International
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PERSPECTIVES ON LABOUR ECONOMICS FOR DEVELOPMENT

Edited by Sandrine Cazes and Sher Verick

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Foreword

The field of labour economics covers a range of issues that are fundamental to understanding the world of work, such as the relationship between employment and growth, wage formation, the importance of human capital, migration and labour market regulations, to name a few. These topics have received considerable attention in the academic literature in recent decades, with a number of issues generating long-running debates, notably in the context of the impact of labour market institutions, such as those on employment protection legislation and minimum wages.

At the same time, it is now well recognized that the labour market plays a central role in the development process: having access to stable and protected employment is the most sustainable path to exiting poverty and promoting inclusion. However, in most developing countries, labour markets continue to be characterized by persistent informality, low levels of productivity and pay, and insufficient access to social security and employment benefits, along with inequalities in outcomes for women, youth and specific groups in society. Overall, the labour market in such economies has too often failed to help individuals and their families escape poverty.

As a consequence, governments — along with social partners, the trade unions and employers' organizations — have sought to develop policies and programmes that tackle these labour market challenges. In order to formulate and implement effective interventions in these areas, it is crucial to understand the nature of these challenges and how to match them with appropriate policy and institutional responses.

However, the majority of the academic literature on both labour and development economics is too technical for most policy-makers to access given their limited time and competing demands. For this reason, *Perspectives on labour economics for development* is both timely and highly relevant to the needs of governments and other partners around the world. The volume has been put together by a group of leading ILO and non-ILO experts seeking to provide non-technical, but up-to-date and robust, insights into key topics in labour economics that are relevant to developing countries.

It is our hope that this book will become an important reference for policy-makers, trade unions, employers' organizations, teachers and students, helping to provide clarity on some of the most fundamental labour market issues facing developing countries.

Jose Manuel Salazar-Xirinachs
Executive Director, Employment Sector,
International Labour Office

Contents

List of tables

List of figures

List of boxes

Notes on contributors

Patrick Belser is Senior Economist with the Conditions of Work and Employment Branch of the International Labour Office in Geneva. He is the principal editor of the ILO's *Global Wage Report* and provides policy advice on wage policies and minimum wage fixing to governments and social partners around the world. He holds a PhD in economics from the Institute of Development Studies at the University of Sussex and also studied at the Graduate Institute for International Studies in Geneva and Columbia University in New York. His publications include articles on minimum wage fixing, the coverage of minimum wages in India, measuring low pay among wage-earners and the self-employed, and the role of wages in income-led growth strategies. He is the co-author of *Forced labour: Coercion and exploitation in the private economy* (ILO and Lynne Rienner, 2009).

Janine Berg is Senior Development Economist in the Policy Integration Department of the International Labour Office. Since joining the ILO in 2002, she has conducted research on the economic effects of labour laws as well as provided technical assistance to ILO constituents on policies for generating jobs and improving working conditions. She is co-author of *Meeting the employment challenge: Argentina, Brazil and Mexico in the global economy* (ILO and Lynne Rienner, 2006) and co-editor of *In defence of labour market institutions: Cultivating justice in the developing world* (ILO and Palgrave Macmillan, 2008). She received her PhD from the New School for Social Research in New York.

Duncan Campbell is Director for Policy Planning in Employment at the International Labour Office and a Fellow of the Institute for the Study of Labour, IZA. His work and publications have focused on industrial organization, labour markets and employment, the economics of labour standards, policy coherence and policy choices relative to productive employment as a central macroeconomic variable and, most recently, behavioural economics approaches to the non-material dimensions of work. He has worked extensively in South and South-East Asia and was based at the ILO Bangkok office for four years. He received a BA from Bowdoin College and an MA, an MBA and a PhD from The Wharton School, University of Pennsylvania.

Sandrine Cazes is Head of the Employment Analysis and Research Unit at the International Labour Office in Geneva. She was previously the Employment Specialist of the ILO Subregional Office for Central and Eastern Europe in Budapest and worked at the French Economic Observatory-Sciences Po in Paris. She is the co-author of *Flexicurity: A relevant approach in Central and Eastern Europe* (ILO, 2007) and *Labour markets in emerging economies: Has growth translated into more and better jobs?* (ILO and Palgrave Macmillan, 2013) and has published widely on labour markets, job flexibility and employment stability.

Naercio Aquino Menezes Filho is the Director of the Centre for Public Policies and Professor of Economics at Insper Institute of Education and Research and at the University of São Paulo. He has a PhD in economics from University College London and has published many papers in economics journals.

Alexandre Kolev heads the Employment Research, Analysis and Statistics Programme at the International Training Centre of the International Labour Organization (ITC-ILO). He has BA in Russian studies from the Institute of Oriental Studies, Paris, and a PhD in labour economics from the European University Institute, Florence. He began his career as a research economist for UNICEF Innocenti Research Centre and later joined the Young Professional Programme of the World Bank, where he held various positions including in the Poverty Reduction and Economic Management unit for Europe and Central Asia and the Social Protection group in the Middle East and North Africa region. Before joining the ILO, he worked as a task manager for the Education and Vocational Training Division of Agence Française de Développement and was an associate professor at the University of Paris 12.

Theo Sparreboom is Senior Economist in the Labour Market Analysis Department of the International Labour Office in Geneva. Prior to joining the ILO, he worked for many years in sub-Saharan Africa and Asia. He holds a PhD in economics from the Erasmus University in Rotterdam and has an extensive publication record on labour market information, policies and institutions.

Sher Verick is Senior Employment Specialist with the ILO Office for South Asia in New Delhi. He holds a master's in development economics from the Australian National University and a PhD in economics from the University of Bonn. He is co-editor of *From the Great Recession to labour market recovery: Issues, evidence and policy options* (ILO and Palgrave Macmillan, 2011) and co-author of *Labour markets in emerging economies: Has growth translated into more and better jobs?* (ILO and Palgrave Macmillan, 2013).

Mirco Tonin is a lecturer at the Economics Division of the University of Southampton and UniCredit Foscolo Europe Fellow at the Economics Department of the Central European University in Budapest. He is also a research affiliate at the European Centre for Social Welfare Policy and Research in Vienna and a research fellow at the Institute for the Study of Labor in Bonn and at the Global Development Network. His main research interests are behavioural economics, labour economics and public finance. He has investigated the role of labour market institutions, the determinants of pro-social behaviour and fiscal compliance.

Acknowledgements

List of abbreviations

ALMP	active labour market policies
BLK	Vocational Training Centres (Indonesia)
CCT	conditional cash transfers
CIG	Cassa Integrazione Guadagni (Italy)
CIS	Commonwealth of Independent States
DOL	Department of Labour (South Africa)
EAP	East Asia and the Pacific
EEO	European Employment Observatory
EES	European Employment Strategy
EGFSN	Expert Group on Future Skills Needs (Ireland)
EMIS	education management information system
EPL	employment protection legislation
EPM	employment projection model
EPR	employment-to-population ratio
EPWP	Extended Public Works Programme (South Africa)
ESRI	Economic and Social Research Institute (Ireland)
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FÁS	Irish Training and Employment Authority
GCI	Global Competitiveness Indices
GDP	gross domestic product
GNI	gross national income
ICLS	International Conference of Labour Statisticians
ICSE	International Classification by Status in Employment
IMF	International Monetary Fund
ISCED	International Standard Classification of Education
ISCO	International Standard Classification of Occupations

ISIC	International Standard Industrial Classification of all Economic Activities
KILM	Key Indicators of the Labour Market (ILO)
LDC	least developed countries
LFPRw	labour force participation of women
LMIA	labour market information and analysis
LMP	labour market policies
MDG	Millennium Development Goals
MGNREGS	Mahatma Gandhi National Rural Employment Guarantee Scheme
MOLM	Ministry of Labour and Manpower (Pakistan)
MSE	micro- and small enterprises
NREGA	National Rural Employment Guarantee Act (India)
NSDS	National Skills Development Strategies (South Africa)
OECD	Organisation for Economic Co-operation and Development
OEE	output–employment elasticities
ONEF	National Employment and Vocational Training Observatory (Burkina Faso)
p.a.	per annum
PES	public employment services
PISA	Programme for International Student Assessment
PLMP	passive labour market policies
PPP	purchasing power parity
REPRO	Productive Recovery Programme (Argentina)
RIGA	Rural Income Generating Activities (FAO)
RNF	rural non-farm
SDPU	Skills Development Planning Unit (South Africa)
SEWA	Self Employed Women's Association (India)
SME	small and medium-sized enterprises
TIMSS	Trends in International Mathematics and Science Study
UI	unemployment insurance
UISA	unemployment insurance savings accounts
WIPO	World Intellectual Property Organization

Introduction and overview | 1

Sandrine Cazes
Chief, Employment Analysis and Research Unit,
International Labour Office

Sher Verick
Senior Employment Specialist,
ILO Decent Work Team for South Asia

In developing countries, labour markets play a central role in determining economic and social progress since employment status is one of the key determinants of exiting poverty. Ultimately, having a decent, well-paid and secure job is the most sustainable path to increasing incomes and consumption levels. However, the reality in the formal economy of most developing countries is that the labour market fails to create the jobs needed to help individuals and their families prosper. Rather, the labour markets tend to be characterized by the persistence of informality in urban areas, the continuing share of workers in subsistence agriculture, low pay and poor working conditions, along with the disparities women, youth and other specific segments of society face.

Despite better economic growth in many countries over recent decades, these challenges remain as pressing for governments across the world as they did when W. Arthur Lewis presented his model of surplus labour over 50 years ago (Lewis, 1954). More concerning is the fact that development and economic growth in many countries, especially in South Asia and Africa, have been characterized by a rising dominance of the informal sector in urban areas. The movement of the rural poor has been from agriculture to working as street traders and construction workers in towns and cities, rather than being absorbed into large-scale manufacturing firms. Thus, segmentation in the labour markets of developing countries continues to persist in both rural and urban areas. Moreover, further informalization of the formal sector, notably through casual and contract labour, has resulted in newer forms of labour market duality in a number of developing (and developed) countries.

A key challenge witnessed in all developing (and developed) countries is gender disparities in the labour market. Women tend to be over-represented in informal and vulnerable employment as they face a range of barriers to access better jobs in the formal economy (due to such factors as skills). For this reason, when women do work, they are more likely to be family or domestic workers and less likely to be working in the formal economy. Moreover, gender wage gaps persist, which reflect, among other factors, the penalty women suffer because they withdraw from the labour force to raise children. As discussed in ILO (2010), World Bank (2011) and other studies, a number of factors drive the poor labour market outcomes of women, including cultural beliefs and norms, lack of education, dominance in low-value added sectors, barriers to entrepreneurship and inadequate support from government policies and programmes.

Another major concern for developing countries is the creation of sufficient jobs for young people as they enter the labour market, a critical challenge because of high population growth rates. As observed around the world, youth unemployment and underemployment is prevalent not only because of demand-side deficits (inadequate

job opportunities), but also because they lack skills, work experience, job search abilities and the financial resources to find employment (ILO, 2006). As a result, youth unemployment rates tend to be two to three times higher than for adults. Furthermore, youths have been affected by the global financial crisis more severely than adults due to the sectors they tend to work in and their vulnerability to layoffs. The global figures show that almost 75 million young people between the ages of 15 and 24 are unemployed as of 2012, reflecting an unemployment rate of 12.7 per cent (ILO, 2012). It is, therefore, a major concern for governments around the world.

Governments and other stakeholders have increasingly recognized these labour challenges, which were greatly accelerated by the global financial crisis of 2007–09. Yet at the same time, complex debates surround many of these issues, such that making progress on implementing more effective policies and programmes requires a good understanding of the linkages between development processes and labour market outcomes.

Although a large number of textbooks have been published on development economics and on labour economics, fewer have been written on the interaction between the two disciplines, particularly in an accessible and relevant format.[1] In this respect, textbooks tend to be overly technical for policy-makers and other stakeholders, who nonetheless require solid information and arguments to develop evidence-based policies. For this reason, this book seeks to provide comprehensive but non-academic coverage of labour market issues in a developing-country context to help policy-makers, employers' and workers' organizations, civil society and other readers improve their capacity to understand these topics and develop appropriate and effective policy responses.

To achieve this goal, this volume consists of three main thematic parts. It begins with a broad, macro overview of labour markets in developing countries (Chapter 2) and the link between growth, distribution, employment and poverty (Chapter 3). Chapters 4–7 delve into specific labour market issues, namely informality, wages, migration and education, while the last three chapters (Chapters 8–10) take a more normative approach to labour market institutions and policies, along with systematic approaches to quantifying labour markets in developing countries. Cross-cutting issues, namely gender and youth, are considered in various sections of these chapters.

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[1]   One recent but more academic contribution is Kanbur and Svejnar (2009).

1.1 Chapter summaries

Chapter 2 starts by recognizing that one of the defining characteristics of developing economies is the abundance of labour and the scarcity of capital, both physical and human. It then underlines the importance of agriculture and of the rural economy, and the process of structural transformation in which employment shifts from the primary to the industrial and services sectors. This chapter also summarizes the differences between developed and developing countries in terms of labour market structure, with the latter characterized by the prevalence of informality and weak market integration.

The linkages between economic growth, poverty, inequality and employment, explored in **Chapter 3**, are complex but fundamental for understanding how growth results in better development outcomes, especially in the context of the labour market. In this respect, how economic growth translates into poverty reduction depends on income inequality. This in turn depends crucially on the impact of growth on employment and wages, given that labour is the main, if not only, source of income for most people in developing countries. To address these issues, this chapter first provides a conceptual framework of the linkages between growth, poverty, inequality and labour markets before reviewing the empirical evidence on this theme. Finally, it discusses various policy interventions that aim at improving the impact of growth on poverty.

A striking feature of labour markets in developing economies is informality: informal employment is not only widespread, often involving the vast majority of workers, but it does not seem to be receding. **Chapter 4** looks more in depth into this issue. After defining and quantifying the informal sector, the chapter discusses the reasons behind its existence, emphasizing how people may work informally by choice or due to exclusion from the formal sector. This chapter then describes the most important characteristics of informality in the main developing regions of the world and, finally, considers possible policy responses.

Chapter 5 examines the determinants of wages in developing countries, emphasizing their link with productivity and labour market institutions, such as trade unions, collective bargaining and minimum wages. The link between wages and education and the role of globalization are also explored. Additionally, this chapter deals with distributional issues, looking at the trend in the wage share in developing countries, wage inequality, the gender pay gap and interindustry wage differentials arising, for instance, between firms in the formal and informal sector.

Labour migration, both international and internal, is the topic of **Chapter 6**. The chapter starts with a quantitative assessment of this important and growing phenomenon.

The chapter then reviews the main theoretical insights and the empirical evidence concerning the determinants of migration, stressing both the push and pull factors. The same is done with regard to the impact of labour migration in sending and receiving economies, underlining the effects of emigration and immigration on wages, human capital and growth, as well as the effects of remittances. The chapter concludes with a discussion on migration policy.

Chapter 7 addresses the importance of education and human capital, which have long been recognized as key factors for development and labour market outcomes. Quite a lot of heterogeneity in terms of educational achievement exists within developing countries, and this chapter examines the relationship both between education and the labour market, and between education and the growth process. The chapter also looks at policies that can be used to improve school attendance and the quality of education, acting both on the demand and the supply sides.

Chapter 8 focuses on the topic of labour market regulations, with particular attention to employment protection legislation, minimum wages and unemployment benefits. In each section, a comparison is made of the main characteristics of these regulations across countries. The chapter then provides a theoretical background, highlighting the main effects of regulations on labour market outcomes. Finally, the chapter discusses the empirical evidence, which draws on research on both Organisation for Economic Co-operation and Development (OECD) countries and developing countries where possible. Nonetheless, this chapter argues that developing countries can benefit from the accumulated evidence when designing or reforming their own regulations.

Chapter 9 deals with the related topic of labour market policies, which are specific interventions that aim to affect labour demand and supply, along with matching them both. Besides defining what labour market policies are and discussing the reasons for their utilization, it focuses on the particular challenges that developing countries face when implementing such policies. This chapter also discusses at length the policy response to the global financial crisis of 2007–09 and provides a methodological overview on how labour market policies have been evaluated through randomized experiments or other methods.

The subject of **Chapter 10** is labour market information and analysis systems. The availability of data, information and analysis is a critical element to addressing labour market issues, an element that is often lacking in developing countries. This chapter first develops the conceptual framework within which to discuss such systems and provides some country examples. It subsequently looks at the set of indicators that can be used to monitor the labour market and, possibly, to make projections and set

targets. The chapter concludes with a discussion on activities that should be undertaken to establish or develop an information and analysis system.

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The labour market in developing countries* | 2

Duncan Campbell
Director, Policy Planning,
International Labour Office

It is a difficult task to capture the diversity of the economic activities of those who work in the world, the vast majority of whom are found in developing countries. To do so, certain stylized features are highlighted in this chapter. Of these, and as distinct from developed countries, two prominent features are: (1) developing countries are characterized by a status in employment in which own-account work, rather than paid employment (wage-earning), is considerably greater; and (2) somewhat contrary to a standard textbook in labour economics, in developing countries much economic activity cannot be understood as the "derived demand for labour" – i.e. labour demand derived from product-market demand. A substantial share of own-account work is actually an effort at "demand creation".

Much activity is in fact outside of a "market" altogether, e.g. subsistence farming or endeavouring to stimulate demand through, for example, street vending, which can be understood as an "employment-led", survivalist strategy, rather than a "growth-led" demand for labour (Campbell, 2011). The distinction here is between "growth" or "demand" absorbing labour into jobs, as is common in developed countries, versus an abundant, underemployed supply of labour seeking to create its own demand for its services. As anywhere, the two sides of the market meet in the end, of course, but it is a question of whether demand or supply is driving this reunion.

The present chapter reviews a few of the major features of developing-country labour markets. These include: the magnitude of the informal economy and its persistence (developed in further detail in Chapter 4); the role of agriculture and the rural economy; the structure of developing-country labour markets; structural transformation and development; human capital development (the subject of Chapter 7); and challenges to market integration.

Two umbrella concepts underlie many of the features above. The first of these is fragmentation. Dualism[1] (illustrated in **table 2.1**) describes the economic structure of developing countries, their economic geography between rural and urban, and the weaker integration of labour markets than is the case in developed countries. The second conceptual distinction between developed and developing countries is an abundance of labour and a scarcity of capital in the latter, and the reverse in the former. The chapter begins with a general look at the consequences for a labour market of an abundance of labour and a scarcity of capital. First, however, a brief definitional overview is given in **box 2.1**.

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[1] A good discussion of dualism appears in Ghose, Majid and Ernst (2008, p. 57).

Box 2.1   A "developing country"? An "emerging economy"?

Most simply, and most rigorously, a "developing country" is defined in income terms, more specifically, gross national income (GNI) per capita. In other words, development is conventionally defined as income-dependent, irrespective of other attributes of development, historical or cultural. Such a definitional standard is, of course, both partial, ignoring other features of development, and relative. When, in particular, does GNI per capita attain a level such that the country can then be considered "developed"? The broad-based conventional answer to this question lies in the World Bank's classification of countries, of which there are four groupings: low income, lower middle income, upper middle income and high income. The classification is defined, once again, by GNI per capita. Revisions to the classification are annual, on 1 July. All countries below the high-income level are, by convention, considered "developing".

There are, of course, ample grounds for debate on equating development with some, arguably arbitrary, monetary standard. Yet, history and culture aside, certain economic empirical regularities do describe a developing country beyond a monetary measure of standard of living. Two are prevalent: developing countries are – perhaps predominantly – agrarian and industrial development is low. Whether there is a common trajectory towards (economic) development is addressed later in the chapter.

The term "emerging economy" was coined in 1981 by Antoine W. Van Agtmael of the International Finance Corporation, a member of the World Bank Group. The difference between an "emerging" and "developing" economy has much to do with the character of its reforms, its rate of economic growth and its engagement in the global economy, as the following definition suggests:

"Although the term 'emerging market' is loosely defined, countries that fall into this category, varying from very big to very small, are usually considered emerging because of their developments and reforms. Hence, even though China is deemed one of the world's economic powerhouses, it is lumped into the category alongside much smaller economies with a great deal less resources, like Tunisia. Both China and Tunisia belong to this category because both have embarked on economic development and reform programs, and have begun to open up their markets and 'emerge' onto the global scene. [Emerging market economies] are considered to be fast-growing economies."[2]

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[2]   http://www.investopedia.com/articles/03/073003.asp#ixzz26GASmySQ

Table 2.1   **"Dual economy": A "traditional" and a "modern" economy**

The "traditional" economy	The "modern" economy
is relatively more …	
Informal	Formal
Vulnerable in employment status	Likely to have a higher share of wage earners
Rural	Urban
Likely to be less productive	Likely to be more productive
Credit-insufficient	Access to credit
Likely to have a low capital-to-labour ratio	Likely to have a higher capital-to-labour ratio
Oriented to domestic, even local markets	Oriented to domestic and international markets
Sheltered from the impact of macroeconomic policies	Exposed to macroeconomic policies
Deficient in the quality of jobs	Deficient in the quantity of jobs
Likely to be less or unprotected	Likely to have at least de jure protection
Prone to greater earnings instability	Stable and predictable in earnings and income

Source: Adapted from Campbell, 2011.

2.1   The employment consequences of abundant labour and scarce capital

As mentioned, a fundamental distinction of developing countries is the abundance of labour and the scarcity of capital. The combination results in inadequate investment and capital accumulation along with greater labour supply pressures than prevail in

developed countries, leading to a shortage of productive employment. Once again, this is a secular and stylized observation that may no longer be true for many otherwise "developing" countries. Indeed, in the aftermath of the Great Recession, with interest rates pushed to zero in the afflicted, wealthy countries, high and even excessive capital inflows to some developing countries are of macroeconomic concern.

Change is also altering the balance of labour and capital supplies in many parts of the developing world, most notably in the emerging economies. In fact, growth rates in developing countries began to diverge and pull ahead of those in developed economies in about 1990, spearheaded by the emerging economies, in particular China and others in Asia. Growth in sub-Saharan Africa in the first decade of the new millennium, for example, reached a rate not seen in decades, fuelled particularly by rising commodity prices. The rise of developing Asia is reflected in **figure 2.1**.

Figure 2.1   **Shares of regions in world output noting the growth of developing Asia, 1973 and 1998 (percentages)**
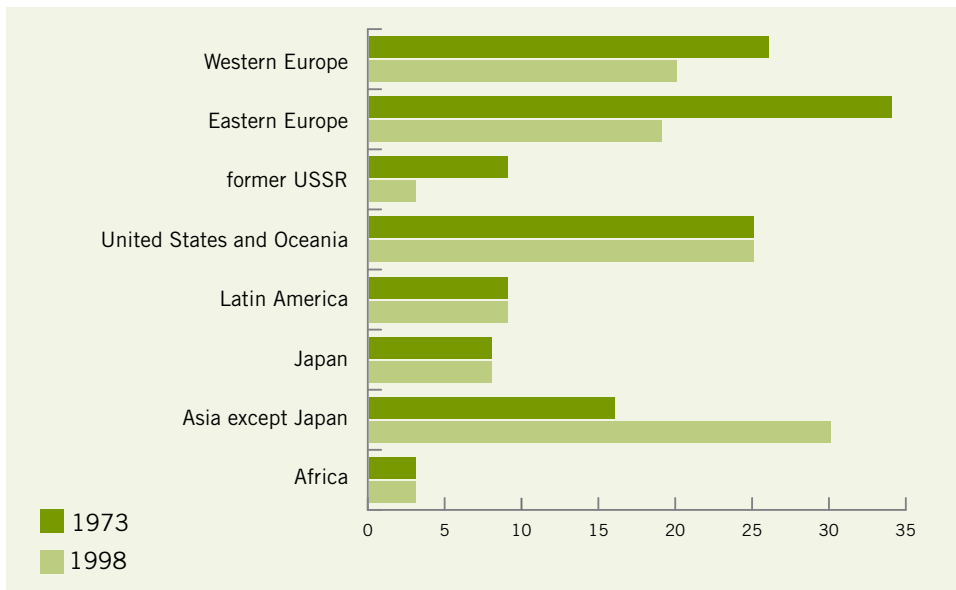
Source: Author's calculations on the basis of data from Maddison, 2001.

That said, it remains the case that the abundance of labour in a context of inadequate growth to absorb that labour into productive employment results in a situation of extensive underutilization of labour. There are two causes of this. The first lies in the

divergence of demographic trends leading to greater labour-supply pressures in developing countries; in fact, often but not always, the poorer the country, the higher the rate of population growth – in economies least likely able to absorb a burgeoning young labour force into productive jobs. This is suggested in **figure 2.2**. The implication is that the employment challenge in developing countries is predominantly a youth employment challenge. This means that the higher the population growth rate, the younger the age structure of the population. Thus, while an ageing population is a concern for many developed countries (and some developing nations, such as China), providing jobs for a young workforce is a challenge for much of the developing world.[3]

Figure 2.2   Population growth, 2000–10 (percentages)
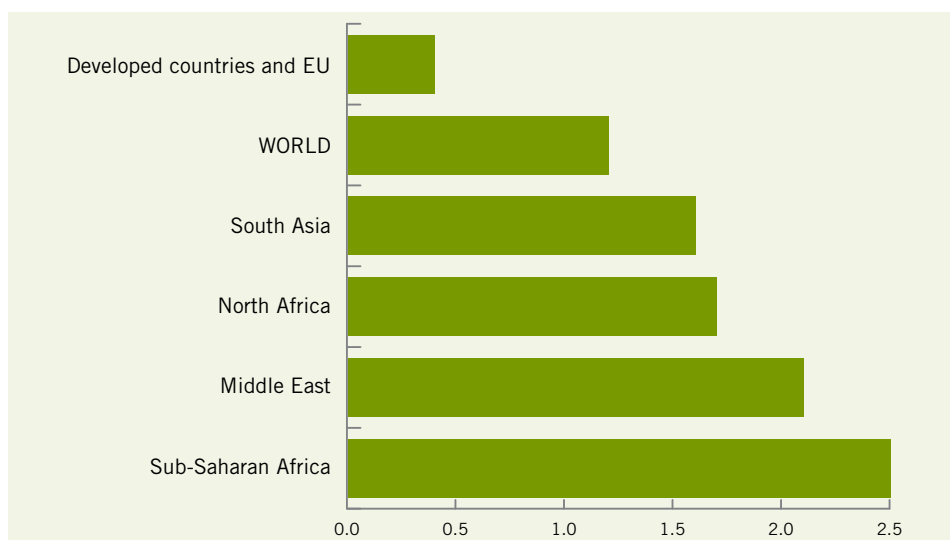
Source: ILO, 2011c.

The second indicator of labour underutilization is the share of working poor[4] in the labour market (see **figure 2.3**), which can be taken as a proxy for income-related underemployment. The share of youth in a population and relative poverty are, of course, likely to go hand-in-hand.

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[3]   There are, of course, exceptions. China's one-child policy has resulted in an ageing population. Moreover, infant mortality rates and disease-related mortality (e.g. from HIV/AIDs, malaria) are generally substantially higher in developing countries, particularly the poorest ones.

[4]   "Extreme" working poverty is defined as those earning US$1.25 or less in purchasing-power-parity terms for themselves and their families.

Figure 2.3 **Share of US$1.25 per day working poor (percentages)**
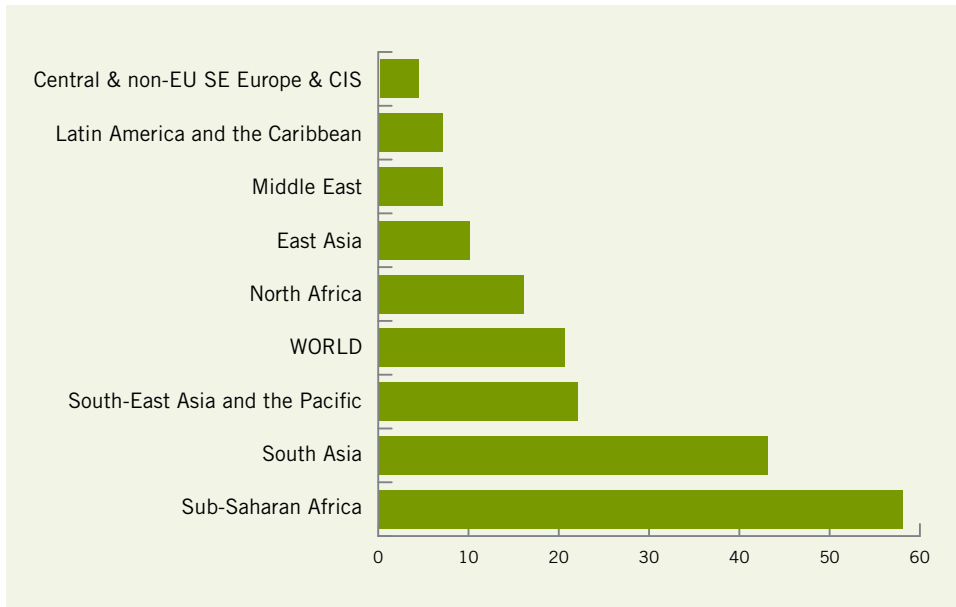
Source: ILO, 2011c.

Thus, while open unemployment is a considerable problem in some developing regions, e.g. North Africa, it is overwhelmed in magnitude by underemployment. In the absence of social protection systems (the case for 80 per cent of the world's population), unemployment is quite simply not an interim alternative. It is not unusual for open unemployment in developing countries to be concentrated among educated youths, whose families can afford them a longer period of job search. Unemployment is therefore an inadequate indicator of labour market conditions in developing countries. That the official unemployment rate in Nepal was 2.1 per cent in 2011 tells us very little indeed about the level of labour underutilization – i.e. underemployment – in that country. With an inadequate number of jobs in the formal economy, and as unemployment is not affordable in the absence of a social protection system, work in the informal economy is the option for the majority of workers in the developing world.

2.2 The persistence of informality

The informal economy is such a predominant feature of labour markets in developing countries that Chapter 4 is devoted to it in this volume. The discussion here, therefore, is of a brief and stylized nature.

The ILO (2002) definition of the informal economy in developing countries underscores the critical role it plays in providing livelihood opportunities in both rural and urban economies. The definition delineates informal employment as: self-employment in informal enterprises such as unregistered enterprises, employers and unpaid family workers; and paid employment from informal jobs such as casual or day labour and unregistered help for informal and formal enterprises, households or temporary employers.

The informal economy tends to include mostly small, family-owned enterprises that are labour-intensive, have low earnings and are either not subjected to or do not comply with existing labour market regulations. In essence, this dualistic labour-market structure consists of one economy (the "formal" one) offering better incomes and other favourable terms and conditions of employment, and another economy (the "informal" one), which offers less favourable wages and conditions. The formal economy is more likely to offer some protection in the form of labour market regulations and some access to formal systems of social protection, both virtually non-existent in the informal economy.

The important points here are that a majority of workers in the world today are in the informal economy and a majority of new entrants in the global labour market enter the informal economy. For example, around 34 per cent of Tanzanian households engage in some form of non-agricultural informal activity at any given moment. The proportion is higher in urban areas – 55 per cent engage in informal work in the largest city, Dar es Salaam. Around 22 per cent of the total labour force is involved in the non-agricultural informal economy to some degree, while 75 per cent of the informal economy workforce consists of the self-employed and contributing family members. The highest proportion of the non-agricultural and urban informal labour force works in restaurants, hotels or trade. Overall, Africa has been estimated to have 80 per cent of its non-agricultural employment accounted for by informal work, over 60 per cent of its urban employment and a remarkable 90 per cent of its new jobs over the past decade. In Asia, the share of informal workers ranges from 45 per cent to 85 per cent of non-agricultural work and from 40 per cent to 60 per cent of urban employment (Becker, 2004).

In seven of the most populous developing countries, the informal share of employment increased in the 2000s. Even in the Republic of Korea, one of the success stories of the 1970s and 1980s, the informal economy still accounts for a large share of the workforce. Furthermore, not only does the informal economy account for a major source of employment in developing countries, it is also assumed to contribute a significant share to a country's gross domestic product – an estimated 8 per cent to 12 per cent of the GDP in South Africa, for example (Budlender et al., 2001), and considerably higher in many other developing countries.

Certain transitional economies show evidence that the large declines in their GDP were alleviated to some extent through the rapid growth of the informal economy (Gerxhani, 2001). Indeed, the tendency sometimes exists to view the informal economy almost as if it were an "automatic stabilizer" when there is a shock to the formal economy; being self-employed is a much easier proposition than seeking a formal job since it involves low capital requirements and entry barriers.

The weak capacity of institutions to provide education, as well as poor training and poor infrastructure contribute to the growth of the informal economy. Large-scale redundancies in the public sector from the structural adjustment policies of the 1980s and 1990s resulted in unemployed workers resorting to the informal economy. Again, these issues are visited in depth in Chapter 4.

2.3 Agriculture and the rural economy

Rural economic activities are usually divided into farm (agriculture) and non-farm activities, with agriculture as the predominant sector. The share of agriculture in GDP has declined over the years, with rural non-farm employment becoming more widespread. However, subsistence food production, i.e. food production for own consumption, is still prevalent. Moreover, agriculture still accounts for a substantial share of the labour market – a majority share in many developing countries – and the world's poor are predominantly found in the agricultural sector of developing countries. That agriculture's share in GDP has declined on the whole more rapidly than employment implies that productivity in agriculture has declined. Productivity is in particular apt to be low in subsistence agriculture, seasonal agricultural wage labour and in forms of non-farm self-employment. The incomes generated are consequently not very high, often just enough to ensure basic food security and to serve as coping mechanisms to alleviate poverty or escape outright destitution.

The Rural Income Generating Activities (RIGA) data set of the Food and Agriculture Organization of the United Nations (FAO) finds that a majority of rural households in developing countries are involved in farming activities. The share ranges from 54 per cent to 99 per cent by country, with an average participation rate of 86.2 per cent. Participation rates in non-farm activities are higher in Latin America and Asia relative to other regions.

2.3.1 The weather, international commodity prices and growth

One of the fundamental observations to make about agriculturally-based developing economies is that they show a fairly high degree of systemic volatility, a situation that does not only arise from the volatility of international commodity prices that induce terms of trade shocks.

There is much discussion today on the growth of "extreme" weather events associated with climate change. These events are quite likely to add to the volatility of both product yields and price movements.

Traditional crops still serve as a major source of livelihood for the rural economies in developing countries. Despite a changing structure in agricultural trade, including increases in the share of high-value products such as fisheries, fruits and vegetables, traditional commodities such as coffee, cocoa and tea are just as important for sustaining livelihood opportunities and subsistence farming.

Urbanization can have positive effects on that portion of the agricultural sector that is commercial. It can increase economies of scale in food marketing and distribution, resulting in an increase in the volume of food marketed (Meijerink and Roza, 2007). That said, while small farms can increase the well-being of the rural poor, they may be left behind during rapid economic growth and globalization. Such poor farms may be "locked out" of markets for, among other reasons, inadequate transport or storage infrastructure. They do not therefore benefit from the growth of commercial opportunities in expanding urban markets. In Nepal, for example, 75 per cent of the labour force is in agriculture – but 90 per cent remain subsistence farmers. And, beyond having access to a good road, the barriers to commercialization may be hard to overcome: lacking the skills needed, rural farmers may often not be able to adopt new technologies. They are also exposed to the vicissitudes of the weather, and may not have access to irrigation or fertilizer, or access to credit.

2.3.2 Staying rural but moving off the farm

The rural non-farm (RNF) sector is growing. Estimates of RNF income shares vary across countries, ranging from 30 per cent to 45 per cent of rural incomes (FAO, 2002; Reardon et al., 2001). In the rural sectors, RNF employment comprises about a quarter of the jobs in Asia, West Asia and North Africa, about one in three jobs in Latin America, and around 10 per cent in Africa (Haggblade et al., 2005). An increasing share of RNF employment would thus seem to be correlated with economic development – less developed regions have significantly lower RNF shares compared to more developed regions. In terms of income, however, RNF shares represent 42 per cent of the rural income in Africa, 32 per cent in Asia, 40 per cent in Latin America and 44 per cent in Eastern Europe and the Commonwealth of Independent States (CIS) countries. Africa's higher share might mean simply a lower "denominator" of total income: non-income-generating subsistence farming might represent a higher share of all farming and thus a lower denominator. The FAO's RIGA data set shows that services accounted for an important share of the RNF economy – over one third of the share of rural non-farm income is generated by services – trading farmed goods, for example.

2.3.3 Multiple job-holding

While difficult to quantify, a major distinguishing feature of many developing countries, relative to developed countries, is that work in developing countries is often characterized by multiple job-holding. Workers engage in different economic activities to supplement the inadequate earnings accruing from just one.

Although RNF activities might not generate high incomes, during periods of seasonal or permanent underemployment, any such utilization of labour can raise incomes. RNF sectors can also provide a source of income to the landless poor and those who are unable to participate in agricultural activities. RNF activities enable people to supplement their incomes when there is no agricultural employment and provide them with a risk-reducing, coping mechanism in the process. In fact, much non-farm activity is secondary, providing a good means of smoothing out the flow of income in slack farming seasons and stabilizing total earnings by diversifying the sources of income. However, RNF employment could result in increasing rural inequality, as a body of evidence suggests that the highest non-farm earnings accrue to the better-off farmers (Burgess, 1997; White, 1991; Evans and Ngau, 1991).

2.4   Labour market structure and status in employment

The foregoing discussion has already implied certain stark differences in the structure of labour markets in developed and developing countries. Another four differences are: (1) the characteristics of non-market work; (2) the labour force participation of women; (3) status in employment; and (4) the dispersion of occupational productivity.

2.4.1   Non-market work: Work outside the scope of market transactions

In developed countries, the most common form of non-market work is the management of the household, usually by a housewife – cooking, cleaning, child-rearing, etc. Such work is both excluded from the system of national accounts and not included in labour force statistics. In developing countries, particularly in the poorest ones, non-market work is often a direct contribution to livelihoods – water- or wood-fetching, for example, or planting, harvesting and livestock feeding in subsistence farming. Such work – non-market and unpaid – is nevertheless included in labour force statistics as employment. As in developed countries, valuation of such non-market work is difficult for the purposes of GDP accounting but is nonetheless an important contribution to the maintenance of living standards and a buffer against extreme poverty. Women are disproportionately represented in contributing family-member work, but so are young people as shown in **figure 2.4**.

2.4.2   The labour force participation of women and the level of economic development

The labour force participation of women (LFPRw), including those engaged in non-market work, varies with the level of economic development. In the poorest countries, which also tend to be agriculturally-based countries, the LFPRw is particularly high, reflecting women's contribution to farming activities and the absence of income protection, such as unemployment insurance. With economic development, participation rates of women tend to decline as a result of greater household income and the affordability of the withdrawal of labour supply for child-rearing purposes or household work. At developed-country levels of economic development, LFPRw tends to increase once again, to levels nearly matching those of males in some countries. The latter phenomenon is not always due to necessity and can be a reflection of

desire to participate in the labour force and fewer barriers to doing so.[5] Reasons for increased participation include the decline in gender-based occupational segregation and discrimination, lower fertility rates, widespread time- and labour-saving technical advances in the home and the growth of services, such as childcare. The LFPRw curve is thus parabolic, or U-shaped, when drawn against the level of economic development.

Figure 2.4 **Share of contributing family members in total employment of youths aged 15–24 (percentages)**
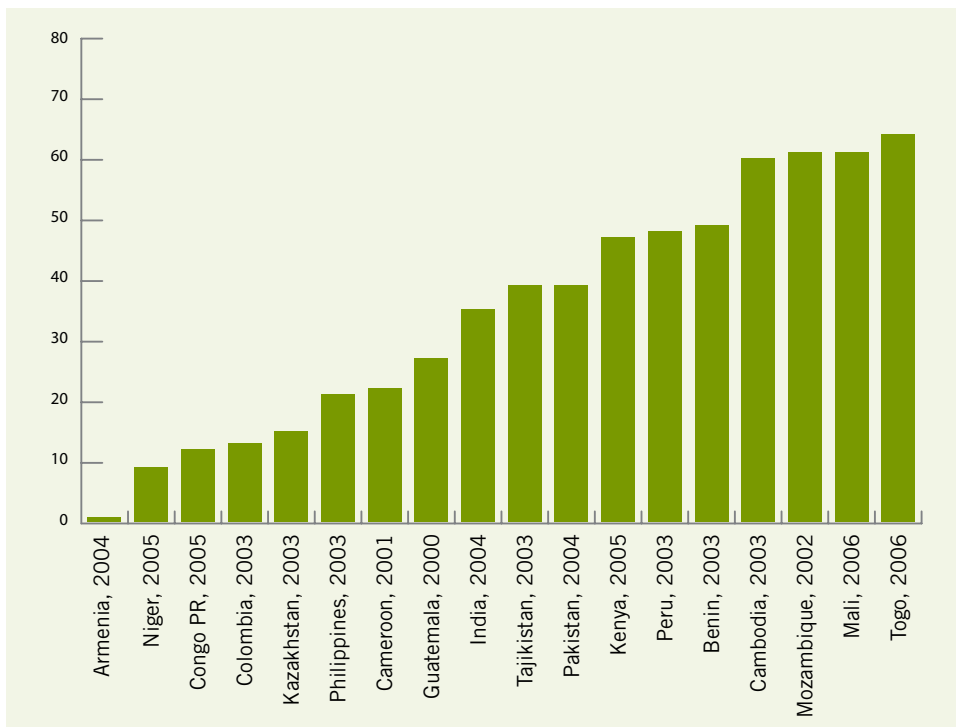
Source: ILO, 2010.

....

[5]   Barriers to labour force participation decline with education, with anti-discrimination legislation or with technological change reducing the time needed for non-market work, as well as institutions reducing the need for non-market work, e.g. childcare centres.

2.4.3 Status in employment

A strong relationship exists between the level of economic development and the share of wage employment in the labour market – a poorer country has a lower share of wage employment. Definitions of status in employment appear in **table 2.2**. The International Labour Organization (ILO) defines as "vulnerable employment" the sum of the shares of "own-account workers" and "contributing family members" in the labour market.[6]

Table 2.2   Definitions of status in employment

Employees are all workers who hold the type of jobs defined as "paid employment jobs", where the incumbents hold explicit (written or oral) or implicit employment contracts that give them basic remuneration that is not directly dependent upon the revenue of the unit for which they work.

Employers are workers who, working on their own account or with one or a few partners, hold the type of activity defined as a "self-employment job" (i.e. jobs where the remuneration is directly dependent upon the profits derived from the goods and services produced) and, in this capacity, have engaged, on a continuous basis, one or more persons to work for them as employee(s).

Own-account workers are workers who, working on their own account or with one or more partners, hold the type of activity defined as a "self-employment job" (see above) and have not engaged on a continuous basis any employees to work for them.

Members of producers' cooperatives are workers who hold "self-employment jobs" in a cooperative producing goods and services.

Contributing family workers are workers who hold "self-employment jobs" as own-account workers (see above) in a market-oriented establishment operated by a related person living in the same household.

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

Source: ILO, 2011a.

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[6]   These workers are "vulnerable" to the extent that they are more likely than (most) paid employees to face greater income insecurity and not have access to formal systems of social protection.

Existing research usually focuses on the dichotomy between self-employment (or own-account work) and wage employment, where self-employment involves the returns received for own inputs like labour, physical capital and entrepreneurial skills, while wage employment only includes returns to labour and human capital (Yamada, 1996). Self-employment amounts to 70 per cent of informal employment in sub-Saharan Africa, 62 per cent in North Africa, 60 per cent in Latin America and 59 per cent in Asia (Becker, 2004). The relationship between paid employment and economic development is shown in **figure 2.5**.

Figure 2.5 **Share of employees in total employment and level of development, 2000–08 (percentages)**
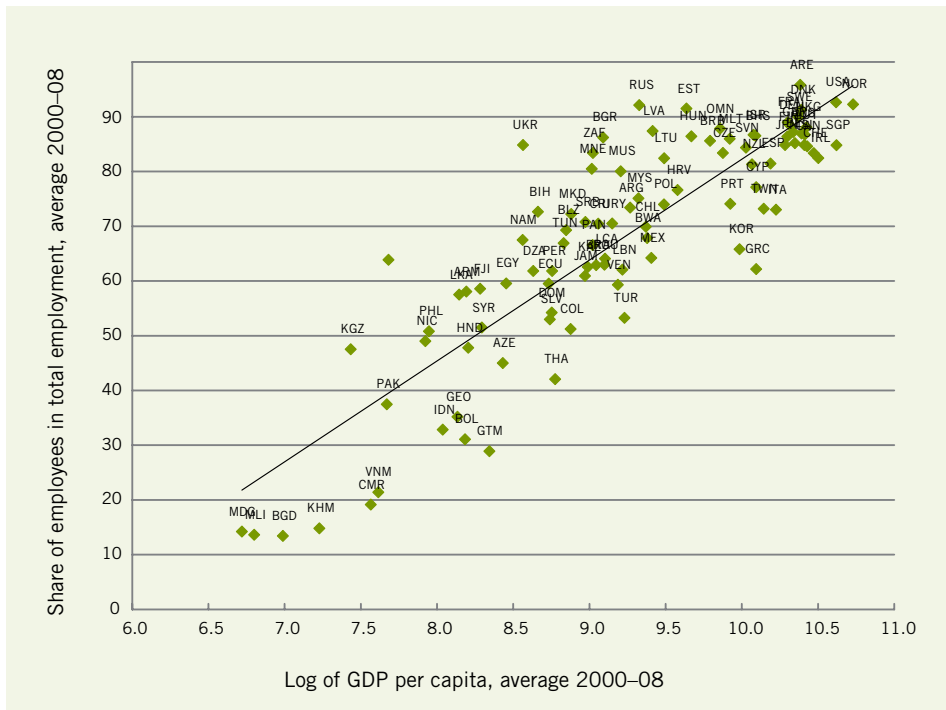
Source: ILO, 2011b.

Among developing and transition regions, rates of self-employment are the lowest in Eastern Europe, with a relatively low share of informal employment, but highest in other developing regions (Carletto et al., 2007). With higher levels of economic

development, the number of self-employed workers has been falling in both manu-
facturing and commerce, with a concomitant rise in wage employment.

Wage employment is still not a negligible component in agriculture, with more than
20 per cent of households (excluding Africa) involved in such activities (Carletto et al.,
2007). Moreover, the importance of agricultural wage employment to the poorest (and
often landless) rural households cannot be underestimated: among the rural popula-
tion, the majority of the poorest quintile in each country participates in agricultural
wage employment, with rates of 30 per cent to 50 per cent in Asia and Latin America
(Winters, 2008). Casual, daily wage labour is paid employment – but not of the sort
that is usually associated with the advantages of economic development, as shown in
figure 2.5.

2.4.4 Productivity variance within – ostensibly – the same product markets

Intrasectoral differences in productivity tend to be far greater in developing than
in developed countries. In the latter, more integrated product markets, better infra-
structure (and thus fewer external constraints to productivity) and less information
asymmetry in product markets make it such that competition reduces the variance in
productivity levels. In a developing country, whether one is making soap in a subsidi-
ary of a multinational company or doing so in a micro-enterprise results in a great
difference in productivity. That both production units coexist, with the more produc-
tive not driving the less productive out of business, has a straightforward explanation:
the same product – soap, in this example – competes in different product markets, the
latter being more segmented in developing countries.

2.5 Structural transformation or the evolution of economic structure

In the classic view of development outlined by W. Arthur Lewis in the 1950s, de-
velopment occurs when surplus labour in agriculture becomes a labour pool for the
development of light manufacturing, with its higher value addition and greater econo-
mies of scale. With increasing incomes, a services sector then develops catering to the
growing manufacturing sector, as well as to the rising purchasing power of consum-
ers. As an empirical observation, this view of development describes fairly well the
change in the economic structure of what are now the developed economies. The

model also fits well with the transformation of several countries in East and South-East Asia. Whereas, for example, there was once a thriving garment industry in Hong Kong (China), the province's economy is now 97 per cent services.

New patterns of employment correspond to the changing patterns of economic activity in developing nations. On the whole, sectoral employment shares in developing countries do indicate the expected pattern of declining employment in agriculture and increasing shares in the manufacturing and services sectors (Majid, 2005). And with these changes, again, a change in the status in employment – greater wage employment – ensues.

The changing pattern of the sectoral shares is also determined by the changing pattern of demand. Some studies find that income elasticities determine the sectoral composition of production and employment shares (Papola, 2005). With rising income levels, the demand for agricultural goods declines relative to that for manufactured goods and, ultimately, the demand for services increases after a much higher level of income has been attained. This "demand side" argument contributes to explain this shifting pattern of employment. Regarding the increasing share of the workforce in the services sector, the industrial sector uses the services sector as "intermediate inputs" along with activities that were previously carried out by manufacturing firms. In the case of India, such erstwhile manufacturing services are "outsourced" to firms in the services sector. Attempts have been made to estimate the portion of this employment in services that could be attributed to manufacturing (Papola, 2005). In the 1980s, various authors reported that this "outsourcing" of manufacturing activities has contributed to increasing the share of service-sector jobs.

It should be noted, however, that the foregoing is a statistical artefact characteristic of labour-market data whether in developing or developed countries. A kitchen helper in a manufacturing plant was once counted as a job in "manufacturing" whereas it is now most likely to be reclassified as a job in the services sector.

The Indian economy in the 1950s was similar to that of present-day developed countries about to undertake industrialization. With around two-thirds of GDP in agriculture, the Indian economy was similar to the British economy in the late eighteenth century and to Japan in the early twentieth century. The Indian labour force was also similar in the sense that agriculture accounted for about three-fourths of the workforce in the 1950s; 72 per cent of the US labour force worked in agriculture in 1841 and Japan had two-thirds employed in 1880.

2.5.1 A brief word on trade and employment changes

The structure of international trade reflects to some extent the factor content of trade – developing country exports rely more on unskilled labour while developed country exports usually tend to embody high skill. Developing countries tend to be more abundant in unskilled labour, whereas developed nations have ample skilled labour and this dictates the pattern of trade to some extent. One study shows that, for 21 developing countries trading in manufactured goods with developed countries in 1965, 1973 and 1983, the developing countries' exports were much less skill-intensive than its imports (Fischer and Spinanger, 1986).

This pattern has been changing rapidly, however, as a result both of rapid technological change and greater economic interdependence. Globalization reduces technological choice for firms competing in global markets and, as most technological innovation occurs in the wealthy countries where labour costs are high, there is a bias for labour-saving technological change, ultimately adopted by countries where "labour" is the abundant factor.

Trade reforms can clearly have an impact on employment and earnings (WTO and ILO, 2007). Research on Morocco found that exporting firms and those that were previously protected to some extent saw a reduction in employment (Currie and Harrison, 1997). Another study examined the impact of Mexican trade reform on wages and employment and found that firms adjusted to the trade reforms through wage reductions. Prior to these trade reforms, workers enjoyed rent-sharing arrangements that allowed them to earn higher wages whereas, afterwards, average real wages declined by 3 to 4 per cent. The reduction of import quotas had significant negative impacts on employment while tariff reductions produced no significant impact (Revenga, 1997). While the literature consistently shows clear economic, employment and earnings advantages of trade, the foregoing downside effects are nonetheless also present (WTO and ILO, 2007).

Structural transformation in other countries could impact nations not undergoing any significant changes themselves. For instance, the World Bank forecasts that China's move from the low-skilled export sectors to the intermediate- and high-skilled sectors in the next decade will generate enormous employment opportunities for low-income countries (Lin, 2011). The reallocation of Chinese workers to higher value-added products should result in the labour-abundant, low-income countries taking up China's place producing the manufactured goods. A reallocation of a small share of China's 85 million labour-intensive jobs could greatly benefit African manufacturing activities, which currently are estimated to employ at most 10 million workers. Thus,

when economies are linked globally, structural changes can have positive trickle-down effects for economies that have not yet taken off.

2.5.2 Concerns over the course of structural transformation

At least two concerns make this optimistic view appear more fragile, however. The first is that for the least developed countries (LDC) principally, getting a foothold on the development ladder through exports of manufactures might be tricky. Efforts to ignite structural change in LDC and catch up to the rest of the developing world through exports of manufactures pose arduous challenges, often as political as they are economic. Thus, the optimistic view above has its pessimistic counterpart:

"There was a moment – roughly the decade of the 1980s – when the wage gap was sufficiently wide that any low wage developing country could break into global markets as long as it was not stuck in one of the traps.[7] During the 1990s, this opportunity receded because Asia was building agglomerations of manufactures and services. These agglomerations became fabulously competitive: low wages combined with scale economies. Neither the rich countries nor the bottom billion could compete. The rich countries did not have low wages, and the bottom billion, which certainly had low wages, did not have the agglomerations. They had missed the boat …[T]he process of breaking in is now harder than before Asia managed to establish itself on the scene." (Collier, 2007, pp. 84–85).

There is some empirical support for this view: the pace of structural transformation varies substantially across regions, and structural transformation is relatively absent in certain regions. This is shown in **figure 2.6**, where the declining share of agriculture is taken as a proxy for the occurrence of structural transformation. Where it has occurred, a concomitant rise in wage employment is apparent, and where transformation has changed little, vulnerability remains high.[8]

The second concern relates to whether the classic progression of structural change is apparent everywhere in the world today. Two doubts support this concern. The first is that instead of growth in the manufacturing sector, deindustrialization is taking place in many developing countries, particularly in the least developed countries. Indeed, the absolute number of employees in even the "world's manufacturer", China, has declined to below what it was 20 years ago. For other developing countries, the sorts of barriers to entry cited earlier might offer some explanation. Most importantly, however, rapid technological

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[7]   The "traps" are civil conflict, poor governance, natural resources and poor location.

[8]   "Vulnerability" is defined as the share of own-account workers and contributing family members in the labour market.

change has substantially eroded the employment content of manufacturing output, particularly in evidence in developed countries. The abundance of unskilled, low-cost labour is no match for this.

Figure 2.6   **Relation between change in shares of agriculture in employment and vulnerability, 2009**
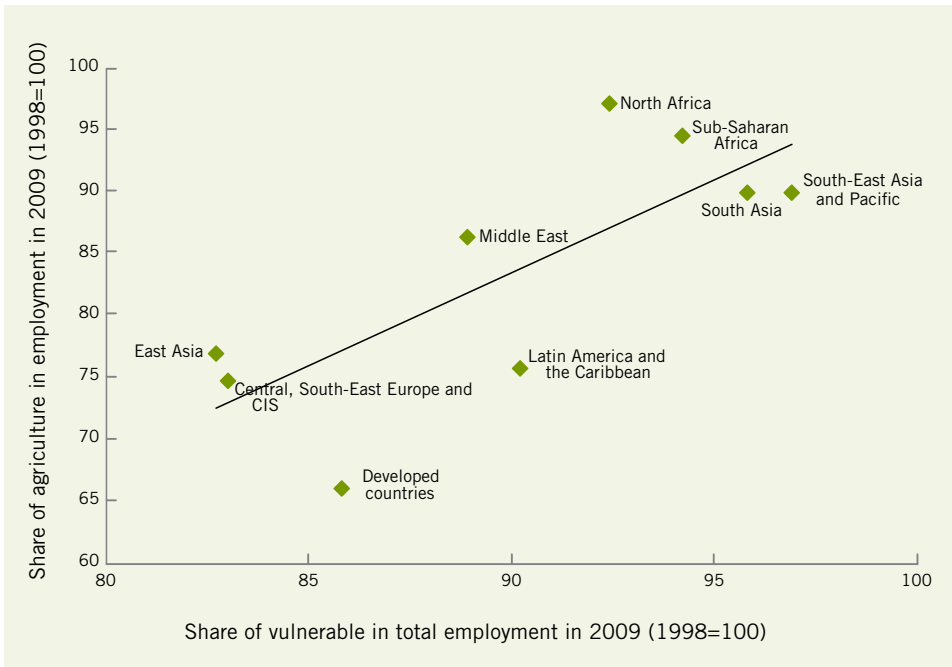
Source: ILO, 2011b.

The second doubt concerns the exact nature of the sharp increase in service-sector employment. The classic model shows a strong relationship between the level of economic development and the share of the labour force employed in the services sector. Today, even countries at substantially low levels of economic development are witnessing strong growth in service-sector employment. **Figure 2.7** displays this in a stylized manner based on actual data. The assumption is that only a minor share of such employment in developing countries is going into productive employment; in other words, the heady growth of India's software industry provides employment for only a tiny share of the Indian labour force. Rather, in many developing countries, rural poverty on the farm is transposing itself into urban poverty in the informal service economy of street-vending, rag-picking, restaurant work and other low-productivity activities.

Figure 2.7   Economic weight of the services sector and economic development

High GDP
per capita

Most developed
countries

Low GDP
per capita

Many developing
countries

Low share   High share

... of GDP in services
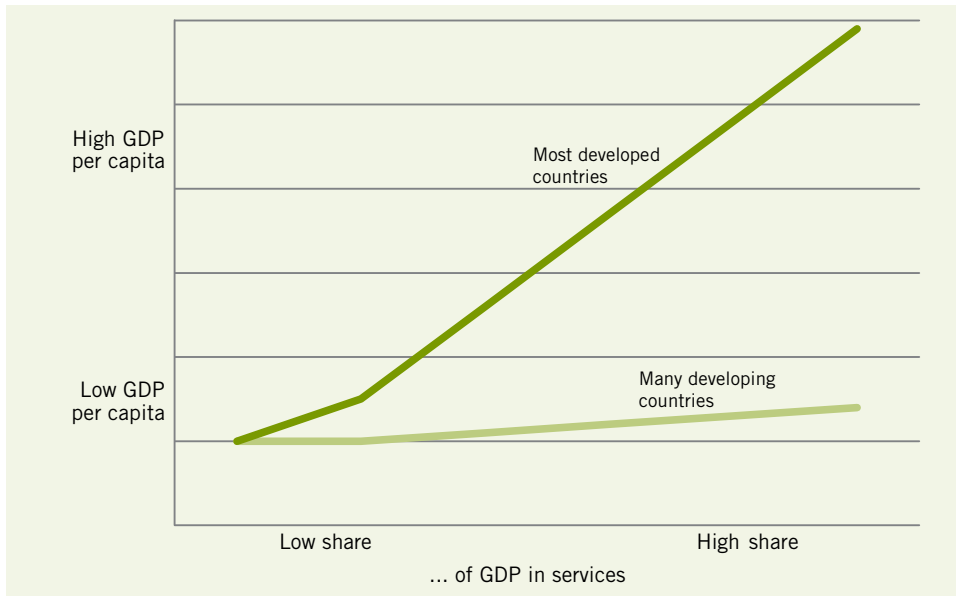
Source: ILO, 2005.

The foregoing suggests three conclusions: structural transformation benefits developing countries that policies should address; productivity improvements in agriculture should not be neglected at the expense of the high value added manufacturing and services sectors – it is possible to achieve an adequate balance without any adverse effects on employment. Implied policy here is straightforward: simultaneously, a focus on ending policy neglect and improving productivity in the traditional sector – agriculture – is needed. Malawi is an excellent example. In the 2000s, subsidies on nitrogen-based fertilizer were introduced, targeting small-hold farmers. The result was a doubling of farm output within only a year. At the same time, policy should not neglect constraints that could impede the growth of the modern sector. Some have likened this dual policy stance to "walking on two legs".

The third conclusion is more conjectural in nature: it may well be that the paths to economic development are becoming more varied than last century's assumptions of the development literature. Advanced, tradable services virtually did not exist 50 years ago. The globalization of competition may be making it harder to gain a foothold in manufacturing, and technological change is reducing the employment content of that sector. Another factor that will clearly shape a developing country's capacity to diversify is human capital.

2.6 Human capital and investment capital

Human capital is critical in determining the quality of countries' labour force. This theme is explored in Chapter 7. Developing nations tend to have lower quality human capital than developed countries. While adult literacy rates in developing nations have improved over the last 20 years – the share of the literate working population increased from 70 per cent to 80 per cent in 2000 – the remaining 20 per cent of the illiterate population consists of a significant proportion of females, most of whom are concentrated in the developing countries of South and East Asia (UNESCO, 2002). Africa has higher adult literacy rates than South Asia, a reflection of the higher literacy rates among African women compared to South Asian women. However, African men are 50 per cent more likely to be literate than women (Appleton and Teal, 1998). Moreover, in 1990, only 25 per cent of Africa's population had completed primary school, compared to 32 per cent in South Asia. African countries have been successful in increasing primary school enrolment, but the drop-out rates have outpaced the increase – children do not stay in school long enough to acquire qualifications.

The returns to education in developing countries have been highlighted in many studies. One estimate suggests that, during the post-Green revolution in agriculture, productivity in Asia increased by an average of 4 per cent for a one-year increase in schooling (Hussain and Byerlee, 1995). In Bangladesh, access to education and capital was found to be more important than access to land in ascertaining income levels in the rural areas (Byerlee, Diao and Jackson, 2005). Other studies have established a link between schooling and technology adoption: one study found that the return to schooling was augmented by education enabling the use of better (i.e. more productive) technologies. Households with primary education saw their profits increase by 70 per cent (Foster and Rosenzweig, 1996). As such, schools and primary education are complements to technological progress, with a positive effect on households: returns to schooling are higher in the presence of new technologies.

Child school attendance is nonetheless determined by seasonal income fluctuations, as has been found in rural Indian households. Household responses to income shocks reveal that children withdrawn from schools serve as a sort of insurance to mitigate the seasonal hardship. For poorer households that are vulnerable to risk, this self-insurance is likely to be very costly in terms of the children missing out on essential schooling (Jacoby and Skoufias, 1997).

Quite obviously, the disparity in the quality of human capital between developing and developed countries has its roots in the quality as well as the quantity of education. Overall, less developed nations are characterized by inadequate levels and poor quality of education and skill accumulation. Despite increasing enrolment and years

of schooling since 1960, around 113 million children of primary school age were not enrolled in school in the mid-2000s; 94 per cent of these children are from developing countries (UNESCO, 2002; UNDP, 2003). Just a decade ago, only 80 per cent of children in low-income countries had completed the full 4 years of primary school. Low-income countries are 10 to 20 years behind middle-income countries in enrolment, and about 70 to 80 years behind high-income countries (Glewwe and Kremer, 2005).

The quality of schools is often abject, while grade repetition, drop-out rates and absent teachers are far too common (Glewwe, 1999; Lockheed and Verspoor, 1991). In the rural areas of Viet Nam's Northern Upland regions, 39 per cent of primary school classrooms did not have blackboards in 1998, while in India in 1987, 8 per cent of schools had no building (World Bank, 1997). In the north-eastern region of Brazil in the 1980s, 60 per cent of primary school teachers had not completed their own primary education (Harbison and Hanushek, 1992). Furthermore, educational systems in developing countries are often geared towards elites. Policy-makers, who tend to be elites themselves in such countries, choose curricula that are more suitable for advanced students than for "average" students. Evidence from Kenya found that the availability of advanced textbooks increased the test scores of the top two quintiles, but the grades and drop-out and repetition rates of the average and below-average students did not improve (Glewwe, Kremer and Moulin, 2002). Consequently, the quality of human capital accumulation in developing countries faces daunting constraints – a result that inexorably spills over into the quality of labour supply.

Low levels of labour productivity in many developing countries are in part a reflection of the low quality of human capital and, in turn, a constraint to earnings growth. Low rates of gross fixed capital formation are one consequence of a context in which low productivity reduces the incentive to invest. On a regional basis, Africa has the slowest growth rate of fixed capital, at 1 per cent per year, compared to South Asia (3.6 per cent), East Asia (7.9 per cent) and South-East Asia (3.4 per cent), and these figures mirror the respective levels and growth rates of productivity.

The nutritional impact on labour productivity in less developed countries is well-known. Investments in nutrition have revealed high productivity effects in very poor countries and when improved nutrition is delivered through the school system, the result, as in Kenya, is improved health, improved attendance, better schooling results and improved earnings in the labour market. Initial investments in health and nutrition in 1965 were found to have had greater "predictive power" for economic growth for the next 25 years than investments in schooling (Behrman, 1999). The pursuit of the Millennium Development Goals relating to health, nutrition and education are thus not unrelated to labour markets as they are likely to result in improved employment opportunities and productivity increases.

2.6.1 Education and structural transformation

One of the principal ways in which these improved opportunities manifest themselves is through changes in the economic structure of developing countries. Here, too, there is an important "supply-side" effect. As **figure 2.8** shows, a strong relation exists between educational attainment and a measure of structural change, the share of agriculture in the economy. Moreover, the causal direction of this relation is dual: education facilitates structural change, but structural change also leads to greater enrolment: in other words, while greater wealth and urban growth result in higher enrolment rates, it is also true that an educated workforce facilitates a country's economic diversification.

Figure 2.8   Relation between educational attainment and share of agriculture in the economy (percentages)
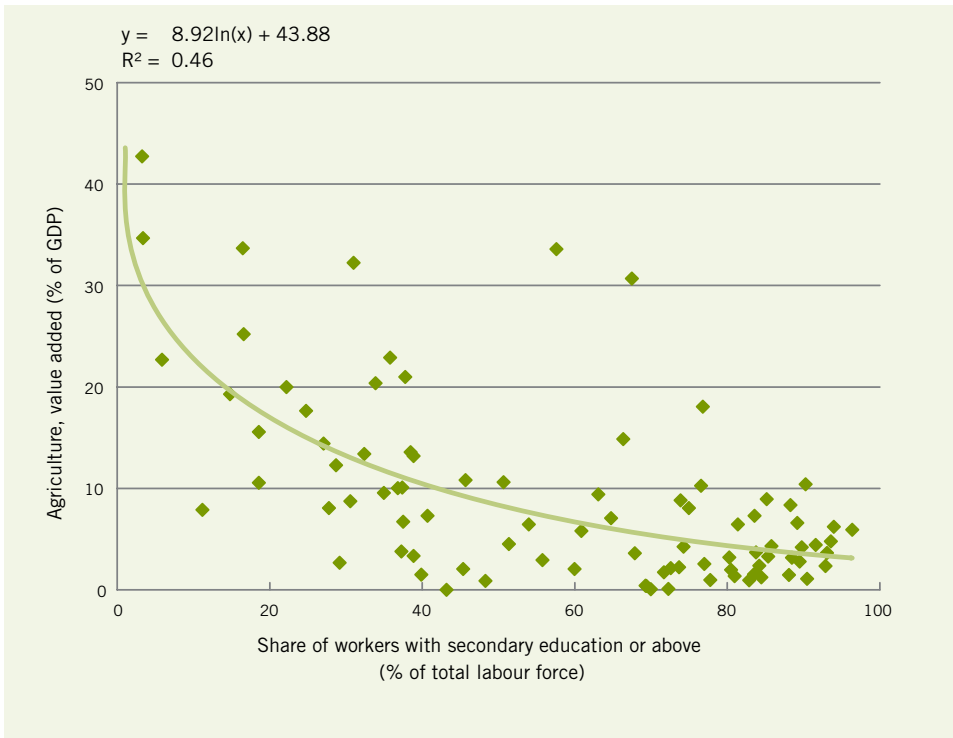
Source: Hill, Khan and Zhuang, 2012.

Finally, while this section has dwelt on the continued existing disparities in human capital between developed and developing countries, there is another, rather dramatic

side of the story: enrolment in tertiary education and investments in the education system have skyrocketed in emerging economies in particular. China and Brazil now graduate more engineers than does the United States. Malaysia and Mexico have become world leaders in certain domains of software engineering (ILO, 2001). The Republic of Korea's Samsung has become the world's largest electronics manufacturer. While it might be premature to proclaim, these trends do bode well for a more homogeneous distribution of innovation in the world.

2.7 Weak market integration

A strong rural–urban divide, a dualistic cleavage between formal and informal economies, high variance in intrasectoral levels of productivity – all these features of developing countries suggest a lower level of integration of all kinds of markets than usually prevails in developed countries.

Comprehensive labour market institutions that are either absent or inadequate not only leave workers unprotected, they also result in substantial "information asymmetries", such as the ignorance of possible labour market opportunities and where they might lie.[9] Transportation, electricity and communications infrastructure that are either missing (e.g. the majority of the population of Bangladesh is not connected to an electricity grid) or of woeful quality are an exogenous drain on productivity and impede mobility. Dualism itself at a minimum implies the existence of "two" labour markets. For all these reasons, an argument can be made that, at least in the poorest developing countries, there is really no such thing as a "national" labour market, or at least not one that functions well.

Even if markets are imperfectly integrated, internal migration is a fact of life in developing countries, most notably from rural areas to urban centres. In somewhat narrow, economic terms, people migrate from one location to another if the present discounted value of benefits is greater than the discounted value of costs. Nevertheless, this calculation implies that migration could be a more attractive proposition for those who are better informed about job prospects elsewhere, have longer time horizons, are more adaptable and perhaps younger and better educated – or, quite obviously, for those who are living close to desperation in their present location. Temporary migration and remittances in households in Botswana serve as an insurance arrangement when household incomes suffer from adverse shocks (Lucas and Stark, 1985). The

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9   Micro-level research investigates how a worker in a poor country actually finds a job. The short
    answer is that it is certainly not via the Internet or in the "Classified Ads" section of the newspaper.

absence of a credit market might be an additional "push" factor – credit-constrained households that face unanticipated income shocks may compel a family member or members to migrate for opportunities elsewhere.

Another cost-based insight suggests that the introduction of a system of land property rights (often lacking) could act as a "push" factor to encourage migration from rural areas. Unemployed workers and land owners secure in the knowledge that their assets are protected and can be used as collateral to finance their migration are more likely to migrate to urban areas (Lall, Selod and Shalizi, 2006). But there are, in fact, many motives for migration: in Nepal, the greatest single motive behind the internal migration of young women is marriage.

Internal migration in an information-constrained context carries downside risks. Rural migrants might face discrimination and difficulties in gaining access to credit, housing and public goods. Rural-to-urban migration might also result in cities unable to absorb the influx of people, thereby creating urban slums such as those in Rio de Janeiro, Mumbai and Dhaka. Unfettered, rural-to-urban migration can actually equalize rural-urban income disparities, but at a cost. The assumption is that in developing countries, high-skilled workers reside in cities since returns to skills are higher in urban areas relative to rural areas (Fan and Stark, 2008). But the wage differential also attracts unskilled workers, who migrate to cities in search of higher wages and greater opportunities to earn a living.

Of course, the economics of the matter is one thing, putting constraints on rural-to-urban migration, whatever perceived economic sense that might make, is clearly questionable on moral grounds. Policy should instead focus on the incentives underlying the economics of migration, which would mean a focus on rural industrial development. As long as a perceived or real disparity in livelihood opportunities persists between rural and urban areas, overcrowded cities and a deficit in productive earnings opportunities will continue.

2.7.1 Infrastructure

In addition to the reach of the rule of law, infrastructure is the most central vehicle for market integration. Inadequate infrastructure in developing countries, such as roads and public transport, mean that workers waste time in commuting to and from work and looking for employment opportunities elsewhere. Poor telecommunications systems in particular mean that workers are deprived of time-saving access to relevant information. Inadequacies in these areas lead to loss of efficiency and thus

place downward pressure on both earnings and productivity. Poor access to markets, roads, highways, credit and public transport keep markets, including labour markets, fragmented rather than integrated.

In the United Republic of Tanzania, the average time it takes to travel to the nearest economic centre is inversely related to the number of rural households participating in the labour market (Mduma and Wobst, 2005). The greater the distance, the more negative the impact on people likely to join the labour market. Access to markets is vital for enhancing the development of non-farm rural employment and in alleviating poverty. In Latin America, insufficient infrastructure investment during the 1990s led to a reduction in long-term growth by 1 to 3 percentage points (Easterly and Serven, 2003). Poor infrastructure could explain about one third of the difference in output per worker between East Asia and Latin America. Poor telecommunications infrastructure explains 50 per cent of the difference in export performance between Africa and Asia (ILO, 2001).

The positive impact of infrastructure on poor households is evident from greater income-generating activities and the increased profitability of firms. In southern Mexico, a 10 per cent increase in market access increases labour productivity by 6 per cent (Deichmann et al., 2002). A percentage point increase in market access increases productivity by US$118 per worker. Productivity is, of course, one indicator of competitiveness. The Global Competitiveness Indices (GCIs) for sub-Saharan Africa show that competitiveness is consistently lower there than in other developing regions, with poor infrastructure taking the lion's share of the blame (UNECA, 2010).

2.8   Conclusion

The intent of this chapter is to provide a stylized description of labour markets in developing countries in a parsimonious way. As with any stylized description, the discussion has necessarily been general and somewhat static – more of a snapshot than a moving picture. In concluding, therefore, it is useful to note that change is indeed occurring in the developing world. Growth there greatly outstrips that of developed economies, a fact accentuated in the aftermath of the Great Recession. One developing country, China, is in fact the world's second economy.

As noted, both China and Brazil graduate substantially more engineers than the United States. In fact, in international comparative surveys, several developing countries score more highly in math and science education than do several developed

countries. Of concern to the United States and other developed countries, moreover, a greater number of jobs higher up on the rungs of the occupational ladder are increasingly capable of being contested by developing countries with the adequate skill base and infrastructure, such as India or Malaysia.

As a final word, whereas the middle class might currently be squeezed in the developed world, globally the middle class is clearly on the rise, and no more so than in the emerging economies of the developing world. Indeed, developing Asia has seen its middle-class workforce increase by 1.3 billion people since 1990, a growth rate far surpassing that of the labour force as a whole. Thus, while poverty still abounds in the world, taken in the aggregate, developing countries are converging– some quite rapidly, others quite slowly – rather than diverging from developed-country living standards.

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Growth, distribution, employment and poverty

3

Janine Berg
*Senior Development Economist, Policy Integration Department,
International Labour Office*

3.1   Introduction

At the beginning of the 1990s, the World Bank redefined its mandate, declaring that "sustainable poverty reduction" was to be its "overarching objective" and tying loan approvals to a country's commitment to poverty reduction. The shift in the Bank's mandate was emblematic of a shift in development thinking, brought about through the realization that growth in gross domestic product (GDP) was not necessarily sufficient for improving living standards. The greater emphasis on reducing poverty and improved well-being culminated in the commitment by the international community in 2000 to halve the number of people living in absolute poverty by 2015, the first of eight goals comprising the Millennium Development Goals (MDGs).

The launch of the MDGs gave renewed urgency to policy-makers' concern over poverty and in the process encouraged new thinking on how best to alleviate poverty. But while the goal is clear, the task leaves many unanswered questions. Is economic growth sufficient and how can it be harnessed? Is poverty reduction best achieved through productivity gains, through employment creation, or through a combination of the two? What role does employment creation play in reducing poverty? Though these questions appear simple, they unfortunately have no straightforward answers. Researchers and policy-makers who are concerned with how best to reduce poverty look at other countries' experiences in the hopes of gleaning important lessons. We will do that as well in this chapter. Although our knowledge is driven by empirical findings, it is important to keep in mind that it is not possible simply to replicate experiences in other countries.

3.2   Growth, employment, inequality and poverty reduction: Theoretical insights and conceptual issues

The amount and degree of poverty in a country is determined by the level of income in that country and how the income is distributed. A country's level of income is measured by its GDP, which is the sum of consumer spending, investment and government spending, plus the value of exports, minus the value of imports. The citizens of a country will be rich or poor depending on the level of income of the country and how that income is distributed. A rich country with a high concentration of income – few people who earn most of the money – can have many poor people, whereas a

middle-income country with a more equitable distribution of income may not have many poor people.

When studying poverty, it is important to know what definition of poverty is being used and whether it is measured in absolute or relative terms. Absolute poverty refers to a poverty line that usually captures the minimum cost for a person or household to satisfy its basic needs. Absolute poverty lines need not be the same across countries, as they reflect the cost of living in a particular country. To facilitate international comparisons and the development of world poverty estimates, in 1990 the international community defined an international poverty line of US$1 a day, measured in purchasing power parity (PPP), an adjustment to account for differences in purchasing power among countries. In 2008, the World Bank revised the $1-a-day poverty line to $1.25 at 2005 PPP. Most international discussions of poverty refer to the $1.25-a-day or $2-a-day poverty line. Relative poverty, on the other hand, reflects the relative differences in incomes within a population. For example, the European Union (EU) considers as poor those whose income is below 50 per cent of the mean income in Member States.

Relative poverty hinges on a comparison of an individual's well-being in relation to others in the same country. A country whose distribution of income is highly unequal is likely to have a greater share of the population in relative poverty, although this will depend on whether the income differences are among the higher- and middle-income groups or between the lower-income groups and the rest of society. Nevertheless, the extent to which the poor benefit from economic growth will depend on how the income that is generated from growth is distributed. For this reason, policy-makers recognize the importance of considering the distribution of income, or the degree of inequality, in a country when analysing and implementing social and economic policies.

Because income is a proxy for living standards, inequality is typically measured by the dispersion of income among a population. Other measures are possible, though they typically address other forms of inequality, such as inequality of opportunity, which concerns access to opportunities for generating income, for example, by having the opportunity to receive a high quality education. Administrative records as well as household and labour force surveys provide researchers and policy-makers with data on income, allowing them to map and compute the degree of income dispersion within a particular area, usually a country, but also within cities, regions and between countries. Also of interest is the distribution of income among groups, such as between women and men, ethnic minorities, rural and urban, to name a few. A commonly used measure of the degree of inequality is the Gini coefficient, an index that ranges from 0 to 1 with higher numbers indicating more unequal distribution (see **box 3.1**).

Box 3.1   How to measure inequality

Income (or wage) inequality can be measured in many ways, each with its own proper-
ties and appeal. Choosing an inequality measure depends on the data available and the
properties required (for example comparability between sectors or ease of interpreta-
tion). Popular measures include the Gini coefficient and the Theil index. The Gini coef-
ficient is based upon the Lorenz curve. As it is easily interpretable, it is the most com-
monly used index of inequality. The Theil index is less popular as interpretation is less
intuitive. However, it is thought to be a superior index due to several of its properties.

Lorenz curve

The Lorenz curve is a graphical representation of the proportionality of the distribu-
tion of a variable, with the variable in this case being income (or wages). For meas-
uring household income distribution, the curve is drawn by plotting the percentage
share of total income (y axis) against the percentage of population (x axis) arranged
from poorest to richest. Each point on the Lorenz curve shows for the bottom x
per cent of households, what y per cent value of income they have. A country with
perfectly equal income distribution is represented by the 45-degree line (line of
perfect equality), as every household has the same income (x=y). The Lorenz curve
is compared against this line of perfect equality, with a curve closer to it indicating
a more equal distribution of income.

Lorenz curve of inequality and line of perfect equality
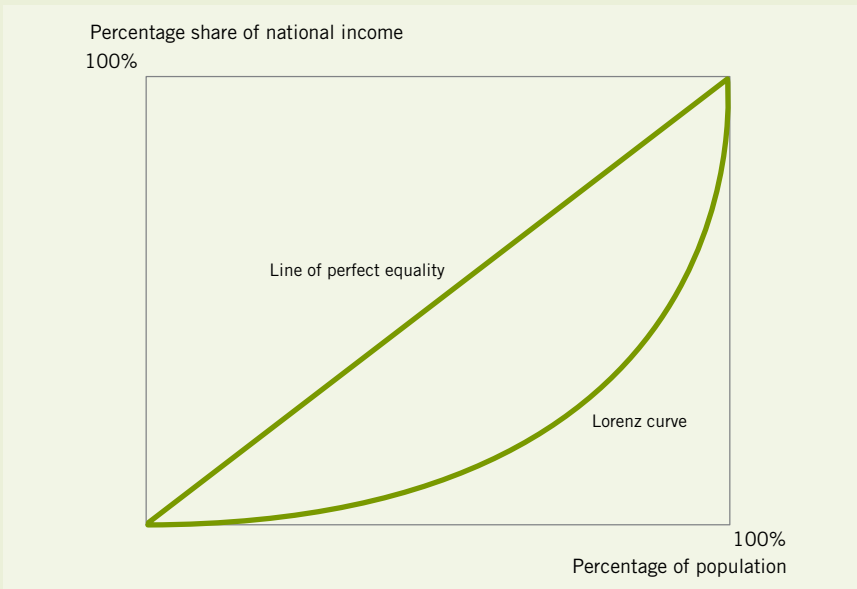
Gini coefficient

The Gini coefficient is the most well-known measure of inequality. The index measures the degree of inequality in a distribution; for studies of income inequality, it is typically used at the country level to measure the distribution of household income. The Gini coefficient is usually defined mathematically, based on a comparison of the Lorenz curve and the 45-degree line of perfect equality. The Gini coefficient is the ratio of the area between a country's Lorenz curve and the line of perfect equality, over the total area under the line of perfect equality.

The Gini coefficient ranges from 0, which indicates perfect equality to 1, which indicates complete inequality (where one person has all the income or consumption while others have none). Graphically, the closer a country's Lorenz curve to the 45-degree line of perfect equality, the more equal the income distribution. A country with perfectly equal income distribution would have a Gini coefficient of 0 and a Lorenz curve that coincides with the line of perfect equality. As the Gini coefficient measures inequality by means of a ratio, it is easily interpretable and hence widely used. However, it has been criticized for its inability to capture where in the distribution inequality occur; thus countries with very different income distributions may have the same Gini coefficient. Moreover, the Gini coefficient is non-additive across subgroups, meaning that one cannot decompose the coefficient.

Theil index

The Theil index is a less commonly used index of inequality. It differs from the Gini coefficient in that it is decomposable, thus making it additive across different subgroups. It allows for the breakdown of inequality scores into smaller sections. As it has the advantage of capturing where distributional inequalities occur, it can be used to highlight inequalities for different data sets, for example regions or subgroups. Although easily decomposable, the Theil index is less popular than the Gini coefficient as it does not provide a straightforward interpretation of inequality.

The basic Theil index is:

$$T = \sum_{p=1}^{n} \left\{ \left(\frac{1}{n}\right) * \left(\frac{y_p}{\mu_y}\right) * \mathrm{1n}\left(\frac{y_p}{\mu_y}\right) \right\},$$

where n is the number of individuals in the population, y_p is the income of the person indexed by p, and μ_y is the population's average income. If every individual has exactly the same income, T will be zero; this represents perfect equality and is the minimum value of Theil's T. If one individual has all of the income, T will equal ln n; this represents utmost inequality and is the maximum value of Theil's T index.

The following table provides the Gini coefficient and Theil index of per capita income for China.

Gini coefficient and Theil index of per capita income, China

Year	Theil index (cost of living adjusted)	Gini coefficient (cost of living adjusted)
1990	0.135	0.287
1995	0.177	0.329
2000	0.199	0.347
2005	0.257	0.388

Source: Zhuang, 2010.

Both the Gini coefficient and Theil index demonstrate the same trend of rising inequality in China. For the Gini coefficient, that is all that is revealed. However, because the Theil index is decomposable, an analysis of inequality between regions, provinces and the rural–urban divide is possible from these figures. Thus, decomposing the Theil index for China by urban and rural areas reveals that in 2005, approximately 33.9 per cent of inequality was in the urban area, 21.9 per cent was in the rural and 42.2 per cent was between the urban and rural areas. In 2000, the figures were about 27.9 per cent urban, 32.8 per cent rural and 39.3 per cent between the urban and rural. The Theil index thus reveals that from 2000 to 2005, urban inequality increased at a much faster pace than both rural inequality or between rural and urban inequality (Zhuang, 2010).

Besides its potential effect on poverty reduction, income inequality is of interest to policy-makers because a highly skewed distribution can lead to social unrest, whereas more egalitarian societies tend to be more stable. Also inherent in the study of inequality are notions of fairness, particularly if those who are less fortunate suffer from no fault of their own or, for example, if there is widespread deprivation in a country that is rich enough to be able to afford to alleviate it. On the other hand, some researchers and policy-makers believe that inequality is necessary for generating the right incentives to encourage investments that have the potential to produce economic growth. In other words, the idea is that a person should be rewarded for risk and hard work. How much inequality should exist is a matter of great debate; what is important for our purposes is that income generated from economic growth does not exclude the poor, as doing so would negate its potentially beneficial effects.

In 1955, the economist Simon Kuznets posited that the relationship between economic growth and income inequality followed an inverted-U, meaning that as economic growth increased, inequality would worsen but that, over time, this trend would reverse and distribution would become more equitable (Kuznets, 1955). Kuznets' findings were based on an empirical analysis of England, Germany and the United States using pre-tax income. Thus it did not include the effect of *redistribution policies* (taxes and transfers). Nevertheless, *distribution policies*, such as minimum wage floors, pensions as well as collective bargaining agreements that boosted earnings, did affect the distribution of earnings and explain why in these countries, after an initial period, income gaps were reduced. Many present-day experiences with economic growth do not follow the trend identified by Kuznets, as the labour institutions needed to ensure better wage distribution are missing or ineffective. Thus we cannot expect inequality to disappear "naturally" with economic growth – policy interventions are needed.

Figure 3.1 illustrates the relationship between economic growth, distribution and poverty reduction. As mentioned, both the overall income level and economic growth affect poverty, but its impact will be mediated by the initial level of distribution in the country and how the fruits of economic growth are distributed.

Figure 3.1   The poverty–growth–inequality triangle
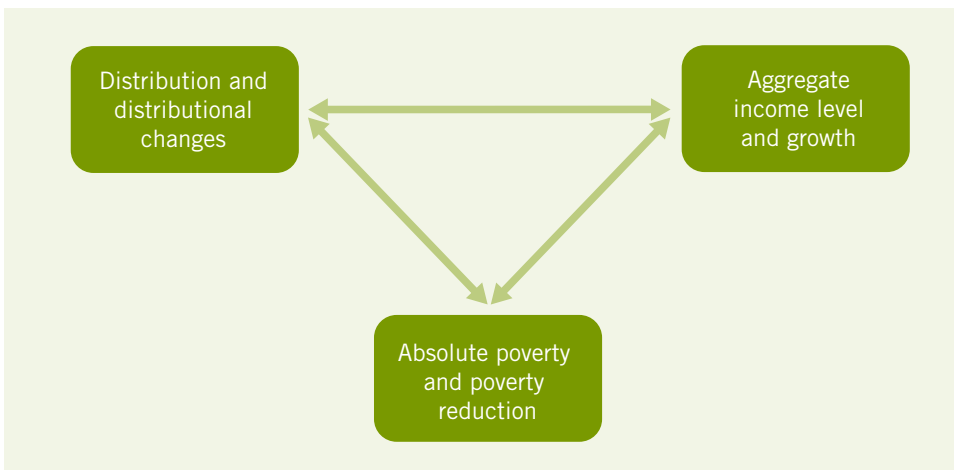
Source: Based on Bourguignon, 2004.

Most debates on growth, inequality and poverty do not explicitly consider employment. But because most people's level of income is determined by their work, whether

they have work and how much they earn from it will largely determine whether or not they are in poverty. In developing countries, unemployment rates are typically low. In South Asia, for example, unemployment was less than 4 per cent in 2010 when the world average was estimated at 6.1 per cent (ILO, 2012). Most workers are employed, but prevalent forms of employment are self-employment and casual wage employment in the informal segment of the labour market, particularly in agriculture but also in urban services. For example, in Zambia, 71 per cent of workers were employed in agriculture in 2008 and 89 per cent were considered informally employed. Yet, although they work and are therefore considered by labour force surveys to be employed, they may be grossly underemployed in terms of hours worked or income received. If economic growth leads to a rise in job opportunities in the more productive sectors of the labour market and previously underemployed workers find jobs in these more dynamic sectors, the shift in employment will not be counted as an additional job created, even though in terms of economic development and individual well-being the transition to work in the more productive sector is very important. Similarly, strong economic growth can increase the demand for the services provided by self-employed workers, leading to an increase in their income.

A classic tenet in development economics, first expressed by the economist W. Arthur Lewis in 1954 (Lewis, 1954), is that economic development will occur when workers move from low-productivity to high-productivity sectors. An economy is composed of three broad economic sectors: the primary sector, composed of agriculture, mining and fishing; the secondary sector, composed of manufacturing, construction and electricity, water and gas; and the tertiary or services sector, which includes wholesale and retail trade, finance, insurance and real estate, transport and communications, education, health and personal services. In many developing economies, particularly in sub-Saharan Africa and South Asia, much of the labour force is in the primary sector, typically subsistence-based agriculture that is characterized by low productivity and value added. As Lewis argued, the driving force in the economy stems from the industrial sector, which is characterized by high productivity and value added. It expands with the support of unlimited supplies of cheap labourers who migrate from the rural, agricultural areas to the urban, industrial areas. The modern sector is able to pay slightly higher wages because of higher productivity. Profits in the modern sector finance the capital investments needed for expansion and continued economic growth. Output and employment growth in the services sector come later. Recent economic experience, however, has shown that the manufacturing sector need not be the driving force for productivity growth. In India, for example, the services sector has been responsible for the strong increases in economic growth since the 2000s; there has been little relative expansion of the manufacturing sector.

Ideally, a link exists between economic growth, employment and poverty reduction, which forms a virtuous circle, as **figure 3.2** illustrates. The stronger the links in the virtuous circle, the more likely it is that growth will be pro-poor. Although the circle does not have a defined beginning or end, the sequence can run from sustained rates of economic growth, which then, ideally, lead to sustained increases in productive capacity and generate employment opportunities, for waged and self-employed workers. Some of these opportunities may already exist, but they need to be upgraded, or new jobs involving higher technology and skill levels need to be created. Thus there is a need to integrate unemployed or underemployed workers into higher productive activities, so they may obtain higher incomes. This income will allow families, businesses and society to invest in education and skill formation (for themselves or their children, thus for the future generation), as well as health, safety and other forms of social protection. These investments mitigate socio-economic risks and empower the poor, thereby creating the necessary conditions for further investment, consumption, higher productivity and growth in the subsequent round (Islam, 2006).

Figure 3.2 **Virtuous circle of links among growth, employment and poverty reduction**

Source: Based on Islam, 2006.

There is, therefore, both a demand side and a supply side to achieving pro-poor growth. The variables that influence the income of the poor from the labour demand side include the employment-intensity of growth, shifts in the employment structure towards higher-productivity sectors and greater availability of technology that boosts productivity. From the labour supply side, growth is best served if the poor are able to integrate into the process of economic growth and access the jobs and opportunities that are created. Enhancing education and skills development is a key aspect in this regard (see Chapter 7 for more details). Briefly, if the challenge of reducing world poverty is to be met, economic growth must include the poor in the economic process. The focus is not simply on employment creation, and hence not on fostering labour-intensive growth as a panacea for poverty reduction, but instead on boosting employment and productivity so the poor have access to sustainable economic opportunities and increased income.

3.3   What do country experiences teach us?

Many of the recent examples of pro-poor growth are in countries that have managed to enter this virtuous circle of high and sustained economic growth, employment creation and rising incomes due to increases in productivity. Although the success of many of these countries may not be easily replicable and there is much diversity in their experiences, some important lessons can be gleaned.

High rates of economic growth for an extended period of at least a decade, and sometimes more, are a feature of most countries that have successfully reduced poverty. Malaysia sustained an average annual rate of GDP growth of 7.5 per cent for nearly three decades, from 1970 until the Asian financial crisis in 1997. Indonesia and Thailand also had long-lasting expansions of more than two decades. An annual growth rate of 7.5 per cent translates into a doubling of national income in a period of 10 years. It is thus not surprising that poverty was cut dramatically.

The more equitable economic growth is, the better the prospects for reducing poverty. In many countries that have experienced economic growth, inequality increased, mitigating some of the benefits of economic growth for poverty reduction. For example, if inequality had not increased in Uganda between 1992 and 2002, the poverty rate would have been 8 percentage points lower (AFD, 2005). Similarly, poverty reduction in India has been less than expected given its high rates of sustained economic growth, because growth has not been broad-based. Strategies such as wage policies, tax policies and labour market policies can help to ensure a more equitable

distribution of growth – a topic addressed later in this chapter and also in Chapters 8 and 9 of this handbook. But it is important to bear in mind that greater incomes for the poor can benefit economic growth, by allowing them to increase their spending on goods, thus boosting aggregate demand in an economy, and also by allowing them to invest more in their businesses, thereby improving productivity and the prospects for future income generation.

Table 3.1 demonstrates the linkages between economic growth, employment growth, productivity growth and poverty reduction in 11 countries over varying time periods, based on country case studies (particularly Islam, 2006). The relationship between economic growth and poverty reduction is not invariant, as similar growth rates appear to have different outcomes on poverty reduction. Bangladesh, Botswana, Brazil, Cameroon, Indonesia, Thailand, Uganda and Viet Nam all saw both a decline in poverty and positive GDP growth, whereas the Plurinational State of Bolivia, Ethiopia and Ghana saw positive growth but failed at poverty reduction. Noticeable is that in all cases of successful poverty reduction, GDP growth was positive, suggesting that economic growth is a necessary, though not a sufficient, condition for poverty reduction.

Looking at the subset of countries that have managed to both successfully reduce poverty and foster positive economic growth, another noticeable trend is productivity was either high or, if low, increasing. For example, Viet Nam's 8.5 per cent per annum (p.a.) GDP growth rate was accompanied with a 6.35 per cent rate of productivity growth. Over the same period, poverty fell by 4 per cent p.a. This pattern is present in all countries in the subset, with the exception of Botswana where productivity growth was very low (0.9 per cent). Another trend within this subset is the decreasing share of agriculture's contribution to GDP and the rising share of either industry, services or both. For example, the share of agriculture's contribution to Brazil's GDP decreased while industry remained stable and services increased. As with the trend of high or rising productivity, this pattern is also present in all countries in the subset. The transformation of economic structure towards higher productivity activities suggests increasing productivity levels to be crucial for poverty reduction. In addition, for most of the countries within the subset (Bangladesh, Indonesia, Thailand and Viet Nam), increased productivity was accompanied by rising wages.

Table 3.1 **Relationship between GDP, employment, productivity growth and poverty reduction, 1980–2008**

Country	Time period	GDP growth	Net job growth	Productivity growth	Poverty
Bangladesh	1996–2001	+	-	+	-
Bolivia, Plurinational State of	1991–1998	+	+	+	+
Botswana	1980–2005	++	++	0	-
Brazil	1996–2003	0	-	+	-
	2003–2008	+	+	+	-
Cameroon	1996–2001	+	+	n.a.	-
	2001–2007	0	-	-	0
Ethiopia	1992–2000	+	-	--	0
Ghana	1984–2000	+	--	-	+
Indonesia	1990–1996	++	-	++	-
Thailand	1988–1996	++	+	++	--
	1996–1998	--	-	--	+
	2000–2002	+	+	+	-
Uganda	1992–1997	++	+	+	-
	1998–2003	+	0	-	+
Viet Nam	1991–1997	++	+	++	--

Notes: -- sharp decline; - moderate decline; 0 stable; + moderate rise; ++ sharp rise; n.a. not available.

Sources: Based on Aryeetey and Baah-Boateng (2007); Essama-Nssah and Bassole (2010); Islam (2006); Krongkaew et al. (2006); Siphambe (2007); World Bank Development Indicators.

When analysing overall job growth for the subset of countries that managed to reduce poverty, the trend is less clear. With the exception of Bangladesh, Brazil in the first period and Indonesia, all the countries in the subset recorded positive overall job growth, albeit to varying degrees. Botswana's employment growth rate, for example, was high, averaging 9.1 per cent per year from 1980 to 1991. In the case of Bangladesh, although unemployment increased, there was modest economic growth and poverty reduction. This suggests that while overall job growth affects poverty reduction, productivity growth and, consequently, rising wages are relatively more important for successful, sharp poverty reduction.

Looking at the subset of countries that recorded positive GDP growth but did not successfully reduce poverty, the opposite trend can be seen. Ethiopia, for example, saw real GDP increase by 4.6 per cent p.a., yet poverty levels remained stable, as most of the employment and productivity growth was concentrated in urban areas. Similarly, Ghanaian workers did not benefit from the relatively high and steady economic growth rates experienced in the country from the mid-1980s until the 2000s. Growth in Ghana has been based largely on exports of low value-added cocoa and gold, which have low employment intensity, whereas high labour-absorption sectors, such as manufacturing, tourism and food crop activities, have experienced slow growth (Aryeetey and Baah-Boateng, 2007).

Many of the recent examples of successful poverty reduction, notably in East Asia, have been characterized by high rates of growth coupled with high output-employment elasticities (OEE) in manufacturing and modern services (Khan, 2007), precisely the development pattern first postulated by Lewis. Output-employment elasticities measure the rate at which employment grows when output increases by one percentage point. Employment elasticities can be calculated for the whole economy, specific economic sectors or a subset of the labour force (for example, women). **Box 3.2** explains how to calculate and interpret OEE. In China, Costa Rica, Indonesia, Malaysia, Thailand and Viet Nam, the development of labour-intensive export sectors has been a significant driver of economic growth. This sector was important for reducing poverty, since job creation was high, given the high OEE of this type of manufacturing. Moreover, productivity improved as industries diversified from mere assembly work to the production of the entire good (known as full-package production). This shift enabled manufacturers to increase their incomes and better secure market share.

Box 3.2   Output-employment elasticities

Output-employment elasticities analyse the relationship between economic growth and employment growth. They serve as a tool in analysing trends in labour productivity, employment generation and structural changes in employment over time. Employment elasticity is defined as the average percentage point change in employment for a given employed population group associated with a 1 percentage point change in output over a selected period (Kapsos, 2005). For example, for the period 2004–08, employment elasticity in the Middle East was 0.7. This means that for every 1 percentage point of additional GDP growth, total employment grew by 0.7 percentage points.

Interpreting employment elasticities

As changes in GDP growth are equal to the sum of changes in employment growth and changes in labour productivity (output per worker) growth, employment elasticity values highlight the relationship between employment and productivity growth, as the table below makes clear.

Employment elasticity values

	GDP growth	
Employment elasticity (ε)	**Positive GDP growth**	**Negative GDP growth**
$\varepsilon < 0$	(-) employment growth (+) productivity growth	(+) employment growth (-) productivity growth
$0 \leq \varepsilon \leq 1$	(+) employment growth (+) productivity growth	(-) employment growth (-) productivity growth
$\varepsilon > 1$	(+) employment growth (-) productivity growth	(-) employment growth (+) productivity growth

Source: Kapsos, 2005.

As can be seen from the table, in countries that exhibit positive economic growth:

◖ a negative elasticity value implies negative employment growth and positive productivity growth;

◖ an elasticity value between 0 and 1 implies positive employment and productivity growth. This would typically be the ideal situation, as GDP gains generate both productivity and employment growth;

◖ an elasticity value above 1 implies positive employment growth and negative productivity growth.

In countries that exhibit negative economic growth, the corresponding employment and productivity effects are the opposite.

Calculating employment elasticities

Two methodologies are frequently used for calculating elasticities.

The first equation is the arc elasticity of employment for country i between time 0 and time 1:

$$\varepsilon_{it} = \frac{(E_{it}\text{-}E_{i0})/E_{i0}}{(Y_{it}\text{-}Y_{i0})/Y_{i0}} \tag{1}$$

where ε_{it} is employment for place (country, region, sector) i at time t and Y_{i0} and Y_{it} are output in place i at time 0 and time 1, so the numerator represents the percentage change in employment and the denominator the percentage change in output.

The second equation calculates the point elasticity for country i:

$$ln\varepsilon_{it} = a + \beta_1 \, lnY_{it} + \beta_2 \, (lnY_{it} \times D_i) + \beta_3 \, D_i + u_{it} \tag{2}$$

where ε_{it} is employment for place i at time t, Y_{it} is output in place i at time t and D_i is the place dummy variable and u_{it} is the error term. The elasticity of employment with respect to GDP in place i is given as $\beta1 + \beta2$, such that $\beta1 + \beta2$ represents the change in employment associated with a differential change in output. Its value can be estimated by running regressions on panel data sets. By estimating the equation using natural logs, the coefficients can easily be interpreted as the percentage change.

Shortcomings of employment elasticities

Several criticisms have been levelled against employment elasticity's use as an analytical tool. First, because elasticity values are ratios, they shed no light on the extent of job creation in the country. Second, elasticities do not provide information regarding how other variables influence employment or economic performance, for example demographic changes. Thus, employment elasticity values tend to simplify the relationship between output and employment growth. For this reason, it is important to also consider changes in the size of the labour force and labour participation, the unemployment rate and the poverty rate when interpreting output-employment elasticities. Finally, employment elasticities cannot convey the quality of jobs created.

Although recent economic growth rates have accelerated in such countries as India, they have not been as successful in reducing poverty because of lower OEE in the growth sectors. In India, economic growth between 1994 and 2005 was driven by an unprecedented expansion in the services sector. India has capitalized on its large pool of educated, English-speaking people to become an important outsourcing destination for multinational corporations, yet unfortunately this sector has relatively low labour intensity.

Thus, although the pattern first envisioned by Lewis of shifts from agriculture to manufacturing still holds for many developing countries, the services sector has gained in importance, becoming in some cases a principal employer from the outset. Unfortunately, the transition from agriculture to services has, in many cases, meant a transition from low-productivity agricultural jobs to low-productivity service jobs in the urban informal economy. This is because the services sector also contains many low-skilled occupations that are important for absorbing surplus labour, but that do not drive economic growth, including petty commerce and personal services. In 2010, the employment share of the services sector in total world employment reached 44 per cent, higher than the share of employment in agriculture, which declined to 34 per cent. In Latin America and the Caribbean, 62 per cent of workers were engaged in services; in the Middle East, the figure was 57 per cent; in North Africa, it was 50 per cent; and in South Asia, it was 28 per cent. The share of employment in manufacturing has remained steady, at 22 per cent, since the mid-1990s (ILO, 2012).

It is also important to bear in mind that while labour intensity is important for reducing poverty, it matters where the intensity takes place. A cross-country empirical study on the role of employment intensity and productivity in reducing poverty found that increased labour intensity in manufacturing is highly correlated with poverty reduction, yet the opposite is true for agriculture. In fact, increased labour intensity in agriculture is associated with an increase in poverty (Gutierrez et al., 2007). Rather than attracting workers to new opportunities, the agricultural sector acts as a refuge for displaced workers. Therefore, policy interventions should be targeted at increasing employment in the secondary sector, but also at increasing productivity in agriculture as well as in services.

Indeed, raising incomes in the agricultural sector can be an important component of a poverty reduction strategy. To do so requires access to markets and effective implementation of land rights, as well as raising the prices of the goods that farmers produce, either through diversification into higher-income crops or through price adjustments brought about by quantitative controls or subsidies. Better income prospects and secure land rights encourage farmers to improve technology, boosting their productivity. Agriculture extension programmes that teach farmers about

new methods and crops, and greater access to seeds, fertilizer and irrigation can also help to raise farmers' incomes. The availability of credit is also imperative (see **box 3.3**). Experience shows that education, health and infrastructure also facilitate rural growth. Increased productivity will allow the agricultural sector to shed labour for more productive and better-paying work in manufacturing and services. Thus, at the early stages of rural development, the issue in agriculture is not increased employment, but raising productivity and thus incomes.

Box 3.3   The importance of credit

Lacking access to credit for small and micro-enterprises is another important barrier for poor workers. It hampers the rise in the productivity of their activities and the general development of their businesses. A common characteristic of the poor is that they perform multiple jobs, often combining waged work with entrepreneurial activities, or sometimes undertaking several entrepreneurial activities. In Peru, 69 per cent of households living under $2 a day in urban areas operate a non-agricultural business. In Indonesia, Nicaragua and Pakistan, approximately 50 per cent do. A large proportion of the rural poor run farms and many of the rural poor also run a non-agricultural business. Many workers perform several activities in addition to running their business, possibly because they cannot raise enough capital to run a business that would occupy them full time. For example, a poor farmer may only be able to work the land she owns for part of the year because she lacks access to funds that would otherwise allow her to irrigate the land and make it useable for a larger part of the year (Banerjee and Duflo, 2007).

The businesses of the poor operate on a remarkably small scale, usually with no paid staff and minimal assets. The smallness of scale hampers efficiency. Access to credit can allow the poor to make investments in their businesses that can improve their long-term viability and revenue potential. Moreover, these investments, if based on local inputs, can further stimulate the local economy. Similarly, when the incomes of waged workers improve, there are multiplier effects on the local economy, through additional household purchases.

3.4   Supporting the growth–employment–poverty link through economic and social policies

Country experiences teach us that there is no automatism between economic growth and poverty reduction. Rather, poverty alleviation requires supporting policies, particularly investments in social (education, health care) and physical infrastructure (transport and communication networks) as well as social protection policies. These

investments can help facilitate economic growth and ensure that the members of society benefit from the growth.

The presence of a well-educated labour force in Costa Rica, India and Malaysia was important for attracting investment in relatively skill-intensive industries. Costa Rica and Malaysia, in particular, based their social and economic development on inclusive policies, guaranteeing universal access to primary education and encouraging secondary education. Education is the largest item in Malaysia's federal budget. Primary education is compulsory, and both primary and secondary education are free. Malaysia's literacy rate is 93 per cent. Costa Rica instituted public and mandatory primary education at the end of the nineteenth century and constantly ranks as one of the highest spenders on social policy in Latin America. For these countries, it is not simply that economic growth has led to greater incomes and thus greater investment in education, skill formation and health, but also that earlier investments in education and health facilitated economic growth, thereby increasing opportunities for work and better incomes and assisting poverty reduction.

Appropriate education can also help ease the transition of workers from agricultural jobs to work in the secondary or tertiary sectors. Industrial jobs require a higher level of education than agricultural work. Most assembly work requires a basic education and sometimes completed secondary education. For example, in Bangladesh, rural unskilled workers were not hired by manufacturing firms because they lacked the skills needed for industrial work (Winters, 2002).

Inadequate physical infrastructure resulting in high transport and communication costs can bring about a concentration of growth in main cities and centrally located areas, aggravating inequality within a country. Investments in physical infrastructure in rural areas can improve labour productivity in both rural industries and agriculture. In Indonesia, for example, the growth in agricultural output during the 1970s and 1980s was partly due to government investments in the construction of roads and irrigation systems as well as schools and health clinics. Many of these projects were built through the Padat Karya programme, a labour-intensive infrastructure development programme that hired local workers for many of the projects. Thus the poor were able to benefit, not only because investments were made in rural areas, but also because rural workers and businesses could participate in the opportunities stemming from these investments (McKinley and Khattry, n.d.).

Similarly, India has a long history of using employment guarantee schemes to provide income relief to the poor and to build needed infrastructure. The employment guarantee scheme of the Indian State of Maharashtra was introduced in the 1970s

and is one of the largest public work programmes in the developing world. It guarantees employment to all adults older than 18 years of age, who are willing to do unskilled manual work on piece rates. The scheme has been successful in targeting the deserving segment of the population and in building rural infrastructure (Dev, 1995). In 2005, the Indian Government announced the creation of a National Rural Employment Guarantee Act (NREGA)[1] guaranteeing 100 days of wage employment to rural households whose adult members volunteer to do unskilled manual work (see also Chapter 9). The programme is estimated to cost about 1–2 per cent of GDP.

Some countries prefer social programmes that provide financial assistance in exchange for work, whereas other countries have opted for social assistance programmes that do not require work per se, but that do often require meeting certain requirements, such as enrolling children in school and meeting certain health conditions (pre- and postnatal care, children's vaccinations). Conditional cash transfers (CCT) aim to reduce poverty and hunger as well as break the cycle of intergenerational poverty by improving the well-being and skills of children so they can overcome the social and economic barriers faced by their parents. The programmes started in the mid-1990s and have since been widely adopted in other countries, especially in Latin America. Brazil's Bolsa Família programme is the largest conditional-cash programme in the world, providing benefits to one quarter of Brazil's population, approximately 13 million families. Although Brazil is a relatively rich country – it is classified as upper-middle-income by the World Bank – it has one of the most inequitable distributions of income in the world. Launched in 2003, the Bolsa Família programme has, in a short period of time, helped to significantly reduce poverty. In 2003, 12.8 per cent of the population lived below the $1.25 PPP poverty line, falling to 6.2 per cent in 2007. In addition, the Gini coefficient for household income fell from 55.3 in 2003 to 52.8 in 2007.

Critics of conditional cash-transfer programmes allege that the programmes exert a negative effect on labour market participation. However, studies of these programmes in Brazil and South Africa show that the programmes increase the participation of adult workers in the labour market, while reducing child labour and increasing school enrolment. In Brazil, the participation rate of adults in the Bolsa Família programme was 2.6 percentage points higher than similar non-participants and 4.3 percentage points higher for women (Soares et al., 2007). Similarly, research for South Africa shows that for the lowest-income households, social grants had a positive and significant impact on labour market participation and the probability of

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[1]   In 2009, the programme was renamed the Mahatma Gandhi National Rural Employment
      Guarantee Scheme (MGNREGS).

finding employment (Samson, 2009). Moreover, the programmes have been shown to have important multiplier effects on the local economy. For example, a December 2004 evaluation of a cash-transfer programme in Zambia covering the poorest 10 per cent of households in 143 villages and five townships found that the local economy was stimulated through the purchase of food, soap and blankets, as well as agricultural inputs (Farrington et al., 2005).

By providing guaranteed income to poor families, social assistance programmes help to cushion some of the more devastating effects of poverty. Few self-employed and informal-waged workers benefit from insurance that can protect them from the pressing risk of accidents, unemployment, poor health and old age. Surveys of the poor in developing countries reveal a remarkably high level of morbidity. Among the rural poor living under $1 a day in Panama, Peru, South Africa, the United Republic of Tanzania and Timor-Leste, between 11 and 15 per cent of households report having a member either being bedridden for at least a day or requiring a doctor. In Côte d'Ivoire, Indonesia and Pakistan, the number is between 21 and 28 per cent, and in Mexico, Nicaragua and Udaipur (India), it is between 35 and 46 per cent (Banerjee and Duflo, 2007).

When the poor come under economic stress, they often respond by eating less or taking their children out of school. According to a household survey in Udaipur, India, in 45 per cent of the extremely poor households (living on less than $1 a day) and in 35 per cent of poor households (living on less than $2 a day), the adults had to reduce the size of their meal at some point during the preceding year (Banerjee and Duflo, 2007). Moreover, health treatments are typically financed through borrowing, usually at very high interest rates. Selling assets, depriving children of schooling and health services or taking out high-interest loans negatively affects the future well-being of the household and can lead to permanent and debilitating levels of poverty.

Another mechanism for mitigating risks is through collective organizations. Collective organizations are typically considered the domain of formal workers, but collectives of informal workers can help provide insurance to the casual and self-employed (see **box 3.4**). Studies focusing on the decision-making of poor families and individuals have shown that, to reduce their vulnerability to unmanageable risks, poor households often engage in low-productivity and low-profitability business and livelihoods. A reduction in risks faced by the poor and the availability of reliable social protection instruments, such as social assistance programmes or insurance, can help to stimulate growth by encouraging people to engage in higher risk, higher profit activities. Producing new crops, undertaking entrepreneurial activities, investing in a business

and taking advantage of opportunities in new areas all involve taking risks, which the poor are more likely to accept if the risks of accident, sickness and death are mitigated.

Box 3.4   Insurance provisions for informal workers

In most developing countries, traditional labour market organizations such as unions are relevant for only a limited number of workers, as most workers are engaged in casual and self-employment. Yet some non-traditional workers' organizations exist that have been helpful in addressing and responding to the concerns of informal workers. The Self Employed Women's Association (SEWA) in India is an organization of poor, self-employed women workers that seeks to address its members' labour market concerns, particularly the provision of health care, childcare and shelter. Another prominent example comes from Kerala, India, where the issue of social security has been a core concern for informal workers and has given rise to the institution of welfare funds as a result of social dialogue between labour unions, representing informal workers, and employers mediated by the State. The Government of Kerala plays a leading role in the initiation and management of welfare funds and contributions are either bipartite (workers and employers) or tripartite, also including the State. The welfare fund is modelled on the social security system and insurance coverage available to formal workers and each fund is managed by a tripartite body.

3.5   Conclusion

Although economic growth is typically thought of as the way to reduce poverty, its effectiveness depends on the pattern of growth, essentially how particular sectors of the economy and workers benefit from growth. Economic growth is a necessary condition for the reduction of poverty, but may not be sufficient. For poverty to be reduced, productivity and earnings (real wages, as well as earnings from self-employment) must increase sufficiently to increase the incomes of the poor. Even then, poverty reduction strategies need to be complemented by supportive economic and social policies, such as the construction of transport and communication networks, investments in health and education, as well as policies to boost the incomes of the poor. In countries with large informal economies, employment guarantee programmes and conditional cash-transfer programmes can provide much needed income security for the poor. In countries where formal labour markets are more developed, traditional labour institutions such as minimum wages, social security systems and collective bargaining can help to ensure that the gains from economic growth are better distributed, thus lowering the incidence of poverty.

Although redistribution is not necessary for poverty reduction, poverty will only be reduced if the poor benefit directly from growth, through increased economic opportunities, or indirectly, through social protection programmes financed by the State. Nevertheless, poverty is more easily reduced when growth is pro-poor, defined as growth that benefits the poor proportionally more than the non-poor. Similarly, if growth is not pro-poor, but some of the fruits of economic growth are distributed to the poorest, then poverty will reduce (see also Chapters 8 and 9).

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Informality | 4

Mirco Tonin
University of Southampton;
UniCredit and Universities Fellow, Central European University

4.1 Introduction

Informality has been compared to an elephant and to an 800-pound gorilla. The first comparison, attributed to economist Hernando de Soto, alludes to the difficulty of defining informality ("We may not be able to define it precisely, but we know it when we see it."), while the second, present in Freeman (2010), refers to the sheer size of the phenomenon in developing countries.

The next two sections of this chapter are devoted to the definition and the quantification of informality; it will emerge how informality is indeed a complex and multifaceted phenomenon, involving actors as diverse as a hawker peddling food in the streets of an Indian city and the owner of a small clothing factory in Mexico subcontracting for a multinational company. It will also emerge that informal work is widespread, playing a central part in developing countries.

Section 4.4 discusses the causes of informality, underlining how informal work may be due to the lack of opportunities in the formal economy or to a choice to operate outside of the formal economy. The subsequent section briefly describes the most salient features of informal work. Section 4.6 then examines the various options available to policy-makers to deal with informality, stressing how no "one-size-fits-all" policy is available. The last section concludes with certain indications on how to structure a strategy towards the informal sector.

4.2 What is informality?

Defining the informal sector involves focusing on the characteristics of the economic units where the work takes place, while defining informal employment entails looking at the characteristics of the jobs. Both concepts are extensively discussed in documents prepared by the International Conference of Labour Statisticians (ICLS, 1993 and 2003).

The informal sector consists of unregistered and/or small and unincorporated private enterprises engaged, at least partly, in market production. Thus, the definition excludes activities involved in producing solely for a household's own consumption. Usually, an enterprise is considered small when it has fewer permanent employees than a certain number (e.g. five or ten employees) depending on the national context. An enterprise is unincorporated if it is not constituted as a separate legal entity independently of its owners. This usually implies that no complete set of accounts

is kept. An enterprise is unregistered when it is not registered under specific forms of national legislation, such as commercial acts, tax or social security laws, or professional associations' regulatory acts. It should be noted that compliance with the various legal requirements imposed by legislation may not be respected as a whole: in environments where enforcement is weak, enterprises sometimes comply with some aspects of the regulatory environment but neglect others.

Informal employment refers to those jobs that generally lack basic social or legal protections or employment benefits (e.g. advance notice of dismissal, severance pay and paid annual or sick leave, among others). Informal employment includes both self-employment and wage employment. Among the self-employed are employers and own-account workers/micro-entrepreneurs employed in their own informal-sector enterprises. Contributing/unpaid family workers can also be included in this category, as well as industrial outworkers/homeworkers, who usually work for a piece-rate without direct supervision and own the means of production. Beyond regular informal employees, informal wage employment includes casual day labourers. These are wage workers without a fixed employer who are particularly present in agriculture and construction.

A large part of informal employment is in the informal sector, but the two concepts do not overlap completely. Indeed, informal employment exists outside the informal sector, represented, for instance, by workers holding informal jobs in enterprises operating in the formal sector or in households. Moreover, some employees within the informal sector may be holding formal jobs. A salaried worker with a regular contract employed by an unincorporated small firm is one example.

Table 4.1 summarizes the conceptual framework described. Informal employment is given by the sum of the cells numbered from 1 to 6 and 8 to 10. Employment in the informal sector is given by the sum of the cells numbered 3 to 8, while the cells numbered 1, 2, 9 and 10 represent informal employment outside the informal sector.

Informal is not synonymous with illegal. Labour regulations may not apply for certain jobs because they are of a limited duration, because they comprise hours of work or wages below a specified threshold or for other reasons. They are informal jobs but they comply with the law. Similarly, firms belonging to the informal sector do not necessarily breach the law.

Informal is also not synonymous with poor. Informal workers may be relatively well off, while formal workers or people excluded from the labour market altogether may be poor.

Table 4.1   **Informal employment and informal sector conceptual framework**

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

Notes: [a]As defined by the Fifteenth International Conference of Labour Statisticians (excluding households employing domestic workers)

[b]Households producing goods exclusively for their own final use and households employing paid domestic workers

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

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

Employment in the informal sector: Cells numbered 3 to 8.

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

Source: ICLS, 2003.

It is worth underlining also that the concepts of informal sector and informal employment are relatively flexible. For instance, definitions of "small enterprise" depend on the national context and definitions of the "unregistered enterprise" depend on national legislation. This flexibility accommodates specific country situations and needs but has the drawback of limiting the comparability of indicators across countries, contributing to the methodological issues related to the measurement of informality discussed in the next section.

4.3 Measuring informality

4.3.1 Methodological issues

There are two main issues related to the measurement of informality. First, informality is a multifaceted phenomenon, involving very diverse actors operating in different sectors such that it is difficult to quantify in a comprehensive manner. Second, some types of informality are difficult to measure by their very nature, because the actors involved are not in official registers, because of their casual or small-scale nature or because informal activities are concealed. Thus it may be difficult for a surveyor to find unregistered micro-enterprises and, even if they are found, they may be reluctant to disclose information if they are operating irregularly. Nevertheless, several approaches to measure at least some aspects of informality exist. But as a result of the difficulties associated with measurement, the picture of informality that ensues may be distorted. Chen, Sebstad and O'Connell (1999), for instance, argue that the neglect of home-based workers in official statistics understates the role of women in the informal economy.

Household or enterprise surveys can be used, when they exist, to measure informal employment or employment in the informal sector (see **box 4.1**). This can be done directly, for instance, as when an enterprise survey asks whether the firm is legally registered or when a labour force survey asks whether interviewees are registered with the social security administration. In other cases, certain indicators or proxies can be used instead for measurement. One commonly used proxy for informal employment is self-employment. Even if self-employment clearly includes some workers who are formal and excludes some who are informal (and therefore does not overlap with informality), it is usually strongly correlated with informal employment, making it a good proxy in absence of direct measures. Data from tax audits or labour inspections, when they exist and are publicly available, can also be used to quantify informality although, since they are not usually conducted on a representative sample, it is difficult to extrapolate the results to the population of interest.

Box 4.1 Measuring informality 1-2-3

A comprehensive way of measuring the informal economy is provided by so-called 1-2-3 surveys. These are mixed surveys, combining households and informal producers. As the name suggests, they consist of three stages:

The first stage is a survey of households, usually a labour force survey, to determine the structure of employment (participation rate, unemployment rate, pay,

professional mobility) and working conditions (premises, working hours). In this first stage, it is possible to identify people active in the informal economy, either as employees or self-employed. This facilitates building the sample of informal production units on which to implement the second survey and thus helps overcome one of the major problems in sampling informal firms, namely that they do not usually appear in official registries.

The second stage is an enterprise survey to determine the characteristics of the economic activities performed in the informal economy. In particular, it investigates the behaviour of informal production units pertaining to employment, prices, production inputs and outputs, investment, competition and customer structure.

The third stage is a household income and expenditure survey. This analyses household consumption and therefore looks at the informal sector from the perspective of demand. For instance, the share of household consumption satisfied in the informal sector can be determined. It is also possible to establish the poverty status of households and thus to analyse the relationship between poverty and the informal economy.

1-2-3-surveys can potentially provide an exhaustive view of the informal economy, including both the demand and supply sides and, within the supply side, the firm and labour perspectives. However, they may be difficult to implement due to costs and skills requirements. They have been applied extensively in Africa, but also in other areas like Latin America. A broad discussion can be found in the journal STATECO, issues 99 and 104 (particularly Brilleau, Roubaud, Torelli (2005); Razafindrakoto, Roubaud, Torelli (2009)).

More indirect methods are also used to measure informality, based on discrepancies between aggregated measures. The difference between total employment and registered employment measured using administrative data can reveal information about informal employment. Other indirect methods have been proposed, based on electricity consumption or on currency demand, or on systems of equations linking the causes and effects of informality. These indirect methods, however, are based on questionable assumptions and, with the exception of the first case, estimate aggregate informal economic activity rather than employment.

Before offering some figures, a word on the treatment of agriculture when measuring informality: measurements are often provided for non-agricultural activities only. In most developing countries, where subsistence agriculture is still significant, the incidence of informal employment over total employment would increase if the agricultural sector were included.

4.3.2 How big is informality?

As highlighted above, quantifying informality is not easy; indeed, the lack of reliable data is an important challenge for the study of informal labour markets. Nonetheless tables 4.2, 4.3 and 4.4 (in section 4.5.1) provide recent data for the areas where informality is most prevalent in the world. The information is extensive for Latin America, while there are considerable gaps in the data covering Africa. The individual tables are discussed more fully in section 4.5, but what is pertinent here is that, globally, estimates suggest that more than half of all jobs in the non-agricultural sector are informal (Jütting and Laiglesia, 2009), particularly in low- and middle-income countries. In fact, the share of informal employment is negatively correlated with GDP per capita and positively correlated with the share of population living below the poverty line (ILO, 2011a). It is of course even more difficult to obtain an accurate picture of the trend in informality, but what emerges from the available data is an increase in this trend in the non-agricultural sector, although the trend may look different when viewing the whole economy, given the prevalence of informality in the agricultural sector and the structural tendency to move away from it. To conclude, it appears that informality is not only widespread but it is not waning, despite previous predictions stating that economic growth would be accompanied by the formalization of labour relationships. The following section explains the causes of informality.

4.4 Why does informality exist?

Two main reasons are usually proposed to explain why workers and firms operate in the informal economy. The first is that, although workers and firms would like to operate in the formal economy, they do not have the opportunity to do so and stay in the informal economy to make a living. The second is that certain economic actors could actually operate in the formal economy, but they choose instead to work in the informal sector. These two views are not mutually exclusive; in any given country, some workers or firms may participate in the informal economy because they are excluded from the formal one, while others may do so by choice. However, the relative importance of these two sets of motivations varies across countries and, for the same country, over time. As discussed in section 4.6, the type of policy intervention warranted by either type of motivation is different. Therefore, it is important to understand in any given context what the main drivers behind informality are.

4.4.1 Informality as exclusion

To understand the mechanisms through which workers are excluded from the formal labour market and wind up working in the informal one, it is useful to introduce the notion of a segmented labour market or, when there are just two segments, a dual labour market. Classic references for this type of models include Lewis (1954) and Harris and Todaro (1970). A labour market is segmented if an individual with a given sets of skills encounters jobs that differ in terms of the wage paid or other conditions, such that some jobs are preferable to others. Moreover, access to the better segments of the labour market, those offering the good jobs, is restricted.

In the case of informality as exclusion, the formal labour market is the one offering the good jobs, jobs with social and legal protections and other employment benefits. Wages in this sector are kept above the market-clearing level. Institutional reasons for this may exist, such as minimum wage legislation or wage bargaining by trade unions. Alternatively, wages may be kept relatively high for reasons related to increased efficiency. Firms are reluctant to lower wages, even if they can find workers willing to work for less pay, if they fear that a lower wage will reduce their ability to hire better-quality workers or will reduce productivity for other reasons, such as, for instance, because workers with very low wages cannot afford enough food to perform at their best in the workplace or because low wages worsen morale, increase absenteeism or shirking, and so on.

Because wages are above market-clearing level in the formal sector, not all workers will find a job there. They will thus enter the informal sector. This sector is seen as a free-entry sector; the lack of regulation there means that wages adjust so everyone willing to work for the typically very low, prevailing wage can find a job. Alternatively, workers may wait to gain access to formal-sector jobs, remaining formally unemployed or underemployed.

Reasons firms are excluded from the formal economy vary. Some engage in marginal activities, with very low productivity; they are not viable in the formal sector because of the costs associated with taxation and compliance to regulations. Other firms, because of their small size and low level of organization or limited managerial capacity, may not be able to benefit from the potential advantages of belonging to the formal sector, including market access or the possibility to tap into formal credit channels. Thus firms in the informal sector are often disconnected from companies in the formal sector, operating in different markets with different customers. An example is somebody selling street food out of their household premises. Alternatively, these firms may be connected to formal firms in an interdependent arrangement and may even be integrated into global supply chains. However, due to their low bargaining

power and fierce cost-cutting competition, they may not be able to afford to operate formally. A small garment workshop producing clothing for an international brand is one example of this possible situation. Such cost-cutting competition is also one reason informal employment exists in the formal sector.

4.4.2 Informality as choice

The alternative view explaining economic actors' presence in the informal labour market states they are there because they choose to be. In the case of workers, one reason often highlighted is that, although formal jobs offer social protections and employment benefits, they do not come without a cost; workers in the formal sector are required to pay for them through taxes and social security contributions. Some workers may not value these benefits, preferring to opt out of the system by working in the informal economy. This is more likely to be the case when the quality of the benefits is relatively poor or when there are other ways to manage the risks covered by the social protection system associated with formal jobs, for instance through participation in community mutual support systems and solidarity programmes. A worker may also prefer to work as an own-account worker or as an industrial outworker in the informal sector rather than as a salaried worker in the formal sector because the person values the greater flexibility and independence offered by such activity.

Arguing that workers choose to be in the informal sector does not imply that they are well off or happy with their professional situation. They may well be living in poverty while working informally. The point, however, is that, given their skills and prevailing labour market conditions, they would not be better off holding a formal job for which they are qualified.

As regards firms, one view, usually associated with de Soto (1989), suggests that the companies that choose informality are dynamic micro-enterprises that wish to avoid the costs, both in monetary terms and in time and effort, associated with formal registration. Reducing the barriers to entry into the formal sector would prompt these firms to regularize their position, which would allow them to take advantage of the benefits associated with official status such as securing property rights and accessing credit. Thus, with the right conditions in place, they could significantly contribute to economic growth. A less positive view sees firms in the informal sector as "parasitic", choosing to be informal to evade taxes and thus remaining inefficiently small, while taking market share away from the more productive, formal firms. These two views differ with the informality-as-exclusion position as they see informal firms as productive enterprises that could, at least potentially, thrive in the formal sector. The

viewpoints are similar in that both see the avoidance of regulation as the main reason firms are active in the informal sector. They differ, however, as regards their view about the enforcement of regulation. While perceiving the informal sector as "parasitic" calls for strict enforcement, viewing it as a way to avoid high entry costs highlights the fact that strict enforcement may be detrimental to a dynamic part of the economy. More generally, these arguments fuel the debate on how strongly regulations should be enforced in an economy with an informal sector. As empirical studies by Almeida and Carneiro (2009 and forthcoming) have shown for Brazil, enforcement has implications in terms, for instance, of firms' size or workers' wages. Moreover, enforcement is costly, such that the government may decide to "turn a blind eye" on regulation, as theoretically argued in Basu, Chau and Kanbur (2010).

4.4.3 Two-tier informality

A view that reconciles the two positions highlighted above and that better reflects the heterogeneous and multifaceted nature of the informal economy is the viewpoint that asserts the informal sector itself has a dualistic nature. It comprises an upper-tier, characterized by relatively productive activities and where the "choice" view of participation can be applied, and a lower-tier, with marginal activities, in which participation is due to the lack of opportunities elsewhere or to considerable barriers blocking operation in the upper-tier of the informal economy. Despite the lack of regulation, these barriers can include the need to obtain substantial start-up capital, for example to buy an initial stock of goods for petty traders, or the existence of cohesive networks of informal-sector operators who restrict access to street trades, for instance by exercising control over zones of operation.

4.5 What are the characteristics of informality?

To understand the characteristics of informality in a particular context, taking a snapshot at a given moment is not sufficient. A dynamic picture is needed, that highlights movements in and out of informality and within the informal economy.

In the case of workers, it is important to understand whether informal jobs act as "stepping stones" toward formal jobs or better jobs within the informal economy, or whether an informality trap exists that maintains workers in low-income activities. Alternatively, some workers may choose to move into the upper-tier informal sector after having accumulated enough assets, skills or contacts in the formal sector.

In the case of firms, some may start as unregistered entities and change their status with time. Alternatively, informal firms may remain informal. Even if they stay within the informal economy, how their sales, productivity and assets develop over time are crucial variables that must be taken into account when analysing the informal economy. However, due to severe data limitations, such a dynamic picture is impossible to obtain in most cases.

An in-depth analysis of the characteristics of informality is necessary to understand how ongoing processes are affecting and will continue to affect the informal economy. Globalization and, more specifically, trade liberalization and the development of international supply chains are powerful forces likely to have a considerable impact on at least some parts of the informal economy. One view suggests that new competitive pressure driven by imports will result, at least in the short term, in an increase in informal-sector activities due to the need for domestic firms to cut costs. On the other hand, thanks to openness in international trade and investment, more opportunities may become available in the formal sector of the economy in the medium term, in particular if productivity is positively affected. Climate change is also a pressing issue that could strongly impact informal workers' welfare. Informal workers are usually excluded from social insurance schemes, typically included in formal employment. However, in some contexts, these workers may still enjoy some degree of insurance through informal mechanisms, such as support in cash or in-kind assistance from extended families or communities when needs arise. These mechanisms can deal with idiosyncratic shocks, but cannot be sustained when shocks affect entire communities. Climate change increases the likelihood of such events and may potentially pose considerable stress on informal social security arrangements, thus further increasing the high uncertainty informal workers face.

The next section describes the characteristics of workers and firms active in the informal economy, and starts with a discussion on the prevalence of informality in the three broad geographical areas where it is particularly important: Africa, South and East Asia and Latin America.

4.5.1 The relevance of informality

Informal employment is widespread in Africa. **Table 4.2** outlines the number of persons employed informally and their share of total employment in certain African countries for which data are available. Big differences among the countries are apparent, but it is worth noticing how more than 70 per cent of employment is informal in many countries. In most of sub-Saharan Africa, the share of women employed

informally is higher than the share of men. In North Africa the opposite is true. It should be noted, however, that many of the figures reported refer only to non-agricultural employment. Given that agriculture is the predominant sector in sub-Saharan Africa, accounting for 60 per cent of employment, and that most employment in agriculture can be considered informal, more inclusive figures covering the whole working population would be even higher. A key feature of informal employment in sub-Saharan Africa, with some notable exceptions such as South Africa, is that it is mainly comprised of the self-employed with paid employment a minor part (Jütting and de Laiglesia, 2009). Although it is not easy to find detailed data allowing a comparative cross-country analysis of informality in Africa, an exception can be found in a series of extensive surveys, of the type described in **box 4.1**, that cover the economic capitals of seven West African countries in the early 2000s: Benin (Cotonou), Burkina Faso (Ouagadougou), Côte d'Ivoire (Abidjan), Mali (Bamako), the Niger (Niamey), Senegal (Dakar) and Togo (Lomé). In all cities, a significant share of employed people, ranging between 71 per cent and 81 per cent, work in the informal sector. The self-employed represent the overwhelming majority of those active in the informal sector, while contributing family members are also relevant, in particular women (Brilleau, Roubaud and Torelli, 2005).

Table 4.2 **Africa: Persons in informal employment and share of total employment (percentages)**

	Year	Type	All		Female		Male	
Country			**Thousands**	**%**	**Thousands**	**%**	**Thousands**	**%**
North Africa								
Egypt	2009	U	8 247	51	572	23	7 675	56
Tunisia	1997	N	423	22	62	13	361	25
Sub-Saharan Africa								
Eastern Africa								
Ethiopia	1999	N	3 256	50	2 337	59	919	36
Kenya	1999	N	1 881	36	791	30	1 090	44
Madagascar	2005	U	1 271	74	671	81	600	67
Mauritius	1997	N	160	39	...	...	...	...
Tanzania, United Republic of	1991	N	2 369	22	838	15	1 531	28

Uganda	2010	U	2 597	69	1 178	71	1 419	67
Zambia	2008	U	920	70	407	80	513	63
Zimbabwe	2004	U	909	52	447	66	462	43
Middle Africa								
Cameroon	1993	U	119	57	...	...	...	...
Central African Republic	2003	N	16	19	2	16	14	19
Southern Africa								
Botswana	1996	N	61	19	39	28	21	12
Lesotho	2008	U	160	35	70	36	90	34
Namibia	2008	U	121	44	62	47	59	41
South Africa	2010	U	4 089	33	2 018	37	2 071	30
Western Africa								
Benin	1999	U	276	46	101	41	175	50
Côte d'Ivoire	1996	U	414	53	247	73	168	37
Gambia	1993	U	101	72	44	83	57	66
Ghana	1997	U	...	79	...	...	...	...
Liberia	2010	U	343	60	206	72	136	47
Mali	2004	U	1 180	82	652	89	528	74
Niger	1995	U	303	...	133	...	170	...
Senegal	1996	U	665	...	...	...	...	...

Notes: N = national, U = urban; ... = not available.

Sources: ILO, 2011a; ILO, 2011b.

Most of the world's informal workers live in South and East Asia, due to the region's large population and due to the large share of the population engaged in informal activities (see **table 4.3**). This is true both in services and manufacturing, where many activities take place in micro-firms or at home, and in both the urban and rural areas. While **table 4.3** mostly refers to non-agricultural employment, the World Bank (cited in Kanbur, 2011) estimates the share of informal employment in total employment to be over 85 per cent in Bangladesh, Bhutan, India and Pakistan, and over 90 per cent in Afghanistan and Nepal. In China, informal employment has expanded with the economic reforms and concomitant downsizing in the state sector and expansion

of the private economy. Lu and Gao (2011) show how the ratio of urban wage employment over total urban employment (including self-employment and informal employment) has been declining from a level close to 100 per cent in the 1980s to less than 40 per cent in 2009. In addition to laid-off urban workers, migrants from rural areas are an important share of those informally employed in firms or engaged in self-employment activities. However, due to rapid economic growth and the end of surplus labour, the situation in China is quickly changing, as documented in Cai and Wang (2012).

Table 4.3   South and East Asia: Persons in informal employment and share of total employment (percentages)

	Year	Type	All		Female		Male	
Country			**Thousands**	**%**	**Thousands**	**%**	**Thousands**	**%**
South Asia								
Bangladesh	1993	U	198	10	21	16	177	10
India	2004/ 2005	U	163 014	84	33 695	87	129 319	83
Nepal	1999	N	1 657	73	605	87	1 052	67
Pakistan	2004	U	16 633	40	1 515	22	15 118	44
Sri Lanka	2009	U	3 184	62	933	56	2 252	65
South-East Asia								
Indonesia	1999	N	55 695	63	23 124	68	32 571	59
Myanmar	1996	U	1 682	54	649	57	1 032	53
Philippines	1995	U	539	17	257	19	283	16
Thailand	2010	U	9 642	42	4 730	44	4 912	41
Timor Leste*	2010	U	44	62	...	...	...	...
Viet Nam	2009	U	17 172	68	7 800	67	9 372	69

Notes: N = national, U = urban or non-agricultural; * = employees only; ... = not available.

Sources: ILO, 2011a; ILO, 2011b.

Table 4.4 **Latin America: Persons in informal employment and share of total employment (percentages)**

Country	Year	Type	All Thousands	%	Female Thousands	%	Male Thousands	%
Caribbean								
Barbados	1998	N	7	6	3	5	4	7
Dominican Rep.	2009	U	1 484	49	615	51	869	47
Jamaica	1996	N	174	24	75	21	100	26
Central America								
Costa Rica	2009	U	754	44	323	46	432	42
El Salvador	2009	U	1 242	66	693	73	549	60
Honduras	2009	U	1 454	74	724	75	729	73
Mexico	2009	U	20 258	54	9 066	58	11 192	51
Nicaragua	2009	U	1 024	66	505	67	519	65
Panama	2009	U	517	44	232	47	285	42
South America								
Argentina	2009	U	5 138	50	2 189	50	2 949	50
Bolivia, Plurinational State of	2006	U	2 069	75	972	79	1 097	72
Brazil	2009	U	32 493	42	15 909	46	16 585	39
Chile	2000	N	1 804	33	577	29	1 226	35
Colombia	2010	U	9 307	60	4 532	63	4 775	57
Ecuador	2009	U	2 691	61	1 214	64	1 477	59
Paraguay	2009	U	1 473	71	666	74	806	68
Peru	2009	U	7 168	71	3 668	76	3 500	66
Uruguay	2009	U	572	40	270	40	302	39
Venezuela, Bolivarian Rep. of	2009	U	5 131	48	2 159	47	2 972	48

Notes: N = national; U = urban or non-agricultural.

Sources: ILO, 2011a; ILO, 2011b.

In Latin America also, informal employment is rather common, reaching as high as 75 per cent of persons in non-agricultural employment in the Plurinational State of Bolivia (see **table 4.4**). In Latin America both the self-employed and wage employees working in firms account each for roughly a 40 per cent share of informal employment, with domestic workers representing a significant group as well. Among dependent employees, approximately half are employed in formal firms and half in informal firms. Thus, in Latin America, informal employment outside the informal sector (formal firms and households) is relatively common (Perry et al., 2007).

4.5.2 What do informal workers do?

Many workers active in the informal economy hold multiple occupations and engage in multiple activities in a given day or across the year. This is true both in the rural and urban contexts. As agriculture is characterized by strong seasonality, many small farmers complement their agricultural activities with small non-agricultural businesses. In the urban context, switching between different activities may be due to supply or demand patterns linked, for instance, to particular periods of the year (e.g. availability of certain fruit and vegetables for street vendors or demand for particular garments linked to festivities) or time of day. Banerjee and Duflo (2007) describe the case of women selling pancakes in front of their houses in a southern Indian city during the morning hours and then stitching and selling saris, collecting trash or working as labourers for the remaining part of the day. This diversification of activities may reduce risks associated with fluctuating demand or input prices but also implies a lack of specialization and the loss of increased productivity associated with it. Besides performing multiple activities, many informal workers also work across multiple locations, engaging in temporary migration to find work. The duration of this migration is usually short, within a month, and its geographical range limited.

It is often stated that, in developing countries, the lack of social security provisions makes unemployment "unaffordable" for most of the population. People must engage in some sort of economic activity to sustain themselves. This partially explains the importance of the informal economy, as the "workplace of last resort" for workers who would otherwise be unemployed. Situations of underemployment, however, are quite common in the informal sector. Chen and Doane (2008) provide figures for the Indian State of Gujarat that show casual workers and industrial outworkers work on average only slightly more than 250 days per year, while the situation is less serious for the self-employed and employees. Strong gender differences exist, with women reporting "124 days of unemployment per year while men averaged only 74 days of unemployment per year". The same is true regarding the performance of

multiple economic activities within the day, involving 37 per cent of women and 15 per cent of men.

4.5.3 Firms and entrepreneurs in the informal sector

Grimm, Krüger and Lay (2010) use the surveys of the economic capitals of seven West African countries already mentioned to look at patterns of capital entry barriers and capital returns in informal micro- and small enterprises (MSEs). In their data set, the vast majority of these enterprises actually consist only of the self-employed owner. The median age of these enterprises is 5 years and more than a quarter are active in "petty trading". The owners have very little education on average (3.7 years) and about half of them are female. The vast majority of these MSEs operate with very little capital. Indeed, the median capital endowment stands at only 75 International Dollars (Int. $). Around 20 per cent of MSEs, mostly active in trading activities, basically work without any capital. A minority of MSEs have relatively high capital stock (the average for the top 20 per cent is almost 5,000 Int. $) and are owned by entrepreneurs who tend to be much better educated than the average and who usually employ at least a second person. Regarding the barriers to entry, the authors find that most informal activities exhibit important entry barriers, although there is an informal subsector for which fixed costs of entry are negligible, and a relatively small fraction of informal entrepreneurs undertake very substantial initial capital investments. Concerning the returns to capital, the authors find that there are very high marginal returns at low levels of capital. A possible explanation for these high returns pertains to credit constraints. Indeed, they find that 88 per cent of MSEs with low levels of capital stock have financed their capital stock only out of their own savings. MSEs with higher levels of capital stock appear to be somehow less constrained, but still resort mostly to personal savings for financing. This suggests that not only formal but also informal credit channels are not very active. The high returns that characterize an important segment of MSEs suggest that the informal sector has the potential to grow out of poverty if additional capital is made available, provided that other constraints on growth, such as managerial capacity, do not hinder it.

Looking at the dynamics of firms in Latin America, the World Bank (Perry et al., 2007) finds that a large majority of micro-firms are comprised only of the self-employed owner, and they tend to remain so; only a few manage to grow and gradually become formal. It also presents evidence that formality has a positive impact on productivity. As mentioned, in Latin America informal employment in formal firms is quite common. Generally the share of unreported workers decreases with firm size, although this does not appear to be the case in countries like Panama, Peru and Uruguay.

4.5.4 The link between the formal and the informal economy

In the same study, the World Bank (Perry et al., 2007) uses panel data for Argentina, Brazil and Mexico to investigate informal labour markets between 2000 and 2005. The study shows that young workers are strongly represented in informal salaried employment, while their presence in this segment of the informal economy declines with age. This suggests that being an employee in the informal sector for many workers is a first step towards jobs in different sectors. On the other hand, the proportion of workers informally self-employed increases with age, while the pattern for formal employment is an increase and then decrease. Transition patterns between formal employment, informal self-employment and informal wage employment show a high level of dynamism in the flow of workers among the different sectors, with no evidence of a unidirectional movement from informality to formality. In particular, flows between the informal self-employed sector and the formal sector in Brazil and Mexico show strong symmetry.

One interesting feature documented in several Latin American countries is that certain labour market institutions, such as the minimum wage, have a positive effect on wages in the informal sector, where labour norms are not enforced. It has been established for many countries that informal-sector wage distribution is compressed by a minimum wage hike. Moreover, the distribution manifests a spike at the minimum wage level, indicating that the minimum wage is also applied in practice in at least some sections of the informal sector (Maloney and Mendez, 2004). In some countries, the effect of the minimum wage is actually stronger in the informal than in the formal sector. This has been called the "lighthouse effect". The idea is that the statutory minimum wage serves as a reference throughout the economy, including in the informal sector, possibly because it provides a benchmark for what is considered fair remuneration or because social assistance payments are often indexed to minimum wages (see Keifman and Maurizio, 2012, for a recent analysis).

In the African context, Diminova et al. (2010) also use the surveys of the economic capitals of seven West African countries (with the exception of Niger and Togo) to study labour allocation and returns to education. They investigate the allocation of labour across the formal sector, informal self-employment sector, informal salaried sector, and the not working, and the returns to education in each of these sectors. They find that people with high levels of education allocate to the small formal sector, while less-educated workers allocate to the informal sector. Women are less likely to work for the formal sector than men and, within the informal sector, more likely to work as employees. With increasing age, people are more likely to work in the formal sector or as informally self-employed and less likely to work as informal employees,

thus suggesting that the informal salaried sector is a stepping-stone for other types of employment. Looking at earnings after accounting for the self-selection of individuals into the different sectors, the paper does not find any evidence of a gender wage gap. Returns to education are consistently positive for both formal and informal employees, while education does not appear to have much of an effect on earnings for the self-employed. Finally, the authors find evidence of queuing for formal-sector jobs in Burkina Faso, Mali and Senegal, but not in Benin and Côte d'Ivoire.

4.6   What is the policy response to informality?

From the previous sections it is clear that informality is characterized by a high degree of heterogeneity; there is no "one-size-fits-all" policy response that is valid across countries or even across different parts of the informal economy within a country. In this section, a framework to think about policies and some examples are offered.

In countries in which the majority of the workforce is active in the informal economy, that is, in most developing countries, policy-makers should take into consideration the likely impact of every policy decision on the informal economy. This means that the discussion on informality should not be relegated to policies specifically targeted at it but should be embedded in every social and economic policy, including, for instance, trade policy. In addition, people making a livelihood in the informal economy should not be seen as passive recipients of policy interventions but should be actively involved in the process. Listening to their voices is important to gather the insider knowledge necessary to base policy on a sound understanding of reality and to provide legitimacy to any intervention.

The types of policy interventions that should be implemented regarding informality crucially depend on understanding the reasons people work in the informal economy in any given context. In particular, it matters whether informality is a choice or rather due to exclusion from the formal sector.

4.6.1   Policy response to informality as exclusion

When informality is due to exclusion from the formal economy, the policy response usually proposed in the literature is a mix of interventions aimed at increasing the productivity of firms and the employability of informal workers, together with measures specifically aimed at poverty alleviation as well as measures to increase aggregate demand.

Increasing the productivity of firms can take place in two ways. The first is by improving the productivity of the existing stock of firms active in the informal economy. This is possible via measures aimed at boosting their capital, for instance through microcredit or small grants, or through the provision of other business development services, such as the use of such information and communication technologies as mobile phones to improve access to market information, or training (see **box 4.2** for one example). The impact of such measures crucially depends on whether or not informal firms have the potential to grow significantly. An alternative way to improve firms' productivity is to induce the replacement of informal firms with formal, more efficient entities through higher growth, in particular growth in sectors that are labour-intensive, thus creating more productive jobs for people trapped in the informal sector.

Box 4.2   Support for informal businesses in South Africa

The city of Johannesburg in the early 2000s launched a series of initiatives aimed at supporting clothing micro-entrepreneurs operating in the inner city. Estimates suggested that around 1,000 such businesses were present, partly operated by immigrant entrepreneurs, particularly from francophone West Africa, and partly operated by black South Africans, some of whom had been dismissed from the formal clothing industry due to the wave of closures that took place during the 1990s. The first group included mostly skilled male entrepreneurs, while the second group comprised mostly women. Most of the firms were one-person enterprises, with most entrepreneurs earning poverty-level livelihoods.

A study conducted to identify the main needs of the sector underlined the lack of adequate training, both technical and business, as a key issue, with most entrepreneurs lacking specialized skills, such as embroidery, and unable to cost their goods correctly, keep adequate business records or market their garments. The study also emphasized the need for improved premises and the lack of childcare facilities and access to credit. To address some of these issues, a training centre for clothing producers was established in 2001, offering part-time training courses to micro-entrepreneurs to enhance sewing and design skills and courses on how to run a business. Moreover, to enhance social capital, the project favoured the formation of networks among trainees to share knowledge and experience and maximize their output by working together, and launched an association of informal garment operators.

An evaluation conducted in 2003 showed that enterprises supported through the programme fared better than a control group in terms of increased and more diversified output, higher revenues and increased involvement in cooperation or networking with other producers.

Source: Rogerson, 2004.

Policies increasing the employability of workers include training programmes. In addition, incorporating informal workers into the social safety net, either through the extension of existing programmes or the creation of new ones specifically targeted at the informal sector, is a policy that can both alleviate poverty in the short term and have long-term beneficial effects on productivity and employability. When affected by a negative shock, poor household without access to social security may be forced to sell their few assets, reduce food intake or withdraw children from school, thus potentially falling into a poverty trap characterized by low productivity, poor health and low skills (EU, 2010). Moreover, households without access to insurance may refrain from engaging in activities that are characterized by higher expected returns but bear greater risk (see for instance the discussion on multiple activities in section 4.5). The provision of at least some insurance may thus contribute both to reduce poverty and promote long-term development. Traditional social security systems, however, are based on formal employment and, as such, fail to reach those operating in the informal economy. One possible downside of policies aimed at extending the social safety net to informal workers through non-contributory programmes is that, if informality is due to choice rather than exclusion, this extension may reduce the incentives to become formal. Levy (2008) discusses the adverse incentives for formalization arising from social programmes targeted at the informal sector in Mexico, while the labour market effects of social protection systems in emerging economies are discussed at length in OECD (2011, Chapter 2). **Box 4.3** provides an example of a programme aimed at providing health benefits to all. Public work programmes, i.e. transfers conditional on the completion of some work requirement, may also be a way to provide social insurance.

Box 4.3 Providing health insurance to all: Seguro Popular

In Mexico, like in many other countries, social security provides pensions, health and other social benefits for all workers who contribute to the system through payroll contributions. Self-employed workers are not obliged to contribute and many employees work informally, both in the informal sector or within registered firms. Therefore, the majority of the population is not covered by the social security system.

The insurance scheme Seguro Popular was established as part of a package of health reforms in the first half of the 2000s to provide health insurance to those lacking coverage through social security. In principle, only households at the bottom of the income distribution get access to the programme for free, while other beneficiaries should contribute. In practice, the overwhelming majority of affiliates do not contribute, so the programme is basically free. It gives access to medical services, including drugs and hospitalization, without co-payments.

Evaluation studies show that the programme is successful in reaching the poorer groups in society and improving their access to health-care services. It is all the more beneficial as there has been a decline in catastrophic health spending, causing further economic hardship and poverty. One important question is whether the introduction of this non-contributory programme has reduced incentives to be formally employed. Some studies have found no effect, while others find that Seguro Popular may encourage informality. A randomized experiment has been implemented to evaluate the effects of the programme. The experiment consists in encouraging the population in some areas of the country to join Seguro Popular through advertisements and other means, while in other areas with very similar characteristics no special effort encourages affiliation. This will ascertain the causal impact of the programme on health and other outcomes, without the need to restrict access to the programme, at least temporarily, for a subset of the population to provide a control group.

OECD (2011, Chapter 4c) provides an extensive discussion of the labour market challenges associated with the extension of health protection coverage in emerging economies, with a particular focus on the Mexican case.

4.6.2 Policy response to informality as choice

The presence of workers and firms that operate in the informal economy by choice when they could instead work in the formal economy is the result of a cost–benefit analysis. If policy objectives are to decrease the extent of informality in an economy, policies must be devised to tilt the parameters involved in this analysis in favour of formality. For instance, simplifying the administrative procedures required to register a firm would decrease the cost of formalization, while more stringent enforcement of regulations would increase the cost of being informal. High enforcement may also increase the cost of being formal, however, as audits and inspections also impose costs on compliant firms; this is particularly the case if enforcement activities target easier-to-locate formal businesses (Almeida and Carneiro, forthcoming). All in all, the literature usually proposes a combination of "carrot" and "stick" to deal with this type of informality. Berg (2010), for instance, discusses the implementation of such a policy mix in Brazil in the 2000s, where a simplified tax regime was implemented in conjunction with better developed and resourced inspection services. De Mel, McKenzie and Woodruff (2012) discuss the results of a field experiment in Sri Lanka providing informal firms incentives to formalize.

Increasing the benefits arising from formal status represents an incentive for firms to register. Formal status allows firms to tap into commercial credit and to enforce

contracts through the judicial system. In many developing countries, however, these benefits are merely theoretical, as access to credit is severely limited for micro-enterprises, irrespective of their formal or informal status, and contract enforcement is lengthy and expensive due to the inefficiency of the judicial system. In addition to benefitting firms that are already active in the formal economy, improving contract enforcement and easing access to credit for micro-enterprises would encourage the formalization of firms. Making it easier for micro-enterprises to participate in public procurement tenders would have a similar effect.

As already mentioned, workers may choose to operate in the informal economy to opt out of a social security system in which contributions cost too much relative to the services it offers. The fact that social security is usually offered as a "package" with a whole range of benefits (e.g. pension, health care, unemployment insurance) bundled together is an issue. Low-productivity workers, in particular, may value some of the benefits but find the whole package too expensive. One method to encourage formalization would thus be to increase the flexibility of the system by offering separate benefits and allowing some choice. Moreover, the system's rules, which are usually designed for formal-sector employees, could be adapted to take into account the needs and characteristics of informal workers, allowing, for instance, irregular contributions by seasonal workers. Yet another way to reduce workers' disincentives to formalization would be to finance the social security system from general taxation rather than through social security contributions, thus widening the tax base and decreasing the gap between take-home pay for workers and labour costs for firms. Alternatively, a stronger link between contributions and benefits could be introduced, as proposed by Robalino, Vodopivec and Bodor (2009) in the case of unemployment insurance.

4.7 Conclusion

One recurring theme in this chapter is that informality is a complex and multifaceted phenomenon, whose causes and characteristics vary across countries. Therefore, the first step to devise an effective strategy towards informal work is to develop a sound knowledge base by collecting and analysing data.

After reaching an understanding of the basic features of informal work in a country, inspiration can be gained by examining international experiences to implement policy packages aimed at reaching the particular goals of policy-makers, whether increasing productivity in the informal sector, improving firms' compliance with regulations or providing informal workers with a social safety net. There are of course limits on the

extent to which experiences from other countries can be successfully translated in a new context. For this reason, it is important to design policy interventions whose effects can be evaluated. The results of this evaluation will generate further knowledge about the nature of informal work in the country and the effectiveness of various policy measures. The strategy towards informal work can then be modified according to the new knowledge, generating a positive loop in which a sound knowledge of informal work informs the design of policies that generate further knowledge and allow the development of a strategy that deals with informal work using the best available tools. This approach is highly needed, given that the livelihood of the majority of people in the developing world depends on informal work.

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Wages in developing countries

5

Patrick Belser

*Senior Economist, Conditions of Work and Employment Branch,
International Labour Office*

5.1   Introduction

In developing countries, wages are in some sense both less and more important as a source of labour income than in developed countries. They are less important because a smaller share of the labour force holds a wage job, as opposed to being self-employed or a family helper, than in developed countries. Global statistics (ILO, 2011a) show that by 2010, the share of wage earners represented 20 per cent of all workers in South Asia or sub-Saharan Africa, about 50 per cent in East Asia and North Africa, roughly 65 per cent in Latin America and the Middle East, and more than 85 per cent in developed economies – clearly indicating that the proportion of wage employees increases with the level of economic development. In another sense, however, wages matter far more as a source of labour income for the 1 billion or so wage earners who live in the developing world, than for the 400 million in the advanced countries. This is because the former have much more limited access to social transfers and alternative social protection schemes. Their wage is thus often what makes the difference between a decent life and a life of destitution, between affluence and poverty.

The first part of this chapter discusses the determination of wages and the empirical link between wages and labour productivity, the determinants of labour productivity, the impact of excess labour supply on wages, and the role of trade unions and collective bargaining in imperfect markets. The second part of the chapter looks at the personal distribution of wages, discusses how wages are linked to the level of education and skills, how globalization has increased the returns to education, why women earn less than men and why wages of similar workers differ across industries, and across firms and plants. This second part also discussed the role of minimum wages and collective bargaining in reducing inequality in developing countries. The last part concludes.

5.2   The determination of wages

Wages are usually defined as the total remuneration received by paid employees during a specific period of time, and must be distinguished from the concept of total income which also includes receipts from other sources such as social security transfers, remittances or returns on capital. While paid employees include both regular-salaried workers and casual or informal wage earners, they exclude self-employed workers and family helpers. In a market economy, it is generally accepted that there is a positive relationship between the productivity of workers (measured as the value of their output per hour or per month) and their wages. When workers produce few goods or services of very low value, their wages are likely to be low. By contrast, if workers

are able to increase the quantity and quality of their output, there is a possibility that their wages will also increase.

5.2.1 The neoclassical theory of wage determination

In neoclassical economic theory (see, for example, Ehrenberg and Smith, 2009), the wages of workers are determined by the so-called "marginal product of labour". The marginal product of labour is defined as the additional output that an additional unit of labour generates at a given level of employment and is assumed to be diminishing as the addition of more and more workers increases output by less and less – until it finally does not increase output at all anymore. The theory of diminishing marginal product of labour has important implications. Firms tend to hire more and more workers, up to the point where they maximize their profits. In the short term (when the amount of capital or machinery is fixed), this point is reached when the productivity of the last recruited worker is exactly equal to the market wage. Hiring one more worker, whose contribution to a firm's output would be worth less than their wage, would be unprofitable. By contrast, hiring one less worker would be a foregone opportunity to increase profits. That is why neoclassical theory reaches the conclusion that the labour market naturally equalizes wages and the marginal productivity of labour.

This relationship between workers' wages and output is understood as the outcome of the free market when firms operate in a context of extreme or "perfect" competition, where firms have no ability to set prices or wages that are different from market prices and market wages.[1] It is also worth noting at this stage that under the hypothesis of the diminishing marginal product, marginal labour productivity is lower than average productivity since the productivity of the last worker who is hired is less than the productivity of all previous workers who were already on the job.

The key to increasing wages in this framework is to increase average labour productivity. When the productivity of workers increases, both average and marginal labour productivity shift upwards, as a result of which it becomes profitable for companies to hire more workers. This story is often illustrated quite simply in **figure 5.1**. Initially, labour demand and labour supply are represented by D and S, respectively. Labour demand is downward sloping: the higher the wages, the lower the employers' demand for labour (for a given level of output prices and capital inputs). By contrast,

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[1]   That is, firms are seen as price takers, meaning that they have no influence on prices; if firms increase their prices they will lose all customers, and if they reduce their prices they will fail to maximize their profits.

labour supply is sloping upwards: the higher the wages, the more people want to work. Initially, the curves intersect at point A, yielding employment E and wages W. With a better productivity-enhancing technology, the demand curve shifts upwards to D', employment increases to E' and employers – who have to compete for workers – are now ready to pay wages equal to W'. Both employment and wages have increased.

Figure 5.1   **Productivity, labour demand and wages**
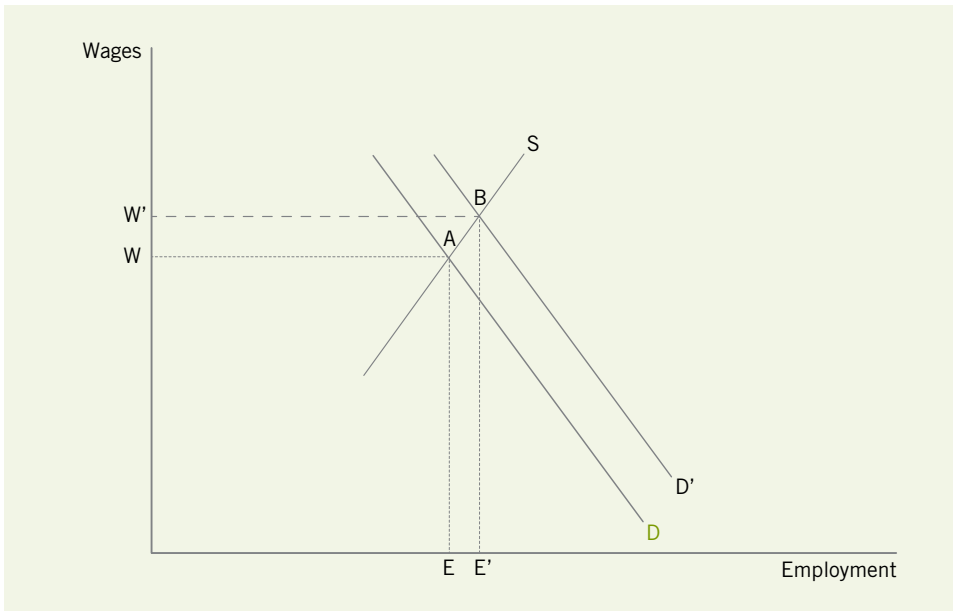
Source: Ehrenberg and Smith, 2009.

5.2.2 The empirical evidence

Is the theory of the marginal product of labour supported by empirical analysis? This question is difficult to answer because marginal labour productivity is not immediately observable or measurable. The only relationship that can realistically be investigated empirically is the link between wages and *average* labour productivity.

Based on a cross-section of countries, the correlation between wages and average labour productivity seems to be beyond dispute. Using national data on monthly

earnings for 108 countries collected by the ILO in its Global Wage Database,[2] Luebker (2011) has calculated that differences in productivity across countries explain about two-thirds of the variations in average wages. In this database, wages are broadly defined as the total gross earnings or remuneration received by employees for a given period of time, for the time worked as well as the time not worked (such as for annual vacations), including regular bonuses. The correlation between wages and productivity is plotted in **figure 5.2**, where it can be seen that countries with higher labour productivity are also those where workers enjoy higher earnings. Rodrik (1999) finds an even stronger correlation when restricting data to the manufacturing sector for 93 countries, where he found that value-added per worker explained between 80 per cent and 90 per cent of the cross-national variation in wages. The US Bureau of Labor Statistics calculated that, in 2010, direct pay in manufacturing varied between US$1.41 in the Philippines and US$34.78 in Denmark (**table 5.1**). Although measured in current US dollars and therefore depending also on exchange rate fluctuations, these differences point towards the existence of large productivity gaps across countries.

Two notes of caution, however, need to accompany these results. First, the results of the cross-country analysis need to be taken with a grain of salt, due to existing problems in the comparability of available wage data. While wage statistics in advanced countries are regularly collected through monthly, quarterly or annual establishment-based surveys, only a few such surveys are carried out in developing countries, where wage data mostly come from household-based labour force surveys. Because of the well-known tendency of individuals to under-report their earnings in household surveys, the data is often not directly comparable to data from establishment surveys. Another problem has to do with differences in the definition of wages across countries, which may or may not include bonuses or the part of the remuneration that may be paid in-kind rather than in cash, as well as incomplete coverage of wage data (which may exclude, for example, agricultural workers). These sometimes stark differences explain why the International Conference of Labour Statisticians (ICLS) called in 2008 for the development of a more harmonized framework for wage statistics across the world (ILO, 2008a).

The second note of caution is that, as already emphasized, the relationship between wages and average labour productivity does not prove or disprove the theory of the marginal productivity of labour. While some economists consider that marginal productivity represents a constant fraction of average labour productivity – and hence that the trends in average labour productivity capture reasonably well the

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[2]   See data collection on wages and income at: http://www.ilo.org/travail/areasofwork/wages-and-income/WCMS_142568/lang--en/index.htm.

trends in marginal productivity – this consideration rests on the assumption of a stable division of national income between capital and labour.[3]

Table 5.1   International comparison of hourly direct pay in manufacturing, 2010 (US dollars)

Country	US dollars, 2010
Philippines	1.41
Hungary	4.74
Poland	4.86
Brazil	5.41
Slovakia	6.03
Estonia	6.10
Czech Republic	6.81
Portugal	7.16
Argentina	8.68
Singapore	12.68
Greece	13.01
Spain	14.53
Israel	15.28
New Zealand	17.29
Japan	18.32
Italy	18.96
France	21.06
United Kingdom	21.16
Austria	21.67
United States	23.32
Netherlands	23.49
Belgium	24.01
Canada	24.23
Sweden	24.78
Finland	25.05
Germany	25.80
Ireland	26.29
Australia	28.55
Switzerland	34.29
Denmark	34.78

Source: US Department of Labor, 2012.

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[3]   Under the assumption of a Cobb-Douglas production function – in which the division of income between capital and labour remains stable – marginal productivity is equal to the product of average labour productivity and the share of labour compensation in national income (the "wage share"). So, for example, if average labour productivity is equal to $1,000 per month and the wage share is equal to 60 per cent, then the marginal product of labour is assumed to be equal to $600 per month.

Figure 5.2 **Labour productivity and average wage in 108 countries, 2009 or latest available year (2005 PPP$)**

Average wage = 0.36*labour productivity + 3948
$R^2 = 0.73$

Average wage, per year (in 2005 PPP$)

Labour productivity, per year (in 2005 PPP$)
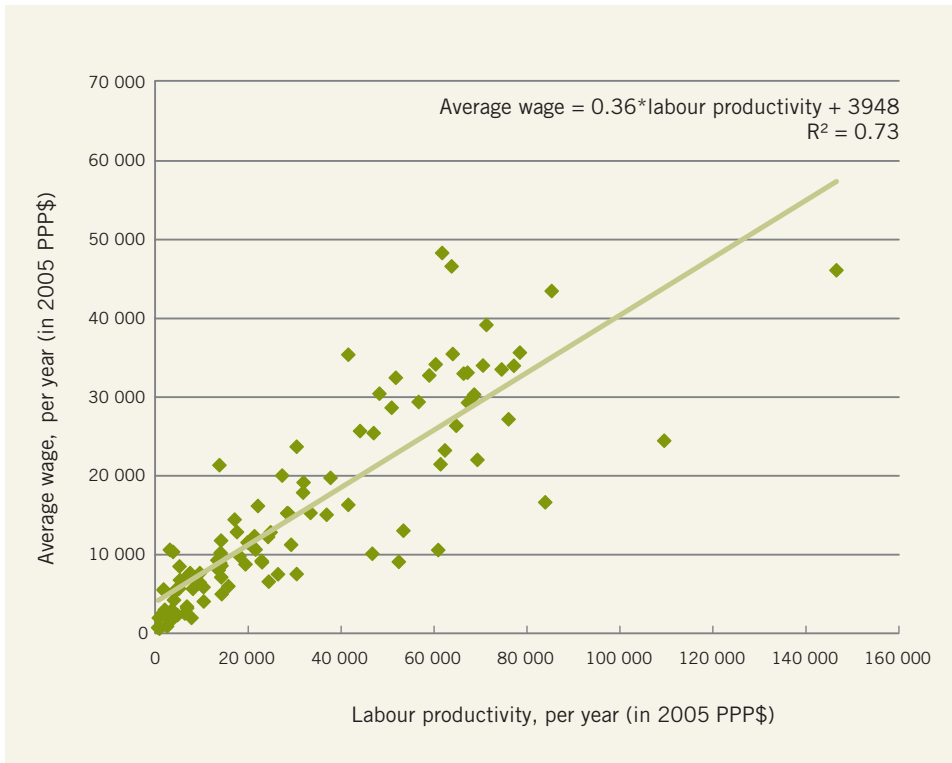
Notes: "Labour productivity" refers to GDP in 2005 PPP US$ per person employed; data are for 2009 or the latest available observation from any given country that is included in the ILO's Global Wage Database. Yearly wages are estimated to be 12 times the average monthly wage (the main indicator collected in the database). For most countries, wage data refer to the formal sector only.

Source: Luebker, 2011, based on ILO Global Wage Database 2010/11 and World Bank (World Development Indicators).

Yet in recent years, the share of total labour compensation in GDP (the so-called "wage share") has been declining in many countries, including in developed economies as well as in emerging economies, as highlighted in **figures 5.3** and **5.4**, respectively. Note that a declining wage share does not mean a decline in the purchasing power of workers' wages. It suggests, however, that labour productivity growth has increased the incomes of capital owners more than it has increased the total compensation of labour.

Figure 5.3   Adjusted wage share in advanced countries, Germany, Japan and the United States, 1970–2010
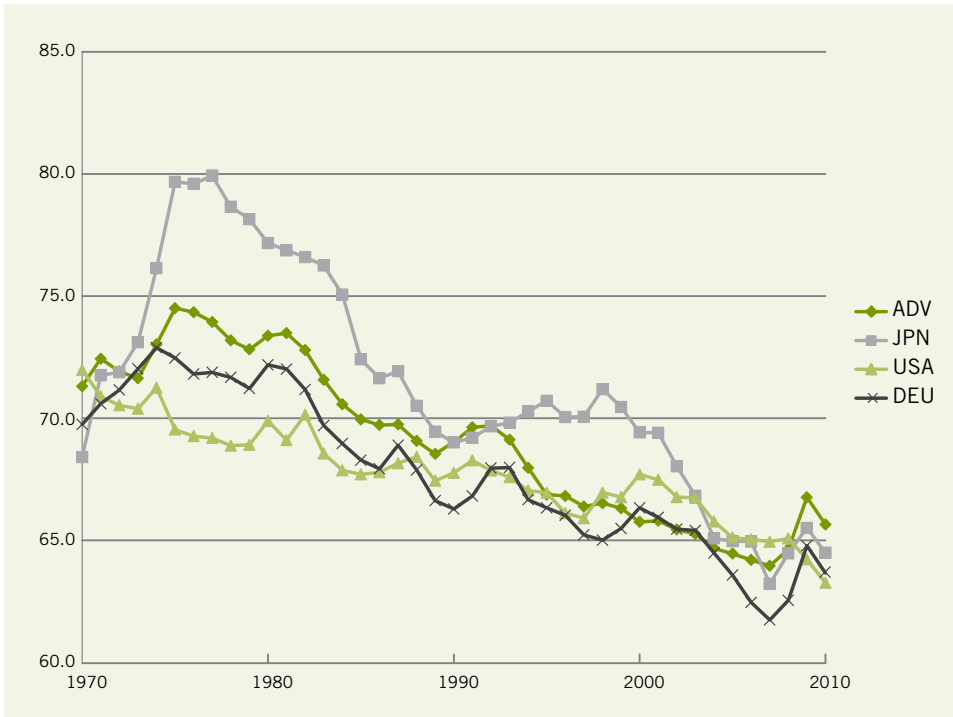
Notes: ADV stands for unweighted average of high-income OECD countries (Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, the Netherlands, Spain, Sweden, the United Kingdom and the United States (the Republic of Korea is excluded)). The adjusted wage share is calculated from national accounts as the product of total labour compensation per employee and total employment, divided by GDP.

Source: Stockhammer, 2012 from AMECO database.

5.2.3   What determines labour productivity?

In light of the above evidence, some economists consider that the question of wages in developing countries essentially boils down to the question of labour productivity. How can labour productivity be increased in poor countries? Until the 1950s, the central problem of development was often seen as being exclusively a problem of capital accumulation, i.e. how to increase the amounts of equipment and machinery that workers work with. Intuitively, a worker with more equipment at their disposal

generates more output per time. One theory, the so-called "Harrod-Domar growth model", assumed that there was a more or less fixed capital/output ratio, so that every additional US$ 1 million worth of machinery could produce say US$300,000 worth of extra output per year. Hence, the challenge of economic growth was seen as to increase savings and investment at a faster rate than the growth of the labour force. Unfortunately, although the correlation between higher savings and more rapid economic growth remains broadly valid (Deaton, 2010), the theory has proved too simplistic. Easterly (2001), for example, calculated that if all the US$ 2 billion of development aid that has flown into Zambia between 1960 and 1995 had translated into labour productivity growth, Zambia would have had, by the end of that period, a GDP 33 times higher than it actually was.

Attention has thus progressively shifted to the country's stock of "human capital", namely the quality of the workforce as determined by workers' level of skills, education and training. In the 1990s, a World Bank report – *The East Asian Miracle* (1993) – highlighted the fundamental role played by education policies in the 5.5 per cent annual per capita income growth between 1960 and 1990 of eight high performing Asian economies (Hong Kong (China), Indonesia, Japan, Republic of Korea, Malaysia, Singapore, Taiwan (China) and Thailand). These economies successfully emphasized universal primary education and, later, secondary education. In Singapore, for example, more than half the workforce in 1966 had no formal education, whereas by 1990 two-thirds had completed secondary education. More recently China also succeeded in increasing educational attainment very rapidly, particularly for higher education. While in 1982, less than 1 per cent of the Chinese population had any college education (although most had received a basic education), this proportion increased to 6.7 per cent in 2004 – about the same level as in India; as a result, the average number of years of schooling in the population of China is now higher than in Mexico (Naughton, 2007).

But education alone is no panacea. In many developing countries, the growth response to the education boom has been disappointing. Many countries, particularly in sub-Saharan Africa, invested heavily in education during the same period as the high performing Asian economies, but with disappointing economic results (Pritchett, 2001). Hence also the crucial role of efficiency and "technical change", referring to any factor that increases the output attainable from given amounts of capital and labour inputs. The source of such higher efficiency is hotly debated but is generally viewed as resulting not only from higher levels of "human capital" but also from increases in knowledge, better management or better economic policies.

But what are better economic policies? In the 1980s and 1990s, "better economic policies" were often equated with the "Washington Consensus", which called for liberalization and privatization as a one-size-fits-all policy; there is now more recognition that simplistic "pre-packaged" solutions should be avoided and that proper diagnostics on the growth bottlenecks should be undertaken before rushing into policy recommendations (Rodrik, 2010). In that context, the role of industrial policy in coordinating investment into potentially profitable sectors of activity and the role of context-specific institutional arrangements (including peaceful relations between labour and capital) have been re-emphasized as key determinants of structural change and sustainable productivity growth in the long term.

Figure 5.4   Adjusted wage share in developing and emerging economies, 1970–2006
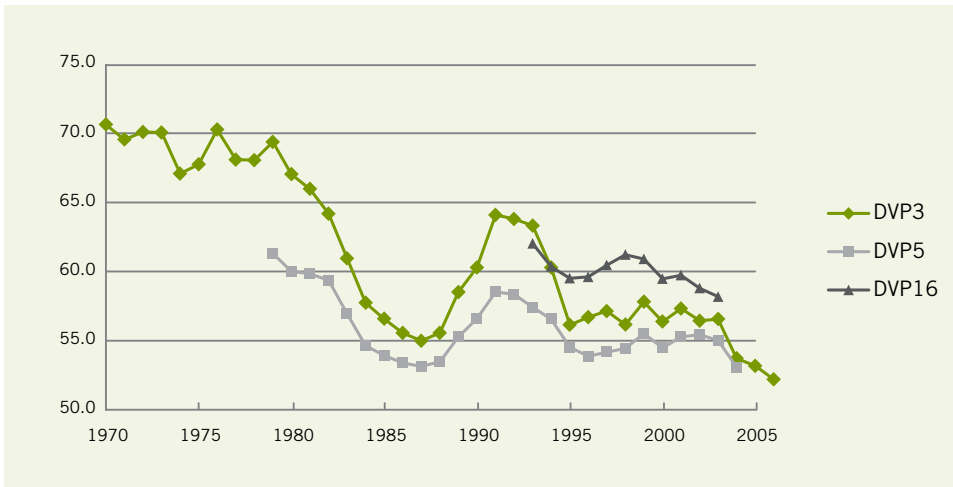
Notes: DVP3: unweighted average of Mexico, Republic of Korea and Turkey; DVP5: unweighted average of China, Kenya, Republic of Korea, Mexico and Turkey; DVP16: unweighted average of Argentina, Brazil, Chile, China, Costa Rica, Kenya, Republic of Korea, Mexico, Namibia, Oman, Panama, Peru, Russian Federation, South Africa, Thailand and Turkey. The adjusted wage share is calculated from national accounts as the product of total labour compensation per employee and total employment, divided by GDP.

Sources: ILO, 2011b[4]; Stockhammer, 2012.

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[4]   See data collection on wages and income at: http://www.ilo.org/travail/areasofwork/wages-and-income/WCMS_142568/lang--en/index.htm.

5.2.4 Economic development and wages with unlimited supplies of labour

Increasing average labour productivity is evidently necessary for workers to enjoy higher wages, but the mechanism between productivity and wage growth is sometimes more complicated in developing countries characterized by excess labour supply. In 1954, Nobel Prize economist W. Arthur Lewis observed that developing countries typically have a small modern economic sector which provides wage employment, and which coexists with a traditional sector where a large pool of underemployed persons work as self-employed farmers or in urban informal and casual jobs. Lewis described the subsistence sector as a recipient for a country's "labour surplus" and saw informal employment there as a form of "disguised unemployment" where the marginal productivity of workers was very low or even perhaps equal to zero.[5] In such circumstances, modern industries face a quasi "unlimited" supply of labour, meaning that they can attract as many workers as they need without having to raise wages. As long as they pay even just a little bit more than what people can earn in the subsistence sector, they will be able to attract as many workers as necessary. Hence, although average labour productivity might increase as a result of investment in the modern sector, wages could very well remain flat – if there are no trade unions or other institutions to bargain for higher wages. Until the turning point is reached when the labour surplus disappears, the only benefit for workers of the expansion of the modern sector is that more of them get employed.

This story can be illustrated as in **figure 5.5**. The labour supply curve is now shown to be horizontal (representing an unlimited or "infinitely elastic" supply of labour) until it reaches the turning point T. Before this turning point is reached, any increase in labour demand (such as from D to D1) will result in increased wage employment (such as from E to E1) but not increased wages. After point T, where all the excess supply has been absorbed and after which any additional demand for labour at wage W will exceed supply, any increase in labour demand (as from D1 to D2) will lead to competition among firms for workers and trigger wage increases (from W to W2). In a review of how labour markets changed in Hong Kong (China), the Republic of Korea, Singapore and Taiwan (China) in their early stages of industrialization, Fields (1994) found some empirical support for the Lewis model. He observed that in the 1960s and 1970s, in spite of rapid economic growth, employment grew very fast but wages changed very little. The prevailing wages in the nascent industries were

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[5] The assumption of a zero marginal product of agricultural labour implies that the number of workers there could be reduced without reducing output. This assumption has been the subject of much controversy and should probably not be interpreted too literally.

apparently high enough to attract a virtually unlimited supply of labour. It was only after the 1980s, "once full employment was attained", that further economic growth produced some rapid wage increases.

Figure 5.5 Productivity, labour demand and wages in a country with surplus labour
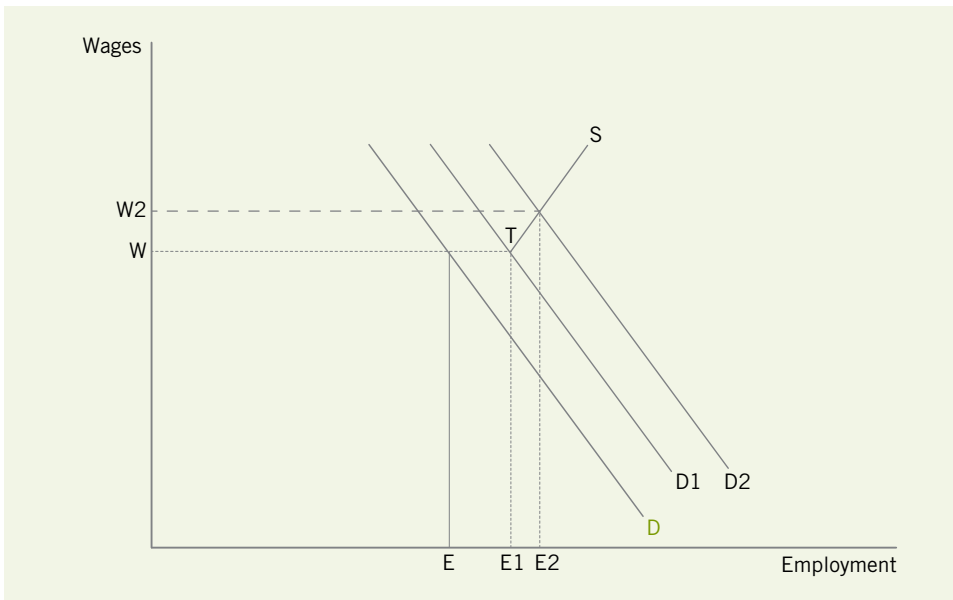
Source: Fields, 1994.

5.2.5 Imperfect competition and the role of labour institutions

In addition to assuming full-employment, the neoclassical marginal productivity theory relies on the hypothesis that markets are so competitive that firms make no profits beyond the rental price of capital. Because this prediction does not square well with empirical observations, a growing body of economic literature takes imperfect competition as a starting point for analysis (Manning, 2011). In a world of imperfect competition, firms almost always have some ability to realize economic profits or "rents", which do not automatically translate into higher wages but which can be shared in multiple ways between workers and employers. The division of such "rents" may be subject to a wide range of "non-market" factors such as bargaining power and wage institutions. Without institutions like trade unions and collective bargaining, there is

a possibility that employers will capture a disproportionate share of the economic surplus.

Collective bargaining is the process of negotiation between the representatives of employers and workers to arrive at a collective agreement that will govern the employment relationship, covering wages, working time and other working conditions (Hayter, 2012). Economic models generally consider that workers' demand for unionization – and employers' incentives to resist unionization – strongly depend on the extent of unions' ability to raise the wages of members. This ability, in turn, depends on the existence and the size of "rents". If there are large rents because of monopoly profits, unions will be able to negotiate higher wages more easily than if rents are small because of firms' exposure to cutthroat competition. If markets really were perfectly competitive, any higher wages negotiated by unions would lead to reduced product demand, lost sales and, ultimately, to the bankruptcy of all unionized firms – a dramatic event that has not been observed in practice (although there are of course examples of individual firms pushed into bankruptcy by excessive labour costs).

A study by Rodrik (1999) indirectly confirms the importance of trade unions in the determination of workers' wages. He finds that in addition to labour productivity, a statistically significant association exists between the level of manufacturing wages in a country and the degree of democracy, which he interprets as an indicator of workers' rights to freedom of association and collective bargaining. This result holds both across countries and over time within countries. So, for example, he found that manufacturing wages increased relative to labour productivity growth at the times when countries or territories transitioned towards more democracy, including in Argentina (1983), Brazil (1985), Chile (1989), Greece (1974), Hungary (1989), the Republic of Korea (end 1980s, early 1990s), Portugal (1974), Spain (1975), Taiwan (China) (end 1980s, early 1990s) and Turkey (1983). By contrast, wages fell relative to productivity after some countries transitioned from democracy to autocracy, such as in Argentina (1976), Brazil (1964), Chile (1973) or Turkey (1980). These findings suggest that authoritarian regimes, by restricting the rights of workers, tend to transfer income from workers to capital-owners.

The finding that institutions, and in particular trade unions, matter in things related to wages appears to be consistent with the large body of country-specific literature. In effect, the "wage mark-up" (i.e. the difference in the average wages of workers with and without union support) lies at the very heart of the existence of trade unions. The largest literature covers the United States and the United Kingdom, where the average "mark-up" indicates that workers with union support earn on average about 10 per cent to 15 per cent more than other workers with similar individual and workplace

characteristics. Limited country-level evidence suggests that the "mark-up" might be even higher in low- and middle-income countries. In South Africa, for example, a series of estimates indicate that unions possibly increase the wages of black blue-collar workers by one quarter compared to non-unionized workers. Some authors consider that these high "mark-ups" in developing countries discourage investment and are only possible because of the relatively small size of the covered sector and, therefore, the limited adverse effect that such high mark-ups may have on a country's macroeconomic performance; when most workers are covered by collective agreements, such high mark-ups would be unsustainable (Tzannatos, 2008).

Another discussion of the side effects of trade union activity in developing countries was provided in economic models of labour migration in developing countries (see also Chapter 6 on migration in this volume). A theory developed by Michael Todaro considers that the higher wages negotiated by trade unions or dictated by minimum wage laws in the urban modern sector are the prime cause of the sometimes massive migration from the countryside to the city, where workers queue for a job in the modern sector even though their actual probability of obtaining such a job is very limited. While this story seems to have some relevance in particular countries, it has also been criticized by researchers who found that access to formal jobs is largely determined by one's contacts or social network rather than by geographical migration from the countryside to the city and who consider that – knowing this – rural workers do not actually migrate because of wage differentials (for more on this subject see Meier and Rauch, 2005).

5.2.6 The macroeconomic perspective

While theories of imperfect competition have questioned the view that higher wages negotiated through collective bargaining always lead to lower employment, another – perhaps more fundamental – criticism of the assumptions behind the simple partial-equilibrium analysis comes from the field of macroeconomics, where one view is that the total economy-wide volume of employment is influenced by the overall volume of aggregate demand (the sum of consumption, investment, net exports and government spending) more than by microeconomic labour market specificities. In effect, it is essential to emphasize that the overall demand for labour is always a "derived demand", which depends on the demand for goods and services that the economy produces. This "derived demand" can either be "direct" if labour produces the good that is demanded by consumers or "indirect" if labour produces an input into the production of another firm (for example, the demand for coal miners may depend on the demand for steel derived from the demand for cars and refrigerators). So the

question of aggregate demand needs to be considered when the relationship between wages and employment is discussed.

Keynes (1936) agreed that there exists a demand schedule for labour at the industry level, which relates the quantity of employment with the level of wages as in **figure 5.1**, but he considered it fallacious to transfer this reasoning without substantial modification to the economy as a whole. The main reason is that industry-level demand can only be constructed on some assumptions about the nature of demand and supply in other industries, and that a simple transposition implicitly assumes that the aggregate effective demand is fixed and independent from the level of wages. In the words of Keynes: "whilst no one would wish to deny the proposition that a reduction in … wages *accompanied by the same aggregate effective demand as before* will be associated with an increase in employment, the precise question at issue is whether the reduction in … wages will or will not be accompanied by the same aggregate effective demand as before."

The broader implication of the Keynesian analysis is that although lower wages may encourage exports and perhaps investment, they are also likely to hurt private household consumption. Hence, if a fall in wages reduces domestic consumption more than it increases exports and investment, it has a negative effect on a country's aggregate demand and thus, by extension, also on employment.

5.3   The distribution of wages

While average wages are a good indicator of general living standards, the *distribution* of wages is an essential determinant of overall income inequality within countries. In their chapter for the *Handbook of income distribution*, Neal and Rosen (2000) remind us that wage inequality is an inescapable aspect of market economies: a remarkable regularity is observed in all earnings distributions in large populations, namely that earnings distributions are asymmetric and display a long right tail (i.e. they are skewed to the right). This is illustrated in **figure 5.6**, where the level of wages is plotted on the horizontal axis and their frequency is on the vertical axis. Key features of such a distribution are that mean earnings exceed median earnings,[6] and that the most frequent scenario (i.e. the peak or mode of the distribution) is closer to the median than to the mean. One implication is that the top percentiles of earners account for a strikingly

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[6]   The median wage refers to the wage of the person in the middle of the wage distribution, while the mean is the sum of all wages divided by the number of employees.

disproportionate share of total earnings and, conversely, that the sum of the wages of all the low-paid represent a relatively small share in the total wage bill.

There are many joint explanations for this unequal wage distribution. According to the neoclassical explanation, wage compensation reflects the productivity of workers, and the productivity of workers varies widely across individuals. But models of imperfect competition show that wage dispersion can also occur for reasons that are completely unrelated to worker skill or ability.

Figure 5.6   The skewed distribution of earnings

Source: Based on Neal and Rosen, 2000.

For example, a firm with a more productive workforce might generate higher rents, and share them with all employees, irrespective of the individual employee's skill or ability. Evidence from Mincer (1974) regressions clearly shows that both worker characteristics, related to their individual labour productivity, and employer characteristics matter (Abowd, Finer and Kramarz, 1999; Abowd et al., 2001; Menezes-Filho, Muendler and Ramey, 2008).

5.3.1 Characteristics of workers – men and women

What characteristics of workers explain the distribution of wages? An obvious characteristic which differs across individuals is the level of education and work experience (see also Chapter 7). Indeed, wage inequality typically arises because of the dispersion in worker education, ability, labour-market experience, firm-specific human capital and sector-specific human capital. At a general level, the theory of "human capital" (i.e. the knowledge created by investment in education) is based on the observation that better education and more skills raise the productivity of workers – who in turn are rewarded in the form of higher wages. If the labour market did not reward people for undertaking lengthy periods of education and training, there would be no incentive to invest in such efforts and forego wages during these periods. Hence, a country's "human capital" would remain low and so would its general level of productivity and wages. One way to assess the extent to which education is rewarded is through the calculation of so-called "private returns to education", defined – in the simplest fashion – as the increase in the level of wages that an individual can expect for one additional year of schooling. Estimates of private returns to education show that the number of years of schooling is a particularly significant determinant of the distribution of wages; **box 5.1** illustrates how economic reforms have increased the returns to education in China to the world average.

Box 5.1   Private returns to education in China

Under its socialist system, China has always attached great importance to providing basic education to as large a number of children as possible. Literacy and basic industrial skills were broadly spread across the population. However, people with more than an average-level of education or skills could expect little individual or private rewards from their superior skills. When studies on the rates of returns to education were first undertaken in China at the end of the 1970s or early 1980s, researchers generally found that the wages of highly educated Chinese were just as low as those of low-educated Chinese workers. The private returns to education were essentially equal to zero. What raised wages was not education, but Communist Party membership, being male and having more seniority on the job.

Economic reforms in China have dramatically altered this reality. The gradual introduction of market reforms has allowed individuals with higher levels of education to reap parts of the extra income created by their investment into education and training. In urban China, the rate of returns to education began to climb in the early 1990s and continued to increase sharply after that. While in the early 1990s an urban worker could expect to raise their wages by 4–5 per cent per year for each additional year of schooling completed, this "knowledge premium" increased to about 10 per cent in 2000. In only about 10 years, China had caught up with the world average of 10–11 per cent. Labour markets in China are now able to provide

higher rewards to those who invest in human capital, creating incentives for people to propel China towards a skill-intensive economy in the future. It is estimated that in only 5 years, from 2001 to 2005, the total number of young people graduating from college tripled, from 1 to about 3 million.

The downside of this rapid change is that inequality in China has increased, perhaps at an unprecedented pace in history. In few years, China changed from a very egalitarian society to a very unequal society (with Gini coefficients of income inequality close to the level found in Brazil or Gambia, among the most unequal countries on the planet). Worried that this may imperil its objective of creating a "harmonious society", the government has reacted with a number of measures aimed at reducing inequality, including through a coordinated increase in minimum wages across provinces.

Sources: Naughton, 2007; ILO, 2010.

Differences in the level of education, work experience and skills training lie at the heart of economic explanations of the gender pay gap. When this gap is measured by the ratio of female to male average wages, the gap is observed to close only very slowly. In a majority of countries, women's wages represent between 70 per cent and 90 per cent of men's wages (ILO, 2010). A review of empirical studies from 71 countries indicated that on average in developed countries, women earn 77 per cent of men's wages, while this proportion falls to 73 per cent in developing countries – but it is not uncommon to find much higher gaps in some developing countries (World Bank, 2001). Cross-country evidence also shows that women are generally over-represented among the low-paid workforce (ILO, 2010). Yet, the fact that female education has improved considerably during the last decades and that gender gaps in schooling have been falling in many places has clearly contributed to reducing the gender pay gap.

Sex-based segmentation in household tasks and in the care economy contributes to the persistence of gender pay gaps, particularly by reducing the time that women can devote to market work. The literature that explores gender differences in earnings finds that there exists a premium for being married for men and a penalty for having children for women. These differences manifest in marked inequalities in transition rates from unemployment or inactivity into employment. If women enter and leave employment with greater frequency to have and care for children or to care for other family members, their job tenure will be lower than that of men. In a world where job tenure means greater experience and the returns to experience are rewarded with greater pay, the inequitable division of labour within the household and in caring responsibilities result in a gender pay gap (Manning, 2011).

Another part of the pay gap is due to the fact that – although they have massively increased their participation in paid labour activities over the past few decades – women tend to be concentrated in different types of occupations than men, reflecting some form of occupational segregation. In developing countries, many women have, for example, been drawn into relatively low-skilled export-oriented manufacturing or temporary plantation work, while facing restrictions in their ability to access more skill-intensive jobs in other sectors (Seguino and Grown, 2006). Outright pay discrimination between men and women also explains part of the gender pay gap. Such discrimination can arise because of employer prejudice, customer prejudice or a number of other reasons. It is not limited to gender but also occurs on the basis of other characteristics of workers. For instance, in China, the risk of low pay is more than three times higher for migrant workers than for local workers (ILO, 2010). About 60 per cent of this discrepancy is attributable to productivity-related factors, while the remaining 40 per cent can be attributed to differential treatment that partly arises because of discrimination. Another example of pay discrimination can be found in the lower wages of indigenous workers in the Plurinational State of Bolivia, Peru and some other Latin American countries (Hall and Patrinos, 2006; Atal, Nopo and Winder, 2009).

5.3.2 Employer and industry characteristics

Wage inequality not only arises because of differences in worker characteristics but also because of differences in wages across industries and firms. Although textbooks sometimes imply that similar workers working in similar jobs must have similar wages, in fact substantial differences in wages exist across industries and firms for workers with similar characteristics doing apparently similar jobs. Although some authors have tried to reconcile these findings with the neoclassical theory of competitive markets, this empirical evidence is most easily understood in the context of imperfect markets, where firms can change prices, make profits (or "rents") and choose to pay wages that are above the market rate.

So, for example, inequality may arise among similar workers because more profitable industries or firms share part of their "rents" with workers through collective bargaining. Alternatively, larger plants or firms may choose to offer relatively high wages to attract better workers, motivate staff, increase productivity and reduce turnover (so-called "efficiency wages"). These practices are likely to be more frequent in formal-sector enterprises where, as a result, wages are also likely to be higher than in the informal part of the economy. Indeed, one particular concern in developing countries is related to the existence of a "wage penalty" for workers who are employed

in the informal rather than the formal economy. One study in South Africa found, for example, that among male wage earners, the hourly wages are twice as high in the formal sector as in the informal sector, and that only 75 per cent of the difference could be explained by observable differences in human capital and job characteristics (El Badaoui, Strobl and Walsh, 2008). Another study in four urban areas of Burundi finds that workers in the informal sector earn 37 per cent less than otherwise similar workers in the formal sector (Sobeck, forthcoming).

The existence of trade unions and collective bargaining at the industry- or firm-level can also have a significant impact on wage distribution. However, the rate of union-ization and the coverage of collective bargaining in developing countries are usually very low. In the advanced European countries, coverage of collective bargaining reaches 70 per cent or more of employees in a majority of countries. In Asian coun-tries, it is usually below 15 per cent and often below 5 per cent of employees. In both Latin America and Africa, trade unions appear to have been weakened by years of structural adjustment policies. In Peru, for example, collective bargaining has reached a historically low level, with less than 8 per cent coverage and a decrease in the number of collective agreements from 2,000 in the early 1980s to 300 in 2007. In the United Republic of Tanzania, too, coverage declined when a centralized wage policy was replaced by wage bargaining at the enterprise level.

Despite some significant positive developments in recent years, freedom of asso-ciation also remains less than universal. Government intervention in trade-union activities is a recurrent problem and the number of complaints received by the ILO concerning acts of anti-union discrimination and interference has increased. Several countries also continue to exclude important categories of workers from the right to collective bargaining, particularly domestic workers, agricultural workers, seafar-ers and public civil servants. In some countries, the killings of trade unionists also remain a dramatic concern.

At the same time, even when freedom of association is guaranteed, it remains a chal-lenge for trade unions in developing countries to develop inclusive systems and to or-ganize low-paid workers. Few low-paid workers are union members and the low par-ticipation rates of women in workers' organizations compound this challenge. In the Republic of Korea, overall union membership fell to 12.2 per cent in 2009 and only 2.2 per cent of low-paid workers are union members. Even in South Africa, where about 31 per cent of wage earners were estimated to belong to trade unions in 2007, union membership among low-paid workers was only 13.3 per cent (ILO, 2010).

5.3.3 Labour market regulations: The example of minimum wages

Low wages in developing countries are often associated with hardship and sometimes with household poverty. One study in India showed, for example, that 30 per cent of salaried workers and 40 per cent of casual wage earners live in poor families (Belser and Rani, 2011). An ILO report (ILO, 2011a) also found that in a sample of 34 countries, a total of 15.8 per cent of all the working poor are wage and salaried workers. In addition, growing inequality can be associated with social conflicts, unrests and political instability. Hence, policy-makers all around the world have tried to regulate labour markets, particularly through minimum wages, with a view to producing outcomes that are socially acceptable or in line with local perceptions of social justice (see also Chapter 8 in this volume).

Although the evidence on the links between minimum wages and employment is controversial, individual country examples show that when minimum wages are set at a reasonable level, they can succeed in reducing wage inequality without much of an adverse effect on employment (see, for example, Lemos, 2007, on Brazil). To obtain such an outcome, however, the minimum wage must be set in a way that takes into account both the needs of workers and their families as well as economic factors, such as productivity. A number of operational criteria (such as the poverty line, the ratio of minimum to average wages or the proportion of wage earners affected) can be used to evaluate whether the minimum wage is set at an appropriate level (Belser and Sobeck, 2012). The involvement of social partners (workers and employers) in the process usually also contributes to a more balanced outcome than if government acts unilaterally.

Because of the potential risks of mismanagement, the importance of sound policy design can hardly be exaggerated. One typical complication arises when different aspects of the social protection system, such as pensions, disability payments or maternity benefits, are linked to the level of minimum wages – so that retirement and other benefits will be adjusted upwards when the minimum wage increases. Although this may be useful to maintain the purchasing power of the poorest pensioners, in practice it often prevents governments from increasing minimum wages for fear of the adverse impact on social security budgets.

Another limitation in developing countries is the partial legal coverage and enforcement of minimum wages, as many casual and informal-wage workers are excluded de jure or de facto from the protection of the labour code. Minimum wages, to be useful, need to cover a broad range of workers and be accompanied by credible enforcement mechanisms. It is well appreciated that compliance is a function of the probability of

firms being visited by labour inspection services and of the level of penalties in case of non-compliance. However, in many countries, labour inspection services are understaffed and penalties are very weak. As a result, evidence from a number of country studies suggests that non-compliance can be extremely high. In Latin America, it has been estimated that the share of workers who are earning less than the minimum wage frequently exceeds 20 per cent and can reach up to 45 per cent (Cunningham, 2007). **Box 5.2** also highlights the magnitude of the challenges for minimum wages and collective bargaining to reduce wage inequality in a country such as India.

Box 5.2   Collective bargaining and minimum wages in India

A study by Rani and Belser (2012b) shows that being part of a trade union in India considerably reduces the probability of low pay for both salaried and casual workers. For salaried workers, the probability of low pay for otherwise similar workers falls by 25 per cent in urban areas and by 14 per cent in rural areas. This means that, for workers, being part of a union is the third largest determinant for escaping low pay, next to the education and sex variables. Interestingly, being part of a union or an association that defends the interests of workers is also an important factor in the wages of casual workers, reducing the probability of low pay by 16 per cent in urban areas and also by 11.5 per cent in rural areas. In spite of the challenges, public employment guarantee schemes in India may have contributed to raising the effectiveness of minimum wages (see Rani and Belser, 2012a).

The overall collective bargaining coverage in India remains relatively limited, with an estimated 24.9 million unionized workers in 2002, representing a union density of 6.3 per cent (Ahn, 2010).[7] While many of the same problems related to fragmented trade unionism in other countries in the region also apply to India (Shyam Sundar, 2009a and 2009b), the case of West Bengal, where an estimated 5 million workers are unionized, is interesting. One important reason for the relatively high collective bargaining coverage in West Bengal is linked to the increasing inclusion of unorganized-sector workers into the ambit of industry-wide collective bargaining. So, for example, many small units in the sponge iron industry, cold storage enterprises and hosiery workers have been covered as a result of government facilitating the signing of agreements in industries hitherto uncovered by collective agreements (Sen, 2009). At the same time, it is also recognized that the economic impact of the trade union movement in India is not without its problems and that trade unions should perhaps operate a paradigm shift from "political unionism" to a tradition of

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[7]   Note that these figures are likely to underestimate the true impact of union density as they are based on a government verification process of unions that are members of the central trade union organization and thus exclude independent unions (Ahn, 2010). Data from the Employment-Unemployment Survey for 2004/2005 suggest that in total 16.6 per cent of workers are attached to a union or an association that defends their common interest.

services-based trade unionism, more suitable for developing industrial relations (see Cunniah (preface) in Ahn, 2010).

Another important area of wage policy relates to the design of minimum wages in India. Through the adoption of the Minimum Wages Act in 1948, India was one of the first developing countries to introduce a minimum-wage policy. The system, however, is one of the most complicated in the world, where state governments fix different minimum wage rates payable to different employees in a limited number of sectors and occupations (the so-called "scheduled employments") where collective bargaining is absent and where workers are seen as being vulnerable to unduly low wages and exploitation. The result is a complex system with no less than 1,171 different minimum-wage rates but in which many million workers remain uncovered because they do not work in any of the "scheduled employments".

Belser and Rani (2011) estimated that partial coverage together with non-compliance have resulted in a situation where 73 to 76 million salaried and casual workers, out of a total of about 175 million, were paid below statutory minimum wages. This calls for a rethinking of the way minimum wages in India are designed and implemented, moving in the direction of a simpler system with better implementation and broader coverage.

Sources: Belser and Rani, 2011; Rani and Belser, 2012a; Rani and Belser, 2012b.

5.3.4 The role of globalization

Globalization – the growth of international trade and capital flows – was predicted by many economists to reduce inequality in developing countries. The standard (Heckscher-Ohlin) trade theory predicted that a fall in trade barriers would trigger massive exports of goods that used a large number of relatively low-skilled workers (the most abundant production factor in developing countries). Hence, it was expected that in these countries, globalization would raise the demand for – and wages of – relatively low-skilled workers, and thereby reduce wage inequality. The plausibility of this prediction was reinforced by the earlier experiences of some countries and territories – notably the Republic of Korea, Singapore and Taiwan (China) – which succeeded in reducing inequality while undergoing trade reforms in the 1960s and 1970s (Wood, 1997).

However, the story of globalization in the 1980s and 1990s has been quite different. Reviews of the literature show that all existing measures for inequality[8] in developing

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[8]   Wage inequality can be measured by the returns to education, but also for example by the Gini coefficient or the wage differential between workers at the 10th and the 90th percentile. See Chapter 3

countries point to an overall *increase* in inequality over the last three decades, which in some cases was quite severe (Anderson, 2005; Goldberg and Pavcnik, 2007). In fact, with the notable exception of Latin America in recent years, almost all developing countries seem to have experienced an increase in the skills premium during this period. What explains this apparent paradox? One possibility is that the entry of giant countries such as China and India into the global marketplace has put downward pressure on the prices of labour-intensive products everywhere across the world, hence reducing the wages of previously protected low-skilled workers (Wood, 1997). It has also been observed that the sectors and industries that experienced the largest tariff cuts in developing countries were often those with the highest shares of less-educated workers and the lowest wages to start with. In Colombia and Mexico, for example, it was found that after trade liberalization, wages in the low-wage industries declined most, hence increasing inequality.

Another possibility is that the positive labour demand effects of increasing exports have been swamped by other concurrent trends, such as labour market deregulation, privatization or the diffusion of modern skill-biased technology – whose effect may all have further contributed to the increase in inequality in developing countries. It is widely believed that the recent distributional changes involve some interaction between openness to trade and the import of new technology that favours more educated people who can work with the technology but displaces (or perhaps even replaces) low-educated workers. The empirical finding that the share of skilled workers has increased *within* almost all industries during the last few decades provides some strong support for this hypothesis (Goldberg and Pavcnik, 2007).[9]

Other possible factors include offshoring from industrialized to developing countries of activities that are at the high end of skill intensity for developing countries – though at the same time at the low end for industrialized countries – and thus raise demand for skill (Feenstra and Hanson, 1996). Another explanation is that globalization offers additional export opportunities and generates higher rents for the most capable firms, which can initially raise wage inequality when export rents are shared with workers (Helpman et al., 2012).

Whatever the reason, the recent experience of developing countries has resuscitated the debate on the links between economic development and inequality. One

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for more details on how to measure inequality.

[9] Note that this contrasts with some of the views from the now developed countries of the nineteenth century, when skilled artisans destroyed weaving, spinning and threshing machines because the machines made their skills redundant, and when products previously made by skilled artisans were progressively produced in factories with workers with relatively few skills (Acemoglu, 2002).

widespread belief is that inequality is an unavoidable part of economic development. This understanding is often expressed in the so-called Kuznets curve (named after Nobel Prize economist Simon Kuznets), which suggests that during industrialization, inequality first increases, then stabilizes and eventually falls.[10] Many have interpreted this relationship as evidence that inequality is somehow a "natural" by-product of early economic development, and that it will decline "naturally" in later stages of development as the supply of educated workers increases and their relative returns decline. Recent evidence from the unprecedented growth in the wages and incomes of the top 1 per cent in the United States and a number of other developed countries (Atkinson, Piketty and Saez, 2011), however, questions whether inequality will "naturally" decline in later stages of development.

5.4   Conclusion

This chapter examines the determinants of wages in developing countries, emphasizing the linkages with labour productivity and with labour market institutions, such as trade unions, collective bargaining and minimum wages. The first part of the chapter focused on average wages, discussing how they are influenced by marginal and average labour productivity as well as by the existence of labour surplus, the structure of product markets, the strength of trade unions and even political regimes. It showed that although productivity growth is a condition for long-term growth in wages, productivity is by far not the only factor that determines how wages increase.

The second part of the chapter discusses the distribution of wages within countries, showing that inequality results from the fact that higher levels of skills and education are rewarded through higher wages. This mechanism provides the incentives that can lead to an accumulation of "human capital" within countries. But the extent to which skills and education of different groups are rewarded in the labour market depends on the relative supply and demand for skills in the labour market, the impact of open trade policies, the degree of occupational segregation and discrimination, as well as the extent to which rents exist and are shared with workers in different industries, firms or plants. Collective bargaining and minimum wages are often used as a way to iron out some of this inequality, but their impact on the most vulnerable workers remains limited in most developing countries.

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[10]   Hence, an inverse U-shaped relationship between economic growth and inequality.

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Labour migration and development: A critical review of a controversial debate

6

Alexandre Kolev

*Chief, Employment Research, Analysis and Statistics Programme,
International Training Centre of the International Labour Organization*

6.1 Introduction

Labour migration has existed throughout time and in all regions of the world. Today, the search for more favourable job opportunities continues to be a major motivation behind migration and explains why labour migrants constitute an important share of international and internal migration stocks. Aside from labour, other reasons for migration include conflicts, wars and political persecution, as well as family reunification, educational opportunities and climate change. Looking forward, projections indicate that, as a result of uneven demographic developments and large global labour market disparities, the supply and demand for labour migrants could continue to rise, contributing to increased migration flows. Such labour flows have induced gains and losses that have not been equally spread between and within countries, fuelling a controversial debate over the development impact of labour migration and the type of policies that States should pursue.

In the past, much of the debate on the development impact of migration focused on whether labour migration has a positive or negative effect on development in sending and receiving economies. Today, with the recognition that the links between migration and development are more complex, the debate has evolved. Considerable attention is being paid to why labour migration seems to be associated with positive development outcomes in some cases but not in others, and which policies can help maximize the benefits of migration while minimizing its costs.

The debate over the development impact of migration is reflected in the abundant theoretical and empirical literature on labour migration. Academic studies typically investigate the determinants of the migration decision by workers in source economies. Simple models to explain the reasons people move have been formulated in terms of the "pull–push" hypothesis. The so-called pull factors are the attractive factors that incite people to move from one area to another, while the push factors are the unfavourable conditions where people live that incite them to emigrate. Research also examines the impact of the migration decision on labour markets and other outcomes in both the sending and receiving economies. At the micro level, studies usually focus, in host regions, on the migration effects on native populations and previous immigrants, the labour insertion of immigrants, as well as, in home economies, the migration impact on households that send migrants – in particular the role of remittances – and on those that do not. At the macro level, the outcomes of interest typically refer to aggregate growth, human capital, poverty, overall inequality and bilateral trade flows.

Academic research supports several major conclusions about the determinants and the consequences of labour migration. A key insight revealed by the existing literature on the determinants of labour migration is that geographical disparities in economic opportunities and migration costs are the key drivers of labour flows. As regards the migration impact in sending regions, studies uncover various effects of migration but do not provide conclusive outcomes. Negative effects unveiled in several papers include the loss in human capital or "brain drain" and some adverse effects of remittances on growth. By contrast, other studies support the overall idea of a migration-induced brain gain and find positive direct or indirect effects in terms of wages, remittances and incentives to invest in schooling and health, poverty reduction, growth, innovation and trade flows. Ultimately, an important conclusion regarding the development impact of migration in host economies is that the migration effects depend above all on how the immigrants' skills compare to the natives' in the host region. There are both winners and losers; increased migration would normally negatively affect the wages of those workers who are close substitutes for immigrants, such as low-skilled native workers or previous immigrants. The impact on wages in receiving economies would be relatively small, however. In addition, while new migrants may have the most to gain, especially if they come from poorer areas, discriminatory practices and irregular migration often make the labour insertion of migrant workers more difficult.

The objective of this chapter is to present the most recent research on the links between labour migration and development. Both theoretical insights and empirical evidence are provided. Section 6.1 begins by presenting the trends and characteristics of labour migration. The following section then discusses the determinants of labour migration. A framework for understanding the development impact of labour migration in home regions, as well as the empirical evidence, is provided in Section 6.3. The effects of migration in host regions are reviewed in Section 6.4. The final section provides a summary of the key findings and a discussion of their policy implications.

6.1.1 Labour migration trends and characteristics

Labour migration is an important component of national and global economic development. Demographic transition theory states that with the development process, countries move from a pre-modern regime of high fertility and high mortality to a postmodern system in which both are low. These demographic transitions have important consequences on local labour markets and were, for instance, one factor behind the massive migration flows of Europeans two centuries ago. As people look for more and better jobs, they move from rural to urban areas, circulate within countries,

or cross borders and migrate to different regions of the world. These moves can be temporary or seasonal, or become permanent. Labour migration can be legal, when the legal requirements for immigrating are met, or irregular, in the case of unauthorized border crossings, entry by tourist visa with subsequent illegal stays, or unauthorized employment. How important is labour migration and what is the profile of labour migrants? Where do migrant workers go and where do they come from? Before answering these questions, this section provides an overview of the magnitude and characteristics of labour migration.

Recent years have seen a sharp increase in the number of international migrants. In 2010, more than 213 million men and women (about 3 per cent of the world population) were living outside their countries of birth, compared to 155 million 20 years before (**figure 6.1**). Globally, women constitute almost half of the world's international migrant population, indicating they constitute an important share of the migrant population. While migration can occur for a variety of reasons, including employment, family reunification, study or to avoid persecution, ILO estimates indicate that close to half of total international migrant stocks are labour migrants,[1] and a substantial proportion – between 10 and 15 per cent – may be illegal (ILO, 2004).

Aggregate data on migrant stocks exhibit large regional disparities in the spatial distribution of migrants across world regions (**figure 6.2**). The higher the level of economic development, the larger the number of international migrants. In 2010, the regions with the largest absolute stock of international migrants were respectively Europe (70 million), followed by Asia (61 million) and North America (50 million). Overall, these regions hosted nearly 85 per cent of international migrants. From a relative perspective, however, world regions with the largest proportion of migrants as share of the total population were respectively Oceania (about 17 per cent), North America (14 per cent) and Europe (9.5 per cent).

Apparent from the same data on international migrant stocks is the tendency for some destination countries to attract more migrants (**figure 6.3**). In 2010, in absolute numbers the United States was the largest recipient of international migrants (42.8 million), followed by the Russian Federation (12.2 million), Germany (10.7 million), Saudi Arabia (7.2 million) and Canada (7.2 million). Yet, in those countries, with the exception of Saudi Arabia, the immigrant population represented only a small fraction of the overall population.

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[1] The International Organization for Migration (IOM) defines labour migration as a cross-border movement for purposes of employment in a foreign country, but there is no universally accepted definition.

**Figure 6.1   Trends in total international migration, 1990–2010 (number of migrants, in
millions)**
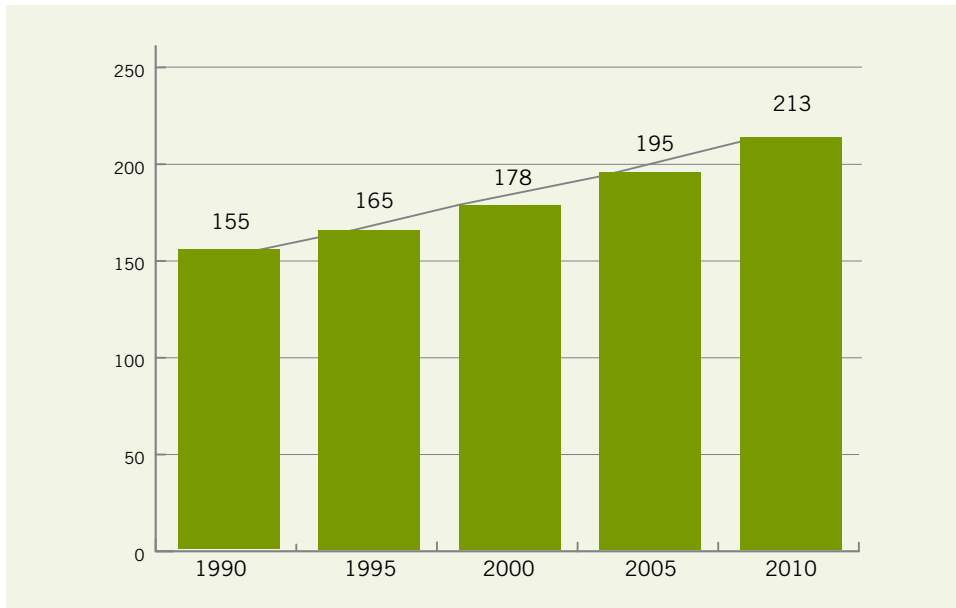
By contrast, the share of migrants as a percentage of the total population was particularly high in certain other countries: above 50 per cent in Kuwait, Qatar and the United Arab Emirates, and between 40 and 50 per cent in Israel, Jordan and Singapore.

The propensity to emigrate varies considerably across countries. In 2010, the largest stocks of international migrant population originated from Mexico (11.9 million), India (11.4) and the Russian Federation (11.1 million). Some countries (**figure 6.4**) also had a very high share of population that migrated: above 60 per cent for four areas (Grenada, Saint Kitts and Nevis, Samoa and Occupied Palestinian Territory), and between 50 and 60 per cent for another two (French Guiana and Monaco).

Figure 6.2   Estimated number of international migrants by world region, 2010

Absolute number of migrants (in millions)

Migrants as a percentage of total population
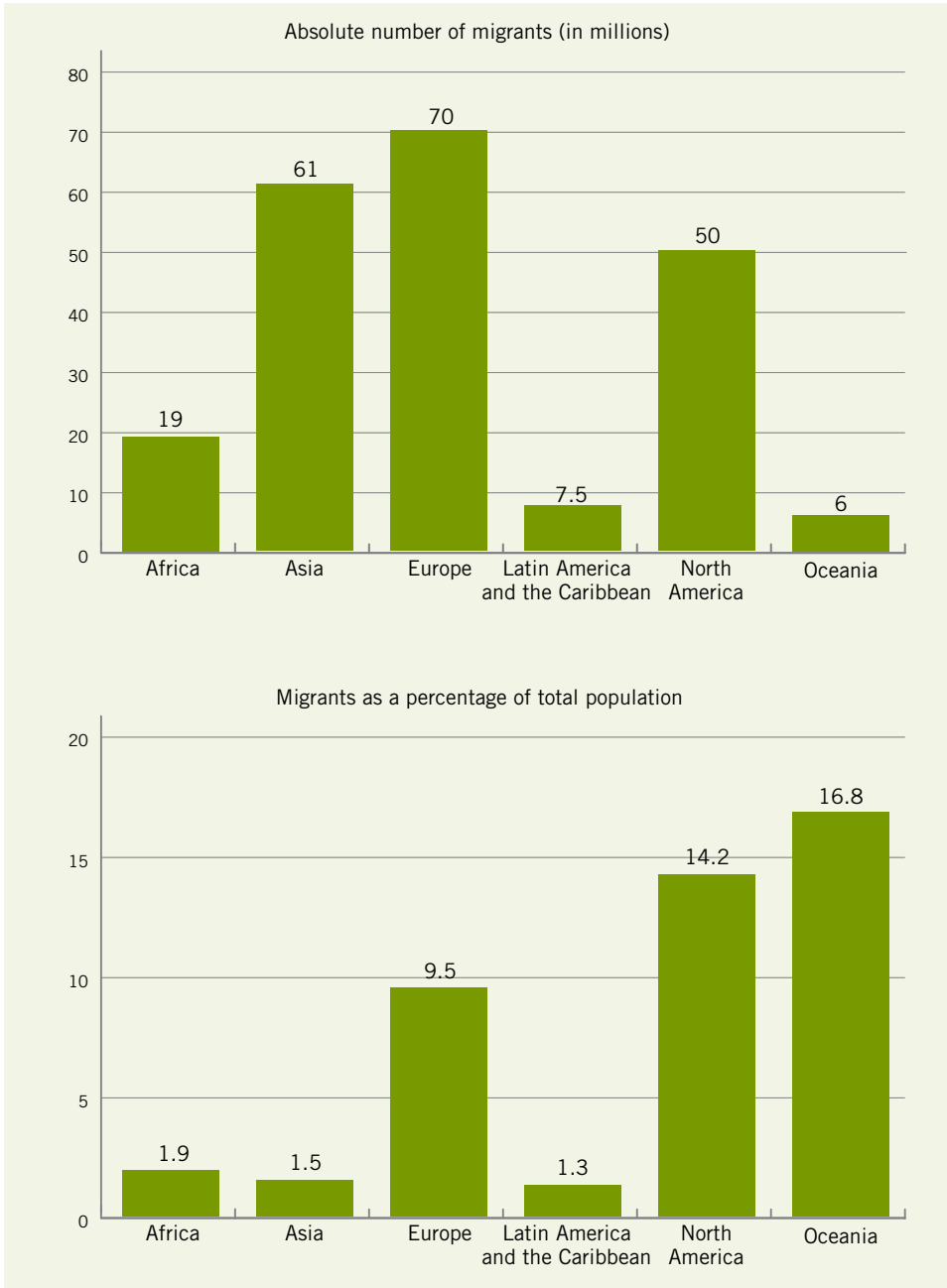
Source: United Nations, 2009.

Figure 6.3 **Top ten destination countries, 2010**

Number of immigrants, in millions

Country	Value
United States	42.8
Russian Federation	12.2
Germany	10.7
Canada	7.2
Saudi Arabia	7.2
France	6.6
United Kingdom	6.4
Spain	6.3
India	5.4
Ukraine	5.2

Immigrants as a percentage of total population

Country	Value
Qatar	86.5
United Arab Emirates	70.0
Kuwait	68.8
Jordan	45.9
Singapore	40.7
Israel	40.4
Oman	28.4
Saudi Arabia	27.8
Switzerland	23.2
New Zealand	22.4

Source: United Nations, 2009.

125

Figure 6.4   **Top ten emigration countries, 2010**

Number of emigrants, in millions

Country	Emigrants (millions)
Mexico	11.9
India	11.4
Russian Federation	11.1
China	8.3
Ukraine	6.6
Bangladesh	5.4
Pakistan	4.7
United Kingdom	4.7
Philippines	4.3
Turkey	4.3

Emigrants as a percentage of total population

Country	Percentage
Occupied Palestinian Territory	68.3
Samoa	67.3
Grenada	65.5
Saint Kitts and Nevis	61.0
French Guiana	56.8
Monaco	56.4
Antigua and Barbuda	48.3
Tonga	45.4
Albania	45.4
Barbados	41.0

Source: United Nations, 2009.

There is also evidence that skilled emigration disproportionately affects poor countries. In 2000, the emigration rate of individuals with tertiary education[2] reached nearly 12 per cent in low-income countries, compared to 7 per cent in middle-income countries and 4 per cent in high-income countries (**figure 6.5**). Moreover, over the past 10 years, while the emigration rate of the tertiary educated has remained constant in high-income countries, it has slightly increased for middle-income and low-income countries. The bias towards skilled emigration in poor countries often raises concern in the literature on international migration as it could exacerbate the brain drain in poor countries and deprive these countries of their most skilled and talented people. However, the emigration rate of the tertiary educated should be considered with caution. As noted by Hanson (2010), the rate can overestimate the extent of brain drain if students acquired their education abroad and if they had no opportunity to study in their home countries.

Figure 6.5   **Emigration rate of tertiary educated by income level of countries, 1990 and 2000 (percentages)**
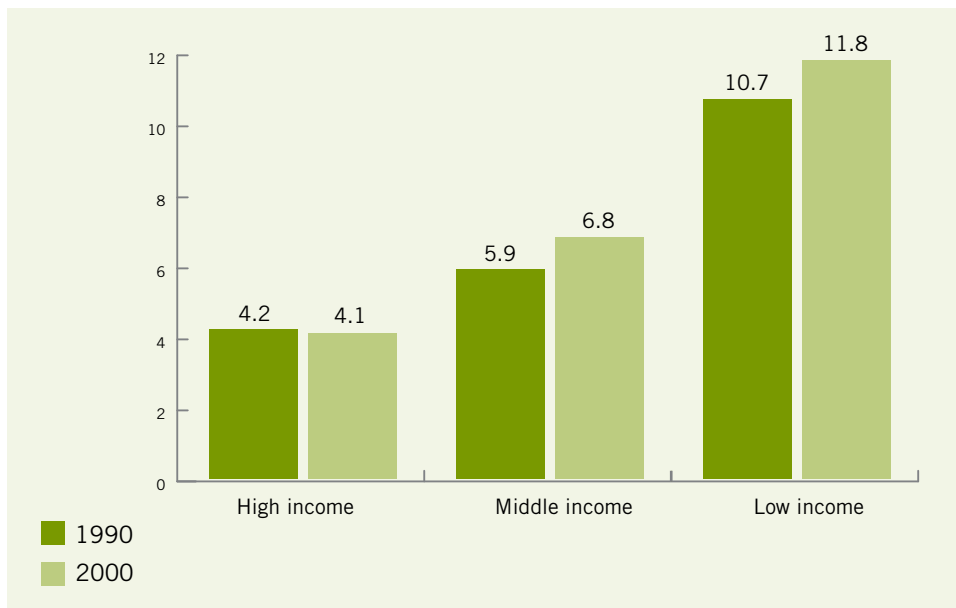
Source: World Bank, World Development Indicators, 2012.

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[2]   The emigration rate of people with tertiary education in the table shows the stock of emigrants aged 25 and older, residing in an OECD country other than that in which they were born, with at least one year of tertiary education as a percentage of the population aged 25 and older with tertiary education (Source: World Development Indicators, 2012).

Looking forward, demographic developments suggest that both the demand for and the supply of labour migrants will rise. Projected worldwide population and labour force changes in the next 45 years suggest that while the world population is ageing overall, disparities will grow across regions. For instance, in the next 45 years, and under a rather simplistic scenario where all other things remain unchanged, the potential demand for migrant labour – measured as the estimated decrease in the total labour force – could reach 215 million people, while the potential supply – measured by the increase in the labour force aged 15 to 39 – could stand at 570 million workers (World Bank, 2009). The supply of labour migrants will be the largest in the countries of sub-Saharan Africa, followed by South Asia, and the Middle East and North Africa. On the demand side, China is projected to suffer the largest decrease in its total labour force and may become an immigration country. However, the scope for increasing labour productivity in China is large, which is likely to offset the effects of a declining labour force on the demand for foreign labour. Aside from China, European countries are expected to have the largest demand for foreign labour, followed by the high-income countries of East Asia and the Pacific (EAP). By contrast, the demand for foreign labour in the United States and Canada, which have traditionally been countries of immigration, could be relatively small (**tables 6.1** and **6.2**).

Table 6.1   Potential supply of migrant labour by region, 2005–50 (million individuals)

Change in 15–39 labour force	2005–10	2010–20	2020–30	2030–40	2040–50	Total change
Low-income East Asia and Pacific	11.1	13.2	0.1	-4.7	-7.5	12.3
India	26.0	43.6	17.8	-2.3	-17.4	67.7
Latin America and Caribbean	12.3	15.0	5.7	0.3	-4.5	28.8
Middle East and North Africa	13.7	12.8	5.8	9.2	2.5	44.0
Other South Asia	16.7	28.0	19.0	14.9	10.1	88.7
Sub-Saharan Africa	31.1	72.0	77.7	78.8	68.7	328.4
Total	110.8	184.5	126.2	96.3	52.1	569.9

Source: World Bank, 2009.

Table 6.2   Potential demand for migrant labour by region, 2005–50 (million individuals)

Change in total labour force	2005–10	2010–20	2020–30	2030–40	2040–50	Total change
China	27.0	13.3	-36.6	-37.4	-51.1	-84.8
High-income East Asia and Pacific	0.1	-4.7	-8.9	-9.7	-9.1	-32.3
Eastern Europe and Central Asia	6.2	-1.9	-4.3	-8.9	-13.8	-22.7
European Union and other European countries	-2.3	-14.2	-19.7	-16.8	-13.4	-66.3
North America	3.5	-0.7	-3.5	-3.3	-4.8	-8.8
Total	34.5	-8.2	-73.0	-76.2	-92.2	-215.0

Source: World Bank, 2009.

In addition to international migration, abundant evidence confirms that an important share of labour migrants make up internal migration flows, in particular from rural to urban areas. The past decades have been marked by important waves of migration from the countryside to urban areas and by an unprecedented increase in the rate of urbanization, especially in less developed regions (**figure 6.6**). Current projections estimate that between 1950 and 2030, the share of the population living in urban areas could increase from about 52 per cent to 81 per cent in the more-developed countries, and from 18 per cent to 56 per cent in the less-developed regions. While such rapid urban population growth rates contribute to the development of urban labour markets, concerns are growing regarding their severe side effects, which include increases in urban unemployment, underemployment or informality, and difficulties to match the rapidly growing demand for basic community services and housing.

Figure 6.6 **Trends in the population, urban areas, 1950–2030 (percentages)**
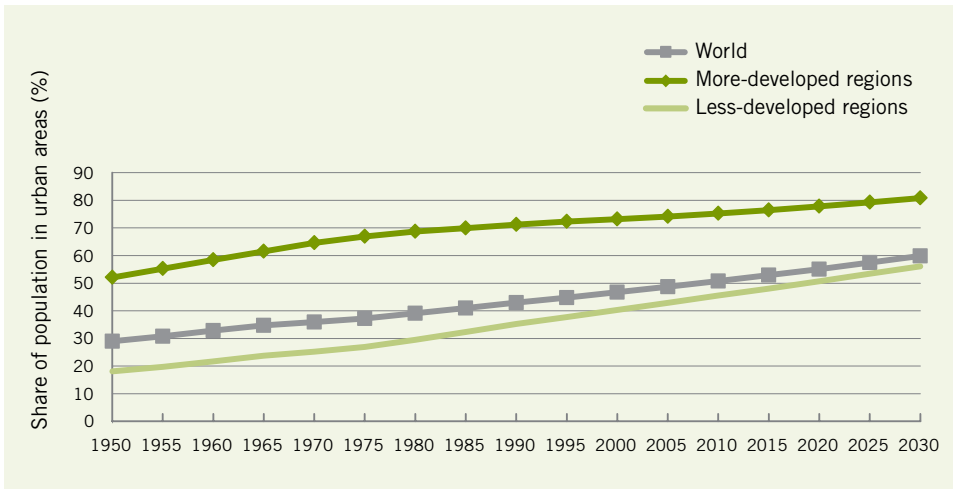
6.2   The determinants of labour migration

Research on migration is paying considerable attention to the role social, economic, environmental and political factors play in determining the intensity and directions of migration flows. Two broad migration modelling approaches have been developed and tested empirically. On the one hand, micro-studies have looked at the migration decision-making process from the individual or household perspective. On the other hand, macro-studies have focused on the spatial context of migration and the role of the main aggregate factors. Geographical disparities in prosperity and migration costs are usually considered as the main drivers of migration; they are thus the focus of most studies on the determinants of labour migration. The following section starts by providing a brief overview of the core analytical framework of the labour migration decision. The empirical literature on the determinants of migration is then discussed.

6.2.1   Theoretical underpinning

Labour migration can be understood as the outcome of both supply-side (push) and demand-side (pull) factors. The traditional focus of the theoretical literature on migration has been on the micro-modelling of the migration decision. Theoretically, the

decision to migrate depends both on the lifetime gain from moving and its costs. The first generation of economic research on the migration decision dates back to the 1960s with the human-capital model of Sjaastad (1962) and Becker (1964). Under this framework, migration is seen as an individual investment resulting from the expected gain and costs of moving. Regional disparities in prosperity and the rural–urban divide are thus important determinants of a move (Harris and Todaro, 1970). Migration flows are expected to respond largely to differences in labour market conditions, costs of living and public transfers (Zaiceva and Zimmermann, 2008). Micro-modelling theory also offers a framework to understand the decision-making process. Mincer (1978) presents a model where the decision to migrate is taken by families rather than by the single individual. In more recent research on the economics of migration, Stark and Bloom (1985) argue that the migration decision is taken collectively by groups of individuals with different preferences (e.g. families) and that the objective is not only to maximize the expected income but also to minimize risks related to different market imperfections. Research on migration has also expanded to explain the phenomenon of return migration, underlying the decision to return (see, for instance, Dustmann and Kirchamp, 2002; Cassarino, 2004).

The micro-theory approach often models the migration decision as depending on wage differentials and differences in wage inequality between home and host economies. A distinction is made according to the skills composition of workers. Migrants can be negatively self-selected when individuals from the lower end of the skill distribution are more likely to migrate (Borjas, 1987). By contrast, positive self-selection occurs when the most skilled workers are more likely to emigrate (Chiswick, 1999). The size of the skill premium in host economies is a key factor behind the skills composition and the selection of immigrants: the higher (lower) the skill premium in better-off regions, the higher (lower) the incentives to migrate are in such regions for skilled workers. Older individuals also exhibit a lower migration probability as their expected lifetime gain from moving is reduced.

Borjas' pioneering model of self-selection is based on the Roy model, which considers that workers have skills in each occupation but they can only use one skill over the others. So workers self-select the sector that gives them the highest expected earnings. The model described by Borjas indicates that relative inequality matters and predicts negative selection of immigrants. The Borjas model is described formally as follows. Let W_k be the individual's wage in economy k=s, d, where s denotes the source and d the destination economy:

$$\ln W_k = \mu_k + \delta_k z \tag{1}$$

where μ_k is the log wage of an individual with zero skill (base wage), δ_k is the skill premium and z is an individual's skill level.

Let π represents migration costs (assumed to be constant in Borjas' model). An individual will choose to migrate from source economy s to destination economy d as long as:

$$\ln W_k - \ln W_s > \pi \qquad (2)$$

or alternatively if:

$$(\mu_d - \mu_s) + z\,(\delta_d - \delta_s) > \pi. \qquad (3)$$

Borjas' model predicts negative selection as long as $\mu_d - \mu_s > 0$ and $\delta_d - \delta_s < 0$, which means when the source economy has a low base wage and high wage inequality. Relaxing the unrealistic assumption of constant cost of migration may however lead to positive selection (Chiquiar and Hanson, 2005; Grogger and Hanson, 2011), as explained below. Dahl (2002) provides an important extension of the Roy model in the presence of multiple potential destinations and income differentials.

Besides disparities in prosperity, migration costs are another key determinant in the migration decision. Migration costs take different forms, encompassing monetary costs such as travel expenses and forgone earnings that need to be covered, and psychological costs related to the separation of family and friends, and the need to adjust to a new environment. Many arguments maintain that migration costs are not constant across individuals, but vary depending on their characteristics. The level of education is often considered to be a key factor affecting migration costs; it is widely recognized that the cost of moving is relatively lower for better-educated workers. Individuals with higher education may enjoy higher earnings and thus have a greater capacity to cover the cost of moving, together with a higher ability to collect and process information. Migration costs increase with distance, and decrease with geographical and language proximity. Some studies have also looked at the role of ethnic networks on the cost of migration. Theoretical models of migrant networks and ethnic cluster formation suggest that moving costs decrease with the number of established migrants in a particular destination (Carrington, Detragiache and Vishwanath, 1996; Chau, 1997). This is because the existence of ethnic networks and chain migration provide potential migrants with valuable information about jobs and can facilitate their access to local labour and housing markets.

Another strand of the theoretical literature looks at the determinants of migration through macro-modelling approaches, with a focus on the relationship between

aggregate migration flows and the whole economic system of defined geographical areas (countries, regions, provinces, municipalities). Geographical disparities as captured through macro-variables act as important factors pushing people to migrate from one area and attracting them to move to another. Because people may have different preferences, the way the differences between places will influence the propensity of different categories of people to migrate will vary.

The gravity model is the most common theoretical framework used in empirical analysis to study the influence of both push and pull factors on migration (Anderson, 1979). The gravity model is based on Newton's law of gravity, according to which the degree of attraction between two bodies increases with their masses and decreases with their distance. When applied to migration, the model explains that as the importance (mass) of one of the locations (bodies) increases, as measured for instance by population size or national income, movement between them will increase. However, as distance increases, movement decreases. The basic gravity model widely used in empirical investigation on migration determinants takes the following form:

$$M_{ij} = \beta_0 + \beta_1 \cdot D_{ij} + \beta_2 \cdot P_i + \beta_3 \cdot P_j + \beta_4 \cdot Y_i + \beta_5 \cdot Y_j + \beta_6 \cdot U_i + \beta_7 \cdot U_j + \varepsilon_{ij} \qquad (4)$$

where M_{ij} captures migration flows from place i to place j, D is the distance, P is the population size, Y is the income and U is the unemployment rate. Expressing the above regression in log-log form means that the estimates of the parameters can be interpreted as elasticities.

Further developments on macro-modelling point to the importance of looking at the migration decision in the context of multiple possible destination countries. Migration flows between two countries are expected not only to depend on their relative attractiveness, but also on that of alternative destinations. Failing to control for the influence exerted by other destinations may lead to biased estimates (Hanson, 2010). The influence exerted by other destination countries on bilateral migration flows is referred to in the literature as multilateral resistance to migration (Bertoli and Moraga, 2011). This expression is borrowed from the trade literature and the well-known multilateral resistance to trade effect (Anderson and van Wincoop, 2004), which refers to the barriers to trade that each country faces with all its trading partners.

6.2.2 Empirical evidence

Abundant literature looks at the responsiveness of the scale of migration flows to varying economic and social conditions in both sending and recipient economies, as well as to changing immigration policies at destination. The evidence indicates that a

mix of political, social and demographic factors influence people's decision to move and, oppositely, the demand for migrants. The traditional approach is to estimate bilateral flows as a function of host and home economies' characteristics only (see, for instance, Beine, Docquier and Ozden, 2011; Clark, Hatton and Williamson, 2007; Grogger and Hanson, 2011; Ortega and Peri, 2009; Pederson, Pytlikova and Smith, 2008; Theoharides, McKenzie and Yang, 2010; Zaiceva and Zimmermann, 2008).

As mentioned, most empirical studies confirm that, in the context of international migration, geographical disparities in prosperity and migration costs are important determinants of labour flows. Looking at the emigration to the United States on a large number of sending-country characteristics for 81 countries, Clark, Hatton and Williamson (2007) report an inverted U-shaped relationship between sending-country average income and emigration. At low levels of income, the rate of emigration increases while the rate decreases at higher income levels. The same authors find that coming from an English-speaking country, geographical proximity and the presence of a large diaspora are strong correlates of migration flows to the United States. In the case of Eastern Europe immigration in the United Kingdom, Blanchflower, Saleheen and Shadforth (2007) find that the propensity to migrate is correlated with income per capita, unemployment rates and life satisfaction in sending countries. In the case of Mexico, McKenzie and Rapoport (2010) show that there is an inverted U relationship between migration and wealth, consistent with the fact that low-wealth individuals are too poor to afford migration while high-wealth individuals have no incentives to leave.

In the case of OECD countries, an increasing number of empirical studies are using gravity models of immigration, borrowed from the popular gravity model of international trade, to test the influence of multiple factors, such as demographic, geographic, ethnic/linguistic and economic conditions on immigration. Such models have been used recently on immigration data from the OECD's International Migration Database (Lewer and Van den Berg, 2008), data on international migration stocks in OECD countries prepared by Docquier and Marfouk (2004), and panel data on migration flows from the Migration Policy Institute (Gubert and Nordman, 2008). In Gubert and Nordman, both migratory stocks and migratory flows are explained by the opportunities in host countries. Economic conditions in host countries, as measured by income level, the returns to education and unemployment rates, are strong determinants of migration. A past colonial relationship and the distance between two countries have a significant effect on migration stocks, although less so for educated migrants who have a greater chance of seizing good job opportunities in distant countries. Shared language acts as a strong factor but only for the most educated

migrants, suggesting that mastering the local language may not be as important for low qualified jobs as for qualified jobs. Population ageing in host countries is a strong correlate of expatriation rates, but demographic pressure in sending countries does not seem to exert a strong influence. Limited political rights also create incentives for emigration.

A word of caution should be introduced regarding empirical migration studies, however. For instance, few studies have addressed empirically the issue of alternative destinations discussed earlier. Studying the Spanish immigration boom between 1997 and 2009, Bertoli and Moraga (2011) were able to control for the influence exerted by other destination countries on bilateral flows – the so-called multilateral resistance to migration. Controlling for the opportunities to move to other destinations, they found a lower effect of income per capita at origin and a larger effect of migration policies on migration flows. They confirm Hanson's argument that if not accounted for, multilateral resistance to migration would bias the estimated effect of income at origin upwards and the effect of visa policies upon bilateral migration flows to host countries downwards.

A large body of empirical research pertains to the issue of self-selection and the skills composition of migration. A common subject is whether migrants are positively selected (better-educated workers are more likely to migrate) or negatively selected (those with the greatest incentives to emigrate are individuals with below-average skill levels in their home country). The positive selection of emigrants appears to be a common finding in most empirical studies, which is consistent with the idea that the least educated are too poor to afford the fixed costs of migration (Hanson, 2010). However, negative selection is observed among US immigrants from Mexico (Chiquiar and Hanson, 2005) and Puerto Rico (Borjas, 2007; Ramos, 1992). Moreover, in the case of migration from the Middle East and North Africa to OECD countries, Gubert and Nordman (2008) find that, although the expatriation rate is lower for the least educated individuals, for low-educated migrants, GDP per capita in the sending country operates as a push effect. They conclude that migration flows of low-educated workers may be responsive to trends in GDP per capita at origin contrary to those of highly-educated workers.

Recent research also points to the existence of specific determinants for irregular migration. Geographic proximity and the existence of well-established migration networks tend to facilitate migration without authorization for entry or for employment. Specific costs are also associated with irregular migration, such as the price paid to be smuggled across borders, and other costs incurred to evade immigration authorities. In a study on illegal migration from Mexico to the United States, Hanson (2006) finds

that illegal migration flows, measured either using survey data on migrant-sending communities in Mexico or apprehensions at the US–Mexico border, are quite responsive to changes in relative earnings between the United States and Mexico. The possibility of relying on migration networks also contributes to increase cross-border labour flows.

Empirical evidence further indicates that the determinants of migration are not gender neutral (Morrison, Schiff and Sjöblom, 2008). Migration costs are influenced, among other factors, by civil status and the need to care for children, and tend to differ between men and women. Several studies find that being married reduces the probability to migrate for women (Kossoudjii and Ranney, 1984; Cackley, 1993; Kanaiaupuni, 2000) and having children raises the incentives to migrate for men but not for women (Kanaiaupuni, 2000). Women tend also to migrate at an older age than men (Kanaiaupuni, 2000; Richter and Taylor, 2008). There is further evidence that the effects of education vary across gender. In the case of Mexican emigrants to the United States, Kanaiaupuni (2000) finds, for instance, that while men are negatively selected to migrate, higher education increases migration among women.

Another important strand of the empirical literature looks at the determinants of internal migration (Mazumdar, 1987; Williamson, 1988). The different factors that have been most widely considered refer to population size and distance, income or wages, labour market conditions and environmental variables such as public safety, social services, environmental quality and basic infrastructure services (Etzo, 2008).

Research on internal migration provides evidence that population density matters, although it often acts more as a push factor than as a pull factor (Anjomani, 2002; Shen, 1999). Distance is shown to be a key explanatory variable which acts as a proxy not only for the migration costs (Greenwood, 1985, 1997; Greenwood and Hunt, 2003) but also for the availability of information about the destination, which decreases as the distance increases (Anjomani, 2002).

The majority of empirical work also provides strong evidence that internal migration flows are very sensitive to income differences. The impact of per capita income in sending regions is found to be negative in almost all studies. Yet, a non-linear relation with income might exist. Banerjee and Kanbur (1981) find that, in the case of interstate rural–urban migration flows in India, the coefficient of the rural income variable (which measures the impact of income on migration flows) is positive while the coefficient of the square of this term is negative, probably reflecting the lower ability of poorer households to cover the costs of migration.

Another variable that is often included as an explanatory factor in internal migration analysis is the unemployment rate. This variable is used as a proxy to measure the influence of labour market conditions on the decision to migrate. The results suggest that the impact of unemployment on internal migration is not clear. Several studies show a weak reaction of net migration rates to differentials in unemployment rates, probably because the unemployed tend to be the least mobile groups.

Aside from economic factors, the quality of life that can be influenced by environmental conditions can affect internal migration flows. Looking at the determinants of interregional mobility in the Russian Federation, Andrienko and Guriev (2004) find that several infrastructural and other variables related to public safety and to climate exert a significant effect.

6.3 The impact of labour migration on the home economy

A pressing question among development practitioners concerns the development effects of labour migration on the home economy. This question is addressed in research on migration from two perspectives. At the micro level, the focus is on the impact of emigration on the development outcomes of individuals and households who stayed in the home economy, either as non-migrant households or as family members of migrant workers. At a more macro level, attention is being paid to aggregate emigration effects on the sending economy, with a particular focus on the impact on human capital, income growth, poverty or trade flows. Overall, the studies find different effects of migration such that the net impact is not clear. This section presents what economic theory suggests about the impact of labour migration on the home economy. It then discusses the empirical evidence.

6.3.1 Theory on the development impact of labour migration on sending economies

The development impact of labour migration on sending countries or regions remains a largely controversial issue. While economic research suggests that both positive and negative externalities are associated with emigration, theoretically, the effect of emigration on non-migrants in the sending region or country is not clearly identified. Emigration usually affects sending regions and countries through its impact on

labour markets (wages), human capital and growth, as well as through remittances and trade flows.

Certain studies have looked at the impact of international migration on the labour market of sending countries. Hanson (2010) develops a simple model to describe how emigrants can affect non-migrants in the sending country through labour market adjustment. The model assumes the production of a single output from two labour inputs i, skilled labour (i=h) and unskilled labour (i=l). Each worker receives a salary corresponding to the marginal product of their labour and low- and high-skilled workers are complementary in the production process. The total workforce includes H identical skilled workers and L identical unskilled workers. $V(Y_i)$ is the indirect utility function for worker i, which depends on disposable income Y_i defined as:

$$Y_i = W_i(1-t_i) + G_i \tag{6}$$

where W_i is the wage, t_i is income-tax rate and G_i is the government transfers. ΔH is a change in the number of skilled workers who emigrate. The change in welfare for the non-emigrating worker is thus:

$$\Delta V_i / \Delta H = V'_i[\delta W_i / \delta H(1-t_i) + \delta G_i / \delta H - W_i(\delta t_i(\delta W_i / \delta H_i))] \tag{7}$$

The first term in equation 7 measures the change in earnings, the last term measures the change in net fiscal transfer that a non-emigrating worker receives from government. It can be seen that the emigration of skilled workers would unambiguously reduce an unskilled worker's welfare. However, the effect on the welfare of skilled workers is not determined, as skilled emigration will overall contribute to raise the wage of the non-emigrating skilled worker but increase the tax rate and reduce transfers received. Moreover, as skilled workers are likely to be net contributors to the fiscal system, the decrease in taxes from their departure is not compensated by the decrease in government transfers.

Other theoretical studies focus on the impact of emigration on human capital (see Docquier and Rapoport, 2007, for a review). A widely debated question is whether the emigration of high-skilled workers is bad for the sending country, contributing to the so-called brain drain there, or inversely to a brain gain or beneficial brain drain. Because theoretical models lead to very different predictions regarding the effects of skilled emigration, the issue of brain drain or brain gain remains an empirical question.

Some authors suggest that skilled emigration can be good for the sending economy. Households' decisions to invest in education can indeed be favourably influenced by the possibility of migrating and earning higher wages, thus enhancing human capital

accumulation. As long as the overall rise in human capital in the sending country compensates the loss due to skilled emigration, the net effect can be beneficial (Mountford, 1997; Stark, Helmenstein and Prskawetz, 1997; Beine, Docquier and Rapoport, 2006). The loss of human capital that occurs when high-skilled people migrate can also be mitigated or compensated by other positive feedback effects. For example, skilled emigrants may leave behind part of their assets (Berry and Soligo, 1969) or generate large remittances. It is also argued that return migration can neutralize the negative effects of brain drain. Migrants returning from more advanced economies may indeed carry out knowledge and technology spillovers that will more than offset the original loss to the home country (Domingues and Postel-Vinay, 2003).

Other studies, on the contrary, have pointed to the negative effects of skilled emigration on sending countries. In the presence of labour market rigidities, imperfect information and other types of externalities, skilled emigration can have negative welfare consequences on non-migrants in these countries (Bhagwati and Hamada, 1974; Hamada and Bhagwati, 1975; Bhagwati and Rodriguez, 1975; McCulloch and Yellen, 1977). The negative effects of brain drain on human capital accumulation and growth have also recently been underlined in the context of endogenous growth models (Miyagiwa, 1991; Haque and Kim, 1995; Wong and Yip, 1999).

Another segment of the theoretical literature focuses on the impact of remittances on sending economies. Remittances constitute a significant portion of GDP in many developing countries such that a key question is whether remittances related with skilled emigration can reverse the loss of income in the sending country. According to economic theory, remittances are the outcome of an implicit contract between migrants and their families (Lucas and Stark, 1985). A family can make a substantial investment to cover migration costs for one of its members and remittances are the returns on this investment. In such modelling, the expectation is that remittances initially increase with emigration and then decline as migrants settle down in receiving countries and reimburse the debt to their families. At the same time, highly-skilled migrants will not usually generate high remittances because they come from richer families and thus do not need to remit and they have a higher tendency to migrate with their families. At the more macro level, theoretical studies underline the potential contribution of remittances on growth and show that their growth effect depends on their impact on productivity and inequality in the origin economies (Rapoport and Docquier, 2006).

Recent theoretical studies also point to the links between emigration and international trade (Casella and Rauch, 2003). Under the cost-reduction hypothesis, the presence of cross-national group ties can reduce the barriers to bilateral trade related to incomplete information. The volume of trade and GDP in trading countries is expected to

increase, because immigrants may have superior information about their country and participate in business networks, which would help reduce the transaction costs of trade. Migration may also impact trade through a consumption effect. Under the consumption hypothesis, immigrants may exhibit a high demand for the local goods produced in their home countries, thus increasing imports from their country of origin.

6.3.2 Empirical evidence on the development impact of labour migration on sending economies

The development impact of labour migration on sending regions remains an empirical question. Nevertheless, empirical research is limited and/or sometimes inconclusive. Recent empirical findings on the effects of labour migration on the sending economy include information on the labour market impact, the consequences of skilled emigration on human capital and trade flows, the impact of remittances and the role of internal migration for growth convergence. A few studies have also looked at the gender-specific impact of migration.

Empirical research on the labour market effects of emigration on sending economies is scarce. In a review of these effects, Katseli, Lucas and Xenogiani (2006) report some evidence that the outflows of migrants contribute either to raise the wages of non-migrants or reduce unemployment in the local labour market from which the migrants depart. Ultimately, the effects tend to vary depending on the local characteristics and considerable heterogeneity exists across sending countries. Mishra (2007) analyses the effect of Mexican emigration to the United States on non-emigrant Mexicans' wages. Using wage data from 1970 to 2000, the study finds a significant positive effect in the reduction in labour supply on wages. Using a similar approach, Aydemir and Borjas (2007) analyse data from the Canadian, Mexican and US censuses. They find a significant inverse relation between migrant-induced shifts in labour supply and wages in each of the three countries. However, the impact of migration on the wage structure differs significantly across countries. In the Mexican labour-exporting economy, emigration is found to reduce the relative wage of workers at the bottom of the skill distribution. Hanson (2007) looks at the relative wage in Mexican states and finds that between 1990 and 2000, wages increased in high-migration states relative to wages in low-migration states.

Another set of studies look at the impact of skilled emigration on human capital accumulation and other development outcomes in the sending economy. To examine this question and determine whether the departure of educated workers translates into a brain gain or brain drain, several factors must be taken into account. One is the

extent to which education is publicly financed, and thus the extent to which the departure of skilled workers contributes to a loss in public investment. Another factor is whether there are positive education spillover effects that may mitigate the negative effect of brain drain or turn it into a brain gain. However, few papers address these issues meaningfully and empirical results are inconclusive.

The idea of a brain gain is supported by certain studies that point to a positive correlation between emigration to rich countries and the stock of human capital in sending economies (Beine, Docquier and Rapoport, 2006). Yet, as emigration and education decisions are likely to be taken simultaneously, such correlation does not allow any causal inference. Other studies looking at feedback effects find that negative externalities related to skilled emigration tend to be small or somehow compensated by other factors. One feedback effect underlined in the empirical literature is the increase in bilateral trade. In the case of skilled US immigrants from China, India and Taiwan (China), Saxenian (2002) finds positive spillover effects in terms of trade and investment, which is consistent with a brain gain. Evidence of a positive correlation between bilateral trade and immigrant population is also found in the United States (Gould, 1994), Canada (Head, Ries and Swenson, 1998) and in the case of Chinese immigrants (Rauch and Trindade, 2002). The effect on trade is much less evident for non-labour immigrants arriving as refugees or for family reunification, however (Head, Ries and Swenson, 1998). The brain gain idea is supported as well in the context of return migration. Jasso and Rosenzweig (1988), in the case of US immigration, and Ramos (1992), in that of Puerto Rican migrants, find that return migrants tend to be more skilled, which may mitigate the brain drain effect. Some early evidence on rural–urban migration also indicates that the amount of remittances tends to increase with the level of education (Johnson and Whitelaw, 1974; Rempel and Lobdell, 1978). Another paper by Desai, Kapur and McHale (2003) looks at the fiscal effects of brain drain in India and concludes that the negative tax consequences of skilled emigration are modest.

By contrast, several studies find an important brain drain effect. Evidence of the negative impact of skilled migration on the stock of human capital in sending countries exists, especially for Africa with the emigration of health workers, and for small countries (Clemens, 2007; Schiff, 2006; Faini, 2003). Some research also suggests that such feedback effects as return migration and remittances may actually accentuate the brain drain effect rather than neutralize it. Several empirical papers do report a negative selection bias of return migration with the return of the least successful/educated migrants (Solimano, 2002; Lindstrom and Massey, 1994; Reagan and Olsen, 2000; Bauer and Gang, 1998; Steiner and Velling, 1994; Schmidt, 1994; Borjas, 1989). Some

findings also indicate that returnees have difficulties reintegrating into the economic and social environment of their home country (Dustmann, 1996; Knerr, 1994). In addition, some evidence states that, although highly-educated workers have larger earnings, skilled migration may lead to smaller rather than larger flows of remittances, because better educated migrants are more likely to move permanently with their family, or to come from richer homes and thus they do not need to remit. Faini (2003) looks at the relationship between education and remittances among US immigrants. The study finds a negative correlation between tertiary education and the amount of remittances. Since Faini does not control for the length of migrants' stay in the host country, one explanation is that skilled migrants are more likely to move permanently to the host country and, as previous research has shown, the flow of remittances tends to decline as the duration of migration increases (Lucas and Stark, 1985).

Aside from the links between education and remittances, the actual development impact of remittances has been the subject of micro- and macro-studies. At the household level, most empirical analyses argue that remittances play a positive role because they smooth consumption (Yang, 2008) and they are associated with more spending on education and health, increased school attendance (Alcarez, Chiquiar and Alejandrina, 2010; Cox Edwards and Ureta, 2003), greater business formation (see, for instance, Woodruff and Zenteno, 2007, for Mexico; Binzel and Assaad, 2009, for Egypt) and a lower likelihood of household poverty (World Bank, 2010). As noted by Hanson (2007), however, such correlations are difficult to interpret and may also reflect that households receiving remittances are better-off initially. At the macro level, studies provide mixed evidence. Some empirical papers indicate that remittance flows have a positive and significant impact on economic growth (Ramirez, 2011; World Bank, 2010; Ramirez and Sharma, 2008). However, other studies find no or negative macro effects of remittances. On growth, Chami, Fullenkamp and Jahjah (2003) find that remittances have no statistical effects on growth, because remittance income often acts as a substitute for labour income and, as labour and capital are complementary goods in production, the rate of capital accumulation is negatively affected. The same authors indicate that remittances are positively correlated with real exchange rate appreciation and find some evidence of Dutch disease effects in remittance-receiving countries, which negatively affect the overall competitiveness of these countries.

The scope for remittances to substantially alleviate poverty on a national level is also limited, as a large number of poor households may not receive remittances (World Bank, 2010).

Another area of empirical research deals with the impact of internal migration on growth convergence. Yet, as noted by Etzo (2008), the empirical findings are

inconclusive. Several studies, using the net migration rate in growth convergence regression, do not find that migration has a significant effect on regional growth (Barro and Sala-i-Martin, 1995; Persson, 1997; Kangasharju, 1998; Shioji, 2001; Hideaki, Kaoru and Tatsuji, 2004; Maza, 2006). Other studies find a negative relationship between internal migration and growth (Kirdar and Saracoglu, 2007). As argued by Østbye and Westerlund (2007), however, using the net migration rate to analyse the impact of migration on growth convergence may be misleading as it assumes that the effect of immigration and emigration flows on growth is symmetrical. This is not always true, especially when immigrants and emigrants differ in human capital.

Few studies have looked at the gender-specific impact of migration in sending countries. In rural Mexico, Pfeiffer and Taylor (2008) examine how gender may shape the effects of migration on migrant sending areas. The consequences of migration tend to vary substantially by gender. Female migration has a negative effect on schooling investments, suggesting that women who have migrated have lost their ability to monitor their household schooling investments. Another finding is that women tend to remit more in response to family health shocks than men, presumably to support health expenses.

6.4 The impact of labour migration on the host economy

The impact of labour migration on receiving economies remains another highly debated question among researchers and policy-makers. Migration impact in the host economy covers two important aspects. One concerns the overall impact of immigration on the host economy as measured through related changes in key macro variables, such as aggregate wages, employment and growth. Another aspect is the distributive impact of immigration as reflected in wage inequality and the extent to which the migration effects vary across different groups of individuals – native populations, previous immigrants and new immigrants. All in all, migration studies do not provide a conclusive answer on the overall impact of immigration, nor do they provide a clear answer on the magnitude of the migration effects on different subgroups. At best, most studies agree that there are winners and losers. This section provides a critical review of the theoretical and empirical evidence on the impact of migration on the host economy.

6.4.1 Theory on the consequences of labour migration in receiving economies

The immigration of workers can affect receiving economies in different ways. One important channel through which the economy can adjust to immigration is the labour market. The labour market impact of migration has been the focus of most theoretical studies. Basic economic models describe how immigration affects wages and employment in receiving economies. Under specific assumptions of homogeneous labour and flexible wages, immigration increases the labour force, reduces the wage level and increases national income (Borjas, 1994). However, relaxing some of these assumptions, in particular with respect to homogeneous labour, leads to different effects. How large these effects may be, who benefits and who does not ultimately depends on several factors, including the size of immigrants' flows, the skills mix of native workers relative to the immigrant population, whether immigrants and natives are close substitutes, the sector composition and other characteristics of the economy. Under more realistic assumptions, the prediction is that local workers may benefit from immigrants whose labour complements their own and lose from competition with immigrants who have similar skills. In the case of the perfect integration of product markets into the international economy, the Hecksher-Ohlin model predicts no wage effects from migration, unless there is total specialization. The effect of migration may also depend on the tasks migrants perform (Ottaviano, Peri and Wright, 2010).

Another segment of the theoretical literature looks at the impact of immigration on growth. Using different assumptions regarding the skills composition of workers in various economic sectors, human capital acquisition behaviours and productivity, economic models show that migration can have various effects on growth. Such effects in the receiving economy are either positive or negative depending on the underlying assumptions.

6.4.2 Empirical evidence on the consequences of labour migration in receiving economies

As already discussed, ultimately the effects of immigration on sending economies remain an empirical question. One important methodological challenge in estimating the impact of migration on receiving economies and drawing causal inference is to account for issues of endogeneity. For instance, immigration may lead to the outflow of natives from high-migration areas, or immigrants may not set up randomly but select economically successful regions instead. A number of studies have attempted

to estimate the impact of migration on receiving economies in view of these endo-geneity issues. Most of the evidence is from developed countries or in the context of rural–urban migration, and studies on the impact of international migration on developing host countries remains very scarce.

Much of the empirical research focuses on the impact of immigration on labour market outcomes of natives in industrialized countries. Some studies suggest there is little or no evidence that immigrants have a major impact on the wages and em-ployment of the native population (Hunt, 1992; Card, 2005; Dustmann, Fabbri and Preston, 2005; Dustmann, Glitz and Frattini, 2008; Gilpin et al., 2006; Glitz, 2006; Manacorda, Manning and Wadsworth, 2006; Ottavanio and Peri, 2006; Blanchflower, Saleheen and Shadforth, 2007; IOM, 2010; Bauer, Flake and Sinning, 2011). Evidence of negative short-term wage effects exists but these effects are usually small and con-cern selected groups of native workers who are close substitutes to immigrants. By contrast, other studies find important negative effects on labour market outcomes of the native population who competes with immigrants, whether they are high skilled or low skilled (Angrist and Kugler, 2003; Borjas, 2003 and 2006; Borjas, Grogger and Hanson, 2008).

Aside from examining the impact on natives' wages, some studies have looked at the impact of immigration on the wages of previous immigrants. Certain evidence sug-gests that immigration has adverse employment and wage effects on previous waves of immigrants. This stems from the fact that new and old migrant workers appear to be perfect substitutes (Ottaviano, Gianmarco and Peri, 2008; Ottaviano, D'Amuri and Peri, 2008).

Other research examines the labour market insertion of immigrants and the time it takes for foreign-born workers to experience the similar performances of natives. It is often argued that immigrants' economic success depends not only on their skills, but also on the extent to which these skills may be transferable to the labour market in host economies. Fluency in the host language and the recognition of foreign diplo-mas, for instance, are important determinants of skills transferability. The process of economic assimilation is usually measured by a standard wage regression on a sample of immigrants and natives from the host country. One key explanatory variable is the duration of migration.

In a seminal paper on the assimilation process in the United States, using cross-sectional data Chiswick (1978) estimates the wage convergence process between na-tives and immigrants to take 15 years, after which immigrants' wages exceed that of natives. The problem, however, with using cross-sectional data is that the apparent

wage progress of immigrants may be driven by the negative selection bias of return migration (the least successful and least skilled workers are more likely to return home). Using panel data for the United States, Lubotsky (2006) finds that half of the convergence rate estimated using cross-sectional data can be attributed to the fact that returning immigrants are negatively selected. The labour market insertion of migrant workers may also be hampered by discrimination. Zegers de Beijl (2001) reports evidence of discriminatory hiring practices against individuals from immigrant background in Belgium, Germany, the Netherlands and Spain.

Evidence also confirms that irregular migration contributes to poorer labour market outcomes for immigrants. Irregular status is often associated with lower wages and less opportunity for occupational advancement, as well as confinement to informal employment often in exploitative conditions (Taran and Geronimi, 2002), while legalization tends to increase earnings (Kossoudjii and Cobb-Clark, 2002; Schluter and Wahba, 2009).

Empirical research has also examined the impact of migration on wage inequality. While there is no evidence that immigration has an important effect on native workers' wage inequality, some studies tend to indicate that the effects on overall wage inequality (including natives and immigrants) are larger, reflecting greater wage inequality among immigrants (Ottaviano and Peri, 2006; Card, 2005).

Finally, there is also rich empirical literature that considers the impact of rural to urban migration, especially in the context of developing countries. Several studies highlight the existence of severe side effects related to rapid urbanization. Abundant evidence shows that many countries have difficulties creating sufficient employment opportunities and housing facilities to absorb the huge influx of people moving into the cities. As a result, many world cities are facing problems of unemployment, poverty, pollution and crime (Altenburg, 2009).

6.5 Conclusion and policy discussion

The debate over the development impact of labour migration is developed in the extensive literature reviewed in this chapter. While available research supports several major conclusions on the determinants and consequences of migration, many questions remain unanswered. Thus, additional research and improved data collection on international and internal labour migration are needed. Notwithstanding the above, the following messages dominate this review of the literature.

The first major insight provided by the existing literature is that geographical disparities in economic opportunities and migration costs are the key drivers of labour flows. Second, studies that investigate the migration impact in sending regions reveal different effects of migration but do not supply conclusive analyses. Negative effects exposed in several papers include the loss of human capital or brain drain and certain adverse effects of remittances on growth. By contrast, other studies support the overall idea of a migration-induced brain gain and find positive direct or indirect effects in terms of wages, incentives to invest in schooling and health, poverty reduction, growth, innovation and trade flows. Finally, an important conclusion about the development impact of migration in host economies is that it results in both winners and losers. Ultimately, migration effects hinge crucially on how the skills of immigrants compare with those of the natives in the host region and whether labour flows are comprised of legal or irregular immigrants.

The review provided in this chapter also underscores that the links between labour migration and development are complex. In addition, recent research has uncovered new links, prompting calls for a variety of reforms in current policies and the development of new policy interventions that could maximize the benefits of labour migration and reduce its costs.

Current practices regarding labour migration in labour importing countries are characterized by rather selective and restrictive immigration laws and policies. Research suggests that these measures may come at a high cost for both migrants and native populations in the sending and receiving economies and thus require adjustment. On the one hand, selective migration policies that target workers with high skills may not necessarily raise global income although they can lower welfare in sending economies. On the other hand, restrictive policies may increase the scope for irregular migration. Indeed, many States appear to tolerate the presence of large numbers of irregular migrants, especially those working in the low-paid sectors that lack national workers, although this situation is often seen as a risk factor for labour exploitation and human rights abuses.

Presupposing that labour migration can be a desirable feature of human and economic development in the sending and receiving economies, new policy approaches are called for. One area that is becoming more central in the policy debate is the need to better protect migrants from risks, ranging from poor health care to vulnerable employment situations and outright marginalization. In this respect, the ILO has approved two major Conventions on migrants, the Migration for Employment Convention, 1949 (No. 97) and the Migrant Workers (Supplementary Provisions) Convention, 1975 (No. 143), which aim to regulate migration and protect migrants. Convention No. 143 provides specific norms on the rights of irregular migrants while

providing measures to end clandestine trafficking and to penalize employers of irregular migrants. The 1990 United Nations Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families further aims to foster respect for migrants' human rights. Another area generating attention in the policy debate is the need to reconcile migration policies with measures to support longer-term economic development and poverty reduction in sending economies. Proposals along these lines include measures to mitigate the problems associated with skilled emigration, such as, for instance, through the Bhagwati tax on migration, which would enable developing countries to receive revenue from taxes levied on emigrants residing in developed countries. Also discussed is the need to develop well-managed labour migration programmes that also include low-skilled workers, to promote efficient remittance channels and to develop innovative financing instruments to boost productive investments in sending countries (such as diaspora bonds to raise financing from overseas diasporas).

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Education and human capital

7

Naercio Aquino Menezes Filho
Professor of Economics,
Insper Institute of Education and Research and University of São Paulo

7.1   Introduction

Education has long been recognized as one of the key factors determining the success of individuals and of countries as a whole. Developed countries tend to have better education outcomes than developing nations and, within countries, more educated individuals earn on average higher wages. Many countries have been pursuing policies to improve the education levels of their population, both in terms of time spent in school and in terms of the quality of education that is provided to their students.

This chapter reviews the basic models and some of the empirical evidence on the relationship between education, wages and economic growth with a focus on developing countries. It examines some of the policies that have succeeded in improving human capital in specific countries and in subregions within a country. It also considers the impact of vocational training as a tool to provide specific human capital that is useful for performance in the labour market.

The chapter starts with a review of the models of human capital, emphasizing the role of education. Section 7.3 examines the evidence on the returns to education within countries. Section 7.4 reviews the relationship between education and growth. Section 7.5 examines policies that have been successful in improving the quantity and quality of education in specific countries, providing some case studies of individual countries that have achieved impressive outcomes in education in a short period of time. The final section concludes.

7.2   Human capital

Human capital refers to the productive capacity of individuals, that is, the knowledge and abilities that allow them to receive a flow of income during their lifetimes. Some of these abilities are natural (inherited), while some are acquired through education and training. The pioneers in modelling the process of acquisition of human capital were Schultz (1963), Becker (1964) and Mincer (1974).

According to these models, education and training are regarded as investments. In deciding whether to stay in school, individuals compare the costs and benefits of the decision. The benefits are measured as the increase in the flow of income they will earn over their life cycle because of the productivity gain associated with more education, while the costs are the opportunity cost of the time spent in school and the out-of-pocket expenses related to fees and books. The internal rate of return

of investments in education is the discount rate that equalizes the present value of benefits and costs streams. According to these models, therefore, individuals stay in school until the internal rate of return of investing one year more in formal education is equal to the market interest rate. Therefore, one should observe a positive correlation between wages and time spent in school at the micro level.

But why do different individuals acquire different levels of human capital? One possible reason is that they may differ in terms of their capacity to finance the costs of their investment, that is, they might be credit constrained. Not all families are able to finance their education expenses and consumption while in school, especially in developing countries. In general, most models assume that individuals can borrow the necessary amount and pay the principal and interest back when they start working, with their increased income flow. But, credit markets may have imperfections, especially with human capital investments. This may happen, for example, if uncertainty exists over the individual-specific returns to education. Moreover, human capital cannot be taken away from people, as cars can, which means that it cannot be used as collateral. Therefore, poorer families, who cannot pay for their current education, will tend to have lower levels of education. Indeed, this has been observed empirically in many countries and is one of the main arguments why education should be subsidized by the government.

Apart from differences in educational achievement within countries, marked differences exist across countries as well, especially in the developing world. These differences are related to economic, institutional and cultural variations among countries. **Figure 7.1**, for example, plots the net enrolment ratio in secondary education in 2009 for regions in the developing world, based on the UNESCO Institute for Statistics database. It shows that central Asia has achieved almost universal coverage and that East Asia, Latin America and Central/Eastern Europe are also doing very well in terms of human capital formation, with net enrolment rates in the range of 80 per cent. The Arab States are at an intermediate level, and coverage is far from universal in the Caribbean, South and West Asia and especially the sub-Saharan countries. Differences in enrolment between boys and girls are not very dramatic in general, with the exception of South and West Asian countries, where girls are at a much lower level than boys. In Latin America and the Caribbean, girls are actually doing better than boys in terms of school attendance.

Figure 7.1   Secondary enrolment in the developing world, 2009 (percentages)
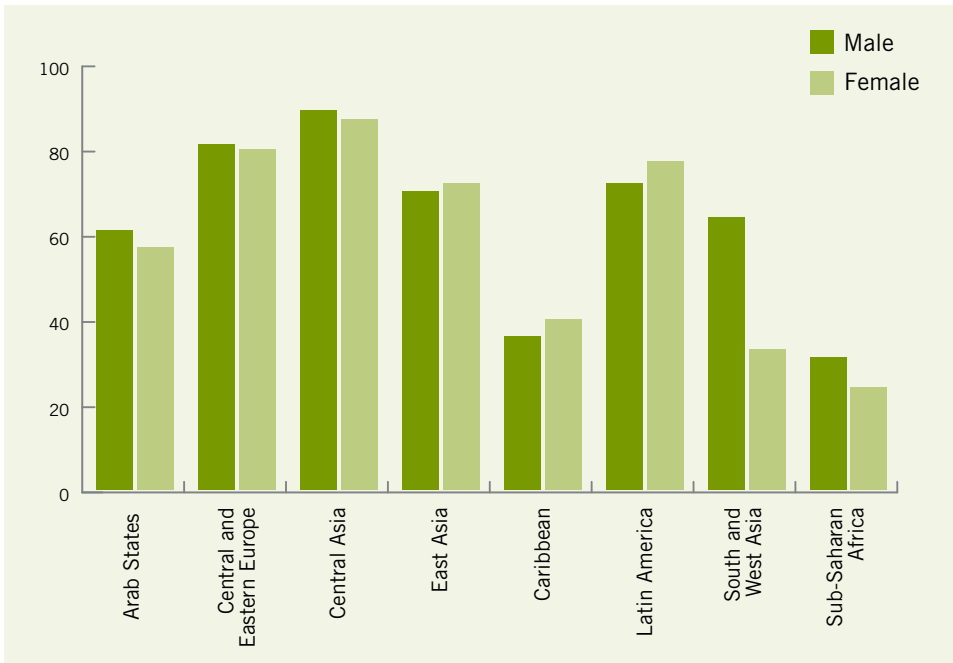
Source: UNESCO, 2011.

In terms of higher education, however, the differences across countries are even more prominent. **Figure 7.2**, for example, displays the share of individuals older than 25 who have completed secondary education or more, in a selected sample of developing countries (Barro and Lee, 2000). Data are also presented for the Republic of Korea to serve as a benchmark. Several aspects of the information are noteworthy. For instance, many differences in educational achievement exist among developing countries. While in the Plurinational State of Bolivia, China, Malaysia and Peru about half of the adult population completed at least secondary education, in the Congo, Morocco, Senegal, Uganda and Viet Nam, less than 20 per cent of the population achieved this stage. Brazil, Egypt, Indonesia and South Africa are at an intermediate stage in the developing world, with about 30 per cent of the adult population having completed secondary education or more. It is important to emphasize that even the best performing countries in the figure are still far from the Republic of Korea, which had the same level of education as the Latin American countries at the beginning of last century but now has 75 per cent of the population with more than secondary education.

Figure 7.2 **Secondary education completion, 2010 (percentages)**
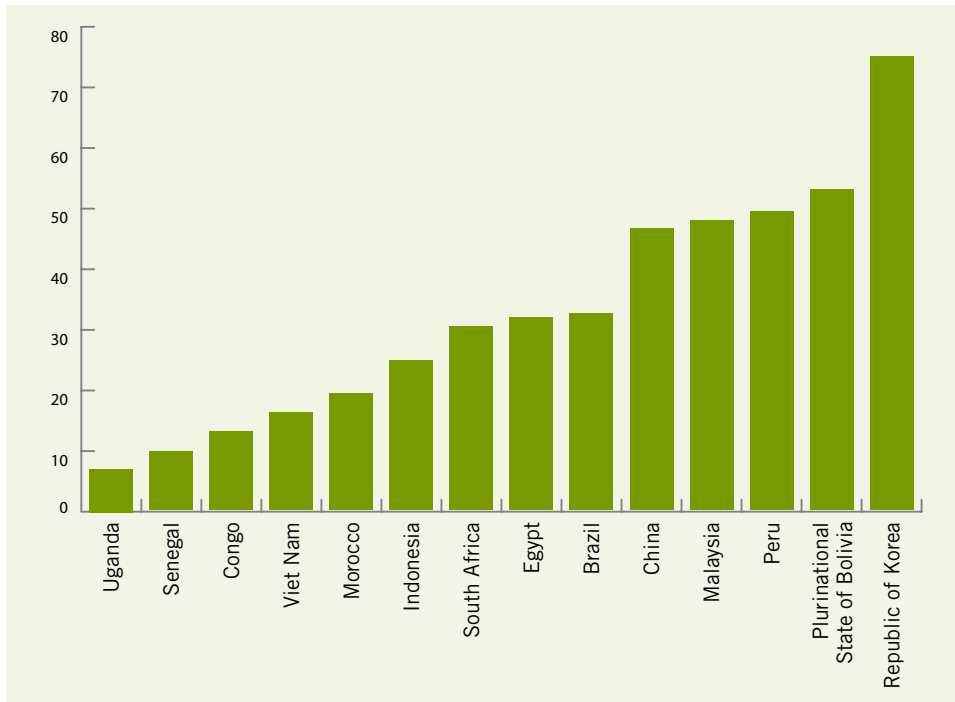
Source: Barro and Lee, 2000.

But why should education increase future wages? One of the main reasons is that education increases individuals' productive capacity, that is, it increases their efficiency in the labour market, and therefore the productivity of their firms and of the country as a whole. But a positive relationship between education and wages does not necessarily mean that education increases productivity. Other mechanisms are also consistent with this evidence, such as using education as a signalling device, as pointed out by Spence (1973). In these models, skilled individuals stay longer in school to differentiate themselves from the unskilled, who will optimally decide not to remain long in school because their cost of doing so is higher. This could happen, for example, as a result of less-able students having to spend more time studying to perform well on exams. Therefore, in equilibrium, less-skilled individuals will leave school early and earn less, while the higher skilled persons will stay longer and earn higher wages, even if education does not increase productivity. Moreover, workers' innate ability may be correlated with human capital acquisition and with wages, driving the correlation between education and earnings.

Human capital can also be acquired on the job market, for instance through on-the-job training. This instruction is usually more specific (to the firm or to the job) than human capital acquired through education. Indeed, more experienced workers earn, on average, higher wages in most countries, at least until they become less productive because of ageing. Moreover, returns to experience tend to be positively correlated with general human capital (education), since better educated people generally find it easier to acquire and use the more specific forms of human capital.

Education also impacts outcomes other than earnings. Better educated individuals commit less crime, are more careful about their health (another form of human capital), have fewer children and care more about the environment, so they tend to become better citizens. Therefore, the social returns to education are generally higher than the private returns. Grossman (2006), for example, develops models that predict that more schooling will increase personal health and that better-educated parents will increase the health and cognitive ability of their children. The empirical evidence summarized there suggests that education raises non-market productivity by about half as much as it does with respect to market productivity (wages). Several studies show that the schooling of mothers, for example, reduces fertility and impacts positively on child and adolescent health and education.

7.3   Education and the labour market

This section briefly presents the evidence on the individual returns to education, comparing individuals within countries, using the case of Brazil as an example (see also Chapter 5). It also discusses how the evolution of the demand and supply of education shapes the magnitude of the returns to education across countries and over time.

As mentioned in the previous section, individuals who acquire more education tend to earn higher wages, as a return on their investments in human capital. **Figure 7.3** displays an example of this correlation, by reporting the evolution of average education wage differentials (percentage increase with respect to the previous group) in Brazil between 1981 and 2009. It is clear that wages increase with education since, in 2009, workers who completed secondary education earned twice (100 per cent more than) the wage of a worker with a primary-school education. Moreover, individuals with high school education earned 23 per cent more than those with secondary education and workers who completed college had wages 125 per cent higher than those who left school after high school. Workers in post-graduate education earned on average 80 per cent more than those who finished their education at college. On

average, workers with postgraduate education earned more than ten times the average earnings of those with primary-school education in Brazil. Similar results can be found in other developing countries.

Figure 7.3 **Evolution of wage differentials in Brazil, 1981–2009 (percentages)**
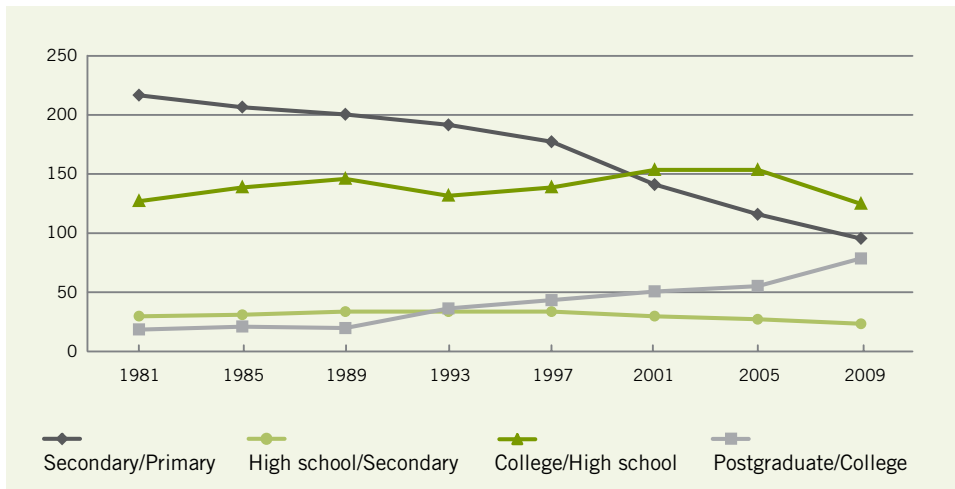
Source: Author's elaboration based on Brazilian Household Surveys (PNADS) and Brazilian Institute of Geography and Statistics (IBGE).

It must be emphasized that the positive relationship between education and earnings does not necessarily mean that more education causes more earning by an exact amount, nor that every individual who achieves postgraduate education will see their wages increase tenfold, since other factors may be correlated with education and wages. Better skilled individuals, for example, may find it easier to pursue graduate studies, but could earn more even if they haven't done so. Therefore, returns to education may also capture returns to ability. Moreover, returns to education may be different for different individuals, that is, better-skilled workers may gain more from a graduate level. Heckman, Lochner and Todd (2008) provide a detailed discussion of endogeneity and heterogeneity in the returns to education literature. Therefore, the numbers displayed in the figure are descriptive rather than indicative of the causal effect of education on earnings.

What about the evolution of wage differentials over time? **Figure 7.3** shows that the returns on different types of education changed significantly between 1981 and 2009. Different forces drive the behaviour of wage differentials over time and changes in

the supply of the different education groups are an important factor. **Figure 7.4** describes the evolution of the relative supply of the same education groups over time. Of note is that there has been a continuous rise in the relative supply of workers with completed secondary education, which represented only 25 per cent of the contingent of workers with primary-school education in 1981 and in 2009 surpassed this group by 25 per cent. This is in line with the fall in wage differential for this group. The supply of workers with high school education also increased dramatically over the sample period, from about 125 per cent of the total number of workers with secondary education in 1981 to about 275 per cent (almost four times higher) in 2009. The pace accelerated after 1997, when their wage differentials also started to fall. The relative supply of college-educated workers fell from 50 per cent of high-school workers in 1981 to about 32 per cent in 2005, rising at the end of the period to about 35 per cent. It is interesting to note that college wage differentials started to fall exactly in this last period. Finally, the supply of postgraduate workers, which was basically negligible in 1981, rose to reach 10 per cent of the workers who stopped attending school at college.

Figure 7.4   **Evolution of relative labour supply in Brazil, 1981–2009 (percentages)**
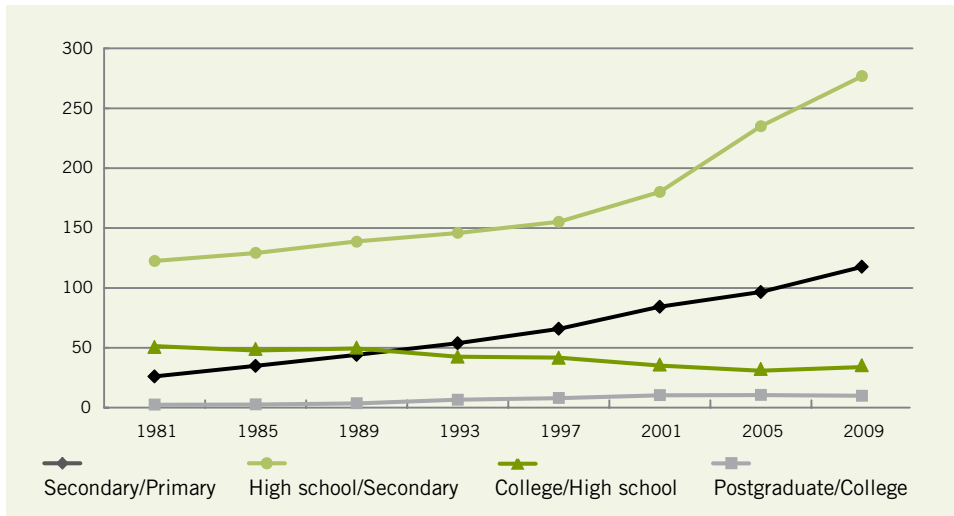
Source: Author's elaboration based on Brazilian Household Surveys (PNADS) and Brazilian Institute of Geography and Statistics (IBGE).

In recent years, a series of studies about the labour market in developed countries has detected that the relative demand for skilled workers has been increasing over the past

few decades (see Goldin and Katz, 2008, for a recent review). The intensity and impact of this shift vary among different countries and their effect on inequality seems to depend on the growth rate of the relative supply of skills and may in fact respond to it. The framework generally used to estimate the demand for skills is a simple demand and supply model with constant elasticity of substitution between skilled and unskilled workers, which assumes perfect competition and exogenous labour supply.

Transferring this methodology to developing countries, however, requires caution. One challenge pertains to the division between skilled and unskilled workers. This separation, as a rule, is based on their educational level, with skilled workers considered to be those who have attended at least one year of university. For developed countries – where the great majority of workers have at least one year of high school – this division may be reasonable, but it is not for developing nations, given their generally much lower average level of education and higher dispersion, as demonstrated in **figure 7.1**. Moreover, the lack of appropriate data and imperfections in the labour markets (such as the share of informal workers) may render estimates of the demand for skills more difficult to obtain in developing countries.

Some recent studies have applied different versions of this methodology to developing countries. Manacorda, Sanchez-Paramo and Schady (2010), for example, find that the demand for skilled workers (with college education) has been rising relative to workers with secondary education in Argentina, Brazil, Chile, Colombia and Mexico. Moreover, the fall in high school wage differentials reflects the quick rise in this group, as exemplified by the aforementioned Brazilian case. López-Calva and Lustig (2010) also show that the decline in education wage differentials that occurred in several Latin American countries was an important component of the fall in earnings inequality that took place in those countries, together with conditional cash-transfer programmes.

When considering the impact of education on the labour market, in addition to formal education, another important topic is investment in vocational training. Arguments contend that formal education is too generalist and that part of the school drop-out rate, especially in high school, is related to the fact that students do not find the curricula of interest. Vocational training instead is more focused on the labour market, so that youngsters who do not intend to pursue higher education can learn techniques that could be useful in the labour market. A recent paper by Hanushek, Woessmann and Zhang (2011), however, produced convincing evidence that, while vocational education increases youth employment in the short run, it may decrease adaptability in the long run, in the face of the rapid technological changes that have been taking place in the world, leading to increasing unemployment in later stages of the life cycle.

A good deal of international evidence suggests that the quality of education, as measured by student achievement tests, is related to individuals' wages and productivity, even after controlling for years of schooling (Murnane, Willet and Levy, 1995). This is important, because it highlights the significance of the quality of human capital accumulated by individuals, as opposed to only looking at quantities, summarized by the years of education achieved. The quality of education depends on how efficient schools in each country are in transmitting knowledge to their students, which also depends on the formation and quality of teachers, on the motivation and discipline of the students and on their family background. This is discussed below.

7.4   Education and growth

By increasing the efficiency of individuals in their occupations, education also augments the productivity of their firms and, therefore, increases growth in the long run. Indeed, education is often considered one of the most efficient mechanisms of achieving growth with social justice, because it increases growth and reduces inequality at the same time. In particular, since the children of the elite tend already to be well-educated in most countries, education expansion tends to affect primarily the children coming from poorer families. When those children reach the labour market and start earning higher wages, due to the improved education, inequality tends to decline.

Several studies have shown that education increases wages at the individual level. It is not easy, however, to capture the relationship between education and growth at the macro level, using aggregate country-level data (see Barbosa-Filho and Pessoa, 2010; Pritchett, 2006, for surveys). Such problems as measurement error in the aggregate education data and the endogeneity of both human and physical capital plague estimates of education's impact on growth. Some authors have argued that the causality is from growth to education, as periods of sustainable growth generate resources that can be invested in education. Most recent studies, nevertheless, do find education to have a substantial impact on growth, even after correcting for the estimation problems.

In terms of growth, however, recent studies show that more important than the quantity of education (average years of schooling) is the quality of education, that is, what the students are actually learning in schools. Hanushek and Kimko (2000), for example, find that measures of student proficiency at the country level, such as the results of the Programme for International Student Assessment (PISA) and Trends

in International Mathematics and Science Study (TIMSS) examinations, are significant predictors of growth.[1] Moreover, after controlling for the quality, average years of education and education expenditures lose statistical significance in growth regressions. This means the hypothesis that these last two variables do not have any impact on growth cannot be rejected, once the quality of education is taken into account. Finally, the study results do not seem to follow the example of South Asian countries' rapid education growth and do not seem to suffer from reverse causality.

The PISA examination was created by the OECD so the educational systems of its member countries could be evaluated in a standardized and systematic way. In these exams, students' proficiency in mathematics, science and reading is evaluated. Countries outside the OECD are also invited to take part in the examinations. The students taking the examination are 15 years old. **Figure 7.5** shows the share of pupils below level 1 in the sample of developing countries that take part in PISA. This is the share of pupils without even a basic knowledge in mathematics, who will most likely have the greatest difficulty entering the labour market.

The figure shows that former communist countries (Estonia, Latvia) tend to have an excellent performance in PISA, as do the students from the province of Shanghai in China, the Republic of Korea and Singapore, all of which perform better than the average of OECD countries, together with the Czech Republic and Slovakia. Some Latin American countries, such as Chile, Mexico and Uruguay, have about 20 per cent of students below level 1, while others like Argentina, Brazil and Colombia are closer to 40 per cent, which is quite high. Panama, Peru and Qatar have around 50 per cent of students faring very badly, while Kyrgyzstan is the country with the lowest achievement level in the sample. Countries with a high share of students below the basic level will have serious problems competing in the globalized world with the high achievers.

One of the most important mechanisms for education to affect growth is in facilitating technology adoption (Benhabib and Spiegel, 2005). A more educated workforce can deal more easily with new technologies and implement new ideas. New ideas are the engine of growth.

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[1] The "Trend in International Mathematics and Science Study" is collected by the US National Centre for Education Statistics.

Figure 7.5   PISA 2009, Share below level 1 (percentages)
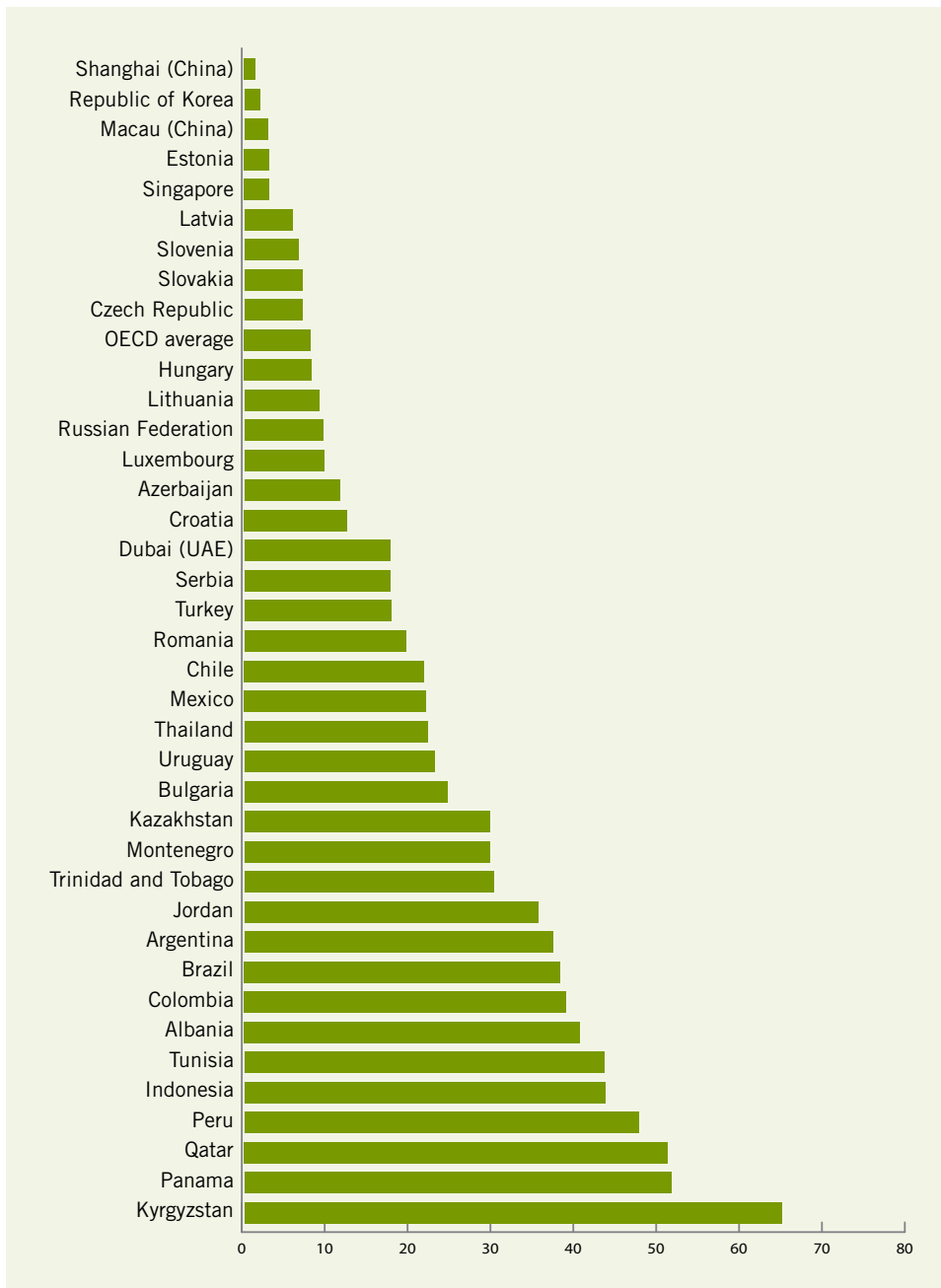
Source: OECD, 2010a.

Figure 7.6 shows the per capita patent application in the World Intellectual Property Organization (WIPO) and the average PISA 2009 score in mathematics. Countries with very low levels of education, like Argentina, Brazil, Colombia, Peru and Tunisia, also have very low levels of patent applications, whereas the opposite occurs in countries like Finland, the Republic of Korea and Singapore. There is a clear positive relationship between these two indicators. Obviously, other factors might correlate with both quality of education and patent application, but the relationship between education and innovation seems plausible in light of the models described above.

Figure 7.6 Patent application and quality of education
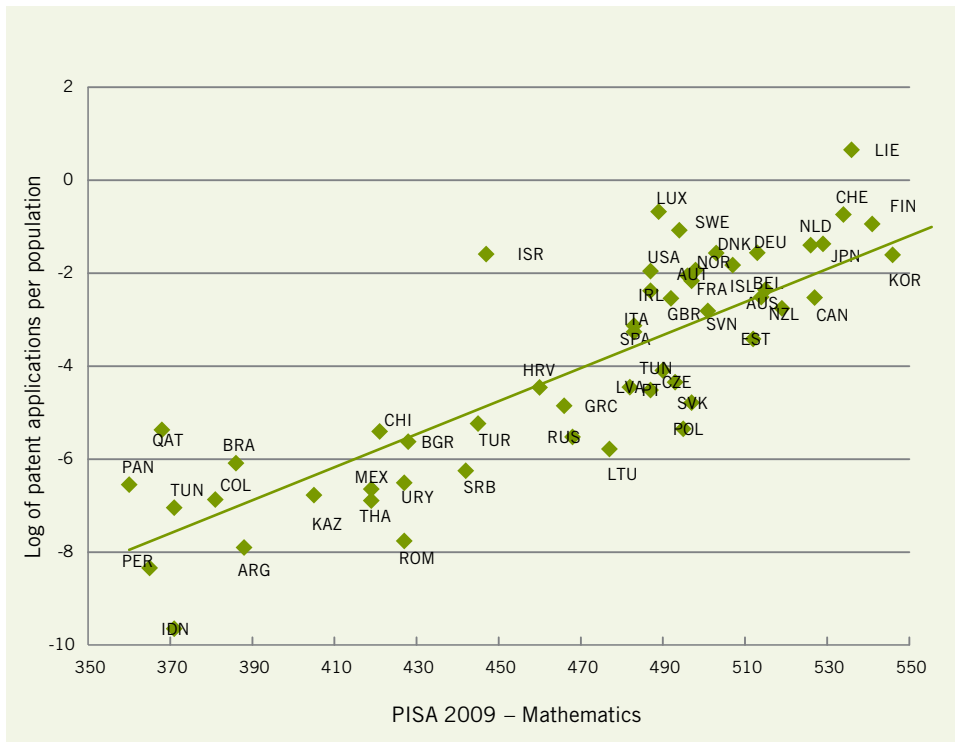
Sources: OECD, 2010a; WIPO, 2012.

7.5 Education policies

Given that education enables individuals to become more productive, to achieve higher wages and to escape from poverty and countries to increase their potential growth rate, the obvious question is: how can a developing country increase school attendance and the quality of its public education? **Boxes 7.1** and **7.2** summarize the recent histories of two developing countries, China and the Republic of Korea, that were able to change the education levels of their population relatively quickly.

Box 7.1 Education in China

As occurred in the Republic of Korea (box 7.2), the recent history of Chinese education is one of reconstruction. In response to Mao Zedung's Cultural Revolution, China completely reshaped education to erase "bourgeois influences". Schooling was normalized after Mao's death and several reforms followed. Nine-year compulsory education and local non-government funding allowances are among the important measures that have permitted China to reach nearly total secondary school enrolment and to have the largest number of undergraduate students in the world today.

Having succeeded in spreading access to schooling, China's policy-makers are now focusing on improving the quality of national education. Two major problems must be addressed: the allowances for the non-governmental financing of schools led to differences in economic welfare between regions, reflected in the current disparities in education quality. Moreover, the long-standing presence of selection examinations spread deep roots in the population's cultural background, leading to an excessive focus on test results. Shanghai has led the way in overcoming these challenges, implementing policies often adapted to the whole country. The curriculum has undergone reform to adapt to students' needs and interests, new methods are being designed that focus on creative problem-solving and various forms of peer interaction are being encouraged between schools and teachers in order to spread successful practices. At the national level, a new policy on school financing was recently implemented to compensate for the economic disparities between regions.

China is committed to establishing a solid educational system. Although the rising graduate unemployment rate might cast a shadow on the impact of educational expansion in the country, the overall perspective suggests China is transitioning from a low-cost, mass production-based economy to one based on knowledge and innovation.

Source: OECD, 2010c.

Box 7.2 **From zero to hero: The Republic of Korea's experience**

After the Second World War, education became a central element in the reconstruction of the Republic of Korea's economy and culture. The years following 1945 saw major efforts to expand access to basic education, making it free and compulsory. Important provisions endorsed teacher instruction, vocational training and a more autonomous administration. Commitment to the educational plan was maintained even during the Korean War, and by 1959 almost every child was enrolled in primary-school education.

Increasing access to the lower educational levels led to greater demand for the more advanced levels. The pressure resulted in heightened investment in schools in the 1960s and 1970s, increasing the number of teachers in the classrooms and revising the entrance exams, among other measures. By 1980, successive reforms began focusing on quality, as quantitative expansion was almost complete. Such centres as the Korea Educational Development Institute were founded with the sole objective of studying new strategies for educational policy, and post-secondary education was reformed to meet the changing demands of a new industrial job market.

In the context of economic rehabilitation, special attention was given to vocational training during the process of reconstruction. A five-year technical education plan was implemented as early as 1958 and the school curriculum focused to a greater degree on science and technology as the industrialization of the Republic of Korea was being consolidated.

The reforms continued with every new government, as has the growth of higher education since the obligation to education was launched. With serious commitment from both the government and the people, the Republic of Korea has managed to enter the twenty-first century as one of the world's pace-setters in educational policy.

Source: Republic of Korea, 2010.

Many recent papers have examined the impact of a variety of specific policies on school attendance and on students' learning (see Glewwe et al., 2011, for a recent survey). Supply and demand policies can be used to increase school attendance and its quality. Supply policies are those concerning the provision of education, in terms of both quality and quantity. Demand policies aim at promoting school attendance, for instance through cash transfers to households conditional on school attendance.

In terms of supply, the results published in the literature on the effect of educational resources on the learning process and the consequent impact on student achievement

are very controversial. While some authors argue that no relation exists between increased school spending and student performance (Hanushek, 1989), others have concluded that the relation does exist and is sufficiently large to be considered relevant (Hedges, Laine and Greenwald, 1994; Krueger, 2003). Studies of the effect of class size on student proficiency produce very discordant results. Hanushek (1997) argues, for instance, that policies to reduce class size do not have a lasting impact on student achievement, are very expensive and hence inefficient.[2]

One study, Rivkin, Hanushek and Kain (2005), found evidence that teacher quality, more than class size, improves student test performances. The authors concluded that the effect of a ten-pupil reduction in class size is less than the benefit generated by an increase in one standard deviation in the distribution of the quality of teachers. Based on the Project STAR results, Krueger (1999), on the other hand, concluded that, on average, students' proficiency on standardized tests increased four percentage points in the distribution of scores in the first year they were in a smaller class, and that these students' advantage increased by around one percentage point each year thereafter.[3]

The Poverty Action Lab (at the Massachusetts Institute of Technology) has instituted a series of randomized evaluations in developing countries to evaluate the impact of specific policies at the school level on promoting greater school attendance and quality education.[4] These policies are generally implemented at the school level, with some of the schools (the treatment group) experiencing the policies and some acting as the control group. The fact that the policies are implemented in an experimental setting allows the researchers to conduct a rigorous evaluation analysis, which can provide results to the policy-makers with more certainty.[5]

A recent study by Duflo, Hanna and Ryan, for example, examined the impact of an incentive system applied in India to reduce teacher absenteeism, which is naturally expected to lower school quality. The programme consisted in conditioning teachers' salaries on their presence levels, which was controlled with photographs taken by

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[2] Another important component that affects the quality of education is the peer effect – a student's learning depends on the ability of their classmates. However, it is difficult to isolate the effect of peers because students self-select into peer groups based, partly, on their own ability.

[3] Project STAR (Student/Teacher Achievement Ratio) was a four-year educational reform experiment conducted between 1985 and 1989 by the State of Tennessee.

[4] See www.povertyactionlab.org. The method is summarized in Banerjee and Duflo (2011). For more details on the experimental methodology, see Chapter 9.

[5] There is, however, a debate about the importance of randomized experiments for economic development (see the exchange between Deaton, 2010 and Imbens, 2010, for example). Also, most of the evaluations assume away general equilibrium effects.

students. The paper found that the programme reduced teacher absenteeism by 50 per cent. Moreover, students in treatment schools did significantly better on standard-ized tests than their counterparts from the control schools.

Duflo, Dupas and Kremer (2010) evaluated the impact of a package of school policies in Western Kenya, which consisted of increasing resources (increasing teacher–pupil ratio), using short-term contract teachers and allowing parents to become involved in school management. They found that reducing class sizes did not impact students' learning, as measured by their test scores, while hiring contract teachers and training school committees (composed by parents) had substantial and statistically significant impact on learning.

In terms of policies aimed at increasing attendance, Miguel and Kremer (2004) have examined the effects of a school-based mass deworming treatment in Kenya. The deworming pills were given to students in schools that were randomly chosen to par-ticipate in the first phase of the programme, and their outcomes were compared to students in control schools. The results showed that the treatment increased school attendance by about 25 per cent and had important externalities, benefiting students that did not take the pills through reduced transmission. Despite not impacting test scores, the increasing school attendance justifies subsidizing the programme.

Chung and Perrota (2010) investigate the impact of a food-for-education programme on school attendance in Cambodia. The serving of school meals can help alleviate hunger and improve nutrition, so students can learn better. The study evaluated the impact of a Word Food Programme intervention implemented in the primary schools of six Cambodian regions between 1999 and 2003. The authors found that school meals improved school attendance in the short run, especially when a full package, including in-school breakfast, take-home rations and deworming medicine, was im-plemented. The results pertaining to long-term school attendance were more dubi-ous, however. The study confirms that policies directed at poor families can increase school attendance in the short run but are limited in their ability to provide long-term outcomes and improve learning.

Conditional cash-transfer programmes have been introduced in several countries, as a means of alleviating poverty and increasing health conditions and school attendance in the developing world. These programmes transfer money to poor families with children in school age, conditional on school attendance and health exams. Schultz (2004), for example, examined the impact of the Mexican programme, Progresa, on school outcomes. Progresa was initially introduced in some villages that were ran-domly selected to take part in the programme. The author finds that the programme

increased school attendance and reduced inequality. The Brazilian government also designed a conditional cash-transfer programme called Bolsa Família, which is very similar to Progresa. Glewwe and Kassouf examined the impact of this programme on school outcomes and found that the programme increased school enrolment, lowered drop-out rates and increased grade promotion rates in primary and secondary education. Improving the quality of education in public schools is the next step forward.

A different type of policy aims at fighting corruption and mismanagement of school resources. Reinikka and Svenson, for example, examine the impact of providing information for parents and school managers on the allocation of public education funds in Uganda. The authors found that a newspaper campaign substantially reduced the capture of funds and increased school enrolment in schools that had more access to information. Ferraz, Finlan and Moreira (2011) find that corruption in Brazil tends to decrease learning outcomes in schools most affected by it. It seems, therefore, that the governance of social services could have an important impact on school outcomes.

There is considerable literature on the effects of vocational training policies on employment and wages. Card, Kluve and Weber (2010) provide a meta-analysis of active labour market policy evaluations, including some developing countries, and find that job search assistance programmes tend to have positive impacts, while public employment programmes are less effective. Moreover, on-the-job training programmes tend to be beneficial only in the long run.

More recent literature has emerged focusing on the importance of early child development on education and labour market outcomes (see Cunha and Heckman, 2010). Experiences of risk and prolonged stress in the first few years of life can affect future development as they may alter the physical and chemical structure of the brain, which may have long-lasting effects. Risk experiences may be linked to nutritional problems or to problems in the family environment and the absence of adequate stimulus in the first years of life. Therefore, research has shown that economic returns to interventions are highest for policies aimed at the very early stages of the life cycle; children that start to lag behind find it increasingly difficult to catch up with their classmates in terms of learning and other non-cognitive outcomes.

7.6 Conclusion

Education is one of the most important assets a worker can bring to the labour market. Better-educated workers earn on average higher wages, have better health and

suffer less from unemployment. The quality of education is as important for future outcomes as the number of years of education completed. Important differences in educational attainment are observed both within and across countries. Within countries, the differences tend to be related to credit constraints, as some families cannot afford the (out-of-pocket and opportunity) costs of education. Across countries, differences in educational attainment are related to institutional and historical factors.

Education is also important for growth, as a more educated workforce is better able to deal with new technologies and is more innovative. Although the quality of education received in schools is fundamental for growth, in general developing countries are not performing very well in this area. Certain policies to improve education have been implemented in several developing countries in a randomized way to permit serious evaluation of their effects. A review of this literature reveals that simply increasing educational resources is not sufficient to improve quality. Changes to the demand side, including health policies, more information and conditional cash transfers, together with changes in school organization and management, appear to be more effective in promoting educational achievement. Early child development is also important for future outcomes, and policies aimed at the first years of life have a much higher rate of return than remediation policies later in life.

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Labour market institutions

8

Sandrine Cazes
Chief, Employment Analysis and Research Unit,
International Labour Office

8.1 Introduction

An important part of today's labour economics has been increasingly concerned with the issue of labour market regulations and their effect on economic outcomes. The topic is the subject of an ongoing and divisive debate among economists and policy-makers. For many, regulations constitute a warranty of fair employment conditions – a help – while, for others, they are detrimental to economic efficiency and employ-ment growth – a hindrance (Freeman, 2005). Beyond the conflictive dimension of the discussion, it is fair to recall that labour market regulations are put in place with the main objective of correcting market imperfections and improving workers' welfare; however, the regulations can lead to adverse outcomes, even for the same workers they intended to protect. The perspective of this chapter is to address these two as-pects, focusing on the "economics" of labour market regulations.

All countries, irrespective of their level of economic development, have labour mar-ket regulations. The distinction between countries lies in the degree to which they are embedded in the law, whether the law is enforced and the extent to which government policies are sufficiently developed to pursue certain objectives. Their origin reflects the balanced ambitions of the labour markets' different stakeholders, mostly workers' rights, as well as the demands of businesses according to their production needs. It is useful to start with a few key definitions that will be used hereafter, as labour market regulations encompass a wide range of institutions and policies, all of which affect how the labour market works. The different elements examined here refer to broad concepts that are not mutually exclusive:

◖ A labour market is a market where a quantity of labour services (L) is offered in exchange for remuneration or a wage (w). Not all labour services are paid.

◖ A labour market institution is a system of laws, norms or conventions resulting from a collective choice – at least in democracies – and providing constraints and incentives that influence individual choices over labour and remuneration. Labour market institutions usually represent a long-term horizon and are considered by individuals as a given when making their own decisions. Often institutions are established by law, but they can also be regulated by social norms or conventions.

◖ Labour market policies (LMP), on the other hand, denote a short-term horizon (see Chapter 9 for more details). They are government policy choices that influ-ence labour supply and demand and their interaction. They comprise a variety of regulative policies that provide income replacement (usually called passive labour market policies) as well as labour market integration measures available to the

unemployed or those threatened by unemployment (usually labelled as active labour market policies).

◖ Labour market regulations can either be a labour market institution or an element of labour market policy. They encompass wage setting institutions, mandatory social benefits and the unemployment insurance system, as well as different aspects of labour legislation (laws on the minimum wage, employment protection legislation and the enforcement of the legislation).

As mentioned, numerous academic papers and policy reports have explored the effects of labour market regulations on economic performance. It is worth mentioning that this literature refers almost exclusively to a specific framework, namely standard competitive labour markets, in which regulations are perceived in economic models as costs only. In such models, for example, the existence of a minimum wage will automatically reduce employment; in other models that consider certain market imperfections, minimum wages may actually have no impact on employment levels or may even increase them (see below). Also important to note is that, until recently, this literature was restricted to the context of advanced economies (Lazear, 1990; OECD, 1994 and 1999; Nickell, Nunziata and Ochel, 2005; Blanchard and Wolfers, 2000).

More recently though, interest in the role of labour market regulations within emerging and developing countries has developed together with the globalization process and its potential effects on the most vulnerable parts of the population; empirical work on these countries has also been enhanced due to data availability (in particular, international data sets have been further developed by the World Bank, the International Monetary Fund (IMF), the OECD and the ILO). However, theoretical models may need serious adjustment given the specific situation of developing countries. Indeed, the labour markets of developing countries differ widely from those of developed economies. They are often characterized (see Chapter 2 and Ghose, Majid and Ernst, 2008) by:

◖ A rapidly growing labour force;

◖ Relatively low levels of unemployment but high levels of underemployment;

◖ A small formal economy with large urban informal and rural labour markets accounting for the majority of workers, who are not afforded employment or social protection;

◖ Low levels of productivity and wages and, hence, high rates of working poverty;

◖ Gender disparities, particularly in terms of the under-representation of women in the formal economy (and over-representation in the informal economy and unpaid work);

◖ A high proportion of youth, who are more likely to be unemployed and underemployed than the adult population.

Although labour legislation in developing countries can be de jure rigid, low levels of enforcement often render the legislation ineffective. Moreover, a majority of workers in developing countries are located in the informal economy and are hence beyond the scope of regulation, implying that employers are not directly affected by the impact of rigidities arising from labour laws and the like. Many of those operating in the informal economy are in fact own-account workers, which means there is no employer–employee relationship to govern.

Thus, the main issue for these countries is not so much unemployment and the lack of jobs per se, but the lack of better paid and more protected jobs in the formal economy and the inadequacy of social protection in general. These characteristics of developing countries' labour markets have important implications: research conducted on developed countries cannot be directly applied to developing countries – the specific features of the labour markets in the latter countries must be considered when analysing empirical research and formulating policy recommendations.

Keeping these differences in mind, it is useful to examine the main theoretical and empirical findings of the literature on the key labour market regulations and how they operate. Despite certain limitations, theoretical models can provide some informative insights about the possible effects of regulations on various outcomes, in terms of both benefits and side effects. Empirical research is also necessary to complement model predictions.

This chapter focuses on three key aspects of labour market regulations pertaining to both theoretical insights and empirical findings. They are employment protection legislation, minimum-wage law and unemployment compensation schemes. The chapter literature suggests that economic models prove somewhat ambiguous about the effects of labour market regulations on economic performances, thus leaving much room for empirical findings.

8.2 Employment protection legislation

8.2.1 What is employment protection legislation?

Employment protection legislation (EPL) refers to hiring and firing rules that are designed to "protect" the welfare of workers and provide some support during the

dismissal of redundant workers. It consists of both norms and administrative procedures that must be followed in cases of individual and collective dismissals. For example, in many countries labour codes mandate that firms discuss layoff decisions with workers' representatives or obtain permission from the Ministry of Labour and give workers advance notice prior to dismissing them. Moreover, in most countries worldwide, rules exist to ensure certain cash payments are made to workers who involuntarily separate from their employers. These severance pay schemes are usually related to the number of years worked with the employer and are linked to the latest salary in the job. Such schemes are meant to help workers start searching for a new job before dismissal and to help them cope with the risk of unemployment (once made redundant).

In most countries, employment protection legislation differs for individual and collective dismissals. Regarding individual dismissals, a distinction is made between economic dismissal and disciplinary dismissal (e.g. workers' fault dismissal). In the former case, legislation typically requires that the termination of individual employee contracts be motivated and that workers be given reasonable notice or financial compensation in lieu of notice. In practice, enforcement is based on the worker's right to appeal against termination following individual dismissal. Rules regarding the dismissal of individual employees can interfere with firms' decisions to adjust overall employment levels. Even in the relatively unregulated US labour market, for example, empirical evidence indicates that legal provisions meant to protect individual employees become more binding during cyclical downturns (Donohue and Siegelman, 1995). The procedure for collective dismissals applies to large-scale firm restructuring and requires the dismissal of a specific percentage or number of the workforce. Collective dismissal legislation often mandates administrative procedures, involving formal negotiations with workers' organizations and with local or national authorities.

From the standpoint of economic analysis, attention has most often been focused on the firing process and costs and, in particular, on severance payment programmes as they are often considered to be the most "costly" element of EPL. Moreover, and particularly for developing countries, severance pay programmes are frequently the main (and sole) form of worker protection and compensation in the case of job loss. However, it is very important to note that the involvement of litigation to assess the legal validity of a layoff must be considered as an important additional but uncertain cost element.

8.2.2 Measures and cross-country comparisons

Measuring employment protection is a difficult task and depends greatly on data availability. Certain quantitative aspects can easily be computed, such as the number of months' notice required for individual dismissal and severance pay. But other aspects, such as the interpretation of the definition of "just cause" for termination, are more difficult to measure precisely.

To perform international comparisons of employment protection regimes, academics and international organizations have computed various summary indicators (OECD, 1994 and 1999; Heckman and Pagés, 2004; Botero et al., 2004; Holzmann et al., 2011) to describe the "strictness" of employment protection legislation in each country (ordinal and cardinal measurement). The positive correlation of the different indicators has partly overcome the problems encountered to produce unambiguous cross-country EPL rankings.

The method consists in assigning a range to every country for any single feature of the protection regimes. The OECD, for example, has developed this methodology and compiled synthetic EPL indicators ranging from 0 to 6. While those indicators were originally produced for advanced economies only, they are now available for a broader set of emerging and developing countries. To compute the overall indicator, detailed information describing various aspects of the legislation must be collected: (1) the legislation for firing individual workers under *permanent contract*; (2) the legislation for firing individual workers under *temporary contract*; and (3) the legislation governing *collective dismissals*. The three sub-indicators are then aggregated into an "overall summary indicator" using different weights. The countries with very flexible employment regulations have a low overall EPL indicator (close to 0 or 1), while those with very strict legislation have a high indicator (close to 5 or 6).

A number of shortcomings apply to these composite indicators. First, they aggregate a number of sub-indicators covering various dimensions of hiring and firing for both regular and temporary contracts as well as collective dismissals. When using the overall indicator in econometric analysis, it becomes difficult to identify the impact of the respective component on the economic outcomes, for example. Second, there are relevant links between the sub-indicators as they are not independent from each other: thus it has been argued, for instance, that the increasing share of temporary workers has been a consequence of overly protective legislation for regular workers. Ideally, each sub-indicator should be used separately according to the weight of workers subject to these regulations (Bertola, Boeri and Cazes, 2000; Berg and Cazes, 2008). A third limitation relates to the omission of enforcement procedures: they are de jure indicators, based on the provision of legislation in place, such as labour

codes, employment protection acts and other types of laws. Yet, several important indications point to asymmetries across countries (and over time) in the degree of labour legislation enforcement, which may be more significant than the differences in regulations per se. Enforcement plays a crucial role in the functioning of labour markets, notably in determining labour market flows, such as job losses and unemployment inflows. Bertola, Boeri and Cazes (2000), for example, argue that given the increasing institutional complexity and the legislative vacuum surrounding the rights of workers under new types of contracts, national administrations and labour courts effectively determine the enforcement of employment protection. Moreover, the indicator offering the closest approximation of judicial interpretation of employment protection legislation – namely an OECD indicator based on the notion of "difficulty of dismissals"[1] – is more closely related than other available indicators to job-termination probabilities and to the inflows of persons into unemployment (Cazes, Boeri and Bertola, 1999). Jurisprudence would thus be as important as, if not more important than, the nominal strictness of regulations per se. Yet it is often neglected as being a particularly hard aspect of the legislation to measure.

Preliminary evidence on the role of the courts, incidence of courts cases, applicable sanctions and the costs of legal proceedings confirm that much can be learned from the cross-country variations in the implementation of the law. The limited and rough information available suggests, for example, that countries whose courts are the most frequently involved in labour disputes over termination of employment also tend to be those displaying the highest percentage of rulings favourable to employees. Spain is a case in point. In 1995, 1 employee in 200 appealed to the courts (compared to 1 employee in 15,000 in Austria) and about 72 per cent of cases in 1995 were won by the workers. France and to a lesser extent Italy display the same patterns. In addition, the precision, transparency and consistency with which legislators define reasons for dismissal may give the courts more or less discretion in interpreting the law. Another relevant aspect refers to the endogeneity of jurisprudence as the incidence and outcomes of litigation are likely to be affected by labour market conditions. There is evidence, for example, that in western Germany, court rulings have been particularly unfavourable to employers during downswings as if jurisprudence were playing the role of stabilizer. There are also some indications that court rulings have favoured employees in high-unemployment southern Il Mezzogiorno more than in the northern

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[1] This indicator of EPL reflects a qualitative assessment of the strictness of legal definitions of unfair dismissal, the frequency of verdicts involving the reinstatement of employees and the monetary compensations awarded in cases of unfair dismissal. The methodology is discussed in detail in Grubb and Wells (1993).

part of Italy. These results should be duly acknowledged when assessing the causal relationship between labour legislation and labour market outcomes.

Finally, many exemptions from applying EPL rules on permanent contracts exist. For instance, small enterprises are often exempt from labour legislation, in particular dismissal protection legislation. In Germany, for example, establishments with five or fewer workers are not subject to the *Kündigungsschutzgesetz* or Protection Against Dismissal Act (Verick, 2004); there are almost 1.5 million small businesses of that size, accounting for over 68 per cent of all establishments in the country. These units employed around 3.2 million workers in 2001, which represented over 11 per cent of all workers. In middle- and low-income countries, most workers are not employed in big companies. In Chile, for example, 60 per cent of workers were employed in firms with fewer than 50 employees (micro and small firms). In Peru and Pakistan, the figures are even higher, at 74 per cent and 79 per cent, respectively. Even in Europe, 53 per cent of workers worked in firms with fewer than 50 employees (data for 19 countries – see Reinecke and White, 2004).

Bearing all these caveats in mind, **table 8.1** displays the overall EPL indicator based on the OECD methodology and its three components for both OECD and non-OECD countries. As mentioned, the EPL indicator comprises values from 0 to 6: countries with very flexible legislation have a low overall index (close to 0 or 1) and those with very protective legislation have a high index (5 or 6).

Within the OECD, the United States is the most flexible country, while EPL is much tighter in the countries of continental Europe. France, Portugal and Spain, for example, feature quite stringent regulation. Emerging economies do not constitute a homogeneous group either. **Figure 8.1** shows even more strikingly this diversity: the degree of employment protection ranges from just 0.3 in Georgia to 3.9 in Nepal. Moreover, Malaysia, the Russian Federation and South Africa are among the most flexible countries and below the OECD average of 2.23 while Indonesia, Mexico, Morocco and Turkey are among the most protective ones. Most of the low- and middle-income countries, however, provide de jure greater employment protection than OECD countries, which is also evident in **figure 8.1**: 13 out of the 21 countries for which data are available have legislation that results in greater restrictions on employment than the OECD average. The key message here is that most developing countries provide protection to workers only through legislation, which is inadequate because it merely covers the small formal sector. Moreover, as discussed above, lack of enforcement means that even the formal-sector workers are afforded little protection in practice. This gap in worker protection remains one of the key challenges to policy-makers in developing countries and emerging economies.

**Table 8.1   Strictness of employment protection, 2008 (OECD employment protection
legislation index)**

Country	Permanent contracts	Temporary contracts	Collective dismissal	Overall EPL index
Argentina	2.10	3.00	4.00	**2.80**
Australia	1.37	0.79	2.88	**1.38**
Austria	2.19	2.29	3.25	**2.41**
Belgium	1.94	2.67	4.13	**2.61**
Brazil	1.49	3.96	0.00	**2.27**
Canada	1.17	0.22	2.63	**1.02**
Chile	2.59	2.04	0.00	**1.93**
China	3.31	2.21	3.00	**2.80**
Czech Republic	3.00	1.71	2.13	**2.32**
Denmark	1.53	1.79	3.13	**1.91**
Estonia	2.27	2.17	3.25	**2.39**
Finland	2.38	2.17	2.38	**2.29**
France	2.60	3.75	2.13	**3.00**
Georgia	0.60	0.20	0.00	**0.30**
Germany	2.85	1.96	3.75	**2.63**
Greece	2.28	3.54	3.25	**2.97**
Hungary	1.82	2.08	2.88	**2.11**
Iceland	2.12	1.54	3.50	**2.11**
India	3.65	2.67	0.00	**2.63**
Indonesia	4.29	2.96	0.00	**3.02**
Ireland	1.67	0.71	2.38	**1.39**
Israel	2.19	1.58	1.88	**1.88**
Italy	1.69	2.54	4.88	**2.58**
Japan	2.05	1.50	1.50	**1.73**

Kazakhstan	2.10	1.50	0.00	**1.50**
Korea, Rep. of	2.29	2.08	1.88	**2.13**
Kyrgyzstan	1.90	0.80	3.60	**1.70**
Lithuania	2.60	2.30	3.60	**2.70**
Luxembourg	2.68	3.92	3.88	**3.39**
Malaysia	2.20	0.30	0.00	**1.10**
Mexico	2.25	4.00	3.75	**3.23**
Morocco	4.00	3.60	0.00	**3.20**
Nepal	4.30	5.00	0.00	**3.90**
Netherlands	2.73	1.42	3.00	**2.23**
New Zealand	1.54	1.08	0.38	**1.16**
Norway	2.20	3.00	2.88	**2.65**
Poland	2.01	2.33	3.63	**2.41**
Portugal	3.51	2.54	1.88	**2.84**
Russian Fed.	2.79	0.79	1.88	**1.80**
Slovakia	2.45	1.17	3.75	**2.13**
Slovenia	2.98	2.50	2.88	**2.76**
South Africa	1.91	0.58	1.88	**1.35**
Spain	2.38	3.83	3.13	**3.11**
Sweden	2.72	0.71	3.75	**2.06**
Switzerland	1.19	1.50	3.88	**1.77**
Turkey	2.48	4.88	2.38	**3.50**
United Kingdom	1.17	0.29	2.88	**1.09**
United States	0.56	0.33	2.88	**0.85**
Viet Nam	3.30	0.80	3.80	**2.30**

Notes: Higher numbers denote stricter EPL regimes. All sub-indicators are normalized in the 0–6 range.

Sources: OECD, 2012; ILO calculations based on OECD methodology (www.oecd.org/employmentprotection) and ILO EPLex database.

Figure 8.1   Employment protection legislation index, non-OECD countries, 2008
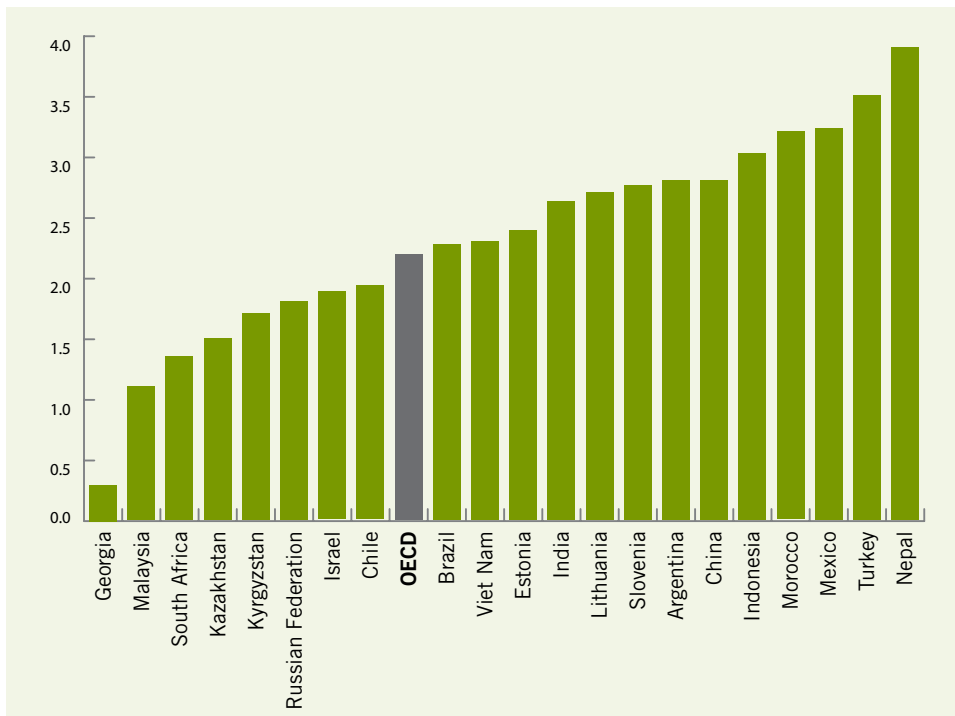
Notes: Data for the overall EPL index is for 2008. The overall summary measurement of EPL strictness relies on three main components related to the protection of regular workers against (individual) dismissal, specific requirements for collective dismissals and regulation of temporary forms of employment. The scale is from 0 (least restrictive) to 6 (most restrictive).

Sources: OECD, 2012; ILO calculations based on OECD methodology (www.oecd.org/ employmentprotection) and ILO EPLex database.

Three facts are noteworthy from the EPL data. First, there are marked differences in the strictness of EPL across countries and across regions. Second, most of this diversity across countries is due to the employment legislation that applies to temporary contracts. So, if only the regulation for regular contracts is considered, Brazil, South Africa and Argentina are among the most flexible of non-OECD countries, while India and Indonesia are among the most restrictive (**figure 8.2**). Third, it is important to note that three of these countries have no regulation whatsoever on collective dismissals (Indonesia, India and Brazil).

Figure 8.2   **Composition of employment protection legislation index, selected non-OECD countries, 2008**
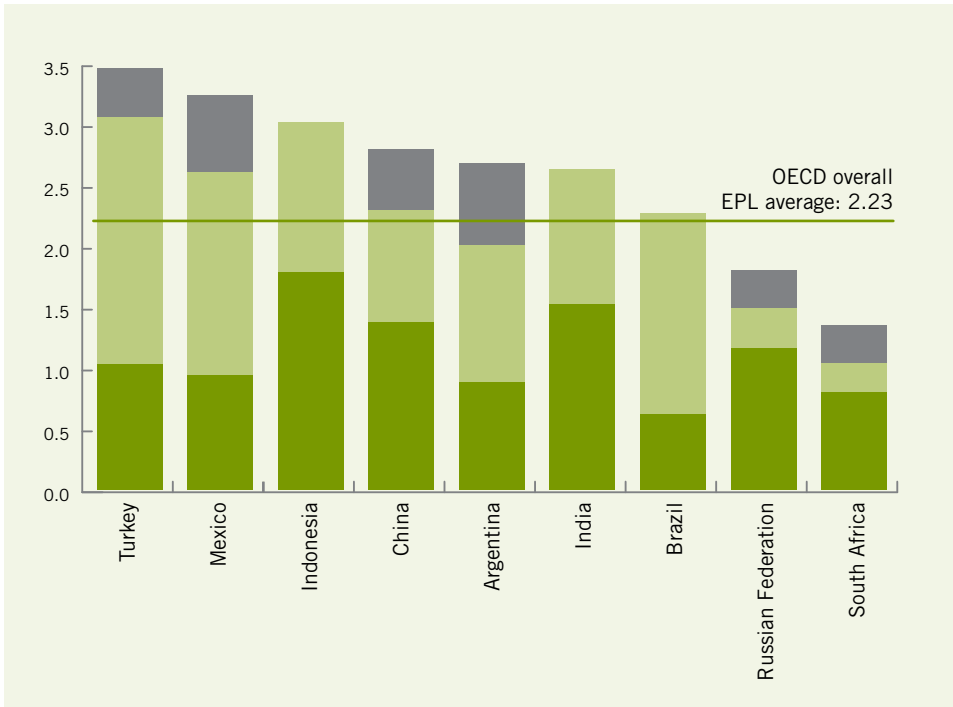
Notes: Grey = regulation on collective dismissals; light green = regulation on temporary contracts; darker green = regulation on regular contracts.

Sources: OECD, 2012; ILO calculations based on OECD methodology (www.oecd.org/employmentprotection) and ILO EPLex database.

8.2.3 Theoretical background

The level of employment protection legislation may affect both employers' and employees' decisions: the main argument for employment protection relates to employees' security at work, in terms of both employment and income, and the advantages of a stable employment relationship that encourages investment in human capital and thereby upgrades the productivity of workers. Another argument in favour of EPL refers to it increasing the willingness of workers to accept technological change and internal job mobility, with a potential increase in productivity. At the macroeconomic level, EPL may also be seen as a "stabilizer", in smoothing labour market adjustment

to adverse macroeconomic shocks. The main argument against employment protection legislation is that it constrains firms' behaviour by raising labour costs and hence it may reduce total employment. These arguments are developed below.

The primary task of EPL is to give more employment and income security to *workers*, both in their current jobs and in case of redundancy. Advance notice informs workers of layoff plans and gives them time to search for new jobs. EPL in some countries obliges employers to offer internal redeployment if possible and to cooperate with the trade unions and public labour market institutions on the re-employment of redundant workers, while providing financial compensation for hardship connected with layoffs. The aim of these provisions is to strengthen the longer-term attachment of workers to their jobs and employers or, if their internal redeployment is not possible, to facilitate relatively smooth external re-employment and moderate income loss. Stable employment prospects encourage workers to undergo retraining and skills upgrading and encourage enterprises to invest in workers' training, leading to higher labour productivity and internal workforce flexibility, beneficial to the market adjustment of enterprises (Piore, 1986). Job security for workers should also moderate their resistance to the introduction of new technologies and working practices.

But EPL imposes costs on firms that need to adjust the levels of their workforce and makes redundancies more lengthy and costly for *employers*. Management should thus look for alternative solutions to dismissals, such as increases in the functional flexibility of personnel through better human development policy and improved worker motivation in the framework of enterprise restructuring, technological upgrading, improved marketing strategy and other alternatives. Firms are thus stimulated to look for internal reserves, to invest in human resources and to constantly improve their technology and work organization. In return, the workforce remains loyal and is willing and able to constantly adapt itself to new technological and market challenges (Akerlof, 1984).

Stricter EPL is also expected to provide better employment protection to certain vulnerable groups in labour markets who, if dismissed, would face difficulty in finding new jobs and sources of income. These groups include older workers protected by seniority rules, employed women during pregnancy and maternity leave, single parents taking care of small children and disabled workers, among others. Employment protection thus helps mitigate discrimination against vulnerable workers, promotes their employment and saves social welfare funds allocated to support the disadvantaged groups of the labour force.

Along these lines, enhanced EPL ensuring higher job stability should improve aggregate productivity through better enterprise adaptation, technological progress and regular

worker training, while simultaneously securing higher income equality and fighting discrimination. The overall effect is expected to be improved economic performance and a better standard of living within the population (Nickell and Layard, 1999).

The potential costs of stricter EPL include widening the distance between "insiders", i.e. workers in regular jobs enjoying high employment security through EPL for permanent contracts, and "outsiders", i.e. those in irregular jobs (fixed-term, seasonal or any type of informal employment) as well as unemployed jobseekers, not covered by EPL. Such a *dual-track reform* strategy causes reform only at the edges, on a flow basis, for new hires, while the employment security entitlements of the incumbent workers remain unchanged (Boeri and Garibaldi, 2007).

In general, for the insiders, job tenure increases with age while the risk of losing their job declines. By contrast, the outsiders face difficulties accessing regular jobs, particularly during periods of higher economic volatility. Thus, stricter EPL may stimulate a rise in irregular forms of employment and reduce new hiring, mainly in regular jobs. This would result in higher and, especially, long-term unemployment. However, even for the insiders, stricter EPL may occasion certain disadvantages. While these workers are better protected against job loss in general, they may be forced to accept internal redeployment to inferior positions in terms of skill requirements, responsibility, status or remuneration. It has been argued, for example, that the deregulation of temporary contracts in most European countries has allowed firms to overcome temporary peaks in demand without hiring new permanent workers.

Firms are subjected to higher labour costs owing to stricter EPL because layoffs are combined with severance pay and other obligations in favour of redundant workers (for example, re-employment assistance and funding of labour market training, among others). Moreover, due to lengthier administrative procedures (advance notice and negotiations with workers' representative bodies and/or labour market institutions), the firm must keep redundant workers on its payroll for a certain period of time, which implies significant additional costs. Therefore the stricter the EPL, the more cautious firms may be about recruiting workers for regular jobs.

For society, the costs of stricter EPL may be twofold. First, the labour market duality between the "insiders" and "outsiders" contributes to increasing labour market rigidity, inequality and social exclusion, requiring additional costs for their mitigation. Second, well-protected workers' fears of losing their entitlements and becoming exposed to the uncertainties of the labour market stop them from moving to more productive jobs elsewhere. But, as previously mentioned, stricter EPL may also contribute to smoother labour market adjustment, greater social stability, the division

of adjustment costs between society and business, the quicker absorption of new technologies via added pressure on enterprises, resulting in positive impacts on productivity. Firms may not always be in a position to make needed internal adjustments to their workforce due to the lack of investment funds, the unfavourable composition of their personnel or an unfavourable economic situation in general, such that doing so would further diminish their market competitiveness and longer-term growth prospects. In such situations, some firms may be forced to lay off redundant workers in any case, despite the higher costs induced by EPL, and to limit new recruitments, increasing the level of unemployment. Moreover, the duration of unemployment rises. An increase in the number of non-competitive firms is detrimental to national economic development and prosperity in general as it reduces resources for economic and social policy while increasing the demand for funds for appropriate intervention.

This overview of the theoretical arguments highlights the fact that EPL generates a number of effects on labour costs, employment and productivity, some favourable and some unfavourable. The net impact of these effects varies according to the size of the firm, the type of activity and relative to economic conditions. But theoretical models suggest quite clearly that employment should be more stable and individual employment relationships more durable when EPL is stricter. In other words, stringent EPL reduces hiring and firing. **Box 8.1** summarizes the main effects.

Box 8.1 Overview of main theoretical findings

To the extent that firing costs prevent dissolution of existing employment relationships, sharp employment reduction is less likely in countries with stringent job security provisions. At times when employment would increase in the absence of EPL, however, employers are less inclined to hire when they fear that future firing costs will make it difficult to reverse current decisions. Hence, EPL reduces job creation as well as job destruction and results in smoother employment dynamics. More subdued turnover implies that individuals who – like new entrants to the labour market – happen to be unemployed at any given point in time are less likely to exit into employment and more likely to experience long-term unemployment.

Since EPL has contrasting effects on employers' propensity to hire and fire, its net effect on *longer-run* relationships between wage and employment levels is *a priori* ambiguous. It may increase or decrease average employment, depending on such subtle features of formal models as the form of labour demand functions, the persistence of labour demand fluctuations and the size of discount and attrition rates. A general insight holds true: since higher turnover costs reduce both hiring and firing, their effect on average employment levels over periods when both hiring and firing occur is an order of magnitude lower than that on hiring and firing separately. Such issues are

studied in some detail by Bentolila and Bertola (1990) and Bertola (1990), who find that average employment effects are indeed small and of ambiguous sign in reasonable parameterizations of dynamic labour-demand problems.

Source: Cazes, Boeri and Bertola, 1999.

8.2.4 Empirical evidence

Empirical work has explored these implications using the above-mentioned overall EPL indicators, and a variety of cross-sectional indicators of labour market performances. This section reviews existing empirical evidence covering international, national and industry-level data to disentangle possible effects of EPL on various outcomes, such as job turnover, job creation, the use of more temporary workers or more outsourcing.

Cross-country studies

Most studies on the effects of EPL take a cross-country approach. Following the seminal work of Lazear (1990), the EPL literature has concentrated on the effects of the quantitative aspects of EPL, such as severance payment in OECD countries with different employment protection regimes (Grubb and Wells, 1993; Scarpetta, 1996; Addison and Teixeira, 2003, 2005; Nickell and Layard, 1999). A majority of these studies initially assessed the effects of EPL on *stock* data.

Table 8.2   The effects of employment protection on the labour market, empirical results

	Stocks		Flows	
Studies by author(s)	Employment	Unemployment	Employment	Unemployment
Emerson (1988)	?	?	-	-
Bertola (1990)	?	?	?	-
Lazear (1990)	-	+	n/a	n/a
Grubb and Wells (1993)	-	n/a	n/a	n/a
Garibaldi, Koening and Pissarides (1994)	?	?	?	-
Addison and Grosso (1996)	?	?	n/a	n/a

Jackman, Lazard and Nickell (1996)	?	?	-	-
Gregg and Manning (1997)	?	?	n/a	-
Boeri (1999)	?	?	+	-
Di Tella and McCulloch (1998)	-	+	n/a	n/a
OECD (1998)	?	?	?	-
Kugler and Saint-Paul (2000)	n/a	n/a	+	-
Belot and van Ours (2001)	n/a	-	n/a	n/a
Heckman and Pagés (2000) and (2004)	-	n/a	n/a	n/a
OECD (2004)	n/a	n/a	-	-
Nickell, Nunziata and Ochel (2005)	?	?	n/a	n/a
Micco and Pagés (2006)	-	n/a	-	-
Lafontaine and Sivadasan (2009)	n/a	n/a	-	-

Notes: ? = evidence not conclusive; + = a positive correlation (between EPL and employment, unemployment, etc.), e.g. an increase (or decrease) of EPL induces an increase (or decrease) of employment, unemployment, etc.; - = a negative correlation (between EPL and employment, unemployment, etc.), e.g. an increase (or decrease) of EPL induces a decrease (or increase) of employment, unemployment, etc.; n/a = not assessed/available.

Sources: Boeri and van Ours, 2008 and author's compilations.

The first two columns display the results for stock data, e.g. the effects on employment or unemployment levels. The evidence is quite weak and generally not conclusive: a few studies identified a negative correlation between EPL and employment in OECD countries (for example, Lazear), while the Heckman and Pagés (2000) study covering Latin American, the Caribbean and industrialized countries found a large negative – but not statistically significant – impact of EPL on employment rates. Estimates also point to increases in informal employment, partially offsetting formal employment loss. However, in their 2004 update Heckman and Pagés acknowledged that, "... contrary to previously reported estimates, we have found little evidence of a

systematic relationship between advance notice period and indemnities for dismissal on employment or unemployment ...". As for the effects on unemployment, very few studies found a positive correlation between EPL and unemployment *stocks*.

Cross-country evidence of effects on job and labour flows, presented in the last two columns of **table 8.2**, however, is a bit more robust. More recent studies have been conducted with wider coverage, including developing countries. The evidence is quite strong and shows that firing costs reduce turnover of jobs and workers in the labour market. Among the cross-country studies are Micco and Pagés (2006), Lafontaine and Sivadasan (2009), Haltiwanger, Scarpetta and Schweiger (2010) and Martin and Scarpetta (2011). Micco and Pagés (2006) include worldwide coverage and use industry-level cross-country panel data; they test and find supportive evidence for the theoretical finding that EPL stabilizes certain industries that are more volatile in terms of demand and supply shocks.

Lafontaine and Sivadasan (2009) use a cross-country, longitudinal data set obtained from a multinational fast-food chain covering 43 countries and 2,500 outlets. The study finds that EPL reduces the ability of firms to adjust labour levels in response to demand or productivity fluctuations, thus hampering the reallocation of resources and potentially impeding an important channel for aggregate productivity growth. However, Lafontaine and Sivadasan use the index developed by Botero et al. (2004), an index that has been questioned (Berg and Cazes, 2008). Moreover, the authors also acknowledged that, "... a major goal of such labour regulation is to protect labour. Our findings are consistent with the idea that incumbent workers benefit from the regulation, as the outlets do not reduce labour as much as they would otherwise when facing negative shocks. Thus, incumbent workers may benefit from longer employment tenure, reduced uncertainty and protection against job loss during downturns. From a policy perspective, the misallocation costs described here must be weighed against these benefits for incumbent workers ...". Martin and Scarpetta (2011) found that employment protection has a sizeable effect on labour market flows and those flows, in turn, have significant impact on productivity growth.

Within-country studies

In recent years, work exploring the effects of EPL within single countries, using panel data on individual firms, has flourished. In general, increased interest in the role of EPL and better data availability have generated greater focus on the effects of labour legislation in developing countries, especially in Latin America and India (for example, Kugler (1999) for Colombia; Besley and Burgess (2004) for India; Montenegro and Pagés (2004) for Chile; Boeri and Jimeno (2005) for Italy; Almeida and Carneiro (2008) for Brazil, among others). Generally, the effects found in these within-country studies are small but qualitatively consistent with the predictions of economic theory.

Kugler (1999) uses Colombian household data to analyse the effects of a reduction in firing costs on the differences in hazard rates for entry and exit of unemployment status between formal and informal workers. Results of this study are taken to imply that a "reduction in firing costs increased the hazard rate out of unemployment by up to 1.06 per cent and the hazard rate out of unemployment of covered workers by up to 1.7 per cent relative to uncovered workers". Besley and Burgess (2004) exploit time and regional variation in India. Their results show strong and statistically significant output and employment effects. However, this study did not focus on EPL directly, so the specific effects of EPL as distinct from other labour legislation cannot actually be identified.

Other within-country studies carried out on both OECD and developing countries have shown that EPL may have different impacts on distinct groups of the population when it applies differently according to the type of worker (e.g. across age groups) or to exemptions (e.g. of small firms). For example, an important dimension of EPL, severance payments, typically depends on the worker's job tenure (the time employed individuals have spent with their current employer without interruption). Very often also, EPL reforms are asymmetric, changing regulations only for a subset of the workforce. Typically workers with shorter tenure (young people, women) are less expensive to dismiss. And, as explained in section 8.2.2, small enterprises are often exempt from the most restrictive aspects of the dismissal protection legislation.

Several studies have confirmed this differential impact, including Montenegro and Pagés (2004) in their analysis of Chile. Using household survey data from 1960 to 1998, they found a negative effect of EPL on the employment probabilities of female, youth and unskilled workers compared to prime-age male workers. Similarly, Boeri and Jimeno (2005) examined the difference between EPL for permanent and temporary workers introduced by dual-track labour market reforms in the late 1980s in Europe as well as the difference involved by the exemptions of small firms. They found higher dismissal rates for temporary workers than permanent workers; they also found a firm-size effect as expected. Autor, Donohue and Schwab (2006) also found some negative effects of EPL on dismissal rates. One of the few studies to look at such effects in a developing country is Almeida and Carneiro (2008). In their study, the authors use geographic variation in the degree of enforcement of labour legislation. Their hypothesis is that stricter EPL enforcement could reduce firm size for two reasons: proper enforcement induces an increase in labour cost and smaller firms are less likely to be controlled by labour inspectors (enforcement variable). Almeida and Carneiro's results confirm that stricter enforcement reduces firm size.

8.2.5 Concluding remarks

Although EPL is initially introduced to improve workers' welfare, it can also produce side effects, even for those same workers it was meant to protect. This can probably be affirmed about all labour market regulations, but EPL remains one of the most controversial and complex to measure. The latter may partially explain why the debate on the effects of EPL on labour markets is still not settled and why empirical and, particularly, cross-country findings are far from robust. However, beyond measurement issues, conceptual problems exist as well. Most of the empirical research carried out in this field has systematically assumed causality in the direction of institutions to economic performances without considering possible reverse causality issues.

Moreover, these studies often assess the single effect of EPL on various labour market performances. However, institutions do not act in isolation such that ignoring the possible interactions among labour market institutions (for example EPL and the wage setting institutions) can lead to irrelevant policy recommendations. But interaction with other institutional factors, outside the labour market, for instance product market regulations or capital market developments, should be captured as well. Finally, it would be important to include other sources of employment protection, such as collective agreements.

8.3 Minimum wages

8.3.1 Minimum wage characteristics

The minimum wage is another key labour market institution. It sets a *wage floor* applicable to wage earners, ensuring they receive a minimum level of pay protection. Therefore, it mostly affects the low end of the wage distribution, whereas the other wage-setting institutions (such as trade unions and collective bargaining) affect the whole distribution. Although most countries in the world have some form of minimum wage, the characteristics of minimum-wage schemes vary across nations, making the elaboration of comparable data sets on minimum wages a difficult task. Minimum wage fixing procedures (including government legislated, collective bargaining), the coverage rate, eligibility and other operational details all change from country to country. There can also be different minima, according to hourly, daily, weekly or monthly time frames. Outside the single minimum wage, reduced or subminimum rates for specific group of workers, such as young people, can also be set.

Certain key statistics, however, such as the ratio of the minimum wage to the average wage, are often used to capture the effects of minimum wages on employment or on the distribution of earnings in different countries. In developing countries, given limited collective-bargaining coverage and the challenges trade unions face to organize low-paid workers, the minimum wage can play an important role in protecting the purchasing power of low-paid workers. Moreover, it is often used as a reference for other worker benefits and by informal workers and employers (the lighthouse effect, which refers to the minimum wage used as a reference point for setting wages even in the informal sector).

The main objective of the minimum wage is to improve the welfare of low-wage earners. Whether the wage actually achieves its intended purpose is another issue that has been the subject of great controversy for several years. The following section begins with elements of cross-country comparisons, then describes the main theoretical predictions of the effects of minimum wages; finally, the main empirical findings are presented. A large number of studies, both theoretical and empirical, have examined the effects of the minimum wage. Theory provides unambiguous predictions only related to a competitive labour market. Empirical evidence provides mixed results, depending on the country, the level of the minimum wage, the existence of a single or several minimum wages, the methods of analysis and the economic model used. Thus, empirical evidence may actually show contradictory findings.

8.3.2 Cross-country comparisons

As mentioned, in cross-country analysis the information usually concentrates on minimum-wage systems, such as the ratio of the minimum wage to the average wage, the percentage of workers at or near the minimum wage, the frequency of adjustment, and certain qualitative information that describes the wage setting mechanisms. The ILO, the OECD and the IMF, for example, collect such information. **Figures 8.3** and **8.4** display the ratio of the minimum wage to the average wage, a standard statistic often used in international comparisons. In principle, using the median rather than the average wage as the denominator would be useful as median wages are less sensitive to outliers and thus may better measure earnings distribution.[2] This ratio presents shortcomings, however. For example, it does not take into account the fact that there may be workforce subgroups not entitled to the minimum wage. Yet in developing countries, in particular, a large informal labour market exists where laws on the minimum wage simply do not apply.

....
[2]   In particular in the case of developing countries where income distributions are highly skewed.

Figure 8.3 Minimum wage to average wage, OECD countries, 2009 (percentages of full-time workers)
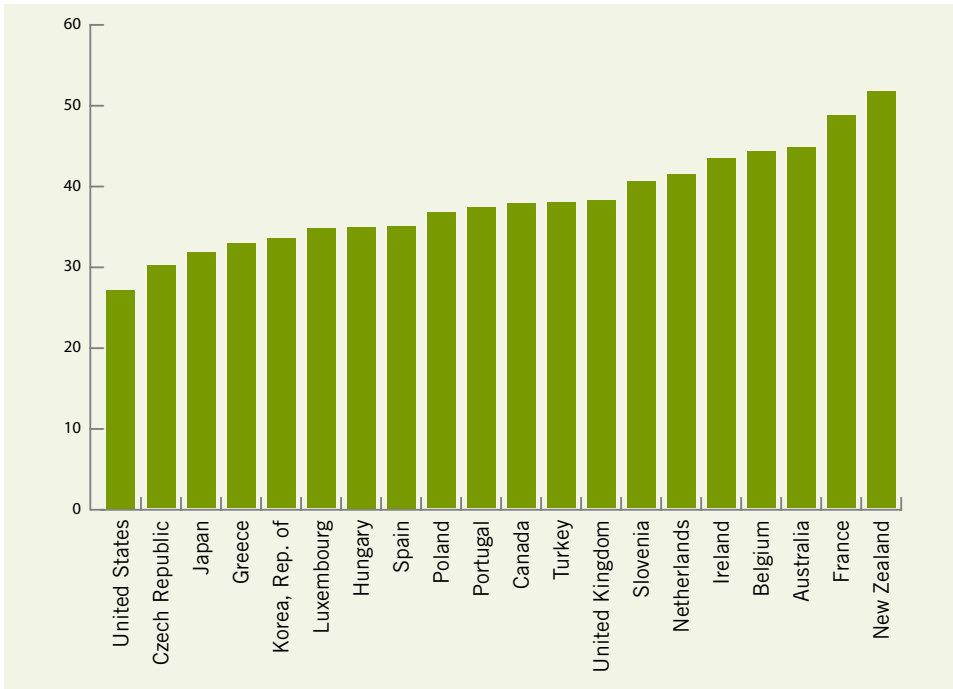
Source: OECD, 2009.

Bearing these caveats in mind, **figures 8.3** and **8.4** illustrate the huge diversity between countries, with Pakistan in this group attaining the highest ratio at 81 per cent and Uganda the lowest at around 3 per cent. By comparison, the minimum wage relative to average wage of full-time workers ranges between 27 per cent in the United States and 52 per cent in New Zealand, while the OECD average was 37.2 per cent in 2009. It is important to recall that this ratio is mainly presented here to illustrate the diversity of minimum-wage[3] situations between countries. Indeed the drawbacks of this measure include the fact that it does not incorporate the large informal labour market in which minimum-wage legislation does not apply or is not enforced; that multiple minimum wages can exist in many developing countries, varying across occupations, industries and/or geographical regions; and that in such countries there is high and volatile inflation that generates wide fluctuations in real wages.

....
[3]   For example 1,171 minimum wage rates exist in India (Belser and Rani, 2011).

Figure 8.4 **Minimum wage to average wage, developing countries and emerging economies, 2010 (percentages)**
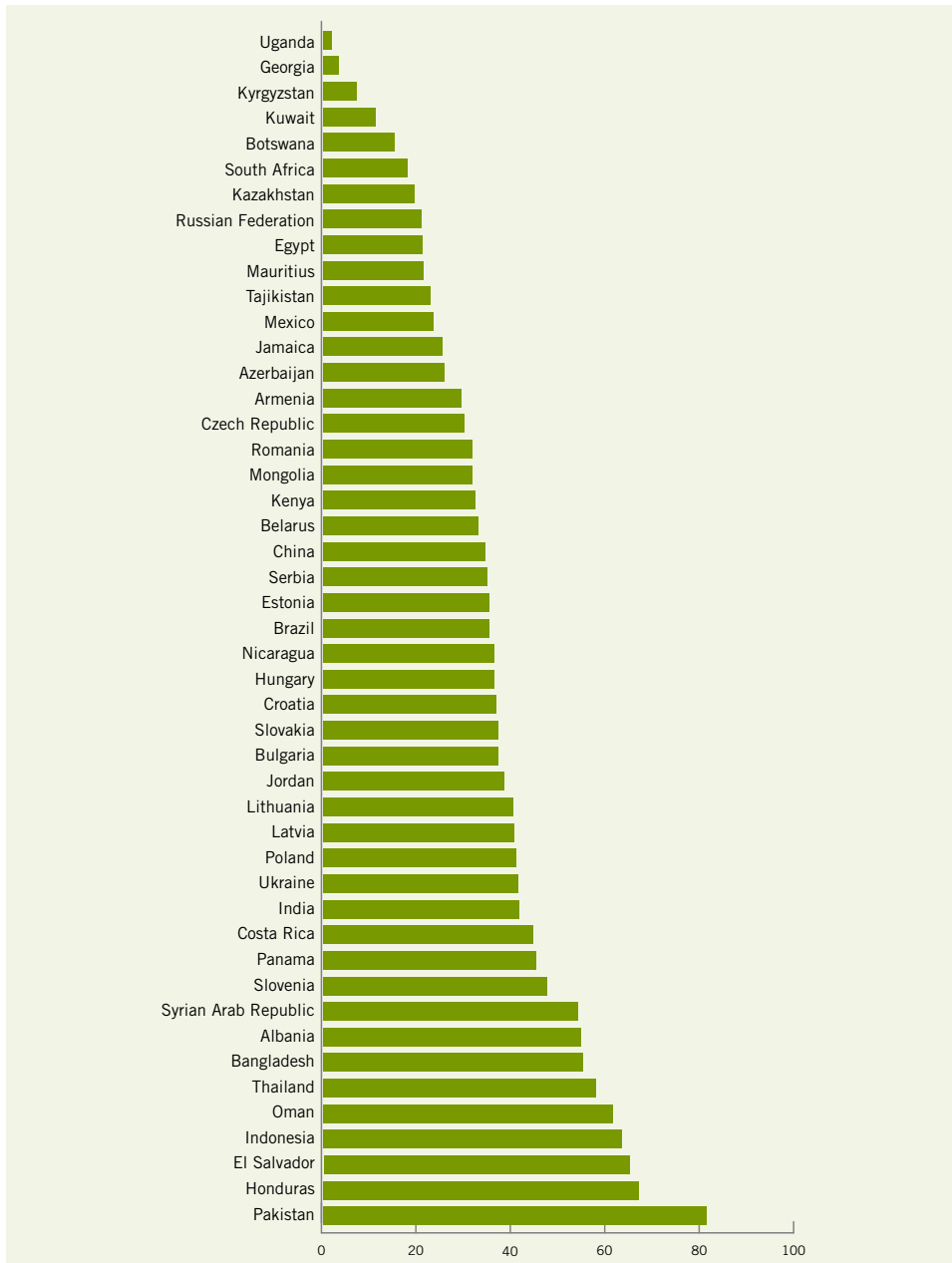
8.3.3 Theoretical background

This section reviews the theoretical effects of the minimum wage in different models. In a competitive labour market, economic theory provides clear predictions about the effects of the minimum wage: if set above the market clearing level, the minimum wage will reduce employment and increase the equilibrium wage level. However, departure from this perfectly competitive framework (e.g. introducing certain distortions in the labour market) makes assessing the effects of the minimum wage much more complex: results may dramatically change in the case of a monopsony (when employers can unilaterally set wages) for example, or in the case of a dual labour market where the minimum wage does not apply to the secondary market or informal labour market. Generally, therefore, minimum wage effects will depend crucially on a series of institutional variables, including the degree of compliance, enforcement, sanctions for non-compliance, the structure of minimum wages and the existence of uncovered sectors. Overall, notwithstanding common understanding from economic theory that the existence of a minimum wage tends to reduce employment, a number of market imperfections do exist that render the effects of the minimum wage quite difficult to establish (Boeri, Helppie and Macis, 2008). Furthermore, Keynesian economists consider the employment effects of a minimum wage to be either positive or negative depending on how it affects the level of aggregate demand, i.e. the sum of consumption, investment, government spending and net exports. While minimum wages potentially create disincentives for investment and exports, they are seen as a way to increase household consumption by redistributing income to low-paid workers, who have a relatively high propensity to spend rather than save their wages. The net effects are theoretically ambiguous but are usually considered in any event to be small (Herr, Kazandziska and Mahnkopf-Praprotnik, 2009).

8.3.4 Empirical evidence

As in the case of EPL, the lack of conclusive theoretical findings has generated vast empirical research attempting to assess the economic effects of minimum wages. In OECD countries, many studies have investigated its impact on employment (for example Dolado et al., 1996; OECD, 1998 and 2006; Card and Krueger 1995 for the United States, among others). A majority of these studies found some, albeit small, negative effects of the minimum wage on employment, notably for young workers. A growing literature is also testing the effects of minimum wages related to developing countries, especially Latin America, on two outcomes: wages (e.g. in the formal economy) and employment (in both the formal and informal sectors).

Table 8.3 provides an overview of the main empirical studies in developing countries. In some cases, the minimum-wage level was set so low that it is not binding. Bell (1997) found this to be so for Mexico, for example. Several papers show that compliance with minimum-wage laws is related to certain worker or employer characteristics: Andalon and Pagés (2008), for instance, find that in Kenya minimum wages are better enforced in the non-agricultural urban sector. Gindling and Terrel (2007) for Costa Rica, and Maloney and Mendez (2004) for Colombia, find that minimum wages are most likely to affect the wages of the bottom of the wage distribution, but also actually affect the entire distribution. Another important result of this study relates to the so-called "lighthouse effect" already mentioned, which signifies that the minimum wage is used as a reference point for setting wages even in the informal economy.

When a minimum-wage effect is detected on wages in general, the question becomes whether it will impact employment levels negatively ("disemployment"). Here, the empirical literature provides mixed responses. As mentioned in the last column of **table 8.3**, when negative effects of the minimum wages are found, they tend to affect certain categories of the workforce.

Other studies identify effects on youth (Montenegro and Pagés, 2004) in Chile; on women (Feliciano, 1998) in Mexico; and on blue-collar workers (Suryahadi et al., 2003) in Indonesia.

An important aspect of minimum-wage impact in developing countries relates to the potential incentives of firms and workers to work in the informal economy and avoid minimum-wage laws. Most studies that looked at the impact of the minimum wage on wages in the informal economy found mixed evidence: Maloney and Mendez (2004) found that higher minimum wages have a positive impact on the employment of full-time, self-employed men in Colombia. Gindling and Terrel (2007) found no minimum-wage effects on informal employment in Costa Rica.[4] Fajnzylber (2001) showed positive minimum-wage effects and negative employment effects on salaried informal workers[5] and on the self-employed in Brazil. These mixed results are not surprising given the difficulty defining such concepts as "informal employment" and "informal economy" (see Chapters 4 and 5).

Finally, it has been argued that the literature on this subject has been affected by specification-searching and certain publication biases, induced by academic journals' tendencies to look for negative and statistically significant minimum-wage employment

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[4]   Informal employment is defined as self-employed or unpaid family workers.

[5]   In Brazil, informal salaried workers are those who report working without a signed work contract.

effects (see, for example, Card and Krueger, 1995). But in fact, a large number of more recent studies have established an overall insignificant employment effect, both practically and statistically, from minimum-wage increases (Doucouliagos and Stanley, 2009).

Table 8.3 **Effects of a 10 per cent increase in minimum wage on wage and employment, selected developing countries**

Country	Minimum wage / average wage	Effect on average wage	Effect on employment	Comments
Indonesia (Rama, 1996)	0.34 (doubling MW)	10%	2% decline	Larger negative effects in small firms
Colombia (Maloney & Mendez, 2004)	0.4	6.4%	1.5% decline	Larger wage and employment effects for workers with lower wages
Brazil (Lemos, 2004)	0.27	1.37%	No effect	Larger wage effects for workers with lower wages
Mexico & Colombia (Bell, 1997)	0.3–0.4 (Mexico) 0.46–0.52 (Colombia)	n/a	No effects in Mexico; but 2–12% decline in Colombia	Larger effects for low-skilled workers
Costa Rica (Gindling & Terrel, 2007)	0.5–0.7	n/a	10.9% decline; 0.62% in hours	Larger effects for low-skilled workers
Kenya (Andalon & Pagés, 2008)	0.17 (2004)	n/a	1.1–5.5 pp decline in formal & 2.7–5.9 pp increase in self-empl.	Higher compliance in occupations other than agriculture

Notes: pp = percentage points; n/a = not available.

Source: Author's compilation.

8.3.5 Concluding remarks

While minimum wages are often put in place to redistribute earnings to low-paid workers and reduce poverty, the economic literature has concentrated on analysing the effects of minimum wages on wages and employment. As in the case of EPL reviewed earlier in this chapter, empirical evidence on this matter is facing serious measurement and econometric challenges. First, the most used indicator to capture the effects of minimum wages is the ratio of minimum wages to average wages but, as indicated, the problem with this indicator is that the average wage is potentially endogenous. A second challenge, more specific to developing countries, refers to the existence of non-covered sectors where the legislation either does not apply or is not implemented. In general, there is no robust empirical evidence that increases in the minimum wage cause large disemployment effects; nor is it clear that the resulting wage gain among those who keep their jobs is large enough to increase the share of earnings going to low-wage workers in the covered sector. In that context, caution is needed in making policy recommendations. The evidence for middle-income countries still very much concentrates on the Latin American experience. Broader geographical experience would be necessary to obtain stronger evidence. In addition, policy-makers should also consider interactions with other labour market institutions (e.g. unemployment benefits, EPL and the wage setting institutions). Unfortunately, most of the empirical evidence tends to ignore these interactions. However, they are likely to amplify (in case of complementarity) or minimize (in case of substitution) the estimated effects of the minimum wage.

8.4 Unemployment benefits

The unemployment compensation scheme is another key labour market institution that has been argued to drive cross-country differences in labour market outcomes. The literature exploring the economic impact of unemployment benefit systems has focused mostly on the possible disincentive effect to undertake job searches of "too generous" unemployment schemes. The next sections present the main characteristics of unemployment compensation systems, the main theoretical arguments regarding their effects on labour market patterns and a summary of the main existing empirical findings.

8.4.1 Characterizing unemployment protection systems

Unemployment compensation can be provided by insurance or assistance schemes. In most European and OECD countries (except Australia and New Zealand), unemployed people receive unemployment benefits through unemployment insurance (UI) schemes that provide at least partial income replacement, maintain a certain standard of living and provide workers with the means to search for a suitable job during the transition period. Such unemployment benefits are typically funded by contributory schemes and offer compensation related to the previous earnings of the beneficiary after a qualifying period, mostly for a limited period of time. The income support provided by the unemployment benefit schemes can play an important role in cushioning the social impacts of an economic recession and serve as an important automatic stabilizer during a slowdown. In addition, public unemployment assistance systems exist in a number of countries (especially in high-income nations) but play only a residual role in closing relatively small coverage gaps. These are usually not based on prior earnings but are flat-rate non-contributory cash transfers to those who are still unemployed, either once their entitlements to unemployment benefits have expired, or when they have never been entitled. Income support to the long-term unemployed and their families is often taken over by general means-tested social assistance schemes.

The absence of unemployment insurance or other statutory income support programmes for the unemployed in most low- and middle-income countries[6] has often made mandated severance payments the only available protection in the event of job loss and has led to higher employment protection legislation, at least de jure protection for those workers in the formal economy. However, while both severance payments and unemployment insurance do provide income compensation to job losers, they are different instruments with different approaches: unemployment insurance schemes are worker-oriented (e.g. linked to the individual status of being unemployed), while severance payment schemes are rather job-oriented (e.g. linked to the specificity of job matches and the value of seniority). Moreover, differences also exist related to their financing and the level of security provided. Severance pay is based on employers' liability, while unemployment insurance is financed from pooled contributions paid by workers and employers. The latter does not entail any additional financial pressure on ailing enterprises (unlike severance payments, which in practice are often not delivered to workers) and tends to provide protection also for workers with shorter periods of job tenure and lower wage levels. Moreover, severance pay is

....
[6] Unemployment insurance systems exist, however, in Brazil, China, the Russian Federation, South Africa and Turkey.

a lump sum, while unemployment insurance provides periodical benefits, usually for a prescribed duration. Finally, severance pay tends to be more strongly related to the wage level and job tenure in a specific enterprise than unemployment benefits, which affects the level of protection and labour mobility.

So several countries – typically central and Latin American countries – have introduced hybrid systems to combine these two approaches: various reforms took place in that region during the 2000s to allow individual savings accounts or experience-rated unemployment insurance, which combines layoff taxes paid by firms (a form of employment protection) with collective unemployment insurance (for example in Chile from 2002 to 2005 and in the Bolivarian Republic of Venezuela from 2002 to 2005 – see Acevedo, Eskenazi and Pagés, 2006) (Robalino, Vodopivec and Bodor, 2009). These private schemes often provide complementary support, such as the Chilean unemployment insurance system which combines the individual capitalization accounts (unemployment insurance savings accounts (UISA), from which the contributions accumulated by the worker are paid out on job separation) with a subsidized solidarity fund for those dismissed for economic reasons (to which the employer and the State contribute). Again, it is important to highlight the fact that UISA, UI and severance pay are not alternative forms of income support and each instrument has its own features and limits. UISA schemes are based on mandatory individual savings. They are usually marred with extremely low take-up, both for workers and employers, even for those workers in the informal economy with relatively good contributory capacities, and more so for those with low contributory capacities and those who face disadvantages in the labour market (often women and various vulnerable groups). Further challenges linked to private individualized savings options relate to possible regressive effects, low coverage and high administrative costs.

Figure 8.5 presents information on unemployment benefit coverage (the number of individuals who are receiving unemployment benefits as a percentage of the unemployed), one of the key characteristics of unemployment protection systems with the initial replacement ratio (the ratio of UI benefits a worker receives relative to their last earning). These two indicators are useful to capture key aspects of unemployment insurance systems but are subject to certain caveats, in particular for cross-country comparisons (see Aleksynska and Schindler, 2011).

Figure 8.5   Unemployment benefit recipiency rate, selected countries, latest year available (percentages of unemployed receiving unemployment benefits)
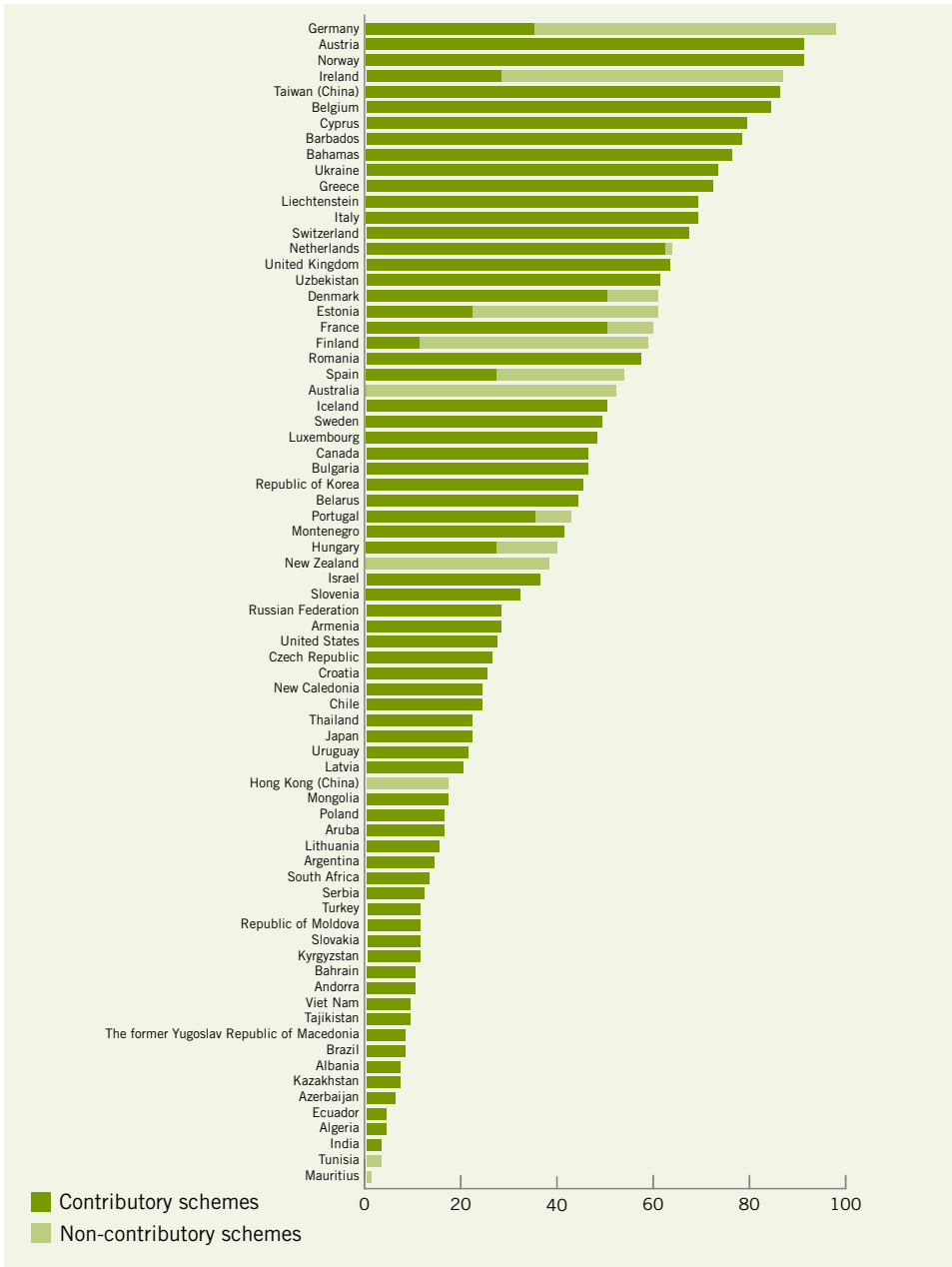
Source: ILO, Forthcoming.

Figure 8.5 shows that benefit–recipient rates are much lower in emerging than in advanced economies. This low coverage can be explained by different factors, such as eligibility rules, the obligation for beneficiaries to have some work experience (insurance scheme) or various administrative obligations. In South Africa, for example, a large share of the unemployed is either long-term unemployed or without any work experience and thus not entitled to unemployment benefits. In Turkey, eligibility conditions are very strict as workers must contribute 20 months to the unemployment insurance scheme over the previous three years; the rules are also relatively strict in China and cover only urban enterprises and their employees (see Cazes and Verick, Forthcoming). Finally, and more generally, the low coverage may be due to the fact that a significant share of workers are not affiliated to the social security schemes in Brazil, China and Turkey. Aside from the eligibility rules, the generosity of the scheme can be also captured by the evolution of the level and the duration of the benefit. Generally, replacement rates are relatively low in middle-income countries, in particular compared to the OECD average, but there is substantial cross-country diversity. The duration of benefits also differs across countries but is generally also lower than in most OECD countries (12 to 24 months). For instance, the maximum duration ranges from three months in Brazil to 12 months in China or the Russian Federation.[7]

8.4.2 Theoretical background

Within the labour market package, the unemployment benefit schemes (contributory and non-contributory) aim at maintaining income levels after losing a job, providing insurance to maintain consumption levels and time to search for a new job. They are part of the labour market regulations that have been argued to drive cross-country differences in labour market outcomes (in particular unemployment patterns). As previously indicated, unemployment compensation systems vary quite dramatically between countries and features with respect to the level of unemployment benefits, their duration and the conditions of eligibility, which may impact both firms' decisions to hire and fire workers in response to changing economic circumstances and employees' decisions to stay or leave their current jobs. According to theoretical arguments, unemployment benefit schemes provide good income protection to formal-sector workers and can help reduce poverty. However, they also suffer from two potential shortcomings: they leave out informal-sector workers and can create moral hazard that increases work disincentives and imposes efficiency costs (see Holmlund, 1998; Vodopivec, Worgotter and Raju, 2005).

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[7]   In the Russian Federation, beneficiaries are entitled to unemployment assistance after the
    unemployment insurance ends.

As for labour supply effects, standard search theory suggests that increasing the "generosity" of income support (either in terms of the level of the benefits or its duration) as well as extending its coverage leads to an increase in the unemployment rate because receiving such benefits act as a disincentive to undertake job search or even take job offers by increasing the reservation wage of the unemployment and reducing the "fear" of unemployment, hence increasing the upward pressure on wages from employees, via trade unions, for example (Pissarides, 1979). Despite the disincentive effect of UI on unemployment duration, UI benefit generosity may also increase job match quality by allowing individuals to wait for better job offers.

8.4.3 Empirical evidence

Much empirical literature analyses the impact of unemployment insurance schemes on the duration of unemployment in OECD countries and former "transition" economies. For example, van Ours and Vodopivec (2008) found that in Slovenia the shortening of the potential duration of unemployment insurance benefits reduced the unemployment spell of recipients substantially (see also Nickell, 1997; van Ours and Vodopivec, 2005; Layard, Nickell and Jackmann, 2005; among others). This literature suggests that high and long-term unemployment benefits generate long-term unemployment and potentially affect unemployment rates, although this has been disputed recently (Boeri, Helppie and Macis, 2008). The positive association between the "generosity" of UI and unemployment duration is interpreted as a labour-supply disincentive effect or a moral-hazard, as described previously. Many studies have also identified another type of impact on unemployment duration: the exit rate from the unemployment pool typically increases sharply around the time benefits end (Katz and Meyer, 1990; Feldstein 2005). This finding may not be as important as suggested (Card, Chetty and Weber, 2007).

Moreover in developing countries, moral-hazard effects due to UI are likely to be different in the context of widespread informality and weak enforcement capacity. Hence, the impact of UI on work incentives is expected to be weaker in those countries, but very few empirical studies have investigated this topic pertaining to developing countries. Another relatively poorly researched subject relates to the association between unemployment benefit schemes and labour market flows. One attempt has been made by Boeri and Garibaldi (2009), who found that less generous unemployment benefits in Europe contributed to increased labour market mobility over the last

15 years, measured either in terms of unemployment turnover, mobility indices for transition matrices or job-to-job flows.[8]

8.4.4 Concluding remarks

Unemployment benefit systems are put in place to help workers who lose their job maintain sufficient income and a certain consumption level while they search for new employment over a certain period of time. As was the case for the previous measures, methodological difficulties may impact on empirical research, especially on cross-country studies: a particular challenge for developing countries is linked to the fact that unemployment measurements are imprecise. It is particularly difficult to account for unofficial and hidden unemployment. Labour force surveys may also underestimate actual unemployment; in many countries these surveys focus on metropolitan areas where unemployment rates are often lower. Because the statistics cover an entire country's recipients, the UI coverage ratio can be implausibly high, exceeding 1 in some cases. Moreover, the standard theoretical arguments that point to the negative effects of "generous" unemployment compensation schemes on the incentive to job search do not appear to match the context of developing countries very well. Finally, not much empirical work has been undertaken to test these hypotheses.

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[8] Job-to-job flows are very important worker flows that may actually explain cross-country differences in the way labour markets adjust: typically the coexistence of low unemployment turnover and large job turnover rates can, for example, be explained by workers' numerous direct shifts from one job to another.

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Labour market policies for development

9

Sher Verick
*Senior Employment Specialist,
ILO Decent Work Team for South Asia*

9.1   Introduction

Confronted with the labour market challenges outlined in Chapter 2 and elsewhere in this book, policy-makers in developing countries have resorted to a range of interventions that seek to increase both the quantity and quality of employment. Ultimately, the main tools for governments to tackle these challenges consist of multiple levels: macroeconomic policy (monetary, fiscal, exchange rate and capital account management); sectoral and industrial policy; and policies that focus on small and medium-sized enterprises (SMEs) and labour market interventions. Therefore, while labour market policies play a role in promoting and protecting jobs and improving the match between labour demand and supply, they are only one set of a range of policies available to governments.

In the context of this chapter, labour market policies refer to measures that influence labour demand and supply, and the interaction between the two. This category of policies typically consists of labour market integration measures available to unemployed or those threatened by unemployment, typically labelled as active labour market policies (ALMPs), along with interventions that provide income replacement, usually called passive labour market policies (PLMPs). In this chapter, although the overall term "labour market policy" is used, most of the focus is on the first category (active labour market policies), while issues surrounding unemployment benefits are addressed in more detail in Chapter 8. For the sake of accessibility, these related topics of labour market policies and institutions are treated in separate chapters.

The concept of labour market policies, especially the specific category of active labour market policies, has largely evolved in an OECD, namely European, context. In these countries, this type of intervention has increased in importance for two reasons. Firstly, advanced countries, particularly European nations, have turned to what has been called "mutual obligations": in return for receiving unemployment benefits, unemployed recipients are required to report to employment services to receive counselling and job search assistance. This link between passive and active labour market policies, known also as "activation", has been supported by the evidence of evaluations over the last decade or so (Card, Kluve and Weber, 2010; Kluve 2007; Martin, 2000). Active labour market policies have subsequently become an integral part of the "flexicurity" agenda in the European Union as it provides what is sometimes called "labour market security", in so far as these measures help the unemployed get back into work and, hence, reduce the risk of being jobless.

In the developing country context, it is important to stress that labour market policies must be relevant and reflect the employment challenges that are being targeted. For example, a labour market policy that focuses on addressing the situation of the unemployed will be less relevant for developing countries where the greatest challenge is usually the lack of jobs in the formal economy.

More recently, the global financial crisis has shown that labour market policies have an important role to play in ameliorating the impact of shocks and smoothing adjustment over the business cycle. For example, as acknowledged by the ILO and other international organizations during the crisis, unemployment benefits act as an "automatic stabilizer" during such episodes since the payments to the unemployed happen automatically without government intervention (unless there is need for extensions such as has been the case in the United States or expansion of coverage as was done in Spain and other countries). Moreover, a number of governments, such as Belgium, Germany, Italy and the Netherlands, relied (successfully) on a labour market policy known as work-sharing or short-time working schemes to keep workers in jobs in affected sectors. Thus, the global financial crisis has underscored the importance of having such policies and supporting institutions in place to be able to react to such downturns.

Policy-makers in developing countries are also increasingly using innovative labour market policy tools, despite the common refrain that such interventions are not relevant outside OECD countries. For example, India's Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), which takes a rights-based approach, guarantees 100 days of local infrastructure-related employment to rural households. Reflecting both its success and the need among rural populations, MGNREGS was accessed by 55.8 million households across India in 2010–11.[1] During the global financial crisis, a number of developing nations turned to measures that aimed to keep workers in jobs and mitigate the impact on export-oriented sectors. In this regard, work-sharing schemes were not only adopted in OECD countries but also in South Africa and Turkey.

Of course, the effectiveness of the implementation of labour market policies in developing countries has varied, depending on technical and financial capacity and whether policies have been well-designed. For this reason, it is important to reflect on the nature of labour market policies in terms of what they can do and what they can't achieve, drawing on the literature from the OECD and developing countries where possible.

[1]   See http://nrega.nic.in/netnrega/mpr_ht/nregampr.aspx.

The remainder of this chapter addresses the definition of labour market policies, and why and when governments (should) use them, before turning to how labour market policies have been utilized around the world. The focus then turns to whether labour market policies work and achieve their goal, which draws from the large literature on evaluation. The last section concludes.

9.2 What are labour market policies and why use them?

In this chapter, labour market policies comprise all kinds of regulative policies that influence labour demand and supply, and the interaction between the two. This category of policies consists of interventions that provide income replacement, the passive labour market policies, as well as labour market integration measures available to unemployed or those threatened by unemployment, the active labour market policies (ALMPs). In OECD countries, efforts have increased to "activate" passive measures to enhance the integration of the unemployed and underemployed. The main ALMPs used for this purpose include job search assistance and training. Thus, in OECD countries, labour market policies are mostly utilized to:

◖ Reduce the risk of unemployment (i.e. getting jobless individuals into jobs or keeping threatened workers in employment);

◖ Increase the earnings capacity of the unemployed and vulnerable workers (through better returns to skills as provided by training programmes);

◖ Protect incomes (via unemployment benefits and other social protection schemes).

In a developing country, it is important to see the role of labour market policies in a broader context, not just focusing on the challenge of open unemployment. In this respect, such policies need to target not only unemployment among certain segments of the population such as youth, but also underemployment and the low quality of employment in the informal sector. That is, these measures should aim to assist transitions from informal employment to better, more productive jobs in the formal sector, or at least escape poverty. For example, a young person may be working as a street trader and, therefore, participating in an entrepreneurship programme that provides access to microcredit and training aimed at helping them set up a business and increase income.

Going into further detail, six categories of labour market policies can be defined as displayed in **figure 9.1**:

◖ **Job search assistance/other employment services** that are provided by public employment services and private agencies;

◖ **Training schemes** that consist of vocational and on-the-job programmes that target the long-term unemployed, laid-off workers, youth and other vulnerable groups along with special incentives for apprenticeships;

◖ **Job/wage subsidies**, which include measures to protect jobs, such as work-sharing schemes and interventions that promote hiring, such as social security exemptions and one-off payments for taking on long-term unemployed and youth;

◖ **Public employment programmes** that cover not only traditional public works programmes but the new generation of public employment schemes and employment guarantees;

◖ **Entrepreneurship incentives** that typically consist of a combination of training and microcredit;

◖ **Income replacement**, mostly in terms of unemployment benefits that are from contributory insurance schemes or assistance programmes that are not conditional on contributions.

The first category constitutes the main pillar of labour market policies in OECD countries because these services have increasingly been linked to the payment of unemployment benefits to the jobless. This "activation" of the unemployed has come about due to the recognition that assistance with job search and participation in programmes to improve employability increase the chance of finding a job and hence reduce the spell of unemployment. Indeed, as highlighted in section 9.4, evaluations of labour market policies show that these measures tend to be the most cost-effective of all interventions. Key components of job search assistance and other employment services include (see, for example, OECD, 2005 and 2007):

◖ Registration of jobseekers and initial placement efforts;

◖ Verification of unemployment status through face-to-face meetings at the local public employment office or via mail/email/telephone;

◖ Job search assistance and monitoring of (usually obligatory) job search activity (reporting);

◖ Job referrals;

◖ Intensive interviews and development of an individual action plan;

◖ Participation in other labour market programmes such as training after a period of unsuccessful job search.

Figure 9.1 Typology of labour market policies

Therefore, linked to these activation strategies are training programmes, which include vocational schemes for the unemployed along with measures to provide on-the-job training (see also the combination of wage subsidies and training under work

sharing schemes discussed below). Training programmes are either publically provided or (increasingly) offered by private agencies through subsidized initiatives. In most countries, training is targeted at youth, the long-term unemployed and workers affected by mass lay-offs. This group of labour market programmes can either be generic or specific to particular vocations and take place over the short term (less than 6 months) or longer term (although the latter tends not to be classified as a labour market policy but rather as a part of a technical and vocational education and training policy). Training as a labour market policy includes both classroom programmes and those that take place in the workplace (on-the-job training).

The third category of labour market policies consists of wage and job subsidies that seek to both get the unemployed into employment and keep workers in jobs. In the first case, governments typically provide a (usually partial) subsidy to employers to hire certain individuals from vulnerable groups, such as, for instance, long-term unemployed, youth and laid-off workers. This type of support may be a direct subsidy of wages (targeted at either the employer or worker), or a reduction in social security contributions. In terms of subsidies to protect existing workers and reduce the risk of unemployment, a common approach in continental European countries is to subsidize a reduction in hours worked to prevent layoffs. These work-sharing or short-time schemes have existed for some decades in countries like Germany but gained particular attention during the global financial crisis (see section 9.6).

The next type of labour market policies is public employment programmes, which are also called public works programmes or workfare. The broader term is adopted to reflect the expanding role of these interventions. The traditional view of these measures is underscored by Subbarao (2003), who states that these programmes can be justified on the following grounds:

◖ Transfer of income to poor households and smoothing of consumption;

◖ Building of much-needed infrastructure;

◖ Creation of assets (infrastructure such as roads and irrigation facilities) that have an indirect impact on employment;

◖ Ability to target specific geographic areas that have high unemployment and an elevated poverty rate;

◖ Assistance for small-scale private contractors to grow.

With the development of newer, more expansive programmes, such as the MGNREGS, recognition is growing that these measures can also play a broader social protection

and labour market role. For example, in the case of the MGNREGS, employment is guaranteed under an act of parliament: if the local government cannot provide a poor rural household with work, it is required to compensate them the equivalent of the wages paid to MGNREGS workers. On this point, the higher wage rate under this scheme has acted as a floor and helped push wages up among casual rural labourers (Ministry of Rural Development, Government of India, 2012).

The final set of measures that belong to the group called active labour market policies is entrepreneurship incentives, which is typically a mixture of microcredit and access to training and business development services. Like most active labour market policies, these measures usually target specific vulnerable groups such as youth. A widespread approach to promoting entrepreneurship for such groups in developing countries is to set up entrepreneurship funds that target such individuals.

The last category, income replacement, is normally categorized under "passive labour market policies". This form of income support comes in two main forms: unemployment insurance that is dependent on work history, contributions and unemployment assistance. Other income support schemes, such as lone-parent and disability support, and pensions, are not typically included as a labour market policy because they are traditionally not linked to the labour market or job search (however, this has changed in many OECD countries because of job search requirements and obligations also placed on such welfare recipients). The institution of unemployment benefits is addressed in greater detail in Chapter 8.

This summary of labour market policies illustrates that these interventions are very specific measures that directly impact labour demand, supply or the interaction between the two. It should be noted, however, that the distinction between labour market policies and other similar interventions is often not clear. For example, labour market policies include training measures but there are a broad range of human capital measures that start with formal education and include vocational education and training (see Chapter 7). The difference is mainly that training in the context of labour market policies is short-term and targeted at the unemployed or vulnerable workers. An overlap also clearly exists between entrepreneurship incentives under the umbrella of labour market policies and micro, small and medium-sized enterprise policy that also involves providing access to micro and other forms of credit. Again, the key difference is the target group: labour market policies typically focus on the unemployed or those threatened with lay-off.

9.3 Theoretical and policy arguments for the utilization of labour market policies

Beyond categorizing labour market policies, it is crucial to understand why governments need to resort to such policy interventions. If the labour market is perfectly competitive, and it is possible to sign complete contracts, there is no (theoretical) need for government intervention in the form of labour market policies. As defined in Cahuc and Zylberberg (2004), a contract is complete when it is possible, at the time of signing to foresee all possible future states and include veritable clauses for each of them.

However, if markets are characterized by imperfections due to the costs of establishing information networks on job availability, skills mismatches or credit constraints, individual decisions to allocate resources to training and job searching will be inefficient. Clearly, labour markets around the world do not function perfectly (equilibrium unemployment is evident in many economies), resulting in market failures. Along with social and distributional concerns, these theoretical arguments provide a basis for government intervention through labour market policies such as job search assistance and training programmes. A good summary of the theoretical arguments for labour market policies can be found in Cahuc and Zylberberg (2004).

In terms of the role of employment services, government intervention can be justified if individuals do not search for jobs enough (inefficient allocation of resources to job search). Due to the high costs of job searching and the need to collect information via a network, a public employment services agency provides a better match between the unemployed and job vacancies. The Beveridge curve (attributed to British economist, William Beveridge) is an empirical representation of the relationship between unemployment and vacancy rates. Movements along this curve represent changes in labour demand over the business cycle (and hence changes in the unemployment and vacancy rates), while a shift of the curve (left or right) is argued to reflect structural changes. Thus, the Beveridge curve captures the efficiency of the labour market. A curve that is closer to the origin indicates that both the unemployment and job vacancy rates are lower – conversely, a shift of the curve outwards would indicate that the unemployment rate is associated with a higher vacancy rate (there are both more unemployed and employers looking to fill vacancies), indicating a less efficient matching process.

This is illustrated by the case of the United States (data on job vacancies is missing for most developing countries) in **figure 9.2**. This chart of the monthly unemployment

and job vacancy rates from January 2001 to November 2011 suggests that, until recently, most changes were movements along the curve. However, at the beginning of 2010, there was a shift outwards in the relationship between unemployment and job vacancy rates, which could reflect heightened skills mismatch stemming from the downturn.

The provision or subsidization of training is also justified by theoretical arguments regarding how the labour market functions. As discussed in Cahuc and Zylberberg (2004), if the labour market is characterized by perfect competition and complete contracts (as defined above), individual training decisions (without government intervention) will be socially efficient. However, in a departure from this theoretical labour market, underinvestment in training will occur if there are transaction costs (in the matching process) (Acemoglu and Pischke, 1999) or credit constraints (Becker 1964). Highly relevant to developing countries, such credit constraints can arise in the presence of asymmetric information since banks and other lending institutions do not have accurate information on the borrower's type, which leads to credit rationing.

Figure 9.2 The Beveridge curve for the United States, January 2001–November 2011, monthly data (percentages)

Source: Author's calculations based on data from the US Bureau of Labor Statistics.

Moving from theoretical justifications for labour market policies, it is important from an implementation point of view to match these measures with policy objectives, which in turn reflect development priorities. In this context, labour market policies should aim to achieve one or more of the following goals, which centre around four main areas (labour demand, match between demand and supply, income support and targeting):

◖ Support labour demand by:

  • Keeping people in jobs to prevent unemployment and working poverty (i.e. help employers avoid laying off workers through measures to reduce labour costs, such as a reduction in working hours or subsidies);

  • Creating new jobs to lift people out of unemployment/underemployment and working poverty (i.e. support laid-off workers and new labour market entrants);

◖ Improve the match between labour demand and supply by making the unemployed more employable;

◖ Provide income support to job losers and low-income earners to smooth consumption and prevent poverty;

◖ Target the most vulnerable segments of society such as youth, older persons, persons with disability, and refugees and migrants, which is a cross-cutting goal relevant to those listed above.

9.4   Labour market policies around the world

Given that labour market polices have developed mostly in an OECD, particularly European, setting, a useful starting point is to reflect on the characteristics of these policies in these countries. That said, an important caveat is that there is significant variation in the use of labour market policies in this group of mostly high-income countries, particularly with regard to the resources (and hence priority) attached to such programmes. This is clearly displayed in **figure 9.3**, which shows that public expenditure in 2008 on both active and passive labour market policies (as percentage of GDP) varies greatly, ranging from under 0.5 per cent in the Czech Republic, the Republic of Korea and the United Kingdom to over 2 per cent in Belgium, Denmark, Finland, Ireland, the Netherlands and Spain. Using the ten-year average for the period leading up to the crisis (1998–2007), Belgium, Denmark, France, Germany, the Netherlands and Sweden all spent on average more than 1 per cent of GDP per annum on active labour market policies.

In most continental European countries, the combined spending on both types of labour market policies exceeds 1 per cent, surpassing 2 per cent in Denmark, Finland and the Netherlands. Denmark is often associated with the concept of "flexicurity" – the combination of flexibility achieved through lower levels of employment protection and security via generous unemployment insurance and a strong emphasis on participation in active labour market programmes for the unemployed, namely job search assistance and training. As displayed in **figure 9.3**, total spending has reached over 2 per cent in Ireland and Spain, which are countries that normally have lower levels of expenditure: however, the effects of the global financial crisis are already evident in these figures as outlays on passive measures, namely unemployment benefits, increased rapidly during 2008. This is also the case for the United States, which normally has very low levels of labour market policy spending as a percentage of GDP (although this does not capture state-level spending). For example, total expenditure reached just 0.43 per cent in 2007. In the following year, as the crisis had already resulted in massive job losses, spending alone on passive policies in the United States reached 0.82 per cent of GDP (the total was approximately 1 per cent).

Looking at the individual components of active labour market policies reveals that most countries allocate the majority of (albeit small) resources to public employment services (which provide job search assistance, vocational counselling and other support) and training programmes (public employment services (PES) are a main provider or, increasingly, referral agency for such measures). The allocation to these measures is a reflection of the increased reliance on activation strategies, which refers to the recognition that it is far more effective to require unemployment benefit recipients to actively search for jobs and participate in programmes that increase their likelihood of success (also known as "mutual obligations"). As discussed below, evaluation studies have supported this approach, which have subsequently helped justify an increased focus on such interventions.

Although expenditure and the utilization of labour market policies have long been associated with high-income countries, developing countries are increasingly expanding such programmes. However, there is considerable heterogeneity in the magnitude and nature of labour market policies in low- and, particularly, middle-income economies.

Asian countries are increasingly using active labour market policies to reach the unemployed and underemployed, particularly through public works programmes (Bechterman, Olivas and Dar, 2004). As mentioned, one of the best known programmes is the Mahatma Gandhi National Rural Employment Guarantee Scheme

in India (Sjoblom and Farrington, 2008).[2] Training programmes exist in most countries, along with programmes that promote entrepreneurship. Moreover, income support policies are not only the purview of richer economies. For example, while high-income countries like Singapore do not have an unemployment insurance scheme, poorer ones such as India and China have introduced or expanded benefits in recent years, although these programmes only cover a small proportion of the population.

Figure 9.3 **Variation in spending on active and passive labour market policies, OECD countries, 2008 (percentages of GDP)**
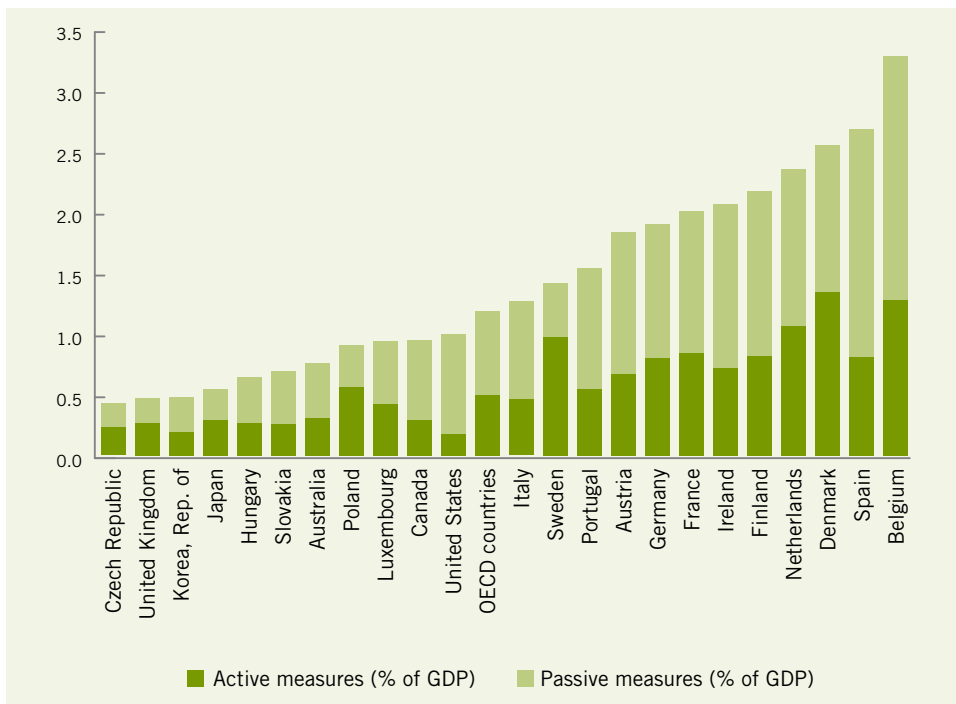
Source: OECD, 2011 (tables K, Statistical Annex).

Although the labour market challenges in Africa are arguably the greatest, the implementation of labour market policies is constrained by many factors. Most African countries have low levels of income and labour markets that are dominated by informal employment (see Chapter 4). Moreover, weak enforcement and poor implementation of EPL imply that regulations do not, in practice, provide much protection to workers

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2   See also http://nrega.nic.in/.

and are thus unlikely to overly restrict hiring and firing in the formal economy. Only five countries in Africa, all middle-income, have an unemployment benefits scheme: Algeria, Egypt, Mauritius, South Africa and Tunisia (SSA/ISSA, 2009). Nonetheless, although public employment services are typically underfunded and inadequate, governments across the continent increasingly utilize a range of active labour market policies, including public works programmes, entrepreneurship incentives and training schemes, which often target youth. According to Auer, Efendioglu and Leschke (2008), spending on ALMPs exceeds 1 per cent in only a few countries such as Algeria and Tunisia.

Spending on active and passive labour market policies in Latin American countries is typically well below the level of spending in most OECD countries. For instance, average spending on training and employment programmes in seven Latin American countries was calculated to amount to just 0.4 per cent of GDP in 1997.[3] Using more recent data for 2007, Mexico allocates negligible amounts to active labour market policies (just 0.01 per cent of GDP), while employment protection is stricter than the average in OECD economies (3.23 on the OECD Employment Protection Index versus the OECD average of 2.19).

While labour market policy spending has been relatively low, most Latin American countries have devoted considerable resources in recent years to targeted social protection measures, such as conditional cash transfers, although these interventions are not directly related to participation in the labour force. Well-known examples include Mexico's Progresa and Brazil's Bolsa Família programme. The latter scheme in Brazil reaches over 11 million poor families, who receive an average transfer of 70.00 Brazilian real (about US$35). In return, they commit to keeping their children in school and taking them for regular health checks. This conditional cash-transfer scheme has been successful in helping reduce poverty and income inequality in the country, and has not led to a decrease in labour force participation, despite earlier claims to the contrary. Other countries in the region, such as Chile and Mexico, have similar schemes.

9.5 Challenges to implementing labour market policies in developing countries

Clearly, developing countries are increasingly utilizing labour market policies to address problems of unemployment and underemployment. Nonetheless, it is important

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[3] The countries are Argentina, Brazil, Chile, Costa Rica, Jamaica, Mexico and Peru. See Auer, Efendioglu and Leschke (2008), and references cited therein.

to stress that the characteristics of the labour markets in developing countries, particularly in low-income economies, are fundamentally different from that witnessed in the OECD (see Chapter 2). In this respect, the main challenges are informality and working poverty rather than unemployment. Moreover, labour market transactions (the matching of jobseekers and vacancies) are typically informal (i.e. through family and friends and social networks). Even in developed economies (see, for example, the earlier but seminal studies of Granovetter, 1995 and Holzer, 1988), a large proportion of workers utilize personal contacts and referrals when looking for a job. In developing countries, this figure is likely to be higher because informal social networks are even stronger. This implies that policies in developing countries must also address developing social capital (i.e. how to build such networks).

Other challenges for the implementation of labour market policies include the low level of institutional and technical capacity (see **table 9.1** below). As stressed above, labour market policies are expensive: a number of OECD countries spend more than 1 per cent of GDP on active policies. Constraining job search assistance and other related programmes, public employment services in developing countries are usually massively underfunded and lack staff to carry out such interventions. Consultant to jobseeker ratio is 1:4000+ in sub-Saharan Africa (in South Africa it is 1:483), while in Latin America it is 1:350 and in Europe 1:150. In terms of money and equipment, it is worse. Training facilities are inadequate in terms of capacity and the quality of services; moreover, these institutions are mostly found in urban areas. In a situation of scare 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.

Table 9.1   Constraints to implementing labour market policies in developing countries

Policy element	Challenges for developing countries
Fiscal capacity	Many developing countries have inadequate tax bases and little fiscal space (i.e. inability of governments to allocate or redistribute resources through the budget to labour market policies).
Institutional capacity	Often there is little administrative and institutional capacity to administer labour market and social protection, and enforce labour legislation.

Social dialogue	Worker and employer organizations are often weak in developing countries, and social dialogue and collective bargaining mechanisms are typically inadequate.
Passive labour market policies	Income replacement mechanisms, such as unemployment insurance, are either inadequate or non-existent.
Active labour market policies	These policies, such as training systems, are few, often weak and inappropriate for relevant skills development. Public employment services are also inadequately developed and ineffective. However, innovative employment guarantee and conditional cash-transfer programmes are nonetheless observed.

Source: Cazes and Verick, 2010.

9.6 Evidence from the global financial crisis of 2007–09

The global financial crisis of 2007–09 hit many countries hard, resulting in an increase in unemployment and underemployment around the world. Most governments responded through fiscal stimulus packages, loose monetary policy and bailouts of the banking system. In addition, a number of countries, particularly in the OECD, relied on active labour market policies to prevent layoffs (most famously the case of *Kurzarbeit* in Germany, which is a work-sharing scheme) and to improve the employability of the unemployed (especially in terms of young people entering the labour market).

Drawing on a survey on the policy response to the global financial crisis (e.g. Cazes, Verick and Heuer, 2010), it is apparent that a large number of high-income countries have implemented various labour market policies in response to the impact of the downturn, in particular to prevent layoffs (**figure 9.4**). The most commonly used intervention in high-income countries is training for both those threatened by layoffs and the unemployed (including work experience and apprenticeship initiatives) (29 countries), followed by reduction in working hours (24 countries), increased resources for public employment services, including job search assistance measures (21 countries), and job and wage subsidies (21 countries). The least-implemented intervention in this group of countries is public works programmes (six countries), which is not

surprising, given the limited effectiveness of this intervention in such advanced labour markets. In terms of income protection provided by passive labour market policies, 18 high-income countries have made changes to unemployment benefit schemes (usually extensions of coverage and broader eligibility criteria).

Figure 9.4 **National labour market policy responses to the current global financial crisis (number of countries)**
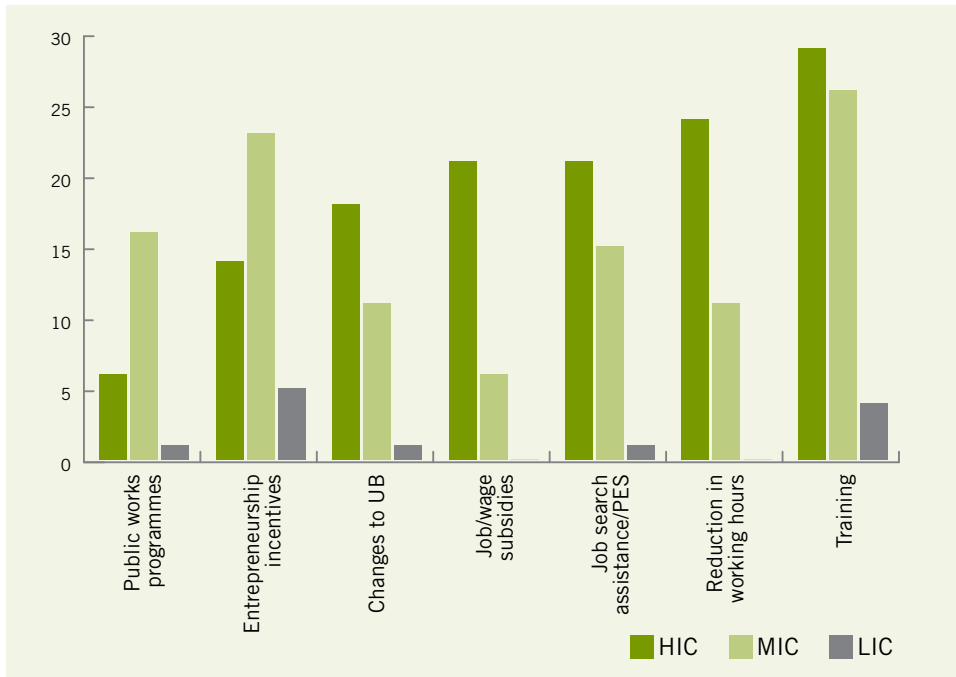
Notes: HIC = high-income countries; MIC = middle-income countries; LIC = low-income countries, which are grouped according to the World Bank's classification of countries, see http://go.worldbank.org/D7SN0B8YU0. UB = unemployment benefit schemes; PES = public employment schemes.

Source: Cazes, Verick and Heuer, 2010.

As evident in **figure 9.4**, the use of labour market policies during the global financial crisis declines with the income level of countries, which reflects the financial and technical constraints hindering the response of these governments. Nonetheless, a range of policies have been utilized in low- and middle-income countries, in some cases in a similar fashion to more developed nations. As displayed in **figure 9.4**, the most utilized policy response in the middle-income group is training (with 26 countries) followed by entrepreneurship incentives, public works programmes and

job search assistance. Recognizing the potential benefits of the latter type of schemes, in 2004 South Africa established the Extended Public Works Programme (EPWP) with the aim of "creating at least 1 million work opportunities, of which at least 40 per cent of beneficiaries will be women, 30 per cent youth and 2 per cent people with disabilities".[4] A second phase launched in 2009 aimed to increase the number of beneficiaries to 2 million full-time equivalent jobs. EPWP beneficiaries participate in a range of infrastructure, economic, environmental and social projects.

The most widely-discussed measure during the global financial crisis is short-time working arrangements/work-sharing schemes, which involves the reduction of working hours together with a reduction in wages that may be subsidized by governments to ease the burden on workers (see, for example, Cazes, Verick and Heuer, 2010). The German *Kurzarbeit* and other similar schemes clearly helped employers respond to the downturn by relying on internal numerical adjustment (i.e. reduction in working hours) rather than external adjustment (i.e. shedding employment).

Despite the well-known challenges articulated in section 9.1, middle-income countries, such as Mauritius, have looked for ways to keep people in jobs. In May 2009, the Government of Mauritius announced that its National Employment Foundation would run a "Work cum Training" scheme to enable companies in the manufacturing and tourism sectors, facing a reduction in their turnover, to send their employees on training instead of laying them off.[5] The Government announced that it would provide 300 million Mauritian rupees for the scheme and expects to save some 6,000 employees from retrenchment while, at the same time, improving their skills.[6] Training was provided for up to two days a week and ran for a maximum period of 18 months until December, 2010. There are few low-income countries implementing such policies in response to the crisis. In general, low- and middle-income countries tend to rely on labour market policy measures that do not require complex institutional structures and social dialogue.

The downturn of the last couple of years has also underscored that governments can respond most effectively to such crises when relying on existing labour market institutions and programmes, which all rest on permanent structures. For example, a well-staffed and well-equipped public employment service is needed to manage programmes that target the unemployed. Subsidies require legislation that stipulates how these financing measures are provided to employers. The lesson learned from the

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[4]   See www.epwp.gov.za/index.asp?c=Home.

[5]   See Budget Speech from 22 May 2009, www.gov.mu/portal/goc/mof/files/budspeech09.pdf.

[6]   Rs 300 million = US$ 9,255,831 at the exchange rate on 23 June 2009.

East Asia crisis in the late 1990s was that the lack of institutions and programmes, especially in terms of established social security schemes, hindered how these countries could respond to the adverse impact on labour markets and household welfare across the region. This situation was, however, repeated in many countries during the global financial crisis of 2007–09 (ILO, 2009).

In addition to the implications of previous studies on the effectiveness of ALMPs, it is also possible to gain an insight into the coverage of crisis-related programmes using information provided by governments (particularly the public employment services). As illustrated by the examples in **table 9.2**, this information indicates that in high-income countries, work-sharing schemes have been utilized for a large number of workers as a response to the crisis. Even if it is too early to "evaluate" these schemes, it is likely that these measures have helped to prevent further increase in unemployment. Moreover, while these measures work over the short term, they have to be phased out at one point because resources and job reallocation have to take place and because these measures are costly. Generally, these measures should be temporary and well-targeted. In some middle-income countries, public works programmes are supporting incomes among a large number of poor households during the downturn.

Table 9.2 **Coverage of selected ALMPs as a response to the global financial crisis, 2008–10**

Country	Name of ALMP	No. of beneficiaries
Work-sharing		
Germany	Kurzarbeit	1.43 million workers (June 2009)
Italy	Cassa Integrazione Guadagni (CIG)	716.8 million hours compensated (Jan.–Oct. 2009)
Netherlands	Deeltijd WW	36 000 workers (third quarter 2009)
Turkey	Short Pay Scheme	508 000 beneficiaries (in 2009)
South Africa	Training Layoff Scheme	7 676 workers (June 2010)

Wage subsidies		
Argentina	Productive Recovery Programme (REPRO)	2 317 enterprises and 123 444 workers (Sep. 2009)
Training		
Indonesia	Vocational Training Centres (BLK)	50 000 jobseekers received training
Republic of Korea	Youth Internship Programme	90 000 interns employed at administrative agencies, public institutions and SMEs
Russian Federation	Vocational Training	107 000 workers threatened with lay-off
Public works programmes		
India	Mahatma Gandhi National Rural Employment Guarantee Scheme	55.7 million households requested work (in 2010–11)
Spain	State Fund for Local Investment	400 000 jobs created
South Africa	Expanded Public Works Programme	568 224 beneficiaries (2008–09)

Source: Islam and Verick, 2010.

One key aspect of the role of ALMPs in times of crisis is the enhancement of individual transitions in the labour market. These policies help keep individuals in touch with the labour market, making sure that they are ready (through training and retraining) when the economy is in better shape. ALMPs are, therefore, crucial tools in the battle to prevent long-term unemployment and avoid discouragement.

9.7 Do labour market policies work? Findings from the impact evaluation literature

Given the considerable technical and financial constraints that governments face when implementing policies and programmes, it is crucial that policy-makers allocate scarce resources to the most effective measures. This, in turn, requires a process of monitoring and evaluation to identify whether outcomes warrant the expenditure. At the same time, it is important to draw from other countries' findings on the effectiveness of labour market policies. This section focuses on these two aspects: the different approaches to the evaluation of measures and the evidence on labour market policy effectiveness.

To fully identify the impact of a programme, it is important to understand how many and what type of participants take part in a specific labour market scheme, such as training or job search assistance, the cost of the programme and, ultimately, the outcomes for the programme participants (the benefits). As stressed in the evaluation literature, the fundamental evaluation problem is to know what would have been the outcome (normally expressed in terms of gaining a job or improving earnings) if the person had not participated in the programme (Heckman, Lalond and Smith, 1999). In contrast, a biased result is likely to be found if the impact of the programme is identified only by comparing labour market outcomes for participants before and after participation, because their enrolment in the programme is expected to be non-random in the sense that it is correlated with unobserved characteristics. However, it is not possible to observe this counter-factual – the challenge is to construct this through either experimental or non-experimental methods.[7] Moreover, participation in labour market programmes is not random but based on both observable (age, education and other factors) and unobservable characteristics (ability, type). Selection bias results from the fact that individuals who participate in a programme differ from those who do not.

In evaluating the impact of a policy, it is important to take into account (although often not easy to measure) the following effects due to their potential to bias results:

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[7] This "evaluation problem" is represented mathematically as $E(Y1 - Y0|X, D=1)$, where Y1 is the outcome following participation in the programme and Y0 is the outcome in the case of non-participation, which, as the counter-factual, cannot by definition be observed; the expected difference is conditional on the characteristics of the individual (X) and participation in the programme (D=1).

◖ **Lock-in effect:** This refers to the phenomenon of a reduced likelihood of exiting from unemployment shortly before commencing or at the initial stages of a programme because of reduced job search (an individual decides to wait and see how the programme is going to improve outcomes and thus reduces job search);

◖ **Deadweight loss:** This refers to outcomes that could have improved even in the absence of any (costly) government intervention. For example, an employer may take advantage of a hiring subsidy to take on new staff although they would have done so anyway.

◖ **Substitute effects:** These occur when a policy, typically a subsidy, causes an employer to replace a non-subsidized worker with one that is being supported by the programme (although this effect can be reduced by conditioning the subsidy on increased net hiring).

◖ **Displacement effects:** A firm that is benefiting from a labour market policy may have negative effects on other firms in its respective market and crowd out other business activity.

Figure 9.5 **Main impact evaluation methodologies**
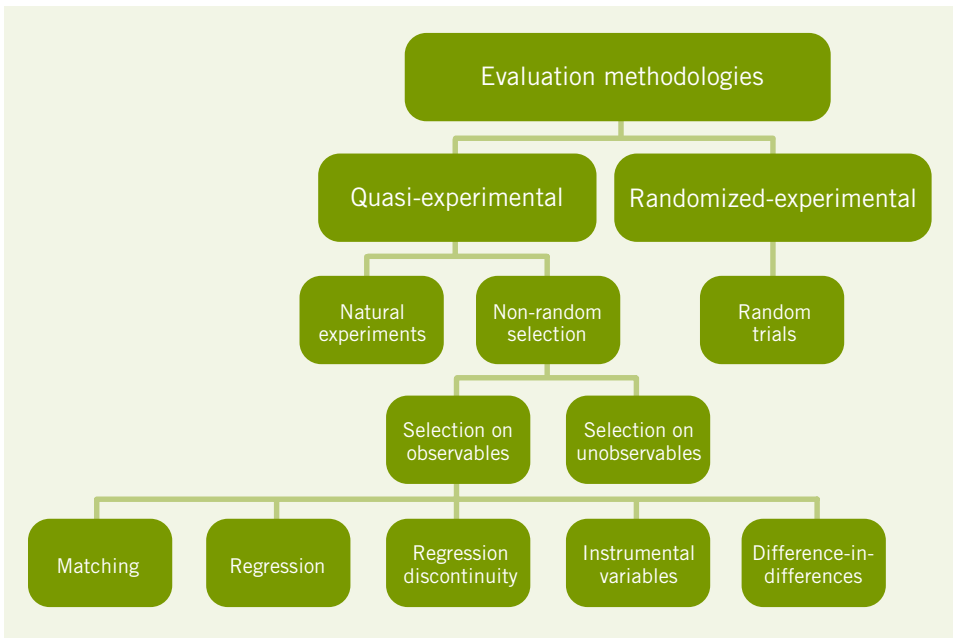
Source: Author's compilation.

Most of the methodologies are actually drawn from medical studies; hence, the use of such terminologies as the "treated" (in the case of labour market policies, this refers to the participants in programmes) and the "untreated" (the non-participants or what is often called the "control group"). In recent decades, tools for evaluating government policies and programmes have developed significantly as reflected by the large literature on this topic.[8] The different methodologies are summarized in **figure 9.5**.

The first category is known as randomized experiments, which is an increasingly popular approach to appraising programmes and is again based on medical studies (**box 9.1**). In this approach, individuals/groups from the population (which may nonetheless be defined by such specific variables as age, gender, region, poverty rate) are randomly assigned to a programme, thus avoiding selection based on individual characteristics (or the judgement of case officers). When a randomized evaluation is properly designed and implemented, it yields an unbiased estimate of the impact of the programme on the sample of individuals/groups being studied (Duflo, Glennerster and Kremer, 2007).

Box 9.1   Randomized trials for evaluating labour market policies

Randomized trials in developing countries have increased rapidly over recent years, particularly in areas like education and health. Results from these experiments have already influenced how policies and programmes are implemented. For example, as quoted in Banerjee and Duflo (2009), improving access to textbooks for students or reducing the teacher–student ratio does not affect the average test score of students. However, providing treatment for intestinal worms can reduce pupil absenteeism by one quarter – this result revealed that deworming is nearly 20 times more effective in increasing school attendance than increasing the number of teachers.

Different methods of randomization exist:

◖ **Oversubscription method:** Typically there is excess demand for participation in programmes allowing for random assignment of individuals;

◖ **Randomized order of phase-in:** Due to financial and technical constraints, programmes are often phased in, which allows randomizing the order of phase-in even in situations where non-assignment is not acceptable;

◖ **Within-group randomization:** Randomization is achieved by providing the programme to some subgroups, although this exposes the control group to contamination;

....

8   See, for example, the surveys of the literature provided by Heckman, Lalond and Smith, 1999.

◖ **Encouragement designs:** Instead of randomizing the treatment of participants, this approach randomly assigns different levels of encouragement to participate in the programme, for example, by providing more information or financial incentives.

Therefore, in a situation where a programme is in excess demand (which is limited by financial and technical capacity), randomized assignment is both a fair way of allocating the scarce places to participants and a methodology that will allow for evaluation of the programme's impact. A similar argument can be made for programmes that need to be phased in before being rolled out to a regional or national level. Ultimately, the sample size along with the design of the trial will affect the power of the experiment.

Despite the growing popularity of randomized trials in developing countries, a number of concerns about experiments remain. A major issue is whether results from a trial can be generalized. This refers to the issue of internal versus external validity, defined as:

◖ **Internal validity:** the experiment is measuring the true impact of the programme on the sample

◖ **External validity:** the impact estimated from the sample can be generalized to the population

For example, how dependent are the experiment results on the environment? How dependent are they on the implementer (say, an NGO)? As pointed out by Banerjee and Duflo (2009), replication of studies is the main approach to tackle concerns about the generalization of findings – experiments need to be conducted in different places by different organizations/implementers.

A related issue is the equilibrium effect of a programme; the positive effects of a small programme may not generalize to a larger scale (say, at the national level). For example, a programme that promotes private schooling for disadvantaged youth will, once it is scaled up to the national level, result in crowding in private schools and a fall in returns to education (due to the increased supply) (Banerjee and Duflo, 2009). Another challenge in the context of experimental methods is compliance. As pointed out by Heckman (1992), low take-up of programmes is a problem if participation is meant to be compulsory (i.e. the experiment is not designed to identify the impact of offering the programme).

Source: Banerjee and Duflo, 2009.

The second category of evaluation methodologies,[9] often called quasi-experimental, are more common in the economics literature, precisely because randomized experiments are costly. Often it is argued that participation in a programme (or rather the effect of an introduction of a programme) can be viewed as random although this was not necessarily part of the design. Examples include variation in the introduction of a programme across different states of the United States, where the selection of states is not linked to the outcome of interest. The literature often calls such situations a "natural experiment". However, in most cases, particularly in terms of labour market programmes, participation is not random and assignment to a programme is correlated with the outcome (namely increased employability and earnings). This creates non-random selection, which would bias the estimation of the programme's impact if ignored. Over the last few decades, an array of econometric techniques have been developed to help researchers overcome this challenge.

Ultimately, the selection of the evaluation methodology will depend on data availability, the type of programme and the financial and technical resources available (either in the relevant government authority or, often, in a research institution).

9.8 Empirical findings

Moving from methodology considerations, a growing empirical literature provides insights into the effectiveness of different labour market policies although, in many cases, a clear impact is difficult to identify. Active labour market policies have been utilized by OECD, particularly European, countries for some decades. Despite the resources allocated to these interventions, they are, however, not always successful in increasing employment probabilities and earnings. Generally, evaluation studies conclude that "ALMPs are a potentially important weapon in the fight against unemployment and poverty, but produce mixed results" (Auer, Efendioglu and Leschke, 2008). Evaluations of ALMPs in Europe and the United States focused mostly on the short-run employment effects of programmes.

Some key messages from this literature are that job-search assistance is relatively inexpensive and cost effective (Bechterman, Olivas and Dar, 2004; Card, Kluve and Weber, 2010; Kluve, 2006; see also **table 9.3**). More recent studies reveal larger positive effects of ALMPs over the longer term. One example is training schemes. Card, Kluve and Weber (2010) find positive impacts after 2 or 3 years, while such interventions

....
9   See Heckman, Lalond and Smith (1999) and Angrist and Pischke (2008) for an overview of the techniques.

targeting youth have been less successful. Training is more beneficial for participants once a longer-run perspective is taken, which allows identifying the impact of the programme after the lock-in effect is no longer evident (Kluve, 2006; Lechner and Wunsch, 2009). Job subsidies generally increase employment chances but may entail significant direct and indirect (deadweight) costs (and, hence, should be targeted).[10] Enterprise incentives (microcredit and training to support start-ups) appear to work better with older and better educated beneficiaries.

Table 9.3   **Key findings on the effectiveness of labour market policies**

Intervention	Empirical evidence	Additional constraints for developing countries
Job search assistance	Generally positive impact; inexpensive and cost-effective	Lack of employment services (public and private); more relevant for formal transactions in the labour market; less relevant when structural and cyclical unemployment is high
Training	Stronger positive impact over the longer term; on-the-job training more effective; training targeting youth has generally been less successful	Inadequate and inappropriate training facilities
Wage/employment subsidies	Less effective (mixed evidence); can generate deadweight costs and substitution effects	Expensive and only relevant to the formal sector
Public works/ employment	An effective social protection scheme but unlikely to improve employment outcomes; subsidized public-sector employment generally ineffective	Generally poor working conditions in infrastructure-related programmes; poor links to training, entrepreneurship and other complementary interventions
Entrepreneurship incentives	Some positive impact for older/ better educated	Low success rate

Sources: Bechterman, Olivas and Dar, 2004; Card, Kluve and Weber, 2010; Kluve, 2006.

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[10] See Card, Kluve and Weber, 2010; Kluve, 2006 and Lechner and Wunsch, 2009, for further discussion on these issues.

Finally, while public works programmes are important forms of social protection, as witnessed in many developing countries, they are less effective in improving longer-term employment outcomes (although this is not the objective of such interventions). However, this aspect is being improved in many developing countries through the inclusion of training in such schemes and the broader role these programmes can play in the labour market, as demonstrated by the case of the Mahatma Gandhi National Rural Employment Guarantee Scheme of India. As provided for in the scheme's Act, the programme guarantees 100 days of work for each rural household and, if the local government institution (Panchayat) is unable to provide the work, households are eligible for payment of benefits. For this reason, MGNREGS has not only supported households directly and helped build rural assets, it has also acted as a wage floor, pushing up daily labourers' earnings in rural areas.

In addition to these specific findings, studies from the last few decades show that labour market policies tend to work better when they are:

◖ Part of a comprehensive package of policies and programmes;

◖ Oriented to labour demand and linked to a real workplace, particularly in the case of training programmes seeking to improve the employability of the unemployed/underemployed;

◖ Carefully targeted.

Relevant to implementing policies during an economic downturn, the conclusions of Lechner and Wunsch (2009) indicate that there are positive medium- to long-run employment effects of German training programmes (in a pre-crisis period), while these benefits are stronger in times of high unemployment. Therefore, such training schemes can act as a counter-cyclical measure, with expenditure increasing with the unemployment rate. However, in terms of ALMPs during previous recessions, the results of Forslund and Krueger (2010) for Sweden in the 1990s suggest that training and other policies in place at the time did not mitigate the impact of the crisis in that decade.

One key remaining question is whether ALMPs can be effective in economies generating very few (formal) vacancies, as is the case in the majority of developing countries. Moreover, since most findings on the effectiveness of ALMPs are based on programmes in advanced economies, it is difficult to extrapolate these studies to the situation in low- and middle-income countries. At the same time, the potential benefits are much larger in poorer countries, and include for example the avoidance of conflict (for instance, by assisting young people find a job).

9.9 Conclusion

This chapter addresses the use of labour market policies as a tool to improve the match between demand and supply by raising the employability of the jobless, along with increasing demand for these individuals, particularly vulnerable groups such as youth. In addition, schemes such as public employment programmes can play a broader social protection role in developing countries.

In implementing labour market policies, policy-makers should keep in mind the following principles: the policy response should build on existing measures; the interventions should match the objectives, for example, they should react to the drop in labour demand or set longer-term goals; the relative costs and benefits of different policies should be weighed. The response is also development dependent: due to financial and technical constraints, the set of options available to OECD countries is far larger than that suitable for emerging and developing economies, particularly low-income countries. Nonetheless, this does not imply that labour market policies do not have a role to play in the latter group; rather, it suggests that these countries may require financial and technical assistance to expand policies.

Moreover, over the medium and long term, governments should aim to develop a comprehensive and integrated policy and institutional framework that will enable them to better respond to labour market challenges, emanating from not only global shocks but also those arising from local and regional phenomena. This involves the development of labour market institutions and a broad-based social security system, which acts as an automatic stabilizer during a crisis. In developing countries, barriers to formalization need to be reduced to ensure that workers have more opportunities to find decent jobs and be protected by labour market institutions, including social protection measures.

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Labour market information and analysis systems

10

Theo Sparreboom
Senior Labour Economist,
Economic and Labour Market Analysis Department,
International Labour Office

10.1 Introduction

The identification of labour market issues in both developed and developing economies critically rests on the availability of data, information and analysis. Labour market information and analysis (LMIA) provides an essential basis for employment and labour policies, and informs the design, implementation, monitoring and evaluation of policies that are better focused and targeted. LMIA also contributes to a reduction in the transaction costs of labour markets as it helps overcome incomplete information of labour market agents.

Most countries are committed to the development of labour market information systems. However, particularly in developing economies, the functioning of LMIA systems, if such systems have been established at all, is hampered by various constraints, including the data limitations that have been repeatedly noted in previous chapters. Data limitations affect not only complex issues such as informality (Chapter 4) and employment protection (Chapter 8), but also labour market measures that are available on a monthly or quarterly basis in most developed economies, such as employment and unemployment indicators. Data limitations are related to other constraints in developing economies, including resource scarcity, limited analytical capacity and other structural factors. Furthermore, labour market institutions, including employers' and workers' organizations, are weak in many developing economies (Cazes and Verick, 2010), which hampers the development and use of mechanisms to feed information and analysis into decision-making. Such problems may lead to ill-informed policy formulation and inadequate monitoring, hindering efforts to achieve labour market and development objectives.

This chapter provides an overview of the issues involved in the establishment and development of LMIA systems. The focus is mostly on information and analysis of quantitative data (statistics), but part of the content is relevant to qualitative labour market data and information (e.g. laws and regulations, information on institutions) as well. The chapter starts with a conceptualization of LMIA systems, highlighting not only the importance of statistics and the indicators based on them, but also the need to establish or develop appropriate institutional arrangements that ensure the information and analysis being produced can be used (section 10.2). Section 10.3 discusses the analytical core of LMIA systems, sets of indicators that are used to monitor and analyse labour markets and, at times, to make labour market projections. Common sets of indicators are briefly reviewed, emphasizing the use, rationale and limitations of selected sets. Section 10.4 discusses the main steps in establishing LMIA systems, including the role of technical cooperation in this area.

10.2 Conceptualization of LMIA systems

Labour market information and analysis is often equated with the availability of labour statistics. Statistics are clearly important, as they constitute the basis of much information and analysis, but this section will discuss a broader conceptualization of LMIA systems. Such systems can be defined as networks of institutions (and persons) with agreed roles to produce and disseminate labour market information and analysis.

Although it is at times assumed that information and analysis are readily available and free of cost, they have to be produced or created and made available to relevant actors. These activities carry a substantial cost, not only in terms of resources needed for key data collection exercises, but also in terms of the capacity and skills to analyse data and produce information that can be used by policy-makers and other stakeholders. Given the public good nature of information, the government's strong role in LMIA has been accepted in most countries. As summarized by Goldfarb and Adams (1993, p. 1):

"No industrialized economy, however, depends solely on private markets for labour market information. It is costly to produce information on labour demand and supply in markets that are widely separated by geography and skill. Market failures arise due to the public good nature of much of this information. Once produced, it can be difficult to maintain proprietary rights to its use, which discourages its very production. Statistics on smaller markets may simply be unprofitable to collect. Lack of consistency in concepts and definitions used and methods of collection by private producers can impede comparability of data and the use of this information for social policy development. Finally, inequities may arise from rationing access to labour market information to those with ability to pay."

Virtually all countries in the world have established publicly-funded statistical offices producing labour market information and analysis, as well as academic and research institutions that may undertake labour-related work. Further development of LMIA systems and government support depends on the function or purpose of such systems, but all systems have similar components as is set out in subsection 10.2.1.

Figure 10.1 illustrates the state of LMIA systems by region, using the availability of selected key labour market indicators as a proxy. This proxy reflects primarily the availability of data, but also the systematic storage of indicators in international repositories that are used to produce analysis. **Figure 10.1** suggests that LMIA systems are likely to be stronger in more developed regions and are particularly weak in many African countries.

Figure 10.1 Availability of selected labour market indicators by region, 1980–2010 (percentages)
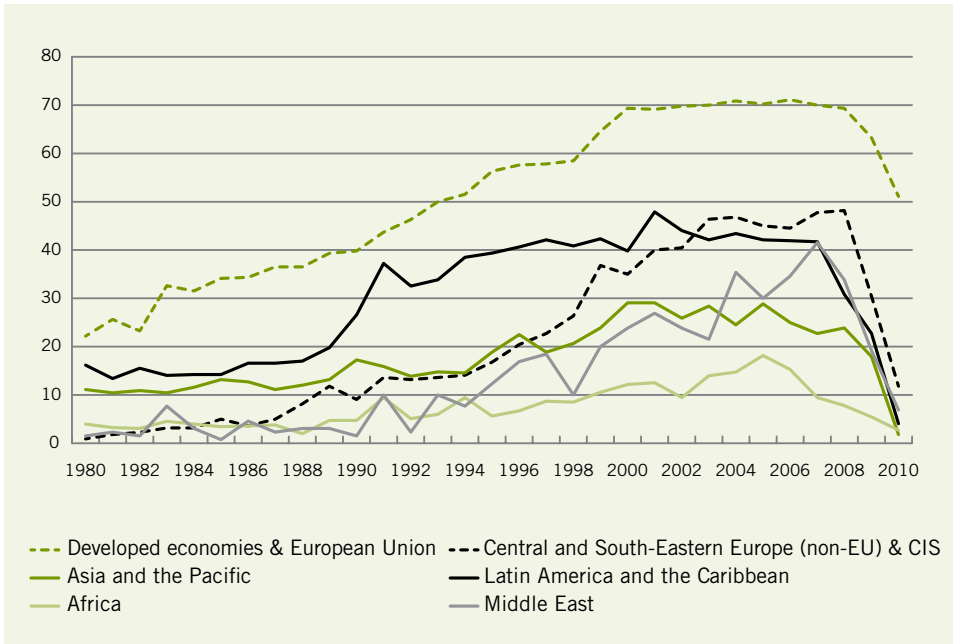
Note: The figure shows the availability of ten indicators in the ILO's Key Indicators of the Labour Market database as a proportion of "full coverage" (meaning that each indicator would be available for each economy in each year). Data for the most recent years are not yet fully captured in international data repositories, which explains the downward trend towards the end of the period in all regions.

Source: Calculated based on ILO, 2011a.

10.2.1 Functions, components and levels

Three main functions of the LMIA system can be distinguished:

(F1) The LMIA system is responsible for labour market analysis;

(F2) The LMIA system is responsible for monitoring and reporting on employment and labour policies;

(F3) The LMIA system provides a mechanism to exchange information or coordinate different actors and institutions that produce and utilize labour market information and analysis.

The first function (F1) is purely analytical and as such is usually being undertaken, at least to some extent, by academic and research institutions, which may or may not have a focus on labour markets. However, the main purpose of LMIA systems that have been established outside academia is the production of information and analysis for policy-makers and other labour market stakeholders.[1] For example, the functions of the European Employment Observatory are stated as follows:[2]

"The European Employment Observatory (EEO) contributes to the development of the European Employment Strategy (EES) through the provision of information, comparative research and evaluation on employment policies and labour market trends in [the countries covered by the EEO]."

Therefore it is important that institutional arrangements are established to make the information and analysis widely available to the target group and to provide opportunities for labour market stakeholders to influence the agenda of the LMIA system. The LMIA system can also be directly involved in monitoring and reporting on employment and labour policies (the second function, F2). If in addition to monitoring and reporting on policies the LMIA system is used to conduct policy analysis and evaluations, the system would combine functions F1 and F2.

Both at the international and the national levels, the institutional role of the LMIA system can be broadened to include a third function (F3), the exchange of information or coordination of the LMIA activities of labour market stakeholders, which include statistical agencies, research agencies and agencies involved in policy formulation and implementation including employers' and workers' organizations. This function may range from the dissemination of information on concepts, definitions and standards, to the allocation of resources regarding data collection or specific analytical activities (e.g. evaluations, econometric models).

Main components and levels

LMIA systems consist of three main components:

(C1)   Collection and compilation of data and information;

(C2)   Analytical capacity and tools;

(C3)   Institutional arrangements and networks.

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[1]   For more discussion on the functions of LMIA systems, see Sparreboom (2001).

[2]   See http://www.eu-employment-observatory.net/ [accessed 3 Oct. 2012].

With regard to component (C1), and given that LMIA systems should provide analyses of labour markets in their economic context, collection or compilation of data consists not only of data on labour markets, but also on the broader economy. For example, data on trade flows and remittances are indispensable for an analysis of the labour market effects on economic crises.

The main sources of labour statistics consist of:

(S1)   Household surveys and population censuses;

(S2)   Establishment surveys;

(S3)   Administrative records.

Labour force surveys can be designed to cover virtually the entire population of a country, all sectors of the economy and all categories of workers, including own-account workers, contributing family workers and persons engaged in casual work or marginal economic activity. For this reason, household-based labour force surveys offer a unique advantage to obtain information on the labour market of a country and its structure. Other sources, such as population censuses, multi-purpose household surveys, establishment surveys, or administrative records (e.g. employment service records), differ in scope, coverage, units of measurement or methods of data collection. Each source has advantages and limitations in terms of the cost, quality and type of information gained. For example, establishment surveys typically have poor coverage of very small or unregistered businesses but are a more reliable source on wages and earnings. Similarly, administrative records provide a low-cost source of labour market information, but this information is limited by the purpose of the records, which may be different from that of an analyst or policy-maker. Therefore, effective LMIA systems draw on all sources.

LMIA systems embody the analytical capacity to identify and interpret labour market developments and trends, and to relate these trends to policies or other factors influencing labour market outcomes (C2). In terms of analytical capacity, LMIA systems can be developed at three levels. The core or first-level LMIA system consists of monitoring or tracking a set of indicators. Activities that need to be undertaken to establish a core LMIA system, such as the compilation of data, the establishment of appropriate databases, the production of regular labour market reports and the dissemination of information and analysis, can be carried out by an LMIA unit in a government department, in collaboration with labour market stakeholders, statistical agencies and research institutions. The unit should be staffed by labour market

analysts, statisticians and staff dealing with the processing of data and information technology.

The monitoring of indicators not only results in signals on the state of the labour market, but also provides a starting point for a range of additional analytical activities and studies, focusing on relationships in the labour market and between the labour market and the broader economy (second-level LMIA system). The analysis of relationships involves the use of quantitative methods (e.g. regression analysis), but may also employ qualitative methods (e.g. stakeholder-driven forums).[3] In all cases, analytical activities will draw on or will need to be complemented by a first-level LMIA system tracking labour market indicators.

The third and most advanced level of LMIA systems involves the use of comprehensive econometric models, building on second-level analysis. Econometric models represent an analytical approach that allows for the generation of economy-wide, detailed and consistent projections of labour market developments. Econometric models, however, are demanding in terms of all components of LMIA systems (C1, C2 and C3) and are therefore costly to develop and maintain. In many cases, the development of models is undertaken by specialized research institutes, while LMIA units may be involved in running existing models and/or use results from modelling exercises for policy development purposes.

Institutional arrangements (C3) enable labour market actors to use information and analysis, and facilitate the creation of networks of users and producers, including government departments, employers' and workers' organizations, statistical agencies and research organizations. These arrangements are needed for the LMIA system to effectively perform its analytical function, for example by providing access to data (from statistical agencies, administrative bodies and other entities), but also to allow for the effective dissemination of information and analysis. An example of a straightforward institutional arrangement is the establishment of an LMIA Advisory Panel joining policy-makers, the statistical agency and workers' and employers' organizations.

A strong role of the LMIA system with regard to policies (F2) and coordination (F3) necessitates institutional linkages between the system and the process of formulating and monitoring national socio-economic plans, including national employment policies, poverty reduction strategies and other development plans. This may also involve the selection of a set of indicators that are monitored to track progress in the achievement of labour market objectives, or the setting of targets for certain

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[3]   For example, employers' and workers' organizations can be brought together to discuss the causes and consequences of major changes in the labour market.

indicators. Institutional arrangements could also encompass institutions involved in the implementation of policies.

10.2.2 Country examples[4]

Pakistan

Over the years, Pakistan made considerable efforts to monitor labour markets and human resource development, often with international support through various projects that covered not only data collection, but also labour market analysis and capacity development. Nevertheless, a number of challenges persisted, in particular concerning the analysis of labour market information and vis-à-vis policy development in general, and skills development policies in particular.

Therefore, the Ministry of Labour and Manpower (MOLM), in collaboration with the ILO and the United Nations Development Programme, started a project on the development of labour market information and analysis. A new Labour Market Information and Analysis Unit was established in the MOLM in the second half of 2006, which constituted the heart of an LMIA system, aiming to provide up-to-date and timely information and analysis to inform decent work and other policies. For this purpose, the LMIA Unit was staffed with a team of junior professionals working on information system development and policy analysis in the employment and labour field. The Unit received both on-the-job and off-the-job training on topics such as labour market analysis and the use of general and specific software for statistical analysis and data management.

Institutional arrangements of the LMIA system in Pakistan started from the formal and informal linkages of the LMIA Unit as it was located in the organizational set up of the MOLM. In addition, an Advisory Panel was established, which brought together labour market stakeholders and social partners. The Advisory Panel reviewed and planned the activities and outputs of the Unit on a regular basis and fostered linkages between data collection, analysis and policy development at the national and provincial levels. In this way the Panel ensured continued policy relevance, ownership and sustainability of the Unit.

The LMIA system developed a national LMIA database containing a limited number of key labour market indicators drawn from the ILO's database on Key Indicators of the Labour Market. These indicators were produced, compiled and analysed in

....
[4]   Country examples are based on Sparreboom and Powell (2009) and updates.

accordance with international standards and reflect best practice in LMIA. Over time, this set of indicators was expanded in response to the demand for information and the capacity of the LMIA Unit to maintain and update the database. Since the start of the LMIA Unit, five reports as well as a series of analytical briefs were produced (Pakistan Ministry of Labour and Manpower, 2007–10). The reports focused on various topics including decent work, skills, the position of women and the position of youth in the labour market in Pakistan. The reports laid a foundation for further analytical work on the same topics,[5] and also for an assessment of the labour market impact of the floods that ravaged Pakistan in recent years.[6]

South Africa

South Africa presents a case of LMIA development in the context of skills policies that constitute a central policy strand following the democratic transition in the early 1990s. Two National Skills Development Strategies (NSDS I, 2001–05, and NSDS II, 2005–10) have been developed, while the centrality of education and skills in South Africa's policies was reinforced in more recent years by the Accelerated and Shared Growth Initiative – South Africa, as well as the Joint Initiative for Priority Skills Acquisition. The development and implementation of national skills development strategies have been accompanied by efforts to build adequate skills development information systems.

Central in the institutional set up to inform skills development policies was the establishment of the Skills Development Planning Unit (SDPU) in the Department of Labour (DOL). According to the Skills Development Act, the functions of the SDPU are:[7]

(a) to research and analyse the labour market in order to determine skills development needs for:

    (i)   South Africa as a whole;

    (ii)   each sector of the economy;

    (iii) organs of State;

....

[5]   See, for example, Sparreboom and Shahnaz (2007).

[6]   See, for example, http://www.ilo.org/islamabad/info/public/pr/WCMS_144470/lang--en/index.htm.

[7]   Act No. 97 of 1998, Chapter 6, section 22.

(b) to assist in the formulation of:

    (i)   the national skills development strategy;

    (ii)   sector skills development plans;

(c) to provide information on skills to:

    (i)   the Minister;

    (ii)   the National Skills Authority;

    (iii) Sector Education and Training Authorities;

    (iv) education and training providers;

    (v)   organs of State.

In line with the functions of LMIA systems set out previously, the SDPU performed an analytical function regarding labour markets and skills development, and has been pivotal in monitoring the skills strategies, in particular the "success indicators" that were part of these strategies. Measuring progress in the implementation of strategies through success indicators requires administrative and other labour market information. The SDPU therefore liaises with institutions such as Sector Education and Training Authorities to capture administrative data on the implementation of skills policies and programmes, as well as with Statistics South Africa to obtain information from labour force surveys and establishment surveys. In this way, the SDPU combines sources (S1), (S2) and (S3).

In addition, the SDPU undertook or commissioned studies and evaluations on a number of topics in accordance with the requirements of the NSDS, including the productivity effects of skills development, industry-training linkages and tracer studies, which track the labour market experience of trainees after completion of their training. An assessment was also made of the potential use of econometric, multisectoral models to inform skills policies. The results of this assessment showed that there is modelling capacity in South Africa, and econometric models could become important (together with other methods) to inform future skills needs. It was, however, also noted that improvement in data quality is needed (Wilson, Woolard and Lee, 2004).

Much of the work of the SDPU is reflected in annual implementation reports, annual reports on the "state of skills" in South Africa and other publications that are available on the website of the DOL.[8] Although a successful skills development system is not the same as a successful skills development information system, the two are

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[8]   See http://www.labour.gov.za/.

clearly interlinked. Without proper information on which to base policy decisions and adjustments, it is not possible to effectively implement skills strategies and achieve targets. According to both the research of the DOL and independently conducted research, the South African system has met a range of targets, and there was evidence of growth in training activity following the introduction of the new skills development system (McGrath and Akoojee, 2007). Monitoring of the South African skills development strategies draws on various methods,[9] and an institutional structure has been created in which actors and stakeholders collaborate in a network to monitor progress as well as to provide feedback into the skills development system (Sparreboom, 2004). The emphasis on the monitoring of results as well as feedback to policies is reflected in, for example, the 2008 Budget Vote Speech by the Minister of Labour, which made extensive references to the evaluations and research conducted by the DOL and others.[10]

Ireland

The Republic of Ireland has a long history of labour market planning and development of LMIA systems, in particular focusing on the support to human resource and skills development in strategic sectors, and has developed sophisticated institutional arrangements to produce information and analysis. A key institutional position is taken by the so-called Expert Group on Future Skills Needs (EGFSN), which was established to advise the Irish Government on current and future skills needs of the economy, as well as on other labour market issues that impact on Ireland's enterprise and employment growth.[11] It has a central role in ensuring that labour market needs for skilled workers are anticipated and met, and reports directly to the Ministry for Enterprise, Trade and Employment and the Ministry for Education and Science.

Membership of the EGFSN is tripartite and the involvement of the Ministry for Education and Science, the Ministry for Enterprise, Trade and Employment and the Ministry for Finance helps ensure that policies will incorporate measures that support labour market adjustments in accordance with the needs of the economy. The participation of development agencies and employment authorities means that the skill needs of development projects can be quickly communicated to the relevant training authorities. Representation from private companies and employers ensures

[9]   See Sparreboom and Powell (2009, table 1) for a summary of methods, most of which have been used in South Africa.

[10]   See "Budget Vote Speech" at http://www.labour.gov.za/media-desk/speeches/2008/budget-vote-speech-celebrating-ten-years-the-fruits-of-our-labour/ [accessed 4 Oct. 2012].

[11]   See http://www.skillsireland.ie/ [accessed 4 Oct. 2012].

that a commercial insight is taken on board, and trade union representation provides an opportunity for workers' views to be taken into account.

The EGFSN obtains its information from several sources, including the Economic and Social Research Institute (ESRI), FÁS – the Irish Training and Employment Authority, industry training committees and the Higher Education Authority. Each of these organizations provides complementary inputs. The ESRI is a government-subsidized private research institute, whose prime function is to undertake economic forecasting for the EGFSN. The second source of information is derived from FÁS, which provides a regionally-integrated and locally-based service for jobseekers, employers and community groups through a network of employment service offices and training centres. In addition, FÁS provides a range of business services to small, medium and large businesses, both indigenous and foreign owned. For most sectors there are industry training committees, consisting of representatives of both employers and unions, which advise on sector training needs. A final partner in the process of gathering information is the Higher Education Authority, which is charged with reviewing the need for higher education and assisting in the coordination of state investment in higher education.

All of the information produced by the EGFSN is discussed at Business Education and Training Forums, which recommend approaches for implementation. Subsequently, these recommendations are passed onto the skills implementation group. Membership of this group consists of public civil servants and the chairman of the EGFSN.

EGFSN's role is to provide policy-makers with the latest labour market trends and shifts in skills demand to ensure that labour market needs will be considered when undertaking policy adjustments, and a series of reports on labour market development are published and disseminated on a quarterly and annual basis. Much of the work undertaken by the EGFSN is analytical and involves the use of labour market analysis based on tracking indicators, econometric modelling, dedicated and sector studies, administrative data and stakeholder-driven forums.

10.2.3 Lessons from country examples

When considering the establishment of a new LMIA system, or the upgrade of an existing system, it is important to keep in mind that LMIA systems may perform various functions and serve various target groups and may employ an array of methods, as demonstrated in the previous section. In general, LMIA systems become more effective if data availability and quality improves across all three sources (S1, S2 and

S3), and analytical capacity in the system advances, often in accordance with the level of development of a country and the resources that are made available to the LMIA system. This process can be supported by international agencies in terms of resources and technical assistance, as happened to varying degrees in all three country examples discussed in this chapter, but international support is no substitute for the need for sustained investment in all components of the system at the national level.

The functions and progressive development of LMIA systems are evident in Pakistan and South Africa. In the former country, the LMIA system was established focusing on the analytical function (F1), while in the latter the information system was designed with a strong focus on monitoring and reporting on policies (F2) alongside an analytical function.[12] In both countries, the LMIA system developed from a core system ("monitoring indicators") to second-level analytical activities ("relationships") and, in the case of South Africa, third-level activities ("econometric models"). Institutional arrangements become more complex if activities of LMIA systems are outsourced to specialized agencies. In many developed economies, including Ireland, LMIA activities are linked in a well-coordinated web of LMIA institutions that has been built up over many years.

Function(s), target group(s), analytical methods, data availability and the economic and policy context all shape the activities that are carried out in the LMIA system, the institutional arrangements that are most appropriate, the location of the LMIA Unit that constitutes the heart of the system, as well as the organizational structure and staffing of the Unit. With regard to location, organization and staffing, two opposite cases are the establishment of a completely new unit, or new institution, with newly recruited staff on the one hand, and building on existing institutional capacity in a government department or research institution on the other. Both cases have obvious advantages and disadvantages in terms of planning, costs and resources. In all cases the establishment of a fully functional LMIA system should be expected to take at least several years.

One important issue to take into account when considering the establishment of a new institution is the role of the LMIA system in national policy processes, which can be illustrated with the National Employment and Vocational Training Observatory (ONEF) in Burkina Faso. D'Achon and Pagès (2011) note that ONEF was set up as a new institution, partly in view of the weakness of government departments responsible for labour market monitoring. However, in practice the functioning of

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12 If the analytical function is absent, an LMIA system exclusively focusing on monitoring and reporting of policies becomes similar to a management information system, such as an education management information system (EMIS, see e.g. Powell, 2006).

ONEF was hampered by lack of clarity about the mandate, status and budget of the institution, as it is neither an independent research institution nor an integrated part of the national policy machinery. This experience underlines the need for agreement on the functions of LMIA systems, and the importance of taking these functions into account for the development of appropriate institutional arrangements.

10.3 Indicators

Labour market information and analysis systems build on sets of indicators that are used to monitor the labour market in its economic context. This section discusses selected sets, with particular emphasis on the employment indicators used in the context of the Millennium Development Goals (MDGs). The MDG employment indicators provide a framework for labour market analysis, which can be used as a cornerstone of the LMIA system. These indicators are also used for employment projections, which is the topic of the final part of the section.

10.3.1 Sets of labour market indicators

As discussed above, at a minimum, LMIA systems track a set of indicators, which constitute the basis for the development of more advanced systems. A widely used set of indicators is the ILO's *Key Indicators of the Labour Market* (KILM). The KILM was designed to: (1) present a core set of labour market indicators; and (2) improve the availability of the indicators to monitor new employment trends. The initial set of indicators was selected in consultation with the OECD and national representatives from Ministries of Labour and statistical offices, based on the following criteria: (a) conceptual relevance; (b) data availability; and (c) relative comparability across countries and regions. The design and presentation of the core indicators has evolved since the first edition. **Box 10.1** shows the set in the seventh edition, which consists of 18 indicators (grouped under seven headings). The box also shows the major classifications and breakdowns that are used. The breakdown by sex is not shown but is in principle available for all indicators (for more details see ILO, 2011a).[13]

The information in the KILM is compiled using international repositories of labour statistics, including those maintained by the ILO's Department of Statistics and other

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[13] For some indicators, such as labour productivity, information needed to calculate the indicator separately for men and women is lacking for all countries.

international agencies, as well as national sources.[14] Several repositories are also available at the regional level.[15] In addition, the KILM includes estimates produced by the ILO for selected indicators, such as labour force participation rates, employment-to-population rates and inactivity rates. ILO estimates are also used to generate regional and global aggregates in the presence of missing country-reported indicators or data. Global and regional indicators are available for more than half of the set of key indicators.[16]

Box 10.1 Key indicators of the labour market

Participation in the world of work

KILM 1. Labour force participation rate (by age group)

Employment indicators

KILM 2. Employment-to-population ratio (by age group)

KILM 3. Employment by status (ICSE-1993)

KILM 4. Employment by sector (ISIC-2008, ISIC-1990 and ISIC-1968)

KILM 5. Employment by occupation (ISCO-08, ISCO-88 and ISCO-68)

KILM 6. Part-time workers (by age group)

KILM 7. Hours of work (by age group)

KILM 8. Employment in the informal economy

Unemployment, underemployment and inactivity indicators

KILM 9. Unemployment

KILM 10. Youth unemployment

KILM 11. Long-term unemployment (by age group)

KILM 12. Time-related underemployment (by age group)

KILM 13. Inactivity (by age group)

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[14] See the website of the ILO Department of Statistics for more information on sources of labour statistics, available at http://www.ilo.org/global/statistics-and-databases/lang--en/index.htm.

[15] See ILO's Bureau of Library and Information Services for both global and regional repositories of labour statistics, available at http://www.ilo.org/public/english/support/lib/resource/subject/labourstat.htm.

[16] For methodological information, see http://www.ilo.org/empelm/projects/WCMS_114246/lang--en/index.htm; global and regional aggregates are not available for KILM 5-8, 11, 12, 14 and 16.

Educational attainment and illiteracy indicator

KILM 14. Educational attainment and illiteracy (ISCED-97 and ISCED-76, by age group)

Wage and compensation costs indicators

KILM 15. Average monthly wages

KILM 16. Hourly compensation costs

Labour productivity indicator

KILM 17. Labour productivity

Poverty, income distribution and the working poor indicator

KILM 18. Poverty, income distribution and the working poor

Classifications used:

ICSE   International Classification by Status in Employment

ISIC   International Standard Industrial Classification of all Economic Activities

ISCO   International Standard Classification of Occupations

ISCED   International Standard Classification of Education

Source: ILO, 2011a; available online at www.ilo.org/trends.

A comprehensive set of decent work indicators that is being discussed in the ILO covers not only access to full and productive employment, but also rights at work, social protection and social dialogue. This set consists of 18 "main decent work indicators" and 25 "additional decent work indicators" grouped in accordance with substantive elements of the Decent Work Agenda (ILO, 1999), as well as indicators of the economic and social context of decent work.[17] Furthermore, apart from statistical indicators, the set includes 19 legal framework indicators, which provide qualitative information on rights at work and other aspects of the legal framework for decent work (ILO, 2008). Decent work country profiles based on this set are available for a series of pilot countries.[18]

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[17]   The preliminary list of decent work indicators also contains indicators on which more developmental work is needed.

[18]   See http://www.ilo.org/integration/themes/mdw/lang--en/index.htm for a list of country profiles.

The decent work country profiles, which are mostly based on national sources, reflect a level of data disaggregation that is often not available for indicators housed in international repositories or databases. For example, the profile for Brazil shows a series of indicators on employment opportunities not only broken down by sex but also by ethnic group and rural/urban area (ILO, 2009b, table 1). Such disaggregations are not available in the KILM which aims, to the extent possible, to provide indicators that are comparable across countries.[19]

10.3.2 MDG employment indicators as a framework for labour market analysis

World leaders adopted the UN Millennium Declaration at the Millennium Summit in September 2000. The Declaration has been translated into a framework of goals, targets and indicators that aims to reduce poverty and hunger and to tackle ill-health, gender inequality, lack of education, lack of access to clean water and environmental degradation. The eight Millennium Development Goals build on agreements made by all countries at the United Nations in the 1990s.

In 2008, a new target on decent work was included under the first Millennium Development Goal on the eradication of poverty and hunger. MDG1 currently consists of three targets, the second of which, Target 1B, focuses on achieving "full and productive employment and decent work for all, including women and young people". This target recognizes that, for the large majority of people, labour is their main asset, and overcoming poverty and hunger requires opportunities for decent work. Target 1B is monitored using four employment indicators, namely: (1) growth rate of GDP per person employed (growth rate of labour productivity); (2) employment-to-population ratio (EPR); (3) proportion of employed people living below $1.25 (at purchasing power parity, PPP) per day (working poverty rate); and (4) proportion of own-account and contributing family workers in total employment (vulnerable employment rate). In addition, the initial set of MDG indicators adopted in 2000 included one employment indicator under the third goal on gender equality (share of women in wage employment in the non-agricultural sector). Since their introduction, the MDG employment indicators have been monitored and reported upon in global and regional MDG reports,[20] and the ILO has made efforts to ensure that the indica-

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[19] ILO (2011a, Section 1C) provides an example of an analysis based on a set of Key Indicators of the Labour Market alongside similar indicators that are not part of the KILM database.

[20] See United Nations (2011) and the full list of 8 goals, 21 targets and 60 indicators, as well as the database, available at http://mdgs.un.org/unsd/mdg/Default.aspx.

tors are used in labour market monitoring systems, including through publications discussing individual indicators and their role in labour market analysis (see e.g. ILO, 2009a, Section 1C).

It is important to realize that the selection and adoption of MDG indicators have only in part been based on technical considerations. Labour market indicators provide complementary information, and there are seldom reasons to exclude certain indicators, apart from capacity constraints or data availability concerns. Consequently, the selection of indicators reflects technical considerations as much as consultations and dialogue. Furthermore, given the number of millennium goals and indicators, the number of employment indicators is necessarily limited. In other words, the MDG employment indicators do not replace, and were never intended to replace, comprehensive sets of indicators, such as the set of decent work indicators.[21]

Several points concerning the MDG employment indicators merit emphasis in the context of the development of LMIA systems, primarily because as a set, and despite their shortcomings (see below), these indicators provide a powerful framework for labour market analysis in developing economies. Labour productivity provides a starting point to assess the extent to which an economy can generate and sustain decent employment opportunities. The indicator reflects the connection between the broader economy and the labour market, and investigation of this connection can shed light on issues such as limitations of productivity gains to certain sectors or labour market segments, and the translation of these gains into better employment conditions. The remaining three indicators under MDG Target 1B provide key measures of labour market performance. The employment-to-population ratio captures the volume of employment, while both the vulnerable employment rate and the working poverty rate provide information on the quality of employment.

Shortcomings of the indicators relate to the interpretation of the information they convey, which is not always straightforward. Contrary to the growth rate of labour productivity, for which higher values generally reflect economic progress and development (taking the issues mentioned above into account), a rise in the employment-to-population ratio does not always signify an improvement. Particularly in developing countries, the volume of employment as such is usually not the main labour market issue, as relatively few people can afford not to work at all. Consequently, poorer countries typically have relatively high employment-to-population ratios, unless women or other large population groups face strong barriers in accessing labour markets, which would depress the level of the national EPR.

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[21] The four MDG Target 1B employment indicators are also part of the set of decent work indicators.

In general, male EPRs tend to decrease as the level of development rises, often driven by the increasing enrolment in education of young people, among other factors. The development of female EPRs is more complex, and depends on the extent to which women can benefit from growing employment opportunities in the face of (often slowly changing) social and cultural barriers to labour market access, the increase in enrolment of young women in education and changes in the division of non-market work between the sexes. Breakdowns by sex and age group are therefore essential for meaningful monitoring of national EPRs and analysis of developments over time.[22]

The inclusion of the EPR as an MDG employment indicator resulted in the exclusion of other measures of the volume of employment, such as the labour force participation rate and the unemployment rate. These measures are not less important than the EPR, but the adoption of the EPR contributes to a better understanding of labour markets in that unemployment is not the single most important indicator in developing economies. This does not mean that the unemployment rate in a developing economy is necessarily lower than in a developed economy, but it does underline the need to look beyond unemployment.

The fact that few people in developing economies can afford not to work is reflected in the poor quality of much of employment and the coexistence of a productive or formal segment and a less productive non-formal segment. This dualism in the labour market is captured, to an important extent, by the distinction between vulnerable and non-vulnerable employment as defined on the basis of status in employment. Large shares of own-account workers and contributing family workers indicate widespread informal work arrangements, whereby workers typically lack adequate social protection and social dialogue mechanisms. Nevertheless, the distinction between vulnerable and non-vulnerable does not fully reflect dualism in the sense mentioned before. Some own-account workers may not be vulnerable (for example highly-skilled professional own-account workers) and some workers in wage employment may actually be vulnerable (for example casual wage workers). It is therefore important to examine vulnerable employment in conjunction with other labour market information, such as data that are available on employment in the informal economy.[23]

The concept of working poverty is less ambiguous than that of vulnerable employment. The working poor are defined as employed persons living in households in which per capita consumption is below $1.25 (PPP) per day. Working poverty therefore

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[22] See Elder (2011, table 3.3) for guidelines for monitoring national EPRs and the design of policy responses.

[23] See Chapter 4 for a discussion on informality.

gives an indication of the lack of decent work: if a person's work does not provide sufficient income to lift them and their family out of poverty, then this work does not qualify as decent work in terms of income (which is an important determinant of consumption), and it is likely that it falls short in other dimensions of decent work as well. Nevertheless, given that poverty status is conventionally determined on the basis of household consumption, the concept of working poverty is not as clear-cut as would be desirable. In the MDG framework, it is possible that two families, each with one breadwinner, who perform similar jobs and receive similar income, are classified differently in terms of (working) poverty status. Reasons include possible differences in the size of the family (number of dependents), household savings and (private or public) transfers which affect household consumption. In other words, because the MDG indicator links labour market status with poverty status (at the household level), it loses some of the information about jobs in favour of information regarding workers and their families.

Additional methods to assess the income component of decent work would therefore be desirable. For example, the median household size could be considered instead of the actual household size to make such an assessment (see D'Achon and Pagès, 2011, for an example of this methodology), and/or income from work could be used instead of (household) consumption. In the context of international monitoring of the MDGs, this is more problematic as such alternatives would typically break the conceptual link between Target 1A and 1B.[24] The result could be that some jobs would be considered decent work (at least with regard to income), while the worker (and their family) would be classified as extremely poor on the basis of conventional poverty measurements (or the other way around). This would certainly create confusion and therefore reduce the role of the MDG framework as a tool for development.

The MDG framework has helped to raise consciousness about development issues in general and (working) poverty in particular. The framework has also played an important role at both the international and the national levels in shaping development strategies and donor support, not least with regard to statistical and analytical capacity building. In this context, the availability of internationally comparable indicators as well as regional aggregates has facilitated the discussion of employment issues. Nevertheless, this brief review of the MDG employment indicators highlights the

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[24] MDG Target 1A is monitored using three indicators, namely: (1) proportion of population below $1.25 (PPP) per day; (2) poverty gap ratio (the mean shortfall of the total population from the poverty line, expressed as a percentage of the poverty line); and (3) share of poorest quintile in national consumption. For international monitoring of the MDG indicators, the measurement of working poverty under Target 1B starts from the measurement of poverty under 1A, and thereafter takes labour market status into account.

need to complement the indicators with additional labour market information, to the extent that such information is available or can be generated.[25] These considerations will play a role in the discussion on the future of the MDG framework after 2015 given that, although some of the targets will have been achieved, the goals will remain relevant.

10.3.3 Employment targets and projections

There is a growing interest in the use of (quantitative) employment targets as part of development and labour market strategies. Such targets may be formulated with reference to indicators from the sets discussed before (KILM, decent work indicators and MDG employment indicators). For example, the European Union uses the employment-to-population ratio to set employment targets. In developing economies, the MDG employment indicators are particularly relevant, because the MDG framework already includes targets, which can be used to formulate objectives with respect to both the quantity and the quality of employment.

Monitoring strategies and, in particular, the achievement of targets presuppose the availability of an effective LMIA system, and the methodology that can be used is linked to the level of development of the system. Starting from a first-level LMIA system including the MDG employment indicators, such a system would allow for the extrapolation of employment trends. For example, a linear extrapolation of the EPR in combination with population projections, which are available from national and international sources for virtually all countries, can be used to project the volume of employment (the number of employed persons) by 2015 (the target date of the MDGs). Alternatively, the volume of employment can be projected based on national or international projections of the economically active population in combination with an assumed (or target-) unemployment rate to project the volume of employment.

To take the quality of employment into account, projections of the volume of employment can be combined with a target for the working poverty rate to project the number of workers that are living above the poverty line. Similar to MDG Target 1A on poverty reduction, a halving of the working poverty rate could be targeted

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[25] In general, this will be the case if indicators such as the employment-to-population rate and the vulnerable employment rate have been calculated on the basis of labour force surveys. Such surveys allow for many possibilities for cross-tabulations and disaggregations, which are often essential for a fuller understanding of the labour market.

by 2015.[26] Such an approach can be enhanced to take the linkages between the labour market and the economic environment into account, and to produce a targeted growth rate of GDP that would allow for the achievement of the working poverty target.[27] In terms of LMIA system development, this approach points at the move to a second-level LMIA system.

As noted in section 10.2, the next step is a third-level LMIA system which uses econometric models to project employment and to analyse progress in the achievement of employment targets. Such models allow for a comprehensive analysis of the labour market in its broader economic context, including the effects of economic policies and exogenous shocks. For example, the ILO has assisted several countries in preparing employment projections using interindustry macroeconomic models developed by the Inforum group at the University of Maryland.[28] These models build up macroeconomic totals from industry details and use an input–output matrix at their core. The models are particularly suited to analyse issues such as changes in the occupational structure of employment, the impact of a decline in foreign direct investment on the employment level and sectoral employment distribution, or the potential labour market impacts of decreased government spending and austerity measures. Because the models explicitly account for the interindustry linkages within each economy, they can be used to analyse the impact that increased demand for the product of one industry has on other industries (spillover effects in terms of output growth and/or employment growth). They are therefore particularly useful in assessing and developing industrial policy.

It is important to keep in mind that this type of interindustry macroeconomic model is not an economic forecasting model per se, and therefore the models are not designed to project GDP, but rather employment. Each set of employment projections is based on a specific macroeconomic outlook; when this outlook changes, then so do the projections. Although the models have been developed with a view to a range of economic and labour market issues, they allow for an analysis of most of the MDG employment indicators, and can be extended to include all MDG employment indicators (see Viet Nam Ministry of Labour, Invalids and Social Affairs, 2011). The flexibility of the approach of these models, even in a context of limited data availability, makes them relevant for developed and developing economies alike, and also makes

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[26] See Buberwa and Matsumoto (2009) for an example of this approach in the United Republic of Tanzania.

[27] See Campbell (2011) for an example of this approach in Nepal.

[28] The Inforum group specializes in the development of econometric models and has developed interindustry models for over 20 years. For more information, see http://www.inforum.umd.edu/.

them a useful tool in the development of the LMIA system itself (see **box 10.2**). At a minimum, the interindustry macroeconomic models require labour force survey data for as many years as possible, an input–output table for at least one recent year, and national accounts data by expenditure category and by industry. More extensive data allow for more advanced models, which can depict output and employment more accurately and with more detail.

Box 10.2 Employment projection models as LMIA tools

Employment projection models (EPMs) that have been developed for Mongolia, the Philippines and Viet Nam track economic and social development over time in these countries on an annual basis. That is, time paths for both exogenous and endogenous variables are determined year-by-year, both over historical periods and forecast horizons (see Meade, 2010). The models are therefore useful tools for the development of LMIA systems, which also build on tracking a set of indicators over time. EPMs are particularly useful as analytical tools for examining linkages between economic variables and labour market outcomes.

The EPM activities in the three countries resulted in valuable lessons on the development of LMIA systems. For example, labour departments in developing countries do not always have the capacity – or rather sufficient confidence in their capacity – to take full ownership of the models, even after training workshops. The main reason is that the capacity building workshops that have been organized thus far have included a wide range of participants (from different government departments and areas of expertise, both analysts and policy-makers). Although this diversity made for interesting debates and discussions, it constrained the extent to which technical material could be covered. One solution being discussed for the Philippines is to offer a more extensive, module-based, long-distance training course for analysts on the use of the model (El Achkar Hilal, 2011).

Interdepartmental cooperation is often a challenge for the work on EPMs. Required data falls under the jurisdiction of different departments that may be reluctant to share it, due to bureaucratic or political considerations. Furthermore, the question of which department should take ownership of the models at the national level may be contentious: on the one hand EPMs are LMIA tools and should be owned by labour departments but, on the other hand, they are very useful for strategic planning and preparation of national developmental plans and should be owned by the agency in charge of these functions (El Achkar Hilal, 2011).

The three country-models produce time series on a range of economic and labour market variables, including employment by industry and by occupation. Nevertheless, many options to further develop the models exist with a view to deepening the analysis of particular issues. For example, structural change could be better captured

based on changing rather than constant input–output coefficients (if more than one input–output matrix is available). The models can also be extended to provide disaggregated industry level employment projections by age group and sex, based on historical trends. Finally, the relationships between the quality of employment and overall employment creation can be examined in more depth, and methods to analyse skills-mismatch and "green jobs" could be explored.

10.4 LMIA system development

It has been argued that LMIA systems consist of more than sets of indicators and statistics, and include institutional arrangements and analytical capacity at various levels to produce information and inform policy development. This concluding section discusses activities that can be undertaken to establish and/or develop LMIA systems. In view of the large number of factors that shape decisions regarding an LMIA system and that will subsequently influence or determine the effectiveness of the system once it has been established, much international experience underlines the need for consultations. The objective of consultations is to foster agreement among stakeholders on the functions, target groups, main activities, organization and resources of the LMIA system.

10.4.1 Information, capacity and institutional assessment

The three components of LMIA systems discussed in section 10.2 can be used as a technical framework for the consultative process, starting with an assessment of available data. Data assessments should in principle cover all three sources of labour statistics and include issues such as the geographical coverage, frequency and quality of available data. For analytical and policy purposes, time series of labour market data and indicators are of particular importance. Also important is the consistent use of statistical concepts and classifications.

Capacity assessments should cover the analytical capacity in the unit or organization that is or will be responsible for labour market analysis. But capacity among other stakeholders of the LMIA system is also important. As noted in the previous section, analytical work may draw on the expertise of specialized research and other institutions (see **box 10.2**).

An institutional assessment should focus on networks among producers of data and information, labour market analysts and users including policy-makers. It was noted

before that an LMIA system with a policy function should be institutionally linked to formulation and monitoring of strategies and policies. The assessment should therefore cover the need for labour market information and analysis in current policies, including indicators that are used for monitoring purposes.

Based on the consultative process and the assessments, proposals can be developed for the establishment or improvement of an LMIA system. Proposed activities may range from support for specific aspects (analysis) to comprehensive project development, including support for policy development. Once the activities have started, a progress assessment of the development of LMIA systems can be made for each of the three components.[29]

10.4.2 Practical considerations

Information, capacity and institutional assessments as well as consultations constitute the basis for LMIA system development plans, which are country-specific. Nevertheless, some general considerations with regard to the establishment or improvement of LMIA systems can be suggested.

◖ The consultative process can be facilitated by the establishment of a task group on LMIA system development. The task group will help ensure stakeholder involvement at an early stage;

◖ The task group can work towards several concrete proposals:

  • A proposal outlining the functions, target group, planned analytical methods, sources of data and outputs of the LMIA system, software considerations (see **box 10.3**) as well as the institutional set-up of the system, taking existing arrangements into account;

  • A proposal for training and capacity building of the LMIA Unit;

  • A financial proposal; although initial funding may draw on donor resources for technical cooperation, long-run sustainability requires public funding;

◖ If donor funding is sought, the above proposals can constitute the basis for a project document. Such a document should be aligned with procedures for technical cooperation (ILO, 2010);

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[29] For an example, see Viet Nam Ministry of Labour, Invalids and Social Affairs (2011), Annex II, Summary progress assessment LMIA system.

◖ If a new LMIA system is envisaged, in a context of limited experience with labour market information and analysis, it is recommendable to establish a (first-level) core system that builds on a limited set of key indicators, e.g. the MDG Target 1B employment indicators;

◖ Although some LMIA activities may be outsourced, in particular in more developed systems, it is essential that adequate capacity in the LMIA system be developed to oversee these activities and allow for movement to at least a second-level system.

Box 10.3 LMIA systems and software

A question that is often raised is the choice of appropriate software to support LMIA systems. All three components of LMIA systems depend on adequate software (and hardware), but it is not a matter of a single choice.

The indicators that constitute the first-level system may be stored in database or spreadsheet software, as is the case with the ILO's KILM and many country-level databases. However, even a first-level national or subnational LMIA system cannot be limited to databases storing indicators. The system often needs to be able to produce tabulations or cross-tabulations that are not readily available from published sources, which means that files with micro data (or non-aggregated data) need to be available as well (i.e. stored in a readily accessible and organized way).

In addition to the use of existing data and information, LMIA units may undertake data collection exercises, independently or in collaboration with national statistical agencies. Such exercises can be supported by spreadsheet or database software, but may also use specialized software for data capturing, coding and the production of tables. Furthermore, analytical tools involve the use of software, ranging from software for standard statistical analysis to software that has been developed for specific purposes, such as the forecasting of economic and labour market indicators. Finally, the dissemination of labour market information and analysis often involves the use of software to design and maintain websites, publish information, and so on.

Therefore, rather than a single, all-embracing software product, software for LMIA systems can best be viewed as a collection of applications that are used for various purposes. This collection includes "standard" database and spreadsheet software, but is augmented by various other applications mentioned before.[30]

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[30] See European Commission (2011, Attachments 5 and 6) and ILO (2011b, Annex 4) for overviews of software used in LMIA systems in Botswana and Viet Nam, respectively.

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