of extreme low pay in the countries considered (Figure 5.A2.1 in Annex 5.A2). These patterns are robust to varying the choice of the absolute low-earnings threshold.

... which translates into higher levels of overall labour market insecurity than in most OECD countries

The high level of the risk of low pay in some emerging economies means that overall labour market insecurity would be underestimated if only the risk of unemployment were considered. The lack of a strong empirical association between the risk of unemployment and the risk of low pay across countries (as is evident when comparing Figures 5.3 and 5.4) also means that assessments of the relative level of insecurity in different emerging economies would be biased if only unemployment risk were considered. In order to obtain a complete picture of labour market risks, the results in Figures 5.3 and 5.4 are combined to create an overall measure of labour market security that is presented in Figure 5.5. This composite indicator is calculated as the insecurity from unemployment plus the insecurity from extreme low pay if employed.[25]

Figure 5.5 reveals that truly high levels of labour market insecurity in emerging economies are generally driven by the risk of extreme low pay, rather than unemployment. The striking exception is South Africa, where the share of jobs with extreme low-pay is relatively low, while the risk of unemployment is substantial. A similar situation prevails in some developed economies (including several OECD countries), where the insecurity due to unemployment is quite high but higher productivity, minimum wage regulations and better social security greatly reduce the risk of extreme low-pay.

Figure 5.4. **Labour market insecurity due to extreme low pay**
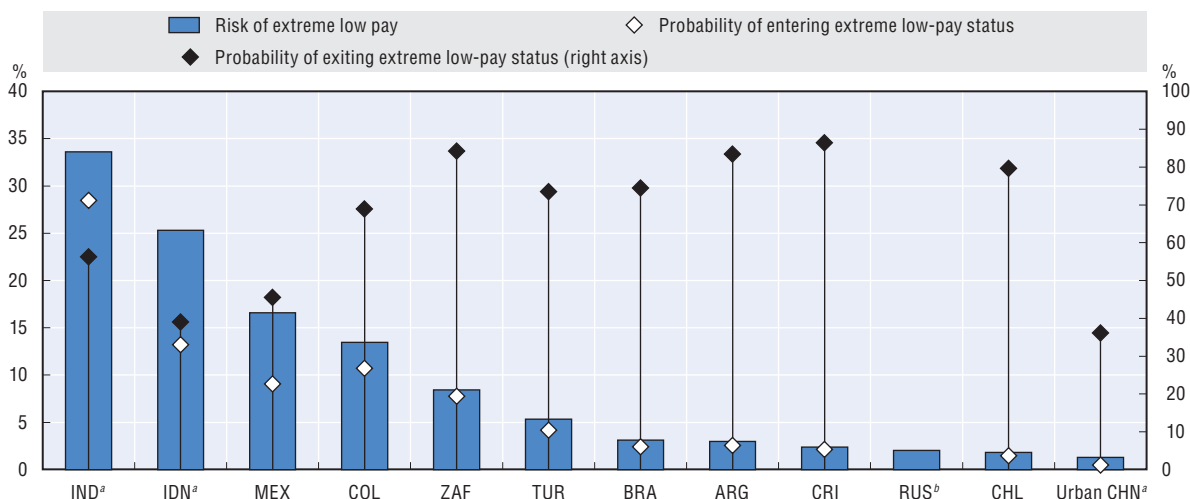
Note: The low-pay threshold is set at USD PPP 1 in terms of net hourly earnings and corresponds to a disposable income per capita of USD PPP 2 per day in a typical household of five members with a single earner working full time. The choice of the household size follows Bongaarts (2001) and is based on data from Demographic and Health Surveys. Country rankings are generally robust to changing the low-pay threshold.

The probability of entering and exiting low-pay status are calculated by the pseudo-panel methodology proposed by Dang and Lanjouw (2013) using the sample of employed individuals. The risk of low pay is calculated by (the scaled transformation) of the probability of entering low-pay status times the inverse of the exit probability, and shows the likelihood that an individual's earnings are below the low-pay threshold at any given time.

The data displayed represent net hourly earnings adjusted for social transfers. Calculations are based on 2009-10 data, except for Brazil (2009-11), Chile (2009-11), China (2008-09), Costa Rica (2010-12), India (2011-12), Mexico (2010-12), Russia (2010-12), South Africa (2010-12) and Turkey (2011-12).

a) The data for China, India and Indonesia do not contain transfers, so an insurance rate of 0% is assumed.

b) For Russia, transition probabilities could not be estimated due to categorical income data. The corresponding risk figure therefore represents the share of employed working-age individuals living in households with a monthly disposable income of less than RUB 6 000, which corresponds to an hourly low-pay threshold of USD PPP 1.14 (as of 2010) for a member of a two-earner family working full-time.
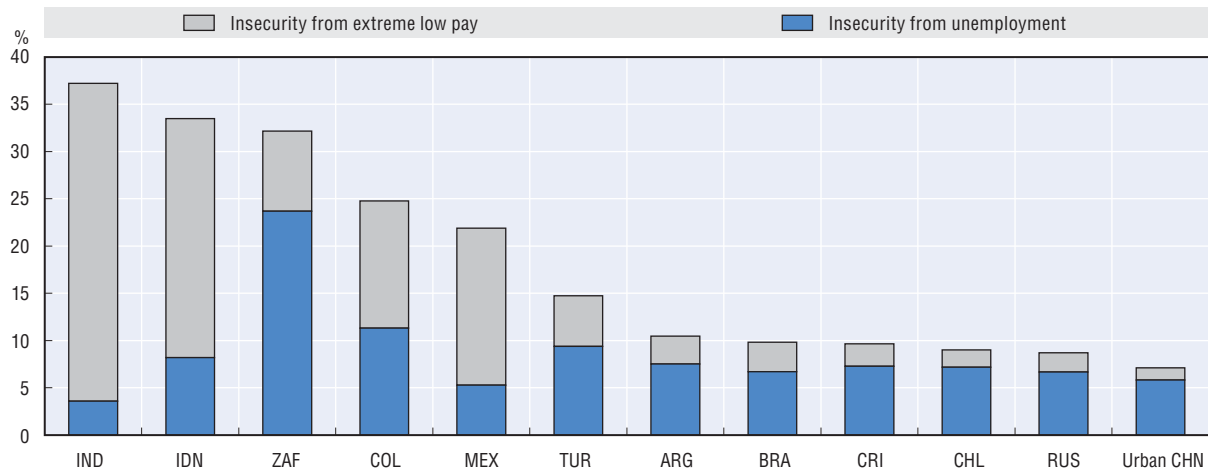
Source: OECD calculations based on national household and labour force surveys (EPH: Argentina, PNAD: Brazil, CASEN: Chile, UHS: China, GEIH: Colombia, ENHAO: Costa Rica, NSS: India, SAKERNAS: Indonesia, ENIGH: Mexico, NIDS: South Africa), the EU-SILC national files (Turkey) and the *European Social Survey* (Russia).

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The incidence of working long hours is remarkably high in many emerging economies

Figure 5.6 displays the incidence of working more than 60 hours a week, which is the maximum authorised in the countries with the most permissive working time legislation among the countries included in this chapter (i.e. Colombia and Costa Rica).[26] The data show that the incidence of very long hours is remarkably high in six of the twelve emerging economies analysed in this chapter, and mostly higher than in advanced OECD countries (with the possible exception of Greece, Japan and Korea) (see also Box 5.1). There is however considerable heterogeneity across emerging countries, with Turkey, Colombia, Indonesia, India, Mexico and Costa Rica having a high incidence (from 12% up to 21% in Turkey) and South Africa, Chile, the Russian Federation and Brazil at levels below 5%. In all countries self-employed workers have a significantly higher incidence of very long hours than employees (the most dramatic example of this divergence being urban China). This is to be expected, since the self-employed do not face the same regulations and have more discretion in choosing their own working schedule.

Figure 5.5. **Overall labour market insecurity**

Note: Overall labour market insecurity is calculated as insecurity from unemployment plus the insecurity from extreme low pay if employed. Formally, $LMI_{OVERALL} = LMI_{UNEMPLOYMENT} + (1 - RISK_{UNEMPLOYMENT}) * LMI_{LOW\text{-}PAY}$, where *LMI* stands for labour market insecurity. Calculations are based on 2009-10 data, except for Brazil (2009-11), Chile (2009-11), China (2008-09), Costa Rica (2010-12), India (2010-12), Mexico (2010-12), Russia (2010-12), South Africa (2010-12) and Turkey (2011-12).
Source: OECD calculations based on national household and labour force surveys (EPH: Argentina, PNAD: Brazil, CASEN: Chile, UHS: China, GEIH: Colombia, ENHAO: Costa Rica, NSS: India, SAKERNAS: Indonesia, ENIGH: Mexico, NIDS: South Africa), the EU-SILC national files (Turkey) and the *European Social Survey* (Russia).

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Figure 5.6. **Incidence of very long hours**
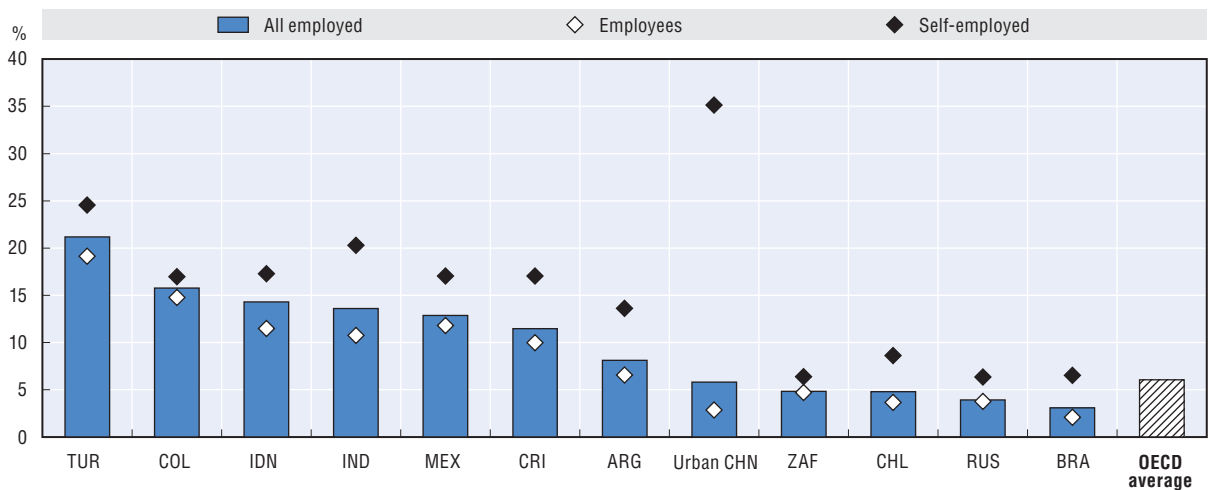
Note: Working long hours is defined as working more than 60 hours in an average week. Figures represent 2010 values except for Brazil (2011), Chile (2011), China (2009) and India (2011).
Source: OECD calculations based on national household and labour force surveys (EPH: Argentina, PNAD: Brazil, CASEN: Chile, UHS: China, GEIH: Colombia, ENHAO: Costa Rica, SAKERNAS: Indonesia, ENIGH: Mexico, NIDS: South Africa), the EU-SILC national files (Turkey), the *European Social Survey* (Russia) and the *Gallup World Poll* (India). The respective figure for the OECD concerns all employed and is calculated as the simple cross-country average based on the OECD *Employment Database*.

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How do workers compare?

It is also important to look at how different socio-demographic groups fare within countries. Doing so can provide new insights into labour market inequalities by shedding light on the nature and depth of the disadvantages faced by some segments of society. A break-down of the principal job quality indices and employment rates by gender, age and

Box 5.1. **Job strain in four emerging economies***

As a supplement to the very long hours indicator presented in Figure 5.6, it is feasible to compute the reduced job strain indices from OECD (2014, Chapter 3) for four of the emerging economies considered in this chapter. The left panel of Figure 5.7 shows the percentage of employees in strained jobs in Mexico, South Africa, Turkey and the Russian Federation, together with the OECD average in 2005. The results show that these countries generally perform worse than the OECD average, except for Mexico which displays the lowest share of strained jobs (34%). In the three other emerging countries, job strain is experienced by between 49% and 67% of all employees (South Africa and Turkey, respectively). All four countries have a higher proportion of workers experiencing a high level of job demands than the OECD average, notably due to time pressure.

Figure 5.7. **Job demands, job resources and incidence of job strain**

Percentage of all employees in selected emerging economies, 2005
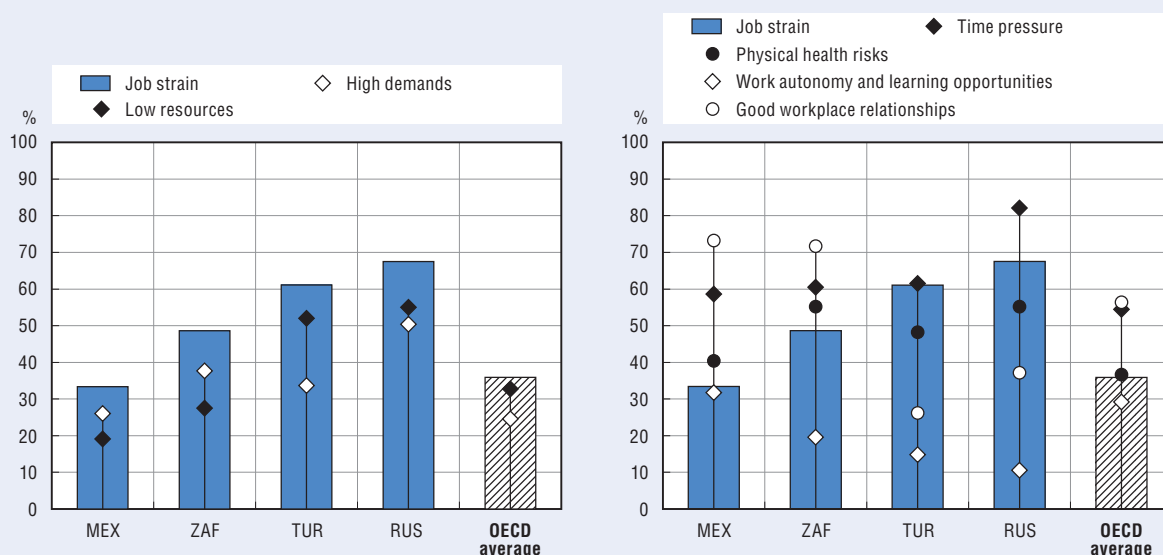
Source: OECD calculations based on Eurofound (2007), Fourth *European Working Conditions Survey* for Turkey; and *International Social Survey Programme Work Orientations Module* (2005) for others.
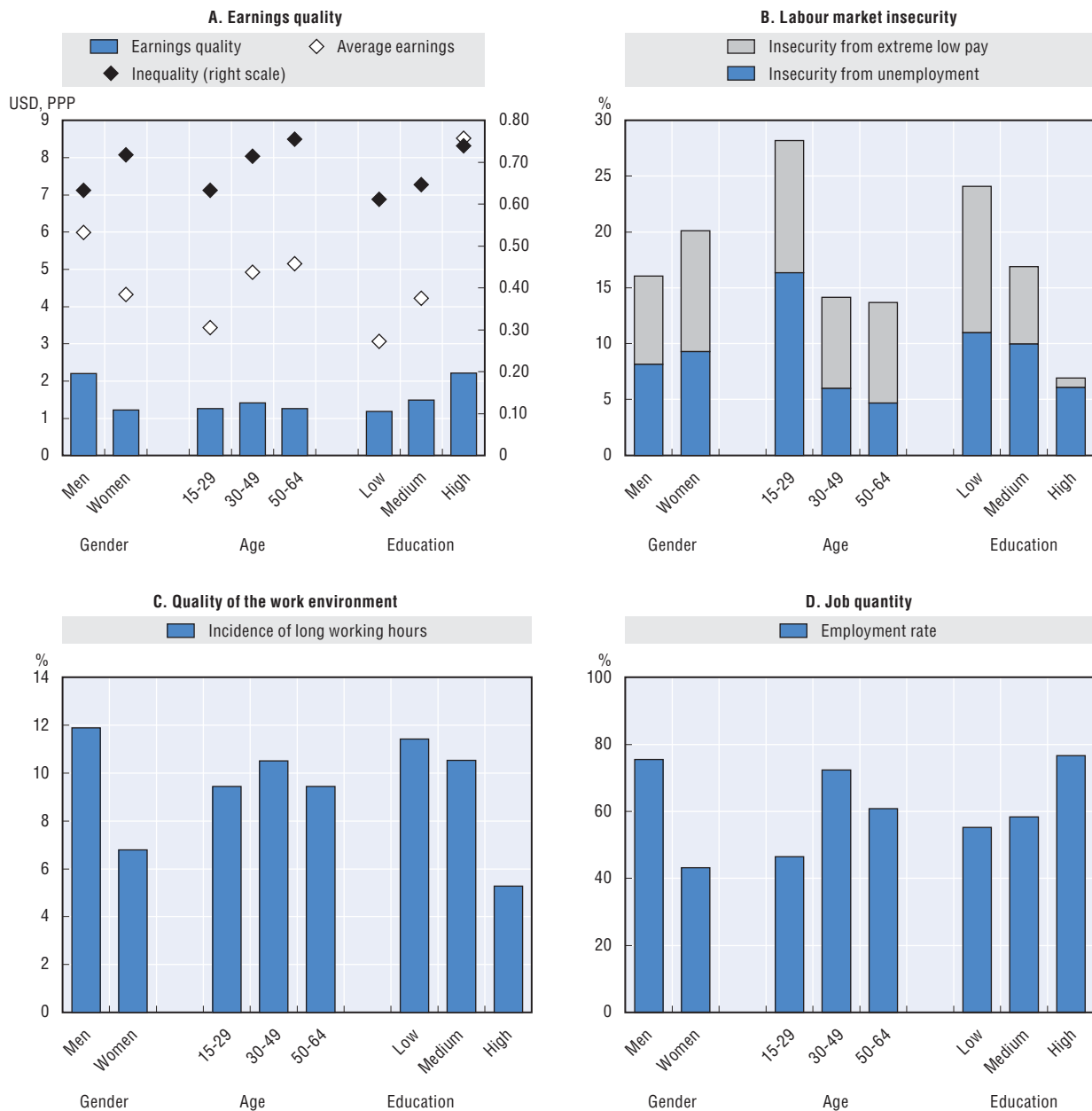
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As is shown on the right panel of Figure 5.7, there are important cross-country differences in the available job resources to compensate for those stress factors. For instance, Turkey and the Russian Federation have a high proportion of jobs with strong time pressure and insufficient resources to compensate for stress factors, while good workplace relationships play a buffer role in Mexico and South Africa. Moreover, a cross-country analysis of this small sample suggests that, long hours are indeed an adequate proxy to be used for measuring the QWE in emerging economies, even though long hours and job strain indices certainly do not capture exactly the same aspects of work (for instance time pressure, one of the key driver of job strain includes in addition to long hours, a notion of work intensity). It should not be surprising, therefore, that cross-country rankings may differ.

* This box benefited from the excellent statistical support from Hande Inanc (OECD Statistics Directorate).

level of education was calculated for each country and cross-country averages are presented in Figure 5.8. The results show that some socio-demographic groups cumulate many disadvantages, while other groups show a good performance in all dimensions.

Figure 5.8. **Job quality and quantity outcomes by socio-demographic groups**

A. Earnings quality

B. Labour market insecurity

C. Quality of the work environment

D. Job quantity

Note: The figures represent unweighted country averages of all twelve sampled emerging economies, except that: i) China is excluded from employment rate calculations in Panel D due to data availability reasons; and ii) China, India, Indonesia and Russia are excluded from the calculation of overall labour market insecurity in Panel B due to missing information on social transfers. Employment rates for Panel D are calculated using the same data sources as for the rest of the analysis, except that the *OECD Education Database* was used for Russia. For more information about the construction of these indicators, see the corresponding notes to previous figures.
Source: OECD calculations based on national household and labour force surveys (EPH: Argentina, PNAD: Brazil, CASEN: Chile, UHS: China, GEIH: Colombia, ENHAO: Costa Rica, NSS: India, SAKERNAS: Indonesia, ENIGH: Mexico, NIDS: South Africa), the EU-SILC national files (Turkey), the *European Social Survey* (Russia) and the *Gallup World Poll* (India).

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The worst off in terms of job quality are youth and low-skilled workers. These two groups cumulate low employment rates (Panel D) with poor outcomes along the different dimensions of job quality (Panels A-C). By contrast, high-skilled workers have both higher employment rates and the best quality jobs along all of the dimensions analysed. Women

face some clear disadvantages. A gender gap exists in terms of earnings quality and job quantity (i.e. employment). Women also face higher labour market insecurity, as captured by the risk of extreme low pay, but their risk of unemployment is similar to that experienced by men. However, women are less exposed than men to very long working hours.

While these results are broadly representative of the patterns observed in different economies, the aggregate figures hide a considerable degree of heterogeneity across countries. Most importantly, it is crucial to observe that between-group disparities tend to decrease with the aggregate level of job quality. In other words, a higher score for a country in a given dimension of job quality typically reflects less inequality between groups and, in particular, a more favourable (relative) position for the most disadvantaged.

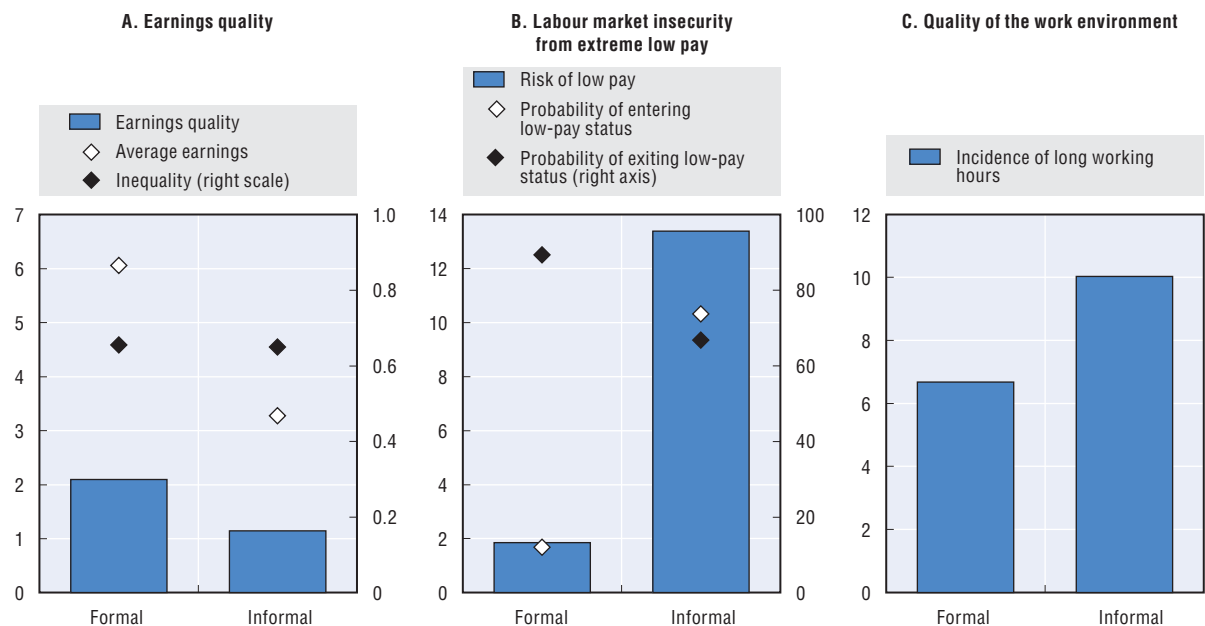### The quality gap between formal and informal workers

The high incidence of informality in the labour market is one of the most salient features of emerging economies. Jütting and J. de Laiglesia (2009) estimated that 60% of all non-agricultural employment worldwide is in the informal sector, with higher shares in Africa, South Asia and Latin America. The research literature has long debated whether informality is a choice or rather a necessity for most workers involved, concluding that the sector is highly heterogeneous.[27] With a view to advancing this unresolved debate, this section makes use of the job quality framework outlined above to gauge the magnitude of the quality gap between formal and informal jobs along the three dimensions used in the *OECD Job Quality Framework*.

Informal workers are defined here as "those salaried workers who are not affiliated to social security systems (do not pay contributions) and those own-account (self-employed) workers whose business is not registered."[28] This choice is consistent with both much previous research and the conceptual underpinnings of this chapter, which place the emphasis on individual workers, as opposed to firms.[29] Furthermore, since part of the motivation is to explore the link between labour market security and well-being, a definition based on access to social welfare appears to be the particularly appropriate.[30] Using this definition, the incidence of informality (in total employment) among the countries considered ranges from less than 10% in Russia to more than 70% in India and Indonesia. Informality is more prevalent among women, younger workers and especially among the low-skilled (see Box 5.2 for a detailed discussion).

Figure 5.9 compares earnings quality, labour market insecurity from the risk of low-pay and quality of the working environment (as defined by the incidence of very long working hours) for formal and informal workers.[31] The results strongly suggest that informal jobs are worse along all the dimension of job quality:

- Earnings inequality is similar among formal and informal workers, but formal workers earn significantly more on average and thus their level of earnings quality is substantially higher. Lower average earnings for informal workers are consistent with the widely held perception that informal jobs are less productive.[32] While earnings quality is lower among informal workers in all the countries analysed, the quality gap is widest in Argentina and South Africa and smallest in Chile, Mexico and Colombia (not shown). Cross-country differences are largely driven by differences in the size of the average earnings gap between the two sectors.

- The difference in terms of labour market risk is very stark. Informal jobs tend to be associated with a significantly higher incidence of extreme low pay in all the countries

Figure 5.9. **Job quality among formal and informal workers**

A. Earnings quality

Legend:
- Earnings quality
- ◇ Average earnings
- ◆ Inequality (right scale)

B. Labour market insecurity from extreme low pay

Legend:
- Risk of low pay
- ◇ Probability of entering low-pay status
- ◆ Probability of exiting low-pay status (right axis)

C. Quality of the work environment

Legend:
- Incidence of long working hours

Note: Figures represent unweighted country averages across all sampled emerging economies except Indonesia. Due to missing information, China was excluded from the calculation of labour market security in Panel B, while India was excluded from the calculation of the incidence of long working hours in Panel C. Classification between formal and informal status is based on social security payments (employees) and business registration (self-employed), except for Colombia and Russia where information on work contract (written or not) was used. For more information about the construction of the job quality indicators used, please see the notes to Figures 5.2, 5.3 and 5.4.
Source: OECD calculations based on national household and labour force surveys (EPH: Argentina, PNAD: Brazil, CASEN: Chile, UHS: China, GEIH: Colombia, ENHAO: Costa Rica, NSS: India, ENIGH: Mexico, NIDS: South Africa), the EU-SILC national files (Turkey), and the *European Social Survey* (Russia).

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considered (approximately seven times higher on average across these countries). Moreover, the analysis of upward and downward earnings mobility reveals that downward mobility is generally higher in informal jobs, whereas upward mobility is significantly larger in formal jobs. This means that workers holding informal jobs not only face the most significant downward risks, they also have fewer opportunities for wage progression.

● The share of workers working very long hours averages 10% for workers in informal jobs, as compared to 6.7% for workers in formal occupations. Very long hours are more common for informal workers in all countries reviewed in this chapter except for Chile and Mexico, where the two shares are similar. In Turkey, one of the countries with the highest incidence of working very long hours, 29% of workers in informal jobs work more than 60 hours a week against 16% of those with formal jobs; in Colombia, where informal work is also widespread, the two shares are 20% and 11%.

● The bivariate results reported in Figure 5.9 are confirmed by a simple regression analysis (see Annex Table 5.A3.1), which shows that even after controlling for differences in the gender, age and educational composition of the formal and informal workforces, informality is associated with a negative and significant job quality gap.

Box 5.2. **Characterising informality**

How common is informal employment in emerging economies?

Figure 5.10 compares the incidence of informality in total employment in the twelve emerging economies analysed in this chapter. It shows that the share of informal employment is highest in Indonesia and India (above 70%) and lowest in Chile, urban China and Russia (around or less than 15%). Argentina, South Africa, Colombia, Costa Rica and Brazil have similar levels of informality (between 35% and 40%), moderately below Mexico and Turkey (between 40% and 50%). In countries where time-series data are available, informality appears to have fallen in recent years (the only exception being Mexico). Some of the most significant reductions have been recorded in Brazil, thanks to effective policy measures to induce formalisation (to be discussed in the final section of the chapter).

Figure 5.10. **Incidence of informality in emerging economies**

As a share of total employment
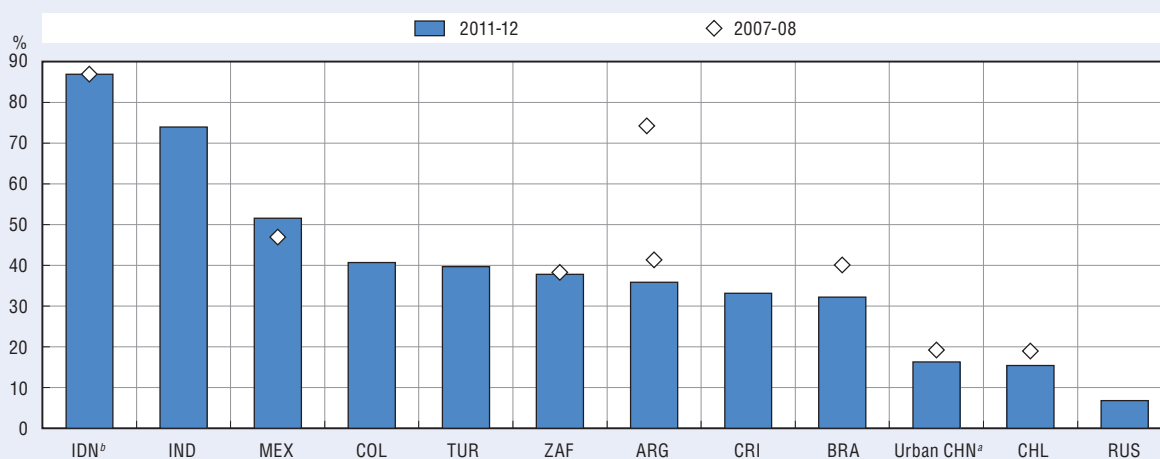
Note: Informality is defined to include: i) employees who do not pay social contribution, except for Colombia, where contract status is used; and ii) self-employed workers who do not pay social contributions (Brazil, Chile, China, India, Indonesia, Turkey) or whose business is not registered (Argentina, Colombia, Costa Rica, Mexico, South Africa).
a) The figures for China are for 2008 and 2009.
b) All figures for Indonesia are for 2007.
Source: OECD calculations based on national household and labour force surveys (EPH: Argentina, PNAD: Brazil, CASEN: Chile, UHS: China, GEIH: Colombia, ENHAO: Costa Rica, NSS: India, SAKERNAS: Indonesia, ENIGH: Mexico, NIDS: South Africa), the EU-SILC national files (Turkey) and the *European Social Survey* (Russia).

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Who works in the informal sector?

Figure 5.11 shows how the average incidence of informality varies by worker characteristics. It highlights some clear patterns. *First*, informality is only slightly more common among women than it is among men. *Second*, it is higher among younger and older workers than it is among prime-aged ones. To the extent that informal jobs constitute a stepping stone towards formal careers for youth, a high incidence for this age group may not be a source of major concern. However, if informality has strong scarring effects, starting a career with an informal job may be highly detrimental. The implications of the relatively high incidence of informality among older workers can also vary. Some older workers may choose to work informally prior to retirement, but others may lack opportunities for formal employment when they lose their career jobs. *Third*, and most strikingly, the incidence of informality is over three times higher among low-skilled workers than it is among high skilled ones. This result is consistent with the productivity gap that divides formal and informal firms (La Porta and Schleifer, 2014). It also suggests that informal jobs may often be the only opportunity available to unskilled workers with stark implications for inegality. *Finally*, and consistently

Box 5.2. **Characterising informality** *(cont.)*

with existing evidence, informality is significantly more common among the self-employed than it is among dependent workers in all the countries considered. This provides a strong indication that informal jobs are often a subsistence strategy, as workers who lack opportunities for formal wage employment need to generate employment opportunities out of their own initiative.

Figure 5.11. **Incidence of informality by key worker characteristics**

Average of selected countries, 2010[a]
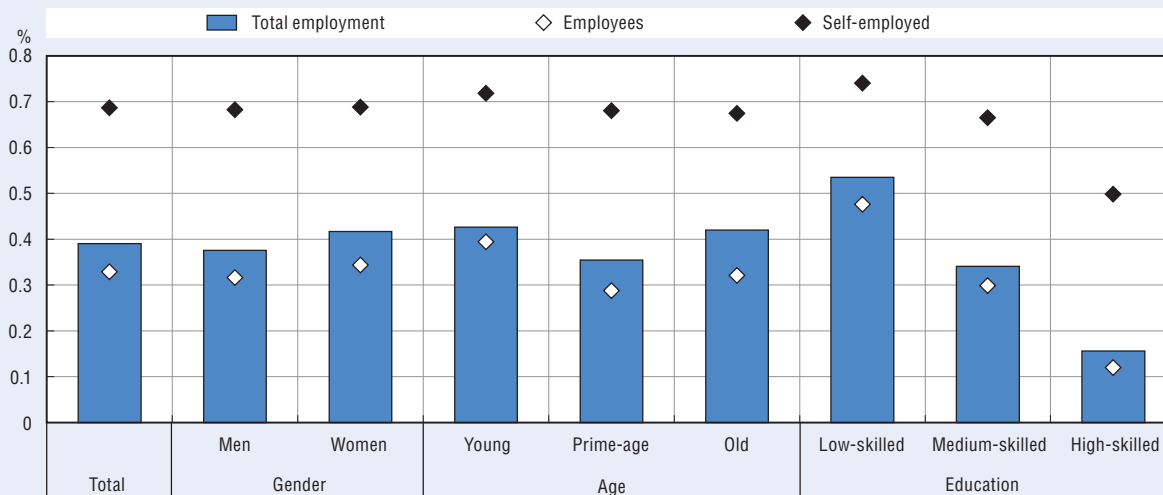
Note: Informality is defined as: i) employees who do not pay social contribution, except for Colombia, where contract status is used; ii) self-employed who do not pay social contributions (Brazil, Chile, India, Turkey) or whose business is not registered (Argentina, Colombia, Costa Rica, Mexico, South Africa).

a)   The figures exclude China and Indonesia (due to data availability) and Russia (where it has not been possible to separately identify informal self-employment); figures for Brazil, Chile and India are from 2011.

Source: OECD calculations based on national household and labour force surveys (EPH: Argentina, PNAD: Brazil, CASEN: Chile, UHS: Colombia, ENHAO: Costa Rica, NSS: India, ENIGH: Mexico, NIDS: South Africa) and the EU-SILC national files (Turkey).

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2. How hard is it to escape low-quality informal jobs?

The previous section documented a significant quality gap between formal and informal jobs. This section takes a dynamic perspective and, in the same vein as the dynamic analysis of working lives in Chapter 4, investigates how difficult it is to move out of informal jobs, what determines mobility and the extent to which different types of workers can hope to move out of informality over the course of their career. In doing so the analysis attempts to address a long-standing debate on whether informal jobs constitute a stepping stone or a trap. To meet these objectives, the focus are placed on a subset of four emerging economies where panel data at the individual level are available: urban Colombia, South Africa, urban China and Turkey. This permits an in-depth investigation of job-transitions and their determinants.

Informal jobs are highly unstable…

As a first step, it is useful to quantify the extent of mobility into and out of informal employment. Figure 5.12 plots the probability that formal (Panel A) and informal workers

Figure 5.12. **Flows into and out of informality**
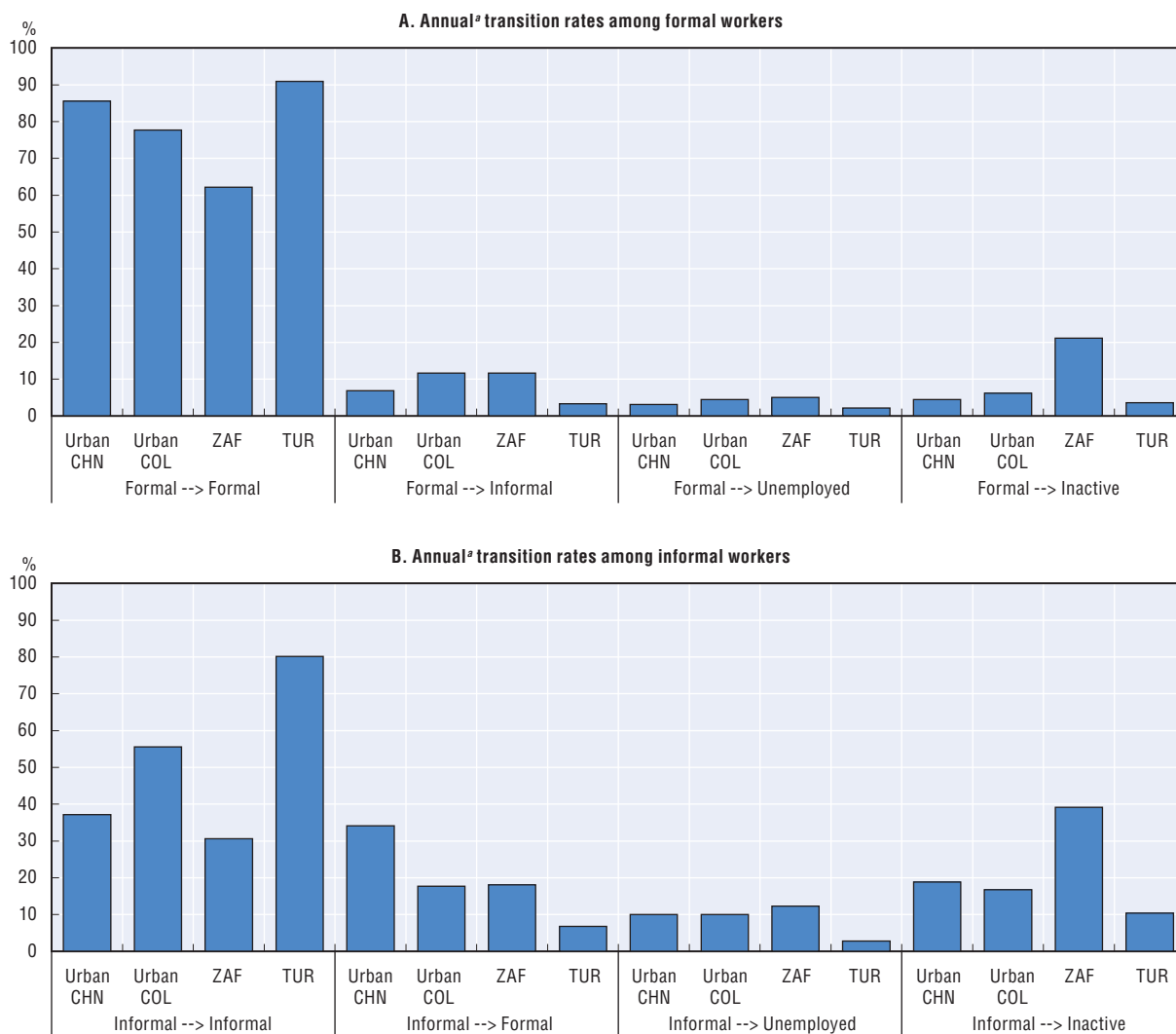
A. Annual[a] transition rates among formal workers

B. Annual[a] transition rates among informal workers

Note: Informality is defined as all employed persons not paying social contributions in Turkey and China. In Colombia and South Africa, informality includes both employees not paying social contributions and self-employed persons whose business is not registered. The sample for China and Colombia covers the urban population only. Annual transition rates are calculated over the following periods for China (2008-09), Colombia (2009-10) and Turkey (2010-11), while the figures for South Africa represent bi-annual transitions calculated over the 2010-12 period.

a) Except for South Africa, where the transitions are bi-annual.

Source: OECD calculations based on national longitudinal household and labour force surveys (UHS: China, Fedesarollo: Colombia, NIDS: South Africa) and the EU-SILC national files (Turkey).

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higher probability of unemployment and inactivity than formal employment. This is particularly striking in South Africa, where the economic crisis led to a dramatic flow into inactivity, which was particularly significant among informal workers. Overall, it appears that informal jobs are highly volatile. They offer a sizeable probability of moving to the formal sector (in this respect they may constitute a stepping stone), but are also characterised by a high risk of job loss, including transitions into inactivity.[34]

formal sector (in this respect they may constitute a stepping stone), but are also characterised by a high risk of job loss, including transitions into inactivity.[34]

... and they are harder to escape for women, older workers and especially for low-skilled workers

Looking at the socio-demographic characteristics of workers who move from an informal to a formal job reveals that women, older workers and, in particular, low-skilled workers find it especially hard to escape informal jobs. The results are summarised in Annex Figure 5.A3.1.

Informal workers are often more likely to move to temporary jobs...

To assess whether informal jobs are a useful stepping stone to good quality employment, it is first important to recall that not all formal jobs are equally appealing and the answer thus depends on which formal jobs are accessible to informal workers. In particular, a large literature documents the existence of a deep divide, within the formal sector, between jobs offering permanent contracts and those offering fixed-term contracts. The distinction is especially relevant from a job quality perspective since fixed-term jobs tend to be, on average, second best jobs characterised by lower earnings quality, higher labour market risk (due to both higher risk of joblessness and to lower unemployment benefit coverage) and lower quality of the working environment (OECD, 2014, Chapter 3). Furthermore, these forms of fixed-term employment are quite widespread in emerging economies, notably in Latin American countries and China.

Which types of formal jobs are informal workers more likely to access? Panel A of Figure 5.13 addresses this question by showing that the majority of informal workers who transit to formal jobs moves into fixed-term employment in urban Colombia and urban China, while the opposite holds for South Africa and Turkey. Low transition rates from informality to fixed-term contracts in Turkey and South Africa can be, at least partly, explained by the relatively restrictive legislation on fixed-term employment in the former and the very light employment protection rules applying to permanent contracts in the latter.

... and temporary jobs in the formal sector generally carry the highest risk of subsequently falling into informality

Panel B of Figure 5.13 shows that workers in the formal sector in all the countries analysed except urban China are significantly more likely to transition to informality if they work in a fixed-term job than if they have a permanent contract. This evidence points to the potential existence of a vicious cycle, in countries like (urban) Colombia, where some workers may be stuck in a back-and-forth between informality, fixed-term formal jobs and joblessness. Such a possibility weakens the claim that informal employment typically serves as a stepping stone towards good careers. The next section sheds further light on this question.

Starting a career in informal jobs may constrain workers' prospects

What part of their career can different types of workers expect to spend in formal and informal jobs? Which workers face the bleakest prospects? And how do these prospects depend on whether a worker starts his/her career in a formal or informal job? To address these questions, the analysis uses a multinomial logit model (McFadden, 1974) and estimates transition probabilities as a function of worker characteristics and prior employment

Figure 5.13. **Informality and subsequent work**

Percentage of workers who change employment status
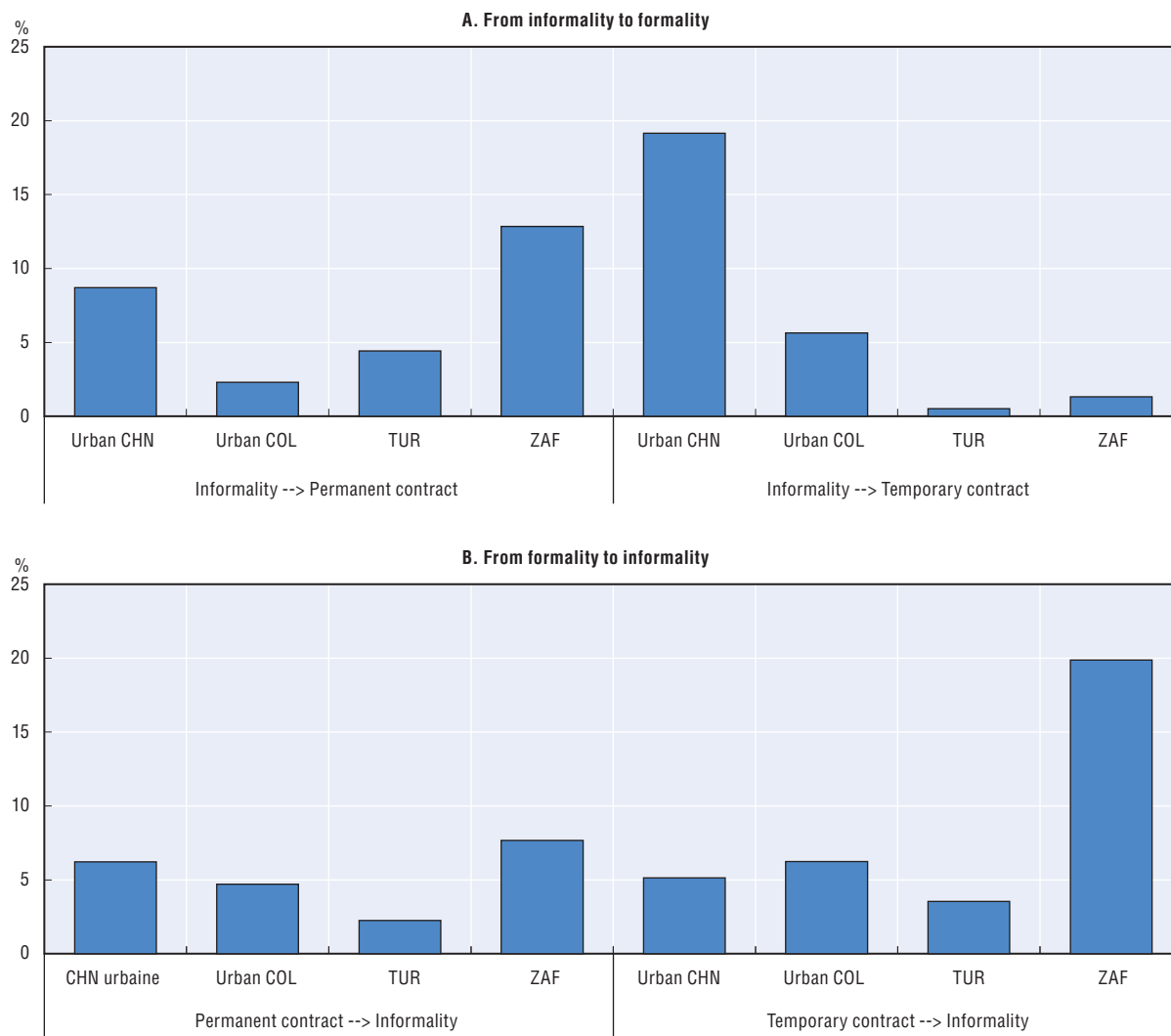
A. From informality to formality


B. From formality to informality

Note: Informality is defined as all employed persons not paying social contributions in Turkey and China. In Colombia and South Africa, informality includes both employees not paying social contributions and self-employed persons whose business is not registered. The sample for China and Colombia covers the urban population only. Annual transition rates are calculated over the following periods for China (2008-09), Colombia (2009-10) and Turkey (2010-11), while the figures for South Africa represent bi-annual transitions calculated over the 2010-12 period. Transitions from informality to formal self-employment are not included.
Source: OECD calculations based on national longitudinal household and labour force surveys (UHS: China, Fedesarollo: Colombia, NIDS: South Africa) and the EU-SILC national files (Turkey).

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histories (the model is discussed extensively in Annex 5.A1). Figure 5.14 shows the estimated career shares that a worker who has an informal job at age 20 can expect to spend in each employment status (formal, informal, unemployed/inactive) over the following 40 years, depending on his/her characteristics. The results, not available for China,[35] show that informality is hard to escape for workers in urban Colombia and Turkey, where persons starting their careers with an informal job tend to spend the majority of their working life in informality. By contrast, since transitions out of informality are more common in South Africa, the resulting career share spent with an informal job is lower.[36] In all countries, the persistence of informality tends to fall with education (most significantly so in urban

Figure 5.14. **Predicted career shares if a worker starts with an informal job**
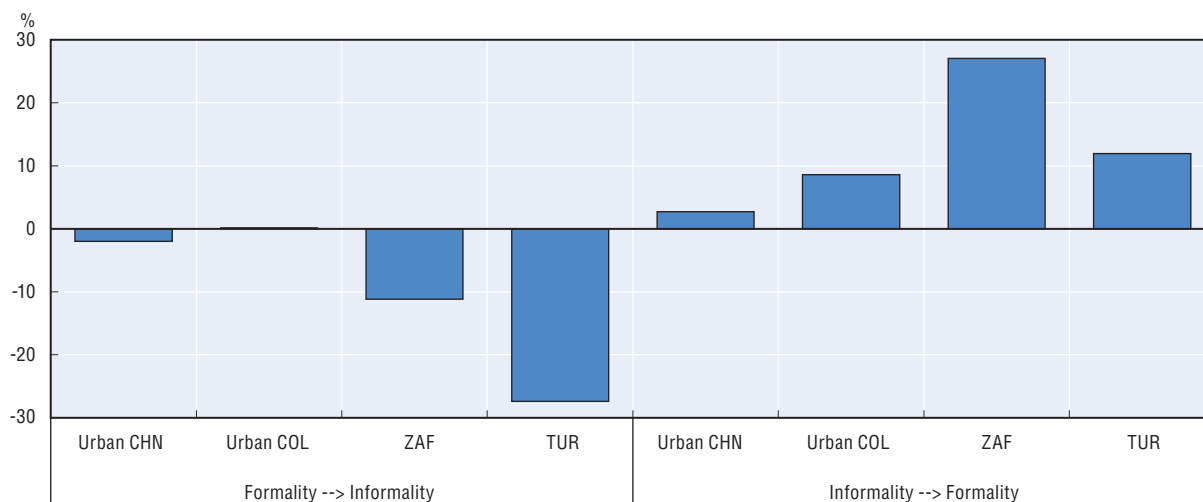
Percentage over a total working life
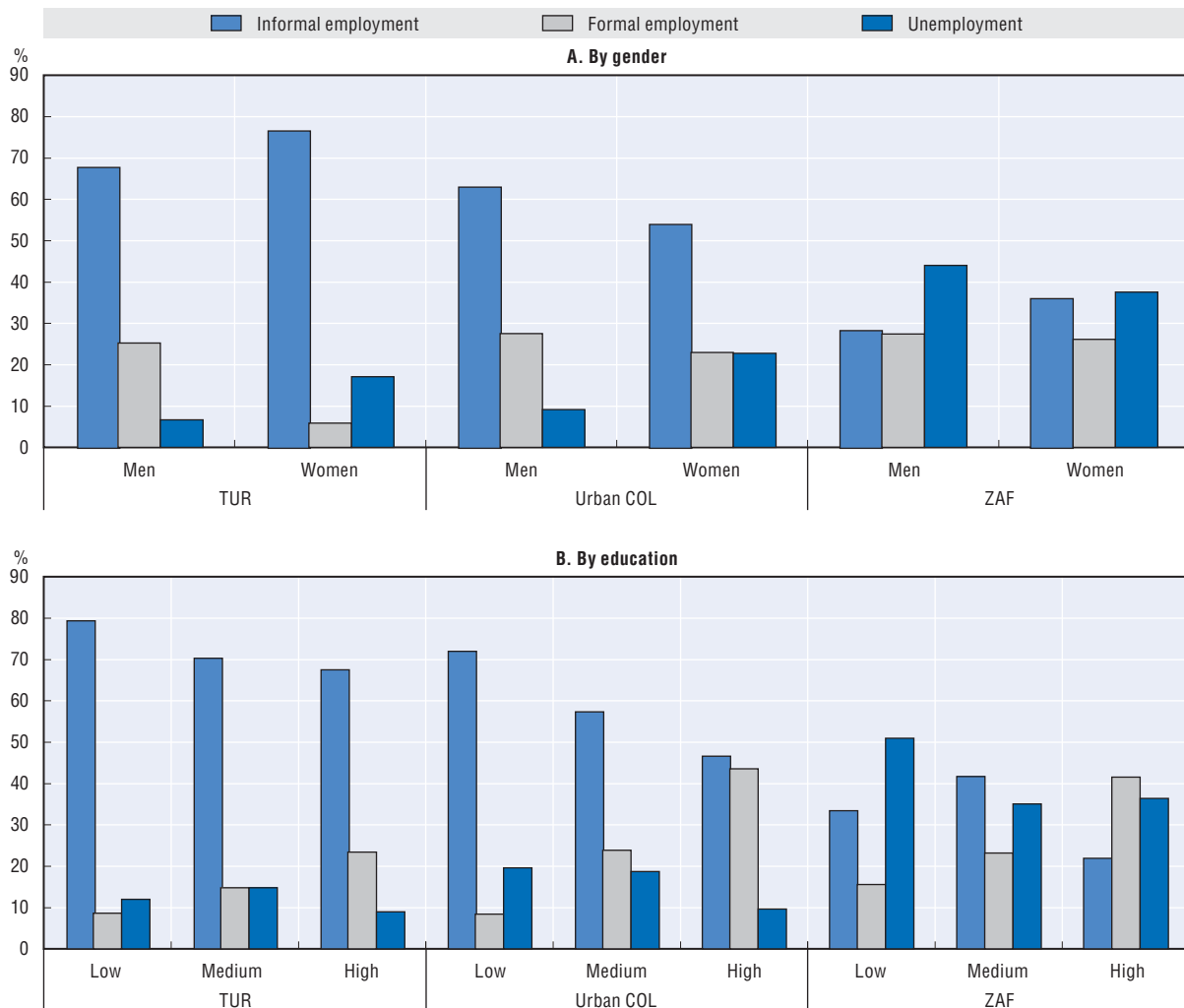
Note: Predictions are based on yearly transition probabilities (bi-yearly for South Africa) obtained from a dynamic multinomial logit model, controlling for individuals' observed characteristics. Figures represent shares obtained for a simulated working life from age 20 to age 60.
Source: OECD calculations based on national longitudinal household and labour force surveys (Fedesarollo: Colombia, NIDS: South Africa) and the EU-SILC national files (Turkey).

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Colombia), indicating that high-skilled workers have a better chance of leaving informality, while there are no distinctive patterns by gender.[37]

Having documented the extent and the determinants of movement into and out of informality, the final part of the analysis investigates the link between transitions into and out of informal jobs and workers' earnings (hence providing indirect evidence on the well-being implications of such transitions). In particular, given the structure of the available data, it is possible to estimate the average earning changes associated with different job transitions (i.e. into and out of informality), relative to average earning changes among workers who do not transition (stayers).[38] Figure 5.15 plots the results by country and shows that transitions to informality tend to be associated with earning losses, although the estimated changes are very small in urban China and urban Colombia. Given that endogenous sorting might take workers towards the type of job where their comparative

Figure 5.15. **Changes in earnings when moving into and out of informality**

Average percentage change in earnings among employees

Note: Informality is defined as all employed persons not paying social contributions in Turkey and China. In Colombia and South Africa, informality includes both employees not paying social contributions and self-employed persons whose business is not registered. The sample for China and Colombia covers the urban population only. Earnings changes are calculated relative to stayers (i.e. subtracting the average change in earnings among stayers from the average change among movers) over the following periods: China (2008-09), Colombia (2009-10), South Africa (2010-12), Turkey (2010-11). The distribution of earnings changes is trimmed at the 1st and 99th percentiles.
Source: OECD calculations based on national longitudinal household and labour force surveys (UHS: China, Fedesarollo: Colombia, NIDS: South Africa) and the EU-SILC national files (Turkey).

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advantage is highest, this result is likely to represent a lower bound on the actual negative effect of informality. [39] Splitting the analysis by worker characteristics (gender, age, education) further reveals that men stand to gain more than women from transitions out of informality, young workers gain more than older ones and highly skilled workers gain the most (the results are presented in Annex Figure 5.A3.2).

In conclusion, the chapter shows that informal jobs are less desirable in terms of job quality, they rarely lead to better employment opportunities and are hardest to escape for the most disadvantaged members of the workforce (e.g. low-skilled workers), who are most likely to be trapped in a vicious cycle between informal jobs, temporary contracts and joblessness. While these conclusions hold on average, one should keep in mind that informal jobs are also extremely diverse. They range from low-pay manufacturing jobs, which are characterised by low quality working environments, limited access to social insurance and no labour regulations, to productive forms of entrepreneurship that (in some relatively rare occasions) thrive in the absence of regulation. Some of this heterogeneity is already evident in Annex Figure 5.A3.2, which shows that different types of workers fare very differently when they move out of informality. Furthermore, Figure 5.A3.3 plots the full distribution of changes in (log) earnings that result from transitions from informality to formality in three of the countries analysed in this section. It shows that while some workers clearly benefit from moving out of informality, the informal sector is far more desirable for others, at least from an earnings perspective. This conclusion is consistent with a large existing literature, including Fields (1990), Maloney (2004) and recent work by Falco et al. (2015).

3. Policy implications

This section highlights some key policy orientations for enhancing job quality in emerging economies drawing on the evidence presented in this chapter as well as previous issues of the *OECD Employment Outlook* (OECD, 2010; OECD, 2011, Chapter 2). In particular, it considers policy actions to improve the quality of existing jobs, help workers move to better quality jobs and reduce the share of low quality jobs in total employment by curbing informality.[40] These different policy actions would need to be tailored to national specificities and institutional frameworks before they can be implemented at the country level.

Enhancing jobs quality through more effective social protection systems and labour laws

The findings presented in this chapter have shown that the multitude of risks that workers (notably those with informal jobs and with low-skills) face represents a major drag on job quality in emerging economies. These risks include a high exposure to earnings volatility, a high risk of falling below minimal subsistence levels and frequent exposure to stressful working conditions such as very long hours.

In light of these considerations, policy makers should consider placing priority on promoting measures that increase workers's security and the quality of their working environment, such as safety standards and labour regulations. Among the most important policy objectives are the development of adequate and effective social protection systems (unemployment compensation and social assistance programmes, such as cash transfers and health-care benefits) and the promotion of effective labour laws (good design and especially proper enforcement). While there are large differences across countries, most emerging economies are still lagging behind in these two areas. They often have a weak administrative and institutional capacity to administer social protection programmes, and low levels of enforcement, making labour legislation ineffective. Labour market policies, such as active measures and unemployment benefits schemes are either non-existent or have only a modest reach and effectiveness.

Among the countries analysed in the chapter, only a few have an effective system of unemployment benefits.[41] The share of the unemployed effectively covered by unemployment benefits is much lower than in adavanced economies, generally less than 15%, except for Chile and the Russian Federation where it ranges from 20 to 25% respectively (OECD, 2011, Chapter 2). While these low coverage rates can be explained by different factors (e.g. strict eligibility rules in Turkey, Chile and China; an obligation to be affiliated to the social security schemes in several countries), it ultimately implies low income support for the unemployed in the majority of these countries. Furthermore, these schemes tend to be less generous than the OECD average, with lower replacement rates and shorter duration of entitlements in the majority of emerging economies. The share of expenditure on unemployment benefits as a proportion of GDP provides an additional indication of both the coverage and generosity of unemployment systems: despite some cross-country variation, these shares are generally much lower in emerging economies than in advanced OECD economies (OECD, 2010).

Building more effective unemployment compensation systems, including by establishing or expanding a system of unemployment *insurance,* is a challenging but important policy priority that governments of emerging economies should consider in light of the insufficient income protection generally provided by existing schemes. Among the immediate objectives is to improve benefit administration, strenghthen incentives for

working formally and target benefits to those most in need (OECD, 2011, Chapter 2). One important challenge in designing an adequate and effective system of unemployment benefits is to strike the right balance between protection and work incentives. The latter encompass incentives to participate in the labour market and, crucially, the choice of formal over informal employment.[42] Eligibility conditions, generosity and duration of benefits should therefore be set at a level that does not discourage employment and, in particular, formal employment. Adequate unemployment benefits should be made conditional on strictly enforced work-availability conditions and be part of a well-designed "activation" package (OECD, 2010). The introduction of a system of unemployment benefits based on individual savings accounts in Chile is a good example of reforms that aim to strengthen the link between benefits and individual incentives.

Similar concerns apply when designing cash transfers (CTs) and health care schemes. These schemes, either unconditional transfers (such as *Dibao* in China, or the Child support grant in South Africa) or conditional ones (such as Bolsa Familia[43] in Brazil or *Oportunidades* in Mexico), are targeted at poor households and do not depend on the labour market status of the recipient. While their objective is to reduce extreme poverty, they can also be an important resource to help workers make better employment choices and facilitate more effective job search. Conditional CTs can also promote access to education and health care of workers and their families, with positive effects on human capital formation and future labour market outcomes. As for health-care benefits, they can play a key role in enhancing opportunities to develop physically and intellectually, increasing workers' productivity and improving their employment prospects.

Although differences exist across programmes, target groups and share of the population covered, evidence suggests that the short-term impact of cash transfers on the incentives to participate in the labour market are limited and tend to be less negative for the poorest households. The longer-term effects of conditional cash transfers can be positive, if the conditionalities relate to investment in education and health. Ultimately, the design of these CT schemes and their long-term strategy are critical aspects to consider (OECD, 2011, Chapter 2).

The implementation of adequate health protection systems and their extension raises the same types of issues. While uncontroversial from an equity standpoint, it is often argued that significant efficiency losses may result from the introduction of non-contributory schemes. For example, the introduction of subsidised health insurance may reduce the value of formal jobs that offer employer-based insurance, hence encouraging informality. New evidence, however, suggests this is not necessarily the case in practice, since universal protection may free up resources and allow workers to participate more actively in the labour market. For example, Del Valle Suarez (2014) and OECD (2011, Chapter 2) show that the introduction of *Seguro Popular* in Mexico contributed positively to the country's growth, by freeing women from their caring duties and bringing them into the labour force. *Bolsa familia* has lowered poverty and income inequality, without decreasing labour force participation (Soares et al., 2007). New results on the Child Support Grant in South Africa suggest that the programme has no adverse impacts on participation rates and formal employment, and may even contribute to reducing informality (Tondini, 2015). While this evidence provides novel insights into the work-incentives associated with non-contributory benefits, the debate is not yet settled and many observers are still concerned about the potentially perverse labour market effects of these schemes (see Levy and Schady, 2013 for a broad discussion).

These considerations imply that policy makers need to consider the range of available options and carefully assess their costs and benefits, taking into account the full array of channels through which such schemes may affect work-incentives, when introducing or developing any social protection programmes. The options to consider include: targeting support to those who need it most; identifying how CTs can provide resources to help workers make better labour market choices and support more effective job search; unifying separate programmes or combining different policies under a common umbrella (this may also include some sequencing between measures, e.g. starting with targeted measures, such as conditional cash transfers, while then establishing the pre-conditions for implementing a broad-based unemployment benefit scheme); increasing the use of mandatory self-insurance based on individual saving accounts for those who can afford it while providing a redistributive component for those who cannot rely on individual savings (OECD, 2011, Chapter 2).

Another important policy implication relates to the effectiveness of labour laws in protecting workers in the presence of a large informal economy and weak law enforcement. In this respect, enhancing health and safety rules as well as working-time regulation, so as to converge towards international labour standards should be considered. The labour inspection system should be given sufficient resources to carry out its work effectively. The number of workers per labour inspector remains very high in countries like Colombia, Turkey or Mexico (28 000, 26 000 and about 192 000 respectively, OECD, 2015). Labour inspectors should be adequately qualified and able to use modern statistical techniques to increase the efficiency of their work. These techniques include statistical profiling so as to identify the workers and firms who are most at risk of informality and selective targeting of enforcement actions. Improved co-ordination among different government agencies is another necessary ingredient for success. One important policy lesson that can be drawn from these experiences is that good enforcement should be transparent and strict, but not be overly harsh, as informality ultimately constitutes a means of survival for many people. One potential concern with better enforced regulation is that it may increase the costs of formality and hence attract even more workers into the informal sector. This is a legitimate concern, but it should not be used as an excuse for inaction as its pertinence for any given initiative to strengthen enforcement needs be carefully assessed against the available evidence for that specific context.

More generally, the effectiveness of employment regulation could be enhanced through an adequate design of employment protection legislation and through stronger enforcement. Very often, employment protection legislation in emerging economies is strict in a *de jure* sense, but poor enforcement renders the legislation ineffective. In India, for instance, factories employing more than 100 employees are required to gain permission from the Ministry of Labour before making any dismissals. Figures from the Ministry of Labour's annual report show that in 2006, only 24 firms were given permission to dismiss a total of 884 workers. Despite this, job destruction rates in large manufacturing firms are relatively high, suggesting that many enterprises are able to evade this requirement (Venn, 2009). A survey of judges, labour inspectors, employment centres, employer organisations and trade unions in Russia shows also that labour law enforcement is seriously lacking: almost 85% of respondents think that non-observance of labour law is a serious or very accute problem, with hiring, contracts, dismissal, pay and working time being the areas of labour law most frequently violated (Gimpelson et al., 2008). In many Latin American countries, the failure of employers to make legally mandated severance payments is an

important issue. A study of labour tribunal cases in Mexico finds that 60% of monetary awards made to employees in unfair dismissal cases are not collected (Kaplan and Sadka, 2011). Similarly, in Chile, according to a survey conducted in the early 2000s, only 44% of the unemployed dismissed for economic reasons reported that they had received some form of compensation. Among those who should have received a payment but did not, 22% said that they had reached an agreement with their employer, while 44% stated that the employer had simply refused to pay (Sehnbruch, 2006).

Assisting workers to find quality jobs early in their careers

The dynamic analysis in Section 2 of this chapter suggests that starting with an informal job can leave permanent scars on workers' careers. It is important, therefore, that policy makers help workers get on a good career path early in their working lives; particularly low-skilled workers who face the highest risk of being trapped in low-productivity and low-quality jobs with limited career prospects.

In this context, policy makers should consider making use of the range of available active labour programmes, such as training schemes or entrepreneurship incentives. While originally conceived for OECD countries, such policy interventions also have an important role to play in emerging economies, notably in assisting young workers and the most vulnerable groups to transition from informal jobs to higher quality jobs in the formal sector, including by preventing human capital deterioration and creating new jobs. Each programme would need to be carefully adapted to the labour markets of emerging economies (where underemployment, informality and working poverty, as well as informal market transactions prevail) and to the weak level of technical (e.g. public employment service providers are often not well trained and under-staffed) and financial capacity.

The OECD Action Plan for Youth: "Giving Youth a Better Start" outlines a comprehensive range of measures to tackle the current youth unemployment crisis and strengthen the long-term employment prospects of all youth. Among the structural measures proposed, a strengthened education system that prepares workers well for the world of work is one of the priorities. This crucially entails increasing enrolment rates and reducing the number of school dropouts; but also increasing the quality of education and tailoring curricula to the needs of the labour market. Within this plan, a particularly important role is played by the vocational education and training (VET) system; this system should provide good foundation skills, be responsive to the needs of the labour market and have strong elements of work-based learning. Where possible, the social partners should be actively involved in developing VET programmes to make sure they are relevant to current labour market requirements.

Apprenticeships are another crucial element to give workers a better start in their careers, as they can help them overcome the hurdle of lacking experience. Well-designed apprenticeship systems can promote skills acquisition, facilitate the transition from school to work, increase the availability of quality jobs and reduce school drop-out rates. The main actions in this field should concentrate on giving better access to high-quality programmes to the most disadvantaged and disengaged youth. Another important issue is the need to improve the recognition and value of apprenticeships as an attractive career choice for youth. The limited evidence available for emerging economies suggests, however, that this is not a major issue compared to some OECD countries: apprenticeship completion rates reach about 80% in India, Argentina and Mexico, suggesting that the programmes' rules and content are rather well-suited to youth expectations and needs. Finally, the

engagement of employers is another crucial element for the success of an apprenticeship schemes. Despite financial incentives, employers are often reluctant to engage with the apprenticeship system, especially when other forms of cheap labour are available. There may be a difficult trade-off between ensuring that the costs to firms investing in apprenticeships are not too high and ensuring suitable working conditions and quality of training for apprentices. In Brazil, *Aprendiz Legal*, an apprenticeship programme based on a legal requirement for firms to hire apprentices, has been succesful in expanding the number of apprenticeships (see OECD, 2015)

More generally and as advocated above, training schemes, job subsidies, entrepreneurship incentives, but also public work programmes, can promote job quality. In many emerging economies, specific work schemes and training programmes exist that can complement apprenticeship programmes. They include on the job training programmes in Turkey, the BECATE programme in Mexico and the *Joven* programmes in Chile, Argentina and Colombia, which combine education, job training and internships. These programmes have generally been shown to have a positive impact on formal employment (OECD, 2015). Furthermore, public works programmes can also provide important forms of social protection and improve longer term employment outcomes, as in the case of the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREG) in India[44] or the Extended Public Works Programme (EPWP) in South Africa (Cazes and Verick, 2013). Yet, as already highlighted, in emerging economies such schemes often lack sufficient resources (both financial and technical) to be fully effective.

While overall spending on active policies in emerging economies is typically well below the levels observed in OECD countries (for instance, Mexico spent 0. 01% GDP in 2007), ALMPs are spreading out, notably those targeting the most vulnerable groups in the labour market, including public work programmes and entrepreneurship incentives (Betcherman et al., 2004). These are important initiatives which need to be further scaled up. Maintaining or introducing cost-effective active labour market measures, including counselling and job-search assistance, can facilitate the transition of young workers into jobs and increase the efficiency of the matching process between job seekers and firms. In a situation of scarce resources, it is crucial that funds are allocated to the most effective interventions. However, programmes are usually not monitored and evaluated in a systematic way in these economies.

Reducing the incidence of low-quality jobs by curbing informality

Given the strong association between informality and low job quality documented in this chapter, policy measures to reduce informality can be expected to contribute to raising overall job quality. In that perspective, it is useful to briefly outline some key policy recommendations to promote formalisation, along three main pillars (OECD, 2008, Chapter 2).

● *First*, firms and workers need to clearly recognise the benefits of formalisation. Governments should improve the quality of the public services they deliver and strengthen the link between contributions and benefits in social protection schemes. Better public services will increase people's trust in their governments and strengthen their motivation to join the formal sector. As discussed above, the introduction of individual unemployment saving accounts (as in Chile) is a good example of how the costs of formalisation can be clearly linked to its benefits, providing incentives to workers to join the formal sector. Another example is South Africa, where domestic

workers were included in the Unemployment Insurance Fund in 2003 and increasingly brought into the formal sector.

● *Second*, the costs of formality should be lowered for employers and the self-employed. Simplified tax and administrative systems, streamlined registration processes and a reduction in red tape are crucial steps in the right direction. Brazil provides a good example of the benefits of this approach. Over the past two decades, Brazil adopted a number of policy measures to reduce the costs of formality, such as the "Simples Law" that introduced a more progressive tax structure and simplified the collection of taxes and social security contributions. It is estimated that these measures contributed to the formalisation of 500 000 microenterprises accounting for 2 million jobs from 2000 to 2005 (Delgado et al., 2007).

● *Third*, enforcement methods should be improved. Enforcement agencies, such as labour inspectorates, should be given sufficient resources to carry out their work effectively (as already discussed in the previous section).

When implementing these recommendations, policy makers need to carefully tailor them to the specific context in which they are operating, and be mindful of their potential adverse effects. For instance, in some emerging economies, the formalisation process has been achieved at the cost of an increased casualisation of the (formal) workforce (as was the case in Colombia and Indonesia). Since temporary jobs are typically of low quality, this is not a desirable outcome.

Finally, it is important to emphasise that these sets of measures are likely to be most beneficial for workers on the verge of formalisation As argued by La Porta and Shleifer (2014), informality is ultimately the result of both demand (i.e. high demand for basic products supplied by informal firms) and supply factors (i.e. poor skills). Many (possibly most) informal firms are fundamentally different from formal ones and they would be unable to compete in the formal economy, even if the costs of formalisation were low. This is why forcing these firms to enter the formal economy may simply drive them out of business. Ultimately, the best way to reduce informality is to encourage economic growth, since the general process of development tends to reduce the size of the informal sector (La Porta and Shleifer, 2014). It will also be important to foster skill accumulation, especially entrepreneurial skills, which are a fundamental driver of development.

Table 5.1 summarises the range of policies that appear best suited to promote high-quality employment in emergining economies.

Table 5.1. **Promoting quality jobs through labour market policies and social protection**

Policies to increase job quality in emerging economies		
Effective regulation	Social protection	ALMPs
Improve effectiveness of labour laws (notably working time regulations, health and safety in the workplace) **Strengthen capacity of labour inspectors** to enforce legislation	**Implement/broaden social protection schemes** including microinsurance and cash transfers to reach those in the informal economy and poor households in general	**Develop ALMPs** that target poor workers including public works programmes, employment guarantees, entrepreneurship incentives Implement ALMP for both under- and un-employed workers such as training and job search assistance
Simplify taxation	**Expand/establish a universal social security system**	**Strenghten capacity of the public employment service**

Conclusions

The main contribution of this chapter is to adapt the *OECD Job Quality Framework*, which was first presented and applied to OECD countries in the 2014 *OECD Employment Outlook*, to the context of emerging economies, where a large share of the labour force is employed in the informal economy and thus largely outside the reach of regulation and without access to social protection. Using the extended framework, the chapter provides the first comprehensive analysis of job quality in twelve emerging economies for which the required data are available.

The implementation of the *OECD Job Quality Framework* is adapted to take into account the labour market specificities of emerging economies, while maintaining its fundamental principles and its three core dimensions: earnings quality, labour market security and quality of the working environment. Most notably, the labour market security dimension of job quality is extended to cover the risk of extreme low pay while employed, which is significant in most emerging economies. Furthermore, a suitable proxy for quality of the working environment is identified which overcomes data limitations that preclude using the job strain indices developed last year.

While this represents an important step forward in the analysis of job quality on a global scale, extending the job quality framework to emerging economies poses a number of challenges. Notably, the available data may not accurately reflect the actual replacement rates provided by social insurance and assistance benefit schemes. Second, approximating the quality of the working environment by the incidence of very long hours, while conceptually and statistically justified, inevitably results in a more simplistic approach than the full job strain model outlined in the 2014 edition of the *OECD Employment Outlook*.

The empirical analysis presented in this chapter provides a detailed picture of cross-country differences in job quality. The results show that the main issue for emerging economies is not the lack of jobs as such, but the shortage of quality jobs. This is partly the reflection of inadequate social security, which pushes workers into subsistence-level occupations. Earnings quality is generally much lower in emerging economies than in more developed OECD countries. This reflects both the wide gap in average earnings and the higher levels of inequality in emerging economies. Labour market insecurity due to unemployment is similar to the OECD average for most emerging economies, but workers in emerging economies face a significant additional risk of falling into extreme low pay while employed. The quality of the working environment is generally lower than in the OECD with the incidence of working very long hours being remarkably high in about half of the countries considered in the chapter.

The chapter also investigates the relationship between job quality and workers' socio-demographic characteristics and identifies the groups most at risk of low-quality employment. Like in advanced economies, young people and low skilled workers face the biggest challenges. They tend to cumulate poor performance in terms of both job quantity (i.e. low employment rates) and job quality (lower earnings quality, higher insecurity and lower quality of the working environment). Crucially, workers with informal jobs tend to do worse on all measures of job quality than workers with formal jobs. The chapter also provides a detailed analysis of transitions into and out of informal jobs in urban China, urban Colombia, South Africa and Turkey; assessing possible scarring effects of starting a career with an informal job. The results show that while mobility in and out of informality is fairly high, informality may leave long-lasting scars on workers' career prospects, so that

young workers who start with an informal job may expect to spend most of their working lives in informal employment.

While the chapter highlights the main types of policies needed to foster high quality jobs in emerging economies, further work will be necessary to identify the policy mix that best suits each country's specificities and institutional setting. Further statistical efforts will also be needed to verify and extend the empirical results presented here. Particular priority should be placed on better measuring the effectiveness of social assistance (coverage rates) and the quality of the working environment, where data are particularly scarce. Concerted international action, particularly among international organisations and policy makers, should support the broader use of job quality measures in analytical work and give job quality the place it deserves in the policy debate on labour market performance.

Notes

1. Open unemployment is a condition in which workers have no work to do, as opposed to underemployment (where their capacities are under-utilised) or disguised unemployment (where employment is effectively a work-sharing device in subsistence level activities with a marginal product of labour close to zero). Throughout the chapter unemployment will be interpreted as open unemployment and the two terms will be used interchangeably.

2. This chapter has been produced with the financial and substantive assistance of the European Union, as part of the OECD project "Defining, Measuring and Assessing Job quality and its Links to Labour Market Performance and Well Being" [VS/2013/0108 (SI2.666737)]. The contents of this chapter are the sole responsibility of the OECD and can in no way be taken to reflect the views of the European Union. This project is a joint undertaking between the OECD Directorate for Employment, Labour and Social Affairs and the OECD Statistics Directorate, and it runs until September 2015. The project also encompasses Chapter 3 of the 2014 *Employment Outlook* and Chapter 4 of this publication.

3. The statistical analysis has benefited from excellent assistance from Alessandro Tondini. The analysis on urban China has benefited from precious statistical support from Ms Zhe Liang.

4. The *OECD Job Quality Framework* is also fully consistent with the OECD Better Life Initiative (OECD, 2013), which builds upon the work of the Stiglitz-Sen-Fitoussi Commission. Annex 5.A4 Figure 5.A4.1 provides an overview of the relationship between these three frameworks for measuring well-being.

5. For a review of the main international job quality frameworks see Cazes et al. (2015).

6. This is a somewhat small departure from the OECD's approach to measure well-being, which considers both objective and subjective outcomes, based on the view that people's evaluations and feelings about their lives are as important as objectively measurable aspects that can be observed by a third party.

7. The general mean (GM) of order α for a distribution of earnings y is defined as:

$$W_{GM}(y,\alpha) = \left[\frac{y_1^\alpha + y_2^\alpha + \ldots + y_N^\alpha}{N}\right]^{1/\alpha} \text{ if } \alpha \neq 0 \text{ and } W_{GM}(y,\alpha) = \left[y_1 \times y_2 \times \ldots \times y_N\right]^{1/N} \text{ if } \alpha = 0$$

The order α can be taken to represent the level of inequality aversion, with lower levels of α placing more emphasis on the lower half of the distribution. For $\alpha = 1$, the general mean corresponds to the arithmetic mean under the assumption of inequality-neutral preferences, while values of α smaller than one imply inequality aversion. When earnings are equally distributed across the workforce, all general means equal the arithmetic mean. Exploiting this "normalisation" property of general means provides a measure of the welfare loss due to inequality, which can be represented as follows:

$$I_A = \frac{W_A(y) - W_{GM}(y,\alpha)}{W_A(y)} = 1 - \frac{W_{GM}(y,\alpha)}{W_A(y)}$$

where $W_A(y)$ stands for the arithmetic mean. I_A is the measure of inequality presented in the chapter.

8. The exact weighting depends on the specific distribution analysed. The figures provided here are based on the earnings distribution of a typical OECD country, but one can generally expect that assuming inequality aversion of -1 (or below, e.g. -3) will place most of the weight on the bottom deciles of the distribution.

9. While the PPP adjustment is the most consistent way to carry out cross-country comparisons, it presents some potential limitations. For instance, living standards may differ substantially across countries (despite the PPP correction) depending on the availability of free public services that are not in the PPP basket. Similarly, access to non-market production, which is likely to be more extensive in certain countries and in rural areas, may drive cross-country differences that the PPP adjustment is unable to correct for.

10. For a detailed description of the methodology, see Annex 5.A1. Risk estimates and country rankings are robust to changes in the estimated persistence parameter of individual earning shocks (see Figure 5.A1.1 in Annex 5.A1).

11. Table 5.A2.1 in Annex 5.A2 presents a detailed breakdown of the income transfer schemes in each country and identifies the subset of those schemes that could be studied using the available microdata and which are thus covered in this chapter's analysis.

12. The main methodological difference is that unemployment insurance was calculated in two steps in the 2014 *OECD Employment Outlook*. First, coverage rates and replacement rates were estimated using country-level information and model-based considerations to provide separate insurance rates by transfer type (unemployment insurance, unemployment assistance and social assistance transfers), which then were added up in the second step to generate the overall degree of insurance. In this year's chapter, due to both the use of microdata and the dominance of social assistance transfers, these steps are combined for simplicity to provide the overall insurance capacity of all transfers at once. Another methodological difference concerns the inclusion of severance pay in the calculation of unemployment insurance, due to the latter's greater importance relative to unemployment benefits in emerging economies (OECD, 2011, Chapter 2).

13. However other reference models are available, such as the Demand Control Model (Karasek, 1979) or the Effort-Rewards Imbalance Model (Siegrist, 1996), see OECD (2014) for further details.

14. Box 5.1 implements the reduced set of job strain indicators used in OECD (2014, Chapter 3) for the four emerging economies studied in this chapter where the necessary data could be accessed.

15. The most recent country-level figures published by the ILO date to 2003. More recent figures are only available for regional aggregates. The underlying National figures are no longer released because it is believed that different reporting standard could undermine cross-country comparability.

16. Information on sickness rates that one could potentially obtain from the national LFS of the emerging economies considered in this chapter is unfortunately not comparable due to inconsistency and heterogeneity in the questions asked, types of illness considered and time spans covered by the different surveys.

17. Figures for sickness absence rates may be biased by the existence of more or less generous social security schemes because workers may have a stronger incentive to take sickness leave in countries with good social security schemes, as they can better afford to be sick.

18. These include all OECD countries, plus South Africa and Russia. The estimated correlation is 0.51.

19. See *OECD Employment Outlook 2014*, notably Annex 3.A1.

20. The need to tailor these models to the self-employed is recognised in the research literature and some progress has been made. For example, rather than autonomy, negotiation power is suggested to be a better indicator of job resources for this group. Overall two challenges remain: data comparability and the difficulty to distinguish between "genuine" and "dependent" self-employed in survey data.

21. More specifically, the measures of earnings quality, labour market security from unemployment and quality of the working environment are based on single cross-sections, while insecurity from extreme low pay is calculated from repeated cross sections. When panel datasets are available (for selected countries), the current section treats them as repeated cross sections to ensure comparability with purely cross-sectional datasets. The longitudinal dimension of the available panels will be explored in Section 2 as part of the dynamic analysis of job and earnings mobility.

22. When 2010 data are missing, information from the closest available year is used, with a preference for more recent observations.

23. Due to lack of panel data, it has been impossible to directly estimate flows into and out of unemployment and the risk of job-loss is approximated by the unemployment rate. In a steady-state economy with a relatively low level of unemployment, this is a valid approximation.

24. Table 5.A2.1 in Annex 5.A2 identifies the social insurance programmes that were considered in each of the emerging economies analysed in the chapter. See OECD (2011, Chapter 2) for an extensive discussion of unemployment compensation schemes in the great majority of these countries.

25. Formally, overall labour market insecurity (LMI) is calculated as:
$$LMI_{OVERALL} = LMI_{UNEMPLOYMENT} + (1 - Risk_{UNEMPLOYMENT}) * LMI_{LOW-PAY}$$

26. Defining long hours is somewhat arbitrary. It can be based on either working time legislation or the distribution of hours worked in the population under investigation. Here the threshold of 60 hours was chosen as the upper limit authorised by national legislation in the 12 emerging economies covered in the chapter. Colombia and Costa Rica use the 60-hour upper limit, while the weekly upper limit varies between 45 (Turkey) and 57 (Mexico) hours in the remaining ten countries (ILO, Travail database). Frijters et al. (2009) choose the same threshold to study the cost of working long hours on mental health in China as it is very close to the median number of hours worked in their sample.

27. See the seminal contributions by De Soto (1989, 2000), as well as La Porta and Schleifer (2008, 2014), and Falco and Haywood (2013) for a more recent discussion.

28. Jütting and J. de Laiglesia (2009) indicate that "the operational criteria for defining informal employment are mainly that the job has no written contract and lacks social protection." It should be noted that according to this definition informal salaried employment may be found both in formally registered enterprises (i.e. in the formal sector) and in unregistered (informal) enterprises (i.e. in the informal sector). Still, the majority of informal employment occurs in the informal sector. For example, two out of three informal jobs are in the informal sector in India (ILO, 2014). However, a significant number of workers in formal enterprises are informally employed.

29. Some previous research has relied, instead, on firm characteristics to define informality. For example, a prominent alternative is to define the informal sector on the basis of firm-size (e.g. firms with five employees or less).

30. In a recent article, Öznur and Tansel (2014) support this argument in the case of Turkey. Yet, one could argue that precisely because social security is intimately related to the outcome of interest, a separate criterion should be used to define informality, such as the existence of a written contract.

31. It has not been feasible to calculate labour market security from the risk of unemployment for formal and informal workers separately (since separate information on the probability of job-loss is not available for formal and informal workers).

32. The estimated gap in net earnings is likely to be an under-estimate of the actual productivity differential due to the distorting role of taxation. Since formal workers pay taxes and social contributions, while informal workers commonly do not, the gap in pre-tax earnings should be ceteris paribus, even larger.

33. Working with consecutive survey waves implies calculating annual transitions rates, except for South Africa for which the survey is bi-annual. However, the conclusions of this section are robust to changes in the transition horizon. In particular, the transition rates observed between two consecutive years paint a very similar picture to the transition rates over longer intervals.

34. It should be noted that the conditional probabilities in Figure 5.12 depend on the size of the destination sector. In countries with a larger formal sector, for instance, the conditional probability of transitioning from informality to formality should be larger. Hence, one should be careful in interpreting cross-country differences. This limitation is discussed by Maloney (1999), who proposes an alternative methodology to standardise the transition probabilities by the size of the receiving sector. The same method is applied by Duryea et al. (2006). For the sake of simplicity, it has been chosen not to adopt that methodology here, but the reader should be alert to this issue. It should also be remarked that from the worker's perspective, the raw transition probabilities matter the most, as they express the likelihood that all things considered workers may move from one sector to the other.

35. The model cannot be estimated for China since it requires at least three years of data and the available Chinese panel only covers two years.

36. This may partly result from the fact that transitions for South Africa are calculated over a longer time horizon (two years). However, upon calculating transition rates for *all* countries over the longer horizon, the qualitative patterns that emerge from the analysis did not change significantly.

37. This descriptive exercise has the advantage of effectively summarising the transition probabilities presented above into a simple measure of time spent in different forms of employment. Its main shortcoming is that workers' employment histories are only observed for a short time-span in the available data, from which one extrapolates long-term patterns. The underlying assumption is one of stationarity in labour market mechanisms, namely that the career patterns of old workers offer a good indication of the career trajectories that young workers can expect to have in the future.

38. The average change among stayers is subtracted from the average change among movers.

39. The effect of self-selection (endogenous sorting) seems to be particularly evident in the case of urban China and urban Colombia, where workers who move to informality do not appear to experience significant earnings changes on average. This pattern points to the possibility that working informally might be a voluntary choice for at least some Chinese and Colombian workers, as opposed to a necessity.

40. Clearly, the three categories are inter-dependent and many policies have simultaneous effects on different dimensions.

41. Some emerging countries simply have no unemployment protection schemes at all (e.g. Indonesia and Mexico).

42. Bosch and Esteban-Pretel (2014) provide an in-depth discussion of the effects of introducing unemployment benefits in an economy with high levels of informality.

43. *Bolsa Familia* for instance reaches over 11 million poor families, who received an average transfer of BRL 70.00 (about USD 35). In return, they commit to keeping their children in school and taking them to regular health checks.

44. This scheme confers a right to employment of up to 100 days per year in public works programmes per rural household.

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ANNEX 5.A1

Empirical methods

A methodology to estimate earning risk with pseudo-panel data

This section outlines the methodology proposed by Dang et al. (2011). In particular, it focuses on the parametric version of their method and on the subsequent extension by Dang and Lanjouw (2013). While this model is used by Dang et al. to estimate the probability that people move in and out of poverty using income data from repeated cross-sections, the same model is applied in this chapter to measure transitions in and out of low-pay status for individual workers.

Consider the case of two repeated cross-sections and assume that the underlying population being sampled in both rounds is the same. In what follows, the superscripts A and B are used to refer to individuals from the first and the second cross-section respectively.

Using observations from Cross-section A, one can estimate the following model of individual earnings in Period 1, containing *only time-invariant covariates* on the right-hand side:[1]

$$y_{i,1}^A = \beta_1' x_{i,1}^A + \varepsilon_{i,1}^A \qquad [1]$$

and obtain estimates for $\beta_{t=1}$, $\varepsilon_{i,t=1}^A$ and for the standard deviation of the error terms $\sigma_{\varepsilon 1}$.

The same model can be estimated for Period 2, using observations from Cross-section B:

$$y_{i,2}^B = \beta_2' x_{i,2}^B + \varepsilon_{i,2}^B \qquad [2]$$

Assuming that $\varepsilon_{i,1}^A$ and $\varepsilon_{i,2}^B$ have a bivariate normal distribution with non-negative correlation coefficient ρ and standard deviations $\sigma_{\varepsilon 1}$ and $\sigma_{\varepsilon 2}$, the percentage of workers from Cohort B who have low earnings in the first period but not in the second period (upward mobility) can be estimated as follows:

$$\hat{P}\left(\tilde{y}_{i1}^B < z_1 \, and \, y_{i2}^B > z_2\right) = \Phi\left(\frac{z_1 - \widehat{\beta_1'} x_{i,t=2}^B}{\hat{\sigma}_{\varepsilon_1}}, -\frac{z_2 - \widehat{\beta_2'} x_{i,t=2}^B}{\hat{\sigma}_{\varepsilon_2}}, -\hat{\rho}\right) \qquad [3]$$

where $\Phi(\cdot)$ is the bivariate normal cumulative distribution function (*cdf*) and $\tilde{y}_{i1}^B$ captures the imputed earnings in Period 1 of workers from Cohort B.

Conversely, the percentage of Cohort B workers who have high earnings in the first period and low earnings in the second period (a measure of downward mobility) can be estimated as:

$$\hat{P}\left(\tilde{y}_{i1}^B > z_1 \, and \, y_{i2}^B < z_2\right) = \Phi\left(-\frac{z_1 - \widehat{\beta_1'} x_{i,t=2}^B}{\hat{\sigma}_{\varepsilon_1}}, \frac{z_2 - \widehat{\beta_2'} x_{i,t=2}^B}{\hat{\sigma}_{\varepsilon_2}}, -\hat{\rho}\right) \qquad [4]$$

Dividing these unconditional probabilities by the share of workers who start out with low (high) earnings generates the conditional probabilities of exiting (entering) low-pay, which are used in the main analysis.

The main challenge in implementing this model is estimating $\hat{\rho}$, since repeated cross sections do not contain observations for the same individuals over time; it is therefore impossible to estimate the serial correlation of individual shocks.

Dang et al. (2011) get around this issue by assuming a minimum and a maximum value for $\hat{\rho}$, to obtain lower and upper bound estimates (rather than point-estimates) of mobility. To implement this approach, one possibility is to calibrate the minimum and maximum bounds on the basis of actual panel-data from previous time-periods or from sufficiently similar contexts. In the absence of these, Dang et al. suggest using the extreme values of $\rho = 0$ (no serial correlation) and $\rho = 1$ (perfect correlation). This approach proves to be quite successful in their validation exercise, as estimates of mobility obtained with true panels are generally within these estimated bounds. The main draw-back of this procedure is that the bounds can be quite large. Moreover, it is not clear whether policy makers should target the lower or the upper bound of estimated mobility. The former approach has been applied in a recent World Bank publication on income mobility in Latin America (Ferreira et al., 2013), where the authors assume $\rho = 1$ and obtain a conservative (lower-bound) estimate of mobility. Ferreira et al. argue that this assumption provides a better assessment of "true" mobility since, by assuming perfect correlation of the error terms over time, the lower-bound estimate is "purged" of classical measurement error. Moreover, assuming perfect serial correlation in individual-specific shocks, brings out more clearly the effect of economic growth on overall poverty. As the focus of this chapter is on the positional mobility and on the uncertainty and risks faced by individual workers, this approach is not suitable for our purposes.

In a follow-up study, Dang and Lanjouw (2013) outline a cohort-based approach that can be used to estimate $\hat{\rho}$ directly to obtain point estimates of mobility. For a sufficiently large sample, like that of a typical household survey, this can be done by estimating the following dynamic income model for various age cohorts:[2]

$$\bar{y}_{c,2} = \delta' \bar{y}_{c,1} + \bar{\eta}_{c,2} \tag{5}$$

where $\bar{y}_{c,t}$ is the average of y in Cohort c and Period $t = 1, 2$.

From the estimation of [5], one can obtain a consistent estimate of δ and of the cohort-level correlation coefficient, $\hat{\rho}_{y_{c,1} y_{c,2}}$, which can be used to approximate the individual-level correlation coefficient $\hat{\rho}_{y_{i,1} y_{i,2}}$.

$$\hat{\rho}_{y_{i,1} y_{i,2}} \approx \hat{\rho}_{y_{c,1} y_{c,2}} = \frac{cov(\bar{y}_{c,1}, \bar{y}_{c,2})}{\sqrt{var(\bar{y}_{c,1}) var(\bar{y}_{c,2})}} \tag{6}$$

Finally, in order to estimate [3] and [4], one needs to obtain the partial correlation Coefficient ρ, which captures the serial correlation in income *conditional on the control variables* (i.e. the serial correlation in the model residuals). As shown by Dang and Lanjouw (2013), ρ can be obtained as follows:

$$\hat{\rho} = \frac{\hat{\rho}_{y_{i,1} y_{i,2}} \sqrt{var(y_{i1}) var(y_{i2})} - \hat{\beta}'_1 var(x_i) \hat{\beta}'_2}{\hat{\sigma}_{\varepsilon_1} \hat{\sigma}_{\varepsilon_2}} \tag{7}$$

Figure 5.A1.1 checks the robustness of the results presented in Section 1 of the chapter to changes in ρ. In addition to the value of the parameter estimated using the methodology above, it presents two extreme cases of zero persistence ($\rho = 0$) and full persistence ($\rho = 1$) in earning shocks. Two results emerge. *First*, it appears that the method proposed here delivers

Figure 5.A1.1. **Sensitivity of the risk of extreme low pay to the persistence of individual earnings shocks**
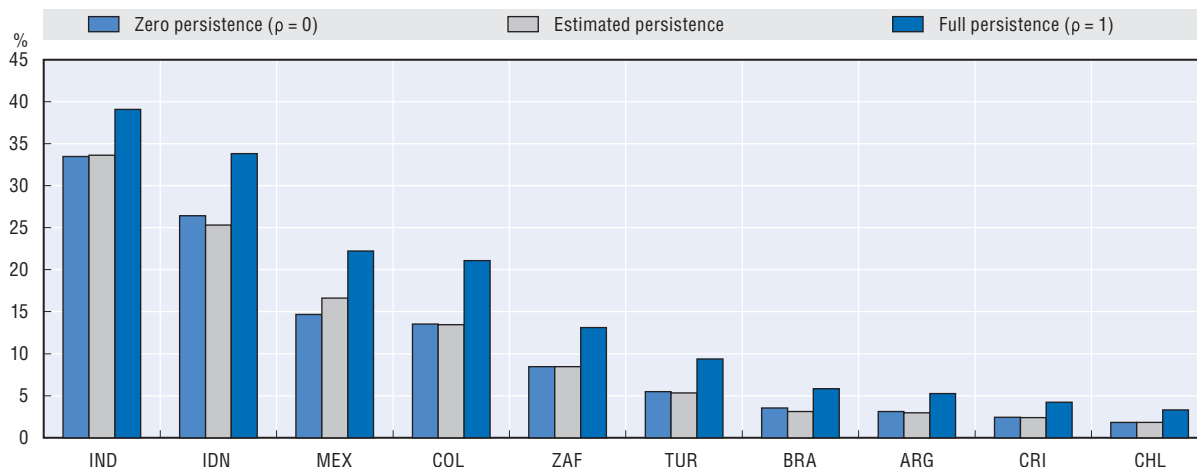
Note: The risk of low pay is calculated by means of the pseudo-panel method discussed above, under three different assumptions about persistence in earnings shock: zero persistence ($\rho = 0$), estimated persistence based on Dang and Lanjouw (2013) and full persistence ($\rho = 1$). Due to data limitations, the sensitivity calculations could not be carried out for Russia and China.
Source: OECD calculations based on national household and labour force surveys (EPH: Argentina, PNAD: Brazil, CASEN: Chile, GEIH: Colombia, ENHAO: Costa Rica, NSS: India, SAKERNAS: Indonesia, ENIGH: Mexico, NIDS: South Africa) and the EU-SILC national files (Turkey).
StatLink ⟳ *http://dx.doi.org/10.1787/888933240087*

estimates that are close to the lower bound (zero persistence) level of ρ. *Second*, and most reassuringly, the country ranking is unaffected by changes in the persistence parameter.

A methodology to estimate career profiles from short panels

The simulated career profiles discussed in Section 3 are based on a multinomial logit (McFadden, 1974) which models the probability of transitioning between employment states (formal, informal, unemployed and inactive) from one survey period to the next.

For each origin state:

$$P(i, j \mid x_{it}) = \frac{\exp\left[x_{it}\gamma(i, j) \right]}{\sum_{m=0}^{N} \exp\left[x_{it}\gamma(i, m) \right]} \qquad [8]$$

where $P(i, j)$ is the probability of moving from state i at a time t to state j at time $t + 1$ for an individual characterised by a vector of covariates x_{it} that includes dummies for gender, education and age in the starting period. In order to capture the true extent of mobility in the data, state-specific dummies for the previous period $t – 1$ are also included in the analysis. As such, the coefficients $\gamma(i, j)$ partially account for duration dependence and persistence of labour market transitions. The same approach has been used in Chapter 4 to model persistence in employment and earnings.[3]

The estimates from this model can be used to predict the likelihood that a worker initially aged 20 with a specific set of characteristics (e.g. low-educated male) and a first job in the informal sector will transition to every other employment state year after year; and hence derive the share of time that he can expect to spend in different employment states throughout his career (40 years in total).[4]

The main potential shortcoming of this methodology is that workers' employment histories are only observed for a short time-span, from which this approach extrapolates long-term patterns. The underlying assumption is that the observed transition patterns

are time invariant, suggesting that the career patterns of old workers (and their transition probabilities) offer a good indication of the career trajectories that young workers can expect in the future. The analysis may also suffer from issues of endogenous selection. If informal workers are significantly different from workers in formal jobs (e.g. because informal jobs tend to attract less productive or motivated workers), one should be cautious in generalising the conclusions of this analysis to the entire population. With this caveat in mind, the results reveal that *among those who start a career in the informal sector*, the predicted share of working life spent with an informal job is very high. This hints at the potential existence of scarring effects from informality, although the endogenous selection issues discussed above suggest some caution in this interpretation.

Notes

1. The set of covariates includes individuals' gender, year of birth and education level.

2. As pointed out by Dang and Lanjouw (2013), there is no consensus in the literature on how large the sample size should be to obtain precise estimates of $\hat{\beta}$. Monte Carlo simulations by Verbeek and Nijman (1992) suggest that cohort sizes of 100 to 200 are sufficient, while recent work by Devereux (2007) points to an ideal cohort-size of 2000 or more observations.

3. The multinomial logit model rests on the assumption of Independence of Irrelevant Alternatives (IIA), which can only hold if the different choices are sufficiently distinct from each other. That is likely to be the case in the specification used in this chapter, with only three, clearly different labour market status outcomes: formality, informality and unemployment/inactivity. See Falco (2014) for a similar application to occupational choices in a developing country.

4. In practice, this is done by generating a synthetic cross section of 1 000 individuals with the same characteristics (gender, education, initial age and initial state) and letting them transition to different states in shares equal to the model's predicted transition rates. Carrying this procedure forward in time, each simulated worker ends up with a full employment history by the age of 60 and the average share of those histories spent in each state can be calculated.

ANNEX 5.A2

Social transfers in emerging economies

Table 5.A2.1. Social transfer schemes and data sources used to measure public insurance by country

Country	Category	Schemes		Source
Argentina	Unemployment compensation	Unemployment insurance (Seguru de Desempleo, private sector employees) Severance pay	• Unemployment insurance • Severance pay	Lustig, N. and C. Pessino (2013), "Social Spending and Income Redistribution in Argentina during the 2000s: The Rising Role of Noncontributory Pensions", *CEQ Working Paper*, Vol. 3, No. 5.
	Social assistance transfers	Income support for families with unemployed heads (Jefes y Jefas) Family allowance (Programa Familias para la Inclusion Social) Child allowance (Asignacion Universal por Hijo) Child benefits School allowance Non-contributory mother's pension Government scholarships (Programa Nacional de Becas Estudiantiles)	• Social assistance transfers • Government scholarships	
Brazil	Unemployment compensation	Unemployment insurance (Seguro Desemprego) Unemployment assistance (Fundo de Amparo ao Trabalhador, INSS) Severance pay (Aviso Previo)		Higgins, S. and C. Pereira (2013), "The Effects of Brazil's High Taxation and Social Spending on the Distribution of Household Income", *CEQ Working Paper*, No. 7.
	Social assistance transfers	Family Allowance (Bolsa Familia) Continued Payment benefits (Beneficio de Prestacao Continuada) Assistance for rural labourers (Previdencia Rural) Social assistance from employers' contributions (PIS/PASEP) Other elements of the Basic Social Protection Scholarships and professional qualification grants Food for workers programmes Residence allowance (Abono de permanência)	• Government transfers (Pensao) • Other types of transfers • Other type of non-labour income (including social assistance) • Residence allowance	
Chile	Unemployment compensation	Unemployment insurance (individual accounts) Unemployment assistance and subsidy Severance pay	• Unemployment benefits • Severance pay	• Country chapter for OECD series 'Benefits and Wages' (2011) • Country file from the *OECD Employment Protection Database* (2013) • Websites of the Chilean Government: http://www.previsionsocial.gob.cl/subprev/ http://www.programassociales.cl/
	Social assistance transfers	Family subsidy (Subsidio Familiar) Family support (Chile solidario, Ingreso Etico familiar) Social allowance (Asignacion social) In-kind benefits (Pension de alimentos) Grant water consumption (SAP) Allowance for working women (Bono al Trabajo de la Mujer) Housing subsidy (Fondo Solidario de Elección de Vivienda)	• Family subsidy • Family support (Bono de proteccion familiar) • Family support (Bono de apoyo a la familia) • Social allowance • In-kind benefits • Drinking water, electricity and fuel allowance • Youth employment subsidy • Other state subsidies	

Table 5.A2.1. **Social transfer schemes and data sources used to measure public insurance by country** (cont.)

Country	Category	Schemes	Measures	Source
China	Unemployment compensation	• Unemployment insurance (administered by the local government)		Yukun Zhu (2009), "A Case Study on Social Security Coverage Extension in China", *ISSA Working Paper*, No. 7.
	Social transfers	• Minimum living allowance (Dibao, only urban areas)		OECD (2010), *Tackling Inequalities in Brazil, China, India and South Africa. The Role of Labour Market and Social Policies*, OECD Publishing, Paris.
Colombia	Unemployment compensation	• Unemployment insurance and assistance (FONEDE) • Severance pay (Cesantias; similar to individual savings account)	• Severance pay	Medina, C. J. Núñez and J.A. Tamayo (2013), "The Unemployment Subsidy Program in Colombia: An Assessment", *Inter-American Development Bank Working Paper Series*, No. 369.
	Social assistance transfers	• Social assistance transfers (Familias en Accion)	• Social assistance transfers • Government subsidies • Family allowances • Government scholarships	Medina, C. J. Núñez and J.A. Tamayo, (2011), "The Unemployment Insurance Program in Colombia: An Assessment", Banco de la Republica de Colombia.
Costa Rica	Unemployment compensation	• Unemployment insurance (Seguru de Desempleo) • Adolescence Work insurance (Seguro de Riesgos para Adolescentes) • Domestic Help insurance (Seguro de Riesgos del Trabajo Hogar) • Income insurance (Proteccion Crediticia) • Severance pay (Cesantia)		Sauma, P. and J.D. Trejos (2014), "Social Public Spending, Taxes, Redistribution of Income, and Poverty in Costa Rica", *CEQ Working Paper*, No. 18.
	Social assistance transfers	• Family allowances (Asignaciones Familiares) • Financial support to households (IMAS) • Government scholarships (Fondo National de Becas; Avancemos) • Housing benefits (Bono Familiar de Vivienda)	• Social assistance (Transferencias régimen no contributivo) • Social support (IMAS, ayuda social) • Government scholarships • Government subsidies • Subsistence transfers	
India	Unemployment compensation	• Unemployment insurance (with partial coverage) • Severance pay		OECD (2010), "Tackling Inequalities in Brazil, China, India and South Africa. The Role of Labour Market and Social Policies", OECD Publishing, Paris.
	Social assistance transfers	• Family allowance (National Family Benefit Scheme) • Food subsidies (Targeted Public Distribution System)		
Indonesia	Unemployment compensation	• Severance pay	• Severance pay	Wordl Bank (2012), "Program Keluarga Harapan (PKH) Conditional Cash Transfer", *Social Assistance Program and Public Expenditure Review*, No. 6.
	Social assistance transfers	• Family allowance (Program Keluarga Harapan) • Government subsidies (Bantuan Langsung Tunai)	• Family allowance (Program Keluarga Harapan) • Government subsidies (Bantuan Langsung Tunai)	World Bank (2012), "Bantuan Langsung Tunai (BLT) Temporary Unconditional Cash Transfer", *Social Assistance Program and Public Expenditure Review*, No. 2.

Table 5.A2.1. **Social transfer schemes and data sources used to measure public insurance by country** (cont.)

| Country	Category	Existing programmes	Available data	Data source
Mexico	Unemployment compensation	• Severance pay	• Severance pay	• Country file from the *OECD Employment Protection Database* (2013) • Website of the Mexican Government: *http://www.semarnat.gob.mx/apoyos*
Mexico	Social assistance transfers	• Family allowance (Oportunidades) • Food aid programme (Programa Alimentario) • Temporary income support (Programa de Empleo Temporal) • Agricultural subsidies (Programa de Apoyos Directos al Campo) • Government scholarships • In-kind transfers	• Conditional cash transfer (Oportunidades) • Conditional cash transfer (Programa Alimentario) • Conditional cash transfer (Programa de Empleo Temporal) • Agricultural subsidies • Government scholarships • Other social programs	
Russia	Unemployment compensation	• Unemployment insurance and assistance • Severance pay	• Unemployment insurance and assistance • Severance pay	Social Security Administration (2010), "Social Security Programs Throughout the World: Europe, 2010", Washington, DC.
Russia	Social assistance transfers	• Child and family allowances • Housing subsidies • Various in-kind transfers (housing, utilities, transport services)		
South Africa	Unemployment compensation	• Unemployment insurance • Severance pay	• Unemployment insurance • Severance pay	The website of the Department of Labour of South Africa: http://www.labour.gov.za/DOL/legislation/acts/basic-guides Woolard, I. and M. Leibbrandt (2010), "The Evolution and Impact of Unconditional Cash Transfers in South Africa", *Southern Africa Labour and Development Research Unit Working Papers*, No. 51.
South Africa	Social assistance transfers	• Child support grant • Foster care grant • Social relief	• Child support grant • Foster care grant	
Turkey	Unemployment compensation	• Unemployment insurance • Severance pay	• Unemployment benefits • Severance pay	• Country chapter for *OECD series Benefits and Wages* (2010) • Country file from the *OECD Employment Protection Database* (2013)
Turkey	Social assistance transfers	• Family allowance (based on educational and health compliance)	• Education-related allowances	

Note: Concerning existing programmes, classification is based on 2010 information. Unemployment compensation may include unemployment benefits (unemployment insurance and assistance) and severance pay. Social assistance transfers may include government cash transfers and in-kind transfers. Importantly, only those transfers that are considered that are part of nationwide schemes and target the active and employable working age population [this means that transfers that are aimed at the permanently inactive (e.g. old-age or disability pensions) and the temporarily inactive (e.g. sickness benefits or compensation programmes), or are related to changes in the family situation of individuals (e.g. marriage bonus, maternity benefits, adoption allowance) are not considered].

In the "Available data" column, those relevant transfer items are listed that feature in the respective national household and labour force surveys used and are used for the empirical analysis. The lists correspond to the relevant survey year used for the calculations (see the notes attached to Figures 5.3 and 5.4).

Source: Country profiles, International Social Security Association, Chapter 2 of the *OECD Employment Outlook 2010*, and Chapter 2 of the *OECD Employment Outlook 2011*.

Figure 5.A2.1. **Reduction in the risk of extreme low pay due to social transfers**

Percentage-point changes, 2010
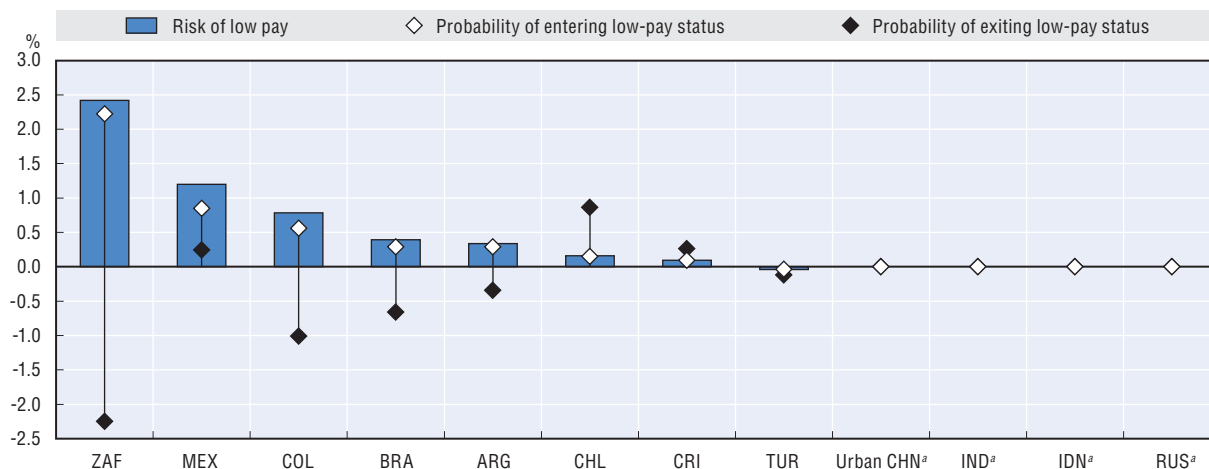
Note: The probability of entering and exiting low-pay status are calculated by the pseudo-panel methodology proposed by Dang and Lanjouw (2013) and represent annual concepts. The risk of low pay is calculated by (the scaled transform) of the probability of entering low-pay status times the expected duration of remaining there.

Calculations are based on comparisons of net hourly earnings with and without social transfers. Figures represent estimates from the 2009-10 cross-sections, except for Brazil (2009-11), Chile (2009-11), China (2008-09), Costa Rica (2010-12), India (2011-12), Mexico (2010-12), Russia (2010-12), South Africa (2010-12) and Turkey (2011-12).

a) Information on social transfers are missing for China, India, Indonesia and Russia.

Source: OECD calculations based on national household and labour force surveys (EPH: Argentina, PNAD: Brazil, CASEN: Chile, UHS: China, GEIH: Colombia, ENHAO: Costa Rica, NSS: India, SAKERNAS: Indonesia, ENIGH: Mexico, NIDS: South Africa), the EU-SILC national files (Turkey) and the *European Social Survey* (Russia).

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ANNEX 5.A3

Informality

Table 5.A3.1. **Group level regressions of job quality on worker characteristics and informality**

	Earnings quality	Labour market insecurity	Quality of the working environment (long working hours)
Female	-0. 910***	3. 158***	-6. 973***
	(0. 175)	(0. 785)	(0. 915)
Aged 30-49	1. 441***	-3. 635***	0. 979
	(0. 214)	(0. 961)	(1. 119)
Aged 50-64	2. 510***	-3. 500***	1. 616
	(0. 214)	(0. 961)	(1. 129)
Secondary education	1. 238***	-4. 710***	-1. 092
	(0. 214)	(0. 961)	(1. 132)
Tertiary education	4. 848***	-9. 830***	-5. 360***
	(0. 214)	(0. 961)	(1. 136)
Informal sector	-2. 051***	10. 21***	4. 189***
	(0. 175)	(0. 785)	(0. 922)
Observations	324	324	334
R-squared	0. 773	0. 644	0. 371

Note: Estimates are derived from group-level regression specifications that include country-fixed effects. Earnings quality is captured by average earnings (measured in PPP-adjusted USD), labour market insecurity denotes the risk of extreme low-pay among the employed (measured in percentage points), while the quality of the working environment captures the incidence of long working hours (60+) among all employed (measured in percentage points). The reference category is low-educated males aged 15-29 working in the formal sector. Standard errors in parentheses. ***, **, *: statistically significant at 1%, 5% and 10% levels, respectively. For more information on data sources, see the respective figure notes in the main text.

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Figure 5.A3.1. **Transitions out of informality by worker characteristics**

Percentage of informal workers who move to the formal sector

Note: Informality is defined as all employed persons not paying social contributions in Turkey and China. In Colombia and South Africa, informality includes both employees not paying social contributions and self-employed persons whose business is not registered. The sample for China and Colombia covers the urban population only. Earnings changes are calculated relative to stayers (i.e. subtracting the average change in earnings among stayers from the average change among movers) over the following periods: China (2008-09), Colombia (2009-10), South Africa (2010-12), Turkey (2010-11). The distribution of earnings changes is trimmed at the 1st and 99th percentiles.
Source: OECD calculations based on national longitudinal household and labour force surveys (UHS: China, Fedesarollo: Colombia, NIDS: South Africa) and the EU-SILC national files (Turkey).

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Figure 5.A3.2. **Earning changes associated with transitions in and out of informality, by key worker characteristics**

Average change in log earnings among employees
Simple average of Urban China, Urban Colombia, South Africa and Turkey

Note: Informality is defined as all employed persons not paying social contributions in Turkey and China. In Colombia and South Africa, informality includes both employees not paying social contributions and self-employed persons whose business is not registered. The sample for China and Colombia covers the urban population only. Earnings changes are calculated relative to stayers (i.e. subtracting the average change in earnings among stayers from the average change among movers) over the following periods: China (2008-09), Colombia (2009-10), South Africa (2010-12), Turkey (2010-11). The distribution of earnings changes is trimmed at the 1st and 99th percentiles.
*Source:* OECD calculations based on national longitudinal household and labour force surveys (UHS: China, Fedesarollo: Colombia, NIDS: South Africa) and the EU-SILC national files (Turkey).

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Figure 5.A3.3. **Distribution of earning changes associated with moves out of informality**

Note: Informality is defined as all employed persons not paying social contributions in Turkey and China. In Colombia and South Africa, informality includes both employees not paying social contributions and self-employed persons whose business is not registered. The sample for China and Colombia covers the urban population only. Earnings changes are calculated relative to stayers (i.e. subtracting the average change in earnings among stayers from the average change among movers) over the following periods: China (2008-09), Colombia (2009-10), South Africa (2010-12), Turkey (2010-11). The distribution of earnings changes is trimmed at the 1st and 99th percentiles.
Source: OECD calculations based on national longitudinal household and labour force surveys (UHS: China, Fedesarrollo: Colombia, NIDS: South Africa) and the EU-SILC national files (Turkey).

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ANNEX 5.A4

Well-being and job quality

Figure 5.A4.1. **Well-being and job quality frameworks**
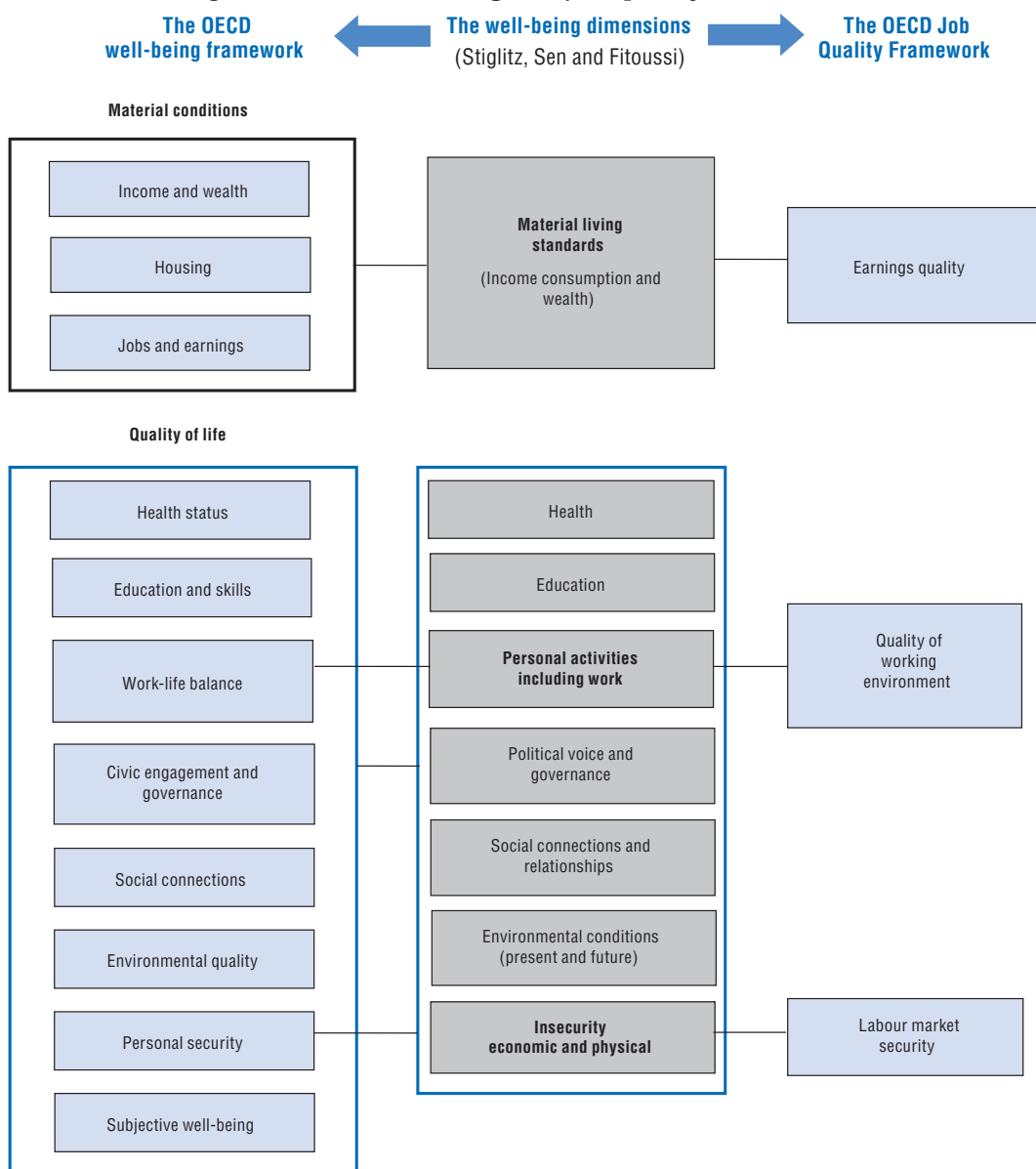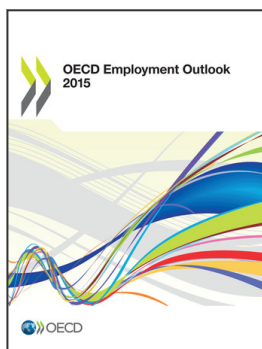
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