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FALLING
INEQUALITY IN
LATIN AMERICA

POLICY CHANGES AND LESSONS

Edited by
Giovanni Andrea Cornia

UNU-WIDER STUDIES IN DEVELOPMENT ECONOMICS

Falling Inequality in Latin America

UNU World Institute for Development Economics Research (UNU-WIDER) was established by the United Nations University as its first research and training centre and started work in Helsinki, Finland, in 1985. The purpose of the institute is to undertake applied research and policy analysis on structural changes affecting developing and transitional economies, to provide a forum for the advocacy of policies leading to robust, equitable, and environmentally sustainable growth, and to promote capacity strengthening and training in the field of economic and social policy making. Its work is carried out by staff researchers and visiting scholars in Helsinki and via networks of collaborating scholars and institutions around the world.

*United Nations University World Institute for Development Economics Research
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Giovanni Andrea Cornia

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Foreword

This volume addresses a major issue in regional economic development with profound implications for many developing regions and possibly also for the beleaguered OECD countries mired in a long-lasting financial crisis and economic stagnation. For at least the last quarter of the twentieth century, Latin America suffered from very low rates of growth, high and rising inequality, and frequent financial and currency crises. However, since the turn of the century, the region's growth rates have improved, income inequality declined to the level of the early 1980s, poverty fallen, and macroeconomic stability improved, all this in parallel with the spread of centre-left political regimes in three-quarters of the countries of the region.

This decline in inequality has taken many by surprise. Indeed, the region has for long been a symbol of a deeply entrenched unequal distribution of assets, incomes, and opportunities, limited or no state redistribution, and a deeply embedded authoritarianism enforcing an unjust status quo. The recent Latin American experience is also particularly valuable as the inequality was reduced under open-economy conditions and in a period of intensifying global integration, which has often been considered by many as a cause of rising inequality.

In this sense, however imperfect, the Latin American experience in the aftermath of its redemocratization may be of interest to other developing countries completing their transition to the market and liberal democracy (such as some of the former socialist countries of Europe), facing a political transition (such as those affected by the Arab Spring, Myanmar, and some countries in sub-Saharan Africa), or recording rises in income inequality and social tensions in spite of rapid economic growth.

The causes of the recent higher economic growth in the region are clear enough and include the rebound from the severe regional crisis of 2001–2, improvement in the international environment (in terms of commodity prices, capital inflows, and migrant remittances), but also better domestic policies in the field of macroeconomic stability, exchange rates, taxation, financial regulation, minimum wages, human capital formation, social assistance, and deeper intra-regional trade integration.

Foreword

Until recently there was not much agreement on the drivers of the decline in inequality, which was alternatively attributed to changes in the supply/demand of skilled workers, improvements in terms of trade (though no decline in inequality was observed on the occasion of prior commodity bonanzas), the spread of social assistance schemes, or 'luck'. In this respect, the volume offers the first scholarly and systematic exploration of this unexpected change on the basis of three pairs of comparative case studies and eight policy chapters that point to the slow emergence of a 'new policy model' in the aftermath of the social-democratization of many countries of the region. In view of the fact that income inequality has been rising and is currently rising in many parts of the world, a good understanding of the Latin American experience and policies over the 2000s, including the different approaches followed within the region, is a topic that will attract a lot of attention. As such this volume is of interest not only to scholars and students of development economics but also to policy makers and people interested in the understanding of inequality dynamics in developing nations. I thus strongly recommend this volume to all of them as well as to the general reader interested in development issues. I would also like to take this opportunity to convey my sincere thanks to the authors of this volume, including the many distinguished scholars working in the field of development economics.

Finn Tarp
UNU-WIDER Director
Helsinki, October 2013

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*Giovanni Andrea Cornia
University of Florence
October 2013*

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Acronyms and Abbreviations

3SLS	3-stages least squares
ACFTU	All China Federation of Trade Unions
AD	<i>Acción Democrática</i> (Venezuela)
AFAM	<i>Asignaciones Familiares Plan de Equidad</i> (system of family allowances, Uruguay)
AFPs	private pension fund management companies
BDH	<i>Bono de Desarrollo Humano</i> (conditional cash transfer programme, Ecuador)
CAFTA	Central American Free Trade Agreement
CCTs	conditional cash transfers
CEDLAS	Centre for Distributive Labour and Social Studies at the Universidad Nacional de La Plata (Argentina)
CIT	corporate income tax
EAP	economically active population
ECH	<i>Encuestas Continuas de Hogares</i> (household surveys, Uruguay)
EHPM	<i>Encuestas de Hogares de Propósitos Múltiples</i> (Multiple Purpose Household Surveys of El Salvador)
EIS	employment in the informal sector
EMCs	emerging-market countries
ENIGH	<i>Encuesta Nacional de Ingresos y Gastos de los Hogares</i> (National Survey of Household Incomes and Expenditures, Mexico)
ENOE	National Survey of Labour and Employment (Mexico)
EPFs	household budget surveys
FDI	foreign direct investments
FEES	social and economic stabilization fund (Chile)
FMLN	<i>Frente Farabundo Martí para Liberación Nacional</i> (El Salvador)
FONASA	Chile's national health fund
GATT	General Agreement on Tariffs and Trade
GCR	Global Competitiveness Report by the World Economic Forum
GDP	gross domestic product
GICs	growth incidence curves

Acronyms and Abbreviations

IASS	<i>Impuesto de Asistencia a la Seguridad Social</i> (social security assistance tax, Uruguay)
ID	<i>Izquierda Democrática</i> (Ecuador)
IE	informal employment
ILO	International Labour Organization
INE	Chile's National Bureau of Statistics
INEC	<i>Instituto Nacional de Estadística y Censos</i> (Ecuador's National Statistical Office that collects the National Employment, Unemployment, and Underemployment Survey data (ENEMDU))
IRPF	<i>Impuesto a la Renta de las Personas Físicas</i> (dual personal income tax system, Uruguay)
IS	informal sector
ISI	import substitution industrialization
LAC	Latin America and the Caribbean
LCSP	LAC Poverty Reduction and Gender Sector of the World Bank
LSDV	least square dummy variable
MNR	<i>Movimiento Nacionalista Revolucionario</i> (Bolivia)
MST	Brazil's Landless Workers Movement
NAFTA	North American Free Trade Agreement
NER	nominal exchange rate
OB	Oaxaca-Blinder type of decomposition
PAN	<i>Partido Acción Nacional</i> (Mexico)
PANES	<i>Plan Nacional de Atención a la Emergencia Social</i> (Uruguay)
PCHI	per capita household income
PEM	minimum employment programme (Chile)
PIT	personal income tax
PLN	<i>Partido de Liberación Nacional</i> (Costa Rica)
POHJ	employment programme for household heads (Chile)
PRAF	conditional cash transfer programme (Honduras)
PRI	<i>Partido Revolucionario Institucional</i> (Mexico)
PT	<i>Partido dos Trabalhadores</i> (Brazil)
RER	real exchange rate
RIF	re-centred influence function
SBTC	skill-biased technical change
SCRER	stable and competitive real exchange rate
SEDLAC	Socioeconomic Database for Latin America and the Caribbean
SMEs	small and medium-sized enterprises
ToT	terms of trade
VAT	value added tax

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Part I

Inequality Changes and the Surfacing of New Policy Approaches

1

Recent Distributive Changes in Latin America: An Overview

Giovanni Andrea Cornia

1.1 The Decline of Income Inequality During the 2000s

This volume aims to document and explain the sizeable decline of income inequality that has taken place in the majority of Latin American countries¹ during the last decade. It does so through a systematic exploration of inequality changes in six countries characterized by different economic structures, political regimes, and inequality trends. Structured comparisons between three pairs of these countries broadly similar in most respects except for their policy approaches or the external shocks endured can help to disentangle the region's recent inequality dynamics. The three country comparisons concern: (i) Ecuador (which was run by a centre-left government for most of the decade and which experienced a large decrease in inequality) versus Chile (also run by a centre-left regime, but which recorded only a moderate fall in inequality); (ii) Uruguay (centre-right till 2005 and featuring a large increase in inequality until 2007 followed thereafter by a moderate decline) versus Mexico (also centre-right, but exhibiting a sizeable fall in inequality during the 2000s); and (iii) Honduras (centre-right, characterized by a large rise in inequality) versus El Salvador (also centre-right, but registering a large decrease in inequality). These comparisons are integrated by analyses of policy changes in the field of macroeconomics, foreign trade, labour markets, education, taxation, and social assistance. In addition, Chapter 3

¹ The volume focuses on 18 countries, i.e. all the South American countries (except for the Guyanas) and all the Central American countries. Caribbean countries are excluded except for the Dominican Republic.

(by Kenneth M. Roberts, a political scientist) explores the factors explaining the re-politicization of inequality following the return to democracy in the late 1990s and the subsequent election in the 2000s of centre-left regimes in many countries. In this sense, however imperfect, the Latin American policy experience in the aftermath of its redemocratization may be of interest to other developing countries facing a political transition or recording rises in income inequality and social tensions in spite of rapid economic growth. The recent Latin American experience is particularly valuable as it shows that inequality can be reduced under open economy conditions and in a period of intensifying global integration if a new policy model (called for convenience ‘open-economy growth with equity’) is adopted.

The recent decline of inequality in Latin America has taken many by surprise. Indeed, the region has for long been a symbol of a deeply entrenched unequal distribution of assets, incomes, and opportunities, limited or no redistribution by the state, and authoritarian regimes enforcing an unjust *status quo*. The root causes of such a situation were to be found in the high concentration of land, human capital, credit, production opportunities, and political power in the hands of a tiny oligarchy. This high asset concentration was perpetuated well into the post-Second World War period by the creation of institutions which facilitated the diversification of the elites’ agricultural, mining, and commercial assets into industrial and financial assets. As a result, with rare exceptions, the Gini coefficient of the distribution of income per capita in the 1950s and 1960s ranged between 0.47 and 0.65 (Chapter 2: Table 2.1), the highest in the world and matched only by a few countries in Southern and Eastern Africa.

As argued by Giovanni Andrea Cornia in Chapter 2, such high structural inequality rose on average by 0.32 Gini points a year during the 1980s, the decade that witnessed a prolonged recession and the dominance of Washington Consensus-type adjustment policies. Inequality continued rising on average by 0.16 Gini points a year during the 1990s, a decade of sluggish growth and the prevalence of the augmented Washington Consensus (Figure 1.1).

The inequality trend of the 1980s and 1990s came to a halt in the first decade of the twenty-first century, a period of major reversals of prior political, economic, and distributive trends. Indeed, as noted in Chapter 2, inequality fell between 2002 and 2010—albeit to different extents and with different timing—in all 18 countries of the region. Exceptions were Nicaragua, where it rose, and Costa Rica, where it stagnated. The average regional decline in the Gini coefficient over 2002–10 was a sizeable 5.5 points (Figure 1.1), but the fall was much more pronounced in Argentina, Paraguay, Peru, and Venezuela. Overall, inequality improved more in South America than in Central America (Chapter 2: Table 2.1).

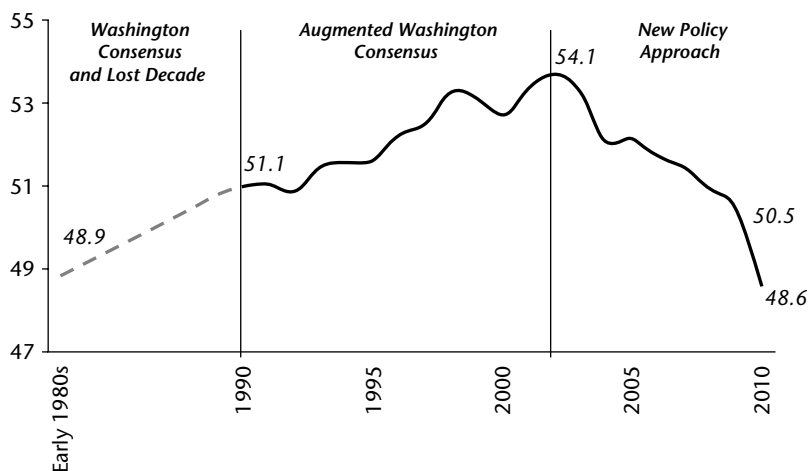


Figure 1.1. Trend in the average regional Gini index of the distribution of household income per capita, early 1980s–2010

Source: Author's elaboration based on the IDLA dataset (Martorano and Cornia 2011), which is based on SEDLAC data and on other sources for years with missing SEDLAC data.

The average drop in inequality was particularly marked during the 2003–4 recovery, particularly in countries that had experienced a sharp rise in income polarization during the 2001–2 crisis, and then slowed somewhat over 2004–8. Inequality, however, did not rise during the 2009 crisis, and fell sharply during the recovery of 2010 in half of the 13 countries with available data (Chapter 2: Table 2.1). Overall, over 2003–10 the region offset the inequality rises of the prior twenty years, thus returning to its average level of the early 1980s.

It has been argued that such a startling decline was facilitated by the high international prices of commodities exported by the region. This factor certainly played a role in reducing inequality in eight countries, and particularly in four (see Chapter 14 and Chapter 4 on Ecuador) heavily dependent on commodity exports (thanks to a rise in public expenditure and aggregate demand leading to a rise in the demand for unskilled labour). Yet, the evidence in Chapter 2 and the country studies in Chapters 4 to 9 indicate that such a decline was as pronounced in the semi-industrialized economies of the region, in remittance-dependent countries such as El Salvador (see Chapter 7), and in economies with a mixed production structure. The uniqueness of the recent inequality decrease in Latin America is underscored also by the fact that no other region experienced comparable distributive gains despite similar improvements in terms of trade, migrant remittances, financial flows, and economic growth. Neither can the recent inequality decline be closely associated with growth, as the fast-growing Asian countries experienced steep inequality rises during this period. It is thus unlikely that the recent

distributive gains of Latin America were only due to a favourable external environment, world growth, or 'luck'. Other factors, including changes in public policies, must help to explain this encouraging trend.

1.2 Determinants of the Decline in Inequality in the Case Studies Analyzed

What, then, explains the recent decline in inequality? To answer this question, the country studies of this volume follow a two-step approach. Changes over time in the Gini coefficient of household income per capita are first decomposed² into changes in their 'proximate determinants', i.e. changes in the shares of different types of income and in their concentration coefficients, corrected when possible for changes in activity and participation rates. Next, changes in the shares and concentration coefficients of labour, transfer, capital, and remittance income are analysed in relation to their 'underlying determinants', i.e. exogenous shocks to the national economy, changes in domestic policies and institutions, and shifts in political regimes.

1.2.1 Proximate Causes of the Inequality Changes During 1990–2010 *Emerging from the Country Case Studies*

There are several similarities among the factors which explain the inequality changes of the last two decades in the six countries analysed in this volume (Table 1.1) or in the related literature (López-Calva and Lustig 2010). These conclusions, however, are biased by the grossly incomplete accounting in household surveys of capital incomes and the labour income of the 'working rich'. As the analyses of income distribution changes based on tax-return data by Atkinson and Piketty (2010) and Alvaredo (2010) show, it is possible (but not necessary) that a decline in the survey-based Gini coefficient G^* goes hand in hand with an increase in G , the survey-based G^* corrected with the percentage income share S of the top income earners (1 or 0.1 per cent).³

² The most common decompositions used are those proposed by Lerman and Yitzhaki (1985), Milanovic (1998), and Bourguignon, Ferreira, and Lustig (2005). These works are respectively referenced in chapters 4, 2, and 7.

³ When commenting on the differences between the household-survey-based Gini and that corrected on the basis of the following formula $G = G^* (1-S) + S$, Alvaredo (2010: 7) notes on Argentinean data that '...not only can [Gini] levels be different, but also the trends of G and G^* can diverge. According to the survey's results, G^* displays virtually no change when 2001 and 2003 are compared, going from 51.1 to 50.9. However, G 'corrected' with the top 1 per cent income share... was 57.4 in 2001 and 59.2 in 2003 (an increase of almost two percentage points). Finally, the discrepancy between the two formulas is larger, the larger the top group considered.' In contrast, in the case of the United States, both G^* and G rose between 1976 and 2006, though the latter displayed a faster rate of increase.

Given the scarcity of information on capital incomes and the income of the 'working rich' in household surveys, this volume is thus unable to establish formally whether the distributive changes discussed in the various chapters concern also the top percentiles of the income distribution. Given all this, analyses of the country studies suggest that much of the shifts in overall survey-based inequality over the period 1990–2010 was explained by variations in the Gini coefficient of labour incomes (Table 1.1). The upward (during the 1990s) or downward (during the 2000s) changes in the latter were accompanied in all cases but one by parallel shifts in the skill premium (the ratio of the wage of secondary- or tertiary-educated workers to that of workers with less than secondary education). In turn, the drivers of the surge and subsequent decline in the skill premium (analysed in detail in the country studies according to a similar methodology) depended on several factors such as: a stagnation in the demand for skilled labour during the 2000s (after its rapid increase during the prior decade); an increase in the supply of skilled workers following a surge in educational investments by governments during the 1990s and 2000s and the subsequent decline of educational inequality, which favoured the low-income groups; the increase in the demand of unskilled workers following the adoption of a more competitive exchange rate, which favoured the unskilled labour-intensive traded sector; and the decline in the supply of unskilled labour due to rising education, a fall in birth rates, and an increase in the rate of emigration.

Third, with the exception of Chile and Uruguay, where the number of agricultural workers is comparatively low, the decline in labour-income inequality was accompanied by a drop in the urban–rural wage gap driven by the adoption of competitive exchange rates or increases in world prices of agricultural commodities. In practically all countries, part of the decline in inequality was also explained by a rise from low levels in the share of social assistance transfers in total household income due to improved revenue collection (as discussed in Chapter 6 on Uruguay), and by the better targeting of social assistance transfers. While these inequality changes were not as large as those resulting from the enhancement in the distribution of labour income, they nevertheless made a significant contribution to the recent decline of income inequality. Finally, contrary to expectations in the literature, the increase in migrant remittances in total household income appears to have had an equalizing effect in El Salvador and Mexico but an unequalizing one in Honduras.

1.2.2 Underlying Causes of Inequality Changes During 1990–2010 in the Country Studies

Hereafter are summarized the underlying factors responsible for the changes in the proximate determinants of inequality in the six case studies included

in this volume. They are discussed for pairs of similar countries which were affected by different macroeconomic shocks or followed dissimilar policy approaches.

ECUADOR VERSUS CHILE

During the 2000s, both countries were run by centre-left governments and both recorded a fall in inequality, although the drop recorded by Ecuador far exceeded that of Chile (Table 1.1). A possible explanation, as Juan Ponce and Rob Vos argue in Chapter 4, is that only Ecuador in the 2000s fully offset the large inequality rise experienced during the earlier liberalization of trade and finance, which strengthened the traditional capital-intensive sector (oil and traditional agriculture). This appreciated the exchange rate and raised modern sector wages but did not create new formal sector jobs, leaving the task of absorbing the surplus labour to the informal sector. Later, floods caused by El Niño and falling oil prices pushed the economy into a tailspin while the 1999 banking crisis triggered a further surge in inequality and a large outflow of migrants, as public transfers did not adequately compensate for the loss of wages due to the crisis. The recovery of the 2000s raised real wages, including those of unskilled and rural workers, and reduced the Gini of labour income. This decline was helped by an expansion in the supply of educated workers, a fall in the skill premium, and more proactive income-transfer policies. As a result, by the end of the 2000s the economy-wide Gini coefficient had returned to the pre-liberalization level of the early 1990s.

In contrast, as noted by Dante Contreras and Ricardo Ffrench Davis in Chapter 5, inequality in Chile rose sharply between 1973 and 1987 when the military regime liberalized foreign trade (a measure which raised the skill premium and reduced employment in the traded sector), introduced labour reforms biased against workers and unions, and lowered taxes on wealth, capital gains, profits, and VAT on luxuries. Those years were also characterized by a sweeping educational reform that favoured private schools and increased educational inequality. Despite the return to democracy in 1990, income inequality stagnated during the entire decade (Table 1.1) but fell moderately over 2000–10 (i.e. 4.3 points as opposed to ten in Ecuador) despite the initial introduction of a competitive real exchange rate, capital controls, a prudent macro policy, an increase in average and minimum wages, a rise in expenditure on social assistance, and expanding social security coverage. During the 1990s, however, inequality in secondary education stagnated and access to tertiary education became more skewed. In brief, while Ecuador offset most of the initial increase in inequality recorded during the liberal era, in the 2000s Chile offset only part of the 1973–87 inequality surge, mainly because of only limited equalization of educational opportunities. In addition, at the end of the 1990s, the previous prudent macroeconomic approach was replaced by

Table 1.1. Changes in the proximate determinants of income inequality in the six country case studies of the volume, 1990s and 2000s

Country	Political regime	Period considered	Absolute changes in Gini index of overall income	Absolute changes in Gini index of all labour income ^b	% change in skill premium	% change in rural–urban wage gap	Absolute change in the Gini of:			Absolute change in the share of:			
							Capital income	Public transfers	Remittances	Labour income	Capital income	Transfer income	Remittance income
Chile	CL	1990–2000	+0.7	+2.4 ^b	+34.2 ^g	not relevant	—	stable	not relevant	+2.0	—	rising	not relevant
	CL	2000–10	–4.3	–3.8 ^b	–35.1 ^g	not relevant	—	equalizing	not relevant	+5.0	—	rising	not relevant
Ecuador	R	1990–2001	+14.0 ^a	+14.0 ^a	+25.4 ^h	—	+15.0 ^a	negligible	negligible	negligible	declining	rising	rising
	CL, L	2001–10	–10.0 ^a	–11.0 ^a	–21.5 ^h	–10.0 ⁱ	–18.0 ^a	equalizing	equalizing	declining	rising	declining	declining
El Salvador	R	1994–9	+4.0	+2.5 ^b	0.0 ^g	rising	—	—	–3.7	–0.5 ^c	—	negligible	+0.5
	R	2000–9	–7.0	–3.2 ^b	–16.0 ^g	–21.0	–9.0	–8.0	–3.2 ^e	–1.0 ^d	–0.1	+2.0	+2.0
Honduras	R	1991–2005	+6.9	+6.2	+32.1	+12.4	—	negligible	+5.0	–15.9	—	negligible	up to 10.3
	CL	2005–7	–5.2	–2.0	–33.7	–4.3	–9.6	–2.7	+2.6	–0.8	+0.3 ^k	+0.9	+1.2
Mexico	CR	1989–94	+1.3	+13.4	+50.5 ^g	+42.6	—	–4.3	+0.2	–3.0	—	+1.4	–0.3
	CR	1995–2010	–8.2	–8.0	–10.9 ^g	–36.9	—	–9.0	–0.4	+7.0	—	+3.6	+0.2
Uruguay	CR	1990–2007	+3.3	+6.7	+42.2	not relevant	+2.0	+0.6	not relevant	–5.0	–0.9	7.0	not relevant
	CL	2007–11	–4.0	–4.4	–14.2	not relevant	+3.0	–1.5 ^g	not relevant	0.8	1.6	2.3	not relevant

Notes: C, L, R, CL, CR, respectively, refer to centre, left, right, centre-left, and centre-right political regimes; — means not available; ^a = urban sector; ^b = based on SEDLAC data on all types of labour income; ^c = labour and non-labour income; ^d = skilled labour only; ^e = the years 2001–9; ^f = data based on the CASEN survey; ^g = based on SEDLAC data on the ratio between the salaries of workers with tertiary versus primary education; ^h = urban male workers; ⁱ = the country was run during the years 1990–2005 by right or centre-right regimes, and by a centre-left regime during 2005–11. The different periodization chosen in the table better permits the highlighting of the turnaround in income inequality in the latter period; ^k = calculated as a residual, which includes other private transfers; ^l = refers to the period 2003–10.

Source: Author's compilation on the basis of chapters 4 to 9, unpublished background data supplied by the chapters' authors, and SEDLAC data where indicated.

a totally open capital account and a free-floating exchange rate which may have hampered employment creation in the labour-intensive traded sector. Inequality started to decline with the recovery in 2004 and the strengthening of targeted social programmes financed with progressive taxes, a further rise in the minimum wage and the wages of different types of workers, the effect of increased public expenditure on education, and greater formalization of employment and coverage of social security.

URUGUAY VERSUS MEXICO

Both of these middle-income countries were run for most of the last twenty years by conservative governments. Yet, while income inequality in Mexico rose in the first decade and declined during the second, in Uruguay inequality started declining only in 2007 after the election in 2005 of a centre-left regime and the adoption in 2006 of redistributive policies. As noted in Chapter 6 by Verónica Amarante, Marco Colafranceschi, and Andrea Vigorito, the rise of inequality in Uruguay since the early 1990s was driven by the current and lagged effects of rapid trade liberalization, suppression of centralized wage-setting and reduction in minimum wages (which contributed to raise the skill premium and wage inequality), as well as by the suppression of personal income tax and lack of social protection for the poor. In contrast, between 2007 and 2011 inequality fell by four Gini points (Table 1.1) due to a drop in returns to education (a phenomenon also observed in Mexico) and a decline in earnings inequality. The decline in returns to education, however, can be ascribed only partially to the lagged effects of educational policies (which, unlike in Mexico, raised educational inequality in tertiary education and did not reduce it in secondary education), to the fall of spatial inequality, or to shifts in personal characteristics of workers, as a considerable portion of the returns-to-education variation remained unexplained. Hence, the authors attribute much of this unexplained decline in inequality to institutional and policy changes such as increased minimum wages, restoration of centralized wage-setting, and inception of a progressive personal income tax that reduced net returns to education. In turn, an expansion of well-targeted non-contributory benefits improved the distribution of public transfers.

As shown by Raymundo Campos-Vazques, Gerardo Esquivel, and Nora Lustig in Chapter 7, Mexico experienced a modest rise of the overall Gini coefficient between 1989 and the mid-1990s, a period characterized—as in Uruguay—by widespread trade liberalization and privatization, the dismantling of price supports and generalized subsidies, and reductions in minimum wages and unionization rates. In contrast, between the mid-1990s and 2010, overall inequality declined markedly following an improvement in the distribution of labour income and, to a lesser extent, non-labour income. During this period, the policy regime was characterized by limited structural reforms,

rising global integration (as signalled by the signing of the North American Free Trade Agreement, NAFTA), and the introduction of large-scale cash transfer programmes. During both periods, the main driver of the total inequality change was a shift in earnings inequality explained by the swings in returns to education. In particular, over 1995–2010 both the supply of skilled workers and the distribution of years of schooling among workers improved markedly following past and current rises in secondary and tertiary enrolments, including rises among the poor. As a result, between 1994 and 2006 the supply of highly skilled workers outpaced its demand, while the demand of unskilled workers (driven by an expansion of assembly-line activities or *maquiladoras*) exceeded its supply. In turn, the decline in non-labour income inequality benefited from the launch of large transfer programmes such as *Progresa* and *Oportunidades* which transformed a neutral distribution of public subsidies into a highly progressive one. In contrast to the case of Uruguay, minimum wages became non-binding and the unionization rate remained low and did not affect the trend in relative wages over 1996–2010.

EL SALVADOR VERSUS HONDURAS

These two fairly similar lower-middle-income countries were run for most of the last two decades by right-wing governments. Yet, the first experienced a major inequality decline while the second recorded a major increase until 2005. As argued in Chapter 8 by Carlos Acevedo and Maynor Cabrera, despite extensive liberalization and rapid growth driven by high post-war capital inflows, growing remittances, and urban growth, overall inequality stagnated during the 1990s as the impact of growing participation rates, falling unemployment, and rising urban wages was offset by the fall of agriculture's relative wages and employment. In contrast, the overall Gini coefficient fell sharply between 2000 and 2009 (Table 1.1). Yet, unlike in most Latin American countries, this decline coincided with a decade-long economic stagnation and dominance of an extreme right government. The inequality reduction was mainly due to a fall in the concentration coefficient of skilled and unskilled labour income mainly caused by the massive outmigration of both types of workers (and the ensuing slowdown in the rate of increase in their domestic supply), the slow rise in the urban demand for skilled labour due to a lengthy economic stagnation, and the slow but steady increase in the supply of skilled workers. These factors drove up the reservation wage of unskilled workers, reduced the skill premium and the urban–rural wage ratio, and triggered a rise in equalizing remittances since the mid-2000s. In contrast, the inequality-reducing effect of public transfers was relatively modest.

In contrast to El Salvador, in the highly dualistic economy of Honduras, income inequality rose between 1991 and 2005 and then fell between 2005

and 2007. As argued by Stephan Klasen, Thomas Otter, and Carlos Villalobos Barría in Chapter 9, the steep increase in inequality during the first 15 years was mainly the result of the surge in rural earnings inequality (while urban inequality remained unchanged) due to a fall in the demand for agricultural goods. The latter was caused by the persistent neglect of rural areas and large inflow of remittances and aid funds for reconstruction after hurricane Mitch which appreciated the real exchange rate. In addition, labour mobility between an increasingly less dynamic agricultural tradable sector and the more dynamic non-tradable service sector remained low because of high moving costs and stagnant educational achievements of rural workers over 1991–2007. The inequality trend has changed in part (Tables 1.1 and 2.1) since the mid-2000s, thanks to an increase in commodity prices that helped to raise wages in the tradable sector, while the rise in remittances also played an equalizing role. The increase in public transfers by the Zelaya government played an additional, if small, equalizing role.

1.3 Underlying Causes of the Inequality Decline of the 2000s: A Regional Perspective

The lessons emerging from the six case studies and the literature on the underlying factors explaining the recent inequality trends are discussed next for the region as a whole.

1.3.1 *An Improvement in International Economic Conditions*

As noted above, it has been argued at times that the recent inequality gains were due to the improvement of global economic conditions over 2002–8. Indeed, the region as a whole benefited from a significant rise in export receipts for primary commodities. Likewise, the region experienced an inflow of foreign capitals at declining interest rates amounting to 2.4 per cent of the region's GDP (Ocampo 2008), which exerted downward pressure on domestic rates and triggered a boom in regional stock markets. Finally, official remittances grew substantially in some countries from the late 1990s and have come to represent at least 17 per cent of GDP in El Salvador, 10–12 per cent in Nicaragua and Costa Rica, and a major item in the Mexican current account balance.

What was the direct impact of these changes on income inequality? A partial equilibrium analysis suggests that, given the high concentration of ownership of land and mines and in access to finance prevailing in the region, the above improvements had, *ceteris paribus*, a unequalizing effect on the pre-tax distribution of income. In addition, production in the primary commodity

sectors is land-, skilled labour-, and capital-intensive, and the absorption of unskilled labour is limited. At the same time, the increased availability of finance did not ease the access of small, labour-intensive enterprises to credit. In addition, the surge in capital inflows appreciated the real exchange rate in most countries, with the effect of slowing growth and employment creation in the labour-intensive non-commodity traded sector. As for the effect of remittances, the literature suggests that their short-term impact tends to be unequalizing, as only middle-class people are able to finance the high costs of migration. Yet, as argued in Chapters 2, 7, and 8, migration may become equalizing in countries where it is state-sponsored or where large migrant networks develop in destination countries. This all suggests that the partial equilibrium effect of the improvement in external conditions is unlikely to explain the recent decline of inequality, with the exception of countries where such transactions were sizeable or the structure of these flows evolved over time.

1.3.2 The Growth Acceleration of 2003–2008 and 2010 and its Impact on Job Creation

While the partial equilibrium impact of a more favourable global environment is unlikely to explain much of the region's recent fall of inequality, there is evidence that this positive macro shock relaxed the foreign-exchange constraint to growth and lowered interest rates, thus increasing employment, incomes, and revenue collection, subsequently helping (together with the policy changes discussed below) to improve regional unemployment, job informality, social security coverage, average wages, the ratio of informal/formal sector wages, and income inequality (see Chapter 2 as well as the evidence on Argentina and Brazil reported in López-Calva and Lustig 2010).

1.3.3 A Decline in Educational Inequality

As noted by Guillermo Cruces, Carolina García Domench, and Leonardo Gasparini in Chapter 15 and as confirmed by the country studies included in this volume, a main determinant of the fall in wage inequality was the increase in secondary enrolment and completion rates that began in the early 1990s and accelerated during the 2000s, thanks to a substantial increase in public expenditure on education. This trend benefited in particular children from low-income families. For instance, SEDLAC data show that for the region as a whole, the probability that a child from the lowest quintile completed secondary education relative to that of a child from the top quintile rose from 27 per cent in 1990 to 59 per cent in 2009/10. The increase in secondary school attainments contributed to a near universal decline in wage inequality due

to a 'quantity effect', i.e. better distribution of human capital among workers from different income deciles, and a 'price effect' (i.e. the fall in skilled versus unskilled wages)⁴ due to a rise in the supply of skilled workers. Yet, while the quantity effect is unambiguous, the price effect can also be explained by a decline in the supply of unskilled labour due to demographic factors and migration, a stabilization in the demand for skilled workers, an increasing demand for unskilled workers (as in the case of the Mexican *maquila*), devaluation of the exchange rate shifting demand in favour of low-skill-intensive sectors, and improvements in minimum wages and collective bargaining, as shown by the case study on Uruguay.

1.3.4 *The Surfacing of a New Policy Model in Most of the Region*

During the last 20 years, the region experienced a steady move towards democratization and, starting from the mid-to-late 1990s, a shift in political orientation which led to the unprecedented election of 15 different left-leaning governments between 1998 and 2011. As noted by Kenneth Roberts in Chapter 3, this shift resulted largely from a growing frustration with the disappointing results of the Washington Consensus policies. In this sense, this political swing seems to reflect more a retrospective economic voting than the ideological realignment of the electorate. This swing also reflected the rising demands that the state should serve as the engine of development, provide social welfare, and be responsible for public utilities, education (including university education), healthcare, and pensions.

As noted in Chapter 3 and in Panizza (2005), the last two decades experienced a revival of social protests led by new actors—unemployed workers, indigenous groups, and community organizations—which replaced the trade unions and traditional left parties at the forefront of social mobilization. In most of the region, these new demands for redistribution were channelled into electoral politics, and gave rise to broad coalitions comprising sectors of business and the middle class, the urban and rural poor, the unemployed, social movements, and the informal sector workers. Some of the new left regimes can be defined as social democratic, as in the case of Chile, Uruguay, and Brazil. A second group, which includes Argentina and Ecuador, developed left-nationalist platforms, while a third (Venezuela and Bolivia, as well as Nicaragua since 2007) followed a radical populist approach that also entailed redistribution of assets. While social justice and economic development are at

⁴ For the measurement of educational inequality, see Chapter 15 as well as Londoño (1990) and Thomas, Wang, and Fan (2000).

the core of their new identity, these new regimes at the same time retained a prudent approach to macroeconomics. While practically all regimes recorded some reduction in income inequality during the 2000s, the fastest yearly drops were recorded by the social democratic governments followed by the centrist and radical left (Table 1.2).

Table 1.2. Inequality changes during the 2000s by ideological profile of governing parties

Political regime	Country	Period	Total change in Gini index during each regime	Average yearly change
Radical left	Bolivia	2006–8	-0.51	-0.26
	Nicaragua	2007–8	no data	no data
	Venezuela	1999–2010	-8.20	-0.75
	Average		-4.36	-0.51
Social Democratic left	Argentina	2003–11	-9.65	-1.21
	Brazil	2003–9	-3.87	-0.65
	Chile	2000–9	-3.26	-0.36
	Dominican Rep.	2000–4	0.00	0.00
	Ecuador	2007–10	-5.01	-1.67
	El Salvador	2009–10	-2.57	-2.57
	Panama	2005–8	-4.55	-1.14
	Paraguay	2008–10	+0.01	+0.01
	Uruguay	2005–11	-3.90	-0.65
	Average		-3.64	-0.92
Centrist	Costa Rica	2006–10	-0.68	-0.23
	Dominican Rep.	2004–10	-4.70	-0.78
	Ecuador	2000–6	-3.06	-0.51
	Guatemala	2008–11	no data	no data
	Honduras	2005–9	-3.53	-0.88
	Peru	2000–10	-3.59	-0.36
	Average		-3.11	-0.56
Centre–right & right	Bolivia	2002–5	-2.16	-0.72
	Colombia	2000–10	-0.65	-0.07
	Costa Rica	2002–6	-1.17	-0.29
	El Salvador	2000–9	-3.84	-0.43
	Guatemala	2000–7	+1.65	+0.28
	Honduras	2000–5	+5.22	+1.04
	Mexico	2000–10	-6.20	-0.62
	Nicaragua	2000–6	+2.10	+0.35
	Panama	2009–10	-0.10	-0.10
	Paraguay	2000–8	-4.01	-0.51
	Uruguay	2000–5	+1.50	+0.30
Average		-0.70	-0.07	

Source: Author's compilation based on Roberts (2012) for most of the coding of the political orientation of governments and on SEDLAC for the changes in the Gini coefficients.

MACROECONOMIC POLICIES

As discussed by Mario Damill and Roberto Frenkel in Chapter 10, during the 2000s macroeconomic policy shared some common objectives (such as low inflation and deficits) with the orthodox approach but differed from it in several other respects. Fixed pegs and free floats were replaced by managed exchange rates aimed at preserving a competitive real exchange rate and avoiding its appreciation during periods of bonanza. Together with an improvement in global economic conditions, this helped to generate large current-account surpluses which were used to reduce the foreign debt and accumulate large currency reserves. However, in 2006–7 and again in 2010, this exchange rate policy came under pressure owing to a surge in the world prices of exports, capital inflows, and remittances. Yet, without capital controls, accumulation of reserves, intervention in the currency market, and sterilization, several countries would have shown stronger symptoms of Dutch Disease.

Consistent with the new exchange rate policy, most governments adopted a monetary and fiscal stance aimed at avoiding its past pro-cyclical bias. Budget equilibrium was targeted through increases in tax revenue (see later), and adoption of fiscal responsibility rules and discretionary decisions aimed at correcting the pro-deficit bias of the past. These measures generated large primary surpluses and, in 2006–7, a balanced budget for the region as a whole. In turn, monetary policy attempted to control the money supply, the fall in interest rates, and the credit expansion due to soaring exports and financial bonanzas, while interest rates were cut and lending by public banks expanded during crises.

This new policy approach affected inequality through several channels. The competitive exchange rate improved employment in the unskilled labour-intensive traded sector. In addition, it shifted the relative price ratio against the non-traded sector, thus discouraging the formation of unequalizing asset bubbles. In turn, the increase in tax/GDP ratios lessened the frequency of unequalizing budget crises. The new macro policies also improved growth (and, through it, inequality), which helped in most cases to create new jobs and raise the unskilled worker wages. Finally, as shown in Chapter 10, the countercyclical fiscal and monetary policies reduced output losses and cyclical rises in inequality during crisis years, while the surge in reserves and capital controls avoided booms and busts and the formation of unequalizing bubbles. Finally, a stricter regulation of domestic banks reduced the risk of financial crises (Rojas Suarez 2010).

TAXATION

Tax policy underwent gradual but deep changes in much of the region, as argued by Giovanni Andrea Cornia, Juan Carlos Gómez Sabaini, and Bruno

Martorano in Chapter 14. In a significant departure from the 1990s, tax policy during the 2000s often emphasized corporate income tax and reduced exemptions, extended the scope of presumptive taxation, cut regressive excises, and introduced indirect taxes on luxury items. The average regional tax/GDP ratio rose by 3.5 points between 2003–8 with larger rises recorded in Argentina and Brazil and smaller ones in Central America. The increase in world commodity prices contributed to this trend in eight countries, and particularly in four, though even there the tax/GDP ratio had started rising before the commodity boom. As a result, during the 2000s the distribution of income after tax improved in relation to the 1990s in 11 of the 12 countries with tax-incidence data.

TRADE POLICY

As noted in Chapter 11 by Miguel Székely and Claudia Sámano-Robles, the trade liberalization of the 1980s and 1990s led to a shift in resource allocation against the unskilled labour-intensive sector and an increase in the relative returns to higher education which raised inequality. During the 2000s, although trade openness was not reversed, its unequalizing effects faded and did not offset the inequality reduction of other measures. The continuation of free trade policy during the last decade was justified in part by the protection offered to the traded sector by the new exchange rate regime and earlier adjustments of the economy to trade openness. In contrast, the pattern of international trade changed substantially. While trade within the Free Trade Area of the Americas stalled, intra-regional trade developed rapidly, especially in manufacturing, as did trade with Asia. This diversification helped to soften the impact of the 2008–9 crisis in the OECD economies. However, during the 2011–12 crisis, several countries raised tariffs to the maximum allowed by the WTO, and Argentina introduced controversial quantitative import restrictions.

LABOUR MARKET POLICIES

As shown by Saúl Keifman and Roxana Maurizio in Chapter 12, the fall in labour-income inequality depended also on the adoption of labour policies aimed at addressing the problems inherited from the two previous decades with regard to unemployment and job informalization, falling unskilled and minimum wages, diminishing coverage of social security, and weakening of institutions for wage negotiations and dispute settlements. The measures introduced in the 2000s included: an increase in real minimum wages in 14 out of 18 countries of the region (Chapter 2: Table 2.4), which raised low wages also in the informal sector; non-contributory cash transfers for the unemployed; formalization of employment through the strengthening of labour inspectorates and stricter enforcement of social security norms;

greater emphasis, especially in the Southern Cone, on collective bargaining at the municipal/sectoral level rather than at the enterprise level; public works for the poor during periods of crisis; and strengthening of training and employment services. Progress in all these areas generated equalizing effects and must thus be positively assessed, especially in view of the fact that they were introduced in the context of intensifying economic globalization.

Latin America and China have had to overcome similar labour market problems. As noted by Richard Freeman in Chapter 13, the rhetoric about income inequality now contrasts sharply with that of both the Deng Xiaoping and Washington Consensus days. Both have relied extensively on minimum wages. But China sought to empower workers and unions to lead the improvement of worker wellbeing whereas the Latin American countries relied more on state initiatives such as the strengthening of labour inspectorate and tax incentives to encourage firms to move into the formal sector. Latin American policy makers can thus possibly learn from China's efforts to give workers written contracts, legal status, and the tools to defend their rights and to build up collective bargaining.

SOCIAL ASSISTANCE TRANSFERS

Under all types of political regimes, the 2000s were characterized, particularly in middle-income countries, by an expansion of social assistance programmes focusing on poor households, including conditional transfers aimed at reducing poverty and child labour and ensuring that children remain in school and have access to health services and proper nutrition; temporary employment schemes; subsidized formal sector employment for the youth; and the promotion of small and medium enterprises. These programmes are funded by the state budget, absorb between 0.2 and 0.8 of GDP, and cover an important share of the population at risk. In addition, several left-of-centre governments introduced non-contributory pensions costing between 0.18 and 1.30 per cent of GDP. As argued by Armando Barrientos in Chapter 16, such a trend made a lot of sense given the truncated nature of social insurance systems in Latin America where one in every two workers relied on informal employment in 2000, and only one in every four made regular contributions to a pension fund. The generosity and coverage of social assistance transfers were increased over time, the design improved, and targeting fine-tuned. Chapter 16 and several other studies document their favourable distributional impact. An IPEA study, for instance, finds that in Brazil social pensions and *Bolsa Família* explained one-third of the three Gini points decline between 2000 and 2006.

1.4 Can the Decline of Income Inequality Be Sustained in the Years Ahead?

Despite its recent decline, the inequality level of many Latin American countries remains very high. Particularly in Central America and some Andean countries, future efforts will have to focus on deepening the comparatively timid policy reforms undertaken during the last decade, as well as on removing the structural causes of inequality by broadening the access of the poor and the middle class to land, credit, investment opportunities, high-quality secondary and tertiary education, and public subsidies. It will also require a calibration of the region's pattern of growth and global economic integration so as to embed future inequality declines in a sustainable pattern of growth.

1.4.1 *Deepening the Recent Reforms*

Progress in raising average secondary and tertiary enrolment rates and reducing educational inequality in secondary education was not accompanied by similar gains in the quality of education. As shown by a six-country ECLAC (2010) study of the PISA science scores of 15-year-old children belonging to four quartiles of the ISEC index (which proxies the socioeconomic and educational level of their families of origin), there still are huge performance differences in favour of children from the upper ISEC group who often attend better quality private secondary schools. This persistent gap reduces the chances of children of lower socioeconomic status being selected during university admission examinations. As a result, while both the ratio and the difference between the tertiary enrolment rate of children belonging to the top and bottom income quintile declined in Argentina, these indexes continued to rise in Colombia (Table 1.3). In Brazil (and for the region as a whole) the ratio fell, but the absolute difference rose. To continue to equalize the educational opportunities of children of low-income families as a way to improve income distribution, governments thus need to broaden tertiary education access by improving the quality of teaching in secondary education and by reducing the direct and opportunity cost of education borne by poor children.

These and other state interventions will need to be financed in a non-inflationary manner. Despite the recent increase in tax/GDP ratio and improvements in tax progressivity, the trend towards rising taxation needs to continue to preserve macroeconomic stability and increase the redistribution via the budget in most of the region. As argued in Chapter 14, a gradual increase of the effective tax/GDP ratio to its potential level would generate additional revenue equal to 3.5–4.0 per cent of GDP for the region

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Table 1.3. Net tertiary enrolment rates, total and by income quintiles, 1990–2010

		Equalized income quintiles									
		Total	1	2	3	4	5	Q5/Q1	Difference	Q5–Q1	Difference
Argentina	1991	19.0	7.7	13.6	5.5	21.5	41.1	5.33		33.4	
	2000	28.2	9.2	13.0	24.8	35.3	55.3	5.98	0.65	46.0	12.68
	2011	30.9	18.0	25.3	29.5	38.2	56.6	3.15	-2.83	38.7	-7.38
Brazil	1990	6.1	0.4	0.5	1.8	5.6	24.2	62.96		23.8	
	1999	9.3	0.9	1.5	3.1	8.2	35.4	40.39	-22.57	34.6	10.77
	2009	16.3	3.3	5.1	9.7	20.4	48.8	14.84	-25.54	45.5	10.92
Colombia	1996	13.6	4.2	4.7	7.1	12.5	36.4	8.77		32.3	
	2000	17.1	8.3	5.7	10.5	17.7	40.9	4.95	-3.83	32.6	0.32
	2010	23.9	8.5	11.7	18.5	27.8	55.8	6.56	1.61	47.3	14.73
Average for 15 LA countries		11.3						13.3		24.8	
		15.9						12.1	-1.2	33.2	8.4
		22.0						10.0	-2.1	39.6	6.3

Source: Author's elaboration on the basis of SEDLAC data (n.d.).

as a whole. A comparison with other regions suggests there still is room to do so at no cost to economic efficiency (see also Chapter 6 on Uruguay). This measure would also reduce the inequality of post-tax income distribution. For instance, as argued in Chapter 14, an increase in income tax revenue of three GDP points would reduce post-tax inequality by three Gini points, bringing the average Latin American country close to the levels of redistribution achieved via taxation in western Europe, while microsimulation of moderate income tax increases and higher family allowances suggests that the Gini coefficient would drop by 1–3 points in Uruguay (see Chapter 6).

As suggested by recent political trends, such an increase in taxation would be legitimized and effectively executed if governments simultaneously and equitably expand the provision of public goods while avoiding state capture by the elites who have traditionally been able to sway public expenditure in their favour. Despite the recent increase in social expenditure/GDP, additional resources will be required to improve the quality of secondary education and to broaden access to tertiary education, ensure universal access to a standard package of health services, and to strengthen social protection.

1.4.2 Promoting an Equitable and Sustainable Pattern of Growth

If implemented with care over a few years, the above reforms could go a long way in reducing income inequality from the present level. Yet, several structural problems will also need to be addressed if inequality is to be further

reduced. In economies where agriculture is still an important source of employment, there is a need to support smallholders' competitiveness by increasing their access to land (still a major problem in most of Central America, a few Andean countries, Paraguay, and parts of Brazil), investing in rural infrastructure, reducing the urban bias of public policy, and adopting an exchange rate that favours the traded sector, as discussed in Chapter 9 on Honduras.

A second structural problem that needs fixing is the segmentation of the labour market and persistent spread of informal employment. Indeed, wage inequality and the urban–rural income gap reflect to a large extent the gap between formal and informal wages. Informality also feeds inequality by narrowing the scope of contributory social protection and exacerbating the need for social assistance transfers. While the expansion of the formal sector depends on broader issues of capital accumulation, labour productivity, and modernization of production, as noted in Chapter 12 a large number of informal workers are currently employed in formal sector firms. Continuing the drive towards the formalization of employment and the issuing of written contracts can help to remove this structural cause of inequality, as discussed *inter alia* in Chapter 13 on China.

Another structural problem affecting long-term growth and inequality concerns the pattern of economic integration in the world economy. As Ocampo (2012) argues, trade liberalization during the last quarter century has led to rapid export growth but only to a moderate growth of GDP and labour productivity, persistent vulnerability to external shocks, and a 're-primarization' of exports. A continuation of this pattern of trade integration is thus unlikely to help reduce inequality because of its modest growth impact and because it shifts resources to the capital-intensive primary commodity and non-traded service sectors. This problem could be approached by adopting an 'open economy industrial policy' that supports development of labour-intensive manufacturing and service sectors by means of active production measures, technological upgrading, entry into new sectors, strengthened regional integration, and a rebalancing of the asymmetries that characterize Latin America's trade with China.

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2

Inequality Trends and Their Determinants: Latin America over the Period 1990–2010*

Giovanni Andrea Cornia

2.1 Trends in Income Inequality

2.1.1 Initial Conditions

The colonial origins of the high income inequality that has afflicted Latin America for centuries have been well analysed by Engerman and Sokoloff (2005), who argue that the high concentration in the distribution of land, assets, and political power inherited from the colonial era led to the development of institutions which perpetuated the privileges of a small agrarian and commercial oligarchy well into the post-Second-World-War period. Prados de la Escosura (2007) further argues that during the globalization period of 1870–1914 such high inequality was exacerbated by improvements in the region's international terms of trade which raised land yields and the land rental/wage ratio to the benefit of large landowners.

As a result, in the early 1950s the region exhibited a high concentration in the distribution of land and human capital. The Gini coefficient of land distribution ranged between 0.61 (Mexico) and 0.93 (Paraguay), as opposed to 0.29–0.56 in Asia and Africa (Cornia 2012). In addition, countries endowed

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with mining resources exhibited a high asset concentration which, together with the strong capital- and skill-intensity of production in this sector, distorted the functional and personal distribution of income. Inequality was also influenced by the urban bias of pricing policies that penalized agriculture, and the capture of a large part of public expenditure by the urban elites.

Starting from the late 1970s, most Latin American countries introduced neoliberal policies aimed at stabilizing the macroeconomy, liberalizing domestic markets, privatizing state companies, and liberalizing international trade, foreign direct investments (FDI), and portfolio flows. Their supporters claimed that these measures would improve domestic inequality in nations with an abundant supply of unskilled labour and low savings. However, the distributive impact of these policies was regressive (Table 2.1; Altimir 1996) and the average regional Gini index rose by 2.2 points from the early 1980s to 1990, by another 1.7 points between 1990 and 2000, and by 1.2 points during the recession of 2001–2, that is by 5.1 points for the two neoliberal decades.

A key feature of this trend was the decline of the labour share in total income and the parallel rise in the capital share. Between 1980 and the late 1980s, the labour share fell by 5–6 percentage points in Argentina, Chile, and Venezuela and by 10 in Mexico (Sainz and Calcagno 1992). Alvaredo (2010) confirms that the income share of the top one per cent of taxpayers in Argentina (whose labour income accounted for less than 50 per cent of the total) rose from 7 to 15 per cent between 1973 and 2002, while in Chile it went from 7 to 14 per cent between 1980 and 1990 (Cornia 2012). Five structural changes help to explain this remarkable shift. First, with the economic stagnation of the 1980s, the regional unemployment rate rose sharply between 1990 and 2002 (Table 2.3). Second, there was a substantial shift of labour to the informal sector. Finally, formal sector wages rose more slowly than GDP per capita while the minimum/average wage ratio fell and wage differentials by skill widened (Cornia 2012).

What factors explain the trends of the 1980s and 1990s? Barring an aggravation of the structural causes of inequality mentioned above, the literature focuses on two complementary explanations: the skill-biased technical change (SBTC) and the impact of liberal policies. The main effect of the SBTC induced by trade liberalization was to raise the demand for skilled workers to operate the newly imported machines while its supply remained rigid because of low public expenditure on education and the inability of the poor to borrow. While there is evidence that the relative wage of skilled workers rose in the 1990s (Cornia 2012), it is not obvious that this was solely due to the SBTC induced by trade liberalization rather than institutional and demographic factors. Indeed, while trade liberalization eased the import of labour-saving skill-biased capital goods, the depressed climate prevailing in the region offered few incentives to invest in new equipment. Indeed, the regional investment/

GDP ratio fell from 22 per cent in 1980 to 16 per cent for the rest of the decade and 18 per cent in the 1990s, while it rose to 24 per cent in 2008 in parallel with a drop in the skill premium. In contrast, there is consistent evidence of the impact of liberalization on income inequality. Behrman, Birdsall, and Székely (2000) find in a study of 18 Latin American countries for 1980–98 that liberalization caused an exacerbation of inequality which was particularly intense on the occasion of domestic financial reforms, capital account liberalization, and tax reforms. Similar results are obtained by Székely (2003), Taylor (2005), Koujianou Goldberg and Pavcnik (2007), and Gasparini and Cruces (2010) for Argentina. Though with different emphasis, these studies conclude that domestic, trade, and financial liberalization generated adverse distributive effects due to competition by low-cost imports and the ensuing job losses, the immobility of production factors in the declining sector, skill-biased technical change, informalization of employment following a rise of the real exchange rate, and devastating macro and financial crises.

2.1.2 The Widespread Decline of Income Inequality over the Period 2002–2010

The last decade experienced a Polanyian reversal of the political, economic, and distributive trends of the 1980s and 1990s. Between 2002 and 2010 inequality fell—albeit to a different extent and with different timing—in all 18 countries analysed with the exception of Nicaragua and Costa Rica (Table 2.1). In Honduras and Uruguay inequality rose until 2005 and 2007 but then started declining. The unweighted regional Gini, which had risen by 0.32 Gini points a year during the 1980s and 0.16 during the 1990s, fell by 0.5 points over the period 2002–8, 0.47 in 2009, and 1.93 in 2010 (Figure 1.1). These declines were much more sizeable than the earlier rises and in 2010 the region returned to the pre-liberalization level of inequality (Figure 1.1). In half of the countries these gains benefited not only the poor but also the middle class (Cornia 2012), which is increasingly seen as a key player in promoting long-term growth, political stability, and the pursuit of low inequality via progressive taxation, social expenditure, and labour policies.

About a third of the last decade's inequality gains can be attributed to the drop in inequality in 2003–4 following its sharp rise during the 2001–2 crisis (Table 2.1, Figure 1.1). However, inequality continued to decline during the subsequent years, including during the crisis of 2009. The decline involved both medium- and high-income inequality countries and was observed under regimes reflecting all types of political orientation, though the yearly Gini drop was much stronger under the social democratic left regimes (Chapter 1: Table 1.2). The decline, involving all types of economies (Figure 2.1), was a bit faster among the industrial economies. It is important

Table 2.1. Trends in survey-based Gini coefficients of the distribution of household disposable income per capita

	Early 1960s	Early 1970s	Early 1980s	1990	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Change btw 2000s peak & latest year
South America		53.3	48.6	50.2	53.1	53.4	54.5	53.0	51.9	52.1	51.8	51.6	49.9	50.1	47.5		-7.0
Argentina	44.0	36.1↓	40.3↑	45.6 ^a	50.4↑	52.2↑	53.3↑	52.6↓	49.6↓	48.8↓	47.5↓	46.9↓	45.9↓	44.9↓	44.2↓	43.1↓	-10.2
Bolivia	—	54.9	—	54.5=	57.6 ^g	58.2↑	59.8↑	54.7↓	54.7=	57.6↑	56.1↓	57.2↑	55.6↓	—	—	—	-4.2
Brazil	62.5	68.4↑	57.9↓	60.4↑	58.6 ^g	58.8=	58.3=	57.6↓	56.6↓	56.4=	55.9=	54.8↓	54.2↓	53.7=	—	—	-5.1
Chile	52.7	53.2↑	52.3↓	55.1↑	55.2=	—	—	54.6↓	—	—	51.8↓	—	—	51.9=	—	—	-3.3
Colombia	64.0	64.4=	52.5↓	51.9↓	57.2↑	56.6↓	59.6↑	54.9↓	57.0↑	56.5=	58.7↑	58.2=	56.5↓	56.7=	56.5=	—	-3.1
Ecuador	47.0	51.8↑	—	44.9↓	56.0↑	—	—	54.5↓	53.6↓	53.6=	52.9↓	53.9↑	50.2↓	48.8↓	48.9=	—	-7.1
Paraguay	—	—	—	58.4 ^f	56.6 ^g	55.8↑	56.4↑	56.7=	53.8↓	52.8↓	54.5↑	54.2=	52.1↓	50.7↓	52.2↑	—	-4.5
Peru	65.3	67.3↑	52.5↓	46.4 ^d	50.8↑	53.0↑	54.6↑	52.0↓	49.1↓	49.8↑	49.6=	50.5↑	48.0↓	48.0=	47.2↓	—	-7.4
Uruguay	—	41.0	41.4=	42.4 ^b	44.4↑	46.2↑	46.6=	46.2=	47.1↑	45.9↓	47.2↑	47.6=	46.3↓	46.3=	45.3↓	42.0↓	-5.6
Venezuela	44.6	43.2↓	43.2=	42.5 ^b	44.0↑	46.4↑	47.4↑	46.1↓	45.3↓	47.5↑	43.4↓	41.5↓	40.3↓	—	—	—	-8.7
Central America	—	56.2	49.1	52.2	52.5	52.3	53.6	53.5	52.2	52.1	52.0	50.1	50.6	51.1	49.7		-3.9
Costa Rica	60.9	57.6↓	43.2↓	44.0↑	45.8↑	49.9↑	49.8=	49.0↓	48.0↓	47.2↓	48.7↑	48.9=	48.4=	50.2↑	49.7=	—	-0.2
Dominican R.	—	—	44.5	48.6↑	51.9↑	50.4↓	50.0=	52.0↑	51.9=	51.0↓	51.9↑	48.7↓	49.0=	48.9=	47.2↓	—	-4.8
El Salvador	60.0	55.1↓	—	52.7 ^c	51.9↓	52.5↑	52.3=	49.8↓	48.4↓	49.7↑	46.1↓	46.8↑	46.6=	48.1↑	45.5↓	—	-7.0
Guatemala	—	55.7	54.6↓	57.7↑	54.2↓	—	58.2↑	55.6↓	53.2↓	—	55.8↑	—	—	—	—	—	-2.4
Honduras	—	61.5	53.3↓	53.5=	54.3 ^g	54.1=	57.8↑	58.3=	58.1=	59.4↑	57.4↓	56.0↓	59.0↑	55.9↓	56.7↑	—	-2.7
Mexico	63.7	56.4↓	48.4↓	51.2 ^b	53.7↑	—	51.0↓	—	50.8=	50.9=	49.6↓	—	50.1=	—	47.5↓	—	-6.2
Nicaragua	—	—	—	55.5 ^e	—	50.2↓	—	—	—	52.3↑	—	—	—	—	—	—	+ 2.1
Panama	52.1	51.2↓	51.1=	55.0 ^b	55.5=	56.5↑	56.4=	56.1=	54.9↓	53.8↓	54.9↑	—	—	52.1↓	51.9=	—	-4.6
Latin America		54.5	48.9	51.1	52.8	52.9	54.1	53.2	52.0	52.1	51.9	51.2	50.2	50.5	48.6		-5.5
No. of Gini changes in relation to prior period		4↑1=6↓	1↑3=8↓	9↑2=5↓	11↑2=4↓	9↑2=3↓	8↑6=1↓	1↑4=11↓	2↑4=10↓	6↑4=6↓	7↑2=8↓	4↑4=5↓	1↑4=9↓	2↑6=5↓	2↑4=7↓		

Notes:

1) The first three columns are not strictly comparable with each other and with those for subsequent years.

2) ↓ and ↑ rises/falls of at least 0.5 Gini points in relation to the prior column.

^a refers to 1988; ^b refers to 1989; ^c refers to 1991; ^d refers to 1992; ^e refers to 1993; ^f refers to 1995; ^g refers to 1999.

Source: Author's compilation on the basis of IDLA dataset (Martorano and Cornia 2011) for 1990–2010 and SWIID3 for earlier years. The IDLA data are drawn from the CEDLAS database, other sources are used as complements. These Gini coefficients may differ from those used in the country studies which use national sources.

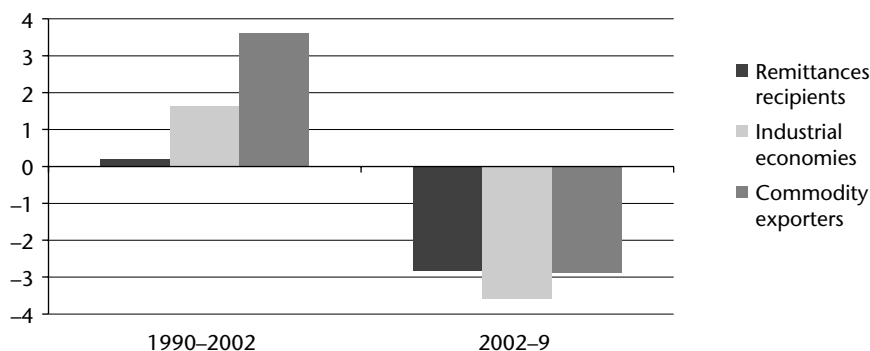


Figure 2.1. Changes in the Gini coefficient of income distribution by type of economic structure, 1990–2002 and 2002–2009

Notes: The remittance recipients are the Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, Panama, and Paraguay; the industrial economies include Argentina, Brazil, Mexico, and Uruguay; and the commodity exporters are Bolivia, Chile, Colombia, Costa Rica, Ecuador, Peru, Venezuela.

Source: Author's elaboration (based on Martorano and Cornia 2011).

to note that the Gini coefficients in Table 2.1 are derived mostly from standardized regional databases which manipulate the surveys' micro-data on household incomes in a somewhat different way than the National Statistical Offices do. As a result, the level of the Gini coefficients in Table 2.1 and in the chapters in Part 3 of this volume may at times differ modestly from those used in Chapters 4–9, though this is not the case for their trends. Annex 1 documents in detail the sources of data and in their eventual differences observed between the country case studies and the other chapters.

An appreciation of the exceptionality of the recent distributive improvements of Latin America is offered by a comparison with the inequality trends of other regions. In this regard, Table 2.2 confirms that during the broad period of 1980–2000, the majority of Latin American countries experienced an increase in inequality, a trend observed also in most other regions. In contrast, during the years 2000–10 inequality rose less frequently and less sizeably than during the previous two decades. However, only in Latin America was there a clear and generalized improvement. This bifurcation of trends is difficult to explain on the basis of the supposed advantages of this region. Most developing regions are, in fact, similarly heterogeneous. All comprise countries that depend on commodity exports, foreign capital, and remittances, as well as some more industrialized nations. All of these benefited from the high commodity prices, rising remittances, financial exuberance, and rapid world growth of the last decade. Nor does the drop in inequality appear to have been driven by growth. Indeed, the fast-growing Asian countries experienced steep rises in inequality, and China in 2010 had a higher Gini coefficient (0.47) than Argentina, Uruguay, and Venezuela.

Inequality Changes and New Policy Approaches

Table 2.2. Trend in the Gini coefficient of the distribution of household disposable income per capita, 1980–2000 and 2000–2010^a

	OECD		Transition economies		Latin America	MENA	Southeast Asia	South Asia	Sub-Saharan Africa	World
	Europe	Asia	Europe	Asia						
	1980s (starting from earliest available year) and late 1990s or early 2000s									
Specific period for each region ^b	1980–2001	1990–1998	1980–2000	1980–2002	1980–2000	1980–1995	1980–2000	1980–1995		
Rising inequality	14	24	2	14	2	5	3	9	73	(69%)
No change	1	0	1	1	3	0	0	2	8	(8%)
Falling inequality	6	0	0	3	3	2	2	8	24	(23%)
Total	21	24	3	18	8	7	5	19	105	(100%)
	2000–2010 (or latest available year)									
Specific period for each region ^b	2000–2010	1998–2010	2000–2009	2002–2010	2000–2007	1995–2009	2000–2010	1995–2007		
Rising inequality	9	13	2	2	4	3	4	7	44	(41%)
No change	4	5	1	1	0	0	1	1	13	(12%)
Falling inequality	8	6	0	15	4	4	0	13	50	(47%)
Total	21	24	3	18	8	7	5	21	107	(100%)

Notes:

^a All countries included in the table can count on at least 10 well-spaced observations over the 30 years considered.

^b The trend analysis shows that the periodization of the inequality changes varied from region to region.

Source: Author's calculations on the basis of the IDLA database (Martorano and Cornia 2011).

2.2 Proximate and Underlying Causes of the Recent Decline in Inequality

The *proximate causes* of the recent decline in inequality can be identified by means of a simple framework which accounts for changes in both the factorial and personal distributions of income. If Y_i is the total income of household i , $y_i = Y_i/n_i$ the average household income per capita, and n_i the number of its members, Y_i can be equated to the sum of the products of household i 's endowments of unskilled labour (LE, i.e. the number of unskilled adults), human capital (HC, i.e. the number of adults with at least complete secondary education), physical capital (K), land and other non-renewable assets (L), all of them multiplied by their rates of returns, namely ' uw ' (unskilled wage), ' sw ' (skilled wage), ' rk ' (return on capital), and ' r ' (rent of land and mines). In symbols:

$$Y_i = uw LF_i + sw HK_i + r L_i + rk K_i \text{ and } y_i = [uw LF_i + sw HK_i + r L_i + rk K_i]/n_i \quad (1)$$

Assuming the state taxes at different rates labour income (t_w) and capital income (t_k) and redistributes part of the revenue as net transfers (TR), and that household i receives untaxed remittances (RE), the post-tax, post-transfers income of a person in household i is equal to:

$$y_i = \{uw LF_i (1-t_w) + sw HK_i(1-t_w) + r L_i (1-t_r) + rk K_i(1-t_r) + TR_i + RE_i\}/n_i \quad (2)$$

The distribution of household income per capita thus depends on the distribution of endowments and their returns. It is affected also by the dependency and the activity rate. Indeed, poor households generally have a larger number of children (and therefore lower LF_i/n_i) and lower activity rates (A_i/LF_i). To account for these differences LF_i is multiplied by (A_i/LF_i) while assuming all human capital HK is employed. With this extension, Equation (2) becomes:

$$y_i = \{uw LF_i (A_i/LF_i) (1-t_w) + sw HK_i(1-t_w) + r L_i (1-t_r) + rk K_i (1-t_r) + TR_i + RE_i\}/n_i \quad (3)$$

Equation (3) shows that disposable household income per capita can be decomposed into six income shares (sh_{jt}) concerning net labour income, net human capital income, net land and mining rents, net capital income, public transfers, and remittances. Following Milanovic (1998), at time t the Gini coefficient of the distribution of disposable household income per capita can thus be written as the average of the concentration coefficients C_{jt} of the distribution of the above six types of income (ranked by the total household income per capita) weighted by their shares in total income sh_{jt} :

$$G_t = \sum sh_{jt} C_{jt} \text{ with } j = uw, sw, r, rk, tr, re \text{ and } \sum sh_{jt} = 1 \quad (4)$$

and a change over time in the aggregate Gini index (ΔG) can be decomposed using the general formula of differentiation over time:

$$\Delta G = \sum \Delta sh_j C_{jt} + \sum \Delta C_j sh_{jt} + \sum \Delta sh_j \sum \Delta C_j \quad (5)$$

Thus, changes over time in the Gini coefficient of the distribution of household income per capita depend on variations in the after-tax shares of the different income types (sh_{jt}), as the following inequalities $C_{TR} < C_{uw} < C_{RE} < C_{sw} < C_{rk} < C_r$, generally hold, and on changes in their concentration coefficients C_{jt} . This general framework thus allows us to trace changes over time in overall inequality to changes in (i) the income shares of different types of income due to changes, for instance, in the relative remuneration of production factors, volume of transfers (TR), taxes paid (t_w, t_k), and remittances received (RE); and (ii) the concentration coefficients of each income component, due to changes in the distribution of endowments (LF, HK, L, K) and in the incidence of social transfers (TR), taxes paid (t_w, t_k), and remittances received (RE). This

approach is information-intensive and cannot be used for regional analyses as there are no regional household surveys. Yet it offers a complete checklist of factors affecting inequality, the importance of which can be assessed by regression analysis and logical narrative.

The next, more complex step consists of relating the changes in the proximate causes of inequality to their underlying causes. Most changes in the latter reflect exogenous shocks or policy interventions. For instance, a change in ' uw/r ' due to an increase in land/mining rents may be driven by a rise in commodity prices. In fact, the number of possible underlying causes can be quite high. For convenience, in the following analysis they are clustered in five groups: changes in global economic conditions; changes in the rate of growth of GDP and job creation; changes in exogenous factors such as fertility, dependency, and activity rates; changes in the distribution of educational achievements due to efforts at raising enrolments among the poor; and policy factors. The impact of these underlying causes of inequality is reviewed next.

2.3 Underlying Causes of the Decline in Income Inequality over the Period 2002–2010

2.3.1 *An Improvement in External Conditions*

During the last decade, the rapid growth of the Asian economies has entailed a rise in the regional terms-of-trade index from 100 in 2000 to 117 in 2008 while the exports/GDP ratio rose from 27.6 to 35.7 per cent (CEPAL 2010). In turn, migrant remittances grew rapidly in Central America, and to a lesser extent in Bolivia, Paraguay, and Ecuador, while the regional ratio of official remittances to GDP climbed from 2.2 per cent in the 1990s to 5.4 per cent in 2007–8 (Cornia 2012). Furthermore, between 2002 and 2008 and again in 2010 the region experienced portfolio inflows amounting to 2.4 per cent of the region's GDP. In contrast, the FDI stock broadly stagnated at 22 per cent of the region's GDP, after having risen sharply over 1995–2002 (UNCTAD 2009).

Given the high concentration in the ownership of land and mines prevailing in the region and their high capital- and skill-intensity, the recent gains in terms of trade generated, *ceteris paribus*, an unequalizing effect on the functional distribution of income. However, if the mining rents accrue to the state or are taxed and redistributed in a progressive way, a rise in them can generate favourable distributional effects. Yet, the evidence suggests a weak relation between terms of trade and revenue/GDP ratio in Latin America. The only relatively strong correlation ($r = 0.63$) was found for the eight main commodity exporters for the years 2003–7.

As for the impact of remittances, the IMF (2005) suggests that their short-term effect tends to be unequalizing, as only middle-class people are able to finance the high costs of illegal migration and, as a consequence, remittances accrue to middle-income families. However, Docquier and Rapoport (2003) suggest that migration may be equalizing if migrant networks develop in the destination countries, as observed in the case of El Salvador and Mexico (Chapters 7 and 8), and because migration they narrowed the rural–urban income gap. In turn, the increase in capital inflows mainly benefited large, capital- and skills-intensive firms and banks, and did not ease the access to credit for small labour-intensive firms. In addition, these inflows caused an appreciation of the exchange rate which retarded growth in the labour-intensive traded sector, including agriculture (see Chapter 9 on Honduras). All in all, it seems that the partial equilibrium effects of the improvement in international conditions are unlikely to have led to a large decline in inequality, except possibly in those countries where such a phenomenon was especially marked.

2.3.2 Impact of the Rapid Growth of 2002–2008 and 2010 on Income Inequality

In the absence of an economy-wide model, the general equilibrium effects of the mid-2000s boom in commodity exports, remittances, and capital inflows are difficult to trace. Yet, as suggested by the ‘balance of payments constrained growth model’ (Thirlwall 2011), these events do relax the foreign exchange constraint to growth and, as a result, may raise employment. Indeed, between the average for the 1990s and 2003–8, the average growth rate of GDP per capita tripled in South America and rose by half a point in Central America. In 2009, it contracted by 2.9 per cent but rebounded to 4.2 per cent in 2010 (CEPAL 2010). The evidence confirms that the GDP recovery—and the policy changes illustrated below—favourably affected several labour market outcomes (Table 2.3).¹

2.3.3 Exogenous Changes in Dependency and Participation Rates

The recent inequality decline might have been due to an increase in labour supply and the simultaneous drop in dependency rates, both of which could be equalizing. Yet, dependency rates had also fallen in the 1980s and 1990s, a period characterized by rising inequality, and López-Calva and Lustig

¹ A simple bivariate regression on a panel for 1990–2009 for the 18 countries analysed here finds that on average a one per cent increase in GDP/c reduces the Gini coefficient by 0.18 percentage points.

Inequality Changes and New Policy Approaches

Table 2.3. Labour market trends for Latin America as a whole, 1990–2009

	Activity rate (% of pop. of 15–64 yrs)	Unemployment rate (%)	% Wage earners of total workers	% Formal sector workers	% Workers paying social sec.	Wage (constant 2000 US\$)	
						Average	Informal// formal sector
1990	61.0	6.2	62.6	55.0	63.3	384	0.54
2002	63.0	10.7	60.9 ^{a)}	52.8	54.6 ^a	397	0.43
2008	64.7	7.3	63.7	50.3	42.0	421	0.46
2009	64.3	8.2	63.2	50.7	38.4	434	0.47

Note: ^a refers to 2000.

Source: Author's compilation on the basis of CEPAL (2006 and 2008), and SEDLAC 2011.

(2010) suggest that their contribution to the recent decline in inequality was of limited importance. Inequality might have fallen also due to a faster rise in the participation rate of the poor. In this regard, López-Calva and Lustig (2010) suggest that the surge in activity rates had a small equalizing effect on income inequality in Argentina, Brazil, and Mexico, while the opposite was true in Peru.

2.3.4 An Improvement in the Distribution of Human Capital

An improvement in the distribution of human capital among households due to a rise in secondary and tertiary completion rates starting in the 1990s and accelerating in the 2000s especially among the poor (Chapter 15) contributed markedly to the recent fall in inequality. The rise in schooling generated two effects: a 'price effect' as sw/uw fell due to a higher supply of skilled workers, and a 'quantity effect' due to a more equal distribution of human capital. Yet, the price effect can also be explained by a decline in the supply of unskilled labour due to demographic factors, the educational upgrading of formerly uneducated workers, a drop in the demand of skilled workers, a rise in that of unskilled workers, and policy changes. Gasparini and Cruces (2010) find for Argentina that the reduction in the skill premium was associated with the rise in employment resulting from the post-2002 commodity boom, the 2002 peso devaluation that shifted demand towards low-skilled labour-intensive sectors, and changes in labour policies.

2.3.5 The Spread of Progressive Regimes and New Policy Approaches

During the last twenty years the region experienced a return to and consolidation of democracy which affected income inequality through the adoption

of progressive policies. As suggested by Robinson (2010), genuine democracy and greater electoral participation reduce the concentration of power in the hands of the elites and facilitate the transition towards non-clientelistic policies. From the late 1990s the region witnessed a shift in political orientation towards left-of-centre governments due to growing frustration with the disappointing results of the liberal policies which had led to a shrinkage of manufacturing and of the industrial working class, a weakening of the unions, rising unemployment, and an enlargement of the informal sector. Of the 18 countries analysed in this volume, only Colombia, Mexico, Chile, Panama, and Honduras (which experienced a coup) were run in 2011 by centrist or right-wing regimes (see Chapter 3).

The new regimes within the region differ. Some can be defined as 'social democratic', as in the case of Chile, Uruguay, and Brazil. A second group (Argentina and Ecuador) developed left-nationalist platforms, while a third (Venezuela, Bolivia, and since 2007 Nicaragua) adopted a radical-populist approach that also entailed redistribution of assets. All of them have abandoned the notion of a revolutionary break in favour of electoral politics and respect for the institutions of liberal democracy. In a sense, the social democratic model is consistent with the 'redistribution with growth' paradigm (Chenery et al. 1974), while the radical-populist regimes share some policies with the radical 'redistribution before growth' paradigm. The main components of these new models are reviewed hereafter.

MACROECONOMIC POLICIES

With the exception of Brazil and Venezuela, most countries abandoned the 1980s and 1990s regimes of free floats and fixed pegs, and opted for managed exchange rates aimed at achieving a competitive real exchange rate and limiting its appreciation. Consistent with this approach, central banks accumulated large international reserves and in a few cases introduced capital controls. On several occasions, this policy came under pressure, owing to a surge in export receipts, capital inflows, and remittances (CEPAL 2011). Such events have eroded only in part the competitiveness of many countries due to the strong real devaluation of 2001–2, although without capital controls, accumulation of reserves, and central bank interventions, the real appreciation and related unequalizing asset price inflation would have been stronger.

To support the new exchange rate policy, most countries avoided the traditional pro-cyclical fiscal and monetary biases of the past. Fiscal deficits were typically reduced below one per cent of GDP and in several cases were turned into surpluses. Furthermore, in line with the shift towards a countercyclical fiscal management, the region recorded a primary surplus of 1–2 per cent between 2004 and 2008 and a balanced budget during the fast growth years of 2006 and 2007 (CEPAL 2011). The authorities also attempted to control the

money supply, the fall in interest rates, and credit expansion triggered by financial inflows through an accumulation of reserves and sterilization. By 2009, only Argentina and Colombia had introduced capital controls, but this policy became more common in 2010–11. In turn, during the crisis of 2008–9, most governments lowered interest rates and expanded lending by public banks.

TAX POLICY

During the 2000s tax policy re-emphasized the role of income tax and reduced exemptions, extended the scope of presumptive taxation, cut excises, introduced indirect taxes on luxuries, and, in some countries, launched a surrogate tax on financial transactions and a selective export tax. As a result, the regional tax/GDP ratio rose by 3.5 points over the period 2003–8 and dropped only 0.35 points during the 2009 recession. The increase in world commodity prices contributed to the surge in tax/GDP ratios in a few countries, although also here the revenue rise began before the commodity boom. Thus, taxation during the 2000s improved the distribution of after-tax income in practically all countries analysed in Chapter 14, though in a few of them—especially in Central America—tax incidence remained regressive. The revenue surge also affected inequality indirectly, as it allowed the funding of social transfers and public expenditure on education in a non-inflationary manner, and the elimination of the unequalizing macro instability of the past.

TRADE AND EXTERNAL INDEBTEDNESS

The free trade policies of the 1990s were not overturned, in part because the new exchange rate regime offered some protection to the tradable sector. In contrast, intra-regional trade grew quickly and so did South–South trade, particularly primary commodity exports to the Asian countries. Governments also attempted to reduce their dependence on foreign borrowing. Short-term stabilization agreements were generally not renewed, while Brazil (in 2005) and Argentina (in 2006) prepaid their outstanding debt to the IMF. Meanwhile the region's foreign reserves grew from 150 to 550 billion US dollars between 2002 and 2009, and its gross foreign debt declined from 40 to 20.4 per cent of the regional GDP over the same period. These changes were likely to be equalizing, as they helped to reduce vulnerability to macroeconomic shocks.

LABOUR MARKET POLICIES

Labour policies explicitly addressed the problems inherited from the two earlier decades, i.e. unemployment, job informalization, falling unskilled and minimum wages, declining social security coverage, and weakening of institutions for wage negotiations and dispute settlements. Most centre-left governments and a few others decreed hikes in minimum wages (Table 2.4) which reduced the minimum/average wage ratio. Average wages grew moderately,

Table 2.4. Trend in the index of real minimum wages (2000 = 100)^a

	2002	2004	2006	2008	2010
Venezuela (1999) ^b	94.5	92.7	113.9	107.2	93.8
Chile (2000–10)	106.8	111.3	116.3	118.3	127.7
Brazil (2002)	114.3	121.4	145.3	160.8	182.0
Argentina (2003)	81.4	129.8	193.2	253.3	321.3
Panama (2004–9)	105.8	107.5	108.1	109.2	113.3
Uruguay (2005)	88.7	77.5	153.2	176.9	196.8
Costa Rica (2006)	99.5	97.6	99.5	99.5	105.8
Bolivia (2006)	116.0	112.0	111.1	117.0	119.9
Honduras (2006–9)	104.6	114.5	127.4	131.1	225.5 ^c
Nicaragua (2007)	105.9	113.5	128.5	141.6	174.6
Ecuador (2007)	112.5	122.2	130.0	146.7	161.5
Paraguay (2008/9)	102.9	102.4	106.7	101.3	102.5
Guatemala (2008)	108.6	117.6	119.6	111.9	122.0
El Salvador (2009)	94.6	95.3	90.5	92.9	100.9
Peru (2011)	101.0	106.9	112.0	114.5	110.1
Mexico (–)	101.2	99.1	99.0	96.2	95.6
Colombia (–)	101.9	103.8	108.0	106.9	111.6
Dominican Republic (–)	105.1	81.2	89.6	87.7	93.5

Notes: ^a nominal wages deflated by the CPI; ^b initial year of rule by a centre-left regime; ^c refers to 2009.

Source: CEPAL (2011).

reflecting recognition that, unless backed by increases in productivity, nominal wage raises may fuel inflation with no effect on real wages.

RISING SOCIAL EXPENDITURE AND REDISTRIBUTION

In most countries, public social expenditure started rising in the 1990s but has accelerated its upward trend since the early 2000s (Cornia 2012: Table 12). Most of the increase concerned social security/assistance and education, generated positive redistributive effects, and appears to have become more progressive over time (López-Calva and Lustig 2010). Practically all governments introduced progressive social assistance programmes to complement the coverage of social insurance. These new programmes were funded by the state, covered an important share of the population at risk, were directed to old and new political constituencies, and comprised conditional transfers aimed at reducing poverty and child labour and at ensuring that children remain in school and have access to health services, employment schemes, training and subsidized employment for the young, and the promotion of small enterprises. In addition, Argentina, Bolivia, Chile, and Brazil introduced non-contributory social pensions costing between 0.18 and 1.30 per cent of GDP (Chapter 16). Their generosity, coverage, design, and targeting generally improved over time.

2.4 Regression Analysis

2.4.1 Dataset and Bilateral Correlation Coefficients Among Explanatory Variables

The conjectures presented in Section 2.3 about the impact of the underlying causes of inequality were tested on the basis of the IDLA dataset (Martorano and Cornia 2011) which includes data for 18 countries for the years 1990–2009. The dependent variable is the Gini coefficient of the distribution of household disposable income per capita (for the sources see Cornia 2012, footnote 19, as well as Annex 1 to this chapter). In line with the discussion of the underlying causes of inequality in Section 2.2, the explanatory variables were clustered into five groups, i.e. international economic conditions; rate of growth of GDP per capita; changes in exogenous factors such as dependency and activity rates; the distribution of human capital among workers; and policy factors, i.e. the real effective exchange rate and its square, the ratio of direct to indirect taxes, the minimum wage interacted with the share of formal sector workers, and public expenditure on social security/GDP (unfortunately there are no time-series on social assistance/GDP). Three dummies were also added in the regression, i.e. the ‘social democratic’ and ‘radical-populist’ dummies and Polity2 index which proxies the quality of democracy. The first two dummies are meant to capture the ‘residual effect’ of progressive policies and institutions other than those explicitly included in the model. A low bilateral correlation between the explanatory variables included in regression (Cornia 2012: Annex Table 2) excludes problems of multicollinearity.

2.4.2 Estimation Procedure and Regression Results

Given the panel nature of IDLA, the estimation must take into account that each country is observed over several periods. A model that satisfies such a requirement takes the form:

$$GINI_{it} = \alpha + \beta X_{it} + \eta_i + e_{it} \quad (1)$$

where $GINI_{it}$ is the Gini index of the distribution of household disposable income per capita and X a vector of 14 explanatory variables (see Annex Table 1 in Cornia 2012). The subscripts i and t refer to the countries and the years of the panel, η_i is a time-invariant country's fixed effect, e_{it} is the idiosyncratic error term, while α and β are parameters to be estimated. A suitable estimator for this model is the least square dummy variables (LSDV) which generates for every country an intercept that captures country-specific effects. The results of LSDV models 1–7 in Table 2.5 generally confirm the conjectures made in Section 2.3

Table 2.5. Regression results using three different estimators, 18 Latin American countries for 1990–2009 (dependent variable: Gini coefficient of the distribution of disposable income per capita)

Variables	Signs expected	LSDV	LSDV	LSDV	LSDV	LSDV	LSDV	LSDV	3SLS	GMM
		Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Terms of trade index	+/-	-0.0176***	-0.0162***	-0.0159***	-0.0176***	-0.0145**	-0.0169**	-0.0007	0.0004	-0.0104***
Remittances/GDP	+/-	-0.0591	-0.0518	-0.0678	-0.0738	-0.0692	-0.0712	-0.0448	-0.044	-0.0431
FDI stock/GDP	+	0.0736***	0.0714***	0.0709***	0.0741***	0.0921***	0.0948***	0.0960***	0.0949***	0.0353***
GDP/c growth rate	-		-0.0383	-0.0382	-0.0309	-0.0444	-0.0400	-0.0447	-0.1364*	-0.0402*
Dependency ratio (growth rate)	-			-0.3834	-0.3738	0.1147	0.0342	-0.3682	-0.2945	-0.2021
Labour force participation (growth rate)	+/-			0.0468	0.0617	-0.0311	0.0439	-0.0089	0.0304	0.0247
People with 3ary and 2ary education/people with primary or no education	-				-2.7241***	-2.4594***	-2.2260***	-1.8689***	-1.7658**	-0.9085*
Direct/indirect taxes	-					-0.6511***	-1.8442***	-2.0464***	-1.8337***	-0.5307*
Public expend. on social security/GDP)	-					-0.1663	-0.3553**	-0.3802***	-0.4009***	-0.1643*
Real eff. exchange rate	-						-0.0820**	-0.0844***	-0.0932***	-0.0233*
Real eff. exchange rate ^ 2	+						0.0003***	0.0003***	0.0004***	0.0001*
Minimum wage index *share of formal workers	-						-0.0300***	-0.0266***	-0.0201**	-0.0109**
Social democratic dummy	-							-0.7926**	-0.8570**	-0.3746*
Radical populist dummy	-							-3.2456***	-2.9162***	-1.6840***
Polity2 index	-							-0.4831***	-0.4545***	-0.1740***
Gini coefficient of disposable income (t-1)	+									0.6375***
Constant	+	53.1416***	53.2416***	53.0263***	50.3315***	44.2807***	54.8681***	58.8193***	59.3686***	23.0956***
Country dummies		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-
Observations		342	342	342	341	319	292	292	291	288
R-squared		0.784	0.784	0.785	0.790	0.803	0.835	0.866	0.865	

Notes: ***, **, and * indicate that a parameter is significantly different from zero at the 99, 95, and 90 per cent probability level respectively.

Source: Author's calculations.

about the average regional impact of the underlying causes of the inequality decline: (i) except for model 7, and contrary to what argued in Section 2.3, the gains in terms of trade contributed directly, if modestly, to the fall of inequality while migrant remittances were not significant in all specifications, and the FDI raised inequality strongly and significantly; (ii) GDP growth per capita has, as expected, a negative sign but is always non-significant; (iii) the effect of changes in dependency and activity rates is small and non-significant as both are heavily trended; and (iv) the reduction in educational inequality is significantly related to income inequality in all specifications. As for the policy impact, the regression analysis shows that (v) the linear and quadratic terms of the real effective exchange rate are both significant and with the correct sign; the ratio of direct/indirect tax revenue is strongly and negatively associated with income inequality; the ratio of social security/GDP reduces inequality significantly (even though the incidence of social insurance is much less progressive than that of social assistance); there is also a modest but statistically significant equalizing effect of minimum wages. Finally, (vi) the social democratic and radical-populist dummies are significant, with the latter having a substantially larger coefficient than the former, suggesting that the policy variables included in the regression do not capture—especially in the radical-populist regimes—all recent policy changes (including, for instance, changes in land distribution, wage bargaining, the specific effects of social assistance which were underestimated by the proxy social security/GDP, and increases in public health expenditure and housing), while the Polity2 index shows that the quality of democracy has a significant effect on inequality beyond the effect of policy changes.

Model 7 was also tested using two alternative estimators. Indeed, given that income inequality and the GDP/c growth rate can plausibly be considered interdependent, their relation can best be represented by a two-equation system in which each appears in turn as the dependent variable. Thus, model 7 was tested by means of the 3-Stage Least Squares (3SLS) where the first equation is the same as model 7, while in the second the GDP/c growth rate depends on the Gini coefficient, investment rate, terms of trade, tax/GDP ratio and share of workers with a secondary education. The results are presented in model 8, which shows results similar to those of model 7 except for the terms of trade, while the growth rate of GDP/c becomes significant. Finally, model 7 does not take into consideration the slow-moving nature of Gini (Table 2.1). Thus, it was tested by adding to the right-hand side the Gini coefficient lagged one year. In addition, model 7 has to be probed for the possibility that the growth rate of GDP/c, workers' education, and the 'social democratic' and 'radical-populist' dummies are endogenous.² To deal

² Reverse causation makes no sense from a theoretical perspective for the other independent variables in model 7 (Table 2.5). For instance, it is not plausible that changes in domestic inequality

with this problem, model 7 was also estimated with the dynamic panel data estimation one-step system GMM procedure (see Cornia 2012 for comments on the values of the Wald, AR (1), AR (2), and Sargan tests, which support the estimates of model 9). The results show that the lagged Gini variable explains 63 per cent of the changes in inequality during the period considered, while all the other parameters retain the same sign but are smaller and significant—as expected, at lower probability levels.

2.4.3 Dealing with the Heterogeneity of Economic Structures in the Region

The estimates in Table 2.5 represent ‘average regional effects’ that do not take into account the specificities of various country contexts. To deal with this problem, model 9 in Table 2.5 (reported for ease of comparison also in Table 2.6) was estimated by adding interactions between variables relevant in subgroups of countries where a specific phenomenon was particularly important. To start with, the terms of trade index and migrant remittances/GDP were interacted with the dummies ‘commodity exporters’ and ‘remittance receivers’. As shown by model 1 in Table 2.6 the terms of trade are significant and negative but its interaction term is positive and significant, suggesting that inequality rises in important commodity exporters in parallel with gains in the terms of trade. Likewise, model 2 confirms that remittances have an unequalizing effect on average, but an equalizing one when they exceed 10 per cent of GDP.

Next, in model 3 the FDI/GDP variable was interacted with the dummy ‘Andean group’, a subregion where foreign investment in the mining sector is particularly important. The interaction term confirms that, while FDI/GDP is unequalizing in all countries, the effect is even more unequalizing in this group. Fourth, as argued earlier, the quality of democracy is influenced also by its consolidation (the uninterrupted number of years during which democratic rule has existed in a country) and by the extent of popular participation to free elections. Thus, in model 4 the Polity2 index was replaced by a composite index combining Polity2 (with weight 0.5), the years of uninterrupted democratic rule (weight 0.25), and the turnout rate in political election (weight 0.25). This substitution yields a higher and statistically significant parameter. Finally, model 5 includes the average import tariff rate, whose parameter turns out to be non-significant. However, when the tariff rate is interacted in model 6 with the skill premium, it appears that trade

affect the terms of trade, FDI, migration, dependency rate, participation rate, the exchange rate, and minimum wages, as these variables are determined by world markets, long-term demographic trends, or policy choices.

Table 2.6. Alternative regression specifications to capture subregional effects on inequality in 18 Latin American countries for 1990–2009 (dependent variable: Gini coefficient of the distribution of household disposable income per capita)

	Reference model (GMM Model 9, Table 2.5)	GMM-1 Model 1	GMM-2 Model 2	GMM-3 Model 3	GMM-4 Model 4	GMM-5 Model 5	GMM-6 Model 6
Gini coefficient (t-1)	0.6375***	0.6243***	0.5676***	0.6257***	0.6352***	0.6380***	0.6083***
Terms of trade index	-0.0104***	-0.0302***	-0.0110***	-0.0125***	-0.0103***	-0.0105***	-0.0122**
Terms of trade index*Commodity exporters dummy		0.0257**					
Remittances/GDP	-0.0431	-0.0611	0.0643	-0.0311	-0.0415	-0.0371	-0.0346
Remittances/GDP*Remittances receivers dummy			-0.2978***				
FDI stock/GDP	0.0353***	0.0353***	0.0376***	0.0225*	0.0355***	0.0335***	0.0240**
FDI stock/GDP*Andean group dummy				0.0328*			
GDP/c growth rate	-0.0402*	-0.0444**	-0.0406*	-0.0394*	-0.0404*	-0.0402*	-0.0377
Dependency rate (growth rate)	-0.2021	-0.1096	-0.3815	-0.1434	-0.2055	-0.1732	-0.2135
Activity rates (growth rate)	0.0247	0.0421	0.1036	0.0338	0.0255	0.0736	0.1175
People with 3ary & 2ary education/people with primary or no education ^a	-0.9085*	-1.0856**	-0.9746**	-0.8933*	-0.8903*	-0.9577*	-0.7748
Direct/indirect taxes	-0.5307*	-0.5927*	-0.7026**	-0.3492	-0.5255	-0.4858	-0.3463
Public expend. on social security (%GDP)	-0.1643*	-0.1418	-0.1314	-0.1902**	-0.1636*	-0.1122	-0.182
Real eff. exchange rate	-0.0233*	-0.0346**	-0.0250*	-0.0257**	-0.0234*	-0.0225	-0.0341*
Real eff. exchange rate ^ 2	0.0001*	0.0001**	0.0001*	0.0001**	0.0001*	0.0001*	0.0001**
Minimum wage index*share of formal sector workers on the total	-0.0109**	-0.0115**	-0.0117**	-0.0107**	-0.0110**	-0.0112**	-0.0107

Social democratic dummy	-0.3746*	-0.3979*	-0.4582**	-0.3522*	-0.3656	-0.4607*	-0.4264*
Radical populist dummy	-1.6840***	-1.9414***	-1.7178***	-1.4827***	-1.6856***	-1.7083***	-0.6538
Polity2 index (quality of democracy)	-0.1740***	-0.1642***	-0.1736***	-0.1623***		-0.1828***	-0.2131***
Composite index of quality of democratic institutions, consolidation of democracy and electoral turnout					-0.3483***		
Import tariff rate (%)						0.0092	-0.1768*
Import tariff rate*skill premium							0.1053**
Constant	23.0956***	25.4785***	26.6505***	23.9626***	23.3249***	22.5951***	25.3196***
Observations	288	288	288	288	288	275	255
Number of countries	18	18	18	18	18	18	18

Notes: Commodity exporters include Bolivia, Chile, Colombia, Ecuador, Peru, and Venezuela; remittance recipients are El Salvador, Guatemala, and Nicaragua; the Andean group includes Bolivia, Colombia, Ecuador, Peru, and Venezuela.

^a Both variables are expressed in terms of their yearly variations. ^b ***, **, and * indicate that a parameter is significantly different from zero at the 99, 95, and 90 per cent probability level respectively.

Source: Author's elaborations.

liberalization is equalizing on average, but unequalizing where the skill premium soared, thus offering some support to the SBTC hypothesis.

These results must be taken with a pinch of salt as the regression coefficients might be biased by the lack of data, measurement errors, omitted variables (as suggested by the unexplained residuals), and reverse causation for variables other than those explicitly considered in the GMM estimates. Yet, the consistency of practically all parameters' signs with their predictions in Section 2.3 provides strong suggestions about the factors explaining the recent fall of inequality in the region.

2.4.4 *Linking the Regression Results to the Findings of the Country Case Studies and of the Policy Chapters*

The regression results presented in Tables 2.5 and 2.6 (which are by definition of aggregate nature) confirm in all cases but one the predictions of Section 2.3 above and of the policy chapters of Part 3 about the distributive effects of the five groups of *underlying determinants* of the recent inequality decline. They are also very much in line with the findings of the microeconomic decompositions about the *immediate causes* of the inequality changes carried out in the country case studies (Chapters 4 to 9) which, because of the nature of household data, are unable to capture explicitly the effects of policy changes and exogenous shocks.

As for the predictions of Section 2.3 above, we can—to start with—note that the regression results suggest that the recent gains in terms of trade have, *ceteris paribus*, been equalizing on average but unequalizing in the countries where the economy is dominated by a capital-intensive and highly concentrated extractive sector (such as Peru, Ecuador, Chile, and so on). This is a partial equilibrium effect that does not, however, exclude equalizing general equilibrium effects, for instance via the redistribution of mining rents via the budget (see Chapter 14) and via employment creation. In turn, the impact of migrant remittances is not significantly different from zero except in countries such as El Salvador, Guatemala, Honduras, and Nicaragua where such flows account for between 10 and 20 per cent of GDP and where remittances have been shown to be equalizing (see Chapter 8), most probably through changes in domestic labour supply and the reduction of migration costs due to the rise of migrant networks in destination countries which allows low-income people as well to migrate and to remit part of their income to their families. Also, the stock of FDI (which, unlike during the 1990s, changed modestly during the recent decade) appears to have been unequalizing on average and particularly so for the Andean nations, where large foreign investments are concentrated in the capital- and skills-intensive extractive sector, characterized *inter alia* by large profit

repatriations. Lack of comparable data did not permit the testing of the impact of portfolio flows.

Second, except in the LSDV econometric specifications, the *GDP/c growth rate* and its attendant employment creation, especially if in the unskilled labour-intensive sector (as shown in the case of agriculture in Honduras, see Chapter 9) appears to be, as expected, equalizing. Third, the *changes in dependency and activity rates* appear to be non-significant, confirming in this way the findings of the literature about their modest impact over the short-medium trend. Fourth, in all specifications, the large *increase in human capital formation* (proxied by the share of workers with at least a secondary-school qualification) which began in the 1990s and accelerated in the 2000s (see Chapter 15), as well as its more egalitarian distribution among income deciles, generated an important effect on the relative supply of unskilled and skilled workers and on the skill premium, and through that on the distribution of earnings, thus confirming the results of the micro-decompositions for the six case studies included in this volume, the results of which are summarized in Table 1.1.

Fifth, several *public policies* appear to have helped to reduce inequality or to have prevented its increase: the real effective exchange rate (the main macro policy tool used in regression) is equalizing, though during the 2000s the benefits of this policy (which shifts labour demand towards the unskilled labour-intensive sector) have been limited due to the pressure towards real appreciation experienced by several countries of the region over 2002–8 after the large real devaluation of the early 2000s, as argued in Chapter 10. In turn, trade policy (proxied by the average tariff rate) appears to be unequalizing whenever it is accompanied by an increase in the skill premium, as is suggested in Chapter 11, but not statistically significant otherwise. The increase in progressivity of tax policy is significant in almost all specifications, though its effect so far seems to have been modest, suggesting that there still is considerable room to reduce inequality by increasing the actual direct tax rate to its potential level, as suggested in Chapter 14. In turn, the minimum wage index interacted for the share of formal sector workers appears to be strongly and significantly equalizing, as indicated also by the analysis of 11 household surveys carried out in Chapter 12. Finally, public expenditure on social security/GDP (as noted, it was impossible to compile data on social assistance/GDP) is equalizing and significant in most specifications, thus confirming also in this case the results of the micro-decompositions summarized in Table 1.1 and the conclusions of Chapter 16 about Brazil.

Lastly, the radical dummy has a bigger parameter than the social democratic dummy, a finding that is, in appearance, at variance with those of Chapter 3 and Table 1.2. However, this result suggests that in radical regimes the ‘residual impact’ on inequality of policies other than those explicitly included in the

regression has been greater than in the social democratic regimes. Finally, in all specifications the quality of democracy (however measured, but including its duration in one of the specifications) seems to affect inequality favourably beyond the adoption of the policy instruments included in the regression.

2.5 Final Considerations

The chapter has argued that in recent years Latin American countries with different political orientations and economic structures often enjoyed sizeable drops in income inequality that were unparalleled in other regions. The drivers of the recent decline in inequality varied, but some common factors stand out. First, on average, the improvements in external conditions played a relevant but not a central role in reducing inequality, although these did help to relax the external constraint to growth. Second, endogenous changes in dependency and activity rates contributed minimally to the recent improvements in the distribution of income per capita. Third, the reversal of the skill premium appears to have played a key role in improving the distribution of income, although it is not entirely clear whether this shift was due solely to the rise in secondary enrolments or to other factors as well. Fourth, in much of the region the new fiscal and labour market policies appear to have reduced inequality. Finally, the shifts in exchange rate policy contributed only modestly, or not at all, to the recent decline in inequality due to the constant pressure towards a real appreciation.

The trend towards declining inequality will endure if the recent policy changes are intensified and structural reforms introduced—especially in the poorest countries—to deal with the deep-seated polarization that still affects the region. Yet, the Latin American governments may face formidable hurdles in pursuing this agenda, as shown by the opposition encountered in Bolivia, Honduras, and Ecuador, where interest groups nearly stalled attempts at redistribution. Finally, if unaddressed, the structural biases of the Latin American economy—the lack of an industrial policy, low savings, dependence on foreign capital, continued pressure towards real appreciation and commodity dependence—may well block future declines in inequality by retarding the shift to a long-term sustainable and equitable growth path.

Annex 1: Sources of the Inequality Data Used in this Volume

This annex documents the sources of the Gini coefficients of the distribution of household income per capita used in this volume. It also explains the

differences existing between the inequality data used in the case studies and those used in Parts 1 and 3.

The country case studies use Gini coefficients computed by the National Statistical Offices (NSO) or by the authors themselves (as in the case study of Uruguay) on microdata collected by the following household surveys: Ecuador's ENDEMU and similar prior surveys; Chile's CASEN and the Employment Survey of the University of Chile; Uruguay's ECH; Mexico's ENIGH; El Salvador's EHPM; Honduras's EPHPM I and EPHPM II.

In contrast, to improve cross-country data comparability, chapters in Parts 1 and 3 mainly rely on international datasets which provide inequality statistics produced according to a standard methodology. The most important of these datasets is SEDLAC <<http://sedlac.econo.unlp.edu.ar/eng/statistics.php>>, which processes microdata collected by national household surveys such as the six ones mentioned above. Other databases used in case of missing SEDLAC data (particularly for the 1980s and early 1990s) are CEPALSTAT, SWIIDv3_0, and WIID. For instance, the Gini coefficients in Table 2.1 are taken from SEDLAC, but data for the earlier years are taken from SWIIDv3_0. In turn, the Gini coefficients used for the regressions presented in Tables 2.5 and 2.6 are from SEDLAC although for the earlier years they come from CEPALSTAT, SWIIDv3_0, and WIID, while about 20 per cent of the datapoints are computed by interpolation so as to increase the degrees of freedom of the regression analysis (Martorano and Cornia 2011). Only Chapter 13 and Chapter 12 do not use CEDLAS data. The latter chapter directly computes Gini coefficients of the distribution of wages from national household surveys for Argentina, Bolivia, Brazil, Chile, Costa Rica, Ecuador, El Salvador, Mexico, Paraguay, Peru, and Uruguay.

To improve data comparability across countries and over time, SEDLAC estimates Gini coefficients on the basis of survey microdata by adopting for all countries and years the same set of statistical conventions used to define the variable 'household income per capita'. This harmonization process³ improves data comparability but implies a deviation from official national statistics, which follow conventions that may differ from those adopted by SEDLAC. The key statistical conventions for which there might be differences concern: the inclusion in the household of external members (such as renters, domestic servants and their families); the grouping of capital incomes; the corrections made for differences in recall periods when transforming all incomes into monthly data; the choice of current income (rather than permanent income) as an appropriate welfare indicator and the ensuing exclusion of non-current income items; the method for the imputation

³ See <<http://sedlac.econo.unlp.edu.ar/eng/methodology.php>>.

of the income stream from owner-occupied dwellings; the adjustments for non-responses through matching techniques or coefficients of a Mincer equation; the imputation of missing incomes or clearly unreliable incomes; the treatment of zero incomes; the grossing-up of income under-reporting; and the upward adjustments of rural incomes to capture differences in rural-urban prices. Thus, by definition, the Gini coefficients of SEDLAC and the NSO do not coincide since they refer to different definitions of the underlying income variable. In most cases the deviation due to these differences is negligible, but in others it can reach 1.5–3 Gini points. However, it is extremely rare that differences in inequality levels are accompanied by differences in inequality trends. What matters is that the inequality trends coincide, and they do.

The use of slightly different data between the country case studies and the sectoral chapters of the volume is justified by the fact that the NSO data are more detailed and therefore permit the development of richer and multifaceted analyses of case studies. For instance, in the case of Honduras, Ecuador, and El Salvador the national data on inequality provide Gini coefficients separately for the rural and urban areas and breakdowns of Gini by income source or for the main regions.

The inequality trends discussed in the volume reflect only in part the recent changes in capital incomes and in the incomes of top earners ('the working rich'). Given the financialization and globalization that have also affected the region, it is possible that the capital income share has risen and exerted an unequalizing pressure on the overall inequality of the true distribution of income. But this is not certain, as during the last decade there have been some offsetting changes, for instance in the field of taxation and in the skill premium. Given the present statistical information, this problem cannot be solved on the basis of the data used for this study, as the national household surveys systematically underestimate capital incomes and the income of top salary earners. These may be inferred on the basis of tax return files, but this information is available in the region only for Argentina until the early 2000s. Similar studies are under way in Brazil, Mexico, and Venezuela, but their results are not yet available. This serious problem (and its implications for inequality) is dealt with explicitly right at the beginning of this volume (in Section 1.2.1 in Chapter 1, and in the related footnote which cites the important work on 'top incomes' by Alvaredo, Atkinson, and Piketty).

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3

The Politics of Inequality and Redistribution in Latin America's Post-Adjustment Era

Kenneth M. Roberts

The declines in social and economic inequality registered in many Latin American countries since the late 1990s (see Table 2.1) coincided with a basic change in the region's political landscape—that is, a shift from the politics of market-based structural adjustment to a new, post-adjustment era in which the social problems of poverty and inequality have returned to a prominent place on the democratic agenda. For most of the 1980s and 1990s, these social problems were relegated to the margins of a political agenda that was dominated by issues of debt-fuelled austerity, stabilization, state retrenchment, and market liberalization. By the middle of the 1990s, however—when Brazil became the last country in the region to defeat hyperinflation—the central tasks of structural adjustment had been completed, and the logic of democratic competition increasingly politicized the 'social deficits' left behind by the process of market liberalization.

This politicization—or, more properly, repoliticization—of social problems took a number of different forms, but it was most prominently manifested in the outbreak of mass protest movements that toppled a succession of pro-market presidents in Ecuador, Argentina, and Bolivia (Silva 2009), along with an unprecedented series of electoral victories by left-of-centre presidential candidates. Between 1998 and 2011, leftist presidents were elected in 11 different Latin American countries, placing two-thirds of the regional population under the authority of national governments of the left (Weyland, Madrid, and Hunter 2010; Levitsky and Roberts 2011). Although these governments have varied in their degree of departure from orthodox liberal economic policies, all have introduced or expanded redistributive social policies.

The post-adjustment era is thus characterized by a broader range of policy debate and a more varied mix of political actors, at least some of whom challenge the pro-market conformity and technocratic political logic of the ‘Washington Consensus’ of the 1990s (Williamson 1990).

Although it is tempting to attribute declining inequalities to this revival of popular and leftist alternatives in the post-adjustment era, the causal relationship between these two trend lines remains a point of considerable scholarly debate. Declines in inequality, after all, have occurred under conservative as well as leftist governments in contemporary Latin America, and they are related to complex combinations of market forces and social policies (see López-Calva and Lustig 2010; Cornia 2012). But even if leftist parties and movements cannot claim exclusive credit for declining inequality, there is little doubt that they have been instrumental in raising the salience of redistributive issues and repoliticizing Latin America’s entrenched inequalities.

This chapter thus explores the demise and revival of redistributive politics in recent decades in Latin America. It seeks to explain how the politics of inequality that characterized the era of import substitution industrialization (ISI) broke down, and how the ‘dual transitions’ to political democracy and market liberalism in the 1980s and 1990s reconfigured the new politics of inequality at the turn of the century. Societal pressures in the post-adjustment period have induced states to augment their social welfare roles, bringing new actors into the political arena and encouraging experimentation with new social and economic development models that diverge in significant ways from both ISI and the neoliberal orthodoxy of the recent past.

3.1 Populism and Redistributive Politics in the ISI Era

The politics of structural adjustment in the 1980s and 1990s involved the dismantling or scaling back of many state policies that were designed to redistribute income or provide economic protection to low-income groups. These policies—most of them embedded in the broader statist development logic of ISI—were deemed too costly, inefficient, or market-distorting to be sustained in a period of debt-induced austerity and market restructuring for enhanced international competitiveness. Cutting or dismantling these programmes, however, inevitably created conflict with the social and political coalitions that benefited from them—coalitions that dated back, in some cases, to the rise of populism in the 1930s and 1940s.

Populism marked the onset of mass politics following a century of post-independence oligarchic rule, and it remains the quintessential expression of redistributive politics in the region. Populist leaders mobilized

working- and lower-class support by grafting social and economic demands onto political claims for democratic rights, including the right to vote, form labour unions, and engage in collective bargaining (Collier and Collier 1991). Although populist movements varied in the extent to which they mobilized peasants around claims for land reform, they built labour unions and new mass-based party organizations, and they established corporatist channels of interest representation that allowed organized labour to press claims on the state. These claims included a broad range of redistributive policies and social protections, ranging from higher wages and employment security to pensions, eight-hour work days, unemployment and disability compensation, and the right to strike.

The rise of populism thus provided an impetus for the development of welfare states in Latin America, as did the consolidation of more competitive and inclusive democratic regimes in a number of countries (Haggard and Kaufman 2008). These welfare states were predominantly contributory (rather than universalistic or social democratic) in their form; that is, they concentrated their benefits on formal sector workers who contributed (usually along with their employers) to health, pension, and other funds from which benefits were paid (Huber and Stephens 2012). Other benefits—such as minimum wage laws and restrictions on firing employees—were likewise enjoyed primarily by workers in the formal (predominantly urban) sector of the economy. Much of the peasantry and rural workforce, along with the urban informal sector and women outside the labour market, were thus left on the margins of social welfare systems. As such, redistribution during the ISI era was modest, reflecting the uneven spread of democracy, the segmented character of labour markets, the imbalance between the political influence of organized and unorganized sectors of labour, low levels of taxation, and political reticence to challenge landowners' control of the rural labour force (Haggard and Kaufman 2008).

Major social programmes—pension systems, in particular—bestowed benefits on blue- and white-collar workers in the formal sector, but they did little to redistribute income to the most needy segments of the population. Pension coverage varied significantly across the region: over 60 per cent of the economically active population (EAP) were legally entitled to social security in 1980 in Argentina, Brazil, Chile, Costa Rica, and Uruguay, but this figure dropped to roughly half the EAP in Mexico, Panama, and Venezuela, and averaged only slightly more than 20 per cent of EAP elsewhere in the region. Even in countries with reasonably broad-based pension coverage, benefits accrued primarily to those who were relatively well off; in Brazil and Uruguay, for example, the wealthiest 40 per cent of the population received 70 and 77 per cent, respectively, of total pension payments, while the bottom 40 per

cent received a mere 15 and 10 per cent, respectively (Huber and Stephens 2012, Chapter 3). Government spending on health and education also disproportionately benefited those at the top of the income pyramid, although less dramatically so than social security programmes. Consequently, redistributive policies in the ISI era did little to alter Latin America's position as the world's most unequal region.

3.2 Structural Adjustment and the Politics of Inequality

Redistributive policies in the populist-ISI era may have been limited in their reach, but this did not prevent them from being targeted for cuts when ISI collapsed in the debt crisis of the 1980s and market reforms spread across the region. Facing rampant inflationary pressures, governments adopted austerity programmes that mandated cuts in state spending and public services. Beyond such stabilization measures, structural adjustment policies to enhance market efficiency included lifting price controls and subsidies, slashing tariffs, deregulating labour markets, and privatizing public enterprises, utilities, and social security.

The implications of these market reforms for the politics of inequality were profound, as liberalization transformed Latin America's class structure, the organization of societal (especially labour) interests, and the content of social policies. First, the combination of economic crisis and market restructuring altered the regional class structure by shifting employment from formal to informal sectors of the economy, which incorporated 57.7 per cent of the workforce by the late 1990s (ILO 1998: 40). Eighty-five per cent of new job growth in the 1990s was concentrated in the informal sector, where employment was typically precarious and low-paid, given the prevalence of non-contract labour or short-term contracts (ILO 1997: 1; see also Chapter 12). Consequently, market liberalization exacerbated historic patterns of labour market segmentation that impeded effective redistributive policies, and it produced a highly unstable and fluid workforce.

Second, these changes in the class structure created impediments to collective action on the part of workers, compounding the political challenges encountered by unions that, in many cases, had already been weakened by military repression in the 1970s. Informal sector workers are notoriously difficult to organize, given their unstable workplace relations and their ambiguous class positions. Unions, moreover, were put on the defensive by inflationary crises and structural adjustment policies that called for wage restraint, the flexibilization of labour markets, and restrictions on collective bargaining (Cook 2007). The net result, as seen in Table 3.1, was a sharp decline in levels of trade-union density across the region, especially in the countries that had

Table 3.1. Changes in trade union density in Latin America (trade union members as a percentage of the total labour force, rank-ordered by peak level)

Country	Peak ISI-era trade union density	Trade union density in 2005	Change in trade union density
Argentina	50.1	21.0	-29.1
Nicaragua	37.3	15.0	-22.3
Chile	35.0	10.0	-25.0
Mexico	32.1	15.0	-17.1
Venezuela	26.4	11.0	-15.4
Peru	25.0	5.0	-21.0
Bolivia	24.8	7.5	-17.3
Brazil	24.3	16.0	-8.3
Uruguay	20.9	15.0	-5.9
Dominican Republic	17.0	8.0	-9.0
Panama	17.0	10.0	-7.0
Costa Rica	15.4	12.0	-3.4
Ecuador	13.5	5.0	-8.5
Paraguay	9.9	10.0	+0.1
Colombia	9.2	4.0	-5.2
Honduras	8.5	7.3	-1.2
Average	22.9	10.7	-12.2

Sources: Based on Roberts (2002: 15), and Country Reports on Human Rights Practices (various).

developed powerful labour unions during the ISI era. Regionwide, the average ‘peak’ level of unionization reached 22.9 per cent of the total labour force prior to the onset of structural adjustment; in the post-adjustment era, union density plunged to less than half that amount, averaging a mere 10.7 per cent of the workforce in 2005.

In much of the region, social fragmentation and political demobilization occurred in the countryside as well, at least during the initial stages of market liberalization. The decline of peasant movements based on traditional land claims—Brazil’s Landless Workers Movement (MST) being a major exception—had roots in the commodification of agrarian labour and social relations, the parcelization of collective landholdings, and the effective removal of land redistribution from the political agenda (Kurtz 2004). In both urban and rural areas, then, market reforms altered productive and social relations in ways that undermined the structural foundations for class-based collective action—and, in the process, transformed the nature of redistributive politics in Latin America.

Third, this weakening of class-based collective actors helped to shield neoliberal technocrats from societal pressures, facilitating experimentation with new types of social policies that were more compatible with free-market principles. Although states varied in the depth and breadth of neoliberal

reforms on the social policy front, the general thrust of these policies was to move towards what Esping-Anderson (1990) calls liberal or 'residual' welfare states—that is, welfare systems that rely heavily on the private sector and the marketplace to fulfil social needs, with state protection provided on a temporary and minimal basis for the poorest individuals who are unable to meet their needs in the marketplace.

The shift in social policies was perhaps best seen in widespread efforts to privatize public pension plans. Following Chile's landmark reforms to privatize social security in the early 1980s, ten additional countries fully or partially privatized their pension systems in the 1990s, hoping to reduce the fiscal burdens of public pensions, streamline benefits, increase domestic savings, and allow for the individualized capitalization of employee contributions (Madrid 2003; Weyland 2006). Although less dramatic, healthcare reforms likewise sought to shift responsibilities from the state to private insurers, providers, and contractors, while decentralizing control over health policies from national to local governments.

Reforms to deregulate markets also had major social policy implications. Albeit with mixed success, most governments sought to reduce labour market rigidities and create more flexible labour markets (Cook 2007), generally by easing restrictions on the dismissal and temporary contracting of workers, and often by limiting collective bargaining as well. In consumer markets, deregulation entailed the lifting of price controls and subsidies that buttressed mass consumption of basic goods and services, but also distorted markets and expended scarce resources on middle- and upper-class groups who did not need public assistance. Hence, market reformers preferred less costly and distortional forms of public assistance that were specially targeted on low-income groups. Initially, this took the form of small poverty-relief grants for community development or infrastructure projects, pioneered through programmes such as *PRONASOL* in Mexico and *FONCODES* in Peru. Over time, these were joined by conditional cash transfers—direct monthly payments to low-income families that were conditioned on their willingness to keep children in school and receive regular medical check-ups (these issues are discussed in detail in Chapter 16).

These efforts to achieve greater economic growth and efficiency, however, did not suffice to alleviate Latin America's chronic problems with underemployment, poverty, and inequality. Over the course of the 1980s, the number of people in the region living below the poverty line increased by nearly 65 million, from 135.9 million people in 1980 to 200.2 million in 1990. Much of this increase was not attributable to population growth, as the percentage of the population living below the poverty line rose from 35 to 41 per cent during this period, before gradually dropping back to 36 per cent in 1997 (Echeverria 2000). Similarly, the regionwide average Gini index of inequality

rose from 48.9 to 53.7 in the 1980s and 1990s (see Table 2.1 in Chapter 2). Patterns of income concentration were so powerful during the ‘lost decade’ of the 1980s that the bottom nine income deciles—that is, the bottom 90 per cent of the population—all lost relative income shares, while the top decile increased its share by 10.6 per cent (Londoño and Székely 2000: 1005–6).

These regressive distributive outcomes reflected several different trends in the region, including labour informalization, wage compression, and skill-biased patterns of technological change that awarded premiums to more highly educated workers in a context of market liberalization (see López-Calva and Lustig 2010). Real industrial wages declined in the region by an average of 12.3 per cent in the 1980s, and even a modest recovery in the 1990s left them below the level of 1980. For those near the bottom of the income scale, the deterioration was even worse: the average real minimum wage declined by 31.6 per cent in the 1980s, and remained 30 per cent below the 1980 level in 1997 (ILO 1998: 43). To compound matters, many workers, especially in the informal sector, did not even make the legal minimum wage; indeed, over one-third of micro-enterprise workers received less than the legal minimum wage (ILO 1997: 15). To fully understand the precarious nature of employment, it should be noted that informalization was not simply a curse on the poor; an OECD study in four Latin American countries found that more than half of middle-sector workers also laboured in the informal economy (OECD 2010: 19), and most of them were excluded from social protection programmes. Similar conclusions about the spread of informal sector employment are arrived at in Chapter 12.

Indeed, labour market informalization combined with contributory social programmes to create a ‘two-tiered’ system of social protection that was driven by a ‘vicious cycle’. As the OECD (2010: 19) stated, ‘the majority of informal workers contribute irregularly, if at all, weakening those systems and providing insufficient support to those workers when they need it’. Consequently, social security systems did not provide old-age coverage for 81 per cent of micro-enterprise workers in Peru, 75 per cent in Colombia, 70 per cent in Brazil, and 64 per cent in Chile. The comparable figures for healthcare plans were 83 per cent in Colombia, 78 per cent in Peru, 70 per cent in Brazil, and 37 per cent in Chile (ILO 1997: 15).

Not surprisingly, with incomes and social benefits so closely tied to precarious employment opportunities, unemployment consistently ranked first on the regionwide list of national concerns from 1995 to 2008 (Latinobarómetro 2010: 7). In the early years of the 2000s, Latinobarómetro consistently found that around 60 per cent of survey respondents reported having an adult member of their household who had been out of work in the previous 12 months. Clearly, low wages and the lack of secure employment were central elements of the ‘social deficit’ left by Latin America’s new economic model.

3.3 Repoliticizing Inequality: Latin America's 'Polanyian Backlash'

In the classic work of Karl Polanyi (1944), the spread of markets and the resulting commodification of social relations are expected to trigger a counter-movement for social protection against market insecurities. Such reactions are far from automatic, however, and they vary widely in their timing, form, and political content. Although game-theoretic accounts assume that democratic competition in contexts of high inequality will produce popular majorities in favour of redistributive policies (Meltzer and Richard 1981; Acemoglu and Robinson 2006), any number of factors can prevent such majorities from forming (Blofield and Luna 2011).

Indeed, the social and political actors who had historically politicized inequalities in Latin America were not well-positioned to do so during the period of economic adjustment. The mobilizational capacity of labour unions was in decline, and unions' political ties to states and parties had clearly eroded. Likewise, the political left was put on the defensive by the crisis of both state capitalist and socialist development models in the 1980s. And in one of the central paradoxes of the market reform process, many of the historic labour-based populist parties of the ISI era actually took the lead in dismantling ISI and imposing structural adjustment policies after the debt crisis. The *Partido Revolucionario Institucional* (PRI) in Mexico, the Peronists in Argentina, *Movimiento Nacionalista Revolucionario* (MNR) in Bolivia, and *Acción Democrática* (AD) in Venezuela had deep historical commitments to organized labour and redistributive politics, but in contexts of inflationary pressures and tightening global market constraints, all imposed far-reaching market reforms that clashed with their traditional platforms and alienated core constituencies. Other centre-left parties with weaker labour bases, such as *Partido de Liberación Nacional* (PLN) in Costa Rica and *Izquierda Democrática* (ID) in Ecuador, also introduced 'neoliberalism by surprise' (Stokes 2001) through 'bait-and-switch' tactics that turned their traditional platforms on their heads.

In short, following the hyperinflationary debacles spawned by the debt crisis and failed heterodox stabilization measures, even the historic architects of state-led development were embracing market liberalization by the end of the 1980s. Austerity and market efficiency—not social equity—dominated the political agenda. But if the 'Washington Consensus' for market liberalization was hegemonic among technocrats and policy makers, its reception was more nuanced within society at large. Indeed, election returns and public opinion surveys both demonstrated considerable ambivalence towards the free-market development model. Although prominent market reformers like Menem in Argentina, Fujimori in Peru, and Cardoso in Brazil achieved

re-election after stabilizing economies wrecked by hyperinflation, the prevalence of 'bait-and-switch' patterns of reform demonstrated that many political leaders did not believe they could win elections by running on a platform calling for structural adjustment policies—that is, by truthfully divulging what they planned to do in public office.

As Baker (2010) shows, this political ambivalence was manifested in public opinion surveys as well. Latin American citizens did not necessarily consider the new economic model to be an undifferentiated whole; instead, they disaggregated the package of free-market reforms into its separate components, some of which were more popular than others. Free trade, for example, was generally supported for giving consumers access to a broader range of lower priced imported goods. Regionwide, an average of over 70 per cent of Latin Americans expressed support for free trade and the Free Trade Agreement of the Americas in the late 1990s (Baker 2003: 425). Privatization policies, on the other hand, were considerably less popular, largely because they generated fears of higher prices for basic utilities like water, electricity, and telecommunications (even if they enhanced the quality or access to such services). Indeed, the percentage of survey respondents who said privatizations had benefited the country declined after the late 1990s, reaching a low of 21 per cent in 2003 before partially recovering as economic conditions improved (see Figure 3.1).¹ Even though most citizens believed private enterprise was necessary for development, 71 per cent expressed dissatisfaction with the privatization of basic utilities (Latinobarómetro 2003: 57).

Figure 3.1 also shows that the percentage of survey respondents who believe a market economy is best for their country dropped from two-thirds to a little over half between 1998 and 2007.² This is hardly a ringing endorsement, given the absence of any identifiable alternatives to a market economy in the post-Cold War era. Discontent was more evident in the fact that satisfaction with the *performance* of the market economy reached as low as 16 per cent in 2003, before tracking upwards as a new commodity boom began in the middle of the decade (Latinobarómetro 2005: 63).

Clearly, the economic downturn that followed the Asian financial crisis helped pave the way for the series of leftist electoral victories that began in 1998, as leftist alternatives could take advantage of performance-based, retrospective anti-incumbent vote shifts. As Arnold and Samuels (2011: 33–5) demonstrate, there was no ideological realignment to the left in most of Latin America after 1998, at least in terms of individuals' ideological

¹ Figure 3.1 shows the combined average of survey respondents who either agree or strongly agree with the statement 'Privatizations of state enterprises have been beneficial for the country'.

² The graph shows the combined average of survey respondents who either agree or strongly agree with the statement 'A market economy is best for the country'.

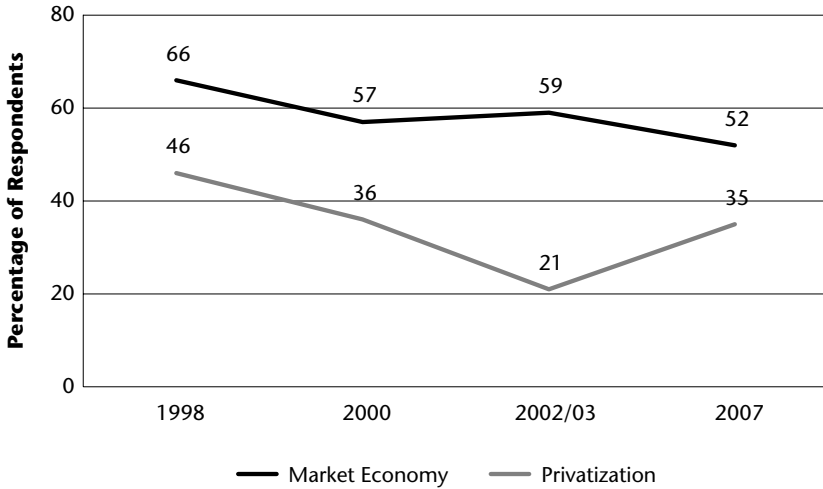


Figure 3.1. Support for privatizations and a market economy, 1998–2007 (regional average)

Source: Latinobarómetro (2007: 25–6).

self-placements, which remained slightly to the right of centre in the aggregate. Latin America did not turn left politically because more people came to identify themselves as leftist; it turned left because many citizens who did not *identify* themselves as leftist nevertheless began to *vote* for leftist candidates and parties. And while this may have been attributable in part to retrospective economic voting rather than ideological identities, survey data suggest that ideological self-placements significantly understate the prevalence of left-leaning attitudes and policy preferences in the electorate. These attitudes and policy preferences make the potential electoral base for leftist candidates and parties substantially larger than the core base of ideologically committed leftist identifiers.

For example, a large majority of Latin American citizens—ranging from 75 to 85 per cent of survey respondents—say that the existing distribution of income in their country is unjust, with half of respondents saying it is ‘very unjust’ (see Figure 3.2).³ This suggests, as Meltzer and Richards’ model would expect, that popular majorities could potentially be mobilized in support of redistributive policies.

Furthermore, public opinion surveys suggest that most citizens look to the state—more than the market—to provide social welfare and promote economic development. Indeed, surveys reveal stark differences between citizens in the USA and Latin America on basic questions related to the role of the

³ The question asked, ‘Do you believe the distribution of income in your country is just?’

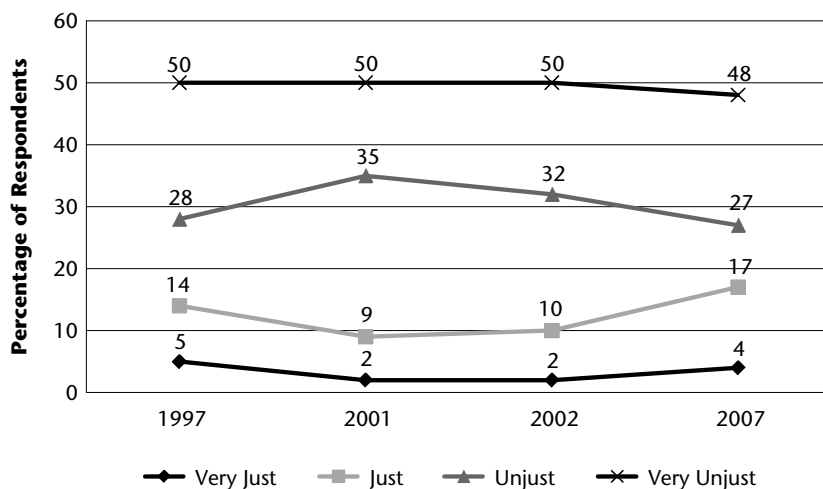


Figure 3.2. Public opinion towards income distribution, 1997–2007, Latin America (regional average)

Source: Latinobarómetro (2007: 36).

state in the economy. The Latin American Public Opinion Project (2008) at Vanderbilt University asked citizens throughout the Americas whether they thought the government or the private sector should own the most important enterprises and bear primary responsibility for creating jobs, providing healthcare services, and ensuring social wellbeing. In every area, sizeable majorities in Latin America—in contrast to the United States—assigned primary responsibility to the state, clearly demonstrating that decades of experimentation with free-market reforms did not transform Latin Americans into committed neoliberals (see Roberts 2012a for greater detail).

Public opinion surveys also indicate that policy preferences became more statist after the mid-1990s as the electorate swung to the left, even if voters were not more inclined to identify themselves as leftist. As seen in Figure 3.3, between 1995 and 2008 large and growing majorities supported state control over pensions, oil and gas industries, and public utilities like telephones and electricity, while support for private ownership declined.⁴ By 2008, 70 per cent or more of survey respondents supported state control in these and other key areas of social and economic activities, with preferences for state control being especially pronounced in major social welfare spheres like primary and

⁴ The questions asked respondents to identify which economic activities ‘should be primarily in the hands of the state, and which should be primarily in the hands of the private sector’.

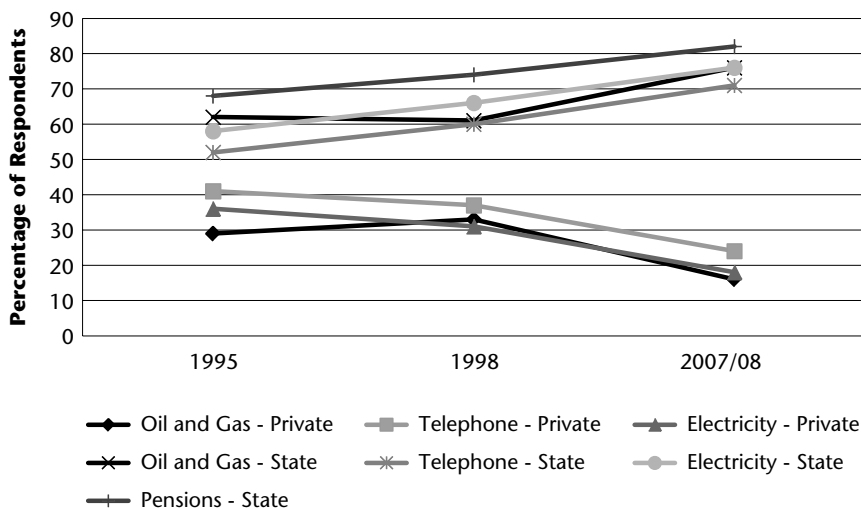


Figure 3.3. Support for state and private control of economic activities, 1995–2008 (regional average)

Source: Latinobarómetro (2007: 32–3 and 2008: 38).

university education, healthcare, and pension systems. Given this reservoir of support for vigorous state roles in economic and social welfare activities, it is hardly surprising that the Washington Consensus was placed on the political defensive in the post-adjustment era as the scourge of hyperinflation was extinguished.

The economic downturn at the end of the century was paralleled by two major political shifts that stamped the character of Latin America’s ‘Polanyian backlash’ in the post-adjustment era. The first was the revival of social mobilization and protest in a number of countries, often with new collective actors—unemployed workers, indigenous groups, territorially based community organizations, etc.—displacing trade unions at the forefront (Yashar 2005; Silva 2009). Although austerity plans and structural adjustment policies had often been met by localized food riots and social protests, more powerful and widespread forms of social protest erupted in several countries in the post-adjustment era.

Whatever their timing, the most explosive patterns of social protest emerged in countries that had experienced bait-and-switch patterns of market reform and were thus left with no major institutionalized party of the left to channel discontent with the process of liberalization—namely, Venezuela (the urban mass riots known as the *caracazo* that erupted after the adoption of market reforms in 1989), Ecuador (the indigenous movement and other popular mobilizations that contributed to the overthrow of three consecutive

elected presidents between 1997 and 2005), Argentina (the *piquetero* movement of unemployed workers that triggered broader mass protests and forced the resignation of the government in 2001), and Bolivia (a convergence of indigenous, community, and class-based social protests against water privatization and gas exports that culminated in the overthrow of two presidents in 2003 and 2005).

Mass social protest may have been a visible manifestation of Polanyi's double movement, especially when it brought down governments, but it was not the most prevalent one. In most of the region, demands for social inclusion were channelled into electoral politics, producing the second major political shift of the post-adjustment era: the strengthening of leftist political alternatives, including the unprecedented election of 15 different left-leaning presidents in 11 countries between 1998 and 2011 (see Levitsky and Roberts 2011). But if the 'left turn' was rooted in similar demands for social inclusion, it took a number of distinct political forms, some more institutionalized than others. One pattern existed in several aforementioned cases of bait-and-switch market liberalization—Venezuela, Ecuador, and Bolivia—where mass protests culminated in party system breakdowns. In these countries, societal resistance to market liberalization outflanked party systems on the left; that is, it was channelled outside of and in opposition to established party organizations, leading to the rise of new populist or leftist movements that captured state power and quickly set out to rewrite national constitutions and refound democratic regimes. As discussed below, the post-adjustment 'left turn' in these countries was associated with significant departures from market orthodoxy in both macroeconomic and social policies, in part because of the political weakness of centrist and conservative opposition parties (Weyland, Madrid, and Hunter 2010).

As shown by the country case studies in Part 2 of this volume, a very different type of 'left turn' occurred in countries where a conservative military regime (Chile) or political parties (Uruguay, Brazil, and El Salvador) led the process of market reform and a major party of the left remained in opposition. These countries avoided the eruption of mass protest movements in the immediate post-adjustment period, in part because claims for social inclusion could be channelled into institutionalized parties of the left. Consequently, established leftist parties—the Socialists in Chile, the *Partido dos Trabalhadores* (PT) in Brazil, the *Frente Amplio* in Uruguay, and the *Frente Farabundo Martí para Liberación Nacional* (FMLN) in El Salvador—gradually strengthened and eventually took power in all four countries. They governed, however, in contexts of increasingly consolidated democratic regimes with established centrist or conservative opposition parties that placed significant institutional checks on the left's reformist agenda (Flores-Macías 2012). The implications of these different types of 'left turn' for redistributive policies are analysed below.

3.4 Redistributive Policies and Declining Inequalities in the Post-Adjustment Era

As Cornia shows in Chapter 2 of this volume (see his Table 2.5), Gini coefficients of income inequality declined in most Latin American countries over the first decade of the twenty-first century, a period marked by recovery from the post-1998 regional recession, the beginning of a prolonged commodity export boom, and experimentation with macroeconomic and social policies that diverged in significant ways from those of the Washington Consensus. Although inequality declined under governments of diverse ideological orientations, the steepest and most consistent reductions were recorded under left-of-centre governments—in particular, Argentina, Venezuela, Brazil, and Ecuador. Centrist and conservative governments had a more mixed record; inequality worsened in a number of cases, but improved (usually modestly) in others (see Table 2.1). Consequently, while there was no strict correspondence between ideology and declining inequality, the relative gains achieved under leftist governments suggest that public policy differences are an important part of the story; market forces alone are unlikely to account for such variation.

Indeed, a diverse array of redistributive policies has been adopted by governments of varying ideological persuasions (see Table 3.2). Some initiatives have introduced or expanded targeted poverty relief programmes, others have sought to move towards basic universalism in healthcare and pension coverage, while still others have been designed to strengthen the wage position and employment opportunities of workers in the market economy. The institutionalization of democratic competition has thus induced governments to respond to demands for social inclusion in the post-adjustment era, especially as financial constraints were relaxed during the commodity boom.

Even in countries where leftist parties did not capture executive office, such as Mexico, they often strengthened their position as political contenders, creating pressure on conservative governments to address the social deficits of the market model. In Mexico, for example (see Chapter 7), a decline in inequality has been associated with changes in the composition and skill upgrading of the workforce, but it is also attributable to concrete policy changes—under conservative administrations of both the *Partido Revolucionario Institucional* (PRI) and *Partido Acción Nacional* (PAN)—that were designed to reallocate resources, build human capital, and enhance market opportunities for low-income sectors. Government spending on public education was redirected from the secondary and tertiary levels to the primary level, enhancing the skill set of low-income workers, while spending on health and nutrition programmes also became more progressive. The government also launched a conditional cash transfer programme in 1997 that provides direct income

Table 3.2. Political and economic trends in Latin America (selected countries), 1980–2010

Country	Political trends	Economic trends
Argentina	Alternation in office between centrist Radical and Peronist parties 1980s and 1990s; turn left under Kirchner faction of Peronism after 2003, following mass protests of 2001	Hyperinflation led to deep market reforms under Peronists after 1989; financial crisis 2001; heterodox statist and redistributive policies under Kirchner
Bolivia	Alternation in office between centrist and conservative parties 1980s and 1990s; mass protest movements after 2000; turn left under Evo Morales after 2005	Hyperinflation led to deep market reforms in 1985; follow more heterodox statist and redistributive policies after 2005
Brazil	Conservative leadership 1985–94; centrist leadership of Cardoso 1994–2002; turn left under Lula and PT after 2002	Begin market reforms late 1980s; achieve stabilization under Cardoso mid-1990s; moderate redistributive policies under Lula after 2002
Chile	Military dictatorship until 1990; centre-left governing coalition 1990–2010, with Socialist leadership after 2000; conservative government after 2010	Deep market reforms under military dictatorship starting mid-1970s; continue market model with modest redistributive policies under centre-left democratic government
Colombia	Alternation in office between traditional conservative and liberal parties until 2002; new conservative party in office since 2002	Moderate market reforms in early 1990s; policy continuity since then
Ecuador	Alternation in office between unstable conservative, centrist and populist parties up to 2006; mass protests drive three presidents from office between 1997 and 2005; turn left under populist figure Rafael Correa in 2006	Market reforms led by a succession of leaders starting in mid-1980s; severe banking crisis in 2000; adopt more heterodox statist and redistributive policies after 2006
Mexico	Political dominance by centrist PRI until 2000; conservative governments from 2000 to 2012	Gradual market reforms under the PRI following 1982 debt crisis; policy continuity under conservative governments
Uruguay	Conservative governments until 2004; turn left under Broad Front after 2004	Gradual market reforms in late 1980s and early 1990s; moderate redistributive policies under leftist government after 2004
Venezuela	Alternation in office between traditional centrist and conservative parties until 1993; election of left-populist leader Hugo Chávez in 1998	Deep market reforms in 1989 and mid-1990s; sharp turn towards heterodox statist and redistributive policies under Chávez

Source: Compiled by the author.

supplements for needy families, along with education, health, and nutrition benefits (Esquivel, Lustig, and Scott 2010).

Conservative administrations also reformed Colombia’s healthcare system in the 1990s by combining partial privatization with publicly subsidized health insurance for the poor. This effort ‘to strike a balance between economic efficiency and social equity’ (Weyland 2006: 184) became

influential elsewhere in the region, as it offered an alternative to Chile's more market-driven healthcare model inherited from the Pinochet regime.

The targeted social programmes favoured by conservative governments (and international lenders) were highly compatible with macro-level economic orthodoxy, but these governments were reluctant to address inequalities by allowing wages to rise. New left-of-centre governments, however, were more likely to combine targeted poverty relief with a broader range of macro-level policy reforms that departed from neoliberal orthodoxy, including income, taxation, and transfer policies. Minimum wages were raised sharply by most of the new leftist governments, while taxation increased and became more progressive (see Chapters 2 and 12). Many of these governments expanded targeted social assistance, and some supported employment through public works or industrial policies, encouraged collective bargaining, adopted counter-cyclical fiscal and monetary policies, or moved towards more universalistic coverage in pension and healthcare programmes. Although its specific content varied across cases, the broad outlines of a new policy model were gradually revealed.

These types of policies played a significant role in the reduction of inequalities in Brazil, historically among Latin America's most stratified societies. The centrist government of Fernando Henrique Cardoso expanded access to public education, while his successor, Lula of the leftist Workers' Party (PT), sharply increased taxation and minimum wages (which, given indexing, also led to increases in social security and other transfer payments) (see Barros et al. 2010). Conditional cash transfers to poor families began at the state level, but they were transformed into national-level programmes under Cardoso, then consolidated into the *Bolsa Família* and significantly expanded after Lula captured the presidency in 2002. By 2006, approximately one-quarter of the Brazilian population was receiving monthly grants, helping Lula win a landslide re-election by dramatically increasing his share of the vote in poverty-stricken northern states where the PT was traditionally weak (Hunter and Power 2007). Although *Bolsa Família* made a significant contribution to the reduction of both poverty and inequality in Brazil, its net costs were relatively modest. The programme accounted for less than 0.4 per cent of GDP and a mere 3 per cent of public transfers—a fraction of the cost of Brazil's regressive social security system, which cost over 10 per cent of GDP and accounted for 95 per cent of public transfers (Lindert et al. 2007; Barros et al. 2010: 147). Consequently, while Lula and the PT abandoned their earlier commitments to socialist reform—in part to avoid disrupting a booming agribusiness sector and provoking business opposition—they demonstrated the possibility of redressing inequalities through macroeconomic and social policies that strengthened the safety net around a market economy.

The policy implications of Brazil's left turn, then, were similar to those in Chile and Uruguay (see Chapters 5 and 6) where institutionalized parties of the left also came into power in the post-adjustment era after conservative-led patterns of market reform. In both countries, leftist governments combined fiscal and monetary discipline with social policies that were designed to redistribute income and expand social citizenship rights. In Chile, the Socialist-led government of Ricardo Lagos (2000–6) implemented an ambitious public healthcare programme that provided universal coverage for a broad range of medical problems. Lagos also launched a conditional cash transfer programme aimed at the 225,000 poorest Chileans, as well as job training and unemployment insurance programmes. His successor, Michelle Bachelet (2006–10), expanded the public health programme to cover additional medical conditions, and promoted kindergarten, pre-school, and daycare programmes in low-income communities. Both socialist presidents continued the policy of their centre-left coalition government to raise the minimum wage on an annual basis.

More dramatically, Bachelet began a partial reversal of Chile's highly touted but deeply segmented privatized pension system. With its emphasis on individual capitalization, Chile's pension system failed to provide adequate coverage for many low-income, informal, and female workers, especially those who had been out of the workforce for extended periods of time due to unemployment or family responsibilities. Forty per cent of workers failed to contribute regularly to the private pension funds, and given unequal individual contributions, benefit levels varied widely (Pribble and Huber 2011: 121). Bachelet thus created a basic universal pension that was available to all Chileans in the bottom 60 per cent of the income scale. Well-entrenched conservative opposition in the congress, however, prevented Lagos and Bachelet from making much headway in raising Chile's very low levels of taxation, reforming a Pinochet-era labour code that limited unionization and collective bargaining rights, or reducing egregious inequalities in the funding and quality of private and public schools. The latter set of inequalities sparked a vibrant student movement that emerged under Bachelet and then spear-headed mass protests against the administration of her conservative successor, Sebastian Piñera.

Similarly, the leftist government of the *Frente Amplio* (Broad Front, or FA) in Uruguay led by Tabaré Vázquez (2004–9) and the left-leaning Peronist governments of Nestor Kirchner and Cristina Fernández de Kirchner in Argentina (2003–present) combined targeted poverty-relief programmes with other social policies grounded in more universalistic principles. Both governments increased minimum wages and family allowances, expanded public health and pension programmes, and encouraged forms of collective bargaining that helped to re-invigorate labour movements (Pribble and

Huber 2011; Etchemendy and Garay 2011). Argentina also adopted ambitious public works and micro-enterprise support programmes in an effort to lower unemployment.

These experiences demonstrate that there is both macroeconomic and social policy latitude to address problems of poverty and inequality in Latin America's post-adjustment era, even without major asset redistribution. Several other leftist governments have been more inclined to test the boundaries of that latitude—in particular, those in Venezuela, Ecuador, and Bolivia, where new populist or leftist movements came into power in contexts where democracy was in crisis and party systems had largely collapsed. Venezuela, where the Chávez government advocated 'Socialism for the 21st Century', has clearly moved the furthest towards restoring a statist model of development and large-scale redistributive policies, including changes in property relations. The Chávez government tightened state control over the national oil industry, nationalized a number of other industries, redistributed land, encouraged the formation of production and service cooperatives, imposed price and exchange controls, and redirected massive oil rents towards a broad range of social programmes, or 'missions'. The most important of these missions placed health clinics in poor communities, expanded access to education, and created new local markets with heavily subsidized food products. The government also spawned a plethora of grassroots communal organizations to plan land and water use and oversee local infrastructure projects (Hawkins 2010).

In short, Latin America's 'left turn' has given rise to several different tracks, offering a diverse array of policy tools for tackling social problems of poverty, inequality, and underemployment. Redistributive social policies are increasingly embedded in macro-level economic policies that move well beyond the market orthodoxy of the adjustment era, and they combine elements of needs-based targeting with more universalistic principles. As argued in Chapter 14, further progress towards universalism will clearly require significant increases in taxation, which remains comparatively low in most of the region, despite the hike in the average regional level of taxation from 12.8 per cent of GDP in 1990 to 18.4 per cent in 2008 (ECLAC 2010: 59). More substantial increases would be sure to trigger political and business-sector opposition, as the Chilean case amply demonstrates. The political battlegrounds of the future, and the tenuous political consensus supporting limited poverty-relief and redistributive measures, are likely to hinge on issues of taxation and levels of public transfers, especially if global financial turmoil cuts into the revenues made available by the post-2003 commodity export boom. The recent Latin American experience demonstrates that equity gains can be made in a context of steady economic growth; whether such gains can be sustained in a period of austerity is yet to be determined.

3.5 Conclusions

Declining levels of inequality registered in most Latin American countries during the first decade of the twenty-first century coincided with a basic shift in the political and economic landscape—a shift from the politics of market-based structural adjustment to a new, post-adjustment era in which democratic competition has repoliticized social inequalities and placed redistributive policies at the forefront of the political agenda. Although new leftist governments have increased the salience of redistributive politics and adopted innovative social welfare reforms, the renewed attention placed on social problems is hardly the exclusive preserve of the left. With heightened electoral competition from the left and widespread public sentiments for an active state role in the provision of social welfare, conservative governments have also taken significant steps to address the needs of low-income groups. Consequently, the institutionalization of electoral competition in contexts of egregious social and economic inequalities appears to be producing new forms of democratic accountability, as parties and governments of diverse ideological profiles struggle to respond to popular demands for equity and social inclusion. The historic tensions between universal rights of democratic citizenship and *de facto* social exclusion continue to exist, but they have clearly given rise to new political expressions and policy outputs in Latin America's post-adjustment era.

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Part II

**Recent Inequality Changes in
Six Representative Latin American
Countries**

4

Redistribution without Structural Change in Ecuador: Rising and Falling Income Inequality in the 1990s and 2000

Juan Ponce and Rob Vos

4.1 Introduction

Like other countries in the region, Ecuador experienced notable increases in income inequality during the 1990s, which by and large were undone during the 2000s. Active transfer policies by successive governments played a role in reducing inequality, but the rise and fall in inequality seem to have been associated for most part with swings in macroeconomic conditions.

The 1990s were characterized by Washington Consensus-type reforms. Trade and financial sectors were liberalized from around 1990 and high inflation of the late 1980s was controlled through a combination of heterodox and orthodox macroeconomic stabilization policies in the early 1990s. The liberalization policies strengthened export growth, especially of more capital-intensive activities (oil, manufacturing, traditional export agriculture), though some of the effect was offset by the stabilization policies which cut inflation, caused the exchange rate to appreciate, and allowed real (urban) wages to increase. On balance, there was a mild increase in inequality during the first half of the decade with the Gini coefficient of per capita (urban) household income increasing from 0.45 to 0.47 between 1990 and 1996. The adjustment policies and market reforms failed to induce strong employment growth in the modern sector, and the jobs that were created therein mainly benefited skilled workers. The slack in the labour market was absorbed in traditional agricultural and informal urban activities. This drove up the wage gap between modern and informal sector workers as well as between skilled

and unskilled workers. Lower inflation and aggregate real wage increases dampened these unequalizing forces somewhat.

The influences mitigating inequality disappeared in the second half of the 1990s when the impact of the stabilization policies faded, trade liberalization pushed further for primary export-led growth, and the political situation became very unstable. Furthermore, heavy floods caused by the El Niño phenomenon and falling oil prices put the economy into a tailspin leading towards a full-blown banking crisis in 1999. The economic downturn pushed more and more workers into unemployment and underemployment, while accelerating inflation and strong devaluation of the exchange rate further eroded real wages and self-employed incomes. Urban income inequality rose sharply as a consequence and the Gini coefficient peaked at 0.59 in 2001. Amidst the crisis, large numbers of Ecuadorians started to leave the country for Europe and the United States in search of better opportunities. Many more would follow in subsequent years.

The 2000s started with a hasty decision to officially dollarize the economy amidst major political turmoil. In the first year of dollarization (2000), Ecuador witnessed high inflation (peaking at 100 per cent a year), in large part because of the way the currency change was implemented.¹ Real incomes and wealth further declined sharply for most Ecuadorians, and inequality rose as low-income groups were affected the most. The ensuing real exchange rate appreciation and a rebound in international oil prices, however, helped stage an economic recovery in subsequent years. Increased government revenue supported a recovery of government spending. As a result, employment levels and real wages rebounded, including for unskilled workers. The shift towards greater informality in the labour market continued, however. This shift by itself contributed to higher labour income inequality, but was more than offset by overall employment growth and a fall in the wage gap between skilled and unskilled workers. As in much of the region, the recovery in real education spending during the 1990s started paying off in the next decade (see Chapter 15) with more skilled workers entering the labour market, and this trend was sustained with cash transfer programmes introduced at the end of the 1990s which induced higher school retention rates. At the same time, demand for unskilled workers in urban informal service sectors and traditional agriculture outpaced that for other workers.

These factors explain much of the fall in per capita household income inequality in the 2000s. The lack of dynamic structural change, however, does not augur well for sustained reductions in labour income inequality. Continued

¹ A conversion rate for sucres to dollars much higher than necessary and an initial shortage of small-denomination coins pushed up prices for many basic products by rounding to one dollar (Vos 2000).

increases in the supply of skilled workers may push further in that direction, but this effect too may not be lasting. This became evident in the second half of the 2000s. The fact that household income inequality declined slightly was mainly due to public transfers and, to a lesser extent, worker remittances. While already in existence from the late 1990s, the cash transfer programme was enhanced substantially along with other social spending under the ‘new leftist’ government of Rafael Correa. Remittances from workers abroad increased significantly as well. Initially, they mainly benefited higher-income groups, but became less regressive or slightly progressive towards the end of the decade. The economy-wide Gini coefficient of per capita household incomes dropped from 0.60 to 0.55 between 2001 and 2005 and to 0.51 in 2010. Urban income inequality dropped from 0.59 in 2001 to 0.49 by 2010, back to the level observed in the early 1990s. Meanwhile, rural inequality dropped from 0.54 to 0.45.

In sum, the drop in inequality during the 2000s was mainly due to a rebound from the deep crisis of the late 1990s, while more structural factors continue pushing to keep up income inequality, especially the continued ‘informalization’ of the economy. Some elements of the programme for an inclusive and cohesive economy (*economía popular y solidaria*) of the ‘new leftist’ government of Rafael Correa (2007–present), the micro-credit programme in particular, may have exacerbated this trend. Other elements, especially the enhanced social spending and qualitative improvements in social services, may help to reduce income inequality over the medium term, but only if more dynamic structural change contributes in absorbing a more educated labour force. Likewise, the decline in rural inequality does not appear to be associated with structural changes in agriculture or in asset distribution. Here too, the improvements seem to be due to the recovery from the prior natural disaster and financial crisis and, in the second half of the 2000s, from improved agricultural terms of trade, rising domestic food demand, and the enhancement of the cash transfer programme.

4.2 Main Trends in Income Inequality

4.2.1 *Rising and Falling Income Inequality*²

As noted, the Gini coefficient of per capita household income in urban areas increased from 0.45 in 1990 to 0.55 in 2000 (Figure 4.1). During the 2000s, this trend was reversed and the Gini coefficient dropped to 0.49 in 2010. In

² The data used in this chapter are taken from the employment and unemployment survey of the National Institute of Statistics and Censuses (INEC) of Ecuador. During the 1990s, the survey covered urban areas only. Rural areas have been included from the year 2000 and onwards, except for 2001. The inequality estimates refer to pre-tax income at the household level. Total income

Recent Inequality Changes in Latin American Countries

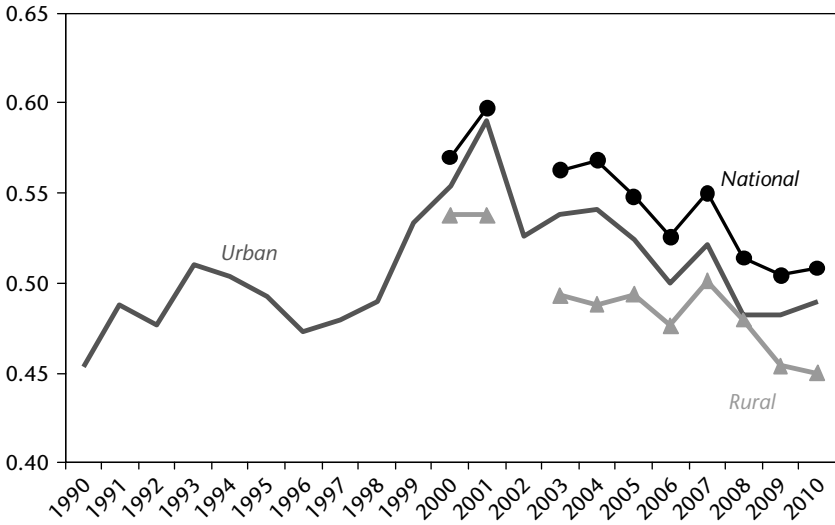


Figure 4.1. National, urban, and rural inequality in per capita household incomes 1990–2010, Ecuador (Gini coefficient)

Source: Ponce and Vos (2012: Annex Table A1).

rural areas, the income inequality measure dropped from 0.54 to 0.45 during the same period. At the national level, the Gini coefficient peaked at 0.60 in 2001, but dropped to 0.51 in 2010. The nationwide measure of inequality is systematically higher than those for urban and rural household incomes, because of continued wide income disparities between people living in the cities and in the countryside.

As noted in the introduction, the drastic liberalization policies introduced in a context of macroeconomic instability caused a notable increase in urban income inequality between 1990 and 1993. The subsequent decline in inflation and real wage increases were a main factor in pushing down urban inequality and poverty over the period 1993–6. As discussed in greater detail in the next section, the financial crisis of 1999 caused a drop in GDP per capita of 7.6 per cent, a steep rise in unemployment and underemployment and a fall in real wages, which all contributed to a sharp rise in inequality. Rural households were less affected by the 1999 crisis and rural income inequality

includes labour, property, and transfer income components. The survey started to measure worker remittances from abroad and benefits from social cash transfer programmes as part of transfer income from 2000 onwards only. During the 1990s, those sources of income were negligible. For further details about the survey data used, see Ponce and Vos (2012: Annex A1). The inequality estimates presented in this chapter may show some differences with the estimates for Ecuador presented in chapter 2. This chapter uses the original survey data, while the estimates in chapter 2 are based on the standardized datasets of CEDLAS (See Annex 1, Chapter 2). Overall trends are consistent, however.

was flat in 2000–1, as part of the negative impact of the financial crisis was mitigated by the recovery from the damages caused by the floods associated with the El Niño in 1997–8.

As shown in Table 4.1 (panel A), the top 10 per cent saw its income share increase by 10 points during the 1990s, while all other urban deciles saw their income shares decline. The opposite happened in the 2000s, as the richest ten per cent saw its income share decline from 45 to 38 per cent while all other deciles gained. A similar trend is observed for the income distribution among rural households during the 2000s (Table 4.1, panel B).

4.2.2 Trends in Labour and Property Income Inequality

Trends in labour and property income inequality broadly follow the trend of the overall household income distribution (Figure 4.2). The Gini for labour

Table 4.1. Per capita household income distribution by deciles (income shares in %) 1990–2010, Ecuador

	Panel A: Urban households, 1990–2010						
	1990	1993	1996	2000	2003	2006	2010
Poorest decile	1.8	1.4	1.5	1.2	1.0	1.4	1.5
2	3.7	3.3	2.8	2.1	2.2	2.9	2.7
3	3.9	3.3	4.6	3.1	3.1	3.2	3.7
4	4.9	4.1	5.3	4.3	4.3	4.5	4.7
5	6.2	6.7	5.6	4.8	5.3	6.1	5.8
6	8.0	8.2	6.8	6.2	6.3	6.6	7.2
7	9.1	6.0	9.2	7.9	8.4	8.9	9.2
8	11.6	10.7	11.8	10.3	11.0	11.2	11.2
9	15.8	16.3	16.3	14.9	16.3	16.3	16.4
Richest decile	35.0	40.0	36.2	45.2	42.1	38.7	37.8

	Panel B: Rural households, 2000–2010			
	2000	2003	2006	2010
Poorest decile	1.2	1.1	1.3	1.4
2	2.4	2.5	2.7	3.1
3	3.0	3.7	4.2	4.1
4	4.2	4.9	4.6	5.3
5	5.4	6.0	6.1	6.6
6	6.7	7.5	7.7	7.8
7	8.5	9.3	9.2	9.6
8	10.9	11.8	11.9	12.0
9	15.0	15.6	15.7	16.1
Richest decile	42.8	37.8	36.4	33.9

Source: Based on INEC (various years).

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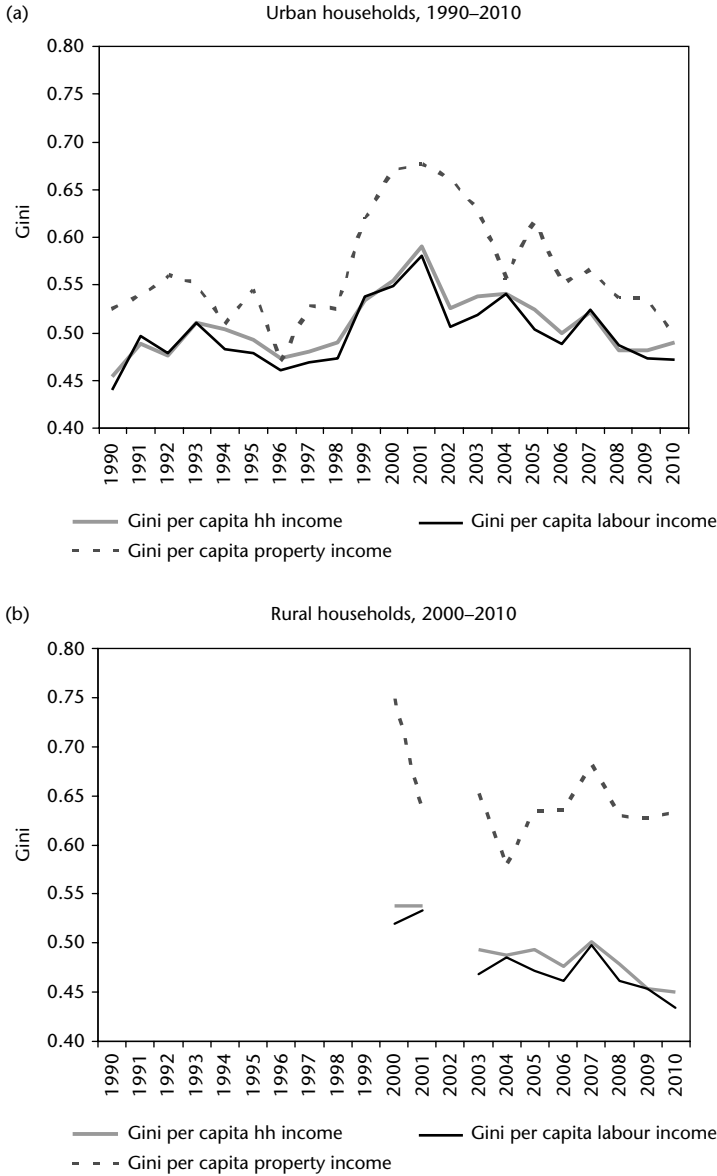


Figure 4.2. Trends in income inequality by income source (Gini coefficient)

Source: Ponce and Vos (2012), based on INEC (various years).

incomes increased from 0.44 to 0.55 between 1990 and 2000 and decreased from 0.55 to 0.47 in the next decade, with most of the reduction occurring in the first half of the decade. The Gini for property incomes surged in the 1990s, but fell in the 2000s. In rural areas the property incomes declined from

0.75 to 0.63. Nationwide, the degree of property income inequality fell from 0.65 to 0.54 between 2000 and 2010.

The trends in the decile distribution show that the shifts in labour and property incomes mimic by and large those of total per capita household incomes, although the shifts are less top-heavy in the case of labour income inequality (Ponce and Vos 2012: Annex Table A.3). Between 1990 and 2000, the labour income share of the bottom quintile of urban workers fell from 6 to 3 per cent while that of the top 20 per cent increased from 45 per cent in 1990 to 57 per cent in 2000. Also in this case, the brunt of the deterioration occurred in the second half of the decade. The pattern reversed almost completely during the 2000s, except for the fact that the richest quintile did not lose all it had gained during the 1990s.

With respect to property and rental income, the bottom 90 per cent of the income distribution witnessed a decline in its share in the second half of the 1990s, while the top 10 recorded an increase from 47 to 57 per cent (Ponce and Vos 2012). The extensive loss of financial wealth that took place because of the banking crisis might have suggested otherwise, but probably the rich were relatively unscathed as they already held most of their wealth in dollars. As in the case with other income sources, inequality in urban property incomes declined again with the dollarization and economic recovery during the 2000s, in particular during the first half of the decade prior to the introduction by the new leftist government of new land redistribution schemes and credit programmes for smallholder farmers. While those programmes may well have contributed to a reduction in inequality, they cannot explain the changes recorded during the initial part of the decade.

4.2.3 *Distribution of Cash Transfers and Worker Remittances*

During the 1990s, private and public transfers were small relative to household incomes and did not significantly alter labour and property income distribution. This changed at the end of the 1990s when a public cash transfer programme was introduced and worker remittances from abroad gained importance following massive outmigration of Ecuadorians in the years following the 1999 economic crisis.

Ecuador's first cash transfer programme, the *Bono Solidario*, was not tied to any behavioural conditions for the recipient households (such as sending children to school or attending health centres), but was introduced to compensate poor households for the elimination of a subsidy on cooking gas. The *Bono Solidario* was transformed later into a conditional cash transfer programme, the *Bono de Desarrollo Humano* (BDH). The household survey data allow estimation of the redistributive effects of the cash transfer programme.

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Table 4.2. Distribution of cash transfer programme by deciles, %, 2000–2010, Ecuador

Decile	2000		2003		2006		2010	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Poorest decile	18.0	11.8	21.0	12.6	22.4	12.3	19.8	8.6
2	16.3	10.5	18.4	10.6	20.4	10.7	16.9	8.8
3	14.0	9.0	14.0	11.5	15.6	11.6	17.6	13.2
4	14.9	11.1	13.8	12.1	12.9	11.1	14.2	10.1
5	11.6	11.0	12.3	11.2	11.5	11.5	10.9	11.9
6	6.9	10.3	7.3	11.2	7.8	11.7	9.4	10.9
7	7.0	9.8	6.5	10.3	5.2	10.5	6.5	11.1
8	4.9	7.7	4.1	8.9	2.7	9.2	3.0	10.1
9	4.6	9.7	2.1	7.5	0.8	7.3	1.3	9.2
Richest decile	1.8	8.9	0.5	4.2	0.7	4.1	0.3	6.2

Source: Based on INEC (various years).

It became increasingly progressive towards the end of the decade (Table 4.2). In 2010, the three poorest deciles of urban households received 54 per cent of the total benefits of the programme, while the three richest deciles received only 4.6 per cent. The progressivity of the programme is less pronounced in rural areas, mainly as a consequence of rural poverty being widespread, but also because of larger targeting errors.

Benefits were increased significantly in the second half of the 2000s: to US\$35 per beneficiary per month in 2010, up from US\$15 in 2006. The cash transfer is an important income source for the poorest deciles (see Table 3 in Ponce and Vos 2012). On average, the BDH contributes about US\$3 and US\$6 to average per capita monthly income of the poorest decile in urban and rural areas, respectively. This is equivalent to around 10 and 50 per cent of the per capita income of those households.

The static impact of the cash transfers on per capita household income distribution can be measured by comparing the Gini coefficient for per capita income with and without the BDH. In the urban case, in 2010, the Gini of per capita after-transfer income was 0.504, compared with 0.512 before the transfer. The Gini for the after-transfer rural income distribution was 0.45, compared with 0.49 before the transfer.

Worker remittances became another important income source during the 2000s. In some countries (see Chapters 7 and 8), remittances have been found to reduce income inequality. In Ecuador's case, however, the opposite seems to be true. Oliví, Ponce, and Onofa (2008), for instance, conclude that remittances have tended to raise income inequality based on counterfactual micro-simulation analysis using data from the 2006 *Encuesta de Condiciones de Vida* (Living Standard Measurement Survey).

Table 4.3. Distribution of worker remittances from abroad by decile, % (shares of total remittance incomes by income deciles of total per capita income distribution), 2000–2010, Ecuador

Decile	2000		2003		2006		2010	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Poorest decile	1.4	0.9	0.2	0.1	0.9	0.3	1.0	0.3
2	2.3	0.9	0.8	0.4	2.2	0.9	1.6	2.3
3	3.0	1.9	2.3	1.3	2.9	1.1	2.9	3.0
4	3.4	2.1	3.0	1.7	3.2	1.1	4.5	3.1
5	2.4	2.6	3.6	3.0	4.5	3.8	9.3	6.4
6	5.4	4.0	5.6	4.5	5.3	6.1	8.9	9.6
7	6.3	7.6	10.1	6.6	10.2	7.0	9.9	7.9
8	13.3	8.4	13.7	11.7	13.8	8.2	8.9	16.5
9	17.5	15.6	18.9	19.9	19.3	19.7	14.3	22.6
Richest decile	45.1	56.1	41.8	50.7	37.6	51.8	38.7	28.0

Source: Based on INEC (Employment and Unemployment Surveys) (2000–10).

A descriptive analysis of the distribution of remittances among Ecuadorian households confirms that richest households receive the larger share by far (Table 4.3). Among urban households, the distribution is slightly more regressive than that of total per capita income during the first part of the decade, but became less regressive and even slightly progressive in the second half (compare Table 4.1 and Table 4.3).

4.2.4 Decomposition of Income Inequality by Source

To assess the contribution of the four key income sources discussed above to overall inequality, we applied the Gini decomposition methodology developed by Lerman and Yitzhaki (1985). The Gini coefficient for total income, with k different sources of income, can be expressed as:

$$G = \sum_{k=1}^K S_k G_k R_k$$

where S_k is the participation of income source k in the total income; G_k is the Gini coefficient of income source k ; and R_k is the correlation between income source k and total income. Thus, the contribution of income source k to the overall level of income inequality depends on the share of each income source on total income, the level of inequality of each income source, and the correlation of the respective income sources with total income.

The decomposition allows to estimate the effect of a marginal change (π) of any of the different income sources with respect to overall inequality

(keeping the other sources of income constant), according to the following expression:

$$\frac{\partial G}{\partial \pi} = S_k (G_k R_k - G)$$

Or, alternatively:

$$\frac{\partial G / \partial \pi}{G} = \frac{S_k G_k R_k}{G} - S_k$$

This means that the percentage change in overall inequality, resulting from a marginal percentage change in income source k , is equal to the initial participation of income source k in overall income inequality minus the initial participation of income source k .

The results in Table 4.4 show that labour income represented, on average, 91 per cent of total urban household income during the 1990s. The negative marginal effects confirm that the distribution of labour income was less unequal than that of property income and other rents, so that increases in the labour share which took place during parts of the 1990s helped to reduce overall inequality.

Shifts in the share of labour income would have either a small, variable impact on overall rural income inequality or be statistically insignificant. Increases in land rents and rural profits, in contrast, did push up rural income inequality significantly, as shown in panel B of Table 4.4. Increases in remittances also seem to have pushed up rural inequality, as shown by their positive marginal effect, which was no longer statistically significant at the end of the decade. The cash transfer programme, in contrast, seems to have had a strong inequality-reducing effect with the marginal effect becoming stronger during the period of the new leftist regime.

In 1990, a 1 per cent increase in labour income for urban households was associated with a 3 per cent reduction in the Gini coefficient, thus implying an elasticity of 3.0. This elasticity dropped thereafter to 1.2 in 2000 and 1.4 in 2006 (the impact was insignificant in 2003 and 2010). In turn, an increase in average property income relative to other income sources always contributed to greater overall urban income inequality during the 1990s and 2000s. Likewise, rising worker remittances tended to raise urban income inequality (with an elasticity of 0.3) during the first part of the 2000s but became slightly progressive towards the end of the decade (with an elasticity of -0.2). The cash transfer programme, in contrast, helped reduce urban income inequality with an elasticity of around -1 during the first half of the decade, but much more strongly towards the end of the decade when the programme grew in scope under the Correa regime.

Redistribution without Structural Change in Ecuador

Table 4.4 Decomposition of the Gini coefficient and the marginal effect of each source of income, 1990–2010, Ecuador

	Labour income		Property income		Remittances		Cash transfers	
	Share	Marginal effect	Share	Marginal effect	Share	Marginal effect	Share	Marginal effect
A: Urban, 1990–2010								
1990	0.8998	-0.0355 (0.0025)	0.1002	0.0355 (0.0025)				
1993	0.9133	-0.0101 (0.002)	0.0867	0.0101 (0.0020)				
1996	0.9038	-0.0056 (0.0012)	0.0962	0.0056 (0.0012)				
2000	0.8852	-0.0123 (0.0066)	0.0617	0.0145 (0.0021)	0.0453	<i>0.0086</i> (0.0067)	0.0077	-0.0108 (0.0002)
2003	0.8784	<i>-0.0038</i> (0.0024)	0.0773	0.0095 (0.0021)	0.0372	0.0057 (0.0012)	0.0071	-0.0114 (0.0002)
2006	0.8679	-0.0146 (0.0019)	0.0953	0.0189 (0.0018)	0.0325	0.0031 (0.0011)	0.0043	-0.0075 (0.0001)
2010	0.8559	<i>0.0036</i> (0.0034)	0.1167	0.0153 (0.0031)	0.0173	-0.0023 (0.0006)	0.0101	-0.0166 (0.0002)
B: Rural, 2000–10								
2000	0.8993	<i>-0.0042</i> (0.004)	0.0292	0.0154 (0.002)	0.0465	0.0151 (0.003)	0.025	-0.0263 (0.0007)
2003	0.8865	0.0075 (0.003)	0.0464	0.0136 (0.002)	0.0386	0.0139 (0.001)	0.0286	-0.035 (0.0005)
2006	0.895	<i>0.0021</i> (0.0034)	0.0452	0.0118 (0.0028)	0.0366	0.0145 (0.0016)	0.0232	-0.0284 (0.0006)
2010	0.8385	0.0388 (0.009)	0.0746	0.0352 (0.008)	0.0171	<i>0.0007</i> (0.0006)	0.0698	-0.0747 (0.0009)

Note: Standard errors in parentheses, calculated using the bootstrap method. Estimates in italics are not statistically significant.

Source: Based on INEC (various years).

4.3 Possible Underlying Explanations for the Income Distribution Shifts

This section examines a number of factors which could explain the observed rise and fall in inequality during the 1990s and 2000s. In line with the broad approach suggested in Chapter 2, we focus on the following factors: the pattern of economic growth, demographic changes and related changes in labour supply, shifts in the structure of employment, changes in the wage gap between skilled and unskilled workers and formal and informal sector workers, and public and private transfers. Other factors, such as tax incidence, were not considered due to lack of consistent information about them in the household surveys used for the empirical analysis in this chapter.

4.3.1 *Economic Growth Patterns*

The empirical literature tends to find a strong influence of the business cycle on poverty and inequality trends.³ Although there does not seem to be any systematic distributive shift taking place during economic upturns, it is mostly found that during downturns income inequality and poverty tend to increase. The pattern of growth is possibly more important in determining distributional shifts than any short-term GDP variation per se. The opening and liberalization of economies in Latin America were often found to have increased income inequality, especially by pushing up wage differentials between skilled and unskilled workers (see Chapters 2 and 12 in this volume), but the impact on poverty has been more ambiguous (see, for example, Vos et al. 2006). Income distribution shifts observed in Ecuador during the 1990s and 2000s seem to fit the broader Latin American pattern with some caveats.

Ecuador's pattern of growth has historically relied mostly on the export of primary commodities. This growth model has remained by and large unchanged. Export buoyancy ultimately determined the space for domestic income and demand growth. During the early 1970s, the country became a net oil exporter allowing, along with heavy external borrowing, for significant public sector and urban real wage growth. This helped push up domestic demand as the main growth driver and, despite the adoption of import substituting industrialization policies, import demand increased significantly and the economy suffered strong Dutch Disease symptoms (Vos 1989). After the debt crisis of the 1980s, the import substitution model was in part dismantled, but adjustment policies failed to reduce dependence on primary exports. Rather, domestic demand and urban wages were compressed, substantially eroding purchasing power of the urban middle class that had surged in the 1970s. Import compression and volatile primary export revenue determined most of the business cycle during this period. Many basic price subsidies that had mainly benefited the urban middle classes were reduced as part of fiscal adjustment policies. Although weakening the 'urban bias', such approach did not do much to support the rural population, as already weak agrarian reform policies were mostly abandoned and international agricultural prices contributed to keep domestic food prices low.

The trade and financial sector liberalization measures introduced around 1990 reinforced the export-led growth pattern. Export volume expanded despite substantial appreciation of the real exchange rate, a trend typical of heterodox adjustment programmes implemented during the first half of the 1990s which used the nominal exchange rate as an anchor to control inflation. The renewed export drive came mainly from the growth of traditional

³ See, for example, the literature mentioned in Ponce and Vos (2012).

exports, particularly oil and shrimps, both of which are rather insensitive to real exchange rate adjustments. Further, during much of the 1990s, the government allowed oil production to increase in response to relatively low international crude prices. Oil exports also increased with the construction of a new oil pipeline. The limited export diversification that took place during this period took the form of foreign-investment-supported cut-flower production and growth of intra-regional trade in the context of the Andean Pact (Vos 2002).

FROM STABILIZATION TO CRISIS IN THE 1990S

The stabilization and market reforms led to a modest recovery from the lost decade of the 1980s. Control of inflation and appreciation of the currency (visible in the downward trend in the real exchange rate in Figure 4.3, below) allowed for an increase in real urban wages, a main factor in the decrease in urban poverty between 1992 and 1997.

The country entered into a period of political and financial turmoil towards the end of the 1990s. Populism, political corruption, and high uncertainty took centre stage and macroeconomic imbalances worsened dramatically. Political instability was compounded by a series of adverse shocks, including a steep fall in oil prices and the natural disaster caused by El Niño in 1997–98. The estimated foregone earnings in agriculture, transportation, and commerce due to the weather shock range between 1 and 10 per cent of GDP

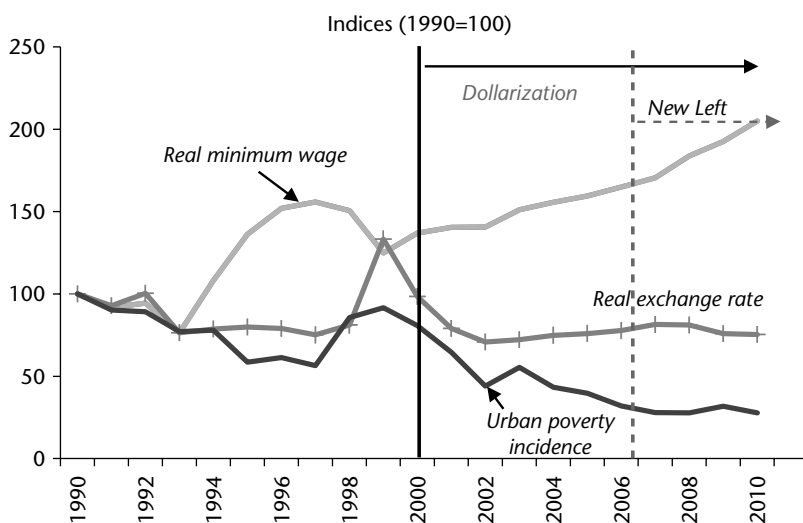


Figure 4.3. Urban poverty, real wages and real exchange rate, 1990–2010, Ecuador
Source: Based on INEC (several years) for poverty data, and Central Bank of Ecuador for exchange rate and wage data.

(Vos 1998). The non-financial public sector deficit climbed to 6 per cent of GDP and the current account deficit to 12 per cent of GDP in 1998. This put pressure on the exchange rate, which was devalued by 15 per cent in September 1998. The devaluation pushed an already fragile banking sector into insolvency. Subsequent, ill-conceived policy responses (like raising the policy interest rate to 190 per cent in February 1999) caused a domestic credit crunch and a full-blown financial crisis. Inflation accelerated to 65 per cent by late 1999 and GDP fell by 7.3 per cent that year.

Urban unemployment doubled to 14.5 per cent during 1999, wages lost 25 per cent in purchasing power, and the dollar value of the minimum wage dropped to US\$40 per month. In January 2000, amidst conditions of financial panic and political turmoil, the government replaced the national currency with the US dollar. This put an end to exchange rate uncertainty but not to inflation, which accelerated to 100 per cent for reasons explained above.

The distributional consequences of the ups and downs of the Ecuadorian economy during the 1990s are not easy to gauge, in part because consistent survey data are available only for urban areas. The available evidence seems to suggest that the structural adjustment induced by the liberalization and stabilization policies led to greater export orientation and a shift towards capital-intensive production (oil, manufacturing, traditional agriculture), with the exception of a few agricultural subsectors (flowers, vegetables). On balance, this led to a relative decline in labour demand in the modern segment of the traded goods sector. At the same time, the demand for wage labour became more skill-intensive, leading to a widening of the skill premium and the income gap between wage earners and self-employed workers. Informal sector employment expanded, shifting factor income distribution away from wages and towards profits and labour income distribution from wages to self-employed incomes. These factors pushed up urban income inequality during the first part of the decade, but the strong recovery in real urban wages from 1993 allowed for a reversal of this trend. In addition, urban household incomes tended to move closely with adjustments in the institutionally set modern-sector minimum wage. As a result, urban poverty rates declined thanks to average real wage improvements rather than by structural change.

When the economy went into a tailspin, the trends towards lower inequality and poverty were reversed as unemployment and job informalization increased, and real wages fell. Poverty increased in both rural and urban areas. Poverty increased more starkly in urban areas along with the steep rise in inequality (Figure 4.2, part A), whereas rural income inequality does not appear to have changed much in the second half of the 1990s (Vos 2002). Taken over the decade as a whole, economic growth was clearly unequalizing (Ponce and Vos 2012: Figure 5).

DOLLARIZATION, RECOVERY, AND FALLING INEQUALITY

The monetary ‘shock’ caused by dollarization generated a large bout of inflation which took three years to reduce to single digits. The ensuing recovery was driven by the construction of a new oil pipeline, a significant increase in the price of oil, and rapidly increasing migrant remittances, which reached almost 5 per cent of GDP by the mid-2000s. However, the rest of the economy did not expand at the same rate, making the country even more dependent on oil exports (León, Rosero, and Vos 2010). Growth of the oil sector, appreciation in the exchange rate, recovery of real wages, and weak productivity growth in the non-oil tradable sector created the basis of the country’s continued Dutch Disease syndrome. A new leftist government took office in 2007. High oil prices, a growing government share of oil rents, and improvements in tax collection stepped up government revenue in a major way. Much of the revenue increase was used to expand social spending, which, including cash transfers, rose from 4 to 8 per cent of GDP in just few years. However, oil dependence as well as other external vulnerabilities increased.

The upshot of all this was a strong pro-poor rebound of the economy. GDP growth averaged 5 per cent per year during 2000–6. It decelerated to 3.3 per cent per year between 2007 and 2010 as a result of the global recession. Similarly, real per capita household income growth slowed in the second half of the 2000s, but averaged nonetheless around 3 per cent per year between 2001 and 2010. This robust growth allowed mean incomes to rise to well above pre-crisis levels and overcome the income losses suffered during the crisis and the inflationary shock caused by the dollarization of the economy. Urban and rural households alike saw welfare increase and poverty drop (Figures 4.3 and 4.4; see also Figures 6 and 8 in Ponce and Vos 2012).

Income growth for the poorest deciles was substantially higher than that of the richer deciles among both urban and rural households and during both the first and second half of the 2000s. An important difference is that income growth was much higher during 2000–6 given the recovery from the 1999 crisis and hence the impact in terms of reducing income inequality was also bigger.

As during the first half of the 1990s, rising real wages and falling unemployment seem to have been key factors in driving down *urban* income inequality during the 2000s. Expansion of the cash transfer programme enhanced this trend, especially in the second half of the 2000s. These factors seem to have been reinforced by the pattern of economic recovery based on primary exports, which strengthened traditional sectors and weakened the post-liberalization push for greater demand for skilled workers. This, together with the continued growth in the supply of educated workers,

Recent Inequality Changes in Latin American Countries

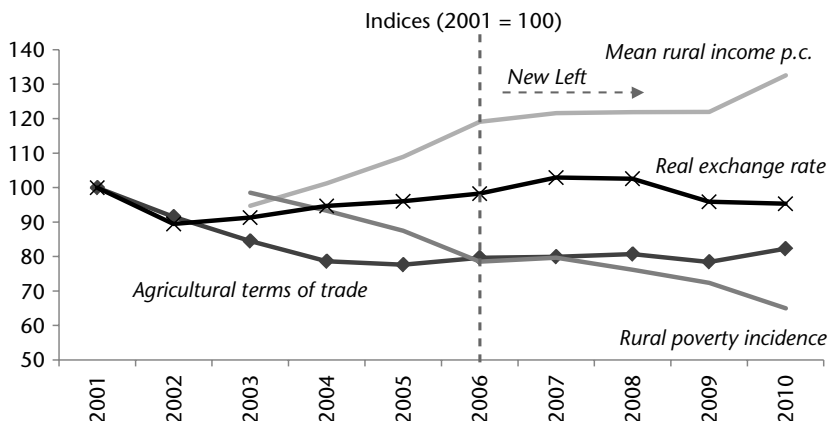


Figure 4.4. Rural poverty, real incomes and relative prices, 2001–2010, Ecuador (indices 2001 = 100)

Source: Based on INEC (several years) for poverty data and household income data; Central Bank of Ecuador for exchange rate and agricultural terms of trade data.

probably pushed down the wage gap between skilled and unskilled workers in urban areas. These trends seem to have been counteracted by the rise of remittances, which, at least for most of the decade, benefited higher-income groups most, and by the continued expansion of informal employment, which probably pushed up income disparity between urban wage earners and the self-employed.

The decline in rural income inequality is less easy to explain. As has been said, rural incomes were lifted by the strong growth in agricultural output in the years after the natural disaster and financial crisis of the late 1990s. Agricultural production increased by almost 5 per cent on average between 1999 and 2005 and continued at that pace until 2008. Expanding agricultural activity seems to have benefited small and medium-sized farming (basic food crops and some traditional export crops, such as cocoa) more than large-scale farming. Rising international food prices may have provided some incentive to farm production. Along with rising domestic food demand (on the back of rising real wage incomes), they induced some improvement in the domestic agricultural terms of trade during the second half of the 2000s, which along with the expansion of the cash transfer programme probably helped reduce rural income inequality and poverty (Figure 4.4). By the government's own assessment (SENPLADES 2012), no structural changes took place in agricultural production and land distribution during 2007–11, thus tentatively suggesting that the decline in inequality was due to improvements in the macroeconomic conditions and progressive social policies.

4.3.2 *Changes in Demographics and Employment Conditions*

In some countries, changes in the demographic structure of households have played some role in the reduction of income inequality during the 2000s.⁴ This does not seem to have been a major factor in Ecuador's case, however. Indeed, in both urban and rural areas the share of the working-age population (defined here as those between 25 and 55 years of age) increased slowly but steadily over the past two decades. However, the increase was stronger among richer deciles (see Annex Table A5 in Ponce and Vos 2012). This trend eased somewhat during the 2000s and thus may have contributed modestly to the observed reduction in inequality during the last decade.

The average number of income earners per household has increased in line with the rising share of working-age household members. In urban areas, households now have 2.1 income earners on average, compared with 1.8 twenty years ago (see Annex Table A6 in Ponce and Vos 2012). The rise in rural areas has been starker, as the average number of income earners increased from 1.9 to 2.2 between 2000 and 2010, though in a way sensitive—as might be expected—to the business cycle. These trends are somewhat stronger among the poorest deciles and thus could explain at least some of the observed inequality trends, including the drop in the first half of the 2000s. However, again, given the rather small changes across deciles, this factor probably explains only a marginal part of the observed distributional shifts.

Changes in the number of working hours and the extent of job 'informality' may also correlate with the observed distributional shifts. In urban areas the average working week increased during the 1990s, peaking at 47 hours in 1996, but declined again during the 2000s (see Annex Table A7 in Ponce and Vos 2012). The average number of hours of rural workers also decreased during the 2000s. The working week tends to be longer for the richer deciles than the poorer ones, reflecting the higher extent of underemployment among the latter, especially in rural areas. In 2000, urban workers belonging to the richest decile worked on average 7.8 hours per week more than those belonging to the poorest decile, up from a difference of 2.7 hours in 1990. Assuming that working longer translates into higher labour incomes, the fuller employment among the richer households may explain some of the rise in urban inequality during the 1990s. Such differences stayed more or less the same, however, during the 2000s, so that this is unlikely to have been a factor in explaining falling urban inequality during that period. In rural areas, it seems to have been a contributing factor during the period of the Correa government

⁴ See, for example, the case studies of Argentina, Mexico, and Peru in López-Calva and Lustig (2010).

when the number of hours worked increased among the poorest deciles and remained the same among richer deciles.

The degree of job informality in Ecuador increased significantly over the past two decades (see also Chapter 12). In urban areas, the share of modern-sector workers declined from 55 to 53 per cent during the 1990s and to less than 50 per cent during the 2000s (Ponce and Vos 2012: Table 7). The degree of informality is substantially higher among the poorest deciles. In fact, among the top 40 per cent of the income distribution, the degree of informality either decreased or stayed the same, while it increased dramatically among the poorer segments. The increase in informal urban employment also continued in the second half of the 2000s when the new leftist government came to power.

As already indicated, the trade liberalization of the 1990s benefited most the capital-intensive sector (oil, manufacturing, traditional agriculture), with the exception of a few agricultural subsectors (flowers, vegetables). This sectoral shift produced a relative decline in the overall labour demand in the modern traded-goods sector, and a relative increase in the demand for skilled workers, thus raising the income differentials between wage earners and self-employed workers. The weight of employment growth has been in informal jobs and among the self-employed. Together with dramatic decreases in real wages, all this has shifted factor income distribution away from wages towards self-employed incomes (Vos 2002). No major changes are observed during the 2000s in this regard.

4.3.3 Increasing Levels of Education and Falling Wage Gaps

Educational levels of the labour force have increased across Latin America (Chapter 14). Ecuador was no exception, as the average years of schooling of the labour force have increased substantially over the past two decades, especially for richer deciles (see Table 8 in Ponce and Vos 2012).

Chapters 11 and 12, and the literature surveyed therein, suggest that much of the increase in overall income inequality observed in Latin America during the 1990s can be explained by widening wage gaps between skilled and unskilled workers induced by the skill-intensive technological change associated with trade and capital-account opening. During the 2000s, in contrast, the increase in the educational level of the workforce appears to have offset the increase in the demand for skilled labour, thus reducing the wage gap. To analyse this process in Ecuador, a Mincerian wage regression was estimated for the population between the ages of 25 and 55 for each of the years analysed in this chapter. The estimation model is as follows:

$$Y_i = \alpha + \beta C_i + \gamma X_i + \varepsilon_i$$

where Y_i is the logarithm of labour income per hour, X_i is a vector of control variables (such as age, age squared, and a dummy for the modern sector), and C_i is a dichotomous variable taking a value of 1 if the worker has at least completed secondary school and 0 otherwise, and ε is the error term with a normal distribution and a zero mean. The larger the β coefficient, the wider the wage gap between skilled and unskilled workers. The results confirm that in Ecuador too the wage premium for skilled workers increased during the 1990s (Table 4.5). After correcting for age (a proxy for work experience) and type of employment (modern or informal), skilled male workers earned around 79 per cent more than unskilled male workers in 2000, up from 54 per cent in 1990. The wage premium for skilled female workers went up from 37 to 58 per cent.

These trends reversed during the 2000s, as the wage gap decreased for both men and women in both urban and rural areas, thanks to an increase in the skill level of the labour force driven by the recovery of real public spending in education that began in the 1990s and the cash transfer programme(s) of the 2000s that helped to increase access to education. However, this favourable trend was counteracted by the relative increase in informal employment. Using the same Mincerian model as above, the wage skill premium was estimated giving the value of 1 to the dichotomous variable if an individual works in the modern sector and 0 if he or she is employed in the informal sector. This coefficient measures the gap between the labour income of workers in the modern sector versus the workers in the informal sector, after correcting for skill level and work experience. The results (see Table 10 in Ponce and Vos 2012) show a strongly rising modern-sector wage premium for urban workers though not for rural workers during the 1990s and 2000s.

Table 4.5. Skill-based wage premium by gender, 1990–2010, Ecuador (Beta coefficients estimated using Mincerian wage equation)

	Urban area		Rural area		National	
	Men	Women	Men	Women	Men	Women
1990	0.5354*	0.3715*				
1993	0.6796*	0.3999*				
1996	0.6278*	0.3813*				
2000	0.7896*	0.5762*	0.6780*	0.7476*	0.797*	0.618*
2003	0.7198*	0.6057*	0.4622*	0.6010*	0.707*	0.633*
2006	0.6374*	0.5657*	0.6463*	0.5931*	0.646*	0.589*
2010	0.5745*	0.4220*	0.3618*	0.4703*	0.594*	0.480*

Note: *Significant at 1%.

Source: Based on INEC (various years).

4.4 Conclusions

The trend towards greater income equality coincides partly with the rise to power of a 'new leftist' government from 2007. However, income inequality and poverty had already started to decline from the early 2000s before the new leftist regime took office. Much of this had to do with the recovery from the natural disaster and deep economic and financial crisis in the late 1990s. During the 1990s, inequality had increased in part because of these factors and in part because of the labour market impact of trade and financial liberalization which, by and large, reinforced Ecuador's primary export-based growth model. During the 2000s, improved international commodity prices helped the recovery and provided space for significant real wage and rural labour income increases, as well as for substantial increases in social spending.

The lack of dynamic structural change in the economy, however, does not augur well for future declines in inequality, as the structural causes of high inequality, especially the continued informalization of the economy have not been dealt with.

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5

Policy Regimes, Inequality, Poverty, and Growth: The Chilean Experience, 1973–2010*

Dante Contreras and Ricardo Ffrench-Davis

5.1 Introduction

Significant changes in poverty and income distribution have been recorded over the past four decades in Chile. During the Pinochet dictatorship in the 1970s and 1980s income distribution deteriorated sharply, and the share of population living below the poverty line was 45 per cent in 1987, the year in which the highest inequality level was also recorded. After democracy was reinstated in 1990, poverty fell substantially, i.e. to 15 per cent by 2009. Income distribution improved during the first half of the 1990s, but regressed under the recessive impact of the Asian crisis. In subsequent years, partial progress was recorded due to economic recovery and significant new social reforms, bringing Chile closer to the lower inequality achieved in the first half of the 1990s. At present, income inequality is markedly lower than in the 1980s, but is still above the levels in the 1960s and early 1970s.

The above results should be reviewed with caution, because capital income, as in other countries, is grossly understated in the Chilean surveys (see Annex 1, Chapter 2). On the one hand, the Employment Survey focuses mainly on labour income. On the other, while the CASEN surveys attempt to include

* We are grateful for the comments of Giovanni Andrea Cornia, Joseph Ramos, and the participants to the UNU-WIDER workshop meeting in Buenos Aires (September 2011) and the assistance of Matías Morales, Paulina Sepúlveda, and Diego Vivanco. We also thank the Millennium Science Initiative at the Ministry of Economy, Development, and Tourism to Microdata Center. Any errors or omissions are our sole responsibility.

also social monetary transfers and capital income, the latter is significantly under-reported in relation to national accounts. As income from capital tends to be concentrated in the hands of wealthy families, the survey data underestimate inequality, and bias the labour share upward. This is an important shortcoming that must be remembered when interpreting the data.

5.2 Income Inequality Under Dictatorship: 1973–1989

5.2.1 Changes in Inequality

Income distribution worsened sharply during the 1970s and 1980s (Figure 5.1). Data from the University of Chile Employment Survey for Santiago show that the ratio of household income of the top to the bottom quintile and the Gini coefficient rose, respectively, from 13 and 0.49 in the 1960s to 15 and 0.52 in the period 1974–81, and to 20 and 0.57 during the 1980s. In fact, income distribution worsened steadily between 1975 and 1987, though it stabilized temporarily during the 1977–80 upswing, only to deteriorate again thereafter.

This trend was essentially a reflection of four interrelated factors: trade reforms emphasizing import liberalization at the expense of export

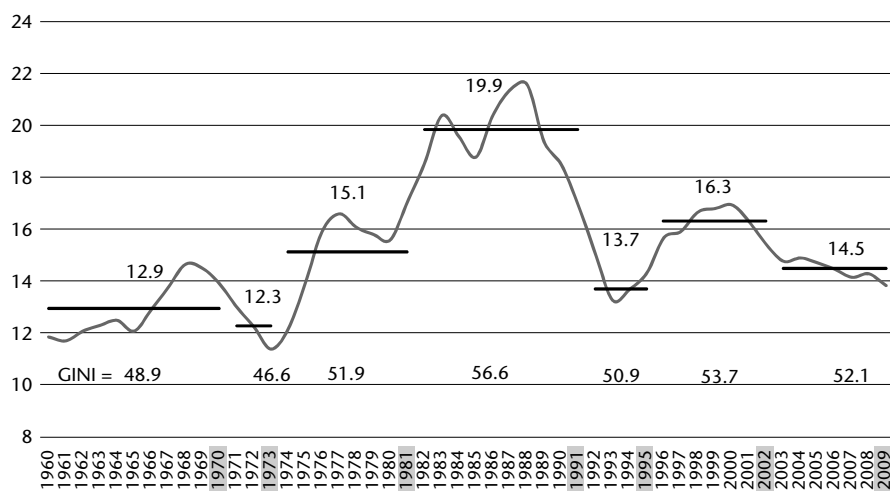


Figure 5.1. Income distribution in Santiago, 1960–2009 (Q5/Q1, three-year moving average)

Notes: Data are ordered by household income per capita. The numbers on the horizontal lines are the average of the ratios richer/poorer quintiles in each subperiod. Figures in the bottom are the respective Gini averages.

Source: Authors' calculations based on the University of Chile Employment Survey.

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promotion; labour reforms strongly biased against workers and trade-unions; considerable real macroeconomic instability; and a low investment ratio per member of the labour force.

Some social indicators continued to improve during the Pinochet regime. For instance, secondary school enrolments rose from 51 per cent in 1973 to 75 per cent in 1989, and infant mortality fell significantly as a result of

Table 5.1. Wages, family allowances, and public social expenditure, 1970–2010, Chile (real indexes, 1989 = 100)

	Average wage (1)	Minimum wage (2)	Family allowance (3)	Per capita public social expenditure		
				Education (4)	Health (5)	Total (6)
1970	109.2	108.9	352.1	159.7	143.7	119.2
1980	97.2	141.6	287.3	141.5	118.2	107.4
1981	105.7	147.8	284.8	147.1	107.3	116.2
1985	90.4	93.7	192.2	121.4	92.0	107.9
1989	100.0	100.0	100.0	100.0	100.0	100.0
1990	101.8	107.0	118.7	94.9	94.0	97.4
1991	106.8	116.7	145.8	105.0	108.9	104.6
1992	111.6	122.0	149.3	118.7	125.1	113.7
1993	115.8	128.0	151.9	127.2	138.6	123.1
1994	123.2	132.8	154.6	137.1	150.9	129.1
1995	129.2	138.8	159.4	151.1	155.3	136.7
1996	134.5	144.8	166.0	168.5	166.7	148.0
1997	137.7	150.1	174.9	183.4	174.4	154.5
1998	141.4	159.3	182.9	201.8	186.4	164.1
1999	144.8	173.8	187.8	213.1	189.7	174.7
2000	146.8	186.5	189.1	228.8	203.0	183.2
2001	149.2	192.8	191.0	244.9	217.1	192.4
2002	152.2	198.2	194.6	260.5	225.1	196.1
2003	153.6	200.7	196.3	261.4	236.0	198.0
2004	156.4	206.3	199.3	278.5	250.8	206.6
2005	159.3	210.2	198.9	275.4	270.1	214.9
2006	162.5	215.6	200.6	289.4	302.7	226.8
2007	167.0	219.3	227.0	318.9	338.9	242.4
2008	166.7	218.4	244.7	364.6	359.2	261.7
2009	174.7	228.8	265.1	417.3	433.7	306.2
2010	178.5	234.4	283.0	437.1	463.9	322.0
Average annual growth (%)						
1982–89	–0.7	–4.8	–12.3	–4.7	–0.9	–1.9
1990–97	4.1	5.2	7.2	7.9	7.2	5.6
1998–2009	2.0	3.6	3.5	7.1	7.9	5.9

Note: Column (6) includes expenditures on education, health, housing, pensions, and others. All are annual average figures.

Sources: Based on Ffrench-Davis (2010, table VII.1) and updated with data from the National Bureau of Statistics (INE) for wages, and the Budget Office (DIPRES) for social expenditure.

stronger public efforts in mother and child care and nutritional programmes for children.

During this period, the worsening of income inequality was caused to a large extent by unfavourable changes in the labour markets (Table 5.1). Initially, nominal wages were under-indexed to inflation, and then the deep recession of 1975 triggered a strong increase in unemployment (Figure 5.2). After a recovery in economic activity, employment and wages continued to rise until the 1982 economic crisis. But real wages during this whole period averaged a mere 82 per cent of their 1970 level, while 18 per cent of the labour force was unemployed, with a peak of 31 per cent in 1987 (Ffrench-Davis 2010: Table I.1). By 1989, minimum and average wages were still 8 per cent below their 1970 levels and their distribution worsened. Similarly, family allowances in 1989 were 72 per cent below the 1970 level. In turn, per capita public social expenditure on education and health dropped by 37 and 30 per cent respectively. Only social security spending increased, owing to the growing number of pensioners, which absorbed the reduction in the average pension (Ffrench-Davis 2010: Table I.1).

These trends in income inequality are confirmed by the consumer spending surveys. Household surveys (EPF) conducted in Santiago in 1969, 1978, and 1988 show a steady decline in household spending in the three lowest quintiles: the poorer the population, the greater the proportional decline (Ffrench-Davis 2010). For example, the consumption share of the poorest 40

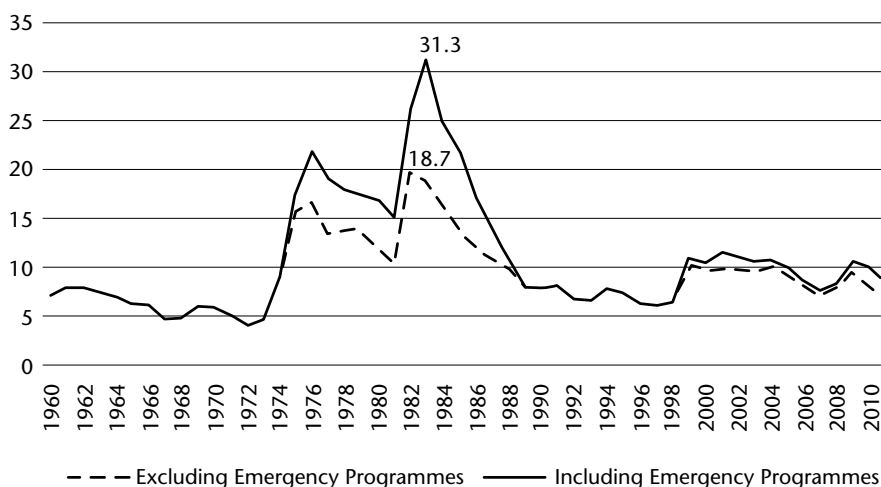


Figure 5.2. National unemployment rate, 1960–2010, Chile

Note: Annual averages.

Source: Calculated by the authors, based on INE data.

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per cent of households fell from 19.4 per cent in 1969 to 14.5 in 1978, and to 12.6 in 1988.

5.2.2 Decomposition of Income Inequality by Source: 1973–1989

Following Lerman and Yitzhaki (1985), a decomposition of the Gini index by type of income was carried out for the period 1973–89 on the basis of the University of Chile Employment Survey which provides information on labour income and ‘other incomes’ (pensions, capital income, remittances, etc.). Each income component is normalized by household size, so that the analysis is based on per capita income.

Figure 5.3 illustrates the trend in labour income inequality. The lowest value of the labour income Gini coefficient was recorded in 1973, thanks to policies implemented during the Allende government.¹ The average coefficient was 0.58 throughout the period, with a peak of 0.64 in 1987. The Gini

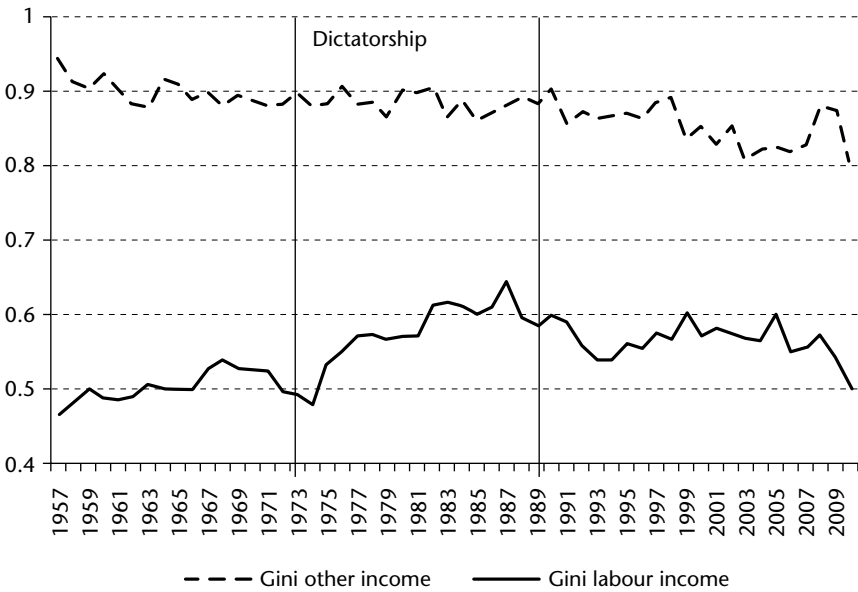


Figure 5.3. Gini index by source, 1957–2010, Chile

Source: University of Chile Employment Survey.

¹ The Allende government (1970–73), supported by the Popular Unity (left-wing coalition), attempted to establish an alternative path to a socialist society—‘The Chilean way to socialism’—with such schemes as increased social spending, nationalization of copper and other large private firms, in the midst of political polarization of the Cold War and a serious economic and financial crisis.

coefficient for 'other sources of income' was persistently much higher, averaging 0.88 over the period considered. Thus, the increasing inequality of this period, recorded in the survey, is explained mostly by growing inequality in the labour market. The high level of open unemployment was a key factor, although the level of the participation rate was also important. Indeed, while the employment rate averaged 47.5 per cent, for the poorest quintile it was 32 per cent and for the richest one it was 62 per cent.

To better understand this trend we examine labour income broken down by gender and skilled/unskilled workers, where skilled workers are those with more than 12 years of schooling and the unskilled with 12 or fewer years of schooling.² The evidence shows that the relative share of skilled labour in total income increased from 26 per cent in 1965 to 50 per cent in 1989. In contrast, that of unskilled labour decreased from 47 per cent in 1965 to 26 per cent in 1989.

The gender analysis is also revealing. During the 1973–89 period the income shares of both female and male skilled labour (which are fairly concentrated) contributed to the increase in overall inequality by 2.9 per cent and 13 per cent respectively. In contrast, the reduced income share of unskilled workers contributed to reduced inequality by 2.5 and 14 per cent for females and males respectively.

In sum, overall income inequality became significantly higher, albeit with sharp year-to-year fluctuations, with the lowest inequality level observed by 1973 and the highest in 1987. As observed also in the other country studies included in this volume, the increased share of skilled labour income accounts for the surge in overall inequality during this period. These results are explained mainly by the unequal human capital investment opportunities as: (i) only a minority of the labour force attained more than 12 years of schooling (then the threshold denoting a break in the yield curve); (ii) there were significant differences in the quality of education between students from the richest quintile and the rest; (iii) efforts were extremely weak and biased towards the well-educated; and (iv) the labour-training system of higher and professional education became more regressive when public funding for the universities was cut in the 1980s and public institutions yielded in importance to the private ones. These facts have contributed to perpetuating historical inequities across generations.³ What are the forces underlying them?

² Returns to schooling in Chile are convex for both datasets used here. On average, the returns to primary, secondary, and tertiary education are 5, 10, and 22 per cent, respectively. These figures validate the use of 12 years of schooling as a benchmark in this period.

³ Núñez and Gutiérrez (2004) have performed in-depth research on the persistence in the correlation between the economic level of parents and the probable income level of their children.

5.2.3 *Underlying Causes of the Increase in Income Inequality over the Period 1973–1989*

The structural reforms introduced over the years 1973–89 had a regressive bias. Reforms, on the one hand, increased inequality as they promoted a development model that pivoted around the *neutrality* of policies in a society affected by a high initial level of inequality and social segregation. On the other hand, failure to take into account the structural heterogeneity of agents—in combination with significant market failures and segmentation—translated into recessive adjustment processes that were characterized by low productive investment and high unemployment. Indirectly these policies had quite a regressive impact on the vulnerable population. These regressive effects were also compounded by the debt crisis, but their severe social and economic impacts were exacerbated by the policy model adopted by the dictatorship.

The economy underwent a radical liberalization process. Given the swift import liberalization, there was a marked increase in the skill premium that contributed to the worsening of wage distribution. Import liberalization impacted on the production structure and on employment, particularly in manufacturing, while the impact on exports was much weaker. At the same time, exports were dominated by natural resource-intensive products that used little unskilled labour, while the rest of the domestic economy remained depressed. Consequently, there was a clear negative net impact on employment, productive investment, and economic activity during the years of import liberalization. This net negative balance was strengthened by the exchange rate appreciation during 1979–82 and by the pro-cyclical bias of macroeconomic policies (Ffrench-Davis 2010).

As suggested also in Chapter 14, the 1975 reform of the tax system included the elimination of wealth and capital gains taxes, and a substantial reduction of the burden on profits. On the other hand, adoption of a value-added tax was completed and existing exemptions for basic consumer goods were abolished. In 1984, a second important tax reform was introduced: the 40 per cent tax on reinvested profits was removed, while only the 10 per cent general tax on profits was retained. In addition, corporate taxes became a tax credit to be deducted from the progressive personal income tax of firm owners. Later, extremely generous income tax privileges were introduced for the purchase of equity stock of firms being privatized. Finally, prior to the 1988 plebiscite, VAT was reduced from 20 to 16 per cent, taxes on several luxury goods were reduced or suppressed, and in 1989 the remaining 10 per cent corporate income tax was eliminated, conditional on profits being reinvested. The transitory high price of copper collected by CODELCO (the national public copper producer) helped to fill the ensuing shortfall in tax revenue.

Financial market reforms led to a sharp increase in short-term transactions, but much less so in long-term financing, while real interest rates averaged out over 1975–82 at the prohibitively high annual rate of 38 per cent (Ffrench-Davis 2010). Increasing financial inflows steered the economy towards a path of unsustainable current expenditure that culminated in the deep crisis of 1982 and the subsequent long-lasting recession. The state also intervened to avoid bank collapse, though the high cost of rescuing the financial system and the borrowers (35 per cent of GDP) involved additional reductions in social spending and public investment during the rest of the 1980s. During 1973–89, investment rate remained significantly lower than in the 1960s, indicating failure of the domestic capital market reforms to finance new productive capacity, while the increased capital inflows crowded out domestic savings.

Privatization of many production units owned by the state began in the mid-1970s, a period characterized by sharp recession and extremely high domestic interest rates. Thus, only a few private groups (mainly those with access to external credit) were able to buy the state assets being privatized, exacerbating the concentration of wealth and power in the country (Devlin and Cominetti 1994).

Labour legislation also underwent major regressive changes: dismissal of workers was made easier, and labour tribunals were abolished (although reintroduced in 1986); unions were suspended in September 1973 and labour leaders repressed; in 1979, unions were authorized (albeit with limited powers), the rights of union leaders were restricted, and the segmentation of labour unions was actively encouraged (Mizala and Romaguera 2001). Combined with political repression and economic depression, legislation was effective in reducing the power of labour organizations.

During the 1980s, the dictatorship implemented a sweeping educational reform. First, the government decentralized the administration of public schools, transferring responsibility for school management from the ministry of education to municipal governments. Second, the funding of public and private schools was changed so that municipalities received a per student voucher for every child attending their schools. As a result, enrolment losses began to have a direct effect on municipal budgets. Private schools that did not charge tuition also received the same per student voucher as public schools. Tuition-charging elite private schools continued to operate without public funding. Consequently, education has become increasingly privatized since the voucher reform.

Private pension fund management companies (AFPs) began to operate in 1981 in an abrupt transition from a pay-as-you-go to a capitalization system. The negative features of this change can be summarized as follows. First, the reform led to a decline in public income as revenue was transferred to

the AFPs, while the public sector was left with the responsibility for financing current and near-future pensions. As a consequence, the public social security deficit rose from 2 per cent of GDP in 1980 to 7 per cent in 1983–6 (Uthoff 2001). Second, the reform failed to include lower-income informal or self-employed workers. In 1988 only 55 per cent of the working people were contributing to either the new private system or the remaining old public system. Third, the reform led to a greater concentration of power in the hands of AFP owners.

5.3 Income Distribution and Poverty after the Return to Democracy, 1990–Late 2008

5.3.1 Changes in Inequality⁴

Diverse periods with different socioeconomic outcomes can be distinguished from 1990 onward. During 1990–5 there were significant improvements in real average and minimum wages and social expenditure while poverty fell sharply, and employment, social security coverage, and labour participation increased steadily. The macroeconomic environment, with a well-aligned real exchange rate and sustainable external balance, and with labour and capital operating close to full employment, provided a significant progressive equity dividend. Average GDP growth exceeded 7 per cent.

Progress in poverty reduction and wage increases, however, slowed down after 1996 as GDP growth declined because of a persistent shift towards pro-cyclical macroeconomic policies and the 1999 contagion of the Asian crisis. Consequently, there was a sharp rise in unemployment and a slow-down in poverty reduction (Figure 5.4), with the recessive effects on exports and domestic economic activity prevailing until 2003 (Ffrench-Davis 2010: chapter IX). Nonetheless, in 1999–2003 the minimum wage, salaries of teachers and of national health service workers, and public pensions all received special raises. The associated higher fiscal expenditure was financed with new tax revenue.

The year 2004 witnessed the start of a recovery and a strengthening of social policies which was continued during the recent global crisis. In parallel, employment recovered especially in the formal sector, while new social programmes such as the *Chile Solidario* and the ambitious Social Security Reform of 2008 focused strongly on the more vulnerable with a significant ‘solidarity pillar’. As a result, while 45.1 per cent of the Chilean population had been poor in 1987, the ratio fell to 21.7 per cent in 1998, and to 13.7

⁴ See Cornia (2010) for a comparative analysis of recent centre-to-left regimes in Latin America.

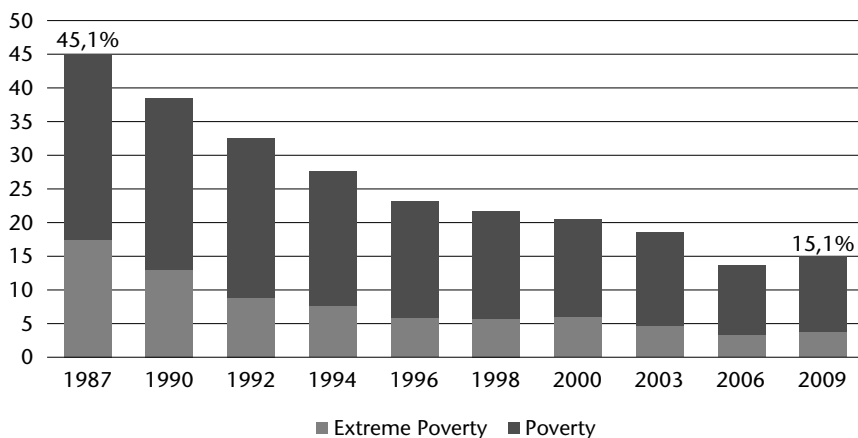


Figure 5.4. Poverty evolution, 1987–2009, Chile (% of the population)

Source: Computed by the authors, based on CASEN data.

in 2006, although in 2009, under the impact of jumping international food prices, it had worsened to 15.1 per cent (Figure 5.4).

Income distribution has also evolved favourably since the return to democracy as confirmed by several survey data. Progress was significant in the early 1990s, with a reversal during the recession of 1998–2003 and further improvement in the late 2000s. Despite these improvements, it is clear that the distribution of income is still highly regressive.

The results of the University of Chile Employment Survey for Santiago (Figure 5.1) show, in fact, a statistically significant improvement in the quintile ratio since 1990.⁵ Similar conclusions emerge from an analysis of the Gini index (Figure 5.1). In addition to economic policy effects, demography has played an important role in this improvement (Contreras and Ruiz-Tagle 1997): average number of household members fell in all quintiles between 1988 (4.09) and 2007 (3.55), but the decline was stronger in the bottom quintile than in the top.

Thus, the gains in income distribution took place mainly in the early years when the *reforms of the reforms* were introduced, injecting a dose of equity into the regressive neoliberal model inherited from the dictatorship. The new approach implied a sustained increase of 4.1 per cent of real average wages and 5.2 per cent in minimum wages during the period 1990–7 (Table 5.1), as well as a steady increase in employment (Table 5.2). We return to this issue later.

⁵ These figures are based on household income per capita (Larrañaga 2001). The observations (which refer to June of each year) suffer from a great deal of ‘noise’, which is why we use three-year moving averages in Figure 5.1.

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Table 5.2. Macro and social indicators, 1974–2010, Chile (average annual growth rates, %)

	1974– 1981	1982– 1989	1990– 1998	1999– 2008	2009– 2010
1. GDP growth	3.0	2.9	7.1	3.7	2.5
2. GDP growth per capita	1.5	1.2	5.4	2.6	1.5
3. Growth of employed people	2.4	3.3	2.4	2.1	3.7
4. Gross investment ratio (% of GDP)	13.7	13.4	20.3	22.3	26.5
5. Net investment ratio (% of GDP)	4.7	4.4	13.1	12.8	14.2
6. Unemployment rate (incl. emergency programmes)	15.6	20.1	7.2	9.8	10.3
7. Unemployment rate (official)	12.3	13.9	7.2	9.0	8.9

Note: There is a significant change of figures with the new 2010 Employment survey from INE. Rows 1–3 are average annual growth rates.

Source: Authors' calculations based on data from the Central Bank and INE.

The best-known survey (CASEN) confirms an increase in the share of monetary income received by the poorest quintile between 1987 and 1996 and a decrease for the richest quintile (Feres 2001). From that time onwards, however, this survey depicts ups and downs in income distribution. After the long-lasting recessive adjustment of 1998–2003, income distribution improved again in line with the economic recovery, with the Gini index falling from 0.55 in 2003 to about 0.53 in 2006 and 2009.

Finally, there has also been a significant increase in 'investment in people' since 1990 (Bravo and Contreras 2004). As a result, if corrected for non-monetary items (i.e. considering the imputed value of educational and health services, housing subsidies, monetary transfers such as pensions of non-contributory seniors, family allowances, and unemployment insurance), distribution improved considerably, and the ratio between the richest and poorest quintiles fell in 2006 from 13.1 to 7.1. As social spending rose significantly under democracy (Table 5.1), the key question is whether it actually led to an increase in the volume and/or quality of services or whether the same services were merely provided at greater cost to the state.⁶ In the case of education, enrolment and the number of years of schooling increased sharply, but the quality of education and the distribution of educational opportunities still need considerable improvement.

⁶ A substantial share of the increase in social spending in the 1990s was directed to raising the depressed wages of teachers and national health service personnel. Unfortunately, while the quality of services fell as a result of declining wages and social status of these public servants in the 1980s, improved incomes are not automatically followed by restored quality.

5.3.2 Decomposition of Inequality Changes: 1990–2009

In this section, a decomposition of income inequality changes between 1990 and 2009 is carried out. Acknowledging data shortcomings, we decompose total income in labour income, monetary transfers from the government, and other sources of income on the basis of the CASEN survey. In turn, we decompose total income into labour income and other income on the basis of the Employment Survey.

Table 5.3 shows the share of each income source in total household income between 1990 and 2009. The data show a moderate increase in the labour share between 1990 and 1996, and a reversal up to 2003, followed by a notable rise in its share and a spectacular drop in that of other income, with the latter falling between 2003 and 2009 from 25 to 17 per cent. In turn, monetary transfers account for a tiny but stable 1 per cent over the entire period, except in 2009 when these jump to 2 per cent (highly focused in the poorer quintiles).⁷ Similar results on the evolution of the share of labour income are obtained from the Employment Survey (not shown), which signals that during 2006–09 labour income represented about 85 per cent of total household income. One potential explanation of such a high share in both surveys is the assumed under-reporting of other sources of income, in particular that from capital, as stated above.

The CASEN survey indicates a high level of labour income inequality (Figure 5.5), with the Gini averaging 0.59 over 1990–2009;⁸ its lowest value

Table 5.3. Participation of the income sources in total household income, 1990–2009, Chile (%)

Year	Labour Income	Transfers	Other income
1990	74	1	25
1992	77	1	22
1994	78	1	21
1996	78	1	21
1998	77	1	22
2000	76	1	23
2003	74	1	25
2006	81	1	18
2009	81	2	17

Source: Calculated by the authors, based on CASEN data (1990–2009).

⁷ However, these cash transfers represent a significant fraction of household income of the poorest deciles. According to the CASEN 2009 dataset, monetary subsidies represented about 36 per cent of household income in decile I.

⁸ A similar figure is estimated from the Employment Survey for Santiago, in which the Gini of labour income is 0.56 in the same period.

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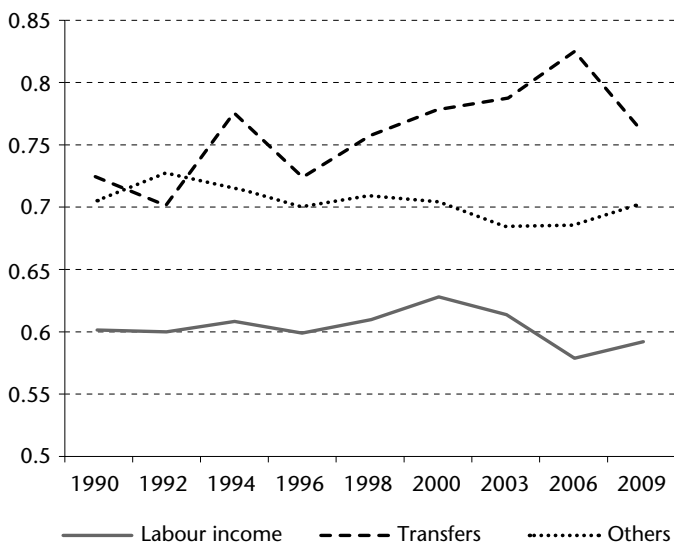


Figure 5.5. Gini index by income source, 1990–2009, Chile

Source: Computed by the authors, based on CASEN data (1990–2009).

was recorded in 2006 (0.58). With a Gini coefficient averaging around 0.75, monetary transfers (ranked according to the size of the transfer, and not according to total household income per capita) were also distributed very unequally, although in this case strongly favouring the poor, as indicated by the negative correlation between total household income and monetary transfers. In other words, the poorest households receive higher transfers, thus reducing overall income inequality. Finally, the average Gini coefficient of ‘other income’ (which correlates positively with total income) stagnated around a high 0.70. Its contribution to inequality, however, decreased sharply, given the drop in other income captured by the 2006 and 2009 CASEN surveys (Figure 5.6). Figure 5.7 brings together the distributive effects of the three monetary income components covered by CASEN. It shows a significant drop in the Gini coefficient in 2006 and 2009. The change is mostly determined by the abrupt fall in the share captured by ‘other income’ in the surveys of those two years (see Table 5.3). The sign of the change in income distribution is consistent with that of the Santiago survey of Universidad de Chile, but much stronger and not matching with data of the national accounts.

Table 5.4 presents the changes in the relative contribution of skilled and unskilled labour for each source of income. Skilled labour income exhibits a higher relative contribution to inequality with a rising trend over time.⁹

⁹ Which corresponds to the distribution of individual wages among all employees.

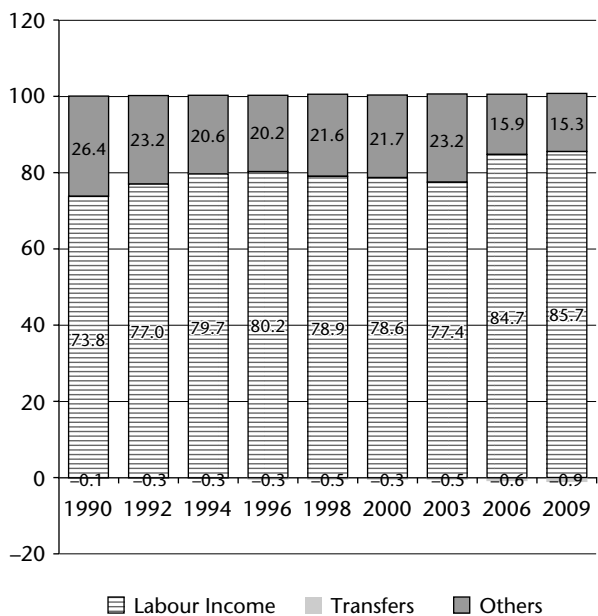


Figure 5.6. Relative contribution to inequality by source, 1990–2009, Chile
Source: Computed by the authors, based on CASEN data (1990–2009).

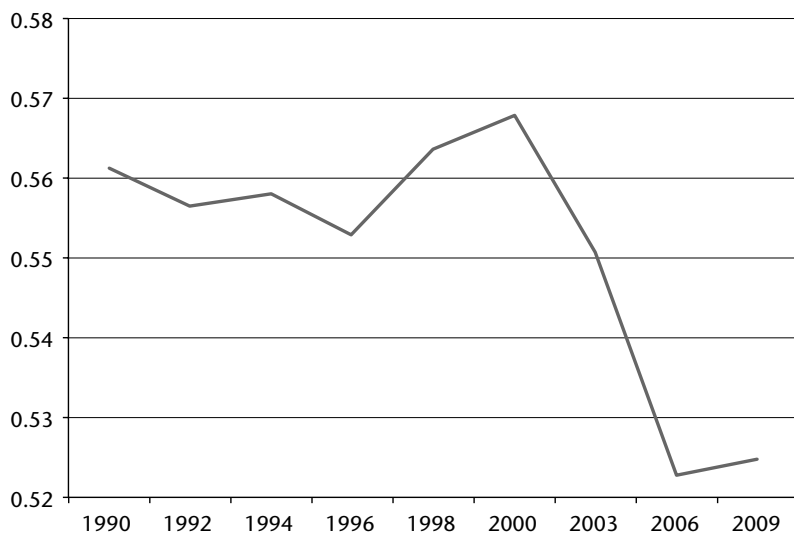


Figure 5.7. Gini index, 1990–2009, Chile
Note: Gini index is calculated on per capita total household income.
Source: Computed by the authors, based on CASEN data (1990–2009).

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Table 5.4. Relative contribution of skilled and unskilled labour to inequality, 1990–2009, Chile

	Labour income, %		Government transfers, %	Other income sources, %	Other labour income, %
	Skilled	Unskilled			
1990	42	30	-0.1	26	1
1992	45	31	-0.3	23	0
1994	48	30	-0.3	21	1
1996	51	28	-0.3	20	1
1998	56	23	-0.5	22	1
2000	60	18	-0.3	22	1
2003	58	19	-0.5	23	0
2006	59	25	-0.6	16	0
2009	64	22	-0.9	15	0

Source: Calculated by the authors, based on CASEN data (1990–2009).

At the same time, the relative contribution of unskilled labour and other income sources is decreasing. The results show that the contribution from skilled income to total income inequality rose from 42 per cent in 1990 to 64 per cent in 2009. In contrast, the contribution of unskilled income decreased from 30 per cent in 1990 to 22 per cent.¹⁰ Finally, while government transfers reduce inequality, this effect became bigger towards the end of the period, underlining the increase in transfers to the poor.

Table 5.5 gives the relative contribution of skilled and unskilled labour income to inequality during the period 1990–2009, indicating an increase in the contribution of both male and female skilled labour. In 1990 the contribution of unskilled male labour income was 32 per cent, and 45 per cent in 2009. The contribution of skilled female labour income increased from 11 per cent in 1990 to 19 per cent in 2009. On the other hand, the effect of unskilled labour decreased, as unskilled male labour income contributed 24 per cent in 1990 but 16 in 2009, and the contribution of unskilled female labour had only a marginal effect. Naturally, monetary transfers reduced inequality.

5.3.3 The Underlying Determinants of Changes in Inequality

In the 1990s there was a significant increase in social expenditure, financed by a fiscal reform that reduced tax evasion and raised progressive taxation and the VAT rate. In the labour market, the reforms led to a substantial improvement in the minimum wage and reduced somewhat the imbalance of power between workers and employers. Furthermore, in the early 1990s

¹⁰ The Employment Survey also reveals a similar pattern.

Table 5.5. Relative contribution of skilled and unskilled labour to inequality by gender, 1990–2009, Chile

Year	Labour income, %				Government transfers, %	Other income sources, %	Other labour income, %
	Skilled		Unskilled				
	Male	Female	Male	Female			
1990	31.70	10.74	23.76	6.65	-0.13	26.37	0.90
1992	34.51	10.81	22.59	8.68	-0.25	23.24	0.44
1994	35.32	13.15	21.18	8.97	-0.25	20.57	1.05
1996	36.71	14.36	20.06	8.04	-0.33	20.16	0.99
1998	39.87	15.75	15.83	6.88	-0.47	21.56	0.58
2000	45.42	14.44	12.50	5.42	-0.30	21.68	0.84
2003	42.21	16.09	13.19	5.71	-0.50	23.15	0.14
2006	40.66	18.72	17.66	7.33	-0.62	15.92	0.33
2009	45.13	18.81	15.84	5.88	-0.93	15.26	0.01

Source: Calculated by the authors, based on CASEN data (1990–2009).

innovative targeted social programmes were introduced, such as priority programmes for elementary schools in poor zones and labour training for the young (Raczynski 1996). In the 2000s, three ambitious, more comprehensive programmes were implemented which directly benefited the poorest households: *Chile Solidario* (Larrañaga, Contreras and Ruiz-Tagle 2012); the gradual health reform AUGE; and a significant social security reform (Arenas 2010).¹¹

In addition, significant reforms concerning macroeconomic management in the first half of the 1990s had major positive effects on productive employment and wages. The introduction of the unremunerated reserve requirement and other prudential mechanisms for regulating volatile capital inflows played a key role in achieving sustainability of the macroeconomic balances, a high level of employment, and the 7 per cent average annual GDP growth in 1990–8 (Ffrench-Davis 2010).

These policies led to a substantial growth in the real average wage that was 41 per cent higher in 1998 than in 1989, and the minimum wage had jumped 63 per cent. Notwithstanding the success achieved with the counter-cyclical macroeconomic approach introduced in 1990, this policy was gradually phased out during 1996–8, and subsequently abandoned in favour of a totally open capital account and a free-floating exchange rate.¹² The recessive adjustment initiated in 1998 in the face of the contagion of the Asian crisis, and exacerbated by the reversal to a pro-cyclical macroeconomic approach,

¹¹ For a discussion on the social protection policies, see Larrañaga and Contreras (2010). For a discussion and proposals on social rights, see FSP (2005).

¹² Ffrench-Davis (2010: Chapter VIII) analyses the shift from what he defined as ‘productivistic or development macroeconomics’ towards a ‘financieristic or neoliberal macroeconomics’.

weakened the growth of wages. Nevertheless, by 2009 the average real wage exceeded by 75 per cent that of 1989, whereas the minimum wage had grown 129 per cent, and family allowances had been multiplied by 2.65 (Table 5.1). In addition, per capita public expenditure in education and health multiplied by 4.2 over 1990–2009. The unemployment rate also improved considerably, averaging 8.7 per cent during 1990–2009 compared to 18 per cent during 1974–89 (see Ffrench-Davis 2010).

Two other positive trends in the labour market must be underlined (see also Chapter 12). One is the rising share of workers employed in the formal sector who contribute to social security. The legacy of the dictatorship policies was the low share (41 per cent of the labour force in 1989) of workers making monthly contributions to the private social security scheme created in 1981. Under the democratic regimes, the proportion had risen steadily to 46 per cent by the mid-1990s, followed by stagnation until 2004, under the Asian crisis; the positive trend was reinstalled by the recovery of economic activity and a legal reform enforcing some formalization of the labour market,¹³ with up-to-date contributors increasing to 56 per cent of the labour force in 2009. Other outstanding trend recorded during this period was the increase in female labour-force participation from 35 per cent in 1990 to 48 per cent in 2009, according to the CASEN survey.

Other improvements included the introduction in 2002 of comprehensive unemployment insurance for private-sector workers. Previously, only an unemployment subsidy of a negligible amount had existed and severance payment was based on one month per each year of employment, which was relevant mostly for organized workers with stable jobs. The new scheme includes two funds. One is financed by worker and employer contributions, which are credited to the individual account of the worker; the contribution of the employer (in the case of contract without a time limit) is credited proportionally against the severance liability of the employer. The second, the *solidarity fund*, is financed by government and employer contributions. The mechanism started to operate during a period of relatively high unemployment, mostly as self-insurance since the benefits received by the unemployed were almost completely self-financed by their own contributions during their period of employment. In all, only 3 per cent of the benefits paid included a complement from the solidarity fund. Notwithstanding that the insurance was created in a recessive period, the two funds had accumulated a stock equivalent to more than 1 per cent of GDP, thus performing pro-cyclically from a macroeconomic perspective. In 2009 the parliament approved a government project that enhanced the coverage of and access to the solidarity

¹³ President Lagos enacted legislation demanding large firms to take responsibility for the fulfilment of labour contracts and for the payment of social security by their sub-contractors.

fund (giving access also to workers with short-term contracts), introduced countercyclical features in the benefits, and sought to improve job-seeking intermediation for the unemployed and access to labour training.

Social policies—together with the more efficient real macroeconomic management that laid the foundations in the early 1990s for faster growth and large-scale job creation—enabled the country to achieve a drastic reduction in poverty, and some modest improvements in the highly unequal income distribution inherited from the dictatorship in 1990.

5.4 Inequality and Poverty Changes During the Global Crisis and Post-Crisis Period¹⁴

When the contagion of the global crisis hit in 2008, trade and financial shocks led to a contraction of aggregate demand, followed by a drop in output, employment, and investment. Now, the government adopted a decidedly countercyclical approach, making use of a public stabilization fund. Expenditure was increased sharply despite the decline in tax revenue. The strong countercyclical fiscal policy was the main force compensating for the negative external shocks, and the domestic economy had already enjoyed a significant recovery by the last quarter of 2009. Countercyclicality of fiscal policy was effective in 2009.

5.4.1 The Global Crisis Impact: Late 2008 to 2009

Prior to the global crisis, Chile had benefited from exceptionally high copper prices that allowed the treasury to accumulate a sizeable stabilization fund (FEES) for difficult years. Indeed, in 2006–8 the government recorded annual fiscal surpluses of 7 per cent of GDP, while the treasury became a net creditor. On the negative side, international prices of oil and food rose steadily. By mid-2008, the price of food accounted for half of the 10 per cent annual inflation recorded at the peak of the commodities boom. It was mainly an imported inflation. Notwithstanding that fact, the central bank consistently pursued a policy of inflation targeting, at the expense of growth. By late 2008, when Chile was already exhibiting negative monthly inflation, the monetary policy interest rate exceeded that of the USA by 7 points.

When the contagion of the global crisis hit Chile in September–October 2008, the economy fell into recession. The price of copper, which represented half of the country's exports, abruptly dropped to US\$1.4 a pound from a

¹⁴ See Ffrench-Davis and Heresi (forthcoming) for further details.

peak of US\$4. The volume of exports also plummeted 6 per cent in 2009 compared with an annual growth of 8 per cent in 1990–2008. In addition, capital flows were reversed, producing large increases in domestic interest rates and a credit crunch, particularly in the case of small and medium-sized enterprises, eroding both their sales and funding. After an annual growth rate of over 8 per cent between 2004 and the third quarter of 2008, domestic aggregate demand fell 8 per cent during the first three quarters of 2009 compared to the same period in 2008. At the same time, GDP went from an annual growth rate of 5 per cent to a contraction of 2.9 per cent.

Thus, trade and financial shocks led to contracting aggregate demand, followed by a drop in output, employment, and the investment ratio. During 2009, the government adopted a decidedly countercyclical approach,¹⁵ making use of FEES resources equal to 4.7 per cent of GDP, and despite a 20 per cent drop in tax revenue, public expenditure increased 17 per cent, which placed the budget deficit at 4.4 per cent of GDP. Such strong countercyclical fiscal policy worked to offset to a large extent the negative external shocks and the economy had already experienced a significant recovery by the last quarter of 2009.

As observed also in the other country case studies in this volume, during economic crises, poverty incidence and income distribution tend to deteriorate. Poverty rates, after decreasing from 45 to 13.7 per cent of the population between 1987 and 2006, increased again to 15.1 per cent in 2009. This worsening can be attributed, first, to the hike in the cost of the food basket used to measure the line of indigence and the poverty line; actually, if the figure is controlled for the rise in food prices, poverty falls from the 15.1 per cent to 11.5 per cent.¹⁶ Second, the national unemployment rate increased from 8.3 per cent in 2008 to 10.7 per cent in 2009 (Figure 5.2). Nominal wage adjustments moderated in 2009 to 6.4 per cent (8.5 per cent in 2008), but given the sharp CPI break in 2009, average real wages increased 4.8 per cent following their stagnation in the previous year.

5.4.2 The 2009 Social Policy Stand and Its Impact

As noted, during the 2009 crisis fiscal policy became strongly countercyclical, including a series of social measures aiming at mitigating the negative effects of the crisis on the most vulnerable population. One of the key measures was the granting of two vouchers equivalent to nearly one-third of the

¹⁵ The central bank was slow in launching monetary relaxation. It was not until January 2009 that it began the process of reducing the interest rate, ending at 0.25 per cent in July. However, the cost of loans to SMEs remained high and bank profits were also quite high.

¹⁶ For instance, 11.5 per cent is the figure published by CEPAL, which makes no adjustment by the price of food.

monthly net minimum wage for each dependent in low-income families. Wide-ranging social security changes introduced prior to the crisis in 2008 to improve the pension system (Arenas 2010) also contributed to sheltering the poor from the impact of the crisis.¹⁷ The 2008 reform, in fact, raised the basic pension for people over 64 years, introduced a sliding-scale complementary subsidy for pensions up to 1.5 times the minimum wage, adopted a subsidy for young formal sector workers equivalent to social security contributions for two years, and introduced a supplement to the pension of mothers for each child raised. In addition, the reform proposed by the government considered the creation of a public AFP alongside the private AFPs; that proposal was defeated in parliament. On the other hand, the country's largest state-owned corporation, the National Copper Corporation (CODELCO) capitalized US\$1 billion to finance its investment projects while the capital of the public-owned Banco Estado was increased by 50 per cent.

Since the volume of exports continued to be depressed, production for the domestic market (where considerable underused labour and capital were available) was the main driver of the vigorous recovery which took place in 2010 (see Ffrench-Davis and Heresi forthcoming). The recovery of economic activity led to an increase in capital formation. The recovery, beginning during the last quarter of 2009, was temporarily interrupted by an earthquake in early 2010. During the six quarters after March 2010, domestic demand grew by double digits, sustaining a 7 per cent annual growth of actual GDP; actual GDP could respond to demand because of the large output gap generated in 2009.

In general, all imports expanded notably, due in part to a persistent exchange-rate appreciation, while the dynamism of export volumes declined steadily between 2003 and 2010. Only the high price of copper helped to finance the difference. However, this accommodation of the economy to a real exchange rate that is compatible only with a copper price that far exceeds its historical average as well as its likely long-term trend is a major source of concern from both a growth and distributive perspective. High copper prices have been internalized in fiscal accounts via notable increases in the long-term price projected in structural budgets.¹⁸ Furthermore, the exchange rate faces additional pressure as a result of growing capital inflows due to the differential between domestic and international interest rates.

In short, the continuation of a free-floating exchange rate policy implies renouncing sustainable macroeconomic policies with aggregate demand

¹⁷ A substantive 'solidarity pillar' was added to the 1981 reform that had replaced the pay-as-you-go system with an individual capitalization. The regressiveness of individual accounts, given the precarious labour market, was partially compensated by the public solidarity pillar.

¹⁸ Nominal 114 per cent increase between the 2006 and 2010 budgets.

regulated to levels close to the productive frontier, 'right' macro-prices, and a favourable distributive impact (on this see also Chapter 10). Under massive and volatile capital flows and highly variable terms of trade, a free exchange rate fluctuates widely. Such volatility discourages the generation of value-added in the natural resource sector, the access of SMEs to export markets, productive investment in tradables, and the use of the opportunities offered by trade agreements; this particularly menaces the survival of national manufacturing firms and the jobs they could generate but which are crowded out by artificially cheap imports.

5.5 Conclusions and Remaining Challenges

During the last four decades, Chile has gone through remarkable changes in income distribution and poverty, including profound economic and social policy reforms. Income inequality worsened markedly in the 1970s and 1980s, but a significant improvement was recorded in the first half of the 1990s owing to the economic and social policies introduced by the new democratic regimes. Subsequently, however, with the recessive adjustment and rising unemployment in 1999–2003, a slowdown in poverty alleviation and some deterioration of income distribution were recorded. Then, the recovery starting in 2004, and a new wave of progressive social reforms, brought a return in 2004–9 to the improved distributive trend of the 1990s, but the main challenge of progressively reducing the still-high inequality remains.

The three key variables behind these ups and downs in inequality and poverty are: the size and incidence of social expenditure, which is still restricted by a low tax/GDP ratio; the macroeconomic environment; and the scant attention paid to the structural heterogeneity prevailing in the domestic market and penalizing the SMEs.

An increase in production and employment in itself has a strong effect on poverty and income distribution. Indeed, the generation of productive employment is one of the main channels through which economic and social progress is realized. Policies intended to strengthen the demand for labour, to reduce gender and skill gaps, and to make the supply of labour more flexible and more adaptable to technological changes—together with real macroeconomic stability, vigorous physical capital formation, a strong drive towards innovation, and increasing investment in people—play a significant role in improving the distribution of opportunities and building more equitable markets.¹⁹

¹⁹ See Consejo Asesor Presidencial de Trabajo y Equidad (2008).

Public action requires a comprehensive move towards equitable policies that improve the productivity and employability of the middle- and low-income segments of society. The required financing should come from higher taxation on the upper percentiles of the income distribution, where the ownership of capital is concentrated even though it is generally underestimated in surveys. At the present stage of Chile's development, there are crucial potential complementarities between growth and equity.

Chile achieved unprecedented economic growth during most of the 1990s. This growth was sustained by a notorious expansion of capital formation and productive capacity. At the same time, employment and salaries rose steadily, and some improvement was achieved in income distribution. A coherent macroeconomic approach was a key ingredient of these achievements. During the years that followed, economic growth slowed markedly but the social agenda intensified. However, the strengthened social agenda was not accompanied by gains in production. The modest growth recorded since the Asian crisis is largely due to the shortcomings of the macroeconomic policies followed since the late 1990s, which shifted the focus of public policy from 'productivism' to 'financierism'. It is also due to the contradictions or absence of several microeconomic policies.

Macroeconomic policy should focus not only on low inflation and fiscal discipline, but also on its impact on the level of domestic economic activity, and on key macro-prices such as the exchange rate, which affects asymmetrically the SMEs and the large corporations, the traditional versus the non-traditional exporters, and the unskilled versus the highly skilled workers. Indeed, given the deep structural heterogeneity of the production factors and markets, the macroeconomic environment can make a remarkable difference for both growth and equity. In this respect, the main challenge is to grow while making the productive process increasingly more equitable, that is, disseminating among all agents, particularly among the SMEs and unskilled workers, the capacity to operate progressively more efficiently in the market. It is in these sectors that the large income and productivity gaps are found. And it is in these areas that the Chilean economy can realize considerable efficiency gains, promote growth-with-equity, and further reduce inequality levels that, despite recent improvements, are still among the highest in the world.

To reach these objectives macroeconomic policy should focus on the 'productivism' of the real economy by designing monetary, fiscal, exchange rate, and capital account policies that keep effective demand persistently close to potential GDP. In parallel, profound microeconomic reforms are also needed. These include structural reforms in the capital markets, so as to develop long-term financing opportunities for small businesses, improved labour training programmes building on the important advances which were

realized in terms of the coverage of education but which were accompanied by deterioration in its quality, and vigorous public support to promote innovation in the SMEs.

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6

Uruguay's Income Inequality and Political Regimes over the Period 1981–2010*

Verónica Amarante, Marco Colafranceschi, and Andrea Vigorito

6.1 Introduction

In the last seven years Uruguay has been governed by a centre-left coalition, *Frente Amplio*, that took power soon after a severe economic crisis. Soon after recovery from the crisis, and in a context of macroeconomic stability and rapid economic growth fostered by the increase in international demand for commodities, several redistributive reforms were introduced. The salient characteristics of this package of policies are consistent with what has been labelled in Chapter 1 as 'open economy growth with equality'.

These interventions were aimed at reducing inequality and alleviating poverty, and included: an expansion and substantial increase of non-contributory public transfer programmes; systematic increases in real minimum wages; restoration of centralized wage-setting mechanisms; the inception of an income tax; health reform; and substantial increases in public expenditure.

When this new government took power, household income inequality had been growing steadily since the mid-1990s. Despite the reforms, it continued to grow, albeit modestly, until 2007. In 2008 inequality declined and went on decreasing during 2009 and 2010, although it is too early to claim that this is a new trend.

* We would like to thank Giovanni Andrea Cornia and Juan Ponce for their comments on earlier versions of this chapter and participants at the UNU-WIDER workshop meetings in New York (December 2010) and the Buenos Aires (September 2011). Jerónimo Roca also provided useful comments on a previous version of the chapter. As usual, all errors and opinions presented here remain ours.

To understand the evolution of inequality during recent years and its potential causes, we first present an overview of the main political regimes (on this, see Chapter 3) and the evolution of inequality between 1981 and 2010 (Section 6.2). Then, we examine the driving forces of this evolution and then focus on the effects of two of the recent policy reforms carried out by the centre-left government: income tax and expansion of public transfers in cash (Section 6.3). Given that the present level of inequality is still above the pre-crisis one, we simulate possible expansions of these two reforms and assess their potential effect on the reduction of inequality (Section 6.4). Finally, Section 6.5 gathers our main conclusions.¹

6.2 Policy Regimes in 1980–2010 and the Evolution of Income Inequality

During the last 30 years Uruguay has experienced significant variations in the prevailing policy regimes and also in its income distribution, although inequality levels were low throughout the whole period in comparison with other Latin American countries (ECLAC 2010; SEDLAC 2011).

Due to data availability, our analysis starts with the last years of the *de facto regime* and finishes with an examination of the reforms carried out by the centre-left government in 2005–10. Four main policy regimes can be identified throughout these years:

1973–84	Extreme right regime (dictatorship)
1985–9	Centre-right
1990–2004	Right
2005–10	Centre-left

The main features of each period in terms of economic and redistributive policies, GDP growth, and the evolution of inequality are given in Table 6.1.

The entire period embodied episodes of economic growth and recession, and fluctuations in inequality (Figure 6.1 and Appendix Table A6.1). Amarante et al. (2011b) present a detailed description of the different policy measures adopted during each period.

Growth incidence curves (GICs) allow the assessment of this relationship by depicting the rate of income growth by percentile along the income distribution, comparing the first and last years of a certain period (Ravallion and

¹ The analysis presented in this article is based on the Uruguayan household surveys, *Encuestas Continuas de Hogares* (ECH) which gather information on socioeconomic variables and post-tax income. In order to give comparable estimates for the whole period we restrict our sample to urban areas of 5000 or more inhabitants, which represent around 85 per cent of total population. Details on the ECH can be consulted in Amarante et al. (2011b).

Table 6.1. Main features of the policy regimes in Uruguay in 1981–2010

Years	Political identification	Main policy measures	% Public social expenditure on GDP	Redistributive policies	GDP growth	Factor income distribution: labour share	Household income inequality change*
1981–4	Extreme right (<i>de facto regime</i>)	<ul style="list-style-type: none"> • Trade and financial liberalization 	Steady	<ul style="list-style-type: none"> • Suppression of wage councils; • Fall in real wages & minimum wages 	–1982–3 economic crisis	–	Decrease
1985–9	Centre-right	<ul style="list-style-type: none"> • Export promotion 	Steady	<ul style="list-style-type: none"> • Wage councils; • Increases in real wages 	+	+	Steady
1990–2004	Right	<ul style="list-style-type: none"> • Trade liberalization; • Privatizations 	1990–2002 = + 2002–4 = –	<ul style="list-style-type: none"> • Removal of wage councils 	1990–8 = + 1990–2003 = – 2004 = + 2002 = crisis	–	1990–6 = steady 1997–2004 = +
2005–10	Centre-left	<ul style="list-style-type: none"> • Export promotion; • Flexible exchange rates; • Fiscal equilibrium 	+	<ul style="list-style-type: none"> • Wage councils; • Increases in real wages; • income tax; • Social protection reform 	+	–	2005–7 = increase 2008–10 = mod. decrease

Note: * See Appendix Table A6.1.

Source: Own elaboration based on ECH.

Uruguay's Income Inequality and Political Regimes

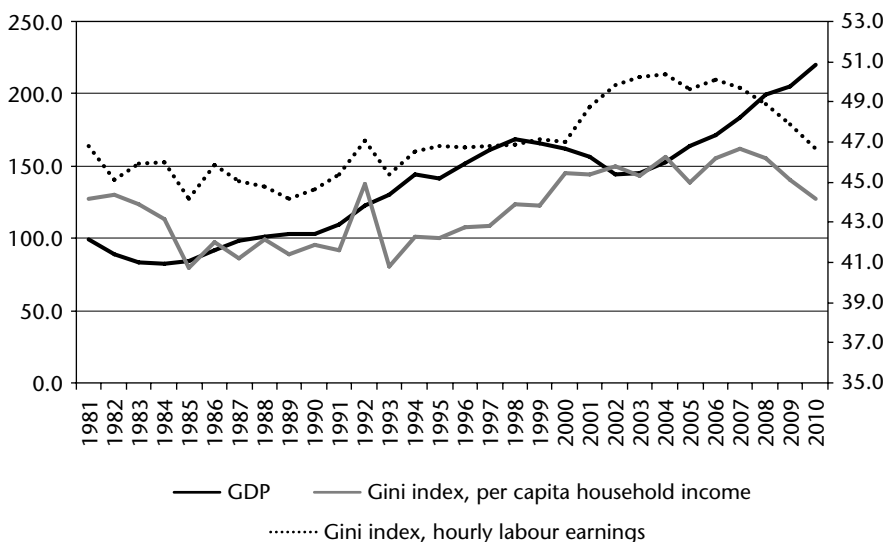


Figure 6.1. Economic growth and income inequality^a, urban areas, 1981–2010, Uruguay

Note: ^a Gini indexes are estimated for urban areas.

Source: Authors' own elaboration based on ECH and Banco Central del Uruguay.

Chen 2003). This exercise can be done starting from 1981, as micro-data are available from that year onwards. To analyse variations in income corresponding to each period, we consider the first year of a new regime as constituting both the beginning of the new regime and as the last year of the previous one (Figure 6.2).

During the last years of the *de facto* regime (1981–5), household income decreased at an average annual rate of 12.5 per cent. This fall was more acute for poorer than richer households, and as a result of these movements, inequality slightly decreased in this period.² Under the moderate right regime (1985–90), household income increased and recovery took place among poorer households.

During the right-wing regime, the upward sloping GIC reflects the worse performance of poorer households. Whereas household income decreased at an average annual rate of 1.7 per cent, the fall for the first decile was 10.7

² The 1985 household survey covers only Montevideo. Hence, GICs for the two first regimes were estimated only for Montevideo, and the Gini indexes in Table 6.2 for these periods represent Montevideo.

Recent Inequality Changes in Latin American Countries

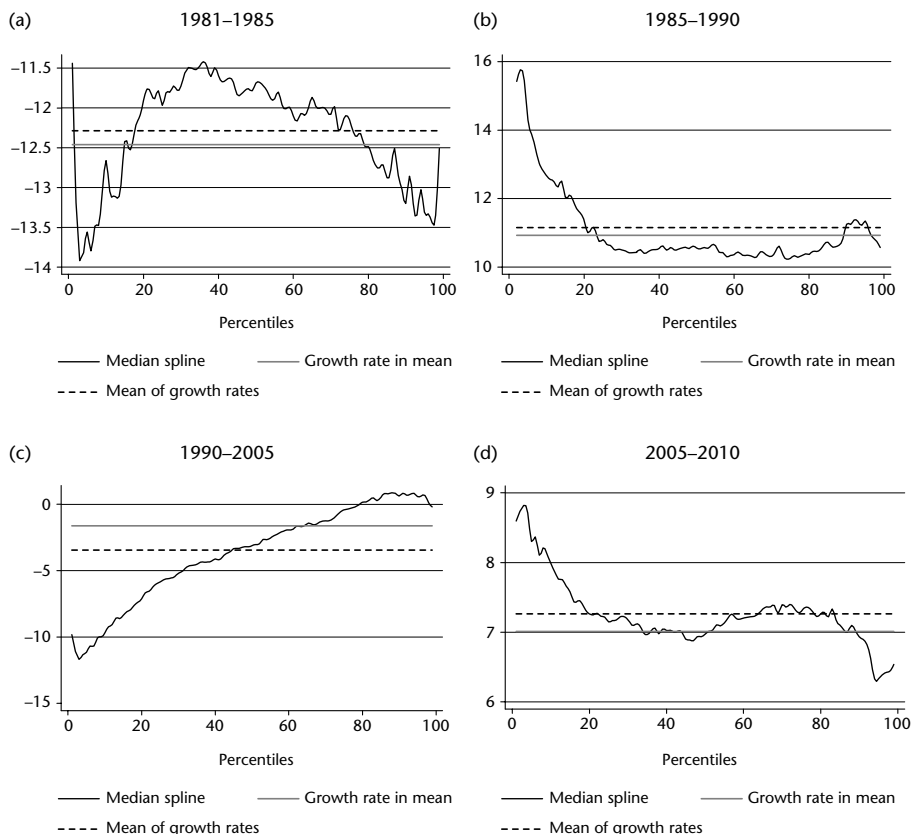


Figure 6.2. Growth incidence curves, urban areas, 1981–2010, Uruguay

Source: Authors' own elaboration based on ECH.

per cent. As a result, income inequality increased almost 3 percentage points. Finally, the centre-left regime period presents a downward sloping GIC, indicating that the growth rate of income was decreasing along the income strata. Poorer households experienced higher increases in their income, and, as a result, income inequality decreased.

6.3 Driving Forces in the Evolution of Inequality

In what follows we assess the evolution of the main income sources and then concentrate on labour earnings.

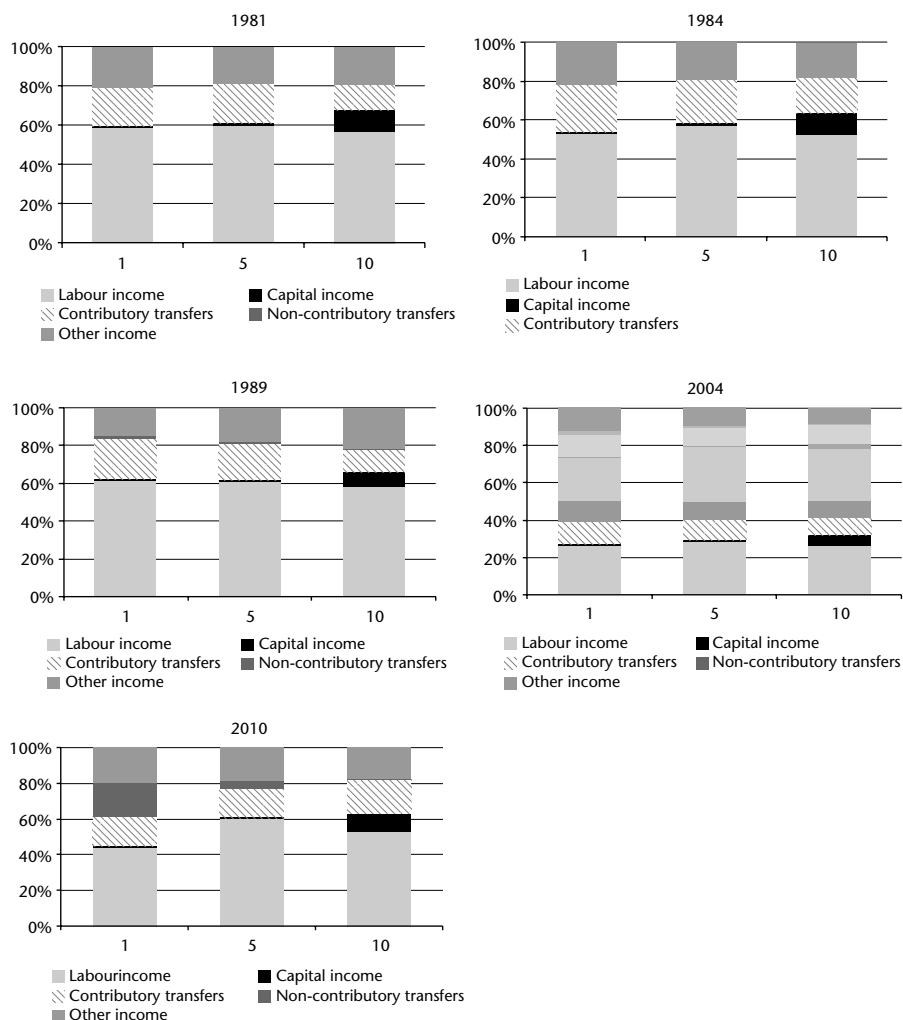


Figure 6.3. Distribution of income by source and per capita decile, urban areas, 1981, 1984, 1989, 2004, and 2010, Uruguay

Source: Authors' own elaboration based on ECH.

6.3.1 Income Sources

Labour earnings account for around 55 per cent of total household income throughout the entire period (Figure 6.3)³, although its share has lessened over the years for all income strata.⁴ In spite of under-reporting, there was

³ ECH gathers after-tax current income. Labour income adds up earnings for salaried workers, self-employed, and entrepreneurs (both in-kind and cash).

⁴ This figure is affected by the well-known fact that household surveys misreport capital income (for the Uruguayan case, see Mendive and Fuentes 1997).

an important increase in the share of capital income among the top deciles in 2004–10, although the levels were similar to those at the beginning of the period covered by this study.

The main modifications during the period to the income structure by decile refer to the increasing share of public transfers, both contributory and non-contributory. The share and location of contributory transfers have varied after 1989 when a constitutional amendment modifying the indexation mechanism of contributory pensions (promoted by pensioners' unions and later supported by *Frente Amplio*) was approved in a plebiscite. Since then, the value of contributory pensions is adjusted quarterly according to past fluctuations of the wage index. As inflation was decreasing, this rule led to a significant increase in pensions relative to wages.

The recent increased share of non-contributory transfers to household income results from the recent expansion of in-cash social benefits. When *Frente Amplio* took power, a new transfer scheme was created, *PANES (Plan de Atención Nacional a la Emergencia Social)* aimed at reaching the poorest 8 per cent of the population. In December 2007 *PANES* was replaced with the *Asignaciones Familiares Plan de Equidad*, a permanent programme that basically reshaped the previously existing child allowances system.⁵ The outreach of public transfers rose significantly and, at present, non-contributory transfers account for around 20 per cent of the lowest decile's income (Dean and Vigorito 2011).

Alves et al. (2010) carry out Shapley decompositions by income sources following Shorrocks (1999). Figure 6.4 depicts the absolute contribution of each income source to Theil's index, showing that labour income is the main contributor, and that this source and public transfers have reduced their share, whereas capital income increased its contribution to inequality during the last years.

The introduction of non-contributive transfers in recent years (a phenomenon which affected most of the region, see Chapter 16) created a redistributive pole. Although the first *Asignaciones Familiares* (AFAM) expansion was in 1999, it is possible to identify its effect accurately in the household surveys since 2001. Table 6.2 shows the absolute contribution of *Ingreso Ciudadano* and *Asignaciones Familiares* to inequality in 2001–9, indicating that even though they were redistributive, their impact on inequality has been limited.

⁵ In Section 6.4 we present the main features of this new regime.

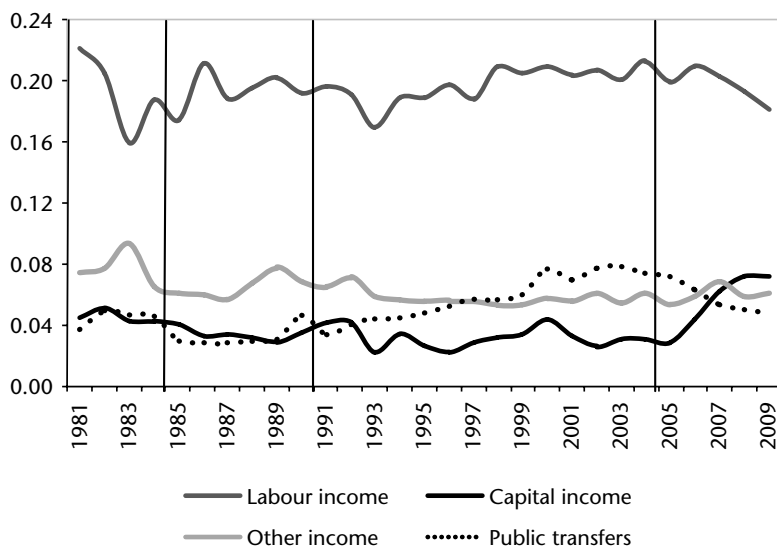


Figure 6.4. Shapley inequality decomposition by income source per capita household income, urban areas, 1981–2010, Uruguay, absolute contributions to Theil's index
 Source: Unpublished work by Alves et al. (2010).

Table 6.2. Shapley decomposition results: non-contributive public transfers per capita household income, 2001–2009, Uruguay, absolute contributions to Theil's index

	<i>Asignaciones Familiares</i>	<i>Ingreso Ciudadano</i>	Other income sources	Total
2001	-0.0007		0.3585	0.3578
2003	-0.0008		0.361	0.3604
2004	-0.001		0.3765	0.3756
2006	-0.0013	-0.0019	0.3804	0.3772
2007	-0.0013	-0.0024	0.3908	0.3871
2008	-0.0015		0.363402	0.3619
2009	-0.0015		0.3622	0.3607

Source: Unpublished work by Alves et al. (2010).

6.3.2 Labour Earnings Inequality

The return to democracy yielded a mild labour income inequality reduction due to generous increases in wages and probably to the restoration of wage councils. This trend continued during the moderate right regime, whereas 1990–2004 revealed a substantial increase in labour income inequality that can be linked to liberalization, institutional changes, and economic crisis. Labour inequality finally began to decrease after 2007.

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The labour market underwent significant changes throughout the entire period: during the two economic crises (1982 and 2002), unemployment peaked and real wages decreased substantially. Since 2006, participation and employment rates have been increasing, led by rapid economic growth, and in 2010 unemployment dropped to its minimum level. At the same time, there was a significant increase in female participation (Espino, Leites, and Machado 2010).

The average schooling of the labour force has increased in recent years, although at a slower pace than has been observed in other Latin American countries (see Chapter 15). For the working-age population (25–65 yrs), the average length of schooling rose from 7.1 years in 1981 to 9.9 in 2010. At the same time, the educational gap between the richer and poorer quintiles increased. Whereas the absolute difference between years of schooling of the working-age population in the richer and poorer quintile was 4.6 years in 1981, the gap had widened by 2010 to 6.1 (Table 6.3).⁶

Primary schooling in Uruguay was expanded and universalized during the first decade of the twentieth century. In spite of these early achievements, secondary school dropout rates since the 1990s remain around 30 per cent, and have stabilized around that level, which explains the labour force's minimal growth in schooling.

Furthermore, returns to education exhibited an increasing trend during 1990–2007, particularly for men with 16 or more years of schooling, but falling thereafter (Amarante et al. 2011b). Based on the decomposition

Table 6.3. Average years of schooling by quintile of per capita household income, 1981–2010, Uruguay

	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Total	Q5–Q1
1981	5.01	5.80	6.48	7.44	9.64	7.11	4.64
1985	5.81	6.63	7.46	8.70	11.08	8.19	5.27
1990	6.06	6.80	7.49	8.50	10.68	8.15	4.62
1995	6.29	7.09	7.86	9.03	11.44	8.56	5.15
2000	6.57	7.50	8.28	9.43	11.91	8.97	5.33
2005	7.04	7.68	8.66	9.92	12.54	9.36	5.50
2010	7.10	8.04	9.06	10.50	13.18	9.85	6.08
Variation 1981–2010	2.09	2.24	2.58	3.06	3.54	2.74	

Source: Authors' own elaboration based on ECH.

⁶ Yet, as stated in Cruces, García, and Gasparini (2011), unconditional measures of inequality such as the Gini index, report a decrease in educational inequality (from 30.4 to 22.7 between 1981 and 2010).

methodology proposed by Lemieux (2002), Alves et al. (2010) find that prices (returns to education, gender, and regional gap) and characteristics (educational attainment, gender, region of residence, industry, and institutional sector) played an important role in the evolution of labour income inequality in 1981–2009 and subperiods. Still, a large fraction of the decomposition remains in the residual factor, which has been interpreted, again, as the role of institutions and other unobserved factors. Based on microsimulation techniques, Alves et al. (2011) show that the increase in employment and the reduction of the regional gap played an important role in the recent decline of returns to education.

A significant bulk of literature has attempted to single out the causes of the rise. For example, Casacuberta and Vaillant (2002) show that during the 1990s, trade openness led to a larger skill premium. Arim and Zoppolo (2000) suggest that a large proportion of the residual factor in explaining earnings inequality variations during that period reflects the effect of institutional factors such as the absence of centralized wage bargaining.

The recent institutional changes can be linked to the reduction of labour income inequality. Previous research shows that the 2006 increase in minimum wages contributed slightly to a higher equality in wages, even when the skill premium was still rising (UNDP 2008). Compositional effects could also have been operating in recent years, as there was a substantial reduction in this period in self-employment, and formalization increased among private workers (Amarante et al. 2011b).

As was shown previously, there were no substantial changes in schooling in recent years and some gaps even increased. Thus, it can be hypothesized that the 2008–10 fall in the skill premium and the consequent reduction of the labour inequality trend might be linked to recent policy reforms.

In order to test this hypothesis, we assess whether changes in the returns to education were led by the recent introduction of income tax. To do so, we estimated the skill premium before and after taxes. As ECH captures post-tax income, we estimated pre-tax income by simulating the previous tax on labour earnings (*Impuesto a las Retribuciones Personales*) in 2006 and the new income tax for 2008 and 2010 (see methodological details in Amarante et al. 2011b).

We estimated standard Mincer equations for all workers, women, men, and private workers. The dependent variable was the logarithm of hourly pre- and post-tax earnings. Independent variables were schooling, gender, region, and a quadratic expression in the square of age. Educational attainment was modelled as discrete intervals of completed years of schooling and we also ran separate specifications using a quadratic expression in years of schooling. In what follows, we report the coefficients of the educational variables for all workers and by gender.

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Returns to education for both pre- and post-tax income rose between 2006–8 and decreased in 2008–10. As argued also in Chapter 14, the introduction of the income tax contributed significantly to inequality reduction by downsizing the skill premium in 2008 relative to 2006 (Table 6.4). Despite this initial effect, the 2008–10 evolution of the pre-tax skill premium shows the same pace as the post-tax one. Although the level of pre-tax inequality is considerably mitigated by the income tax, it contributes to explaining the reversal of the 2006–8 inequality trends, but it was a level shift and cannot explain the 2008–10 skill premium reduction. The same trends are found when the sample is restricted to private workers.

Pre- and post-tax inequality indexes are given in Table 6.5. Income tax contributed to a reduction in earnings inequality of 2 percentage points in 2006–8. The redistributive effect of the income tax in 2010 was exactly the same as in 2008, reflecting a fall in the level, rather than in the trend of inequality.

In sum, although it is difficult to disentangle the forces driving the evolution of inequality throughout the timespan analysed here, returns to

Table 6.4. Pre- and post-tax returns to education, all workers, 2006, 2008, and 2010, Uruguay

Years of schooling	Post-tax			Pre-tax		
	2006	2008	2010	2006	2008	2010
	Total					
7–9	0.232	0.225	0.220	0.236	0.261	0.249
10–12	0.402	0.465	0.412	0.409	0.534	0.479
13–15	0.720	0.752	0.710	0.730	0.853	0.800
16 and more	1.208	1.272	1.211	1.238	1.373	1.304
Years of schooling	0.0518	0.0692	0.0574	0.0487	0.0947	0.0799
	Men					
7–9	0.267	0.243	0.236	0.267	0.274	0.267
10–12	0.475	0.479	0.421	0.479	0.532	0.483
13–15	0.750	0.712	0.641	0.751	0.785	0.717
16 and more	1.300	1.251	1.168	1.304	1.300	1.237
Years of schooling	0.0606	0.0659	0.0564	0.0574	0.0881	0.0774
	Women					
7–9	0.160	0.167	0.198	0.170	0.208	0.223
10–12	0.266	0.406	0.409	0.278	0.496	0.483
13–15	0.606	0.721	0.778	0.629	0.853	0.884
16 and more	1.026	1.201	1.251	1.078	1.345	1.364
Years of schooling	0.0326	0.0659	0.0680	0.0309	0.0972	0.0949

Note: All coefficients significant at 1%.

Source: Authors' own elaboration based on ECH.

Table 6.5. Pre- and post-tax hourly labour earnings inequality indexes, 2006, 2008, and 2010, Uruguay

	2006		2008		2010	
	Post-tax	Pre-tax	Post-tax	Pre-tax	Post-tax	Pre-tax
Gini index						
Total	0.494	0.495	0.468	0.486	0.446	0.466
Private employees	0.458	0.475	0.442	0.466	0.424	0.448
Men	0.501	0.500	0.470	0.486	0.443	0.463
Women	0.482	0.486	0.464	0.483	0.448	0.470
Theil index						
Total	0.537	0.529	0.445	0.469	0.391	0.420
Private employees	0.424	0.449	0.397	0.435	0.366	0.404
Men	0.569	0.554	0.460	0.479	0.396	0.423
Women	0.486	0.492	0.422	0.453	0.380	0.413

Source: Authors' own elaboration based on ECH.

education, employment variations, and institutional changes played a key role. In recent years, the fall in inequality can be related to the increase in real minimum wages, income tax, decreasing returns to education, and increasing employment.

6.4 Distributional Effects of the Income Tax and Child Allowances: Present Situation and Potential Expansions

In this section we assess the sustainability and potential limits of the present process of inequality reduction with regard to two policy instruments: income tax and non-contributory public transfers (*Asignaciones Familiares* and *Tarjeta Alimentaria*).⁷

We first present the distributive impact of the two interventions, followed by a microsimulation of the effects on inequality of potential expansions of the two regimes. As household surveys have had national coverage only since 2006, estimations in this section have been conducted for the whole population. Thus, the 2010 baseline Gini index presented below differs slightly from the one given earlier, as the latter was restricted to urban areas to ensure comparability.

⁷ Other policies such as minimum wages and wage councils are not addressed in this section due to the difficulties involved in carrying out separate simulations to account for their potential behavioural effects.

6.4.1 Distributive Incidence of Income Tax and Non-Contributory Transfers

The Uruguayan tax system relies mainly on indirect taxes, which represent around 65 per cent of total tax revenue. Direct taxes consist of a dual personal income tax (*Impuesto a la Renta de las Personas Físicas*, IRPF) that combines a progressive tax schedule on labour income with a low flat tax rate on capital income.

The labour income component of IRPF is based on six marginal income tax rates ranging from zero to 25 per cent (Table 6.6). Pensions were originally taxed as a labour component of the IRPF, but according to a judicial review, this tax was unconstitutional. As a result, pensions were no longer taxed by IRPF; instead, a new tax on pensions was sanctioned in July 2008, known as IASS (*Impuesto de Asistencia a la Seguridad Social*).

Capital is taxed at different rates depending on the source, ranging from 3 to 12 per cent. Rental and lease income above a certain threshold (around US\$3,000 per year) is taxed at 12 per cent.

IRPF allows deductions for child health expenditures (up to US\$1,374 per year), social security contributions, and a portion of a tax on university graduates (*Fondo de Solidaridad*) which contributes to public tertiary education funding. Capital income also allows deductions to be made for bad debts, real estate taxes, and commissions for renting. Almost 40 per cent of Uruguayan households pay IRPF.

Previous empirical analyses of the distributional impact of the tax reform, based on ex-ante techniques, conclude that the reform had positive redistributive effects, ranging between 1–2 percentage points of the Gini index (Amarante, Arim, and Salas 2007; Llambí et al. 2008; Perazzo and Rodríguez 2007). In a difference analysis Martorano (2011) confirms the positive impact of the tax reform on the equity of new direct taxes (see also the findings of Chapter 14).

Table 6.6. Labour earnings IPRF tax rates, 2010, Uruguay

	Rate, %
Less than US\$8,878	0
Ranging between US\$ 8,878–12,683	10
12,683–19,025	15
19,025–63,415	20
63,415–126,831	22
More than US\$126,831	25

Source: Based on information for *Dirección General Impositiva*.

Two non-contributory transfers are analysed in this section: *Asignaciones Familiares* and *Tarjeta Alimentaria*. The new *Asignaciones Familiares* stems from an old contributory programme created in 1942 to cover formal workers with children (Amarante et al. 2011b). In 2008, as part of a more ambitious equity programme (*Plan de Equidad*), *Asignaciones Familiares* was redesigned. The new design, which forms our baseline, maintains its contributory strand (which has been means-tested since 1995) and enlarges its non-contributory strand by expanding the programme's target population. The target population of the new programme is composed of 500,000 children living in poor households, regardless of the parents' contributory status. The transfer is conditional on children aged 6 to 17 years attending school. The old contributory regime has been maintained for non-eligible households.

At present, the transfer for primary school attendants is a monthly stipend of US\$41 supplemented with US\$18 for those in secondary school. An equivalence scale of 0.6 is used to calculate benefits at the household level.

PANES-classified households with children or pregnant women were also entitled to an electronic foodcard (*Tarjeta Alimentaria*), with a varying monthly value, depending on the number of children and pregnant women in the household. After PANES ended, *Tarjeta Alimentaria* remained as a component of *Plan de Equidad*. In May 2009 the programme was expanded to compensate for the old in-kind food transfer (*Canasta Riesgo Social*) that was discontinued; its beneficiaries were entitled to *Tarjeta Alimentaria* (beneficiary households increased 40 per cent). Depending on the composition of the beneficiary household, the transfer varies between US\$27–72 per month.

The Kakwani progressivity index (Kakwani 1977) is negative for transfers and positive for taxes, indicating that both policies are progressive, with the former being considerably more progressive (Table 6.7).

Based on household survey data (see details in Amarante et al. 2011b), we estimated the distributional impact of the simulated IRPF, IASS, and transfers. Assuming that the inception of these two policy regimes did not generate behavioural responses in terms of labour supply and hours of work, their joint effect explains around 2.5 points of the Gini index (Table 6.8). The magnitude of the distributional impacts of both policies is similar, albeit IRPF is slightly more redistributive.⁸ Although transfers are more progressive, the average rates involved indicate that the redistributive effect of taxes is higher (re-ranking effects are very small in magnitude).

⁸ Comparisons with the national accounting system indicate that capital income is severely underestimated in household surveys (Amarante, Arim, and Salas 2007; see also Section 1.2.1 of Chapter 1). This implies that the distributive impact of income tax calculated from this source is probably underestimated. Nevertheless, the expanded value of the capital tax revenue that stems from household surveys is very similar to administrative tax records, which illustrates evasion of direct taxes on capital.

Table 6.7. Coverage and progressivity of tax and transfers, 2010, Uruguay

Tax and transfer	% households covered	Progressivity index (Kakwani)
<i>Asignaciones Familiares</i> (AFAM)	17.9	-1.00
<i>Tarjeta</i>	6.5	-1.16
AFAM and <i>Tarjeta</i>	5.8	-1.21
IRPF (labour)	30.9	0.32
IRPF (total)	39.6	0.32

Source: Authors' own elaboration based on ECH.

Table 6.8. Distributive impact of the income tax and transfers total, 2010, Uruguay

	Gini index	Variation
Actual 2010	44.3	
Removing AFAM & <i>Tarjeta</i>	45.4	1.1
Removing IRPF (and IASS)	45.6	1.3
Removing AFAM, <i>Tarjeta</i> , IRPF and IASS	47.5	2.4

Source: Authors' own elaboration based on ECH.

Previous research for Uruguay has shown that arithmetic and behavioural simulations on transfers yield approximately the same results, as their potential effects on the adult labour supply are negligible (Amarante et al. 2011a). Martorano (2011) analyses the effects of taxation on the labour supply, and finds that the so-called income effect is dominant with respect to the substitution effect. Hence, the decrease in after-tax wages did not result in a decrease in work hours. A similar conclusion is found by De Rosa, Esponda, and Soto (2010), who emphasize that behavioural responses to modifications in the tax structure in Uruguay are in general terms very small.

It is interesting to compare the redistributive impact of the Uruguayan direct tax and transfers system with developed-country estimations. For instance, Paulus et al. (2009) find that income tax accounts for 4 points of the Gini index and means-tested benefits for 0.7 in Spain, on a total Gini index of 0.305. For Sweden the same figures correspond to 4, 2, and 0.24. In the light of this, it may be argued that there is still some margin for an expansion of the income tax.

6.4.2 Microsimulation Exercises

One crucial point to be assessed is to what extent margins still exist for expanding the existing redistributive mechanisms. In what follows we consider the different expansion scenarios of the two policies, and simulate their effects on income inequality. In order to carry out our exercise, we present two tax-rate increase scenarios for IRPF and two for AFAM and *Tarjeta Alimentaria* (Table 6.11):⁹

Scenario 1: We split the fourth labour income bracket in two equal parts and increased the marginal rate of the upper bracket from 22 per cent to 25. We also increased the marginal rate of the top labour income bracket from 25 per cent to 30 (see Table 6.8 to compare with baseline scenario).

Scenario 2: We simulated some features of the Spanish labour income tax system based on *Agencia Tributaria* (2012) and Adiego et al. (2010). To simulate a rough version of the Spanish labour income tax system, we created the income brackets and the amount of deductions based on their relative distance from the average income. We applied similar eligibility conditions for deductions and marginal rates as are currently used in Spain. For details see Amarante et al. (2011b).

Scenario 3: We expanded AFAM to fully cover households in the first three income deciles and doubled the *Tarjeta Alimentaria*.

Scenario 4: We doubled the amount of the present transfer of AFAM and *Tarjeta Alimentaria*.

In the following exercises we also simulated IASS, maintaining its present brackets. The baseline scenario corresponds to the year 2010. Hence, the simulations capture the marginal contribution of the different scenarios to inequality compared to the current status of the reforms considered.

The modifications considered in scenarios 1 and 2 have different distributive impacts: whereas the former exerts no change relative to the baseline, the latter results in a drop of labour income inequality of 1.3 percentage points in the Gini index (Table 6.9).

Table 6.9. Simulation results of different income tax modification scenarios on hourly labour earnings inequality, total, Uruguay

Scenario	1	2	Baseline
Gini	44.7	43.4	44.7
Variation	0.0	1.3	

Source: Authors' own elaboration based on ECH.

⁹ Due to the under-reporting of capital income, all the scenarios refer only to labour earnings.

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Table 6.10. Microsimulation results on the distributional impact of the different policy scenarios, Uruguay

	Baseline Gini: 44.3		
	Scenario 1	Scenario 2	AFAM only
Scenario 3	43.18	42.22	43.43
Scenario 4	42.7	41.69	42.92
Income tax only	44.2	43.20	
Gini index variation (relative to baseline)			
Scenario 3	-1.12	-2.08	-0.87
Scenario 4	-1.6	-2.61	-1.38
Income tax only	-0.1	-1.1	

Source: Authors' own elaboration based on ECH.

Table 6.10 presents household income inequality as obtained under the assumptions of the different scenarios. When only IRPF modifications are considered, scenario 1 yields a Gini index similar to the baseline. Although we do not present additional simulations in this vein, the many introduced variations that departed from the present structure produced very similar results.

Scenario 2 implies a significant margin of redistribution compared to the present situation, as the Gini index fell 1.1 percentage points. The fact that the tax burden is higher than at present and deductions vary significantly with the number of children might contribute to explaining this result. As was mentioned earlier, in these simulations the IASS and capital income taxes were maintained as constant. Introduction of progressive rates on capital income taxes could also yield an increase in the redistributive power of the present IRPF. This aspect needs to be studied further based on administrative income tax data.

In terms of transfers, higher redistribution could be achieved in the two scenarios considered, so there is still margin for expanding their redistributive power. Combination of the two policy modifications could result in a total reduction ranging from 1.2 to 3 percentage points in the Gini index. This upper bound is close to their present effect (Table 6.8).

Table 6.11 depicts the tax burden implied by these new scenarios and the combined effect of transfers and new income tax schemes. Scenario 1 resembles the current situation whereas scenario 2 implies important modifications in the tax burden of the upper deciles. When considering the combined effect of the direct tax and AFAM reforms, it is clear that in all scenarios the first two deciles experience significant increases in their income.

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Table 6.11 Simulation scenarios of income gains and losses by income decile, Uruguay

Decile	Pressure on household income (%)			Effective rate (%)			Simulated income variation combining transfer & income tax scenarios (%)			
	Baseline	Sc. 1	Sc.2	Baseline	Sc. 1	Sc. 2	Sc. 1.3	Sc. 1.4	Sc. 2.3	Sc. 2.4
1	0.0	0.0	0.1	0.0	0.0	0.1	20.7	31.3	20.6	31.3
2	0.1	0.1	0.7	0.1	0.1	0.7	8.4	14.5	7.9	13.9
3	0.3	0.3	1.9	0.2	0.2	1.9	4.0	7.2	2.4	5.6
4	0.6	0.6	3.1	0.4	0.4	3.1	2.1	1.7	-0.4	-0.8
5	1.0	1.0	4.4	0.7	0.7	4.3	1.1	0.8	-2.3	-2.7
6	1.4	1.4	5.5	1.0	1.0	5.6	0.6	0.4	-3.5	-3.7
7	2.3	2.3	7.5	1.5	1.5	7.1	0.2	0.1	-5.0	-5.1
8	3.0	3.0	8.8	2.2	2.2	8.7	0.1	0.0	-5.7	-5.7
9	4.3	4.3	11.0	3.4	3.4	11.2	0.0	0.0	-6.7	-6.7
10	6.2	6.4	13.6	6.2	6.3	15.6	-0.2	-0.2	-7.4	-7.4
Total	3.6	3.7	9.1	2.3	2.3	7.8	1.0	1.5	-4.4	-3.9

Source: Authors' own elaboration based on ECH.

Table 6.12. Simulated scenarios of changes in tax revenue and public spending, Uruguay

Scenario	Baseline	Simulation	Variation (%)	Variation as % of GDP
Tax revenue from IRPF (labour) (million US\$) 2010				
Scenario 1	714	733	2.7	0.05
Scenario 2	714	1823	155.3	2.68
Public spending on AFAM (million US\$) 2010				
Scenario 3	208	224	7.7	0.04
Scenario 4	208	393	88.9	0.15
Net gain/loss by scenario (combining IRPF and AFAM)				
Scenario 1.3	506	509	0.6	0.01
Scenario 1.4	506	340	-32.8	-0.1
Scenario 2.3	506	1599	216.0	2.64
Scenario 2.4	506	1430	182.6	2.53

Source: Authors' own elaboration based on ECH.

Fiscal outcomes vary across the scenarios (Table 6.12). The scenarios related to income tax modifications imply an increase in tax revenue that is significant in scenario 2. This could also be consistent with a reduction in VAT, as it will increase present tax revenue considerably. Estimates by *Dirección General Impositiva* point out that a one-point reduction of VAT is equivalent to approximately US\$200 million, so even after funding the AFAM expansion with this

tax revenue, it could be feasible to cut VAT somewhat from the present rate of 22 per cent. Of course, the macroeconomic effects implied by these results and conjectures need to be assessed in depth with further studies.

With respect to transfers, two scenarios imply that public expenditure increases; this rise is half a point of GDP in the case of doubling the transfer amount.

It must be noticed that there is still margin to expand the current reforms and thus to reduce inequality, but the options are limited and need to be explored further. These results suggest that significant changes need to be introduced in order to improve the redistributive potential of IRPF, whereas AFAM provides a wider set of possibilities for achieving higher progressivity. These results also suggest that other reforms are needed if sustaining the fall in inequality is on the policy agenda.

6.5 Final Comments

This study has shown the main trends of household income inequality over the years 1981–2010, considered as subperiods according to the main political regimes, labelled as extreme right (1981–4), centre-right (1985–9), right and centre (1990–2004), and left (2005–10). Due to the scarcity of micro-data, it was not possible to assess the full impact of the *de facto* regime on inequality, although suppression of the wage councils and trade unionism and the significant fall in real wages lead us to suspect a negative effect. Inequality fell in the years over 1981–4. Inequality also fell moderately during the restoration of democracy, increased significantly during the years of the Washington Consensus policies that were applied by the right-wing regime and throughout the first two years of the left-wing regime, and then started to fall, reversing the trend of the previous fifteen years.

The increase in inequality was mainly driven by trade liberalization, suppression of the centralized wage-setting mechanisms, a fall in minimum wages, and the lack of a social protection system oriented to the most deprived households.

In the context of a stable macroeconomic system, the recent fall in inequality resulted from a reduction in labour income inequality and the introduction of non-contributory public transfer schemes. As the last period of analysis combines a wide set of redistributive reforms with rapid economic growth, it is difficult to single out the causes of the reduction in labour earnings inequality, but microsimulation results here and in previous studies suggest that the increase in minimum wages, the introduction of income tax, the fall of returns to education, and expanding employment are among the main causes. However, in spite of these possible causes, a large portion of the reduction in labour market inequality remains unexplained. If some of the

reasons for the inequality reduction are related to increasing employment, as suggested in certain microsimulation exercises, the opportunities provided by this particular path are coming to a close, as long as Uruguay reaches its lower bound in terms of unemployment. Further policy actions, for example policies aimed at fostering increased participation of women in the labour market, need to be studied.

We also analysed the margins for a sustained reduction in inequality by assessing the potential impact of expanding *Asignaciones Familiares* and *Tarjeta Alimentaria* and of taxing labour income more progressively. The combined effect of these simulations would allow for a reduction of 1 to 3 points of the Gini index. Modifications to the present income tax rate need to be substantial to achieve genuine changes in terms of inequality. Meanwhile, *Asignaciones Familiares* offers a wider range of possibilities for achieving higher progressivity.

Increases in minimum wages could also play a key role, although they were not explored in this study as their micro and macroeconomic effects would have required the development of a full simulation model. These results also suggest that expansion of the tax and transfer reform needs to be coupled with new interventions that contribute to sustaining the fall in inequality in the long run. Some of these will have medium-term effects, such as educational reform. Furthermore, the effects of additional taxes on capital income need to be explored further and a relevant effort in terms of data gathering is needed to meet this task.

Appendix

Appendix table A6.1. Income distribution indicators, urban areas, 1981–2010, Uruguay

Year	Gini	Theil	Income distribution by per capita quintiles					Total
			1	2	3	4	5	
1981	44.2	35.7	4.5	9.5	14.6	22.0	49.3	100
1982	44.4	36.5	4.6	9.4	14.5	22.0	49.5	100
1983	44.0	34.6	4.6	9.5	14.6	22.2	49.1	100
1984	43.2	33.9	4.9	9.7	14.8	22.2	48.5	100
1985	40.7	30.4	5.4	10.5	15.3	22.3	46.5	100
1986	42.0	32.4	5.0	10.1	15.2	22.3	47.4	100
1987	41.2	31.1	5.2	10.4	15.2	22.3	46.8	100
1988	42.2	38.3	5.6	10.2	14.6	21.2	48.4	100
1989	41.4	33.5	5.6	10.3	15.0	21.7	47.5	100
1990	41.9	34.1	5.5	10.1	14.8	21.6	48.0	100
1991	41.7	33.0	5.6	10.2	14.9	21.5	47.8	100
1992	44.9	36.8	4.7	9.2	14.2	21.9	50.1	100

(Continued)

Recent Inequality Changes in Latin American Countries

Appendix table A6.1 (Continued)

Year	Gini	Theil	Income distribution by per capita quintiles					
			1	2	3	4	5	Total
1993	40.8	29.3	5.5	10.3	15.2	22.2	46.8	100
1994	42.3	32.3	5.3	10.0	14.7	21.8	48.2	100
1995	42.2	31.7	5.2	9.9	14.8	22.2	47.9	100
1996	42.8	32.7	5.1	9.9	14.6	21.9	48.5	100
1997	42.9	33.0	5.2	9.7	14.6	21.8	48.7	100
1998	43.9	34.8	4.8	9.5	14.4	21.8	49.4	100
1999	43.8	34.9	5.0	9.5	14.3	21.6	49.5	100
2000	45.5	38.7	4.7	9.1	13.9	21.3	51.0	100
2001	45.4	37.5	4.7	9.0	13.8	21.6	50.8	100
2002	45.8	38.1	4.6	8.8	13.8	21.6	51.1	100
2003	45.2	37.4	5.0	9.0	13.8	21.3	50.9	100
2004	46.0	38.9	4.7	8.8	13.7	21.5	51.3	100
2005	44.2	35.2	4.6	9.6	14.3	22.8	48.7	100
2006	46.3	39.0	4.6	8.7	13.6	21.5	51.7	100
2007	46.6	39.9	4.6	8.5	13.5	21.4	51.9	100
2008	46.2	39.6	4.5	8.8	13.8	21.6	51.4	100
2009	45.4	38.4	4.8	8.9	13.9	21.7	50.7	100
2010	44.2	35.2	4.9	9.2	14.2	22.0	49.7	100

Source: Authors' own elaboration based on ECH.

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7

The Rise and Fall of Income Inequality in Mexico, 1989–2010*

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7.1 Introduction

During the last twenty years, the evolution of inequality in Mexico has followed two distinct patterns (Figure 7.1): inequality rose between 1989 and the mid-1990s and declined between the mid-1990s and 2010.¹ All in all, the Gini coefficient for per capita (disposable monetary) income² rose from

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¹ For our analyses we use information from the National Survey of Household Incomes and Expenditures (in Spanish, *Encuesta Nacional de Ingresos y Gastos de los Hogares, ENIGH*) for 1989, 1992, 1994, 1996, 2000, 2006, 2008, and 2010. Although the 1989 survey is not entirely comparable with the subsequent surveys, we use it to present results related to the factors behind the rise in inequality between 1989 and 1994 (see also Annex I of Chapter 2).

² *Income* includes labour income and non-labour income. The former includes all the income that is reported as labour income in ENIGH, including labour income from self-employment. Non-labour income includes income from own businesses, income from assets (including capital gains), pensions (public and private), and public transfers (*Oportunidades* and *Procampo*) and private transfers (e.g. remittances) as well as—when indicated—*non-monetary income* (imputed rent on owner-occupied housing and consumption of own production, common in poor rural areas). The surveys capture income net of taxes and contributions to social security and include government and private transfers (remittances). Official poverty measures in Mexico use net current income; that is, capital gains and gifts and in-kind transfers to other households are subtracted from current total income. Current monetary income, the concept used in the decomposition of inequality by source presented here, does not include non-monetary income and consumption of own production (common in poor rural areas) and excludes capital gains.

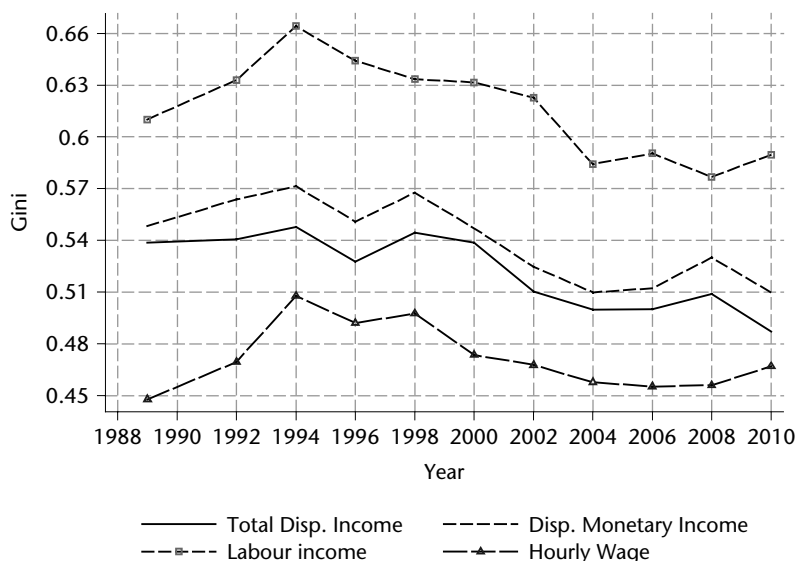


Figure 7.1. Evolution of the Gini coefficient, 1989–2010, Mexico

Notes:

- a) Total disposable income includes labour and non-labour monetary income (net of direct taxes and contributions to social security), transfers (private and public), and non-monetary income (imputed rent for owner’s occupied housing, gifts in kind, and own consumption).
 - b) Disposable monetary income excludes non-monetary income.
 - c) Hourly wage is equal to monthly labour income over weekly hours of work times 4.33. Hourly wage inequality is calculated for individuals 18–65 years old with positive income, and it includes labour income from wages and self-employment.
 - d) Following standard practice, households whose head reported zero labour incomes are excluded. Results, however, are similar if we include all households. The latter are shown in the Statistical Appendix in Campos, Esquivel, and Lustig (2012).
 - e) Differences between Gini coefficients are statistically significant for the pairs: 1994–2006; 1994–2010; but not for 1989–94 and 2006–10.
 - f) There is Lorenz dominance between 1994–2006 and 1994–2010; and no Lorenz dominance between 1989–94 and 2006–10.
 - g) Results are similar if we use other inequality measures such as the Theil index. See Statistical Appendix in Campos, Esquivel, and Lustig (2012).
- Source:* Authors’ calculations based on ENIGH, several years.

0.548 to 0.571 between 1989 and 1994, and declined to 0.510 in 2010.³ The period of declining inequality can also be divided in two: 1994–2006, when the decline in inequality was pronounced (the Gini fell from 0.571 to 0.512); and 2006–10, when the decline in inequality lost its momentum.⁴

Although during the period under analysis there were important macro-economic fluctuations (a financial crisis in 1994/95, a steep recovery immediately after that, a long but mild recession in 2000–3, and a deep GDP contraction in 2009), most of the changes in inequality observed in Mexico in this period can be linked to changes in the labour market and, more specifically, to changes in the wage ratio between skilled and unskilled workers. In fact, Esquivel, Lustig, and Scott (2010) show that changes in labour income and non-labour income inequality were equalizing for the period 1996–2006 and that the decline in labour income inequality was by far the most important proximate determinant of the observed decline in overall inequality.⁵ Given the importance of labour market inequality dynamics in explaining the trend in overall inequality, this chapter concentrates on analysing the more ‘fundamental’ determinants of labour income inequality. In particular, it examines the role of market forces (relative demand and supply of labour by skill) and institutional factors (minimum wages and unionization rate) in explaining changes in the distribution of hourly wages. It also extends the analysis to 2010. By doing so, it examines the factors that may account for the pause in momentum in the decline in inequality between 2006 and 2010.

More specifically, this chapter applies the ‘re-centred influence function’ (or RIF) method proposed by Firpo, Fortin, and Lemieux (2009) to decompose changes in hourly wages into characteristics and returns effects.⁶ Results reveal that the main driver behind the rise and decline in earnings inequality is changes in returns.⁷ Given the prominence of the returns effect, the

³ In this study we use the Gini coefficient as our preferred measure of inequality. This measure satisfies all the desirable properties of an inequality indicator: (i) adherence to the Pigou-Dalton transfer principle, (ii) symmetry, (iii) independence of scale, (iv) homogeneity, and (v) (non-additive) decomposability. Also, the Gini is decomposable by proximate determinants as well as income sources. We use disposable monetary income per capita unless specified otherwise. Other measures of inequality such as the Theil index show similar trends as those described in the text. See the Statistical Appendix in Campos, Esquivel, and Lustig (2012). As is the case with practically all inequality estimates based on household surveys, the Gini coefficients presented here are probably an underestimation of ‘true’ levels of inequality because of the significant under-reporting of incomes and consumption at the top of the distribution (see in this respect Section 1.2.1 of Chapter 1).

⁴ The years 1996 and 2008 are atypical because the country was experiencing crises. In this chapter we do not attempt to explain which factors determine inequality dynamics during a crisis.

⁵ The reduction in labour income inequality (leaving out the interaction terms) accounted for 87.1 per cent of the decline in inequality in 1996–2000 and for 65.5 per cent of the decline in 2000–6.

⁶ Although the RIF procedure was published in 2009, there have been several papers employing it (on China, the UK, and Vietnam, for example). For references see Campos, Esquivel, and Lustig (2012).

⁷ In fact, changes in characteristics were unequalizing during the period of declining inequality (1994–2006) in spite of the reduction in the Gini coefficient for education. This suggests a persistence of what Bourguignon, Ferreira, and Lustig (2005) call the ‘paradox of progress’, which Legovini, Bouillon, and Lustig (2005) observe in Mexico for the period 1984–94.

study proceeds in turn to analyse the determinants of the evolution of relative returns.

Changes in returns can be due to changes in the relative demand and supply of workers of different characteristics and/or changes in institutional factors such as the minimum wage and the unionization rate. We apply the methodology proposed by Bound and Johnson (1992) to shed light on which factors were predominant. The results suggest that institutional factors and the increase in relative demand for skilled workers (workers with high school education and above) explained the increase in the inequality of hourly wages between 1989 and 1994. This result is consistent with the findings of a large body of existing research (see, for example, Hanson and Harrison 1999; Bosch and Manacorda 2010). Institutional factors, however, did not account for the decline in wage inequality between 1994 and 2006. The evidence suggests that wage inequality fell because the supply of skilled workers outpaced demand. The slightly rising trend in wage inequality during 2006 and 2010 appears to be the consequence of a weakening in the relative demand for low-skilled workers (workers with secondary education or less).

Another factor behind the decline in overall inequality was the decline in non-labour income inequality (Esquivel, Lustig, and Scott 2010). Non-labour income is a very heterogeneous category. It includes all forms of income from capital (although grossly under-reported in household surveys), pensions from contributory systems, private transfers (remittances, in particular), and government transfers. The importance of government transfers as an equalizing factor has risen considerably over time. The fiscal incidence analysis by López-Calva et al. (2012) also underscores the growing importance of government transfers for reducing inequality and poverty.

Figure 7.2 shows the results of applying the Lerman and Yitzhaki (1985) decomposition.⁸ The contribution of income from 'capital' (own business, income from property, financial income, and contributory pensions), as expected, is always inequality-increasing whereas remittances and government transfers are always inequality-reducing. Contribution of government transfers is higher than that of remittances and it has grown significantly over time. Income from capital represents, roughly, 20 per cent of total income; income from remittances and government transfers, the remaining 20 per cent.

Labour income, which represents more than 60 per cent of total income, does not show a definite pattern. It was inequality-increasing in 1994 and very much so in 2010, but it was inequality-reducing in 2000, 2006, and

⁸ For details see Campos, Esquivel, and Lustig (2012).

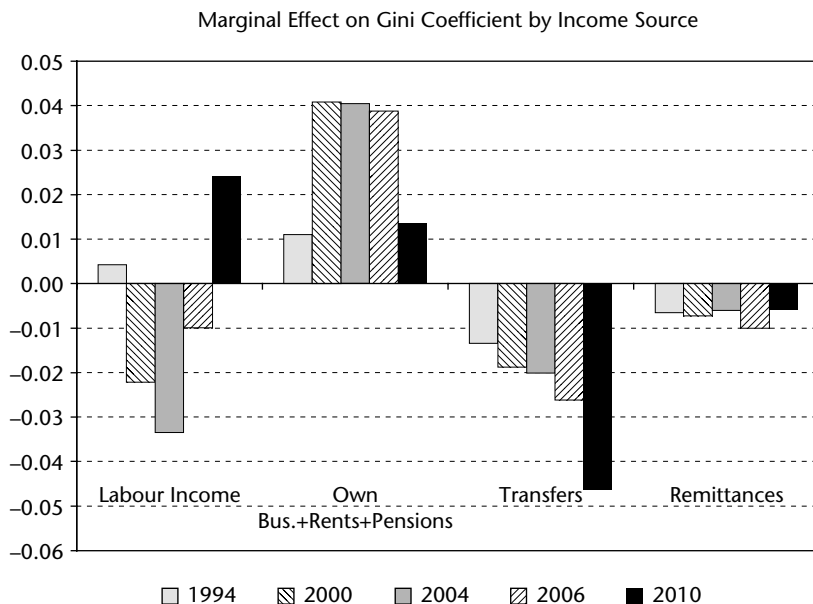


Figure 7.2. Decomposition of overall inequality, 1994, 2000, 2004, 2006, and 2010, Mexico

Note: Income is total current household monetary disposable (after direct taxes, contributions to social security, and cash transfers) income in per capita terms.

Source: Authors’ calculations based on ENIGH, several years.

2004.⁹ Between 1994 and 2006, the Gini coefficient of labour income fell, while the correlation of labour and total income remained basically constant. Between 2006 and 2010 there was practically no change in the Gini coefficient of both labour and total income, but the correlation between them increased. The latter accounts for the fact that labour income became unequalizing in 2010.

Given the prominent role played by labour income inequality in accounting for the evolution of overall inequality, below we focus on analysing the determinants of earnings inequality. In particular, we analyse the determinants of inequality in hourly wages (where ‘hourly wages’ means the hourly remuneration of both employees and the self-employed), since labour income inequality also reflects decisions to participate in the labour market not examined here.

⁹ These results are slightly different from those presented in Esquivel (2011) and Esquivel, Lustig, and Scott (2010), due to revisions in the data and in the definitions of income.

7.2 Determinants of Earnings Inequality: The Contribution of Characteristics and Returns

As observed in Figure 7.1, wage inequality (measured by the Gini for hourly wages) rose between 1989 and 1994. After 1994 there was a clear decline. This process stops in 2006; since then, wage inequality has risen slightly in 2010.¹⁰ In this section, we analyse the main determinants of the observed trends in wage inequality. We do this by applying the decomposition methodology proposed by Firpo, Fortin, and Lemieux (2009).

Wage inequality is affected by two main factors: the distribution of (observable and unobservable) characteristics of workers (e.g. education, experience, gender, etc.) and the returns to those characteristics. Workers' characteristics, in turn, are affected by 'fate' (e.g. gender, race, talent, and so on), households' decisions (e.g. to enrol in school), and policy (e.g. expanding access to education). Returns to households' characteristics depend on market forces (i.e. demand and supply of workers of different skills and experience) and institutional/policy factors (e.g. minimum wage policy and the unionization rate).

As one can observe in Figure 7.3, both workers' returns and characteristics changed between 1989 and 2010.¹¹ The evolution of returns (panel A) follows an inverted-U at least up until 2006. After 2006, returns to college-educated workers begin to rise. Panel B shows that the proportion of workers with secondary, high school, and college degrees (incomplete primary and no education) rose (declined) steadily and the relative supply of college graduates rose faster after 1998. Measured by the Gini, inequality in the distribution of years of schooling for Mexican workers (ages between 25 and 65) declined from 0.444 in 1989 to 0.324 in 2008 (on this, see also Chapter 15).¹²

We now proceed to quantify the contribution of changes in characteristics and changes in returns to the observed changes in wage inequality. In particular, we decompose the change in log hourly wages into characteristics (also called quantity or composition) effects and returns (also called price) effects. Given the trends observed in Figure 7.3, we would expect the contribution of returns to be unequalizing between 1989 and 1994 and equalizing between

¹⁰ Results are robust for other inequality indexes. In sum, the results point out a downward trend in labour income inequality, at least up to 2006. Since then, inequality has remained relatively stable with a small increase in inequality by 2010, depending on how we measure inequality. We also did the calculations using the labour force survey for the period 2005–10 (ENOE) and the results are robust across both surveys.

¹¹ Panel A presents the relative returns and Panel B the relative supply. Relative returns (with respect to primary or less) are obtained from a regression of log hourly wages against dummies of education groups (secondary, high school, and college) and control variables such as age and geographic dummies. See Statistical Appendix in Campos, Esquivel, and Lustig (2012).

¹² See Socio-Economic Database for Latin America and the Caribbean (SEDLAC), available at: <<http://sedlac.econo.unlp.edu.ar/eng/statistics-detalle.php?idE=37>>.

Recent Inequality Changes in Latin American Countries

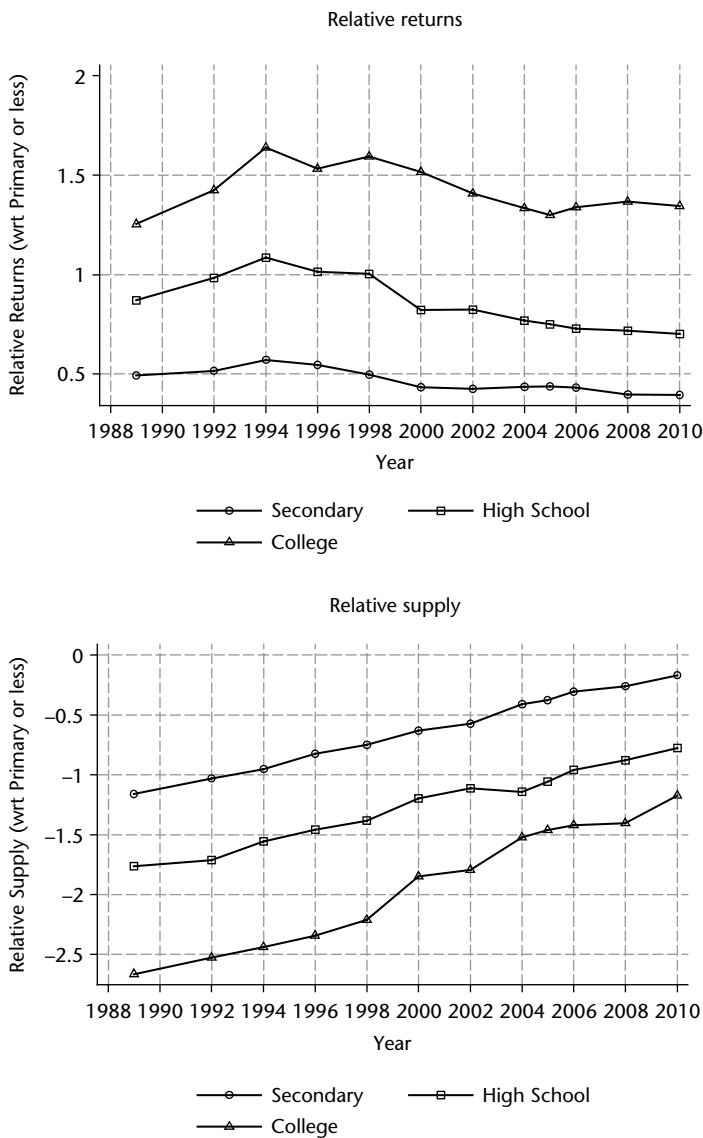


Figure 7.3. Relative returns and relative supply, 1989–2010, Mexico

Notes: Sample restricted to workers 18–65 years old. Panel A plots relative returns of education groups with respect to primary or less. Panel B plots relative supply (in logs) of education groups with respect to primary or less. Primary or less refers to individuals with less than secondary (9 years of schooling), secondary refers to individuals with equal to or more than 9 and less than 12 years of schooling, high school refers to individuals with equal to or more than 12 and less than 16 years of schooling, and college refers to individuals with at least 16 years of schooling.

Source: Calculations by the authors using ENIGH.

1994 and 2006. In contrast, the effect of changes in the composition of characteristics cannot be inferred *ex ante*.

Although there was significant educational upgrading and the distribution of the stock of education became more equal over the entire period under study, whether this change was equalizing or unequalizing depends on the extent of convexity in the returns to education and at what point of the education equalization process the country found itself. Bourguignon, Ferreira, and Lustig (2005) were among the first to notice that a reduction in the inequality of education—in the presence of increasing returns to education—could lead to a rise in earnings inequality. They call this result the ‘paradox of progress’ alluding to the fact that a more equal stock of education can be inequality-increasing (at least during part of the educational upgrading process) if the returns to education increase at an increasing rate with the level of attainment (convexity in the returns). As noted in Chapter 15 and by Gasparini et al. (2011), the ‘paradox of progress’ has been quite a pervasive phenomenon in Latin American labour markets in the last couple of decades.

7.2.1 *Decomposing Wage Inequality into Characteristics and Returns Effects: An Application of the Re-centred Influence Function Procedure (1989–2010)*

There are many decomposition procedures that are employed in the literature (see the excellent review by Firpo, Fortin, and Lemieux 2011). Most of them rely on a Oaxaca-Blinder (OB) type of decomposition.¹³ In this chapter, we employ the ‘re-centred influence function’ (RIF) procedure proposed by Firpo, Fortin, and Lemieux (2009) to decompose effects into characteristics or composition and returns effects.

The RIF procedure is very similar to the typical OB decomposition.¹⁴ The main difference is that the dependent variable, Y , is replaced by the RIF.¹⁵ Firpo, Fortin and Lemieux (2009) demonstrate that the RIF procedure is equivalent to a simple unconditional quantile regression. They show that

¹³ We can divide the decomposition into four groups: (i) reweighting procedures (DiNardo, Fortin and Lemieux 1996), (ii) residual-imputation procedures (Almeida dos Reis and Paes de Barros 1991; Juhn, Murphy and Pierce 1993), (iii) quantile decomposition procedures (Machado and Mata 2005), and (iv) re-centred influence function (RIF) procedures (Firpo, Fortin and Lemieux 2009; see also Chapter 12 for a discussion of the decomposition methods).

¹⁴ See the papers by Firpo, Fortin, and Lemieux (2009, 2011) for more details of the RIF procedure.

¹⁵ Define $RIF(v, y)$ as the re-centred influence function with distributional statistic of interest $v(F_y)$ and observed wage y . Then it can be shown that $RIF(v, y) = v(F_y) + IF(v, y)$, where IF denotes the influence function such that $\int RIF = v(F_y)$. For the case of quantiles, it can be shown that the influence

function is equal to $(Q_{\tau}, Y) = \frac{\tau - 1\{Y \leq Q_{\tau}\}}{f_Y(Q_{\tau})}$. Each statistic $v(F_y)$ refers to a specific quantile in the distribution of Y or to the Gini coefficient or the variance.

$E[RIF(v, y)|X] = X\beta^v$, where the coefficient β^v represents the marginal effect of X on the dependent variable statistic v .¹⁶

Once we estimate the parameter β^v for each year in our sample, we apply a Oaxaca-Blinder decomposition. In other words, we estimate

$\hat{v}(Y_t) - \hat{v}(Y_s) = \hat{\beta}_s^v (\bar{X}_t - \bar{X}_s) + \bar{X}_t (\hat{\beta}_t^v - \hat{\beta}_s^v)$ where t is the final year and s is the initial year. In our application, we set up the initial years as 1989, 1994, and 2006 and the final years as 1994, 2006, and 2010, respectively. As is typical in an OB decomposition, the term $\hat{\beta}_s^v (\bar{X}_t - \bar{X}_s)$ refers to the characteristics effects and the term $\bar{X}_t (\hat{\beta}_t^v - \hat{\beta}_s^v)$ refers to the return or price effects to observ-

able characteristics included in X and also, unobservable ones (which is why this term is often referred to as the ‘unexplained component’). We use as reference the wage distribution in the initial year (for each decomposition).

Figure 7.4 shows the decomposition for quantiles 1, 2, ..., 99. In other words, we estimate the RIF procedure in every quantile and obtain the difference in the average wage for each quantile and then the part attributed to characteristics and to returns. The figure includes three panels for different periods. Panel A (1989–94) shows that inequality increased during the period. In this period, observable characteristics explained little of the increase in inequality, given that the part explained by characteristics is a flat line. The increase in inequality was mostly due to returns as shown by the upward sloping shape of the ‘effects of returns’ curve.

Panel B (1994–2006), on the other hand, shows that inequality decreased during the period. Wages for low-earning individuals rose while those for richer individuals declined. Interestingly, the effects of characteristics (education, experience, female, and urban) were inequality-increasing. In other words, if returns to characteristics had been equal to their 1994 level, the change in characteristics in the population (in spite of the equalization of education) would have increased inequality. This points to a persistence of the ‘paradox of progress’ found for Mexico (1984–94) by Legovini, Bouillon, and Lustig (2005). Hence, the driving force behind the decline in wage inequality between 1994 and 2006 must have been the effects of returns. As shown in

¹⁶ For example, if v represents quantile 0.50, then $\beta^{v=0.5}$ represents the effect of X on the wage quantile 0.50. It can also be applied to scalar indicators of inequality such as the Gini or the variance. In order to estimate the RIF regression, we first estimate the sample $\widehat{RIF}(v, Y)$. In practice, we follow the ado file *rifreg* in Stata published by Firpo, Fortin, and Lemieux (2011) provided by N. Fortin <<http://faculty.arts.ubc.ca/nfortin/datahead.html>>. The RIF dependent variable is estimated using kernel methods. We use the following explanatory variables: dummy variables of female, urban, education categories and a cubic polynomial in age. We also estimated a more flexible model that included interactions among all variables; however, the difference in explained and unexplained components was minimal.

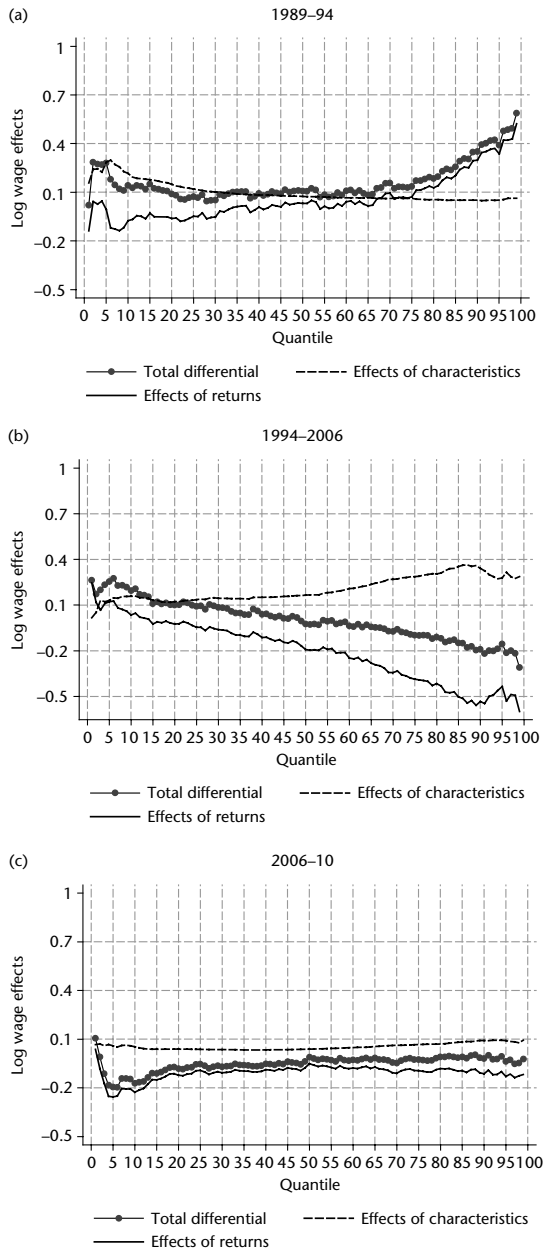


Figure 7.4. Decomposition of differences in the distribution of earnings, 1989–2010, Mexico

Notes: Total differential is the total change in hourly wages (in logs); Effects of characteristics and Effects of returns are the portions that one can ascribe to changes in characteristics and returns respectively.

Source: Calculations by the authors using ENIGH.

Panel B, the effects of returns contributed to equalize the earnings distribution by such an amount that they compensated for the inequality-increasing effects associated with the changes in characteristics. Although we do not disaggregate the returns into various components, this result is consistent with the fall in the relative returns to education shown in Figure 7.3.

Panel C (2006–10) shows that although changes in hourly wages were practically nil across most of the distribution, individuals at the bottom suffered declines in wages. Observable characteristics do not contribute to an explanation for the changes in inequality in this period. However, and in contrast with the 1994–2006 period, the decline in relative returns to low-wage workers accounted for their decline in relative wages.

In sum, these results suggest that the driving force behind the rise (1989–94), decline (1994–2006), and slight increase (2006–10) in wage inequality was changes in relative returns. Our next task is to determine which factors explain the behaviour of relative returns. We shall concentrate on the relative returns to skill because they experienced prominent changes, as shown in Figure 7.3, Panel A.

7.3 Determinants of Relative Returns: The Role of Demand, Supply, and Institutional Factors

The wage structure is affected by demand and supply of workers of different skills and by institutional factors such as the minimum wage and unions. Labour demand by skill, in turn, is primarily affected by the characteristics of technical change and international trade. The composition of labour supply is determined, to a large extent, by the characteristics of educational upgrading. Figure 7.5 plots the relative returns and relative supply of workers with high school education or more against workers with secondary or less. The left y-axis shows the relative returns and the right y-axis the relative supply in logs. The increase in relative supply is larger for the period 1996/98–2010 than for the period 1989–96/98. The increase in relative supply for the period 1989–98 is approximately 20 per cent, while for the period 1998–2010 it is approximately 54 per cent. Inequality measured as the relative returns for workers with at least high school education, on the other hand, increases for the period 1989–94 and it clearly declines for the period 1998–2010.

Following Bound and Johnson (1992), if increases in supply are larger than increases in demand—everything else being equal—then we expect relative returns to fall. For the period 1989–94 we observe both an increase in relative supply and a rise in relative returns for workers with tertiary education. Hence, either demand outpaced supply for skilled labour, or institutional factors disfavoured the unskilled, or both. The rapid increase in wage inequality

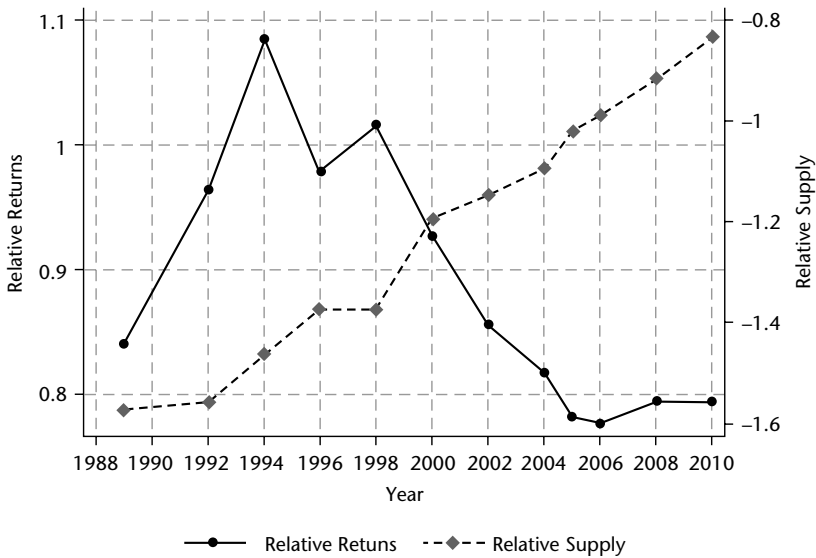


Figure 7.5. Relative returns and relative supply, 1989–2010, Mexico (high school and more vs. secondary or less)

Notes: Sample restricted to workers 18–65 yrs old. Relative returns are obtained from a regression of log hourly wages. Relative supply is equal to the log of the ratio of proportion of workers with high-school or college education over the proportion of workers with secondary or less. For more details, see Campos, Esquivel, and Lustig (2012).

Source: Calculations by the authors using ENIGH.

that occurred in Mexico between the mid-1980s and the mid-1990s has been the subject of a fairly large body of research.¹⁷ The main conclusions are that institutional factors as well as skill-biased demand explain the observed trend. Further details are discussed in the last section of the chapter.

What about the period 1994–2006 when wage inequality declined? In Figure 7.5 we observe that the relative supply of skilled workers rose while the relative returns declined. This means that either supply outpaced demand, institutional factors moved in favour of the unskilled, or both. Figure 7.6 shows the evolution of the real minimum wage and the unionization rate for the period 1988–2010. Panel A includes the monthly index of the real minimum wage using December 2010 as the base period. The real minimum wage fell by 50 per cent between 1988 and 1996. However, after 1996 the real minimum wage was fairly stable. Hence, it is unlikely that the minimum

¹⁷ There are plenty of references that analyse the determinants of changes in inequality. A summary of the literature can be found in Bouillon, Legovini, and Lustig (2003), Campos (2013), Campos, Esquivel, and Lustig (2012), Esquivel (2011), Esquivel and Rodríguez-López (2003), and Legovini, Bouillon, and Lustig (2005).

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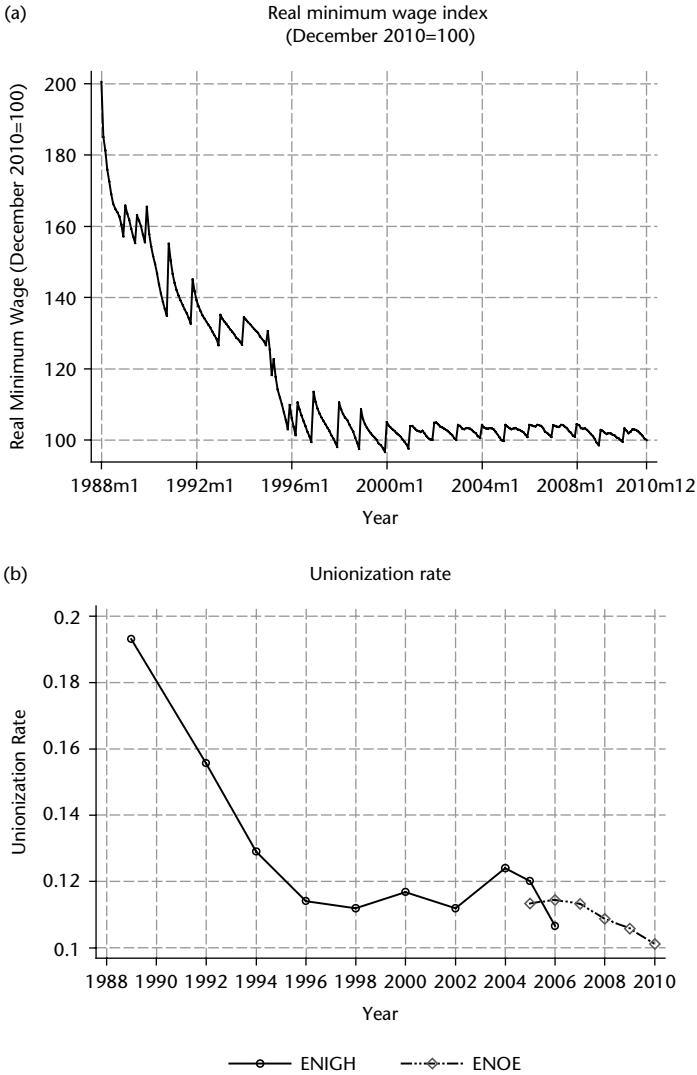


Figure 7.6. Real minimum wage and unionization, 1988–2010, Mexico

Notes: Real minimum wage index is obtained from *Comisión Nacional de Salarios Mínimos* <<http://www.conasami.gob.mx/>> and the unionization rate is obtained from two different surveys. ENIGH provides union information up to 2006. ENOE (*Encuesta Nacional de Ocupación y Empleo*) provides union information for the period 2005–10.

wage affected the wage structure for the period after 1994. While there is a marked decline in unionization between 1989 and 1996, there was no major change after 1996, although there appears to be a slight decline in unionization after 2005 (approximately 1 percentage point). The minimum wage may affect the distribution of wages if the minimum wage is binding, because this

could result in stable real wages at the bottom even if wages higher up in the distribution experience a decline. Existing evidence suggests that the minimum wage is currently not and has not been binding since the mid-1990s. Following Bosch and Manacorda (2010), Figure 7.7 shows the wage distributions in 1989 and 2010 for the urban sector once we subtract the median wage. The vertical line is the value of the minimum wage minus the median wage. The figure shows that the minimum wage could have been (slightly) binding in 1989 but not in 2010.

In sum, it appears that institutional factors such as the minimum wage and the unionization rate did not play a role in explaining the trends in relative wages/returns during 1996–2010. The evolution of relative wages/returns in this period seems to be associated with how the demand and supply of labour of different skills changed over time. For the period 1994–2006, the fall in relative returns appears to have occurred because the supply of high-skilled workers outpaced demand. Since the supply of skilled workers continued to increase during 2006–10, the rise in relative returns suggests that either relative demand for skilled labour outpaced supply or, that the relative supply

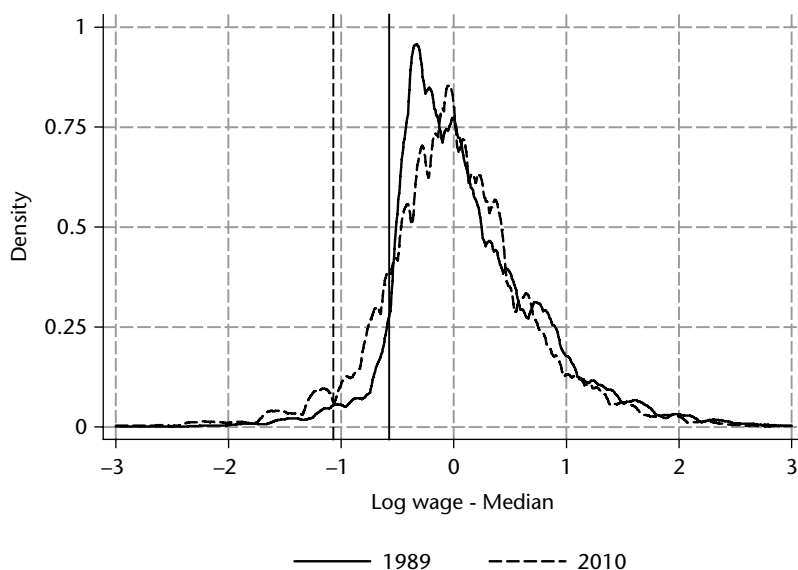


Figure 7.7. Wage distribution with respect to median wage, 1989 and 2010, Mexico

Notes: Calculations by the authors using labour force surveys (ENEU and ENOE) for the urban sector and for full-time workers (more than 25 hours per week). Wage distributions using monthly earnings. Vertical lines show the log of the minimum wage assuming full-time work during the month minus the median monthly wage.

Source: Calculations by the authors using labour force surveys (ENEU and ENOE).

of unskilled workers outpaced demand.¹⁸ We now attempt a more rigorous estimation and account of demand and supply factors

7.3.1 *The Effect of Demand and Supply on Relative Wages: An Application of the Bound and Johnson Method (1989–2010)*

In order to examine the effect of supply and demand on relative wages, we follow the Bound and Johnson (1992) method.¹⁹ Based on the evidence presented in Figures 7.5 and 7.6, and as discussed above, we assume that non-competitive factors (i.e. minimum wages and unionization rate) are not important during the 1994–2010 period and ascribe the observed trends in relative wages by skill to demand and supply factors alone.

Assuming a simple CES production function with elasticity of substitution, σ , constant across skills, it is possible to determine the effect of supply and demand on relative wages.²⁰ In particular, it is possible to show that the relative wage of workers with at least a high-school diploma (W^c) in terms of the wage of workers with at most secondary education (W^s) can be expressed in terms of its increase in demand and supply:

$$\Delta\% \left(\frac{W^c}{W^s} \right) = \frac{1}{\sigma} \Delta\%(Demand) - \frac{1}{\sigma} \Delta\%(Supply) + \xi$$

The residual term ξ contains the effect of skill-biased technical change and other non-competitive factors. As the unionization rate and the real minimum wage were fairly constant during 1994–2006, we assume non-competitive factors are negligible. In order to make the simulation simpler, we simulate changes only in supply and assign the full residual to demand and skill-biased technical change (which affects demand, of course). The supply component is equal to the relative increase of workers with at least high-school education divided by workers with at most secondary education. Table 7.1 shows

¹⁸ Using ENOE for the period 2006–10, we find that the relative returns of college-educated workers against workers with primary or less declined 0.01 points. However the decline in returns was larger for high school-educated workers and workers with secondary education. Hence, the result of the slowdown in returns for college-educated workers is robust to the selection of the microdata: ENIGH and ENOE.

¹⁹ We attempt to estimate a model similar to Bound and Johnson (1992) and Manacorda, Sánchez-Páramo, and Schady (2010). However, as pointed out by Manacorda, Sánchez-Páramo, and Schady (2010), the relevant elasticities of substitution for the case of Mexico cannot be precisely estimated. In order to estimate the structural parameter σ , these authors use a sample of workers from Argentina, Brazil, Chile, Colombia, and Mexico; they mention that ‘Mexico does not really contribute to the identification of the regression parameters’ (page 314, footnote 1).

²⁰ See formula (3) in page 377 and formula (A8) in page 390 of Bound and Johnson (1992).

Table 7.1. Effects of relative labour supply on relative wage, 1989–2010, Mexico

	Change Returns	Supply	= Rest
Panel A. $\sigma=1$			
1989–94	0.240	0.111	0.351
1994–2006	-0.310	0.474	0.164
2006–10	0.020	0.154	0.174
Panel B. $\sigma=2$			
1989–94	0.240	0.055	0.295
1994–2006	-0.310	0.237	-0.073
2006–10	0.020	0.077	0.097

Source: Authors' estimates based on ENIGH, several years.

the results of the simulation assuming an elasticity of substitution of 1 and 2 which is the consensus in the literature (Bound and Johnson 1992; Katz and Autor 1999).

Consistent with previous research findings, Table 7.1 suggests that changes in relative supply had a small effect on relative wages in the period between 1989 and 1994. Most of the changes for that period, then, have to be explained by changes in demand and institutional factors, as discussed above. The relative contribution of market versus institutional factors, however, cannot be clearly disentangled.

For the period of declining relative wages (1994–2006), Table 7.1 shows that relative returns declined by 31 per cent for the period 1994–2006. However, had nothing changed in the same period other than relative supply, then relative returns would have declined by as much as 47 per cent. A key issue arises, however, depending on the value we assume for the elasticity of substitution. In Panel A ($\sigma = 1$), relative demand shows a steady growth for the period 1994–2010. In Panel B ($\sigma = 2$), relative demand declined for skilled workers (high-school and college) during the period 1994–2006 and started to rise again for the period 2006–10. Taking the median value of the elasticity of substitution (not shown on Table 7.1), the patterns show a slowdown in demand for the period 1994–2006, and then a rise for the period 2006–10. Hence, the rapid increase in relative supply was a key component in explaining the reduction in relative wages, but only up to 2006. In recent years, demand patterns appear once again to benefit the highly skilled to a larger degree. Based on the analysis presented in Section 7.3 and Figure 7.4 (Panel C), it would appear that during the 2008/9 recession and its aftermath, relative demand for low-wage/low-skilled workers declined the most.

7.4 Cash Transfers and Inequality

In Table 7.2, one can observe the changes in total disposable income per capita²¹ as a result of government transfers. The calculations presented in this table are the result of a standard incidence analysis of government transfers.²² As one can see, the contribution of government cash transfers to the reduction in inequality and poverty was almost nil in 1996, rose in 2000, and became more significant, especially for poverty reduction, in 2010.

Table 7.2. The impact of cash transfers on inequality and poverty, 1996, 2000, and 2010, Mexico

		Net market income	Disposable income
1996	Gini	0.522	0.520
	% change with respect to net market income	—	-0.4%
	Headcount index (US\$2.5 PPP)	30.2%	29.9%
	% change with respect to net market income	—	-1.0%
2000	Gini	0.544	0.539
	% change with respect to net market income	—	-0.9%
	Headcount index (US\$2.5 PPP)	22.1%	21.6%
	% change with respect to net market income	—	-2.3%
2010	Gini	0.503	0.495
	% change with respect to net market income	—	-1.7%
	Headcount index (US\$2.5 PPP)	13.8%	11%
	% change with respect to net market income	—	-20.1%

Notes: Income variables here include monetary and non-monetary components which explain the bulk of the difference between the Gini coefficients reported here and in the first paragraph of the chapter and the Statistical Appendix in Campos, Esquivel, and Lustig (2012). The remaining differences are due to rounding errors.

Net market income is total market income minus direct taxes and contributions to social security.

Disposable income is net market income plus government transfers (private transfers and contributory pensions are included in market income).

Source: López-Calva, Lustig, and Scott (2012).

²¹ The differences between the Ginis here and those presented in the first paragraphs of this study are due to the fact that there we include information on monetary income only while we use total income here. Total income includes monetary income plus auto-consumption and imputed rent for owner's occupied housing.

²² For details, see Lustig et al. (2011) and López-Calva et al. (2012). Unfortunately, due to limitations of the data, it was not feasible to conduct this analysis for years prior to 1996. However, 1996 is the year before the cash transfer programme *Progresa* was launched. Hence, the results for 1996 can be used as a baseline.

Most of this change is due to *Progresa*, the flagship conditional cash transfer programme launched in 1997 (which changed its name to *Oportunidades* in 2002).

Oportunidades is a federal conditional cash transfer programme that targets rural and urban households in Mexico that fall within the extreme poverty category. It complements traditional supply-side spending on social services with demand-side subsidies. The programme has three components: education, nutrition, and health. The education component grants cash transfers based on school attendance, high school completion, and the need for school supplies. The nutrition and health components offer cash and in-kind transfers (nutritional supplements, vaccinations, preventative treatments, and so forth), based on regular visits to a health clinic. The average monthly transfer is about US\$35 and estimated total transfers are equivalent to, on average, 25 per cent of eligible rural households' average monthly income. The programme's size is significant in terms of the number of beneficiaries, yet it is inexpensive in terms of cost. By the end of 2010, *Progresa/Oportunidades* granted benefits to 5.8 million families (about 27 per cent of the Mexican population). Its budget in 2010 equalled 0.48 per cent of GDP (compared with 0.02 per cent in 1997), and it commanded close to 2.5 per cent of the programmable public expenditure budget. Impact evaluation studies have found that the programme has had positive impacts on education and health.²³

All in all, *Progresa/Oportunidades* transformed the broadly neutral distribution of government spending on food subsidies into a highly progressive one: the share benefiting the poorest decile increased from 8 to 33 per cent between 1994 and 2000.²⁴ Beyond its effects on education, health, and nutrition, *Progresa/Oportunidades* has had a positive impact on poor households' consumption, thereby helping to reduce poverty and inequality in Mexico.²⁵

7.5 Concluding Remarks: The Rise and Fall of Income Inequality and Policy Regimes

Previously we identified three episodes in inequality dynamics in Mexico: a period of rising inequality (1989–94); a period of declining inequality (1994–2006); and a period in which the decline in inequality lost its momentum (2006–10). These periods coincide roughly with two broad policy regimes (Table 7.3). Between 1989 and 1994, the policy regime was characterized by intense and widespread market-oriented reforms (with trade liberalization

²³ For citations see Campos, Esquivel, and Lustig (2012) and Lustig (2011).

²⁴ See Scott (2009).

²⁵ For references, see Campos, Esquivel, and Lustig (2012).

and privatizations taking the lead), dismantling of price supports and generalized subsidies, and reductions in the minimum wage and unionization rates (similar effects were observed in the other country case studies in this volume). After 1994, the policy regime was characterized by a paucity of structural reforms, strategic integration with the rest of the world (of which the salient example is the North American Free Trade Agreement or NAFTA), and the introduction of large-scale (in terms of beneficiaries) cash transfer programmes. Minimum wages became non-binding and the unionization rate remained low. What, if any, might be the connection between the policy regimes and inequality outcomes?

Our analysis indicates that the rise in overall inequality between 1989 and 1994 is accounted for, to a large extent, by the rise in labour income inequality. This, in turn, is associated with the increase in relative returns for skilled workers (those who hold a high-school diploma or more). The increase in the skilled–unskilled wage gap coincided with the unilateral trade liberalization that started in the mid-1980s (Table 7.3; see also Chapter 11). In that sense, the evolution of Mexico’s wage inequality was unexpected; Mexico had an abundance of relatively unskilled labour (at least from the perspective of its main trade partner, the United States), and standard theories of trade predicted exactly the opposite pattern (that is, a reduction in the skilled–unskilled wage ratio).²⁶

Why did trends in relative wages during 1989 and 1994 contradict expectations stemming from standard trade theory? First, this period also coincided with labour market policies/institutional changes that disfavoured the low-skilled: a reduction in real minimum wages and in the unionization rate (Table 7.3 and Figure 7.6). Bosch and Manacorda (2010) find evidence that these institutional factors were quite decisive in causing wage inequality to rise. In addition, there is evidence that the direct and indirect impact of the opening up of the economy (trade liberalization and foreign direct investment liberalization) contributed to the rise in the wage gap by skill. The direct effect occurred because—contrary to expectations—some labour-intensive sectors (such as textiles and garments) were relatively more protected under import-substitution industrialization and were hurt by trade liberalization.²⁷ The indirect effect manifested itself through skill-biased technical change (though, admittedly, it is hard to disentangle which part of the latter is induced by openness or occurs independently).

Is there a connection between the policies pursued after 1994 and the decline in overall inequality? Again, the results of the decomposition exercise presented in Section 7.2 and in Esquivel, Lustig, and Scott suggest that one

²⁶ For a discussion of trade liberalization and its implications, see, for example, Lustig (1998).

²⁷ See, for example, Hanson and Harrison (1999).

The Rise and Fall of Income Inequality in Mexico

Table 7.3. Policy regimes, 1989–2010, Mexico

	1989–1994	1994–2010
Macro	<ul style="list-style-type: none"> – Aftermath of 1980s debt crisis – Contractionary fiscal and monetary policies—Quasi-fixed exchange – Very low growth – Inflation under control starting in 1989 	<ul style="list-style-type: none"> – 1995 peso crisis and recovery – Fiscal discipline (balanced budget law passed in 2006) – Inflation-targeting by central bank since 1999 – Flexible exchange rate regime – Low growth (GDP/capita growth of around 1% annually) with some inflation in the second half of 1990s; low inflation since around 2000 – Output contracted sharply in 2008/09 due to great recession in USA
Labour	<ul style="list-style-type: none"> – Minimum wages and unionization rates declined markedly 	<ul style="list-style-type: none"> – Minimum wages stable and not binding. Unionization rates stable with a slight decline since 2005
Openness	<ul style="list-style-type: none"> – Unilateral trade liberalization since 1985. Mexico joins GATT in 1986. – Foreign direct investment liberalized 	<ul style="list-style-type: none"> – NAFTA comes into effect in 1994. Other free trade agreements
Other market-oriented reforms	<ul style="list-style-type: none"> – Large scale privatizations (banks and telecommunications) – Deregulation – Dismantling of price support (and other) schemes in agriculture and elimination of general production and consumption subsidies 	<ul style="list-style-type: none"> – Social security reforms
Social policy	<ul style="list-style-type: none"> – Very small-scale targeted subsidies to <i>tortilla</i> – Flagship anti-poverty program <i>Programa Nacional de Solidaridad</i> focused on expanding rural infrastructures (no targeted cash transfer) 	<ul style="list-style-type: none"> – Targeted cash transfer programmes: <i>Procampo</i> in 1995 and <i>Progresa</i> in 1997. <i>Progresas</i> changes name to <i>Oportunidades</i> in 2002 and is expanded to urban areas and includes children in high school – Non-contributory pensions in rural areas in 2007 (<i>Seventy or more</i>)
Inequality	<ul style="list-style-type: none"> – Increased 	<ul style="list-style-type: none"> – Declined especially between 1998 and 2004; between 2006 and 2010, decline loses momentum and wage inequality slightly rises

Notes:

a) *Progresa/Oportunidades*: Launched in 1997; provides direct monetary and in-kind transfers conditional on school attendance and health-centre visits. By the end of 2010, *Progresa/Oportunidades* granted benefits to 5.8 million families (about 27 per cent of the Mexican population).

b) *Procampo*: Direct monetary transfer per hectare, originally set at close to US\$100 per hectare to all beneficiaries identified in the original 1993 survey on the basis of cultivation of nine basic crops. Conditional on cultivation of the land, but after 1995 not conditional on particular crops. Administrative data: 2.39 million beneficiaries in 2008.

c) *Seventy or more*: Non-contributory pension. All the population of 70 years and older living in localities of 30,000 or less are eligible for this universal rural non-contributory basic pension of 500 pesos (US\$37) per month. Administrative data: 1.031 million beneficiaries in 2008.

Source: Authors' compilation based on Lustig (2010).

of the most important inequality-reducing forces between 1994 and 2006 has been the evolution of labour income inequality. Note that labour income is basically the result of multiplying hours worked by hourly wages (here defined as including remunerations to the self-employed). It turns out that hours worked did not change much from 1994 to 2006,²⁸ so the change in labour income inequality must have been caused by changes in hourly wage inequality. Some authors have linked the reduction in wage inequality to NAFTA. Robertson (2007), for example, suggests that Mexico's manufacturing workers are now complements, rather than substitutes, to US workers. He also posits that there has been an important expansion of assembly-line activities in Mexico (*maquiladoras*), which has increased demand for less-skilled workers. Campos (2013) emphasizes the supply-side explanations based on changes in the composition of the labour force.

Between 1989 and 1994, most of the changes in the wage distribution occurred in the upper tail of the distribution (workers with high wages and high levels of education and experience). As was seen in Figure 7.4, Panel A, the increase in wage inequality in those years was not caused by a (relative) decline in the wages of the low-skilled or low-experienced workers; rather it was the result of a higher rise in the wages of the high-skilled or high-experienced workers. In contrast, between 1994 and 2006 the reduction in wage inequality was caused by the changes in the lower tail of the income distribution. Average wages for workers with lower levels of education and/or fewer years of experience increased (Figure 7.4, Panel B), even though average real and legislated minimum wages were practically flat over this period (Figure 7.6). Average wages for higher-paid workers (high-skilled and/or high-experienced workers), in contrast, declined between 1994 and 2006 (Figure 7.4, Panel B).

For the post-NAFTA period (after 1994), then, there are at least two (not mutually exclusive) possible explanations: an increase in the relative supply of skilled workers and an increase in the demand for low-skilled labour resulting from an expansion in assembly-line activities (*maquiladoras*) in Mexico's manufacturing sector. Based on our analysis presented in Section 7.4 (Table 7.1), the reduction in relative returns of the high-skilled workers seems to be driven, primarily, by the rise in their relative supply.

The increase in the relative supply of workers with high levels of skills reflects the significant educational upgrading of the labour force that occurred

²⁸ Actually, between 1994 and 2006, weekly hours in all jobs fell slightly and the decline was concentrated in low-education (poorer) workers, which would be an inequality-increasing change. This means that the inequality-reducing changes in the distribution of hourly earnings must have been large enough to compensate for the inequality-increasing effect of the changes in the distribution of hours worked. Data on weekly hours and hourly wages are available at: <<http://www.depeco.econo.unlp.edu.ar/sedlac/>>.

during this period (Figure 7.5). Part of this upgrading should be the consequence of the expansionary policies in terms of access to education (on this, see Chapter 15). However, part might also be a consequence of more individuals deciding to invest in a tertiary degree in response to the rising returns to skill experienced between 1989 and 1994 (and, actually since 1984). This would suggest that Mexico experienced a Tinbergian process in the sense that skill-biased demand (due to trade liberalization and technical change) contributed along with institutional factors to a significant increase in the skill premium. This, in turn, could have induced individuals to invest more in their own education by completing high-school and tertiary qualifications. The subsequent increase in the relative supply of more educated workers caused the skill premium and wage inequality to decline.

In sum, the results reveal the following. Relative supply only marginally affected the wage structure during the period 1989–94. Therefore, relative demand and institutional factors are responsible for the increase in inequality. On the other hand, after 1994 institutional factors have remained largely unchanged. At the same time, relative supply of skilled labour (completed high school or more) increased by more than 50 per cent and relative demand slowed down, which resulted in lower inequality. The period 2006–10 has seen a small increase in inequality. This is mainly due to a decrease in wages at the bottom and not to an increase of wages at the top. Does this point to a reversal in the wage inequality dynamics in Mexico? At this point, it is too soon to be able to disentangle the permanent versus the temporal effects of the recent macroeconomic crisis caused by the recession in the United States.

Finally, overall inequality has declined because non-labour income inequality declined too. Our analysis and that presented in Esquivel, Lustig, and Scott (2010) suggest that a change in social policy from general subsidies to cash transfers targeted to the poor contributed to the decline in inequality—especially since 2000, when the number of beneficiaries was increased.

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8

Social Policies or Private Solidarity? The Equalizing Role of Migration and Remittances in El Salvador

Carlos Acevedo and Maynor Cabrera

8.1 Introduction

El Salvador has been historically characterized as a highly unequal country and still remains among the 20 per cent of countries with the highest inequality in the world. Nonetheless, there has been a noticeable improvement during the last decade, as El Salvador's Gini coefficient fell from 0.551 in 2000 to 0.483 in 2009, a phenomenon consistent with what has happened in a dozen Latin American countries (see Chapter 2). The reduction of income inequality has been accompanied by a steady decrease of poverty rates, which fell from over 60 per cent at the beginning of the 1990s to almost 30 per cent around 2006.¹

However, in contrast to the experience of other Latin American countries, the decline in income inequality in El Salvador has paradoxically coincided with a decade-long period of economic stagnation that has followed dollarization in 2001, and the dominance of right-wing governments from 1989 until 2009. This raises a number of issues about the effects of (low) growth dynamics on inequality and the role of social policies vis-à-vis private mechanisms of solidarity such as the 'family safety nets' built around migration and remittances.

¹ Poverty rates have rebounded since 2007 by about 10 percentage points due to the impact of the global crisis.

This chapter reviews the trend of income inequality in El Salvador since the 1990s and discusses the probable factors that explain its reduction since the early 2000s. Its relevance is twofold: first, because income inequality decreased precisely when the economy entered a low-growth period; and second, to test the claims of right-wing governments that this reduction was the result of their social policies.

The chapter, however, shows that the role of migration-induced decline in the skill-premium and of remittances has been crucial to the reduction of poverty and income inequality. Other causes have been a slowdown in the rate of increase in labour supply, growing urbanization, an increase in the levels of education, and structural change of the economy towards services. The chapter also explores changes in public policy that might have affected poverty and inequality.

Since most Salvadorans who migrate abroad are poor, migration by itself has contributed greatly to the decrease in poverty rates. Moreover, once these emigrants become economically stabilized in the country of destination and begin sending money home, their relatives also begin to escape poverty, which reinforces the ameliorating effect of migration on poverty rates in the country of origin. At the same time, remittances increase the income of households that otherwise would be much poorer. The combined effect of migration and remittances has also led to an increase in the reservation wage of unskilled workers and a decrease of the wage premium for skilled workers, which in turn is reflected in a reduction of labour income inequality.

On the other hand, social policies, such as the expansion of government monetary transfers targeted to the poor, seem so far to have had a small effect on reducing inequality. Compared to the vast amount of remittance inflows, the resources devoted to social policies aimed at the poor have been quite modest. During 2006–10 the whole budgetary allocation for *Comunidades Solidarias* (i.e. conditional cash transfers to the poor, originally known as *Red Solidaria*), amounted to US\$132.7 million, compared to almost US\$18 billion received in remittances in the same period.

8.2 External Environment and Macro Policies

8.2.1 Trends in the Salvadoran Economy During the 1990s

The decade of the 1990s was a period of rapid change for El Salvador: the end of the civil war, aggressive economic liberalization, boom and deceleration of economic growth, and the rise in remittances.

The economy went through two different phases between 1991 and 1999. The first phase (1991–5) was one of strong recovery after the internal war

Recent Inequality Changes in Latin American Countries

Table 8.1. Remittances, services, workers, and population, 1989–1999, El Salvador

	Circa 1989	1999
Remittances (% GDP)	3.7	10.0
Services (% GDP)	45.2	55.7
% workers in services	48.6	57.3
% urban workers in urban area	53.2	62.8
Urban population (% of the total)	47.7	58.1

Source: Based on Cordova and Zéphyr (2000), Central Reserve Bank.

ended:² during this period the Salvadoran economy was one of the fastest growing in Latin America, reaching an average annual growth rate of 6 per cent. However, in the second phase (after 1995) the rate of growth began to decline as a result of lack of innovation, the end of the stimulus of post-peace accords, and a lower growth of exports.³

Cordova and Zéphyr (2000) identify four stylized facts in the Salvadoran economy over the period 1991–99: high post-war economic growth, increasing flows of remittances, growing importance of the services, and orientation towards urban activities, whose combined effect led to an important structural transformation of the economy during the decade (Table 8.1).

One of the main drivers of aggregate demand was household consumption, which grew at an annual rate of 5.3 per cent during the decade. The rise of domestic consumption was concentrated in the non-tradable goods sector, and the composition of GDP shifted in favour of non-tradable services, especially construction and commerce. The contribution from the non-tradable sector to the average rate of GDP growth was 63 per cent. This is explained by the decline of agriculture and rural activities (the participation of agriculture fell from 18 per cent in 1990 to 13 per cent in 1999) and the growth of services.

Exports recovered partially in the 1990s after a severe drop in the 1980s, but remained stable as a percentage of GDP, due to the combination of declining agricultural exports and a rise in *maquila* (free-zones producing garments), whose value added increased tenfold (Segovia and Lardé 2002). Imports experienced rapid growth due to the increase of family remittances, exchange rate appreciation, and better credit availability. Exports were affected negatively by the appreciation of the real exchange rate (Larrain 2003).

² The civil war lasted about 12 years, resulting in approximately 75,000 victims. During the war (1979–89) the economy shrank annually at a rate of 2.2 per cent (Cordova and Zéphyr 2000). The peace accords were formally signed on 16 January 1992.

³ There are also explanations that the recovery and deceleration of the Salvadoran economy were linked to a post-war impulse and the loss of dynamism after reconstruction. That is, the rapid growth experienced during the first half of the 1990s was mainly the result of a 'rebound effect' following the civil war (Acevedo 2003).

Table 8.2. Macroeconomic importance of remittances, 1991–2010, El Salvador

Year	Millions of US\$				Remittances as % of:		
	Remittances	Exports	Imports	GDP	Exports	Imports	GDP
1991	790	725	1,516	5,311	109.0	52.1	14.9
1995	1,061	1,652	3,329	9,501	64.2	31.9	11.2
2000	1,751	2,941	4,948	13,134	59.5	35.4	13.3
2005	3,017	3,437	6,809	17,094	87.8	44.3	17.1
2006	3,471	3,730	7,763	18,551	93.1	44.7	18.7
2007	3,695	4,015	8,821	20,105	92.0	41.9	18.4
2008	3,742	4,641	9,818	21,431	80.6	38.1	17.5
2009	3,387	3,866	7,325	20,661	87.6	46.2	16.4
2010	3,431	4,499	8,498	21,215	76.3	40.4	16.2

Source: Based on Central Reserve Bank of El Salvador and the Ministry of Finance (various years).

Migrant remittances rapidly increased at the beginning of the 1990s, from an average of 2.6 per cent of GDP during the 1980s, to become the country's largest source of foreign exchange, averaging 12 per cent of GDP during the 1990s (Table 8.2). In contrast to other flows of foreign exchange, remittances do not generate any indebtedness and have proven to be remarkably stable. Their persistence, despite the cyclical downturns in economic activity and their effect on the appreciation of the real exchange rate, have served to cushion the economic shocks that have affected El Salvador.

The flow of remittances accelerated in the 2000s, increasing by 14.4 per cent per year from 2000 to 2006, reaching their peak as a percentage of GDP (18.7 per cent). Even though their relative importance has lessened in the last few years in the wake of the global crisis, they remain a relatively stable source of foreign exchange compared to foreign direct investment and other private capital flows, and still form one of the pillars of macroeconomic and social stability.⁴

8.2.2 External and Policy Environment

As in the other countries analysed in this volume, at the beginning of the 1990s El Salvador implemented an aggressive agenda of liberalization reforms that included privatization of public enterprises and pensions, deregulation, and trade and capital liberalization. In fact, in the Index of Economic Freedom in 2006, El Salvador still ranked second after Chile.

⁴ Remittances as a percentage of GDP in El Salvador remain far above the Latin American average of about 2 per cent.

Trade reforms included elimination of trade restrictions, tariff exemptions, and simplification of customs procedures. Tariffs fell from levels close to a ceiling of 290 to about 20 per cent (see Chapter 11). Furthermore, El Salvador joined GATT in 1992 and signed free-trade agreements with Mexico, Chile, Panama, and the United States during the first decade of the 2000s. Also, laws for export promotion, guarantees for and promotion of foreign investment, and a decree regulating free-trade zones and tax havens were passed and export taxes were eliminated.

These measures were introduced to boost the export sector. Exports benefited from good performance of the terms of trade during 1991–5 (first phase of rapid growth in 1990s), growing at an annual rate of 17.7 per cent, with an outstanding performance of the *maquila* sector that expanded rapidly in the 1990s to reach 3.5 per cent of GDP in 2000. In contrast, traditional agricultural exports began to fall, affected by the decline of coffee production and the disappearing of cotton.⁵

In 1989 the exchange rate was unified. Foreign-exchange controls were eliminated through the removal of quotas, licences, administrative procedures, and other restrictions. Capital inflows rapidly increased, fuelled by higher levels of foreign aid for post-war reconstruction, repatriation of private capital flows, and increasing workers' remittances (Segovia and Lardé 2002). Both private and public investment rose during the first half of the 1990s. In this context, monetary policy was oriented to sterilizing a large inflow of foreign capital. This helped to control inflation, but the sterilization policies contributed to higher interest rates and the foreign-exchange inflows led to further appreciation of the real exchange rate. Banks were privatized again around 1993 after having been nationalized in the early 1980s. This also contributed to an accelerated growth of credit in the first instance, although it was followed by a tightening of monetary policy around 1995.

In the fiscal policy area, a tax reform was passed in 1990 to simplify the tax structure. Income tax was streamlined, a value added tax (VAT) was introduced in substitution of a sales tax, tariffs were significantly reduced, and export and property taxes were eliminated. As a first result of the reform, the tax burden increased by about one percentage point of GDP, but then remained stable at around 10.2 per cent of GDP during the second half of the 1990s, one of the lowest tax/GDP ratios of the world (see Chapter 14).

Levels of public expenditure on education and health increased slightly during the decade. Public expenditure on education grew by 1 per cent of GDP and expenditure on health by 0.6 percentage points. Educational attainment improved *pari passu*. The net enrolment ratio in primary schools increased

⁵ In addition to adverse international conditions, this was, to a great extent, the result of inadequate pest-control techniques and land reform (Hausmann and Rodrik 2005).

from 75.5 per cent in 1990 to 82.7 per cent in 1999. The Gini coefficient of years of education among workers decreased from 0.573 to 0.48 between 1991 and 1999 (CEDLAS-World Bank 2011). Also, there was some progress in the health sector. Infant mortality rate decreased from 54 deaths per 1000 live births in the period 1983–8 to 35 in 1993–8, while malnutrition (weight for age) was reduced from 16.1 in 1988 to 11.8 in 1993 (FESAL 1993).

8.2.3 Macro Conditions During the 2000s

The reform efforts of the 1990s were capped by official dollarization in 2001. Authorities at the time raised high expectations about the favourable effects of such a measure on export performance, the attraction of investment, job creation, and economic growth. More than a decade later, dollarization does not seem to have met these expectations (Levy-Yeyati 2011). In reality, the ten-year period of dollarization has been the decade of the lowest growth rate in El Salvador during the last 60 years for which economic data are available, excluding the civil war period in the 1980s.

The Salvadoran economy has not yet entered the path of sustained long-term high growth and is still confronted with structural fragilities which affect its competitiveness, particularly within the export sector. With the exception of the *maquila* sector, exports have shown weak performance since the second half of the 1990s, despite efforts to strengthen and diversify the export supply. So far, El Salvador has not been able to take full advantage of the trade opportunities brought by such initiatives as the free-trade treaties with Mexico, Chile, Panama, and the Dominican Republic, and more recently the Central American Free Trade Agreement (CAFTA), which came into effect in 2006.

To a certain extent, the modest performance shown by the Salvadoran economy during the last decade can be attributable to an adverse external environment (deteriorating terms of trade due to declining coffee prices and rising oil prices, increase of international interest rates, slowdown of the US economy, competition from China in textiles and other manufactures, etc.). However, other countries in the region have faced the same adverse external environment and yet they have grown at higher rates than El Salvador (Zegarra, Rodríguez, and Acevedo 2007). Since 1995, the Salvadoran economy has grown at a lower rate than the world economy, the developing countries, the Latin American region, and its Central American neighbours (see Acevedo and Cabrera 2012).

After so many years of modest economic performance, it was not surprising that El Salvador was the Central American country hardest hit by the global crisis, and faced most difficulties in attempts to recover. Even though the administration that took office on 1 June 2009,⁶ amidst the worst of the crisis,

⁶ The current administration is the first centre-left government in Salvadoran history.

has tried to overhaul the economy and resume growth, prospects for the near future are still sombre and estimates of growth rates remain well below those of neighbouring countries.

As a result of the deteriorating social conditions associated with long-lasting low growth, external migration accelerated during the 2000s, even though El Salvador had already experienced significant emigration flows since the 1980s. Although other Latin American countries have also recorded large out-migrations, the impact on the labour force and human capital in El Salvador has been much greater.

Estimates from the Salvadoran government indicate that 3.5 million Salvadorans live abroad, three million of them in the United States.⁷ In view of the country's population of 6.3 million living in El Salvador, the figure of 3.5 million migrants indicates that 36 per cent of all Salvadorans live abroad. The effect of migration on demographic growth has been so strong that the annual population growth rate in El Salvador during the last decade was just 0.4 per cent, lower than the average rate of population growth of high-income countries of the Eurozone.

Most migrants are young people. According to the United States Migration Policy Institute, 80 per cent of Salvadorans living in the USA in 2000 were younger than 44 years old. The Central Bank of El Salvador conducted a survey in the United States during the first semester of 2004, showing similar results. This survey indicates that the average age at the time of emigration from El Salvador was 25 years and that 52.7 per cent of recent migrants were aged between 17 and 36 years. As a collateral effect, since most of the migrants are men, migration has been accompanied by an increasing participation of women in the labour force, particularly in the *maquila* sector.

These particularities of the country's demographics need to be taken into account among the main factors that explain the Salvadoran economic performance, as massive migration has led to a stagnant labour force, severely affecting the labour supply, which partially explains the low growth rates of the economy. Migration may have also negatively affected the quality of human capital, as available evidence suggests that Salvadoran migrants tend to be slightly more educated than non-migrants.

In addition, migration may have had an effect on economic growth via remittances and the real exchange rate. The large flow of remittances from abroad has contributed to the appreciation of the real exchange rate, affecting the competitiveness of Salvadoran firms. Overall, migration would thus have negative effects on social returns to investment, generating a vicious circle. Migration leads to the decline of human capital, which affects economic

⁷ UNDP (2005) presents a summary of the main existing data sources on migration for El Salvador.

growth. Also, migration increases remittances, which reduce the real exchange rate. Real appreciation reduces competitiveness of the Salvadoran traded sectors and economic growth. In turn, less economic growth leads to fewer job opportunities, which then enhance the incentives to migrate.

Not all effects of migration have been negative, though. Migration can also generate strong opportunities for development that have not been exploited by El Salvador. Remittances could be used to fund productive investments, partially compensating for the negative effect on the real exchange rate. Moreover, migration and remittances have led to much lower poverty rates and income inequality than would otherwise prevail in El Salvador, as we attempt to show later.

8.3 Evolution of Poverty and Inequality

El Salvador has made significant progress in reducing poverty since the beginning of the 1990s (Table 8.3). The share of households whose income falls below the poverty line declined from 59.7 per cent in 1991 to 30.2 per cent in 2006, while the fraction living in extreme poverty declined by 19 percentage points from 28.6 per cent to 9.6 per cent during the period. Poverty fell fastest in the first half of the 1990s and slowed considerably after 2000 in the face of the coffee crisis, the earthquakes of 2001, and the slowdown in the global and domestic economies. Since 2006, poverty rates have increased rapidly again, amidst further deterioration of domestic economic conditions due to the impact of the global crisis.

Table 8.3. Percentage of households in poverty, 1991–2009, El Salvador

Year	Extreme poverty			Relative poverty			Total poverty		
	Urban	Rural	National	Urban	Rural	National	Urban	Rural	National
1991	23.3	33.6	28.2	30.5	32.5	31.5	53.8	66.1	59.7
1995	12.4	26.5	18.2	27.6	31.7	29.3	40.0	58.2	47.5
2000	9.3	27.2	16.0	20.6	26.5	22.8	29.9	53.7	38.8
2005	9.7	16.9	12.3	21.3	25.5	22.8	30.9	42.4	35.2
2006	8.0	12.2	9.6	19.8	23.6	21.2	27.8	35.8	30.8
2007	7.9	16.3	10.8	22.0	27.5	23.8	29.9	43.8	34.6
2008	10.0	17.5	12.4	25.7	31.5	27.6	35.7	49.0	40.0
2009	9.2	17.5	12.0	24.1	29.0	25.8	33.3	46.5	37.8
2010	9.1	15.1	11.2	23.9	28.1	25.3	33.0	43.2	36.5

Source: EHPM, several years.

This rapid poverty reduction between 1991 and 2000 was associated with a sharp fall of urban poverty and a moderate decline in rural poverty (Table 8.3). Several factors were associated with this broad improvement. Economic growth was an important force as many poor families were able to share in the growth that occurred over the period. Between 1991 and 2002, average incomes of the poor households grew by 3.1 per cent a year, not far from the nationwide average of 3.7 per cent.

Structural changes in employment and household earnings also contributed to poverty reduction over the period. Specifically, there was considerable diversification of employment and household incomes out of agriculture, as the higher rates of economic growth led to an increase in real wages and an important creation of jobs in the non-tradable sector in urban areas. The households that were able to get some of these new jobs generally succeeded in raising their living standards, thus explaining the bigger reduction in urban poverty.

Although there has been some narrowing of income differentials between rural and urban areas and across departments since the early 1990s, poverty in El Salvador continues to be predominantly a rural phenomenon. Roughly half of the Salvadorans living in rural areas were poor and almost a fifth were extremely poor in 2009, compared with one-third of the urban population being poor, and only 9 per cent being extremely poor. As a result, nearly two-thirds of all El Salvador's ultra-poor live in rural areas.

Another important factor behind the reduction in poverty has been the surge in family remittances. Households that receive remittances have 50 per cent higher income levels than otherwise identical non-recipient households, even though remittances are received only by a relatively small proportion of the poorest.

Remittances reach directly about 25 per cent of Salvadoran households, who use about 80 per cent of their value to meet consumption needs. While the majority of direct recipients are households in the middle and upper deciles, as migration costs and barriers are daunting for the poorest, the importance of these flows in total income is the highest for the poor. For instance, remittances for households in the second and third deciles represented about 14 per cent of their income, while in the tenth decile they amounted to 5.2 per cent of total household income. If one were to restrict the set of households to only those that receive remittances, their importance as a source of household income increases considerably. These payments constituted 65–70 per cent of the income of remittance-receiving households in the first to third deciles of the income distribution. Overall, remittances represented 35 per cent of total income for households that received remittances, but about 60 per cent of the income of the lowest three deciles.

8.4 Remittances and Labour Market Effects on Inequality During the 1990s: A Zero-Sum Game?

8.4.1 Trends in the Labour Market

Income inequality did not show a clear trend over the 1990s. From 1991 to 1995, the Gini coefficient of household income showed a slight decline, but then gradually increased during the second half of the decade. The Gini for 1999 was 0.522, quite similar to its value of 0.526 registered in 1991. Several factors were at play behind this result.

On the one hand, the creation and quality of jobs contributed to reduce—or at least did not worsen—inequality, as labour participation improved modestly from 59.7 per cent to 60.3 per cent during 1991–99, and the unemployment rate fell from 8.3 per cent to 6.8 per cent. The lessening of unemployment presumably had a favourable effect on inequality because greater unemployment reductions were apparent in the low- to medium-educated worker groups, while unemployment rose for highly skilled labour. The quality of jobs did not deteriorate much, as the share of informal workers in the total labour force remained quite stable at around 54 per cent. Also, the increase in real wages during the 1990s could have contributed to decreasing inequality. It is also worth noting that the increase in labour participation to some extent was the result of the notable increase in the participation of females in the workforce (from 48 per cent to 55 per cent), which in turn probably also had a positive effect on equality.

In contrast, the reduction of wages in agriculture in comparison to the rest of the economy would have contributed to increased inequality. The average hourly wage in primary activities in 1991 was about 78 per cent of the average hourly wage for the whole economy, but this had fallen to 50 per cent by 1999.⁸ The negative impact of this could have been worse if the proportion of workers in the primary sector had not decreased from 36 per cent to 22 per cent (Acevedo and Cabrera 2012: Table 4). At the same time, the fall in relative wages and employment levels in the primary sector accounted for the slower reduction of rural poverty and the increased gap between the mean incomes of the urban and the rural sector from 2.3 in 1991 to 2.8 in 1999.

Reduction of employment in the agricultural sector reinforced the migration trends to urban locations and to other countries, mainly the United States. According to the data reported in Table 4 in Acevedo and Cabrera (2012), job creation was more intense in commerce, the low-tech *maquila* industry (Robertson and Trigueros 2011), and construction. According to the 1999 Household Survey, around 45 per cent of the women working in the

⁸ More than 96 per cent of the jobs in the primary sector were in agriculture during 1991–9.

industrial sector were located in *maquila*. Other important sectors absorbing female workers were hotels and restaurants and commerce.

The net effect of changes in the returns to human capital may have helped to improve income distribution. During the high growth of 1991–5, the returns to human capital experienced a big increase, but the gap between high- and low-educated workers narrowed over the 1996–9 period. Returns to secondary schooling fell between 1992 and 2002, whereas returns to primary education rose in the first half of the decade, when the economy was growing faster and when the educational effort had not yet affected the labour market, only to fall below the initial level in the second half of the decade. Returns to higher education increased during the decade, especially for the older cohort. Based on the results from a Mincer equation, returns to higher education and the skill premium in El Salvador in 1998 were modest relative to many other fast-growing countries or those with higher educational attainment (Table 8.4, see also Chapter 15).

8.4.2 Decomposition of Changes in Inequality

As there are no fully documented databases for the period prior to 1995, the changes in inequality are estimated in two ways. First, we performed a decomposition exercise with the data from 1994 and 1999 for only two income components (labour and non-labour income and remittances). Second, we calculated the changes in inequality through a non-parametric microsimulations a *là* Paes de Barros (see Cicowiez and Sánchez 2009).

The result from the decomposition exercise (Table 8.5) shows that the non-significant change in inequality is explained by an insignificant fall in the income shares and the concentration coefficient of both income sources. The second effect was more important.

We also performed a simulation exercise of the labour market structure in 1991 with the data from EHMP 1999. The parameters were obtained from Segovia and Lardé (2002). Following the methodology of Ganuza et al. (2002),

Table 8.4. Average wage by level of education and skill premium, 1991–1999, El Salvador

Year	Low	Medium	High	Medium/ low	High/low	High/ medium
1991	0.79	1.22	2.50	1.5	3.2	2.0
1995	0.71	1.18	2.86	1.6	4.0	2.4
1996	0.69	1.28	2.88	1.8	4.2	2.2
1998	0.69	1.08	2.52	1.6	3.7	2.3
1999	0.69	1.09	2.41	1.6	3.5	2.2

Source: CEDLAS-World Bank (2011).

Table 8.5. Decomposition of Gini coefficient by sources of income, 1994–1999, El Salvador

	sh(94)	sh(99)	Δsh	
Labour and non-labour income	94.9%	94.4%	-0.5%	
Remittance income	5.1%	5.6%	0.5%	
	C(94)	C(99)	ΔC	
Labour and non-labour income	0.544	0.540	-0.004	
Remittance income	0.418	0.381	-0.037	
	$\Delta sh * C(94)$	$sh(94) * \Delta C$	$\Delta sh * \Delta C$	
Labour and non-labour income	-0.003	-0.004	0.000	
Remittance income	0.002	-0.002	0.000	
	-0.001	-0.005	0.000	-0.006
	1994	1999	Change	
Gini	0.537	0.531	-0.006	

Source: Authors' calculations based on EHMP (1994 and 1999).

Table 8.6. Effects on inequality of income structure in 1999, El Salvador

	Gini	Δ Gini 99	Δ Effects
Gini 1999	0.522		
+ r	0.536	0.014	0.014
+ r + u	0.538	0.016	0.002
+ r + u + s	0.530	0.007	-0.009
+ r + u + s + w1	0.523	0.001	-0.006
+ r + u + s + w2	0.530	0.008	0.007

Source: Authors' calculations based on EHMP (1999).

we simulated the change in remittances, unemployment, employment structure (in the tradable and non-tradable sectors), wage structure, and wage levels. The results in Table 8.6 suggest that overall inequality did not change, but that this was a combination of the positive effect of remittances 'r' (-0.014), lower unemployment 'u' (-0.002) and the increase in wage levels 's' (-0.007). Simultaneously, there were negative effects from wage 'w1' and employment structure 'w2' (0.015 for both).

Segovia and Lardé (2002) find that if liberalization had not taken place, inequality, poverty indicators, and the number of poor would have been lower because of the negative effects on wage structure due to economic liberalization: 'This fits with which actually took place in the labour market: a decrease in real wages of unskilled workers, an increase of wages for the skilled and semi-skilled labour force, and a rise in the urban-rural and male-female wage gaps.'

8.5 A Closer Look at the Evolution of Income Inequality in El Salvador in the Last Decade

8.5.1 The Decrease of Income Inequality

Figure 8.1 shows that the Gini coefficient of total income per capita at the national level increased slightly during the second half of the 1990s, as mentioned above, but declined from 0.551 in 2000 to 0.485 in 2009, a reduction of 12 per cent for the entire period and of 1.3 per cent on a yearly basis. This reduction is similar in magnitude to those observed in Mexico and Brazil as documented by Esquivel (2010) and Paes de Barros et al. (2009). Figure 8.1 also shows while income inequality declined in both urban and rural areas, this trend was more pronounced in rural areas.

In turn, Figure 8.2 illustrates the trend in the Gini coefficients of income distribution with and without remittances, suggesting that income distribution without remittances is more unequal than that after the inclusion of remittances, which thus appear to play an equalizing role. It is important to note that the gap between the two Gini coefficients (with and without remittances) widened steadily over 1997–2008. This would imply that the equalizing effect of remittances concerns not only its level but also its trend over time.

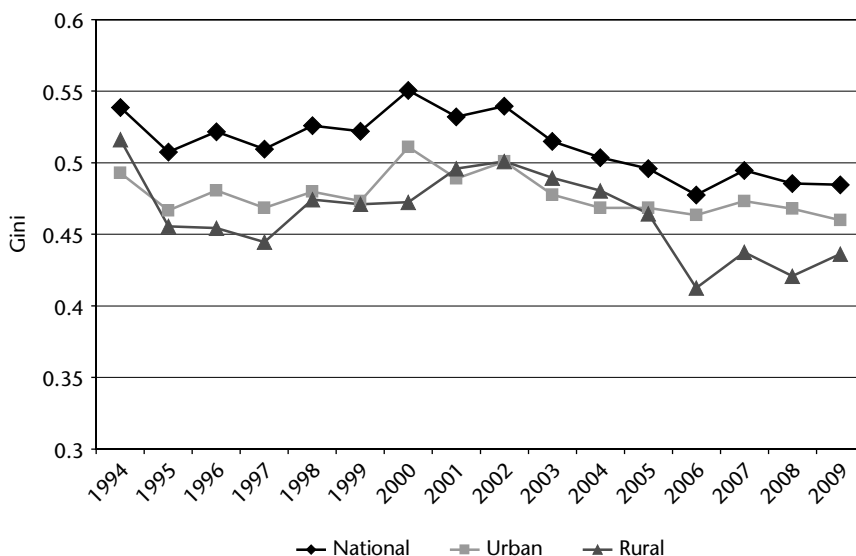


Figure 8.1. Evolution of Gini coefficient, 1994–2009, El Salvador

Source: Authors' calculations based on EHPM (various years).

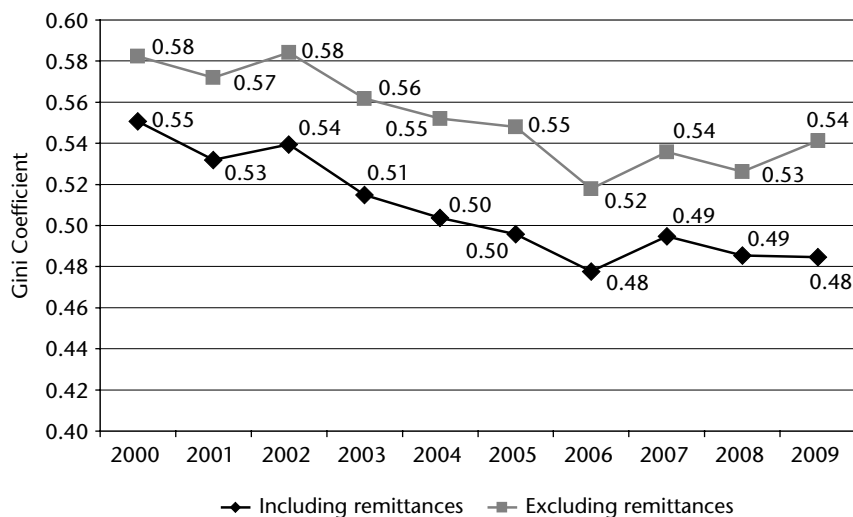


Figure 8.2. Gini coefficient of household income per capita with and without remittances, 2000–2009, El Salvador

Source: Authors' calculations based on EHPM (various years).

Table 8.7 shows the distribution of income by deciles between 2000 and 2009, as well as some other indicators of inequality. In general, these measures covariate with the Gini coefficient. It is particularly striking how the income ratios of top-10 versus bottom-10 and top-20 versus bottom-20 have halved during the period.

It is worth noting that the reduction in income inequality during most of the decade of the 2000s contributed to the fall in poverty more than the contribution from income growth. For instance, a decomposition exercise of the change in the Foster-Greer-Thorbecke Index between 2000 and 2006, applying the Datt and Ravallion (1992) approach, shows that the redistribution component contributed more than 60 per cent of the poverty reduction during the period, while the growth component contributed around 30 per cent (See Table 8.8).

8.5.2 What Are the Sources of Income Inequality in El Salvador? A Decomposition Analysis

In this section we conduct an income decomposition exercise following the approach suggested in Chapter 2 for investigating the contribution of different income sources to the observed reduction of income inequality in El Salvador.

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Table 8.7. Income distribution by deciles, 2000–2009, El Salvador

Deciles	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
I	0.77	0.81	0.74	0.90	0.97	1.43	1.56	1.29	1.54	1.48
II	1.94	2.09	1.95	2.18	2.53	2.39	2.72	2.72	2.71	2.71
III	2.95	3.05	3.00	3.31	3.40	3.70	3.94	3.93	3.69	3.77
IV	4.01	4.17	4.06	4.49	4.62	4.75	4.83	4.53	4.68	4.81
V	5.20	5.38	5.65	5.59	5.66	5.69	6.11	5.83	5.82	6.00
VI	6.54	6.91	6.66	7.19	7.80	7.19	7.44	7.22	7.19	7.30
VII	8.49	8.83	8.79	9.18	8.78	9.25	9.15	8.89	9.21	8.97
VIII	11.54	11.76	11.64	11.96	11.96	11.74	11.58	11.46	11.74	11.42
IX	16.25	16.89	16.66	16.74	16.80	16.45	16.08	15.88	15.86	16.11
X	42.31	40.10	40.85	38.46	37.48	37.42	36.60	38.26	37.56	37.44
	100	100	100	100	100	100	100	100	100	100
Top 10/ Bottom 10	54.6	49.3	55.4	42.9	38.6	26.3	23.4	29.7	24.4	25.4
Top 20/ Bottom 20	21.6	19.6	21.4	17.9	15.5	14.1	12.3	13.5	12.6	12.8
Top 10/ Bottom 40	4.4	4.0	4.2	3.5	3.3	3.1	2.8	3.1	3.0	2.9
Gini	0.5508	0.5321	0.5406	0.5134	0.5011	0.4937	0.4762	0.4951	0.4875	0.4832

Source: Authors' calculations based on EHPM, several years.

Table 8.8. Decomposition of the variation in the FGT index into growth and redistribution, El Salvador

	Estimate	STE	Lower bound	Upper bound
Distribution year 2000	0.412405	0.004320	0.405299	0.419511
Distribution year 2006	0.325448	0.004009	0.318854	0.332042
Difference: 2006–2000	-0.086957	-0.000311	-0.098508	-0.075406
Datt & Ravallion approach: reference period t1 (2000)				
Growth	-0.028466	0.004530	-0.035918	-0.021013
Redistribution	-0.055396	0.006340	-0.067822	-0.042970
Residue	-0.003095	-	-	-
Datt & Ravallion approach: reference period t2 (2006)				
Growth	-0.031561	0.004541	-0.039030	-0.024092
Redistribution	-0.058491	0.005927	-0.070108	-0.046875
Residue	0.003095	-	-	-
Shapley approach				
Growth	-0.030013	0.004605	-0.039040	-0.020987
Redistribution	-0.056944	0.006038	-0.068777	-0.045110

Source: Authors' calculations based on 2000 and 2006 EHPM.

According to Chapter 2, total disposable income per capita can be decomposed into (i) labour income (including self-employment income), (ii) capital income (rents, interest, capital gains, profits, and other capital income), and (iii) transfer income (pensions, unemployment subsidies, child allowances, targeted income subsidies, anti-poverty transfers, and so on). In turn, we disaggregate labour income into ‘unskilled labour income’ (accruing to people with less than completed secondary education) and ‘skilled labour income’ (accruing to those with completed secondary education and above). Given the importance of migration and remittances for household income, we treat ‘remittance income’ separately.

According to this disaggregation, the fall in the Gini coefficient over the last decade can be decomposed into:

- a) a change (Δ) over t and $t + 1$ in the shares sh_i of each type of income (skilled and unskilled labour, remittances, capital, transfers) multiplied by their concentration coefficients in the base year t , C_{it} ;
- b) a change (Δ) of each of the concentration coefficients C_{it} of each type of income multiplied by their income shares sh_{it} in the base year t ; and
- c) a (very small) interaction factor ($\Sigma\Delta s_i\Delta C_i$) given by the product of the changes over time of the concentration coefficients by the changes over time of the income shares.

For this decomposition we used the total income per capita (unless specified otherwise) derived from the Multiple Purpose Household Surveys (or EHPMs according to its Spanish acronym). These surveys are available for the years 1994 to 2009, although the data are not fully comparable due to methodological changes over time. Therefore, specific data-points should be taken with caution, although the general trend from 2000 onward is quite clear.

It should be noted that El Salvador did not have a population census from 1992 to 2007, and that population growth rates in the interim were grossly overestimated as official projections did not take into account the full magnitude of migration. Indeed, the 2007 census revealed that the country’s population was around 1.1 million less than previous official estimates. Consequently, the labour force was also overestimated considerably. As household surveys prior to 2007 have not yet been officially adjusted for this overestimation, it makes no sense to compare post-census figures to those of previous years. Therefore, we can only work with ratios, not with the levels, of the household survey data for those years.

Survey income comprises labour income and non-labour income. The former includes all the income reported in the EHPM, including labour income through self-employment and own businesses. Non-labour income includes income derived from the ownership of capital (profits, interest, rents, and

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capital gains), which tends to be concentrated at the top of the income distribution, but it also includes private transfers (remittances), which tend to be more concentrated in the middle and lower-middle ranges of the distribution. Non-labour income also includes government transfers (pensions), which are concentrated in the middle and upper-middle ranges of the income distribution, as well as targeted government transfers (such as the conditional cash transfer programme *Comunidades Solidarias*), which are concentrated at the bottom, and non-monetary income such as the consumption of own production, which is common in poor rural areas.

The main income component in El Salvador is labour income, although its share has declined somewhat in the last decade, while the second is remittances (Table 8.9). Table 8.10 reports the concentration coefficients for the different income components. The results of the decomposition exercise for the years 2001 and 2009 are shown in Table 8.11.

Table 8.9. Income shares in total income, by source, 2000–2009, El Salvador

Income source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Skilled	0.43	0.40	0.41	0.38	0.36	0.39	0.40	0.42	0.43	0.42
Unskilled	0.41	0.41	0.39	0.42	0.42	0.39	0.40	0.40	0.38	0.39
Capital	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Transfers	0.08	0.09	0.10	0.09	0.10	0.10	0.09	0.08	0.08	0.10
Remittances	0.06	0.08	0.08	0.09	0.09	0.10	0.09	0.09	0.09	0.08
Other	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00

Source: Authors' calculations based on EHPM, several years.

Table 8.10. Concentration coefficients for different income components, 2000–2009, El Salvador

Income source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Skilled labour	0.7924	0.7588	0.7667	0.7443	0.7217	0.7086	0.7163	0.7311	0.7333	0.7167
Unskilled labour	0.3205	0.3301	0.3462	0.3280	0.3188	0.3150	0.2530	0.2879	0.2393	0.2682
Capital income	0.8205	0.8187	0.6992	0.7529	0.7783	0.7200	0.7105	0.7203	0.8255	0.7353
Transfers income	0.5032	0.4928	0.4562	0.4404	0.5138	0.4371	0.4942	0.4300	0.4312	0.4198
Other income	0.4101	0.5008	0.7400	0.5514	0.6123	0.3204	0.4335	0.4189	0.5319	0.0865
Remittances	0.3467	0.4059	0.4031	0.4276	0.4140	0.4064	0.3769	0.3574	0.3577	0.3703

Source: Authors' calculations based on EHPM, several years.

Table 8.11. Results from the income decomposition exercise, El Salvador

	Gini	Δ with respect to Gini 2001	Δ Effects
Gini 2001	0.5321		
+ s	0.5286	-0.0035	-0.0035
+ s + u	0.4952	-0.0369	-0.0334
+ s + u + c	0.4847	-0.0474	-0.0105
+ s + u + c + t	0.4860	-0.0460	0.0014
+ s + u + c + t + o	0.4850	-0.0471	-0.0011
+ s + u + c + t + o + r	0.4832	-0.0489	-0.0018

Note: s = skilled labour; u = unskilled labour; c = capital income; t = transfers income; o = other income; r = remittances.

Source: Own calculations.

Income source	Share in total income		Delta share (A)	Concentration Index		Delta CI (B)	CI*share		(A) *CI in 2001	(B) *Share in 2001	(A) *(B)
	2001	2009		2001	2009		2001	2009			
Skilled labour	0.40	0.42	0.0186	0.7588	0.7167	-0.0422	0.3028	0.2994	0.0141	-0.0168	-0.0008
Unskilled labour	0.41	0.39	-0.0290	0.3301	0.2682	-0.0619	0.1368	0.1033	-0.0096	-0.0256	0.0018
Capital income	0.02	0.01	-0.0118	0.8187	0.7353	-0.0834	0.0178	0.0073	-0.0097	-0.0018	0.0010
Transfers income	0.09	0.10	0.0182	0.4928	0.4198	-0.0729	0.0423	0.0437	0.0090	-0.0063	-0.0013
Other income	0.00	0.00	0.0014	0.5008	0.0865	-0.4142	0.0015	0.0004	0.0007	-0.0012	-0.0006
Remittances	0.08	0.08	0.0026	0.4059	0.3703	-0.0356	0.0309	0.0292	0.0010	-0.0027	-0.0001

Source: Authors' calculations based on EHPM.

The results of the decomposition exercise (Table 8.11) suggest that the main equalizing force in the last decade has been the reduction of the concentration coefficient of skilled and unskilled labour income. Furthermore, the share of unskilled workers' income in total income has diminished, as the result of a slight increase in the proportion of skilled workers in the labour force, despite a reduction of the skill premium (measured as the average labour income for skilled workers relative to the average labour income for unskilled workers).

Despite a decline in its (high) concentration coefficient, and a small decline in its share, the changes in capital income have not been an important equalizing force given its very small weight in total income. The same applies to 'other incomes'; its effect on the Gini evolution is insignificant as well.

The contribution of remittances is quite interesting. As in the case of unskilled labour income and 'other incomes', the concentration coefficient for remittances is relatively small, if positive. Therefore, the small increase in the share of remittances in total income between 2001 and 2009 had an equalizing effect which was compounded by the decline of their concentration coefficient during the same period. This is due to the fact that remittances have been increasingly concentrated on the bottom half of the national income distribution (but not in the lowest deciles, as the poorest households usually do not have the means to send anyone abroad), as confirmed by the fact that the Gini coefficient for income with remittances is noticeably lower than the corresponding Gini for income without them.

In the context of the low economic growth that has prevailed in El Salvador during the last decade, there is a clear relationship between the income-equalizing effect of migration remittances, the changes in the composition of labour income, and the growth dynamics. Given the effects of migration on the growth rate of the labour force, we hypothesize that workers' migration might be a significant factor in explaining the low growth. On the other hand, low growth might also be a factor that can influence the decision to migrate because job opportunities are scarcer when the domestic economy slows down.

Several factors are at work: first, due to the deceleration of the economy, employment generally has not kept pace with the increase in population and the demand for jobs. The Salvadoran economy needs to create about 50,000 new jobs annually in order to employ the new entrants in the economically active population each year. However, according to census data, the creation of new jobs during the period 1992–2007 averaged less than 16,000 per year, and migration has been the factor that has kept unemployment rates below 8 per cent despite the inability of the economy to generate enough jobs.

Second, the country's modest domestic economic growth has contributed to widening wage differentials with the United States. As is pointed out by conventional migration theories, especially in human capital models,

the decision to migrate is based upon a comparison of anticipated future incomes in the sending and the receiving countries adjusted by the cost of migration.

Third, the educational base of the labour force has improved over the years, although not as much as in other countries of the region (see Chapter 15), but the proportion of skilled labour is higher among migrants than among those staying in El Salvador. Survey data from the central bank indicate that Salvadoran migrants who send remittances back home to their families had an average of 9.2 years of schooling, compared to the national average of 5.6 years (Garcia and Palacios 2005). Furthermore, 27 per cent of migrants leave the country after completing their bachelor's degree (12 years of schooling). The survey also indicates that migrants in the post-2000 years had an average of 9.9 years of schooling, compared to 8.8 years prior to 2000. In particular, the share of migrants with the highest education (13 years or more) has more than doubled (9.3 per cent prior to 2000 as opposed to 19.2 per cent thereafter), which indicates that current Salvadoran migrants have better skills. Migrants on average also tend to have better entrepreneurial skills than the non-migrating population. Migrants tend to be less risk-averse than those who decide not to migrate. Therefore, migration may have reduced entrepreneurial talent in El Salvador, reducing the possibilities of innovation.

Fourth, remittance inflows have grown significantly, a reflection of the increase in the stock of Salvadorans abroad and their shift towards more highly skilled jobs, a fact that may encourage additional potential emigrants to migrate.

Fifth, the large existing network of Salvadorans in the United States facilitates job placement. Also, remittances relax the 'budget constraint' faced by many who wish to migrate. Remittances provide support in covering the high initial costs of migration, which are often prohibitive for unskilled low-income migrants. Thus, workers' remittances can be an important source for financing migration and may trigger additional outflows, thereby strengthening the migration chain.

Arguably, these outflows of workers over the years, which include a higher proportion of skilled labour, have affected the productivity and output levels of the Salvadoran economy. To the extent that remittance income reduces recipients' need to work, this may have a negative impact on overall economic activity. Thus, the combined effect of a slow growth of the labour force, and a slow demand for skilled workers due to weak economic growth during the last decade has greatly contributed to increasing the reservation wage of the unskilled workers, increasing numbers of both skilled and unskilled workers leaving El Salvador, and reducing the skill premium and the urban-rural wage ratio (Table 8.12).

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Table 8.12. Skill premium by region and gender, and urban–rural labour income ratio, 2000–2009, El Salvador

Year	National	Urban	Rural	Male	Female	Urban–rural labour income ratio
2000	2.76	2.34	2.15	3.02	2.48	2.38
2001	2.61	2.23	2.22	2.80	2.42	2.24
2002	2.62	2.23	2.18	2.98	2.23	2.30
2003	2.37	2.06	2.03	2.57	2.15	2.04
2004	2.23	1.97	1.96	2.41	2.03	1.90
2005	2.34	2.07	2.27	2.45	2.26	1.85
2006	2.35	2.18	1.70	2.50	2.19	1.88
2007	2.32	2.13	1.80	2.47	2.17	1.93
2008	2.47	2.29	1.84	2.66	2.24	1.95
2009	2.34	2.17	1.81	2.47	2.20	1.88

Source: Authors' calculations based on household surveys.

On the other hand, some positive 'externalities' of migration and remittances may affect economic performance and social wellbeing. For instance, remittances may have a positive indirect effect on the educational status of the migrants' relatives, as remittances are largely used by relatives to fund schooling, thus lowering the risk that a child never enrolls in school or drops out (Cox-Edwards and Ureta 2003). Acosta (2006) confirms the positive effects of remittances on the education of recipients' children aged between 11 and 14 years, whereas this is not the case for boys aged 15–17 years. Also, the networks established by emigrants can contribute to the widening of the market for Salvadoran exports in the USA or enhance some productive investments in El Salvador.

Previous administrations in El Salvador have often argued that the sharp reduction in poverty rates and income inequality described above has been the result of good public policies. However, as shown above, this argument lacks any solid basis. Furthermore, a comparison between the volume of remittances and that of public resources devoted to social development emphasizes the limited impact of public policies vis-à-vis the equalizing effect of remittances on income distribution and social disparities. Remittances constitute two or even three times the amount of public expenditure on social development (Table 8.13), even when entire social expenditures are considered. When a comparison is made between the net 'family subsidy' from remittances and the tiny conditional cash transfers to poor households from *Comunidades Solidarias*, the contrast is even starker. It is clear that El Salvador would be a much poorer country with much higher levels of inequality without migration and remittances.

Table 8.13. Comparison of remittances, social expenditures, and conditional cash transfers, 2001–2010, El Salvador

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Millions of US\$										
Public expenditure on: ¹										
Social development	992.1	1,084.6	1,091.7	1,176.0	1,363.9	1,097.6	1,206.3	1,407.9	1,644.2	1,623.2
Education	472.3	468.8	466.3	463.6	501.3	526.1	575.2	632.2	756.2	687.8
Health	209.8	217.9	226.0	233.5	273.9	313.7	343.3	365.3	422.4	443.0
Anti-poverty programme ²										
Remittances	1,911	1,935	2,105	2,548	3,017	3,471	3,695	3,742	3,387	3,431
GDP	13,813	14,307	15,047	15,798	17,094	18,551	20,105	21,431	20,661	21,215
Remittances as a ratio over:										
Social development	1.9	1.8	1.9	2.2	2.2	3.2	3.1	2.7	2.1	2.1
Education	4.0	4.1	4.5	5.5	6.0	6.6	6.4	5.9	4.5	5.0
Health	9.1	8.9	9.3	10.9	11.0	11.1	10.8	10.2	8.0	7.7
Anti-poverty programme ²										
As % of GDP	13.8	13.5	14.0	16.1	17.7	18.7	18.4	17.5	16.4	16.2

Notes:

¹Central government expenditure.

²Comunidades Solidarias programme.

Source: Central Bank of El Salvador and the Ministry of Finance (various years).

8.6 Conclusions

This chapter has shown that there has been a noticeable reduction in El Salvador's income inequality since 2000. A Gini decomposition analysis by income source suggests that inequality has fallen because of an important decline in the skill premium and in the concentration coefficients of both skilled and unskilled workers, a fact that seems to be related, *inter alia*, to the massive outmigration of labour experienced by the country. Remittances and other private transfers have also played a role in this equalizing process, as they have increasingly contributed to the improvement of the household income of the bottom half of the income distribution. In contrast, the income-reducing effect of income transfers seems to have been relatively modest.

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9

The Dynamics of Inequality Change in a Highly Dualistic Economy*

Stephan Klasen, Thomas Otter, and Carlos Villalobos Barría

9.1 Introduction

Honduras stands out as one of the few examples where income inequality has not declined in the early 2000s, as it has in most other Latin American countries (see Chapter 2). The country has thus been an outlier where the peak in inequality occurred much later and the decline thereafter is also more tentative.

Despite considerable economic growth before the global economic downturn started in 2008, Honduras is one of the poorest and most unequal countries in Latin America, with more than 50 per cent of its population below the poverty line. The situation has been aggravated by natural disasters (e.g. Hurricane Mitch in 1998), especially in rural areas, since the poor commonly live off small-scale agriculture. Starting in 2005 there has been a reduction in extreme poverty due to the combined effects of public policies, improved economic growth closely linked to increasing commodity prices, and a substantial amount of resources going directly to poor households through remittances, although the pace of poverty reduction slowed considerably after 2007.

The political system in Honduras during the past 30 years has been characterized by the Liberal Party (social liberal) and the National Party (centre-right

* We would like to thank Giovanni Andrea Cornia and the participants at the UNU-WIDER workshop meetings in New York (December 2010) and Buenos Aires (September 2011) for helpful comments and suggestions.

conservative) taking turns in government. As a result, there is not much variation in the kinds of policies implemented. Regulations protecting workers are flexible and have been systematically ignored. The last liberal government of President Zelaya (2006 to 2009) took a more populist turn, expanding social programmes and minimum wages, but was subsequently ousted in 2009 by the military. After renewed presidential elections, President Lobo from the National Party was installed in 2010.

9.1.1 Macroeconomic Environment, Liberalization, Trade Imbalances, and Inequality

Honduras, a small economy heavily dependent on a narrow range of commodity exports, began to liberalize its international trade in 1990.¹ Total imports increased enormously, while the growth of exports lagged well behind this upsurge. After the 1994 crisis, GDP growth resumed alongside improved public finances, reduced inflation, and rising international reserves (see Table 9.1). Nevertheless, trade imbalance continued to grow, real interest rates increased until 1996, and the real exchange rate (RER) continued to appreciate steadily until 2002. The appreciation of the RER seems to be linked to capital inflows after Hurricane Mitch, donor transfers for reconstruction, and, more recently, to remittances, aid, and debt relief.

As in many developing countries, and in contrast to the richer middle-income economies of Latin America, agricultural activities employ more people than any other sector, still providing over one-third of jobs overall and in rural areas over 55 per cent. The agrarian sector, however, has not been able to offer growing labour earnings due to its stagnant labour productivity.² This, in turn, is partly a consequence of the appreciated RER, insufficient capital investment, and the effects of Hurricane Mitch on the infrastructure and soil productivity, as well as of the subsequent falling commodity prices for coffee and bananas until about 2002. In contrast, and consistent with the appreciation of the RER since 1994, the non-tradable sector

¹ Bananas and coffee are the most important exports, and make Honduras highly vulnerable to natural disasters and shifts in commodity prices. Hurricane Mitch largely wiped out banana production in 1998 and 1999, from which the country recovered very slowly. It was also greatly affected by falling coffee prices until about 2002, and rising prices for both commodities afterwards. Moreover, labour emigration makes Honduras the fastest growing remittance destination of the region, with inflows representing over a quarter of GDP.

² After 2005, commodity price booms in coffee and bananas significantly improved the situation in the agricultural tradable sector, a trend that has continued to this day. See Klasen, Otter, and Villalobos Barría (2012) for a detailed description of the evolution of the Honduran economy.

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Table 9.1. Relevant macroeconomic indicators for selected periods, 1991–2007, averages in Honduras

	1991–99	1999–2005	2005–07
Remittances/GDP* (since 2000)	n/a	10.8	20.1
Exports of goods and services/GDP*	40.6	52.9	56.1
Imports of goods and services/GDP*	47.7	67.8	78.6
Banana price index (until 2009)	86.4	123.2	196.4
Coffee price index (until 2009)	112.2	90.3	154.7
Current account balance/GDP*	-6.5	-5.6	-5.3
Average inflation rate	18.9	10.7	6.4
Max. inflation rate	28.8	30.8	7.2
Real exchange rate (2000 = 100)	121.79	99.82	99.00
Real interest rate	6.81	11.78	10.53
Overall balance central government/GDP*	-3.2	-3.48	-2.13
Debt/GDP*	120.79	69.05	32.55
Tax revenues/GDP*	13.22	14.08	15.39
Public social spending/GDP*	5.92	8.92	9.90
Public social security spending/GDP*	0.28	0.22	0.36

Note: * percentages.

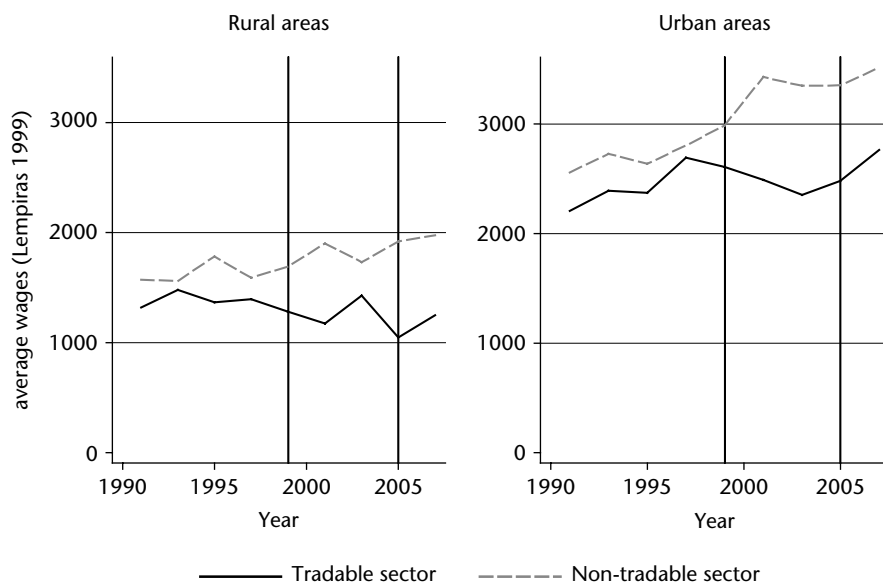
Source: Based on WDI, Secretaría Ejecutiva Consejo Monetario Centroamericano, Central Bank of Honduras (2010), ECLAC (1999).

gained momentum in terms of production, value added, and labour earnings.³ As a result, the 1994–2005 period shows an increasing earnings gap between the tradable and non-tradable sector accompanied by rising inequality between the two (Figure 9.1).⁴

How did the expansion of the non-tradable sector affect inequality? The answer depends on how efficient labour markets are in reallocating workers between sectors. If workers can be reallocated easily, we would not expect large effects as workers move across sectors with little loss of earnings. But Figure 9.2 shows that while low earners in the tradable sector suffered steep real wage declines between 1991 and 2005, in the non-tradable sector, they seem to have kept their earnings stable between 1991 and 1999, and improved their performance between 1999 and 2005; thus rising wage

³ Labour earnings in agriculture, as a share of total labour incomes, declined from 28 per cent in 1991 to 20 per cent in 1999 and to 17 per cent in 2007, while the share of wages in the non-tradable sector such as commerce, transport, construction, and basic services grew from 29 per cent in 1991 to 39 per cent in 2007. The share of labour incomes in the tradable sector in rural areas declined from 67 per cent of total labour incomes in 1991 to 56 per cent in 2007 (and from 25 per cent and 22 per cent of labour incomes in urban areas). All mentioned figures are based on EPHPM I and EPHPM II.

⁴ The tradable sector consists of formal and informal employment in agriculture and livestock activities, mining, and manufacture. The non-tradable sector consists of formal and informal employment in basic services (electricity, water, and gas), construction, commerce, transport, financing, and other services.



Source: Authors' calculations based on EPHPM I and EPHPM II.

Figure 9.1. Average labour earnings in the tradable and non-tradable sectors, 1991–2007, Honduras

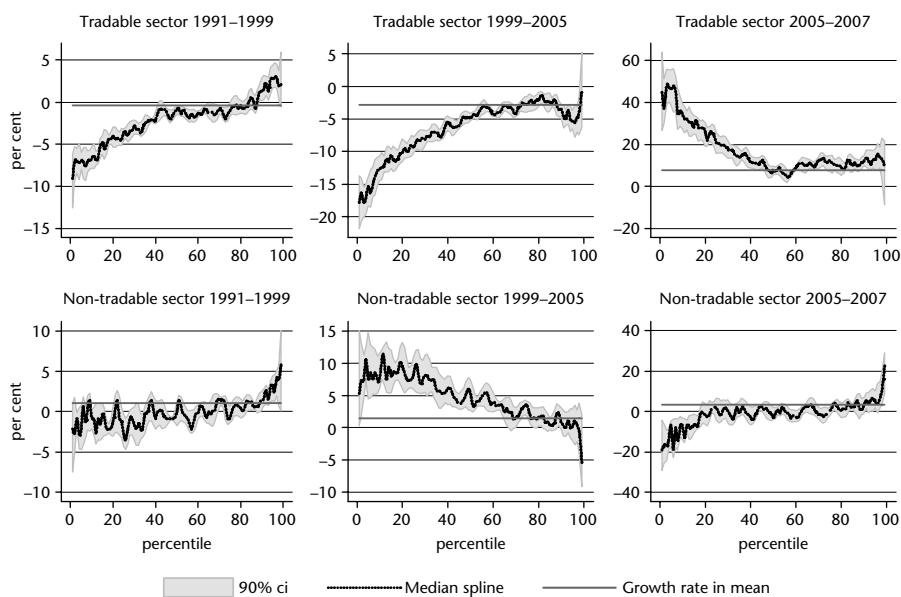
inequality in rural areas intensified the growing earnings gap between the two sectors. Why were low earners in the tradable sector unable to move to the non-tradable sector and profit from growing wages? The answer may be related to immobility caused by high moving costs and poor education of rural workers, which restricts in particular the mobility of low-skilled workers and allows inequality to rise without a migration response (see Barahona and Blas 2008; see also Devillanova et al. 2010).⁵ Thus deficiencies in the educational system might be the issue, and we now turn to this problem.

Market-oriented reforms were implemented in Honduras during the early 1990s, including those affecting educational policies. Barahona and Blas (2008) argue that reforms were implemented with the objective to decentralize and incorporate the private sector in the educational process. Despite these efforts, the country's educational system is still deficient in coverage and quality.⁶

⁵ See Barahona and Blas (2008) on the Honduran educational system.

⁶ Public spending per capita in education in Honduras (US\$40 in 2000) is far removed from the more advanced educational systems in Latin America, e.g. US\$520 in Argentina during the same year (ECLAC). However, given that public spending on education in Honduras is already quite high as a share of the GDP, considerable complementary financial flows will be required to enhance educational resources further.

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Note: Different y-axis scales.

Source: Authors' calculations based on EPHPM I and EPHPM II.

Figure 9.2. Growth incidence curves in the tradable and non-tradable sectors in rural areas, 1991–2007, Honduras

Average formal education in the Honduran labour force has increased only marginally during 1991–2007 (for a comparison with the performance of other countries in the region, see Chapter 15). Furthermore, education lagged behind in rural areas (see Table 9.2). Although the proportion without formal education has steadily declined in both urban and rural areas alike, in rural areas this is compensated for by the increasing share of people with intermediate education, while the largest increase in cities was among those with tertiary education. Thus, changes in the distribution of education at the country level are dominated by the accelerated expansion of tertiary education in urban areas. Given the (often convex) link between education and labour earnings, educational progress in the cities may serve to increase labour income inequality.⁷ In short, the very limited educational progress in rural areas puts a brake on the ability of low-skilled workers in the tradable

⁷ The disequalization of the earnings distribution may occur even when the Gini coefficient of years of schooling shows a monotonic decreasing trend (1991–2007). This fact has been termed the 'paradox of progress'. See Gasparini, Marchionni, and Sosa Escudero (2005) for Argentina and Legovini, Bouillón, and Lustig (2005) for Mexico.

sector to move to the non-tradable and urban sectors. To see this more clearly, we need to study the extent and selection process of migration itself.

Internal migration may have an extraordinary impact on the level and distribution of earnings in the origin and destination areas. To understand the contribution of migration on changes in the distribution of educational levels among the labour force, and thus on inequality, we estimate the educational composition of the rural-to-urban migrant flow between 1994 and 1999.⁸ It shows that, compared to the rural population, migrants are, on average, better educated than those who remain behind, supporting the notion that poorly educated rural dwellers face higher moving costs and low opportunities in cities because of their deficient education. Thus, they are unable to easily escape worsening economic opportunities in the rural tradable sector. A comparison of Tables 9.2 and 9.3 also suggests that the disequalizing effect of migration for the educational structure in urban areas, caused by migrants having lesser educational training than the urban average, is not large enough to affect declining educational inequality in urban areas. This is again consistent with our claim that there are barriers to migration for the low-skilled, leading to migrant flows that are too low to reduce earning inequality in the face of a shift from the tradable to the non-tradable sector. With this background in mind, we can now turn to the details of income inequality changes in the two periods.

The Appendix Table A9.1 depicts inequality trends in household per capita income and labour earnings on a monthly basis. Inequality in household per capita income increased steadily for more than ten years from 1991 onwards, and then started to decrease after 2005, a trend that appears to have continued beyond 2007, the last comparable dataset in our analysis.⁹ Disequalization appears to be heavily influenced by increased rural inequality, while urban inequality remains almost unchanged.

To better understand these inequality changes and to link them to the macro developments, we draw on various decomposition techniques and divide our analysis into three periods: 1991–9 (just after Hurricane Mitch), 1999–2005 (years of highest inequality), and 2005–7.¹⁰

⁸ This estimation controls for the fact that after migration, movers may decide to enrol or to continue current studies. These figures were estimated using a structural model for internal migration based on the extended Roy model. See Villalobos Barría (2012) for technical details about the estimation procedure.

⁹ The pace of inequality reduction slowed considerably after 2007.

¹⁰ We include the years 1991 and 2007 in order to have the broadest perspective possible with our data. In addition, we include the year 2005 because, as shown above, this is when labour income inequality reached its peak, and the year 1999, which makes it possible to control for the impact of the 1998 Hurricane Mitch on labour income distribution.

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Table 9.2. Changes in the educational structure of the labour force, 1991–2007, Honduras

Education structure	Per cent				Annualized change*		
	1991	1999	2005	2007	1991–1999	1999–2005	2005–2007
Country level							
Without	20.0	16.7	14.3	13.2	–0.41	–0.41	–0.57
Less than secondary	57.8	58.0	57.0	56.0	0.02	–0.16	–0.54
Less than tertiary	18.1	20.0	21.9	23.1	0.23	0.33	0.56
Tertiary	4.1	5.3	6.7	7.8	0.16	0.24	0.54
Years of schooling	5.1	5.4	5.8	6.0	0.04	0.06	0.11
Gini coefficient	45.4	43.0	41.3	40.3	–0.30	–0.20	–0.10
Rural areas							
Without	27.4	24.1	21.2	19.3	–0.42	–0.48	–0.92
Less than secondary	64.3	65.5	67.7	67.0	0.14	0.37	–0.35
Less than tertiary	7.8	9.6	10.3	12.2	0.23	0.12	0.96
Tertiary	0.5	0.9	0.9	1.5	0.05	0.00	0.31
Years of schooling	3.6	3.8	3.9	4.2	0.03	0.02	0.15
Gini coefficient	47.6	45.8	43.6	42.4	–0.20	–0.30	–0.20
Urban areas							
Without	10.6	8.7	7.0	6.4	–0.23	–0.30	–0.30
Less than secondary	49.3	49.8	45.6	43.8	0.05	–0.69	–0.94
Less than tertiary	31.4	31.3	34.4	35.1	–0.01	0.51	0.33
Tertiary	8.7	10.2	13.0	14.8	0.19	0.47	0.91
Years of schooling	7.1	7.2	7.8	8.0	0.01	0.10	0.10
Gini coefficient	37.2	35.4	33.1	32.4	–0.20	–0.30	–0.10

Note: * in percentage points; Gini coefficient based on the years of schooling distribution.

Source: Authors' calculations based on data from EPHPM I and EPHPM II.

Table 9.3. Structures of education for migrants, urban and rural residents, 1994–1999, Honduras

	Urban areas		Rural areas		Internal migrants	
	1994	1999	1994	1999	Net migrants	Structure
Without	9.34	8.88	22.49	22.07	43,799	23.74
Less than secondary	52.40	50.88	67.39	67.03	110,056	59.65
Less than tertiary	32.05	32.44	9.76	10.36	30,519	16.54
Tertiary	6.21	7.80	0.36	0.54	135	0.07

Note: The educational structure of migrants controls for the fact that some migration has taken place for education. See Villalobos Barría (2012) for further details.

Source: Authors' calculations based on EPHPM I and EPHPM II.

9.2 Microeconomic Decomposition I: The Proximate Determinants of Changes in Income Inequality

In this section, we first present evidence regarding the relative importance of demographics, labour markets, (international) remittances, government transfers (social policies), and other non-labour income (principally capital income and domestic private transfers) in explaining inequality changes in the distribution of household per capita income between 1991 and 2007. Consistent with our discussion above on the role of macro changes, we hypothesize that the change in labour earnings is a key driver of inequality changes over time.

Following the methodology proposed by Barros et al. (2006), we identify and quantify these determinants using a series of counterfactual simulations. Here we extend the methodology to assess the impact of government transfers, remittances, and other non-labour income on inequality changes.

Putting technical aspects of the decomposition aside, the empirical approach is based on the following tree of identities:¹¹

$$y = a * r \tag{1}$$

$$r = o + t \tag{2}$$

$$t = u * w \tag{3}$$

$$o = rem + soc + nrs \tag{4}$$

Hence,

$$y = a * [(rem + soc + other) + (u * w)] \tag{5}$$

where y is the household per capita income, a corresponds to the proportion of working adults in the household, r the household income per adult, o corresponds to the household non-labour income per adult, and t represents the household labour income per adult. The variable u represents the proportion of working adults in the household (as a share of adults in the household) and w is the labour income per working adult in the household. In our extended specification (Identity (5)), remittances per adult in the household are symbolized by rem , while government transfers per adult in the household are represented by soc , and $other$ represents other household non-labour income per adult.

To clarify our notation in Table 9.4, in the decomposition presented by Identity (1), we define Δ_a as the proportion of change of the Gini coefficient resulting from changes in the distribution of the percentage of adults

¹¹ For a description of the basic model of decomposition of a distributional change, see Klasen, Otter, and Villalobos Barria (2012). Note that we do not provide a decomposition of the Gini coefficient directly, but we use it to evaluate changes in the entire income distribution.

Table 9.4. Percentage contribution of the proximate determinants to inequality changes of the household per capita income, 1991–2007, Honduras

Determinant	ΔGini = 2.7 points 1991–99			ΔGini = 4.2 points 1999–2005				ΔGini = –5.2 points 2005–07				
	(1)	(2)	(3)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(5)
$\Delta_{r \rightarrow a}$	-10.77	-10.77	-10.77	11.49	11.49	11.49	11.49	1.87	1.87	1.87	1.87	1.87
Δ_a	0.04	0.04	0.04	-3.16	-3.16	-3.16	-3.16	-2.93	-2.93	-2.93	-2.93	-2.93
Δ_r	110.73			91.67				-98.94				
$\Delta_{o \rightarrow t}$		11.10	11.10		-0.54	-0.54	-0.54		-2.72	-2.72	-2.72	-2.72
Δ_o		-24.23	-24.23		0.80	0.80			-51.15	-51.15		
Δt		123.86			91.41				-45.07			
$\Delta_{u \rightarrow w}$			-47.86			3.61	3.61			19.11	19.11	19.11
Δ_u			-2.18			10.29	10.29			-6.90	-6.90	-6.90
Δ_w			173.89			77.51	77.51			-57.28	-57.28	-57.28
$\Delta_{rem \rightarrow nrem}$							5.10				18.78	18.78
Δ_{rem}							-7.32				-43.63	-43.63
Δ_{nrem}							3.02				-26.32	
$\Delta_{soc \rightarrow other}$												10.22
Δ_{soc}												-11.74
Δ_{other}												-24.79
$\Delta Total$	100	100	100	100	100	100	100	-100	-100	-100	-100	-100

Note: Δ_r is decomposed in $\Delta_{o \rightarrow t} + \Delta_o + \Delta_t$ as Δ_i in $\Delta_{u \rightarrow w} + \Delta_u + \Delta_w$, Δ_o in $\Delta_{rem \rightarrow nrem} + \Delta_{rem} + \Delta_{nrem}$ and Δ_{nrem} in $\Delta_{soc \rightarrow nsoc} + \Delta_{soc} + \Delta_{nsoc}$

Source: Authors' calculations based on EPHPM I and EPHPM II.

in the household. In the same way Δ_r is the proportion of change of the Gini coefficient resulting from changes in the distribution of household income per adult. Finally, $\Delta_{a \rightarrow r}$ captures the proportion of change of the Gini coefficient resulting from changes in the association between the proportion of adults in household a and the household income per adult r .¹² Using the same notation, the contribution caused by changes in the remaining proximate determinants, and their respective associations on changes in labour income inequality, are illustrated in Table 9.4. Results for urban and rural areas are given in Klasen, Otter, and Villalobos Barría (2012).

Column 1 in Table 9.4 shows that the distribution of household income per adult r explains about 110 per cent of the disequalizing trend from 1991 to 1999. The decomposition of r attributes this dispersion entirely to the evolution of labour income per adult t , which in turn, is also fully explained by changes in monthly labour incomes w . At the country level, the conclusion is that changes in labour earnings are by far the greatest contributor to the disequalization of household per capita income; this in turn is driven mainly by rising inequality in labour earnings in rural areas.

The period 1999–2005 shows similar results: labour earnings are by far the main inequality driver. Non-labour income, including remittances and government transfers, does not change inequality much in this period.

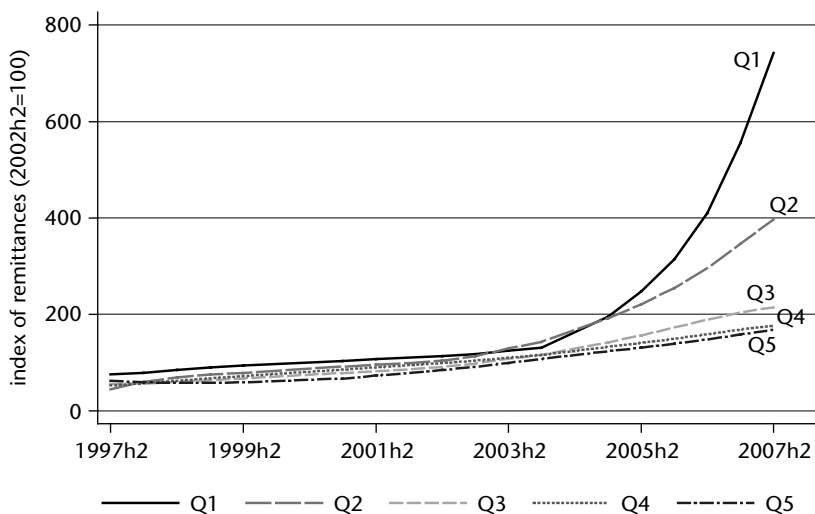
The period 2005–7 is characterized by a strong equalization of household per capita income distribution, decreasing by 5.2 Gini points at the country level, and by 7.3 and 3.2 Gini points in rural and urban areas respectively. Changes in labour earnings and non-labour income are responsible, almost in equal proportions, for the equalization pattern observed at the country level and in rural areas during this period.

At the country level, columns 4 and 5 show that non-labour income accounts for 51 per cent of equalization and that almost 44 per cent of this equalization can be attributed to remittances, about 25 per cent to private transfers and capital income, and approximately 12 per cent to government transfers. But the association between the aforementioned proximate determinants tends to disequalize household per capita income distribution, which weakens this equalizing trend to some extent. It suggests that the rising association between government and private transfers, while each contributing to the equalization of household per capita income distribution individually, reduces this effect.¹³

¹² As mentioned by Barros et al. (2006), since we are dealing with identities, any change in the income distribution must be related to changes in the joint distribution (association) of these proximate determinants.

¹³ Remittances have a stronger impact in rural areas, but the net impact, considering the association between the distribution of remittances and other non-labour incomes, is almost the same in both areas (about 30 per cent).

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Note: Trends are based on locally weighted regressions of biannual information. h2 means 'second half'.

Source: Authors' calculations based on EPHPM I and EPHPM II.

Figure 9.3. Index of remittances across quantiles of the total per capita household income, 1997–2007, Honduras

With respect to the impact of remittances, Figure 9.3 shows the evolution of the amount of per capita remittance receipts by total household income quantile using an index (2002 = 100). Remittances across income quantile do not exhibit any clear pattern until 2004, which explains why remittances had no equalizing or disequalizing effect. Starting from that year, the poorest seem to have benefited disproportionately from remittances (both in the number of beneficiaries among the poor as well as absolute amounts), leading to falling non-labour inequality as shown above.

The period between 2005 and 2007 is of great interest with respect to the role of social policy, because of the country's political transition in the beginning of 2006, when the government switched from a centre-right conservative political party, headed by Ricardo Maduro, towards a left-wing populist-inspired government led by Manuel Zelaya. In particular, cash transfer policies are critical here. Already in the early 1990s, a government conditional cash transfer programme (PRAF) was created to minimize the undesirable effects produced by the programmes implemented during the 1990s.¹⁴ The PRAF-III programme was launched under the Zelaya government

¹⁴ See Klasen, Otter, and Villalobos Barría (2012) and Moore (2008) for a detailed discussion of the PRAF programmes.

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Table 9.5. Basic data on conditional cash transfer (PRAF) programme, selected years, Honduras

	2005	2006	2007	2008	2011
Total number of beneficiaries	628,476	566,977	672,619	969,744	436,000
Total investment (1000 lempiras)	407,706	370,009	573,527	639,517	313,830
Total investment (million current US\$)	21.6	19.6	30.3	33.8	16.5
Investment per beneficiary (current US\$)	34.3	34.5	45.1	34.9	37.8

Source: Based on PRAF and Ministry of Finance (n.d.).

in 2007 and approximately 18–20 per cent of its expenditure was transferred to extremely poor rural households. Zelaya's approach to transfers (in Table 9.5) can be clearly distinguished from today's (2011) policies and those from 2005 and 2006 in terms of scope and transferred amounts per beneficiary. As shown in Table 9.4, this had the effect of equalizing non-labour income, although the effect was reduced by the rising association between government transfers and other non-labour income.

In summary, between 2005 and 2007, non-labour income was strongly equalizing the income distribution at the country level, driven by the rising equalization of remittances, other non-labour income, and government transfers. When rural and urban areas are examined separately, labour incomes are the more important drivers of equalization in rural areas, while remittances and other transfers play a relatively larger role in urban areas.

These results overall confirm the central importance of the changing distribution of labour earnings as the key factor of rising inequality between 1991 and 2005 and falling inequality in 2005–7. Only in the latter period does non-labour income begin to play a significant and equalizing role.

9.3 Microeconometric Decomposition II: Determinants of Changes in Labour Income Inequality

Changes in the distribution of labour income are by far the greatest contributor to the disequalization of household per capita income distribution between 1991 and 2005. The previous section showed that changes in the country's overall labour income inequality seem to be heavily influenced by large variations in the earnings distribution in rural areas. This is also confirmed in Table 9.6. In order to understand this development, a second set of techniques is used to identify major drivers of these distributional changes in labour earnings. In this section, we decompose changes in total distributions

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Table 9.6. Gini coefficient changes of monthly earnings distribution, Honduras

	Whole country	Urban areas	Rural areas
1991	50.80	49.08	49.15
1999	54.52	49.99	55.13
Change %	7.3	1.9	12.2
1999	54.52	49.99	55.13
2005	57.00	49.46	60.88
Change, %	4.5	-1.1	10.4
2005	57.00	49.46	60.88
2007	55.01	49.19	55.88
Change, %	-3.5	-0.5	-8.2

Source: Authors' calculations based on EPHPM I and EPHPM II.

by implementing the microeconomic decomposition methodology first proposed by Bourguignon, Ferreira, and Lustig (1998).¹⁵

Lacking a panel survey for Honduras, we rely on a procedure which allows us to replicate the structure of observed and unobserved characteristics between two different years and vice versa. The advantage of this decomposition methodology is that it enables us to explain inequality fluctuations caused by changes in the standard variables determining working hours and hourly wages accounting for the role of unobservables and behavioural responses by household members.¹⁶ In particular, we decompose the observed distributional changes into changes due to variations in the stock of endowments, their prices, and changes in their joint distributions for the periods 1991–9, 1999–2005, and 2005–7.

Figure 9.4 illustrates the evolution of the returns and relative supply of workers by educational levels at the country level.¹⁷ Returns to schooling increased slightly during 1991–4;¹⁸ however, returns to education declined substantially between 1994 and 2005, linked to the increasing availability of more educated workers.

Correspondingly, Table 9.7 shows that changes in the returns to education had an equalizing effect between 1991 and 2005 across the country while the 2005–7 period was characterized by disequalizing returns in rural areas

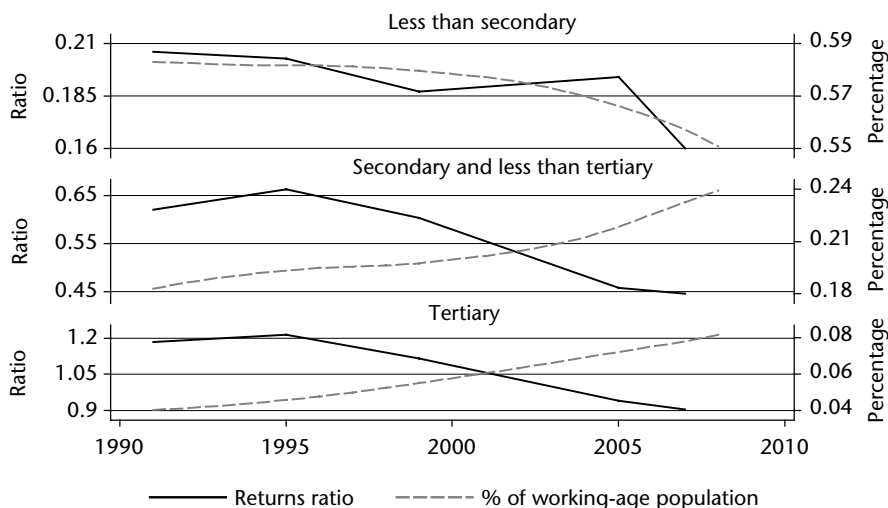
¹⁵ See Klasen, Otter, and Villalobos Barría (2012) for a methodological description of this particular estimation.

¹⁶ In this decomposition methodology we studied labour market responses separately according to the position of the person within the household. In particular we simulated labour market responses for the head of household, spouses, and other household members.

¹⁷ Returns are obtained from the Heckman ML wage regression (category 'without formal education' excluded). See Klasen, Otter, and Villalobos Barría (2012) for rural and urban areas.

¹⁸ This trend is also observed in Mexico; see López-Calva and Lustig (2010).

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Note: Returns ratio refers to returns compared to no or less than primary education. Returns are on the left y-axis, the share of people in different categories on the right axis.

Source: Authors' calculations based on EPHM I and II.

Figure 9.4. Structure and returns to education, 1991–2007, Honduras

and (slightly) equalizing returns in the cities. Why are the patterns different in urban and rural areas during this last period? Perhaps the observed commodity boom during 2005–7 was increasing returns to formal (traditional) education.

Returns to skills are not only related to formal education but to unobserved ability. After trade liberalization the demand for (unobservable) skills increased in both sectors while the demand for low-skilled traditional workers in the tradable sector decreased. We argue that the supply of highly skilled labour was very limited, particularly in the new dynamic environments in the modern non-tradable (e.g. high-end services) sectors. Thus, returns to such unobservable ability increase dramatically since endowments tend to change slowly. Conversely, the supply of unskilled workers in the tradable sector in rural areas outpaced the falling demand. Table 9.7 confirms the disequalizing role of unobserved characteristics between 1991 and 2005, most importantly in rural areas. However, it also confirms the duality between the tradable and non-tradable sector and their different labour demand composition.

The educational upgrading of the labour force may also have an impact on the distribution of earnings. For instance, there is evidence for Brazil, Mexico, and Peru to suggest that improvements in the distribution of schooling attainment led to an equalization of the earnings distribution. However, equalization in the years of schooling can, if combined with convex returns,

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Table 9.7. Decompositions of the change in the Gini coefficient, labour earnings, selected periods, Honduras

	Country level			Rural areas			Urban areas		
	1991–1999	1999–2005	2005–2007	1991–1999	1999–2005	2005–2007	1991–1999	1995–2005	2005–2007
Returns									
Individual education	-1.35	-1.24	0.62	-1.95	-1.44	1.69	-1.76	-1.29	-0.29
Household education	-0.34	-1.01	0.59	0.80	-1.09	0.35	-0.52	-1.20	0.33
Experience (potential)	-0.69	0.80	-0.10	-1.02	-0.85	0.62	-0.68	3.27	-0.62
Sectoral occupation	0.36	2.42	-1.52	8.06	2.82	-1.83	-0.15	0.87	0.11
Other	0.20	0.48	-0.48	1.27	0.48	0.00	-0.16	-1.08	0.22
Endowment									
Individual education	2.73	-0.75	-0.91	-5.91	-0.99	-3.67	1.48	-0.21	-1.24
Household education	-0.11	-0.18	-0.01	-0.11	-0.02	-0.09	-0.03	-0.16	-0.01
Experience (potential)	-0.01	-0.04	-0.03	-0.02	-1.15	-0.01	-0.04	-0.14	-0.03
Population structure	-0.28	-0.42	-0.09	0.21	-0.48	-0.13	-0.35	0.44	0.02
Non-observables (returns & endowments)	3.35	3.43	-2.31	5.92	6.89	-4.77	2.18	2.97	-0.88
Hours of work, intensity	0.42	-2.72	1.14	-3.78	3.30	0.15	2.66	-6.77	0.24
Hours of work, employment	-0.91	1.68	0.84	0.24	-0.95	1.98	-0.93	2.24	1.56
Residual	0.35	0.03	0.26	2.29	-0.78	0.72	-0.78	0.53	0.32
Total Gini change	3.72	2.48	-1.99	5.98	5.75	-5.00	0.91	-0.53	-0.27

Technical note: This table shows the average contribution to the observed Gini change produced by the observed change in each determinant. Averages come from changing the base year from t to t' (two earnings simulations required). See Bourguignon and Ferreira (2005). See Klasen, Otter, and Villalobos Barria (2012) for a technical description of the model specification.

Source: Authors' calculations based on data from EPHPM I and EPHPM II.

disequalize income distribution in the short to medium term, a phenomenon dubbed the 'paradox of progress'.¹⁹

Decomposition results in Table 9.7 suggest that, as expected, changes in educational endowments were equalizing in rural areas in all periods, associated with the expansion of rural education as well as the migration of the more educated individuals to urban areas. But due to a widening gap in mean earnings between rural and urban areas and slight disequalization in the cities, the total national effect of the educational upgrade between 1991 and 1999 is disequalizing.

¹⁹ See López-Calva and Lustig (2010) for equalization as the consequence of educational improvements. See Bourguignon, Ferreira, and Lustig (2005) for details on the 'paradox of progress'.

In Table 9.7, we also decompose changes in labour income distribution into changes in the returns to different economic sectors and occupations.²⁰ The combination of sectors and occupations yields a rich labour market division in many 'sector-occupations' of various sizes, such as agricultural labourers or management staff in agriculture. Conditional on education and other covariates, our results show that in rural areas the change in returns per sector-occupation was the main inequality driver during the 1990s and one of the most important factors between 1999 and 2005.

A comparison of two worker groups from different sector-occupations clearly indicates how the returns for specific sector-occupations drive disqualification. Consider the first group: agricultural workers with less than secondary education who earned, in real terms, 28 and 30 *lempiras* per hour in 1991 and 1999 respectively (an 8 per cent increase). The second group: workers in the finance, communication, and services sector with more than secondary education earned 75 and 111 *lempiras* per hour for the same respective years (a 48 per cent increase). Note that the first group typically belongs to the more 'traditional' agricultural sector, while the second group is part of the dynamic non-tradable sector. Regarding the existence of a growing earnings gap between the tradable and non-tradable sectors, for those with less than secondary education returns to the tradable and the non-tradable sectors increased by 13 per cent and 23 per cent per hour respectively during the same period. This means that after controlling for the years of formal education and other standard covariates, working in the non-tradable sector makes an important difference.

Table 9.7 also shows the impact of hours of work in different sectors and occupations (dubbed 'employment'), effectively modelling the impact of sectoral and occupational change, as well as hours within a sector (dubbed 'intensity'). The results show no clear and persistent trends in the country overall, nor in urban and rural areas. This implies that inter-sectoral and occupational mobility has not been a major factor affecting changes in earnings inequality, and supports the claim of a relatively rigid labour market with little inter-sectoral mobility.

This decomposition method has helped understand the role of education, mobility, and unobservables in accounting for changes in earnings distribution. The findings suggest that between 1991 and 2005, low inter-sectoral mobility, combined with rising demand for unobservables, associated with an expansion of the non-tradable sector, was driving the increase in earnings

²⁰ We identify the following four sectors: agriculture and related subsectors; manufacturing; financing; communication and personal services; and other sectors. The occupations are: professional and technicians; directors; office workers; agricultural workers; drivers; manufacturing workers; transport workers; and service workers.

inequality and dominated the effects of educational endowments and returns to formal education, particularly in rural areas.

9.4 Microeconometric Decomposition III: Linking the Microeconomic Evidence to the Macroeconomic Story

In this section, we present a model for linking the findings from the microeconomic decomposition above with the macroeconomic story. Our central argument regarding macroeconomic events and inequality trends is that the effects of trade liberalization in the 1990s, combined with a large inflow of remittances and donor capital, led to a highly overvalued currency that depressed the tradable sector. The story changes during the mid-2000s as a consequence of higher commodity prices, leading to rising earnings in the tradable sector, and the effect of remittances increasingly going to poor households. The idea behind our model is that there is underemployment in the tradable sector. Additionally, mobility costs and skills are negatively correlated causing insufficient mobility of (less skilled) workers between tradable and non-tradable sectors.

Given adverse international market conditions, it may not pay to increase productivity in the tradable sector, and earnings stagnate. In contrast, a favourable external environment boosts investments in the non-tradable sector. Consequently, an earnings gap between both sectors emerges (determining different equilibrium labour incomes across sectors).²¹

The key issue in this methodology is to decompose the distributional change of rural earnings (which is the sum of the tradable and non-tradable sectors) into two determinants. The first is the ‘within-sector’ determinant of inequality changes (*WS*), which is not directly correlated with returns to the tradable and non-tradable sectors. The second is the ‘between-sector’ determinant (*BS*) that captures inequality changes due to variations in the relative returns to the sectors (given a fixed structure of endowments, their returns and their joint distributions).

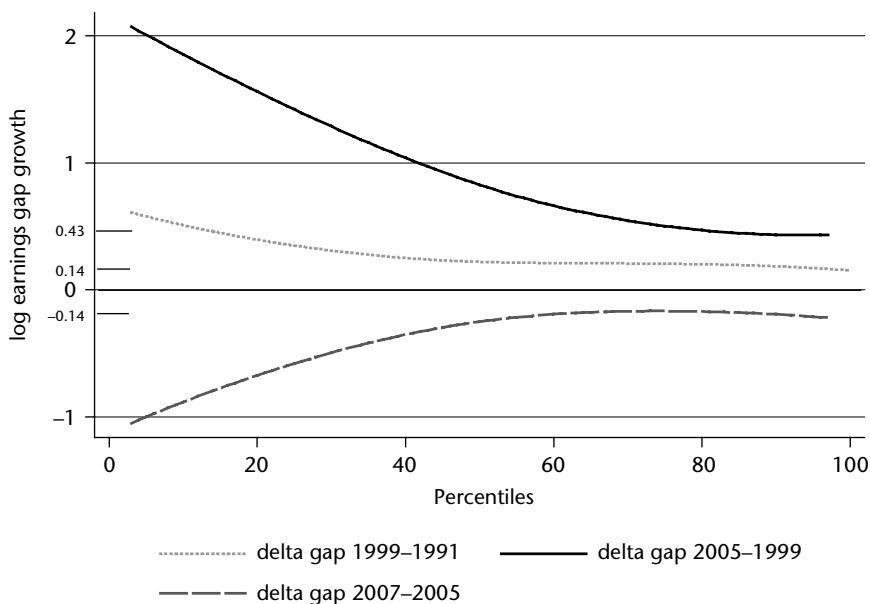
The *BS* determinant captures then the direct effect of structural changes in key macroeconomic variables, which alter the relative competitiveness of the sectors.²² It captures inequality changes resulting from the horizontal shift of

²¹ This formulation is compatible with the model by Devillanova, Di Maio, and Vertova (2010). The prediction of this formulation is that an economy suffering a shift against the backward sector will increase the inequality between and within sectors.

²² For instance, reduction of import barriers, appreciation of the nominal exchange rate, increasing public deficit, the non-adjustment of the obsolete or damaged export infrastructure, and declining prices of commodities are only a few examples of institutional and market changes, partially driven by adverse climatic events that can have an impact on the real exchange rate.

one (or both) labour earnings density function(s), keeping the shapes and the employment weights of the labour earnings density functions constant. Based on this decomposition idea, Villalobos Barría (2012) and Klasen, Otter, and Villalobos Barría (2012) formally present a methodology for decomposing the distributional change in a direct macroeconomic *BS* effect (earnings gap effect) and in a *WS* effect. One should emphasize that this method is likely to underestimate the complete impact of macroeconomic conditions on the sectoral distribution of earnings as well as on the rural distribution. In particular, one can well imagine that the macro conditions that caused the favourable shift towards the non-tradable sector not only shifted the entire earnings distribution to the right but also affected different portions of the earnings distribution differently. In that sense, our analysis probably represents a lower bound.

We can now examine to what extent the gap in earnings between the two sectors is actually driving changes in the labour earnings distribution. Figure 9.5 shows the changes in the labour earnings gap by earnings distribution quantiles between the tradable and non-tradable sectors in rural areas. While the patterns of the curves are also a consequence of changing returns to skills in the two sectors, the minimum vertical shift of the curves can be understood as the contribution of the general shift of conditions favouring



Source: Authors' calculations based on EPHPM I and EPHPM II.

Figure 9.5. Growth incidence curves for the inter-sectoral earnings gap in rural areas 1991–2007, Honduras

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Table 9.8. The 'macroeconomic' (between sector) earnings-gap effect on labour income inequality changes (using Ginis), 1991–2007, Honduras

	Observed distributions		Simulation I—sectors		Simulation II—occupations		% of change			
	Rural	Country	Rural	Country	Rural	Country	Sectors		Occupations	
							Rural	Country	Rural	Country
1991	49.15	50.80	—	—	—	—	—	—	—	—
1999	55.13	54.52	54.95	54.24	54.73	53.98	3.06	7.53	6.74	14.52
2005	60.88	57.00	60.44	56.03	60.00	55.73	7.66	39.11	15.31	51.21
2007	55.88	55.01	56.50	55.68	56.66	55.60	-12.38	-33.67	-15.60	-29.65

Source: Authors' calculations based on data from EPHPM I and EPHPM II.

the tradable versus the non-tradable sector (*BS* effect). Between 1991 and 2005 this effect was positive, widening the earnings gap between the two sectors; between 2005 and 2007, however, the gap change was negative, leading to declining inequality.²³

Table 9.8 shows the direct contribution to inequality changes resulting from the exogenous change in the log earnings gap between the tradable and non-tradable sectors (Simulation I—sectors) and between the tradable and non-tradable occupations (Simulation II—occupations).²⁴ Results in this table confirm that an exogenous change favouring the non-tradable sector (occupation) yields higher levels of labour earnings inequality and vice versa.

Between 1991 and 1999, the exogenous macroeconomic shift between sectors (occupation) explains a minimum of 7.5 and 14.5 per cent of the observed disequalization in rural areas and at the country level respectively. The contribution is higher in later periods, explaining up to 50 per cent of the disequalization between 1999 and 2005.²⁵ This finding suggests that shifts between tradable and non-tradable sectors, plus structural shifts that increase the demand for unobservables, together with structural rigidities in labour markets that limit mobility, combine to drive up labour earnings inequality between 1991 and 2005. After 2005, the commodity boom represents an exogenous shift favouring the tradable sector, explaining about one-third of the labour income equalization at the country level.

²³ Applying this methodology, the *BS* effect is equal to 0.43, 0.14, and -0.14 log points for the periods 1999–91, 2005–1999, and 2007–05 respectively.

²⁴ The tradable sector includes many occupations that are not directly related to trade activities (e.g. personnel transport in agriculture). On the other hand, tradable occupations include only those that are directly related to trade activities (e.g. agricultural workers in the same sector). Here, the tradable occupation should reflect more narrowly the consequences on inequality arising from changes in the relative Honduran export competitiveness.

²⁵ Note that the effects are larger at the country level than in rural areas as the rural income distribution is at the bottom of the overall country distribution and a widening of it has a larger proportionate effect on the overall country distribution.

9.5 Conclusions and Remaining Challenges

Increasing income inequality in Honduras throughout the last two decades has mainly been a rural phenomenon, occurring within a context characterized by a fall in demand for tradables, linked to an overvalued exchange rate, and a low labour mobility between a shrinking and increasingly less dynamic tradable sector and the more dynamic non-tradable sector. These conditions form the framework that helps to explain the inequality increase during the 1990s and the first part of the 2000s.

First, we implemented an extended methodology proposed by Barros et al. (2006) and find that distributional change in labour income is a key driver of inequality changes in household per capita income. However, between 2005 and 2007, the decrease in inequality is the outcome of equalizing trends in labour as well as non-labour income; remittances played a significantly equalizing role for changes in non-labour income. The increased social transfer policies by Zelaya's government had an additional, albeit small, equalizing role.

Second, using a microeconomic decomposition methodology based on Bourguignon, Ferreira, and Lustig (1998 and 2005), we find that changes in unobservables (prices and endowments) and in the structure of education, together with a pronounced occupational sorting associated with an increasing productivity gap between the tradable and non-tradable sectors, are the main factors of disequalization between 1991 and 2005. Regarding unobservable factors, it is plausible that the relative expansion of the non-agricultural sector during the 1990s, which implies wider skills, is behind the extraordinary contribution of unobservables to increased labour income inequality. Contrary to this, during the 2000s, the equalizing contribution of changes in the structure of formal education, together with a recovery of the tradable sector—driven by favourable external conditions and improved export revenues—promoted equality by increasing earnings in the tradable sector, which is expressed in our decomposition as a reduction in the price to occupations (occupational sorting), and an equalizing impact of changes in unobservable factors on inequality.

We argue that the underlying determinant of the disequalization is the low mobility between sectors and occupations, where typically a poor agricultural worker is unable to abandon his sector and move to other sectors or occupations. Improvements in sector mobility would reduce the earnings gap between the tradable and non-tradable sectors.

Given that almost 80 per cent of the extremely poor live in rural areas, with most of them working in the agricultural sector, it is critical to

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increase smallholder competitiveness, including export promotion policies, an adjustment of the real exchange rate, and investments in rural infrastructure. Similarly, a promising step towards increasing rural earnings equity in the long run would be to improve educational opportunity and quality, thereby increasing the mobility prospects of the rural labour force.

The observed decrease in inequality between 2005 and 2007 should not be misunderstood as an already guaranteed change from the previous disequalizing trend. The evolution of inequality will depend heavily on the impact of the current international crisis, commodity prices, the flow of remittances, the real exchange rate, and further trends in education and social policies. Even if social policies have so far shown only a small impact on inequality, their potential impact for reducing inequality is substantial and largely unrealized in Honduras.

Appendix

Appendix table A9.1. Gini coefficient for household per capita income and monthly labour earnings, 1991–2007, Honduras

Year	Household per capita income			Monthly labour earnings		
	Country	Urban	Rural	Country	Urban	Rural
1991	54.01	51.16	49.81	50.80	49.08	49.15
1992	55.29	50.77	51.80	51.30	49.59	47.85
1993	56.32	53.45	53.23	52.86	52.11	49.58
1994	55.49	52.45	54.18	53.60	51.77	53.43
1995	57.36	51.68	56.99	56.04	52.00	57.34
1996	53.72	48.68	51.50	51.47	49.10	50.56
1997	55.36	50.93	52.22	54.06	51.50	53.13
1998	54.58	48.24	53.93	51.69	47.68	52.87
1999	56.68	50.18	54.45	54.52	49.99	55.13
2001	58.01	50.80	54.56	53.36	48.75	51.94
2002	60.06	52.48	59.72	56.26	50.26	56.10
2004	58.90	50.68	58.72	55.99	49.99	58.02
2005	60.92	52.57	61.43	57.00	49.46	60.88
2006	58.71	51.11	58.40	55.15	48.56	58.11
2007	55.73	49.41	54.15	55.01	49.19	55.88

Note: In 2000, no household survey was implemented; EPHPM 2003 presents a high degree of measurement errors.

Source: Authors' calculations based on data from EPHPM I and EPHPM II.

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Part III

**Main Policy Changes and Inequality
During the Last Decade**

10

Macroeconomic Policies, Growth, Employment, Poverty, and Inequality in Latin America

Mario Damill and Roberto Frenkel

10.1 Introduction

This chapter examines the macroeconomic policies adopted by the Latin American countries during 1990–2010 as well as their outcomes. Macroeconomic policies refer to exchange rate, monetary, and aggregate fiscal policies, while macroeconomic outcomes refer to the patterns of growth, inflation, employment, investment, balance of payments, and the evolution of the external and public debts and of international reserves. The analysis includes a discussion of the effects of macroeconomic outcomes on poverty rates. We do not present here a study of the impact of macroeconomic outcomes on inequality indicators such as Gini coefficients. The connections between macro variables and inequality indicators are mediated by a number of other important factors, particularly by social policies, so that the links are quite complex. But it is clear that better performances regarding macro variables, particularly growth and employment, create room for improvements in indicators of income inequality. The links between these macro variables and other indicators of social conditions such as poverty rates are more direct, and we explore these connections in the chapter.

With regard to policy, the following section of the study reviews the changes that took place from 1997–8 onwards, i.e. in the aftermath of the contagion of the Asian and Russian crises. The section includes an assessment of the impact of the global crisis on growth rates.

A new macroeconomic configuration was established in the period, which favoured the acceleration of output growth. In Section 10.3 we explore

how the new macroeconomic settings fostered employment creation, and contributed to reducing poverty rates. We present an econometric testing of the relationships between growth, real exchange rates, inflation, and poverty rates.

The chapter examines data for ten South American and eight Central American countries, including Mexico.¹ A section of conclusions closes the chapter.

10.2 Macroeconomic Policy Changes and Outcomes in Latin America

10.2.1 Main Changes in Macroeconomic Policies

In the 2000s, many countries in Latin America, and elsewhere, adopted novel macroeconomic policies. In contrast to the 1990s, these changes, introduced in the wake of the 1997–8 Asian and Russian crises, prompted an acceleration of growth and changed these nations' integration with the global economy. The policies also contributed to the promotion of employment creation, improved distributive outcomes, financial stability, and greater resilience in the face of financial and real external shocks.

The core of these policy changes was the pervasive adoption of managed floating exchange rate regimes aimed at preserving competitive real exchange rates or avoiding excessive appreciations.² This new regime allows monetary authorities to intervene by accumulating reserves, so as to avoid real appreciation in the presence of current account surpluses or large capital inflows, as observed in many emerging-market countries (EMCs) in 2002–8.

Under any exchange rate regime, the availability of significant amounts of foreign reserves reduces the risk of default on public and private debts caused by insufficient international liquidity when capital inflows, for example, come to a sudden stop. But the combination of abundant reserves and managed floating tends to reduce the risk of default through other channels as well. Exchange rate flexibility leads to exchange depreciation in the face of negative external shocks, and this contributes to an adjustment of the economy to new external conditions. At the same time, the availability of reserves makes it possible to control devaluation and avoid overshooting and

¹ The South American (SA) economies are Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, and Venezuela, and the Central American (CA) ones are Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, and Panama. Mexico was also included in the latter group.

² For details on managed floating regimes, see Williamson (2000) and Bofinger and Wollmershäuser (2003).

bubbles. This limits the negative balance-sheet effects on banks and companies, a particularly relevant factor in economies with partially dollarized financial systems. Large reserves increase the role of central banks in guiding foreign exchange markets. Under the new managed floating regimes, the sizeable accumulation of international reserves that resulted from interventions in the foreign exchange market was frequently accompanied by the sterilization of the increase in monetary aggregates, aiming at price stability.

Another important macro policy change concerned fiscal management. Signs of structural change in this area emerged in the 2000s, as many countries implemented fiscal rules and fiscal responsibility laws or took discretionary decisions aiming at correcting the pro-deficit bias shown by some of them in the past (Fanelli, Jiménez, and Kacef 2011). In most cases, these changes together with steady increases in tax revenues (see Chapter 14) contributed to a generalized improvement in fiscal results as well as to a decline in outstanding public debts.

EXCHANGE RATE POLICIES AND THE EVOLUTION OF REAL EXCHANGE RATES³

Several South American countries experienced episodes of real appreciation in the early 1990s, mainly due to the fact that the exchange rate was used as a nominal anchor to fight inflation (Figure 10.1a). Next, relative stability prevailed until 1998, which was generally followed by periods of real depreciation during 1998–2003, and sustained real appreciation thereafter, except for a brief interval in 2009. Brazil, Colombia, and Chile adopted floating regimes and inflation-targeting schemes in 1999 to face the negative contagion effects from the Asian and Russian crises of 1997–8. Peru, already having adopted a managed floating exchange rate regime in the early 1990s, formally introduced inflation targeting in 2002. Argentina and Uruguay retained fixed exchange rates and continued to appreciate real exchange rates (RERs) until the 2001–2 crises, when both countries shifted to floating regimes. Similar RER trends were also recorded in Paraguay, which retained its managed floating regime, and in Bolivia. Only two countries escaped this pattern: Ecuador, which had dollarized in 2000, and Venezuela, with an erratic exchange rate policy and strong RER fluctuations.

In Central America (with the exception of dollarized Panama and El Salvador), crawling pegs or managed floats were maintained with a high degree of intervention, thus preventing strong swings in nominal and real exchange rates (for details, see Damill and Frenkel 2012).

³ See Frenkel and Rapetti (2010b) for an analysis of the evolution of ER regimes in Latin America.

Main Policy Changes and Inequality During the Last Decade

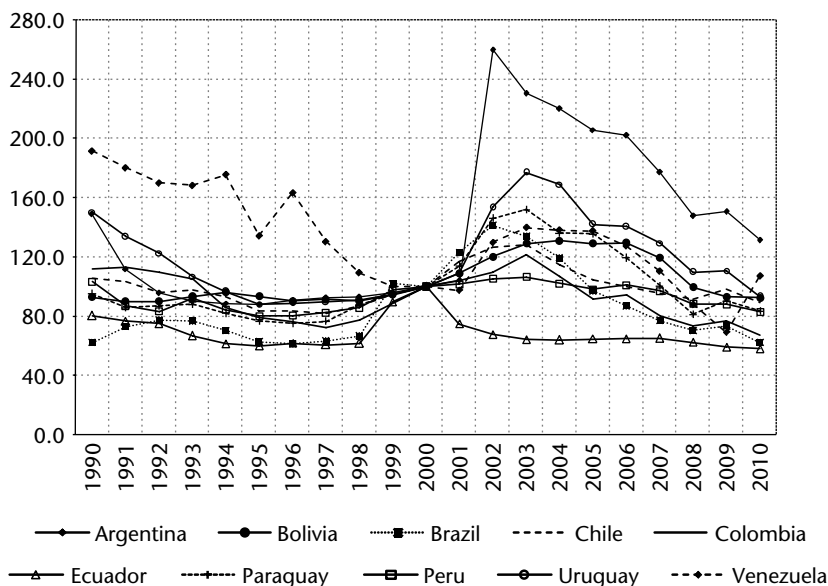


Figure 10.1a. Real bilateral exchange rates against the US dollar, 1990–2010, South America (2000 = 100)

Note: The Argentine RER has been corrected for the period 2007–10 using the average CPI of 7 provinces (CPI-7) published by CENDA, instead of the CPI elaborated by INDEC. The Argentine CPI-7 has also been considered for the period 2007–10 in the analysis of inflation rates.

Source: Authors' computation based on CEPALSTAT data.

Bilateral exchange rates in Central America followed a much more stable evolution than in South America. In the early 1990s, with the exception of El Salvador and Mexico, there was no general tendency to appreciate, nor was there any sign of an impact from the Asian crisis later. The countries went through soft real depreciation of their currencies in 2001–3, followed by mild appreciation thereafter (Figure 10.1b).

In 2010, the RERs in the SA countries were, on average, 35 per cent below the 2003 level, and had appreciated against the US dollar in every country considered, with Brazil registering a record 53 per cent. By comparison, in Central America the average appreciation between 2003 and 2010 was 15 per cent.

Some points deserve to be emphasized. First, the RERs in 2002–03 had depreciated in every SA country to its lowest level since 1990 when the region regained access to voluntary foreign lending. Second, real depreciation had a significant impact on the current account situation prior to the commodity price increases of the 2000s. Third, due to the depreciated 2002–3 RER levels, average RERs during the period 2002–8 were considerably more depreciated than the average of the 1990s, despite the general trend towards real

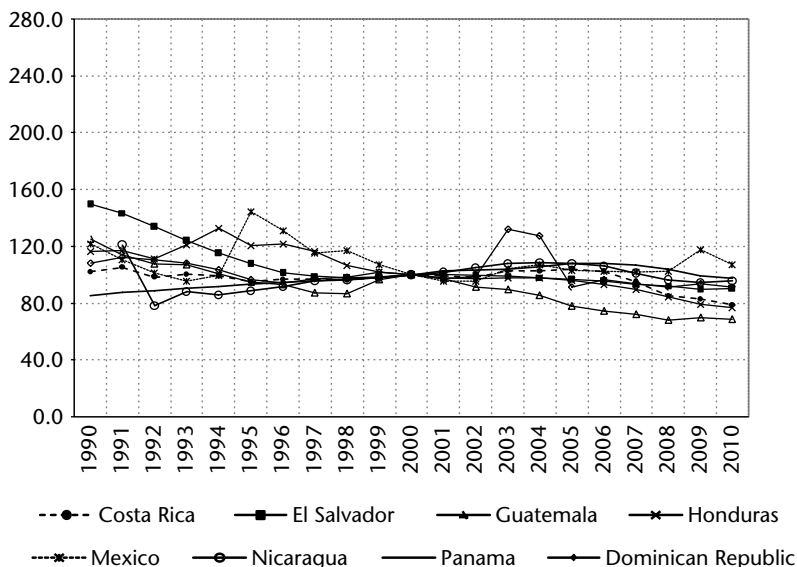


Figure 10.1b. Real bilateral exchange rates against the US dollar, 1990–2010, Central America (2000 = 100)

Source: Authors' computation based on CEPALSTAT data.

appreciation. Fourth, depreciations in 2008–9 were only a transitory interruption of the appreciation trend, which continued the following year.

THE FISCAL FRONT

A long-run improvement in fiscal performances was the result of the adoption of measures oriented at correcting the pro-deficit bias of earlier periods (Fanelli, Jiménez, and Kacef 2011) including important changes in tax policies (see Chapter 14). Both regions recorded primary surpluses in the 1990s ranging between 1 and 2 per cent of GDP (Figure 10.2), and global fiscal deficits were moderate until 1997 at least.

Despite the recessionary impact of the spillover of the Asian and Russian crises, South American economies recorded positive trends in primary balances from 1998, thus revealing the pro-cyclical bias of fiscal policies. Nevertheless, the global fiscal results tended to deteriorate as a consequence of the impact of the negative shocks on interest payments (Damill and Frenkel 2012: Figure 2a).

The average primary balance of the Central American economies turned negative in 2001, when they were hit by the impact of the recession in the USA. Both subregions, particularly SA, showed significant improvements in

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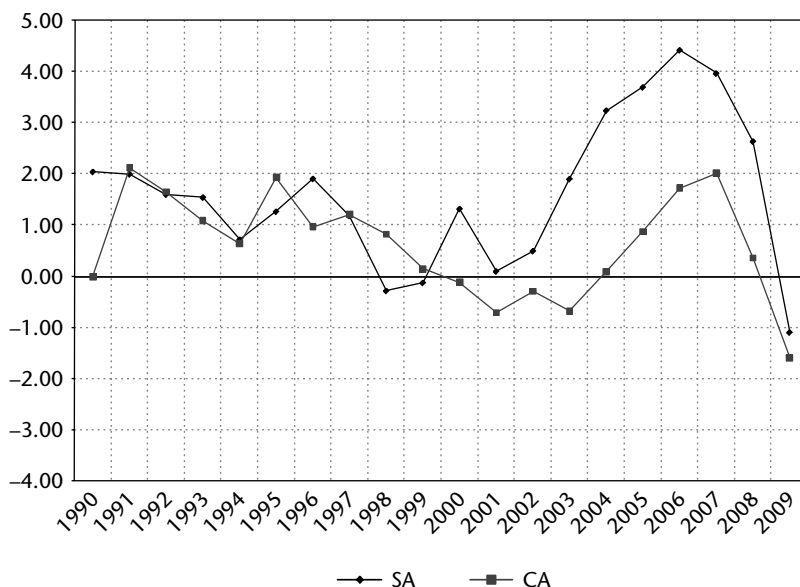


Figure 10.2. Primary fiscal results as percentage of GDP by subregions, 1990–2009 (non-financial public sector, average)

Source: Authors' computation based on CEPALSTAT data.

the fiscal results between 2003 and 2007, but worsened after 2007 as a consequence of the global crisis.

REDUCED FINANCIAL VULNERABILITY

The benefits due to the above changes in macro policies were apparent not only in Latin America but also in other developing countries. These benefits manifested themselves through two channels: on the real side, the accelerated growth of the reforming economies produced a pull effect on other developing countries, in part via better terms of trade. On the financial side, the policy changes improved the relationship between the international financial system and the developing countries.

These positive effects were apparent prior to the global financial crisis, and during its first phase around mid-2007, until the collapse following the bankruptcy of Lehman Brothers. In the subsequent phase, the negative effects of the financial shock were less severe in the economies that had adopted the new macroeconomic configurations, as they had greater room to implement countercyclical policies. In contrast, the consequences were devastating for those economies (for example, the economies of Central and Eastern Europe) following macroeconomic policies and international financial integration patterns similar to those that had prevailed in Latin America during the 1990s.

Given the region's history of frequent financial and currency crises, a decline in financial vulnerability was a primary benefit of the policy changes mentioned above. In striking contrast with this history, the recent global crisis that initially broke out in the USA triggered no similar financial crises in the region and other emerging market economies. This was due to two factors. The first is the new role of the IMF, which brought the institution closer to the role of international lender of last resort. It is plausible that IMF action helped a number of small economies avoid situations of great financial and external fragility. But more important is the fact that other developing economies which did not receive IMF support also avoided the crisis.

In the past, emerging-market countries were integrated into the international financial system in a segmented manner and several fell into 'financial traps' that usually turned into crises (Frenkel 2008a). This was a consequence of the inability to finance debt maturities and high structural current account deficits. High country risk premia made external financing more expensive while at the same time determining a floor for local real interest rates. The persistence of high country risk premiums was unexpected. During its initial stages, defenders of financial globalization considered that full integration between local financial systems and the international system would lead to their convergence. Full integration implies a global brokerage system in which the yields of financial assets on the one hand and the cost of capital for borrowers on the other are equal in similar transactions, regardless of the geographical location of the parties involved. Financial integration was to lead to continuing reductions in country risk premia, but this did not happen before the early 2000s.

However, a considerable change was experienced then, and by mid-2005 the average country risk premium of developing economies had fallen below the minimum recorded prior to the 1997–8 Asian crisis, to reach a record low in early 2007. Country risk premia have tended to rise since mid-2007, but the contagion effect due to the bankruptcy of Lehman Brothers was short-lived and by 2009 many developing countries had regained access to international credit at relatively low interest rates. Risk premia continued to decline during 2009 and 2010, settling again at levels lower than in the favourable 1990s (see Damill and Frenkel 2012: Figure 3).

The reduction of country risk premia can be associated with the changes in macro policies which started taking shape after the 1997–8 Asian and Russian crises (Frenkel and Rapetti 2010a) and which concerned: (i) adopting flexible exchange rate regimes (with different levels of intervention); (ii) generating current account surpluses or reducing previous deficits; and (iii) accumulating substantial reserves. These features persisted after the global crisis, moderating the perception of risk. These measures helped dispel the segmentation of emerging market assets and significantly limited the risk

of contagion and herd behaviour, so that the perception of diminishing risk extended also to the EMCs with deficits or less flexible exchange rate regimes.

CURRENT ACCOUNT AND AGGREGATE INVESTMENT

An important indicator of the reduced financial vulnerability of South American economies in the 2000s was the switch from foreign to domestic savings as the source of financing of aggregate investments. In fact, in contrast to the 1990s, when both subregions presented sustained current account deficits, an important recovery of investment rates observed in the 2000s in SA was no longer dependent on foreign savings. This change, essential for the sustainability of economic growth, is clearly shown by the evolution of the current account results (Frenkel and Rapetti 2010a: Figure 4). By 2003, half of the economies of the SA region exhibited current account surpluses, and by 2005 only Colombia recorded a deficit. However, several of the surplus economies recorded deficits again from 2008 onward.

In contrast, a remarkable aspect of the performance of the CA economies (in particular El Salvador, Panama, Honduras, Nicaragua, the Dominican Republic, and Mexico) is that they recorded persistent current account deficits despite the receipt (at times) of huge flows of migrant remittances.

Aggregate investment rates followed pro-cyclical patterns in both regions (Frenkel and Rapetti 2010a: Figure 4). They rose until the Asian and Russian crises, and after falling in the period 1998–2003, recovered rapidly in both regions during the upswing of the 2000s. By 2008 both subregions had achieved similar peaks of about 23 per cent of GDP on average, only to fall thereafter with the global crisis.

TERMS OF TRADE

Part of the favourable trends in current account balances and the reduced financial vulnerability of many EMCs resulted from a significant improvement in the terms of trade (ToT) during the 2000s. The improvement was particularly important for the South American countries, especially for several minerals exporting economies (Frenkel and Rapetti 2010a: Figure 6a). However, the picture was completely different in the Central American countries which, with the exception of Mexico, even faced a terms of trade deterioration during the 2000s due to their dependence on imported oil and food.

The fluctuations of the ToTs during the global crisis were more intense in South America than in Central America. However, in both the 2009 ToTs were, on average, close to the 2006 levels. In SA this was the consequence of a strong rise during the first phase of the 2007–8 global crisis followed by a fall in 2009.

ACCUMULATION OF FOREIGN DEBT AND RESERVES

The evolution of foreign debt and reserves also contributed to a reduced financial vulnerability of the South American countries in the 2000s. The current account surpluses allowed for a substantial reduction of the outstanding foreign debts from 2003 onward. This is an important fact differentiating the expansion of the 2000s from the growth years of 1991–7. The performance of the two subregions, however, differed considerably. The ratio of foreign debt to exports had always been much lower in Central America, as these economies are, on average, more open. Despite sustained current account deficits, these economies registered a gradual and steady decline in their foreign debt ratios since the early 1990s (see Damill and Frenkel 2012: Figure 7), the majority of these obligations being related to credit lines obtained from multilateral agencies like the IMF, the IDB, and the WB, or from governments of advanced countries.

The decline in financial vulnerability is also reflected by the change in the composition of payments abroad belonging to investment returns: interest payments have had a much lower weight than in the earlier 30 years of financial globalization; the contrary applies to profits and dividends on foreign direct investments. Interest payments on foreign obligations need to be serviced in foreign currency and constitute an inertial component of the current account balance. In contrast, FDI profits accrue predominantly in local currency and their value in foreign currency falls when the exchange rate depreciates. Moreover, authorities may establish temporary limits or restrictions on the transfer of profits abroad, while under normal conditions, part of FDI profits is used to finance new investments. Consequently, the external vulnerability associated with a certain current account deficit became lower than in the past.

The decreasing financial vulnerability of the Latin American economies is also shown by the accumulation of foreign reserves, which was particularly intense in SA after 2002 (Damill and Frenkel 2012: Figure 8). The average public debt ratio to GDP of the SA economies also declined significantly from 2002 onwards, particularly in Argentina, which restructured its public debt in 2005. A similar trend is evident also in the CA economies, albeit its decline was much smaller. By 2008 both regions had reached the lowest public debt to GDP ratio of the entire 1990–2010 period, close to 30 per cent on average (Damill and Frenkel 2012: Figure 10).

GDP GROWTH AND INFLATION OUTCOMES

Disinflation was a major achievement of the Latin American economies in the 1990s. It was achieved mostly during the expansionary period of 1991–7 and was preserved in most countries during the 2000s (Damill and Frenkel

2012: Figure 11). This was mainly reached with stabilization programmes based on the fixing of nominal exchange rates as the main anti-inflationary tool. Inflation dropped from the four-digit annual rates experienced before by several economies—Argentina, Brazil, Peru, and Nicaragua—to an average of less than 10 per cent in Central America by 1998 and in South America by 2004. At the end of the period analysed, only Argentina and Venezuela were struggling with two-digit annual inflation rates.

As mentioned, another notable change in the global economy during the last decade was the acceleration of growth. In the 1980s and 1990s, GDP growth rates in the advanced and developing countries correlated closely and were broadly similar. For example, during 1992–2001, the advanced countries grew at an annual rate of 2.8 per cent compared to an average of 3.8 per cent for the developing countries. Latin America also registered on average slightly higher growth rates than in the advanced countries.

The correlation between the business cycle of these two country groups persisted during the last decade, but for the first time since the start of financial globalization, the developing countries (including those in Latin America) expanded at consistently higher rates than the advanced economies. In fact, Latin America's growth rate reached on average 4.7 per cent, or double the rate of its advanced counterparts.

The GDP performance was positive in LA, but differed between the South and Central American subregions. The evolution of per capita GDP in South America shows two expansion periods: 1991–7 and 2003–8. In the first period, GDP per capita growth averaged 2.5 per cent. The negative impact of the Asian crisis became evident in 1998–9 and lasted until 2002. During the second upswing (2003–8), the rate of growth doubled in relation to the early 1990s, but fell in 2009 as a result of the global crisis (Damill and Frenkel 2012: Figure 13). Although the growth performance of Central America in the early 1990s was slightly below that of South America, the expansionary phase lasted until 2001, with only a very small effect of the 1997 Asian crisis. Yet, CA was hit in the early 2000s by the dotcom crisis that affected the US economy. In the following recovery (2003–8), the average growth rate was 3.4 per cent, which was higher than the 1990–2000 average but lower than that of South America.

10.2.2 Econometric Assessment of the Impact of the Global Crisis

A synthetic way of measuring the novel resilience of the emerging market economies is to examine their growth performance in the critical year 2009, when the GDP of advanced countries dropped 3.4 per cent while that of developing countries grew 2.7 per cent, though with considerable heterogeneity. The recessionary impact was greater in Latin America than for developing

countries as a whole, as Mexico and Central America were severely affected by the US recession. While the GDP of South America contracted by only 0.3 per cent in 2009, Mexico's GDP fell by 6.1 per cent.

Among the factors that could explain national differences in 2009 GDP growth rates is the drop in international trade: no country could avoid a decline in its exports, though the effect depended on trade insertion patterns. The fall in migrant workers' remittances, particularly important in Central America and Mexico, is another channel of transmission of the crisis. The third channel is the financial one. In practice, the extent of the recessive impacts depended on the prior adoption of policies that permitted a decoupling from the financial effects and the implementation of countercyclical policies.

To test this hypothesis, we selected a sample of 48 developing and 30 advanced countries (see Damill and Frenkel 2012: footnote 9). The sample included 16 Latin American countries, all those studied in this chapter except Bolivia and Venezuela. The dependent variable is the 2009 growth rate of GDP at constant prices. The independent variables include the 2009 growth rate of the dollar value of exports (*expo09*) as a proxy of the real effects of the contraction of international trade; the short-term debt/GDP ratio at end of 2007 (*stermdebtgdp07*); the average current account/GDP ratio over 2005–07 (*caccountgdp0507*); the international reserves/GDP ratio at the end of 2007 (*reservgdp07*), and the average GDP growth rate over the period 2005–07 (*y0507*).

The sample includes 12 countries⁴ that had signed IMF stand-by agreements between July 2008 and November 2009 (*dumimf* is a dummy variable that equals 1 for these countries and 0 for the rest). The 2009 average GDP contraction in this group was 5.6 per cent, while the value of exports fell 24.1 per cent. The corresponding figures for the remaining 36 countries were 0.7 per cent and 20.4 per cent respectively. In the estimation shown below, the 2009 GDP rate and the independent variables are measured in percentages, so that the estimated coefficients have a direct interpretation.

As can be seen from Table 10.1, the current account coefficient is significant at the 8 per cent probability level, while the other coefficients are significant at the 4 per cent level at most and the constant is not significant. The exports coefficient is positive and indicates a recessive effect of 0.23 per cent of GDP for each percentage point reduction in the dollar value of exports. The short-term external debt/GDP ratio coefficient is negative and significant. In turn, the current account/GDP ratio coefficient is positive and of a

⁴ Countries included in the sample with stand-by agreements: Armenia, Belarus, Costa Rica, Dominican Republic, El Salvador, Georgia, Guatemala, Hungary, Latvia, Mongolia, Romania, and Ukraine.

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Table 10.1. OLS estimate of the impact of the 2009 crisis on growth performance, selected countries

Variable	Coefficient	t-Statistic	Prob.
expo09	0.231	3.545	0.0010
stermdebtgdp07	-0.180	-2.337	0.0243
caccountgdp0507	0.227	1.804	0.0783
reservgdp07*(1 - dumimf)	0.102	2.416	0.0201
y0507	0.527	2.240	0.0304
C	-0.276	-0.154	0.8776
R square = 0.48			
Number of observations: 48			

Note: White heteroscedasticity-consistent standard errors and covariance.

Source: See text.

magnitude similar to the coefficient of the fall in exports. The coefficient of the 2005–07 average growth rate is positive and significant. Last, the international reserves/GDP ratio coefficient is positive (0.10). In the estimation, the international reserves/GDP ratio is set equal to zero in the 12 countries with IMF stand-by agreements, assuming that these countries needed IMF support due to insufficient international liquidity. The developing countries that signed an IMF stand-by agreement experienced, on average, a higher GDP contraction than the rest of the sample, so that the significance of the international reserves coefficient could result from their higher contraction rates, explained by factors other than the availability of international reserves. In fact, the significance of the reserves coefficient fades if IMF agreements are not taken into account, and the coefficient also becomes insignificant if the equation is estimated on the subsample of countries without IMF agreements.

When the above equation is estimated only on the advanced country sample, only the coefficient of exports is statistically significant. In contrast, in the developing country sample all variables affected the 2009 activity level. The results thus show that, after controlling for the fall in exports, the countries that prior to the crisis had experienced higher rates of growth had lower short-term debt ratios, showed higher current account results, had higher international reserves (or have not had to ask the IMF for support), and grew more (or contracted less severely) in 2009.

It thus seems reasonable to conjecture that the diverging effects of the external financial shocks are correlated with the extent of the dependence on capital inflows as proxied by a country's current account situation, the magnitude of its public and private sectors' financial needs, the proportion of foreign capital in the financing of banks, firms, and the public sector, and the size of international reserves. These variables measure not only the robustness of the economy vis-à-vis a sudden stop, but also its ability to implement

countercyclical measures. Thus, a lower short-term debt/GDP ratio implies that a sudden stop generates fewer liquidity problems and recessive effects; the long-term debt/GDP ratio is less significant. One might ask why the coefficient of the international reserves was not found significant among the explanatory variables. One possible reason is that many countries held large amounts of international reserves but their different magnitudes did not have an impact on output levels, one of the multiple functions performed by reserves. In fact, one function of international reserves is to avoid defaults of public and private debts, and no defaults occurred among emerging market economies during the global crisis.

Furthermore, while the availability of international reserves provides liquidity in international currency to private or public debtors forced to repay external debts under sudden stop conditions, it cannot avoid recessive effects if the debts are not fully refinanced in domestic currency by the national financial system or by the government. This could explain the significance of the short-term debt coefficient, despite the availability of voluminous reserves. On the other hand, a number of countries in the sample have flexible exchange rates, which can be devalued in the face of external shocks. One function of international reserves is to allow official exchange market interventions to control the magnitude of the devaluation and guard against overshooting and the formation of bubbles. This does not depend on the different levels of international reserves, as sufficient amounts for undertaking corrective measures are available in many countries.

In order to interpret the average 2005–7 current account/GDP ratio coefficient, it is useful to express the current account result with the following identity:

$$(SP-IP) + (SG-IG) = CA$$

where SP and IP indicate, respectively, private savings and investment and SG and IG government savings and investment. The two terms on the left-hand side of the identity are the financial surpluses of both the private sector and the government. A positive current account result implies an increase in the amount of net foreign assets owned by the residents, and a lower dependence on external financing for the normal working of the economy. A positive current account balance reflects a budget surplus of the government, the private sector, or both. Thus, a current account surplus is associated with lower probability that a sudden stop could generate illiquid situations with recessive effects, and wider room for the government to finance expansionary policies.

To test the quality of the estimation fit in the case of the Latin American countries, we plotted the observed and forecasted 2009 GDP rates (Figure 10.3). The correlation coefficient between actual and forecasted GDP growth rates is 0.69 in the whole sample of 48 countries, and 0.28 for the Latin American

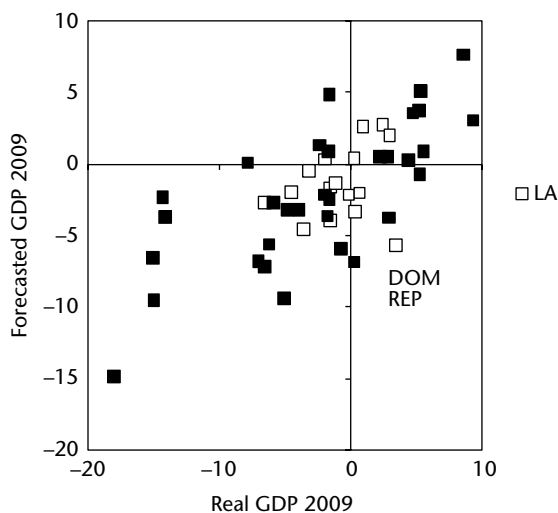


Figure 10.3. Actual and forecasted 2009 GDP rates of growth for Latin American and other developing countries (%)

Source: Authors' computation based on the panel data described above and the panel regression results.

subsample of 16 countries. The Dominican Republic (an outlier) explains this difference, and after removing it the correlation coefficient rises to 0.72 for the whole sample and to 0.60 for the Latin American one, indicating similar fits.

10.3 Employment, Unemployment, Poverty, and Inequality

As employment normally correlates positively with the business cycle, the expected relation between the unemployment rate and GDP growth is negative. Quite remarkably, this has not always been the case in the region, particularly in South America, where average unemployment rates showed an increasing trend during the 1990s upswing (see Damill and Frenkel 2012: Figure 15). In contrast, the 2003–8 expansion showed a sharp decline in unemployment, which was, however, insufficient to offset its previous rise.

Given that unemployment is closely linked to social conditions and has significant impact on the incidence of poverty and income distribution (see Chapter 12), we focused in particular on its behaviour. Both these variables worsened due to the 1997 contagion of the Asian crisis but improved sharply from 2003 onwards (see Chapter 2). Real exchange rates, in particular, explain the noticeable difference in employment creation between the first

and second periods of positive growth performance in the South American economies: 1990–7 and 2003–8. In contrast, in Central America the evolution of the unemployment rate shows a weaker correlation with the exchange rate, and is mainly explained by GDP fluctuations.

10.3.1 Econometric Testing of the Relationships Between Growth, Real Exchange Rates, Inflation, Unemployment, and Poverty

This section presents econometric analysis of the effects of macroeconomic variables on the behaviour of unemployment and poverty rates, for the 18 countries considered here, for the years 1990–2010. We expect that both faster growth and depreciated real exchange rates favour employment and reduce unemployment. In addition, lower unemployment rates contribute to decreasing poverty rates, while higher inflation rates tend to increase poverty rates. We considered GDP rates and real exchange rates as exogenous variables; thus, we do not attempt to test the effects of the RER on growth: our hypothesis on the positive effect of depreciated RERs on growth rests on numerous empirical studies that point to a similar conclusion.⁵

First, we assessed the effects of GDP growth and real exchange rates on unemployment. The estimated equation is a variant of Okun's law in which we assume that a depreciated RER has positive effects on the employment–output ratio.⁶ Next, we estimated poverty rates as a function of unemployment and inflation rates. The unemployment and the poverty equations compose a model whose reduced form expresses the poverty rate as a function of the rate of growth, real exchange rate, and inflation rate. Complete series of annual poverty rates were not available for the 18 countries. In the estimations presented here, we used poverty-rate data from the ECLAC database, which collects this information from national sources. We had to adapt our estimation procedures to data availability, which showed differences over the years and across countries. For instance, we estimated the unemployment equation based on rates of fluctuation within consecutive annual trends, but we could not do the same with the poverty equation because data on consecutive years were not available for all countries for the whole period. Thus, we estimated the poverty equation based on figures for the years with available data.

The estimation method was the panel OLS with yearly data covering the period 1990–2010 for the 18 countries. The estimations included fixed

⁵ See, for instance, the studies surveyed in Frenkel and Rapetti (2010a).

⁶ Theoretical discussions about the relationship between employment and the real exchange rate are presented in Frenkel (2004) and Frenkel and Ros (2006). A formal model from which the estimated relationship is derived is presented in Frenkel and Ros (2006).

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country effects to control for the continually diverging levels in national unemployment and poverty rates that are caused by differences in definitions and measurement procedures as well as in the structure of the labour markets. The estimations also included fixed time effects to control for the external shocks experienced by the region.

The estimated model is:

$$u(t) = g y(t) + e r(t-i) + k + \varepsilon_u(t) \quad (1)$$

$$V(t) = f U(t) + h p(t) + j + \varepsilon_v(t) \quad (2)$$

U is the unemployment rate, Y represents the GDP, and R is the bilateral real exchange rate with USA (u, y, and r represent, respectively, the annual rates of variation of U, Y, and R), V is the poverty rate, and p is the inflation rate. The coefficients to be determined are g, e, k, f, h, j; i is a time lag to be determined and ε_u and ε_v are stochastic errors.

We also used the following equation to obtain estimations of $\varepsilon_y(t)$ to be used in place of y(t) in estimating Equation (1):

$$y(t) = a r(t-i) + b + \varepsilon_y(t) \quad (3)$$

The time lag $i = 2$ (years) provides the best fit in the panel estimations of both Equations (3) and (1). The same two-year lag provides the best fit in the estimations with the time-series of individual countries (not shown here). First, we estimated Equation (3) for the sole purpose of using its residuals in place of the series y(t) to avoid collinearity problems in the estimation of Equation (1). The results are the following:

$$\hat{y}(t) = 0.034 r(t-2) + 0.036 \quad \text{R-squared} = 0.40 \quad (4)$$

(2.061)** (21.945)*

where the numbers in parenthesis under the parameters are t-statistics, and *, **, and *** indicate that the parameters are significant at 1, 5, and 10 per cent respectively. The total number of observations of the unbalanced panel is 323. The estimation used White diagonal standard errors and covariance.

Then, we calculated the residuals of the estimation:

$\text{reseq4}(t) = y(t) - \hat{y}(t)$, which are estimations of $\varepsilon_y(t)$, and we used these to replace y(t) in estimating Equation (1). From the estimation of Equation (1) we obtained the following results:

$$\bar{u}(t) = -1.616 \text{reseq4}(t) - 0.299 r(t-2) - 0.002 \quad \text{R-squared} = 0.34 \quad (5)$$

(-5.092)* (-3.495)* (-0.205)

where the total number of observations of the unbalanced panel is 299, and where the explanation of the other symbols is the same as those of Equation (4).

The coefficients are both negative and highly significant. Both faster growth and more depreciated RERs tend to reduce unemployment. A 5 per cent GDP growth rate reduces the unemployment rate by 8 per cent. A 10 per cent depreciation of the RER reduces the unemployment rate by 3 per cent with a time lag of two years.

Next, we focused on the estimation of poverty, Equation (2). We adapted the estimation procedure to the limitations imposed by data availability and to avoid endogeneity problems. First, we used Equation (5) to calculate the series $\bar{u}(t)$ of the forecasted rates of variation in unemployment rates. Then, we used the series $\bar{U}(t)$ to calculate the variable $\bar{U}(t)$:

$$\bar{U}(t) = U(t-1) [1 + \bar{u}(t)] \quad (6)$$

The new $\bar{U}(t)$ variable is the product of a predetermined variable $U(t-1)$ by the $(1 + \text{the rate of variation})$ of the unemployment rate forecasted with the macro variables, GDP and RER. We used the series $\bar{U}(t)$ in place of the original series $U(t)$ in the estimation of Equation (2). The results of the estimation are the following:

$$V(t) = 0.689 \bar{U}(t) + 0.237 p(t) + 28.032 \quad R\text{-squared} = 0.96 \quad (7)$$

$$(2.364)** \quad (3.359)* \quad (8.326)*$$

where the total number of observations of the unbalanced panel is 143 and where the explanation of the other symbols is the same as those of Equation (4).

Both coefficients of the unemployment rate and the inflation rate are positive and significant. An increase of one percentage point in the unemployment rate tends to raise the poverty rate by 0.7 percentage points, while a similar increase in the inflation rate tends to raise the poverty rate by 0.24 percentage points.

When the estimation procedure utilized above was applied on a panel of ten SA countries, the generated results were similar to those obtained using the whole sample. The results of an estimation for the CA subsample of countries presented several differences, however. The effect of the RERs on unemployment rates was not statistically significant and we found a significant effect of the US GDP growth, a variable that is not relevant for SA countries. A comparison of the results for both regions, South and Central America, is presented in Damill and Frenkel (2012).

10.4 Conclusions

The analysis we have presented so far attempts to identify the elements of the macroeconomic policies implemented in Latin America that contributed

to launching rapid growth in productivity and employment in a sustainable manner, thus creating room for improvements in income distribution and social conditions. We have also shown the effects of these processes on poverty reduction. Our analysis emphasized the role of stable and competitive real exchange rates in achieving these results.

By way of a conclusion, in this section we outline the guidelines of a macroeconomic policy regime that could make a simultaneous achievement of several objectives possible—promoting growth and employment, controlling inflation, and preventing external and financial crises.⁷ The guidelines are based on both the negative and positive aspects of the developing country experiences gained during financial liberalization. In this respect, Latin America represents the region with the longest experience, as its incorporation into the process dates from the late 1970s. The Latin American experiences are mostly negative: deep real exchange rate appreciation episodes with devastating effects on employment and balance of payments and financial crises were frequent until the early 2000s. But regional performance in the post-2002 years, particularly that of the SA subregion, contrasts vividly with the three earlier decades, yet no individual country can be singled out as a role model for the implementation of the guidelines.

The first subset of guidelines focuses on the promotion of growth and employment, the robustness of external accounts, and the prevention of crises from adverse external shocks. It comprises: (i) introducing a managed floating exchange rate regime that combines exchange rate flexibility with discretionary interventions by the central bank in the foreign exchange market; (ii) a competitive level trend in the real exchange rate (RER), avoiding strong appreciations in the short run; (iii) a surplus trend in the current account of the balance of payments and moderate current account deficits in the short run; and (iv) the accumulation of sizeable international reserves.

Relatively high rates of growth and employment are fostered by the competitive trend of the RER. Current account surpluses and the accumulation of reserves support the sustainability of the growth process by helping to avoid external crises and cushioning negative real and financial external shocks.

Policies involving the RER, external accounts, and reserves management should be accompanied by consistent fiscal and monetary policies focused on the control of aggregate demand and inflation. An important point in this regard is that in the context of a managed floating exchange rate, competitive RER levels, and a surplus in the current account, a considerable degree of monetary autonomy generally exists, which will allow active monetary policies to be introduced. So the suggested guideline with regard to monetary

⁷ A lengthy discussion of the implementation of the guidelines can be found in Frenkel (2012). They were first presented in Frenkel (2010).

policy introduces the fifth point: promoting an active monetary policy, facilitated by sterilization of the interventions in the foreign exchange market and the non-existence of fiscal dominance.

Coordination between macroeconomic policies is essential in this regime. In particular, monetary policy should be implemented in coordination with short-run fiscal policy. Depending on foreign exchange market pressures, capital controls may be necessary to simultaneously retain the competitiveness of the RER (or avoid its appreciation) and the preservation of monetary autonomy.

As in any macroeconomic policy regime, short-run fiscal policy can be either expansionary or contractionary. Although we point out later that monetary and fiscal policies in this regime should normally have a restraining role on the aggregate demand dynamics, the sixth and last guideline refers to the orientation in fiscal accounts: ascertaining equilibrium in the fiscal accounts and moderate fiscal deficits in the short run. This allows the adoption of countercyclical policies in the short run and the avoidance of the accumulation of significant public debts.

THE COORDINATION OF MACROECONOMIC POLICIES

A competitive RER provides a conducive environment for growth and development. This view has long been stressed by development economists and recently documented in many econometric studies.⁸ The growth-enhancing attributes of a competitive RER operate through the enhancement of tradable sector profitability. As this sector expands, it relaxes the balance of payment constraint to growth and generates positive effects on the rest of the economy in the form of learning-by-doing externalities and technological spillovers.

The adoption of an RER target is a singularity of the proposed macroeconomic policy regime, which we call the stable and competitive real exchange rate (SCRER) regime. In addition to the standard policy objectives of any macroeconomic regime; namely, inflation and employment and activity levels, the SCRER regime also pursues economic development as an objective. The trend of the RER is the intermediate target for such an objective, in the same way as a reference interest rate or a given fiscal budget operates as an intermediate target for monetary and fiscal policies focusing on inflation and employment. Once a pre-set trend for the RER is adopted, exchange rate policy focuses exclusively on both permitting some short-term volatility of the nominal exchange rate (NER) and preserving the long-term stability of the RER. Thus, in normal times the NER cannot be oriented towards any other macroeconomic objective such as the reduction of inflation or of

⁸ See, for instance, the evidence surveyed in Frenkel and Rapetti (2010a).

inflation expectations. The control of aggregate demand, inflation, and inflation expectations rests on monetary and fiscal policy (as well as on other policies not discussed here, such as wage and incomes policies).⁹ The role of these policies in an SCRER regime is crucial for moderating the pace of aggregate demand and inflation pressures, because the SCRER—by enhancing employment growth and capital accumulation in the tradable sector—has by itself an expansionary bias on aggregate demand. So, the three macroeconomic policies are active in an SCRER regime.

As discussed above, in the proposed macroeconomic regime, management of aggregate demand rests on monetary and fiscal policies because the exchange rate policy is committed to the preservation of an SCRER target and of its expansionary effect. In normal circumstances, these policies largely have a restraining role on the aggregate demand and inflationary pressures.

The management of policies in an SCRER regime is not simple. On the one hand, there is a tension between the preservation of the SCRER target and the aggregate demand and inflation control. On the other hand, the limiting role that monetary and fiscal policies should normally play in this context necessitates sophisticated political leadership. Both observations stress the importance of macroeconomic policy coordination at the highest level of the economic policy administration.

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11

Trade and Income Distribution in Latin America: Is There Anything New to Say?*

Miguel Székely and Claudia Sámano-Robles

11.1 Introduction

This chapter argues that in spite of the vast literature on the relationship between income distribution and trade openness in Latin America, the second decade of the twenty-first century offers an ideal moment to engage in deeper analysis both on the direction of the association between this particular policy and the distribution of income across individuals, and on the underlying mechanisms by which trade affects inequality. It is now possible to account for many of the longer-run effects that are unmeasurable by shorter-term previous analysis.

The main hypothesis we explore is whether changes in trade openness have a temporary effect over inequality that lasts only while the process is taking place, or if the change leads to long-lasting impacts that are not reversed even after the economy has been able to adjust to the shock implied by an abrupt reduction in tariffs. Since trade openness leads to a reallocation of factors across the economy, there are reasons to expect a contemporary increase in inequality, but once the adjustment has taken place, the distributional effect would tend to vanish. If this is so, once tariffs reach low levels, further effects over the distribution of income associated with it would tend to be small.

The chapter offers estimations on the sign of the association between inequality and trade openness over 30 years, and presents an illustration of the

* We are grateful to Guillermo Cruces and participants at the UNU-WIDER Workshop meetings in New York (December 2010) and in Buenos Aires (September 2011) for useful comments and suggestions, and in particular to Giovanni Andrea Cornia for the feedback for improving the chapter.

distributional dynamics that are observed once the initial impact of openness stabilizes and other factors come into place. Section 11.2 presents the main stylized facts for the income distribution–trade openness relationship in Latin America. Section 11.3 discusses a framework that illustrates the complexity of tracing the effects of openness on inequality. Section 11.4 discusses our empirical strategy and presents our results. Section 11.5 concludes.

11.2 Stylized Facts: Inequality and Trade Reform in Latin America During 1980–2010

An analysis of the trade–inequality relationship in Latin America (LA) has the advantage that the timing of trade liberalization can be clearly localized around the early mid-1980s when average tariffs started being cut drastically.¹ Figure 11.1 clearly illustrates their steep reduction from around 50 per cent in 1985 to levels of around 10 per cent in the year 2000 and thereafter, as well as the parallel rise in the share of imports plus exports over GDP from 40 per cent in 1983 to between 70 and 75 per cent at the end of the first decade of the new millennium.

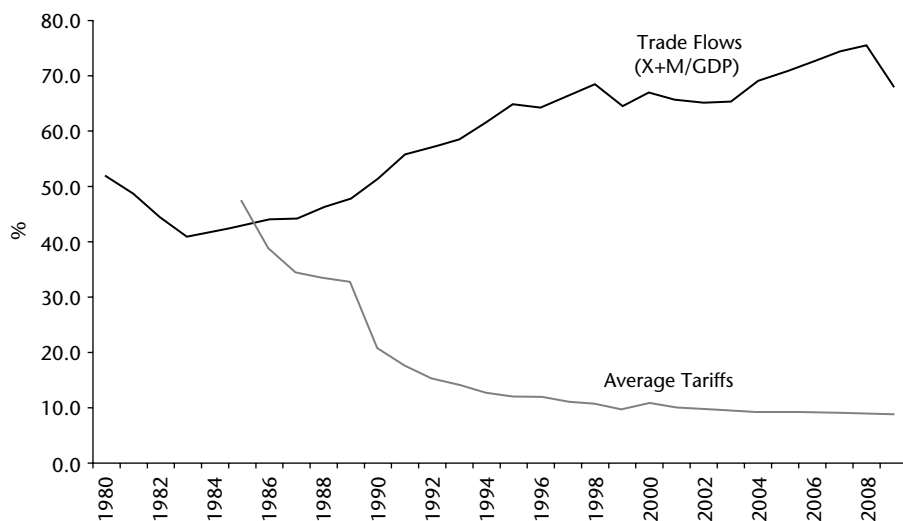


Figure 11.1. Trade flows and average tariffs in Latin America, 1980–2010

¹ As is well-known, non-tariff barriers can be even more important than tariffs themselves in promoting trade, but systematic comparable information on this type of trade restrictions is much more limited.

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During the years 1985–2009 tariff reductions were greatest in the Dominican Republic, Colombia, Paraguay, and Brazil, with declines of around 60 points or more, to reductions below 10 points in Bolivia and Panama (Table 11.1). The largest increases in trade flows are observed in Paraguay and Nicaragua—above 50 percentage points—with reductions in the Dominican Republic, Honduras, and Panama.

The data on income distribution are much more limited. Here we use the three-decade database assembled by Székely and Sámano (2012), who compiled a series of Gini coefficients computed directly from household surveys, using household income per capita, which includes labour income as well as income from other sources. The data, which are similar to those used in Chapter 2 and other policy chapters in this volume, show a sharp rise in inequality in the region between 1980 and 2002, and a sharp decline thereafter until 2009, which counterbalances around 75 per cent of the original increase.

Table 11.1. Trade flows and average tariffs, 1980–2009, Latin America

Country	Trade flows			Average tariffs		
	1980	2009	Change 1980–2009	1985	2009	Change 1985–2009
Argentina	22.6	41.7	19.2	28.0	12.6	–15.4
Bolivia	35.9	59.3	23.3	20.0	10.3	–9.7
Brazil	9.3	24.2	15.0	80.0	13.6	–66.4
Chile	41.1	76.9	35.7	36.0	6.0	–30.0
Colombia	23.9	40.6	16.6	83.0	12.5	–70.5
Costa Rica	42.5	84.3	41.8	53.0	5.4	–47.6
Dominican Republic	76.0	49.3	–26.7	88.0	7.1	–80.9
Ecuador	43.6	60.1	16.5	50.0	11.2	–38.8
El Salvador	38.7	59.2	20.5	23.0	5.9	–17.1
Guatemala	61.3	53.8	–7.5	50.0	5.6	–44.4
Honduras	144.2	102.8	–41.4	41.9	5.6	–36.3
Mexico	17.0	54.9	37.9	34.0	11.5	–22.5
Nicaragua	45.9	98.1	52.2	54.0	5.6	–48.4
Panama	172.2	141.7	–30.5	15.8	7.1	–8.7
Paraguay	57.3	120.0	62.6	71.3	10.3	–61.0
Peru	30.1	42.9	12.8	64.0	5.5	–58.5
Uruguay	30.9	60.9	30.0	32.0	10.5	–21.5
Venezuela	43.5	52.4	9.0	30.0	12.5	–17.5
LA Average	52.0	67.9	15.9	47.4	8.8	–38.6

Source: The data on trade flows taken from World Penn Tables 7.1 version. Average tariffs for 1985–99 are from Lora and Barrera (2001), 2001–10 are from Free Trade Agreement of the Americas Hemispheric Database, and 2004–9 are from WTO.

This pattern of changing inequality supports the hypothesis that a shift towards more trade openness generates an intensive reallocation of resources in the medium run, that after the adjustment and once the trade openness process has stabilized, it can lead to a more equal distribution of income once the factors of production and production patterns have adjusted to the new circumstances, and can therefore exploit the comparative advantage of the country.

11.3 The Complexity of Tracing Changes in Inequality

An analysis of the microeconomic effects of policies that increase the level of trade in a country generally identifies four channels through which the distribution of welfare (as proxied by consumption levels) is altered as a consequence: (i) by changing the price of the goods consumed by each individual, where the implications depend on the particular consumption structure; (ii) by changing the wages and salaries that reward different types of human capital in the labour market; (iii) by altering the conditions under which households produce goods and services; and (iv) through modifying the level of public revenues that finance public services.

Here we refer only to the second and third channels, which already include a large and complex number of transmission mechanisms to be considered. This complexity can be illustrated even by starting from a simple accounting framework following Attanasio and Székely (2001), who represent the income of each individual in a society as a function of the combination of four essential elements: first, the stock of income-earning assets owned by each individual; second, the extent to which these assets are used for producing income; third, the market value of income-earning assets; and fourth, the income received independently of income-earning assets, which may include transfers, gifts, and bequests among others—and which can be financed by public revenue among other sources. Consequently, family per capita income can be expressed in the following equation:

$$y_i = \left(\frac{\sum_{i=1}^j \sum_{a=1}^l A_{a,i} R_{a,i} P_a + \sum_{i=1}^k T_i}{n} \right) \quad (1)$$

where y_i represents the household per capita income of the individual i , A is a variable representing the stock of asset type a owned by an individual i , R is a variable representing the rate at which asset type a is used by individual i , and P is the market value per unit of asset type a . The variable j represents

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the number of income earners in the household to which the individual i belongs, l is the number of different types of assets, and k is the number of individuals in the household obtaining income from transfers and bequests, while n is the size of the household to which i belongs.²

For our analysis we classify income-earning assets into human capital (H), physical capital (K), and land (L), represented in Equation (2). Human capital assets are the set of skills endowed to an individual, such as knowledge, capabilities, or expertise, normally represented by the years of schooling or the highest education level achieved by the individual. Physical capital refers to the monetary value of any form of financial asset, be it money holdings, property, rents, capital stock used for production, or any other form of physical capital used to produce a good or service. In the case of land, its value comes from the natural resources or potential for production that it embodies. These stocks can be used in several ways: they can either be invested for production or accumulated in order to function as savings.

$$y_i = \frac{\sum_{i=1}^n (A_H R_H P_H) + (A_K R_K P_K) + (A_L R_L P_L) + T_i}{n} \quad (2)$$

The ownership of, or the access to, any of these assets, implies that an individual has the potential capacity to generate income at some point in time, but the income that is actually generated depends on the use and price of the asset. For instance, in the case of human capital, the years of schooling of an individual will only be translated into income if there is labour market participation (that is, $RH > 0$ in Equation (2)). Physical capital becomes income when it is invested ($RK > 0$). Land will generate a flow of resources depending on the rate at which it is used (RL), including agricultural or similar production, or the natural resources extracted or processed from it.

The market price of income-earning assets is determined by supply, demand, and institutional factors, in which the relative weight of each individual is negligible. Prices are therefore set by the economic system, and they become relevant to the individual in the process of deciding whether or not to place the asset to productive use.³

² This simple identity is inspired by the work of Sokoloff and Engerman (2000), who argue that the main factor driving the persistently disparate income levels in Latin America is the skewed distribution of factor endowments, or income-earning assets, among individuals. A similar analysis is presented in Cornia (2011) and in Chapter 2 of this volume, but does not include the use of the asset (R in the equation) as an individual decision that can be affected by policy.

³ Birdsall, Pinckney, and Sabot (1999) develop a model in line with this argument, in which they sort out the interaction between returns to labour, the incentives to the use of human capital, and income distribution.

To understand the dynamic process, Equation (1) should be complemented with equations describing the accumulation of each asset, the decision-making process that determines its use, and the mechanisms through which the price for each is determined in the economy. The process of accumulation, obviously, would be asset-specific, and can have interactions with others. In the end, the distribution of income y_i across individuals will depend on the distribution of assets, as well as on the differences in the rates of use and prices along the distribution. Inequality is exacerbated when the rate of use and the price are themselves positively influenced by the size of the stock.

One of the central justifications for promoting trade openness in Latin America during the 1980s was precisely that when income-earning assets are highly concentrated, one of the few mechanisms through which income distribution can be improved is by changing the price structure in such a way that those with smaller stocks receive better rewards for their productive use. For example, if the demand for unskilled labour-intensive goods is expanded by lowering tariffs as a short-term response, P_H in Equation (2) would be expected to shift in favour of the human capital assets owned by those in the lower part of the distribution. In addition, if the prices of the intermediate inputs used in the production process by individuals with lower incomes decline, one would expect higher returns to investment and a reduction in income inequality as a first-round effect through P_K .

Similarly, trade can affect the demand for human capital in specific sectors or occupations. Even if rewards to factors were not modified through the increase in demand, a change in R_H in Equation (2) through increased labour participation in a certain activity would result in higher income flows, and if the increase is greater among low-income households, the participation effect would improve the distribution of income. Depending on the speed at which labour is reallocated across sectors, the price and the 'employment' effect can even reinforce themselves until the incentive to move from one sector to another is reduced.

Any short-run analysis of the effect of trade on y_i would tend to capture these types of contemporaneous impacts, but would not consider other important effects, such as those of factor reallocation processes that take longer to consolidate, or changes in the incentives to accumulate assets under the different price structure. Moreover, there are cases where the same household can adjust its amount, use, and investment of the three types of assets H , K , and L simultaneously, with reinforcing or compensating effects across them. These types of shifts would also be missed by a short-term analysis.

In sum, even a very simple accounting framework illustrates that the analysis of the trade-inequality relationship is, on the one hand, complicated by the identification of the full short- and long-term effects triggered by the change in trade patterns, but also by the fact that several different

transmission mechanisms can be in place for the same household or groups of households, which makes it even more difficult to identify such mechanisms unambiguously. Székely and Sámano (2012) present a literature review of studies following a similar framework.

11.4 Trade and Inequality in Latin America During the Past Thirty Years

Our empirical strategy consists of estimating the association between trade openness and inequality by taking Equation (2) as reference. Specifically, we use the Gini inequality index to characterize income distribution, average value of tariffs to represent the extent of trade openness and changes in trade policy, as well as variables representing the stock, use, and market price for H , K , and L respectively.

Figure 11.2 presents the evolution of the variables we use to represent A_H , R_H , and P_H .⁴ As can be observed, the human capital stock as characterized by the average years of education for the working-age population increased from 4.5 years to more than seven during the course of three decades.

Employment levels (which represent the use of human capital) also increased during the period. Figure 11.2 shows that the proportion of working-age population reporting as being employed increased from 56 to about 63 per cent. Several studies that have investigated the dynamics of labour market participation in Latin America have documented that employment rates among males tended to remain stable at around 90 per cent, while female employment rates increased considerably over time, especially among less educated women—given that labour market participation is positively associated with education.⁵

In the case of returns to education, the figure illustrates an important feature already widely documented in the literature of increasing returns to higher education relative to the returns to primary schooling during the 1990s. According to our data, the increase was over 60 per cent between 1985

⁴ The human capital stock is represented by the average years of education of the working-age population, taken from the Barro-Lee (2011) database. Employment is calculated as the proportion of working-age population reporting as being employed or working (from ILO 2011) with respect to the total working-age population (from UN population statistics, 2010 version). Returns to education are calculated directly from available household surveys, and complemented by the returns to education also calculated from SEDLAC household surveys. In order to smooth out the series in this case, we linearly interpolate data for the missing years and calculate three-year moving averages.

⁵ It should be noted that here we use employment rates rather than labour market participation, which includes not only those who have found a job but also those who are still seeking, because we are interested in measuring the actual use of human capital.

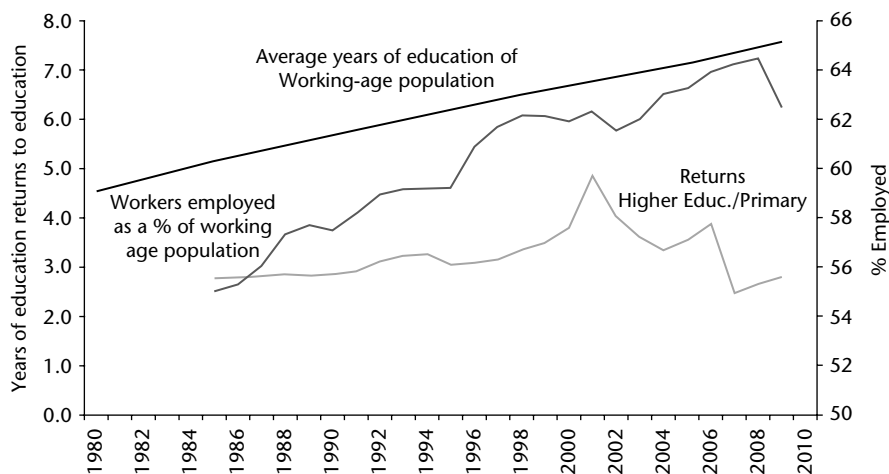


Figure 11.2. Evolution of variables characterizing the stock, use, and market price of human capital in Latin America, 1980–2009

and 2002. The novelty of the pattern covering 25 years is the strength of the inverted ‘U’ trend with sharp declines after 2002.⁶

Figure 11.3 plots the evolution of variables that could be used to characterize A_K , R_K , and P_K .⁷ As opposed to the case of education, the alternatives for accessing time-series for representing the stock, use, and price of physical capital are much more limited and imperfect, so they need be taken with caution. Our choice of indicators is driven mainly by the existence of series covering the decades of the 1980s–2000s, rather than being an optimal proxy for the variables of interest. One rough approximation is the use of the rate of gross capital formation to characterize the accumulation of physical capital. As can be seen, this variable increased steadily during the 1980s and 1990s, declined between 1999 and 2003, then increased through to 2007 with a new decline towards 2009. Another option would be the investment rate, which follows a similar trend to that observed in Figure 11.3. However, its effect over the distribution is more ambiguous and depends on the specific type of investment undertaken.

⁶ The regional averages are presented from 1985 onwards since five countries do not have data points prior to this year.

⁷ For the stock of physical capital we use gross capital formation as a share of GDP from the World Bank (*Development Indicators*). The use of physical capital is characterized by the level of investment as a share of GDP from the World Penn Table, 7.1 version (Heston, Summers, and Aten 2011), while the returns to capital are represented by the real interest rate from the World Bank. Real interest rates are chosen due to the lack of other indicators capturing information on the returns to investment. As is well-known, these normally underestimate the returns to capital across the economy. Therefore, they should be interpreted only as a lower bound to the real returns.

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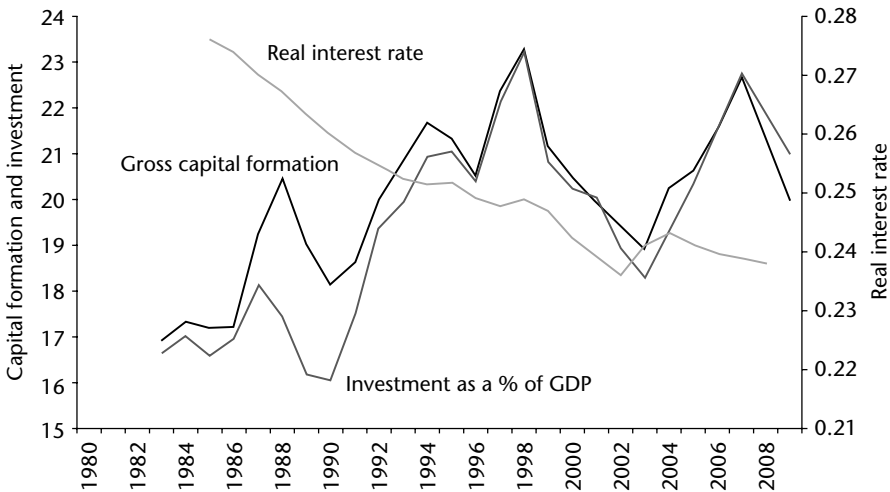


Figure 11.3. Evolution of variables characterizing the stock, use, and market price of physical capital in Latin America, 1980–2009

A possible proxy for the price paid in the economy for the productive use of capital is the interest rate. Figure 11.3 shows a steady decline in this variable between 1985 and 2010.

Characterizing the stock, use, and prices of land assets is even more complex than for capital stocks. Also, here only some rough proxies are available for the 1980–2010 years, so their use is even more cautious. One of the few options for measuring the size of the stock of assets in this category is arable land per capita, which has two important drawbacks. The first is that this variable does not capture the effect of mining, which has been one of the important sectors promoted by trade openness and the demand for primary commodities (the exclusion of mining will not allow the capturing of the full effect of trade on the A_L asset). The second drawback is that this variable is normally affected by other policies that can be quite independent from trade, such as land reform. As for the rewards for these assets, we were not able to find indicators of the terms of trade in the primary sector for the reference period that would be adequate for our analysis. One of the few options available is the use of agricultural GDP as a share of total GDP, which can be a gross representation of the use (investment) of the asset and the price received in the market for its produce.⁸

Figure 11.4 shows declining trends of both the size of the stock of A_L and of the relative value of the produce from one of the uses of this asset.

⁸ Both variables are from the World Bank (2011).

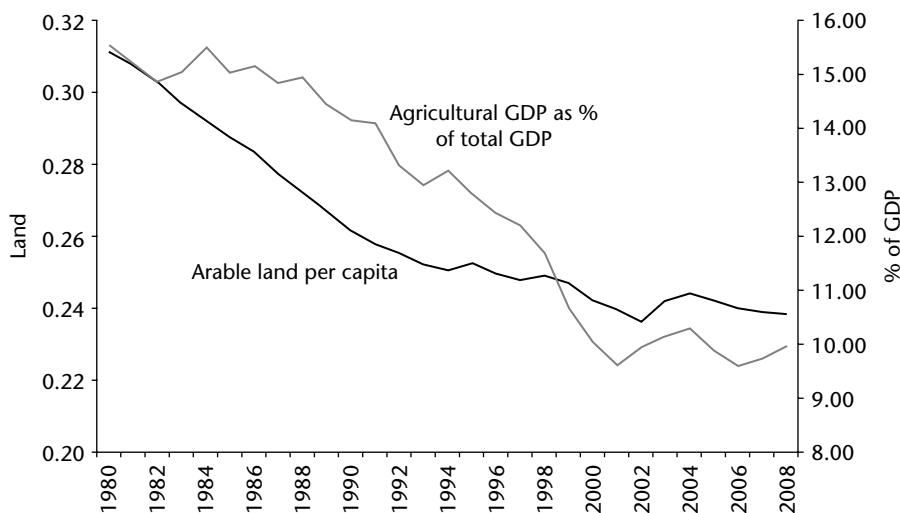


Figure 11.4. Evolution of variables characterizing the stock, use, and market price of land assets in Latin America, 1980–2009

11.4.1 Regression Results

Table 11.2 presents our regression results from the implementation of Equation (2) using the data described above. The estimation is performed in all cases through fixed-effects and random-effects regressions and we report the preferred specification according to the Hausman test in each case. The first regression refers to the simple association between inequality and trade policy as characterized by the level of average tariffs. The result is that a negative statistically significant relationship emerges between these two variables for the full 1980–2000 period. That is, lower average tariff levels (greater trade openness) are associated with higher inequality, while greater tariffs (more closed economies) are associated with a less concentrated distribution of resources. We report these results before a more complete implementation of Equation (2) since this association is maintained throughout our analysis.⁹ The preferred model is the random-effects specification, but the fixed-effects estimation leads to exactly the same result.

This result is consistent with the stylized facts reported in Figures 11.1 and 11.2 that show that during the process of openness, income inequality in Latin America increased substantially, but also declined substantially when the process of openness stabilized.

⁹ During our analysis we perform a large number of tests using alternative indicators and specifications and the result that inequality and openness are inversely and significantly related remains.

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Table 11.2. Basic regression model of the effect of trade on income distribution, 1980–2009, Latin America

Variable	(1)	(2)	(3)	(4)
	Base model	Human capital	Physical capital	Land
	re*	re*	fe*	fe*
Tariffs	-0.0303**	-0.0636***	-0.1149***	-0.0723*
Years of schooling		-1.1018***	-0.969**	-1.0743**
Employment		0.0013	-0.0206	0.0103
Ratio returns higher over primary		0.1458***	0.1764**	0.2126***
Real interest rate			-0.0051	-0.0258*
Gross capital formation			-0.026	0.0314
Agricultural GDP/GDP				-0.0884
Arable land per capita				-11.5778
No. of obs			178	171
No. of countries			18	18

Note: The dependent variable is the Gini index. Estimates of the intercepts are not reported.

Coefficients are multiplied by 100 for simplicity.

* Significant at 10%; ** significant at 5%; *** significant at 1%.

* Sign over the fixed-effects or random-effects regression means that this particular specification is preferred to the other according to the results of Hausman Test.

Source: See text.

The second regression includes the three variables that account for the stock, use, and price of human capital. The random-effects model is also preferred in this case although the fixed-effects specification leads to exactly the same results. When the human capital variables are included, the negative effect of tariffs is strengthened and we also observe a negative association between the Gini index and the average years of schooling of the working age population (the human capital stock). In contrast, a strong positive statistical relationship is observed with the relative returns to higher education (the price effect), as would be expected. The employment effect is positive, but not statistically significant.

This regression is our base specification and the main conclusions from this chapter rest in these associations, since the characterization of the human capital stock, use, and price variables is much more solid than for the set of physical capital and land indicators. As will be observed in what follows, incorporating variables that proxy the other two types of assets does not alter either the sign nor the significance of the associations between inequality and trade openness, years of schooling, returns to education, and

employment variables. All together, the variables in the base model account for about 20 per cent of the variation in the value of the Gini index.

Our result for the trade–inequality relationship in these estimations is in line with other authors' findings that more trade openness leads to a worsening in the income distribution. Some of these studies include Lundberg and Squire (2003), Morley (2000), Lindert and Williamson (2001), Perry and Olarreaga (2006), Bucciferro (2010), and Cornia (2010, 2011). The conclusions are also consistent with the argument in Atolia (2007), who puts forward the hypothesis that trade liberalization has transitory positive effects over (wage) inequality and negative long-run impacts over the distribution due to the asymmetries in the speed of adjustment in the export and import sectors. One of the few studies arguing for a negative relationship between inequality and openness is Dollar and Kraay (2001), although these authors do not directly test this hypothesis, but look instead at the effect on the incomes of the poorest 20 per cent of the population. The positive association between inequality and returns to schooling is consistent with the observation in the literature that the short-run price effects in the labour market in favour of educated individuals are inequality-increasing.

The third regression incorporates (imperfectly) the variables characterizing physical capital (the interest rate and gross capital formation). Neither of these additional variables has a statistically significant association with the Gini index. The fourth regression incorporates the proxies for land assets and their use. These two additional variables are not statistically significant either, and have minimal influence on the size and significance of the other variables in the equation. The only observable change is that the coefficient for the interest rate becomes significant, with a negative sign. It is possible that these (insignificant) associations in regressions (3) and (4) are a consequence of the impossibility of measuring the variables of interest for capital and land for the years 1980–2010 through more solid data. Rather than being considered as indicative of the influence of capital and land stocks, these two last regressions should be interpreted as robustness tests performed on the second regression.

Table 11.3 presents additional estimations with interaction between tariffs and the stock, use, and price of human capital. The results in the first regression show that the size of the interaction effect is statistically significant for the trade openness–average years of schooling variable. The interpretation, on the one hand, is that the inequality-increasing effect of trade openness is exacerbated in countries with larger human capital stocks; and on the other, that once the openness process stabilizes and releases its pressure over distribution, greater reductions in inequality will also be observed in countries with greater education stocks. In other words, after absorbing the initial negative shock on inequality from the reduction in tariff levels, a country may observe

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Table 11.3. Regression model of the effect of trade on income distribution with interaction effects, 1980–2009, Latin America

Variable	(1)	(2)
	fe*	fe*
Tariffs	0.5048*	0.2892
Years of schooling	-0.6094*	-0.6274
Employment	0.0377	0.0464
Ratio returns higher over primary	0.0631	-0.0109
Real interest rate		-0.0244
Gross capital formation		0.0359
Agricultural GDP/GDP		-0.0513
Arable land per capita		-12.5412*
Tariffs interaction with ratio returns higher over primary	0.0077	0.0178
Tariffs interaction with years of schooling	-0.0644***	-0.0468*
Tariffs interaction with employment 2000s dummy	-0.0045	-0.0025
No. of obs	197	171
No. of countries	18	18

Notes: * Significant at 10%; ** significant at 5%; *** significant at 1%.

Source: See text.

improvements in the distribution of income if education levels increase sufficiently. The second regression presents a robustness test by including the proxy variables related to capital and land stocks. The observed association between inequality and the interaction of the trade–human capital variable remains similar to that observed in the first regression in the table.

As already mentioned, Kuwayama (2009) argues in a recent paper that trade patterns in LA are not homogeneous, and have to be defined for different types of countries grouped in three categories (those where trade patterns are linked directly to the manufacturing sector of the United States, those where trade is more strongly linked to tourism and the transportation sector, and the countries with trade patterns characterized by a larger importance of primary-sector goods linked to Asia and other markets). In order to explore the possible heterogeneity of relationships across the region, we estimate our base regression by splitting the sample into two groups of countries: (i) Mexico and Central America (which includes Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, and Panama); and (ii) South America (including the rest of the countries considered in the base regression).

Table 11.4 presents the results. Interestingly, the negative and significant trade-inequality association remains in both samples, and the variable years of education is also strongly and negatively related to the Gini index. The main difference is that the returns of higher relative to primary education are

Trade and Income Distribution in Latin America

Table 11.4. Estimates with groups of countries, 1980–2009, Latin America

Variable	(1)	(2)
	Mexico and Central America	Rest of the countries
	re*	re*
Tariffs	–0.0996**	–0.0618**
Years of schooling	–0.8324**	–1.464***
Employment	0.0637	–0.0458
Ratio returns higher over primary	0.1642**	0.1262
No. of obs	74	123
No. of countries	6	12

Notes: * Significant at 10%; ** significant at 5%; *** significant at 1%.

Source: See text.

positively and significantly associated with inequality in the first set of countries, but not in the second group. Given the differences in trade patterns, one possible interpretation is that countries where trade flows are dominated by skill intensity in the manufacturing sector tend to experience greater variability in prices as a response to increased demand for the skills that are still relatively scarce in the supplying countries. However, the main implication of the results in Table 11.4 seems to be that the associations already identified in the previous estimations basically hold for the LA region as a whole.

11.4.2 Decomposing Changes in Inequality

Figure 11.5 decomposes the changes in inequality in LA by using our coefficient estimates in the base specification (second regression in Table 11.2). The decomposition is performed by multiplying each coefficient by the mean value of the respective variable for the 1980s, 1990s, and 2000s respectively in a simple accounting framework. This exercise provides a view of the importance of the shifts taking place over the 30-year period by using the information on the observable variables in our analysis. As already mentioned, our base regression accounts for about 20 per cent of the variation in the Gini index over time—the adjusted R squared is 0.1945—so other variables affecting the distribution of income and accounting for about 80 per cent of the variation are not accounted for. This, in itself, is an important result, since it means that trade variables and those associated to the stock, the use, and the price paid for the human capital assets (and the physical-capital and land assets as characterized here) can account only for a small part of the dynamics of income distribution in LA during the 30 years for which we have data.

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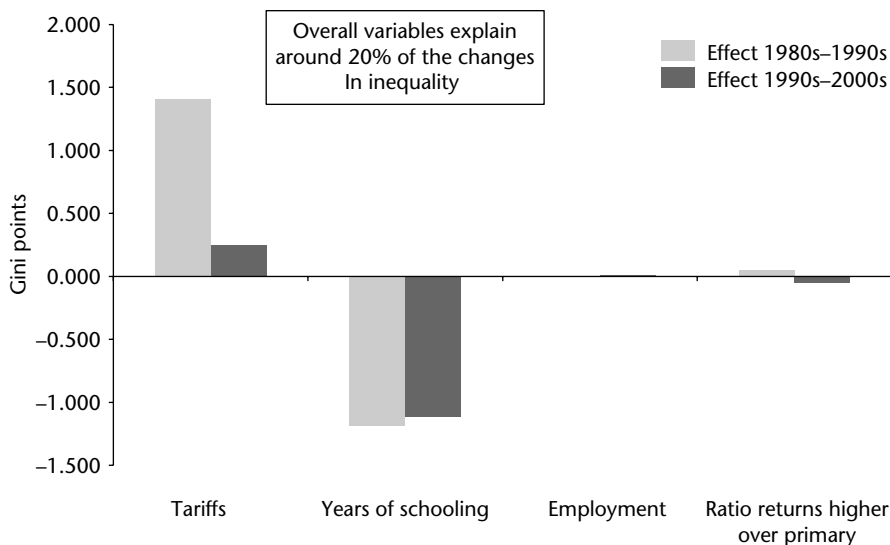


Figure 11.5. Decomposition of the change in inequality in Latin America between the 1980s and 1990s and between the 1990s and the 2000s

The figure clearly highlights the central argument of this chapter: trade openness had an initial contemporaneous inequality-increasing effect that remained up to the end of the 1990s. Parallel to this effect, the secular increase in the average years of schooling had an inequality-reducing effect, which was totally counterbalanced by the unequalizing trade effect. In the first decade of 2000, the regressive trade effects faded after reform had been implemented, while the equalizing effect of human capital accumulation continued, and prevailed.¹⁰ The positive effects of the long-term increase in average years of schooling observed over the decades (see Chapter 15) were thus initially cancelled out by the tariff declines in the twentieth century, but were able to impact favourably over income distribution in the 2000s once the effect of trade openness disappeared. The main forces driving the improvement in the distribution of income in the last decade were the longer-run asset accumulation effects, not the short-term price shifts. Having a positive premium for more years of education at the same time as the average years of education of the population are increasing seems to have reduced inequality through the access of higher returns to larger sectors of the working-age population. Employment effects have the smallest impact among the three variables included.

¹⁰ To explore this further we include lagged values for over six years for the tariff variable. Neither the contemporaneous nor the lagged data appear to have a significant effect over inequality.

All in all, we can characterize the 1980s–2000s years in LA as a period when trade openness was associated with significant inequality-increasing effects, but these were not sufficiently strong and did not affect the structure of the economy in such a way that would impede future improvements once longer-run processes such as accelerations in the accumulation of human capital took over.

11.5 Conclusions

This chapter offers a medium-run perspective for analysing the trade openness–inequality relationship in Latin America over the past three decades. One advantage of this perspective is that it can account for both the contemporary effects of reducing tariff levels as well as for the longer-term dynamics observed once trade liberalization has been fully implemented and the effects of other variables fall into place.

The chapter offers two conclusions. The first is that there is a negative association between tariff levels and income distribution over the 30-year period, so lower tariffs (that is, more openness) have been related to contemporaneous increases in inequality in Latin America. The drastic reductions in average tariffs observed during the 1980s and 1990s mirror the sharp deterioration in income distribution over the same years.

The second conclusion is that once enough time is allowed for the economy to adjust to openness, no further pressure over inequality is observed, and liberalization of trade in the previous decades did not represent a permanent obstacle to improvements in income distribution thereafter. One example is the prevalence of the inequality-reducing forces generated by the secular increases in the skill level of the population, which seem to have dominated the arena in the distributional dynamics in Latin America during the decade of the 2000s.

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12

Changes in Labour Market Conditions and Policies, and Their Impact on Wage Inequality During the Last Decade*

Saúl N. Keifman and Roxana Maurizio

12.1 Labour Market Approaches, Policies, and Outcomes During the Neoliberal Era in Latin America

12.1.1 *Theoretical Underpinnings of the Neoliberal Policy Model and Main Reforms Pursued*

Policy reformers in the 1990s acted as if they believed in the reality of the Arrow-Debreu model and its welfare economics theorems. Their goal was to replace the statist–protectionist regime which had prevailed in Latin America until the 1980s, with a ‘self-regulating market’ (Polanyi 1944). As noted in Chapter 2, privatization of state-owned enterprises (including natural monopolies), trade and capital account liberalization, deregulation of domestic financial markets, and fiscal adjustment became the main reforms of Latin America.

‘Flexibilization’ was the buzzword in many Latin American countries. Labour market flexibility was seen as instrumental to the reallocation of the labour needed to realize the expected efficiency gains from structural reform. Therefore, labour legislation was often changed in order to: (i) introduce more flexible forms of employment, such as fixed-term contracts that granted

* We are grateful to Giovanni Andrea Cornia and Richard Freeman for their stimulating comments, and the participants at UNU-WIDER’s workshops in New York (December 2010) and Buenos Aires (September 2011). We also thank Andrea Vigorito, Sergei Soares, Luis Lima, Nora Lustig, Gerardo Esquivel, Luis Beccaria, Carlos Acevedo, and Maynor Cabrera for their valuable advice about Latin American household surveys. We are thankful to Ana Laura Fernández and Gustavo Vázquez for their statistical assistance.

less or no protection to workers; (ii) facilitate outsourcing; (iii) reduce termination costs; (iv) lower other labour costs, such as employer contributions to social security; and (v) raise employer discretionary power to determine workdays and workweeks.

Policies with regard to trade unions varied highly across countries. Brazil, Chile, Colombia, and Costa Rica passed legislation to strengthen trade unions while Argentina and Peru did exactly the opposite. However, the general trend showed a decline of trade unions and collective bargaining in the 1990s² (see also Chapter 3)

The shift from 'pay-as-you-go' to fully funded pension systems, implemented in Argentina and Bolivia, after Chile's example, was another reform that had potential impact on the labour market. One of the reasons to justify the reform was to encourage registered employment. Despite country-specific policy differences, Latin American labour markets in 1999 were rated as less regulated and more flexible than the average of a worldwide 58-country sample (Gwartney and Lawson 2001).

12.1.2 *Labour Outcomes of the Neoliberal Reforms*

Facts did not bear out reformers' expectations. Labour market performance was disappointing. Unemployment and inequality rose in the 1990s (see Chapter 2), so that despite growth revival,³ poverty hardly fell and remained above the 1980 levels. The share of informal employment by any measure (unskilled own-account workers, microenterprise employees, and non-registered workers) increased significantly.

Labour market reforms failed also to promote employment and were instrumental in reducing social protection. Fixed-term contracts, outsourcing, lower termination costs, and greater discretion of employers reduced workers' rights, a situation facilitated by weaker trade unions. These innovations probably lowered short-run labour costs, but favoured higher labour turnover, with probably deleterious effects on productivity growth and long-run labour costs. Outsourcing, poor enforcement of labour law due to weaker labour inspection, and a general anti-regulatory climate contributed to the rise in non-registered employment. Lower employer contributions to social security and the enactment of fully funded pension systems put pressure on the budget and pension benefits for retired workers. Finally, labour market

² Between the 1980s and the 1990s, trade-union membership as a percentage of non-agricultural workers declined in nine out of ten Latin American countries, and the region's average fell from 23 to 15 per cent (ILO 1997: Table 1.2).

³ Between 1990 and 1999, per capita GDP grew 1.5 per cent per annum, but unemployment almost doubled, from 5.8 to 11 per cent and Gini coefficients rose in South America, Costa Rica, Dominican Republic, and El Salvador.

developments and the decline of trade unions reduced workers' bargaining power, making it more difficult for them to share in the gains from economic growth.

12.2 The Labour Market During the 2000s: Advances and Structural Deficits

12.2.1 The Dynamics of Employment Generation and Unemployment Reduction

Recent fast GDP growth (close to 4 per cent per annum) in Latin America—before the international crisis—has had a positive impact on social and labour market indicators. In 2003–8, unemployment decreased from 11 per cent to 7.4 per cent (Figure 12.1), the number of formal jobs increased, and average wages recovered.

GDP annual growth accelerated from 3.2 per cent in the 1990s to 3.6 per cent in 2000–8.⁴ Its favourable impact on the labour market was compounded by a continuation of the demographic transition. Annual population growth slowed down from 1.6 per cent in the 1990s to 1.2 per cent in the 2000s. Therefore, annual per capita GDP growth escalated from 1.5 in the 1990s to 2.3 in 2000–8. On the other hand, the annual growth of labour

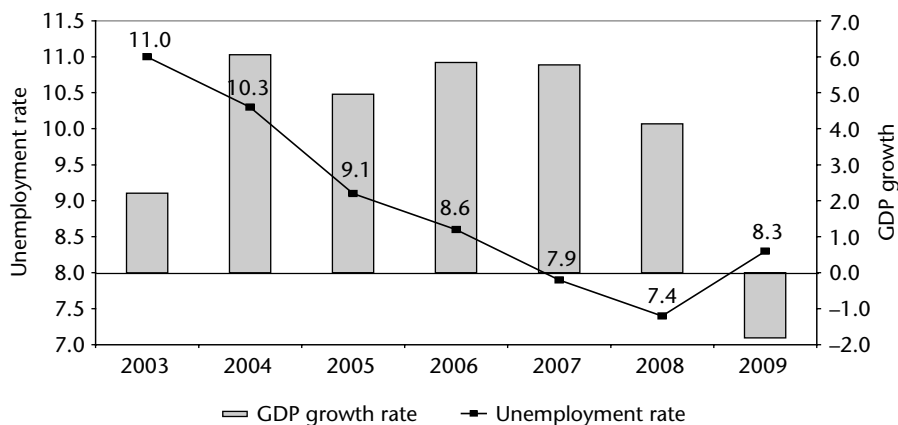


Figure 12.1. Annual GDP growth and unemployment rates (per cent), Latin America, 2003–2009

Source: Authors' elaboration based on ECLAC (2010) and ILO (2009).

⁴ Latin American GDP and per capita GDP peaked in 2000 rather than in 2003.

supply fell significantly, from 3 to 2 per cent due to the decrease in fertility rates from 2.9 in the 1990s to 2.4 in the 2000s. To appreciate the impact of these developments on the labour market, note that the difference between the annual growth rates of GDP and the labour supply—a better indicator of the change in labour excess demand—jumped from 0.1 in the 1990s to 1.4 in 2000–8.

However, the impact of GDP growth on job creation varied across countries. Overall, there is a close relationship between economic growth and formal jobs creation. In countries with a high labour supply, total employment is less associated with GDP growth because self-employment is preferred to open unemployment. The relationship between employment rates and economic growth reveals that there are two groups of countries. In Argentina, Brazil, Chile, El Salvador, Mexico, the Bolivarian Republic of Venezuela, and Uruguay, correlation coefficients between both variables are positive and greater than 0.5. However, in Colombia, Ecuador, Honduras, Peru, and the Dominican Republic, this correlation coefficient is very low and negative in the Plurinational State of Bolivia. Per capita GDP is significantly lower and labour supply growth faster in the second group of countries (CEPAL/OIT 2010).

Progress in employment formalization was also observed in several countries, reversing the negative trends recorded during the 1990s (Beccaria and Maurizio 2010). The percentage of the urban employed population with pension coverage rose from 50 to 53 between 2000 and 2008 in Latin America (ILO 2009).

12.2.2 *The Persistence of Structural Problems in Latin American Labour Markets*

Despite the progress achieved during the 2000s, labour markets still show high levels of unemployment, underemployment, informality, precariousness and inequality, and low average wages. Labour informality is a crucial category for analysing labour conditions in Latin America. There are two different approaches to (associated with different concepts of) labour informality. According to the ‘productive approach’, the concept of the *informal sector* (IS), elaborated in the early 1970s by the ILO (1972), reflects the inability of Latin American economies to generate sufficient employment in the formal sector relative to labour-force growth. The IS is associated with small-scale, low-productivity enterprises that aim at survival rather than accumulation. Jobs in this sector constitute *employment in the informal sector* (EIS). According to the ‘legal approach’, which focuses on job conditions, the concept of *informal employment* (IE) depends on the evasion of labour regulations and defines IE as the employment of workers not covered by labour legislation.

The two major components of the informal sector (IS) are family units comprised of own-account workers and family workers and microenterprises with less than five employees. In the case of own-account workers, only non-professional ones are considered as part of the IS. The public sector is excluded from the IS. On the other hand, informal employment (IE) includes non-registered wage earners, as well as own-account workers and employers who do not fulfil their tax obligations. Finally, unpaid family workers are a part of IE and EIS.

We present a general outlook of IE and EIS, and their interrelations in Argentina, Bolivia, Brazil, Chile, Costa Rica, Ecuador, El Salvador, Paraguay, Peru, and Uruguay (for the list of surveys see Keifman and Maurizio 2012: Annex 1). Employment in the informal sector and informal employment represent more than a third of total workers in all these countries (Keifman and Maurizio 2012: Annex Table A1). At one extreme (Bolivia and Paraguay), EIS (including domestic workers) represents 65 per cent of the employed workforce whereas IE (including informal domestic workers) reaches 80 per cent of total workers. At the other extreme, (Chile, Uruguay, and Costa Rica), these figures fall to 34 per cent and 40 per cent respectively. In all cases except Uruguay, IE is higher than EIS.

Informal non-wage earners are the largest class of workers in Bolivia, Ecuador, Paraguay, and Peru, with approximately one-third of total employment. In Argentina, Brazil, Chile, Costa Rica, and Uruguay, in contrast, about half of total workers are formal wage earners in the formal sector. The fraction of non-registered wage earners in total wage earners ranges from a minimum of 19 per cent in Uruguay to a maximum of 69 per cent in Bolivia (Keifman and Maurizio 2012: Figure 12.2). Finally, independent workers (own-account workers plus employers) comprise between 25 per cent and 40 per cent of the labour force in the region. Informality and independent work clearly narrow the scope of labour institutions and labour market policies.

There is a close correlation between informal employment and employment in the informal sector (Keifman and Maurizio 2012: 42). However, between 30 per cent and 60 per cent of non-registered wage earners work in the formal sector, which implies that there is scope for significantly reducing the levels of labour precariousness. In turn, given the importance of labour sources in household income, and limited social protection coverage, these precarious conditions often give rise to the phenomenon of the 'working poor': having a job is no guarantee against poverty. For instance, around 20–30 per cent of the heads of poor households in Argentina, Brazil, Costa Rica, Ecuador, and Peru are informal workers (Beccaria et al. 2011).

As for the covariates of informality, schooling, sex, and age stand out (Keifman and Maurizio 2012: Annex Table A3). In all countries, workers with incomplete secondary schooling and young workers (except in Costa

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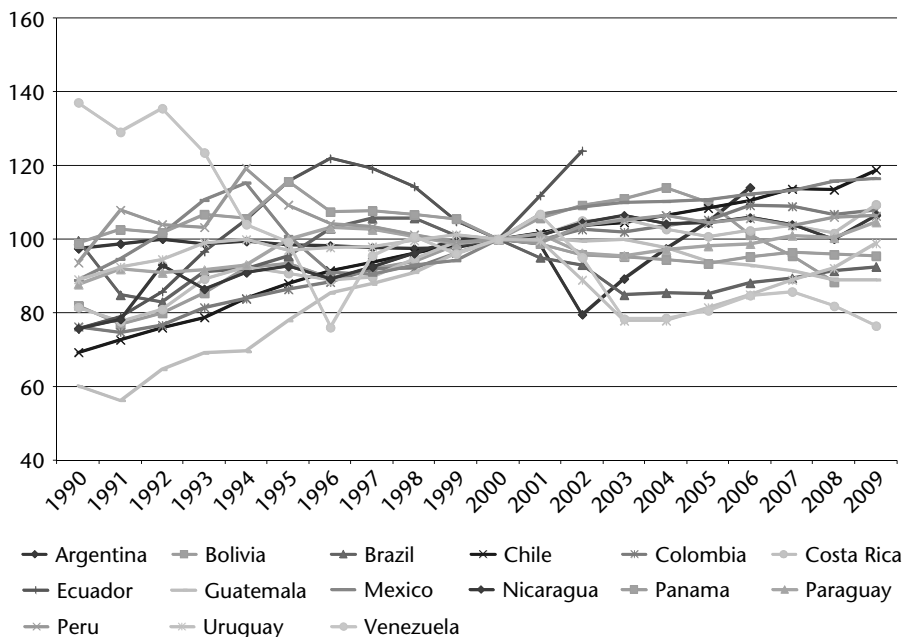


Figure 12.2. Mean real wages for Latin American countries, 1990–2009 (index 2000 = 100)

Source: Authors' elaboration based on data from ECLAC.

Rica) are over-represented in the group of informal workers. Women have a higher proportion in informality than in total employment in all countries except Argentina, Brazil, Mexico, and Uruguay. In turn, workers older than 45 are, in most cases, also over-represented in the informal sector. Over-representation of the less educated, the young, and women in the group of informal workers suggests a priori that they have lower average incomes than formal workers because their personal endowments usually command lower returns.

12.2.3 Labour Incomes and Their Distribution

Mean real wages recovered during the years before the crisis along with strong job creation, although with different intensity in different countries (Figure 12.2). Nevertheless, real wage gains have been smaller than employment gains, and average real wages in several countries are still below the levels achieved in 2000.

However, wage inequality has decreased along with the fall in the concentration of family incomes in several countries. According to SEDLAC estimates

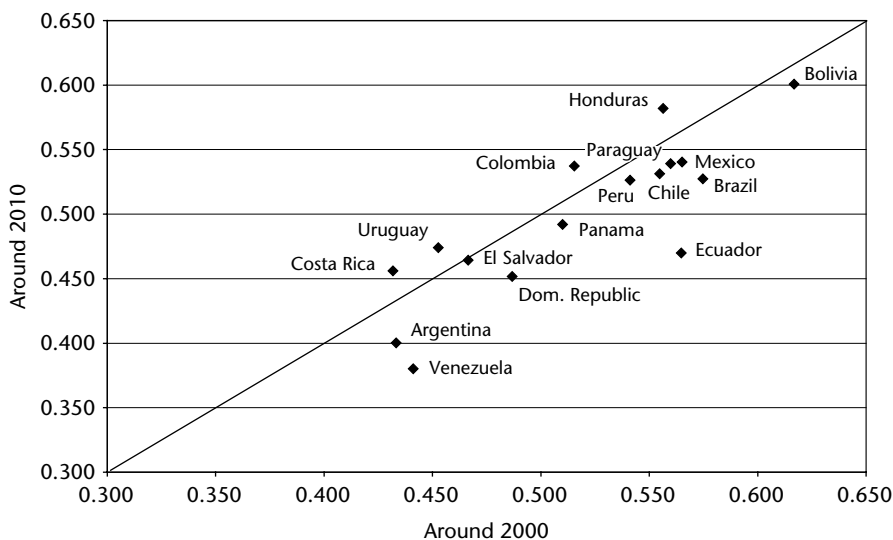


Figure 12.3. Gini coefficients of hourly wages around 2000 and 2010, Latin America
Source: Authors' elaboration based on SEDLAC. Figure 12.4 Kernel density functions hourly labour income.

of the hourly wage Gini coefficients, labour income concentration in the late 2000s in most countries was below the level of the early 2000s (Figure 12.3).

Higher wage and employment levels together with less inequality helped to reduce the incidence of poverty. In the 2003–8 boom, poverty and extreme poverty headcount ratios dropped by 11 and 6 percentage points respectively (ECLAC 2010), reaching 20-year lows. Despite these positive developments, inequality still remains very high in several countries (see Chapter 2).

CLASS OF WORKERS AND THE LABOUR INCOME GAP

We describe earnings distributions by distinguishing between five classes: registered (formal) and non-registered (informal) wage earners, professional and non-professional own-account workers, and employers.

Figure 12.4 shows the non-parametric kernel density functions of the log of hourly earnings for Argentina and Brazil (for the other nine countries for which this information is available, see Keifman and Maurizio 2012: Figure 5). Four clear facts arise from this graph. First, with the exception of Mexico and Costa Rica, non-registered wage earners have the lowest average hourly earnings everywhere. In most cases, non-professional own-account workers have the highest left tail in the income distribution; but since they exhibit higher intra-group inequality, their average hourly income is higher than that of informal wage earners. Second, employer earnings are located on the other

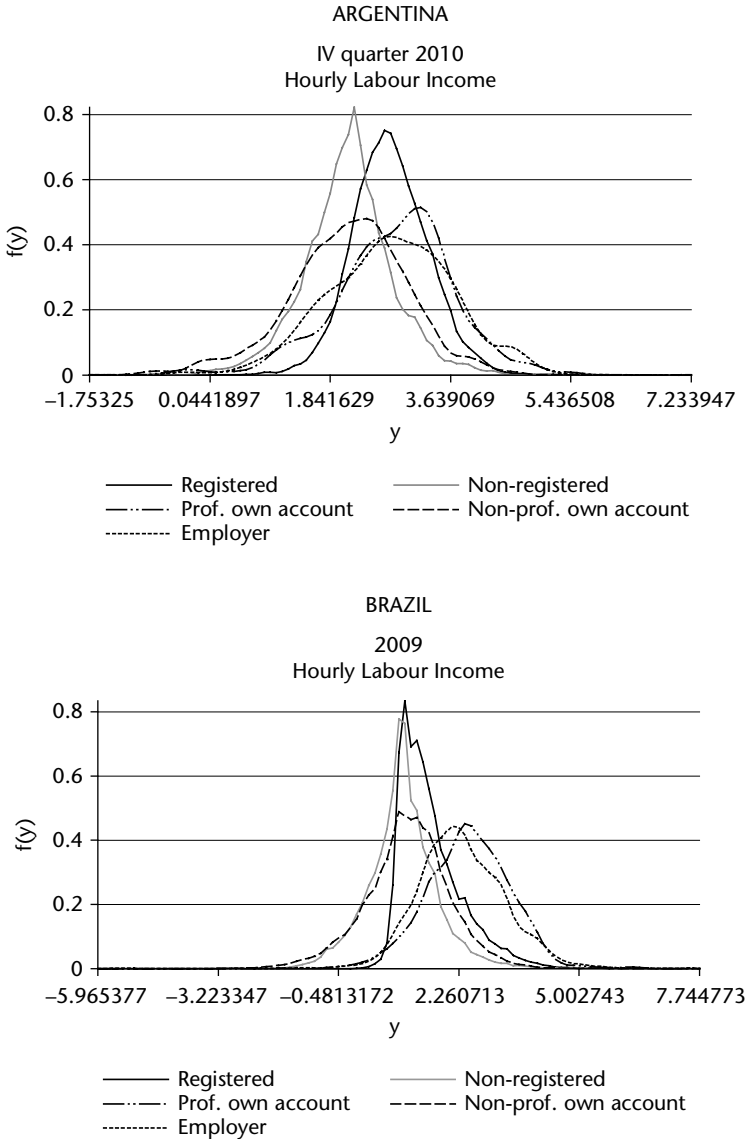


Figure 12.4. Kernel density functions hourly labour income, Argentina and Brazil
 Source: Authors' elaboration based on household surveys.

extreme of income distribution, except in Argentina and El Salvador, where professional own-account workers are the top average income group. Third, the distribution of non-registered wages relative to that of registered wages shifts to the left in all countries. Finally, in all countries but Chile, registered wages are located in the middle of the labour income distribution, are higher

than non-registered wages and non-professional own-account earnings, but are lower than the earnings of professional own-account workers and employers.

Therefore, the significant wage gap between registered and non-registered workers is an important stylized fact, along with high labour informality. As formality seems to be associated with lower spreads in labour incomes, it is crucial to take into account the recent advances in formalization in the analysis of distributive changes.

INFORMALITY AND INCOME SEGMENTATION

Are labour incomes differentials that are not fully explained by workers' differences in individual attributes depending on whether they hold formal or informal jobs? Informality defined according to the 'legal approach' is consistent with both income segmentation and the lack of it. Informality without segmentation occurs if identical formal and informal wage earners end up receiving equal net remunerations even when employers in the first case face additional costs related to labour regulations. Income segmentation requires a deficit in the creation of formal jobs, which makes workers accept lower remunerations or more precarious working conditions.

To estimate income gaps associated with informality, four parametric and non-parametric methods are performed in order to obtain robust results (Keifman and Maurizio 2012: Tables 1–4). We find statistically significant (with 99 per cent confidence levels) and large gaps against informal wages with all methods in all countries, which suggests the universal existence of a strong wage segmentation. The three parametric methods estimated Mincerian hourly wage equations. Heckman's two-step estimates of the informality dummy coefficients yielded a 'penalty' for informality which ranges from –21 per cent in El Salvador to –42 per cent in Argentina. In turn, quantile regressions show that informality gaps are not constant across the wage distribution but larger (in absolute terms) at the lower extreme. The informality penalty for the first decile varies from –28 per cent in Bolivia and Peru to –65 per cent in Brazil. This pattern might be related to the differential impact of certain labour institutions, such as a minimum wage.

The Oaxaca-Blinder procedure decomposes the difference between mean hourly log wages of formal and informal workers into 'coefficient effects' (which come from differences in returns) and 'endowments effects' (that arise from the differences in individual attributes). Informality penalties, as estimated by 'coefficient effects', range from –22 per cent in Bolivia to –45 per cent in Paraguay. In turn, 'coefficient effects' are larger than 'endowments effects' in Argentina and Chile, and about the same size in Brazil, Ecuador, Mexico, and Uruguay. Finally, non-parametric estimates based on the matching estimator method find informality penalties, as measured by the Average

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Treatment Effect on the Treated, that vary from –21 per cent in Costa Rica to –47 per cent in Paraguay.

12.3 Contribution of Labour Market and Social Protection Changes to the Fall of Inequality in Latin America

In order to quantify the contribution of the labour market and social protection to reduced inequality in Latin America during recent years, the changes in the Gini of per capita household income (PCHI) are decomposed by different sources of income, making a distinction between labour market sources, pensions, government transfers, and other sources of monetary income. Furthermore, labour income was subdivided by registered and non-registered wage earners and non-wage earners. The years chosen correspond to periods during which inequality fell.

Table 12.1 reports each source's shares in PCHI at the beginning and the end of each period. Labour incomes explain between 70 and 80 per cent of households' total income. The growing importance of incomes from registered jobs is associated with higher formality in Argentina, Brazil, and also Paraguay. Pension benefits are another relevant source in Argentina, Brazil, Chile, and Uruguay, a fact associated with the high coverage of contributive and non-contributive pension systems. However, according to Rofman and Lucchetti (2006), coverage of the elderly is very low in most Latin American countries, with the exception of the above-mentioned Bolivia and Costa

Table 12.1. Household per capita income by source, selected Latin American countries

Income sources	Argentina		Brazil		Chile		Mexico		Paraguay		Uruguay	
	2010	2003	2009	2001	2009	2000	2008	2000	2009	2004	2010	2006
Labour income												
Registered wage earning jobs, %	52	44	42	39	44	43	36	38	25	18	46	44
Non-registered wage earning jobs, %	12	14	10	11	9	5	28	24	28	28	4	4
Non-wage earning jobs, %	17	19	24	28	30	31	20	24	29	35	20	20
Pensions, %	14	13	20	19	7	8	6	5	6	5	20	22
Public cash transfer, %	1	2	1	0	2	1	2	1	0	0	2	1
Other non-labour incomes, %	4	7	2	3	7	12	7	8	11	14	8	8
% Labour income/ total family monetary income	81	78	76	78	83	79	85	86	83	81	70	68

Source: Authors' elaboration based on household surveys.

Changes in Labour Market Conditions and Policies

Table 12.2. Decompositions of the variations in Gini indexes by sources of income, selected Latin American countries, various years

Income sources	Argentina	Brazil	Chile	Mexico	Paraguay	Uruguay
	2003–2010	2001–2009	2000–2009	2000–2008	2004–2009	2006–2010
Labour income	73	62	44	60	55	66
Registered wage earning jobs, %	43	34	33	18	–2	63
Non-registered wage earning jobs, %	13	6	12	71	22	–2
Non-wage earning jobs, %	17	22	–2	–29	35	5
Pensions, %	24	14	26	1	3	21
Public cash transfer, %	–5	20	28	26	2	10
Other non-labour incomes, %	8	4	3	13	41	2
Variation in Gini index (in PP)	–10.1	–5.1	–3.8	–1.9	–7.4	–3.7

Note: For the methodology used for this type of decomposition, see Milanovic (1998) and Annex 3.2 in Keifman and Maurizio (2012).

Source: Authors' elaboration based on household surveys.

Rica. Finally, government cash transfers explain a small percentage of family incomes, despite its recent expansion in the region (see Chapter 16).

Table 12.2 decomposes the decline of the PCHI Gini coefficients over relevant periods in terms of changes in the share of each income source in total income. Changes in net labour income are, in all cases, the single most important factor behind the fall of Gini coefficients, explaining from 44 per cent of the change in Chile up to 73 per cent in Argentina. The contribution of formalization to reducing inequality in Uruguay, Argentina, and Brazil has been very important (see Section 12.4.1 for policy details). In these countries and in Chile, formal incomes are the main determinant of the distributive improvement. In contrast, incomes from non-registered workers explain most of what happened to labour incomes in Mexico, a fact related to the continued growth of informality. On the other hand, government transfers explain between 20–30 per cent of the changes in Mexico, Brazil, and Chile. This result comes from the extension of transfer programmes to households with children, such as *Oportunidades* in Mexico and *Bolsa Família* in Brazil. In turn, pensions have significant explanatory power in Argentina, Uruguay, and Chile, thanks to the extension of coverage mentioned above.

In turn, the net contribution of each income source to a lower Gini coefficient can be decomposed into a 'share effect', when less concentrated income source gains share in total family income, and a 'concentration effect', when

an income source becomes less concentrated. The inequality fall in Argentina, Brazil, Paraguay, and Uruguay is mostly explained by concentration effects, while share effects are more important in Chile and Mexico (Keifman and Maurizio 2012: Annex Table A5).

12.4 Labour Institutions and Labour Market Policies

By institutions we mean ‘...the system of laws, programmes, and conventions that can impinge on labour market behaviour and cause the labour market to function differently from a spot market’ (Blau and Kahn 1999). Once we depart from the perfectly competitive textbook model of the labour market, free market equilibria are no longer Pareto-efficient and labour institutions have a potentially important role to play not only in achieving distributive goals but also in improving efficiency (Manning 2001).

12.4.1 *Changes in Institutions and Policies*

MINIMUM WAGES

Real minimum wages increased in 14 out of 18 Latin American countries in the 2000s, although at very different rates (see Keifman and Maurizio 2012: Figure 6, as well as Chapter 2, Table 2.5). The rise was especially strong in Argentina, Brazil, Honduras (in 2009), Nicaragua, and Uruguay. However, they stagnated in El Salvador, Mexico, and Paraguay, and fell in the Dominican Republic. The behaviour of real minimum wages had been more mixed in the 1990s.

A comparative picture of the absolute and relative levels of minimum wages across Latin America in 2010 is shown in Figure 12.5. Measured in PPP-adjusted US dollars,⁵ minimum wages range from 182 in Mexico up to 571 in Panama. The range of the ratio of the minimum wage to per capita GDP is even larger, almost ten times as large in Honduras as in Mexico. This disparity suggests a great variety as to the enforcement, impact, and relevance of minimum wages across the region. Paraguay has both very high levels of the (relative) minimum wage and informal employment (76 per cent). These facts are consistent with conventional wisdom: too high a minimum wage causes either unemployment or informality. The contrary proposition, however, is not necessarily true, since Mexico has a rather greater level of informal employment (63 per cent) than countries with significantly higher relative minimum wages such as Argentina, Brazil, Chile, Costa Rica, and Uruguay (Keifman and Maurizio 2012: 42). We study the impact of minimum wages in Section 12.4.2.

⁵ The PPP survey year is 2005.

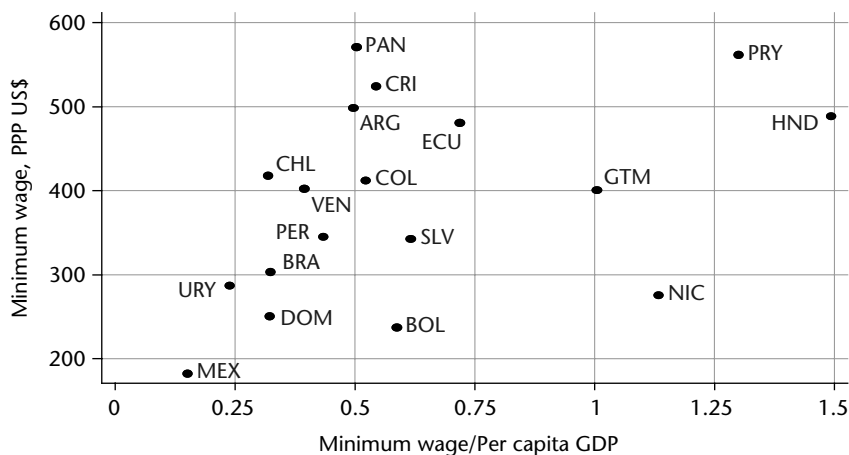


Figure 12.5. Minimum wages in PPP-adjusted US\$ and per cent of per capita GDP, 2010
Note: The year for Argentina’s data is 2006.

Source: Authors’ elaboration based on ILO and World Bank data.

TRADE UNIONS AND COLLECTIVE BARGAINING

Collective bargaining remains underdeveloped in much of Latin America and there is a general emphasis on enterprise-level bargaining, particularly in Mexico, Central America, and the Andean region. With the exception of Argentina, Brazil, and Uruguay, the proportion of workers covered by collective agreements is low, ranging from 4 per cent of wage and salaried workers in El Salvador to 16 per cent in Costa Rica (see also Chapter 3). A large informal economy and a predominance of small firms and enterprise-level bargaining are obstacles to collective bargaining, particularly in countries (such as Colombia, Ecuador, Honduras, El Salvador, and Panama) that set the threshold for unionization anywhere from 20 to 40 workers per firm. However, collective bargaining occurs largely at the municipal/territorial level in Brazil. Argentina and Uruguay have recently promoted collective bargaining at the sectoral level, and thus reversed the enterprise-based emphasis typical in the 1990s. Besides, Uruguay brought under collective bargaining previously excluded sectors such as rural workers, domestic workers, and groups of public-sector employees (see Chapter 6).

The impact of collective bargaining in Argentina, Brazil, and Uruguay is much greater than suggested by their levels of trade-union density (which range from 22 per cent in Uruguay to 38 per cent of wage and salaried workers in Argentina). Since collective agreements cover all the workers of the sector or area involved whether they are union members or not, the coverage rate of salaried workers reaches 60 per cent in Argentina and Brazil, and 100 per cent in Uruguay. In fact, coverage of collective agreements expanded in Uruguay

and Argentina. The number of sectoral collective agreements jumped from an annual average of 6 in 2000–4 to more than 200 during 2007–8 in Uruguay. In Argentina, collective agreements went from an annual average below 200 in 1991–2002 to more than 1000 in the late 2000s, and the number of private-sector workers covered increased 45 per cent between 1998 and 2008; finally, as the ratio of collective-agreement wages to actual wages also rose in the meantime, from 55 per cent in 2001 to 81 per cent in 2009, collective bargaining has become more relevant (Cardoso and Gindin 2009; Hayter 2010; Hayter and Stoevska 2010; Mazzuchi 2009; Ministerio de Trabajo 2011).

FORMALIZATION

Some governments have reversed the previous light approach towards the enforcement of labour law and compliance with social security contributions, and have reinforced labour inspections and begun to fight social security evasion, fostering labour formalization (see Chapter 13 on the issuing of written contracts in China). Law enforcement through labour inspection became a central element of the action of labour ministries in Argentina and Brazil, but in both countries a series of tripartite mechanisms also favoured compliance. However, this has not been a general trend in the region. In Mexico, compliance with the law has been very low, meaning that while the system is formally rigid, it is flexible in practice (Cardoso and Gindin 2009).

In 2004, the Labour Ministry of Argentina launched the National Programme for Labour Regularization. The number of labour inspectors increased from 20 in 2003 up to 400 in 2010. Under this programme, more than 800,000 establishments, employing 2.6 million workers, were inspected. To foster formalizations, labour inspections were complemented by a simplification of the registration programme, a one-year exemption of the employer's social security contribution for hiring new employees in small and medium firms, a tax incentive to formalize domestic workers, and the development of a corporate social-responsibility network to work with suppliers on the registration of their staff. As a result, the number of registered workers increased 43 per cent between 1998 (the 1990s peak year) and 2010, and the percentage of non-registered workers fell from 50 per cent (of wage and salaried workers) in the third quarter of 2003 to 35 per cent in the first quarter of 2010 (Ministerio de Trabajo 2011).

Brazil, too, has implemented a number of micro-level policy interventions that have altered the behaviour of firms and employers, resulting in greater formalization. These include the introduction of the SIMPLES law in 1996, which simplified and lowered taxes for small- and medium-sized enterprises (see Chapter 14 for similar measures introduced in other countries), and improved labour inspection as well as greater legal awareness among workers, for instance, among domestic workers. Between 1996 and

2004–08, the annual number of workers registered as a result of inspection increased from 268,000 to 700,000, and the percentage of formal employment rose from a low of 44 per cent of total employment up to 50 per cent in 2008 (Berg 2010).

In Uruguay, the percentage of formal workers has grown from 80 per cent (of full-time wage and salaried workers) in 2004 to 87 per cent in 2010, as measured by household survey data and by the number of workers registered with the social security administration (BPS). This shift reflects the effects of the reinstatement of wage councils and greater control by the BPS. In 2003–08, the number of private-sector employees contributing to BPS rose by 56 per cent (Mazzuchi 2009).

UNEMPLOYMENT PROTECTION AND ACTIVE LABOUR MARKET POLICIES

Despite high unemployment and labour precariousness, contributory-based unemployment insurance has not been fully developed in Latin America. Argentina, Brazil, Chile, Ecuador, Uruguay, and Venezuela have contributory unemployment insurance, although coverage and benefits are very low⁶ due mainly to informality and, to a lesser extent, to instability of formal jobs. Recently, some countries have extended unemployment protection to temporary agricultural workers (Argentina and Brazil), domestic workers (Uruguay), and workers with fixed-term contracts (Chile).

Some countries have implemented non-contributory cash transfer programmes for the unemployed (*Seguro de Capacitación y Empleo* in Argentina, *Programa de Formación y Capacitación* in Chile, and *Programa de Apoyo al Empleo* in Mexico). However, these schemes are not enough to ensure coverage for all the unemployed, while transfer amounts are very low. Therefore, the unemployed are usually unprotected. As a result, workers who lack unemployment insurance are forced to accept precarious jobs in order to survive. The main challenge is to design unemployment protection systems with high levels of coverage that limit potential moral hazard and that are coordinated with active policies to accelerate the beneficiaries' reinsertion into the labour market.

Active labour market policies have undergone changes in Latin America in the last few years with a view to increasing their efficiency, efficacy, and equality. In the case of training programmes it is worth mentioning the greater diversification of training suppliers, certification of competence, a greater focus on training to meet demand-side requirements, the design of different programmes according to the problems of the target groups, and

⁶ Overall, this insurance has never covered more than 20 per cent of the unemployed (Velásquez Pinto 2010).

new instruments for funding such programmes.⁷ Nonetheless, training systems still have significant shortcomings: their coverage is usually limited; training options are not always transparent; outcome assessments are few and are often unable to predict future business requirements.

Direct employment generation programmes have arisen in the context of strong demand contraction, although they have generally continued after the crisis since most beneficiaries were unable to get a job (see Chapter 16). These programmes offer temporary work for remuneration below the minimum wage and are generally oriented to members of poor households.⁸ Low remunerations are a self-selection mechanism. Typically, unskilled tasks are carried out under these programmes. Finally, several countries have implemented programmes to foster independent employment, either own-account activities or micro businesses.⁹ Credit rationing and access restrictions to new technologies and markets are important barriers to the development and sustainability of microenterprises (Chacaltana 2009).

12.4.2 Evaluation of the Distributive Impact of Labour Institutions

This section examines the impact of a minimum wage and collective bargaining on the fall of wage inequality in six countries during the 2000s. While the employment effects of a minimum wage are controversial (Card and Krueger 1995), its distributive impact is more straightforward. The distributive impact of collective bargaining is a priori less clear. Unions tend to affect the middle of the wage distribution and cause wage compression and higher wages for those covered by collective agreements. The former has an equalizing effect, but the latter increases disparity between the covered and the non-covered. In a pioneering paper, Freeman (1980) finds that the wage compression impact of unions was greater than its unequalizing effect in the United States during the 1970s.

Figure 12.6 shows the growth incidence curves of the log of real hourly wages during the 2000s in six countries. Argentina, Brazil, Chile, and Uruguay show equalizing patterns, while Mexico and Paraguay do not. These contrasting patterns are, a priori, compatible with the changes in labour institutions or a lack thereof, described previously.

⁷ Some examples are *Programa de Habilitación para el Trabajo (Hábil)* in El Salvador, *Aprendizaje* in Costa Rica, *Procajoven* in Panama, *Projoven* in Uruguay, and *Programa Jóvenes con Más y Mejor Trabajo* in Argentina.

⁸ This is why they are sometimes considered as anti-poverty programmes.

⁹ For instance, the microfinance programme *Usura Cero* in Nicaragua, *Programa Nacional de Emprendedores* in El Salvador, *Programa de Emprendimientos Productivos* in Uruguay, and *Manos a la Obra* in Argentina.

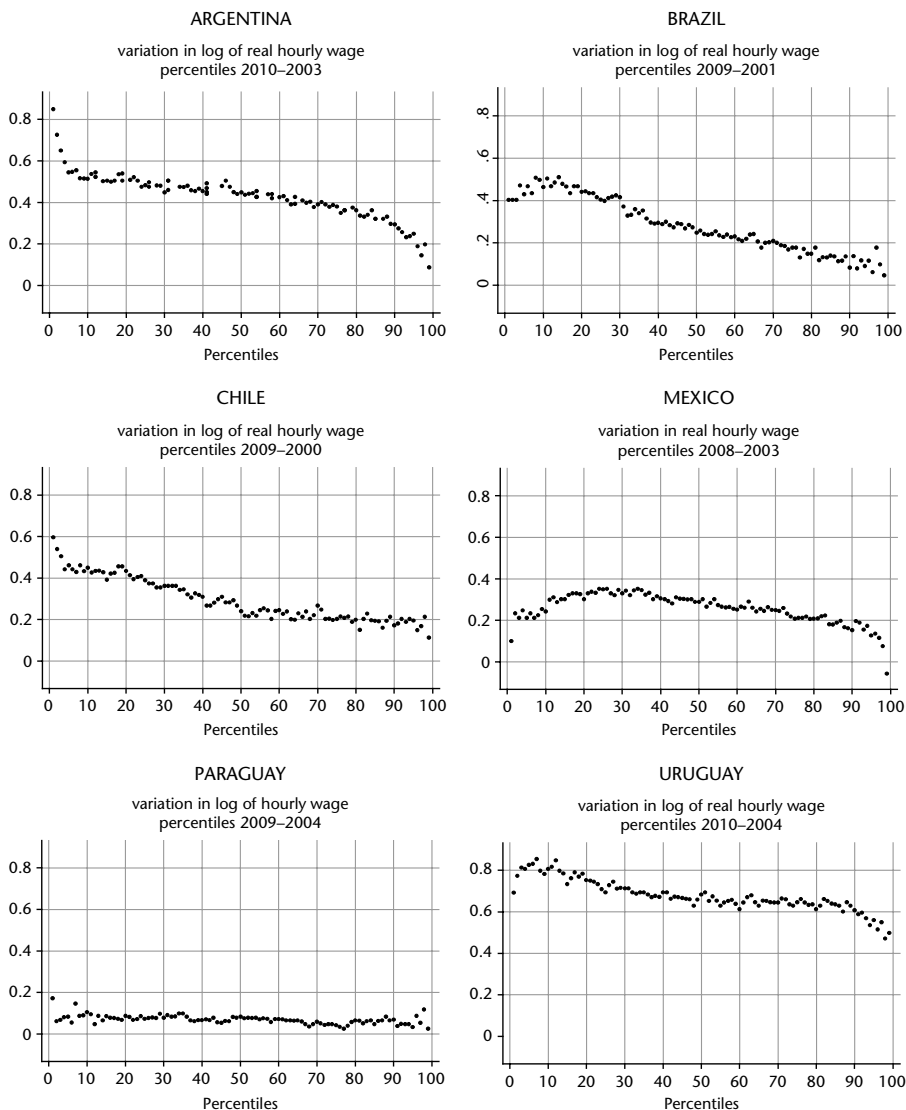


Figure 12.6. Growth incidence curves of real hourly wages in the 2000s

Source: Authors' elaboration based on household surveys.

THE MINIMUM WAGE

The impact of the minimum wage can be carried out by analysing the cumulative distribution graphs of full-time workers' wages¹⁰ for both formal and informal workers¹¹ in two different years following Kristensen and Cunningham (2006) and Maloney and Nuñez Mendez (2004). These authors find 'cliffs' in the cumulative distributions at the levels of minimum wages in most Latin American countries, even for informal workers and thus confirm the so-called 'lighthouse effect' reported for Brazil long ago.¹² These cliffs are inconsistent with a continuous distribution of human capital among workers and the hypothesis of competitive equilibrium wages.

Our analysis (see Keifman and Maurizio 2012: Figure 9) finds cliffs for formal workers' wages when real minimum wages are high but always finds lighthouse effects in all countries. Therefore, a minimum wage is a reference for informal workers even when it is low. On the other hand, we find a positive association between the percentage of subminimum formal and informal workers and the level of the real minimum wage. The only exception is formal employment in Brazil, which records no subminimum wages.

Real minimum wages increased much more than real median wages in Argentina, Brazil, and Uruguay. Their growth incidence curves are consistent with the equalizing effect of the former. In Chile, real minimum and median wages increased by 25 per cent, but real wages at the lower half of the distribution grew faster. This fact and the limited impact of unions suggest that the recent decrease in wage inequality in Chile has been mainly market driven. The non-equalizing patterns of real wage growth in Mexico and Paraguay and the fall in the fractions of subminimum workers are consistent with stagnant real minimum wages with moderate overall real wage raises during the 2000s.

In order to quantify the impact of minimum wages on wage inequality, we pursue two different methods. The first method was proposed by Fortin and Lemieux (1997). The main assumption is that minimum wages only affect the bottom part of wage distributions, that is to say, the mean and variance of (log) wages below or equal to the minimum wage. Therefore, a simple way to evaluate the impact of minimum wage changes is to compute a counterfactual variance for the period with the lower real minimum wage, by replacing the mean and variance of the fraction below the higher real minimum wage with the mean (adjusted by inflation) and variance of the bottom part of the distribution in the period with the higher real minimum wage. The difference between the counterfactual and actual variances for the period with a lower

¹⁰ Following the convention of the literature, full-time workers are defined as those who worked 30–50 hours in the reference week.

¹¹ Formal/informal worker means registered/nonregistered worker.

¹² The original reference is Souza and Baltar (1979).

Table 12.3. Impact of minimum wages on the variance of log wages, 2003–2010, Argentina

	Actual	Counterfactual*	Change and fraction explain
Hourly wages, all wage earners			
2003	(a) 0.6162	(b) 0.4738	(c) = (b) – (a) – 0.1424
2010	(d) 0.4358		
Change and fraction explained	(e) = (d) – (a) –0.1804		(c)/(e) 0.79
Wages, full-time wage earners**			
2003	(a) 0.5404	(b) 0.4719	(c) = (b) – (a) – 0.0685
2010	(d) 0.3624		
Change and fraction explained	(e) = (d) – (a) –0.1780		(c)/(e) 0.38

Notes:

* See main text.

** 35- to 48-hour workweeks.

Source: Authors' elaboration based on household surveys.

real minimum wage is interpreted as the fraction of the change in actual variances explained by changes in the minimum wage.

Table 12.3 reports the results of these exercises for Argentina in 2003–10.¹³ We computed the counterfactual variances of hourly wages for all wage earners and of full-time workers'¹⁴ total wages for 2003. According to this method, the increase in the minimum wage 'explains' 79 per cent of the fall in the variance of the log of hourly wages and 38 per cent of the drop in the variance of the log of total wages of full-time workers between 2003 and 2010.¹⁵

The second method is proposed by Lee (1999). Binding minimum wages truncate observed wage distributions. Regional differences in average wage levels are usually significant in a country. If wage levels are uncorrelated with latent wage dispersion (the identifying assumption), a simple way to test for the impact of minimum wages is to check whether the 10th–50th percentile differential of the log of wages is higher (lower in absolute value) in poorer areas where the minimum wage-median log differential is higher (lower in absolute value). If the identifying assumption is right, the regression coefficient of the former on the latter should be positive. We found empirical support for Lee's approach in Uruguay, Chile, and Brazil, consistent with the redistributive impact of minimum wages in the 2000s. In turn, Bosch and

¹³ As the estimation of variances is too sensitive to outliers, we were not able to apply it to other countries.

¹⁴ A full-time worker is defined here as somebody who works between 35 and 48 hours per week.

¹⁵ For the years 2007–10 we use the seven-province consumer price index.

Manacorda's (2010) application of Lee's method shows that the fall in real minimum wages accounts for most of the rise in inequality in the bottom end of the distribution in the 1990s (Keifman and Maurizio 2012: Section 4.2).

COLLECTIVE BARGAINING

Trajtemberg (2009) measures the degree of wage compression caused by collective bargaining by analysing data from an Argentinean enterprise survey conducted in 2005, which provides information on workers' wages, hours, personal attributes, firm characteristics, and whether workers are covered by collective agreements; he computes actual and counterfactual variances of the log of hourly wages and finds that the coverage by collective agreements caused a 26 per cent fall in that inequality measure. Mazzuchi (2009) offers a detailed analysis of the recent collective agreements in Uruguay. She does not offer econometric evidence on their impact, but provides abundant information on decreasing wage dispersion in successive agreements. Besides, minimum wages for the lowest categories in collective agreements are set above the general minimum wage.

12.5 Final Remarks

Labour market incomes have been a major contributor to the important fall in inequality in Latin America during the 2000s. Indeed, they were the main contributor in the countries where inequality fell more dramatically. The favourable international economic environment and the continuity of the demographic transition have had positive effects on labour market outcomes but are beyond the control of Latin American governments.

Yet, the chapter shows that the recent changes in labour market policies appear to have made a definite contribution to the decline in income inequality. Real minimum wages increased in many countries, and rose significantly in some of the countries that managed to reduce inequality more dramatically. We find some evidence that these developments are no coincidence. Besides, collective bargaining, although still largely undeveloped (partly due to legal hurdles), has also helped to reduce wage inequality. Moreover, the drive towards formalization of employment and the issuing of written contracts has also helped in present day China, as shown, *inter alia*, by Freeman in Chapter 13.

The productive approach to informality, with its focus on self-employment and micro-enterprises, emphasizes the need to transform the productive structure. Yet, active labour policies, especially training and employment services, have expanded in the last decade, and hold the promise of addressing some of the challenges emphasized by the productive approach. Therefore, recent

progress in employment formalization and the strengthening of labour institutions must be positively assessed, a fact that becomes even more relevant in the current context of economic globalization (Berg and Kucera 2008).

While progress was real in the last decade, one should not overlook the structural problems still afflicting Latin American labour markets. The 800-pound gorilla of informal employment (Freeman 2009) still looms large in the region, and much of wage inequality is linked to a large gap between formal and informal wages. Formal and informal workers are not alike, but we have proved that the formal–informal wage differential cannot be fully explained by worker attributes. In other words, the labour market is segmented, and this exacerbates endowments inequality. Informality also feeds inequality by narrowing the scope of contributory social protection.

The legal approach now emphasized by ILO focuses on the institutional dimension of non-registered work. As shown in this chapter, a large number of non-registered workers are employed in the formal sector, a fact consistent with the legal approach. We have also shown that policy and political will can raise formality significantly, as Berg (2010) argues, and that this can be accompanied by dramatic falls in inequality.

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13

What Can Latin America Learn from China's Labour Market Reforms?

Richard B. Freeman

Analysts typically take the labour institutions in advanced countries as defining the ways in which developing economies can organize their labour markets. International agencies often pose the choice as one between a US-style decentralized market-driven system that relies on employers to determine wages and working conditions subject to market pressures with little institutional intervention or collective bargaining; or a European Union (EU)-style system in which industrial or regional unions bargain collectively with employer federations to produce agreements that governments may extend to all firms and workers in the sector. The IMF and World Bank favour US-style labour flexibility. The ILO favours EU-style bargaining.

In this chapter I argue that developing country labour markets differ so much from those in advanced countries that developing countries can benefit more from the experience of the labour markets in other developing countries than from the labour markets of the USA and EU. I examine the range and performance of labour institutions among advanced and developing countries. I then compare China's labour institutions and labour market reforms to Latin American institutions and reforms (as analysed *inter alia* by Keifman and Maurizio in Chapter 12) and use this as my case in point of what developing countries can learn from each other's labour experiences, the similarities and differences in how Latin America and China have dealt with the same types of labour problems.

13.1 Developing Country Labour Issues are Different

Labour issues in developing economies differ from those in advanced economies in three fundamental ways. First, the informal share of the labour force is far greater in developing countries than in advanced countries. Throughout the developing world, many workers are self-employed, and many work as employees in the informal sector or in informal jobs within the formal sector (see Section 12.2.2 of Chapter 12). From 40 per cent to 90 per cent of the labour force in developing countries works with few formal sector rights or protections. By contrast, about 5 to 10 per cent of the labour force in advanced countries works in the informal sector or in informal jobs.¹ The inverse relation between the proportion of informal workers and level of development suggests that economic growth shifts labour from generally precarious low-paid informal jobs to more desirable formal-sector jobs. But time series data show little decline in the informal share of employment in most developing countries even when they experience rapid economic growth. Increasing levels of GDP per capita did not reduce the informal sector's share of employment in India and China between the 1980s and 2010s. Economic growth in Latin America and Southeast Asia from the mid-1980s to the mid-1990s was associated with a shift in the work force towards the informal sector (OECD 2009: Figure 0.1). Table 2.3 of this book shows a continued decrease in the percentage of formal-sector workers in Latin America from 55.0 per cent in 1990 to 50.7 per cent in 2009. Perhaps most telling, despite Korea's extraordinary economic success, the proportion of workers categorized as non-standard or irregular, including temporary or day workers, contingent workers, and so on, increased from 1996 to 2006 (Lee and Lee 2007; Grubb, Lee, and Tergeist 2007).

Table 13.1 compares informal employment in the non-agricultural sector for Latin America and China. Column 1 summarizes data from the OECD study *Is Informal Normal?* (which concluded that yes it was) on the informal sector's share of employment in Latin American countries in the 1990s. Column 2 gives estimates of informal employment in Latin America for 2009/latest year from the ILO's (2011) 'Statistical Update on Employment in the Informal Sector'. The full datasets, which contain additional countries, show that the informal sector's share of employment is lower in countries with higher GDP per capita. But using the difference between the estimated shares of informal sector employment in columns 1 and 2 as an indicator of trends over time, there is no evidence of trend declines in the informal

¹ The proportion of workers with non-standard or irregular contracts has increased in advanced countries but most of these workers still have some protections and social insurance and pay charges for those benefits.

Main Policy Changes and Inequality During the Last Decade

Table 13.1. Shares of informal employment in non-agricultural employment in Latin America and China, selected years

Countries	1995–1999/earlier 1990s	2009/latest year
Latin America		
Brazil	60.0	42.2
Mexico	59.4	53.7
Argentina	53.3	49.7
Bolivia	63.5	75.1
Chile	35.8	—
Colombia	38.4	59.6
Costa Rica	44.3	43.8
Dominican Republic	47.6	48.5
Ecuador	53.5	60.9
El Salvador	56.6	66.4
Guatemala	56.1	—
Haiti	92.6	—
Honduras	58.2	73.9
Nicaragua	—	65.7
Panama	37.6	43.8
Paraguay	65.5	70.7
Peru	—	70.6
Uruguay	—	39.8
Venezuela	46.9	47.5
China*	24.2 (1996)	59.4 (2006)

Source: OECD (2009: Table 2.1) for column 1; ILO (2011: Table 1) for column 2; China data for 1996 from Ghose (2005: Table 5), where I have divided the sum of informal sector + self-employed + irregular relative to total urban employment. This seems most comparable to Huang (2009: Table 1), but Table 5 shows only 3.9 per cent of wage workers listed as informal, which makes the increase even greater. * Huang (2009: Table 1); for other estimates see Yaowu, Yang, and Park (2006).

sector's share of employment: the informal share increased in eight countries and fell in four countries. Because 'the official statistical apparatus in China still does not gather systematic data on the informal economy',² I rely on academic researcher estimates of the informal sector for China in the bottom row. Retrenchment of state-owned enterprises in the 1990s and massive flow of migrant labour in the 1990s–2000s into urban areas raised the informal sector's share of non-agricultural employment substantially in that country.

Labour regulations can reduce the movement of workers from the informal to the formal sector (Djankov 2009) but do not explain much of the long-term persistence of informal sector employment. Mobility of workers between formal and informal jobs is high in Latin America (Perry et al. 2007) and possibly

² Huang (2009: 45). Cooke (2008: 4) reports that the term 'informal employment', however, is a relatively new concept in China that was first introduced by the labour authority in Shanghai in 1996.

elsewhere, but much of the movement is cyclic. Informal sector workers move to formal jobs when the economy booms and return to the informal sector when it contracts. Underlying the continued importance of informal sector work in developing countries is the rapid growth of productivity in manufacturing and industry (where formal sector work predominates), which limits job growth in those sectors, and the slower growth of productivity in the service industries (where informal sector work predominates).

With a substantial share of the labour force working outside the formal sector for the foreseeable future, developing countries have to devise new ways to deliver pensions, occupational health and safety protection, unemployment insurance, training, labour rights, and other social services to informal sector workers or face continued bifurcation of their labour markets into a better paid protected formal sector and a lower paid informal sector.

The second big difference between labour in developing economies and in advanced economies is that developing economies have greater inequality in household income and in labour earnings. Column 1 of Table 13.2 documents the level of income inequality with Gini coefficients from the Central Intelligence Agency's *The World Factbook*. The column records the median Gini coefficient from the distribution of Ginis for advanced countries and the median Gini from the distribution for all other countries. It also gives Gini coefficients for selected advanced countries, for China, and for Latin American³ countries. The median Gini for advanced countries is 30.9 compared to 40.9 for 'other countries'.⁴ The USA's 45.0 Gini makes it the only major advanced country with a developing country-level of inequality.

Latin American countries have historically had high inequality. The median Latin American Gini was 51.0 in the late 2000s despite the decline in inequality of income over the previous decade (Cornia 2010). Ginis vary in Latin America from 41.0 in Venezuela to 58.5 in Colombia but every Latin American country is above the median for developing countries.

China's Gini of 41.5 places it in the middle of the distribution for all countries and below the Ginis of nearly all Latin American countries. Before China began its economic reforms it had the narrow distribution of incomes associated with communist economies. Market-oriented reforms doubled the Gini in China between 1978 and the 1990s. Inequality continued to increase into the 2000s (Chen et al. 2010). Much of China's rising inequality is associated with urban-rural differentials which trended upwards as economic reform brought market wage-setting to the urban areas. In 2010 the urban-rural

³ I include some Caribbean countries under the Latin American heading.

⁴ I distinguish between advanced economies and all others, including wealthy Arab oil countries, transition economies, and so on for simplicity. Comparisons are qualitatively similar for more narrowly drawn samples of economies.

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Table 13.2. Gini coefficients and rankings of labour market and related indicators of labour-related practices for selected countries and years

Gini and measures of labour market	Gini coefficient (in %)	Fraser Institute rank of labour regulation 2009	GCR rate of labour efficiency 2011–2012	GCR rate of higher education 2011–2012	GCR rate of innovation 2011–2012
	(1)	(2)	(3)	(4)	(5)
Median, advanced	30.9	62	18	15	14
USA	45.0	5	4	13	5
Germany	27.0	112	64	7	7
Sweden	23.0	107	25	2	2
Median, all others	40.9	73	85	93	82
China	41.5	103	36	58	29
Median, Latin America	51.0	108	104	85	94
Argentina	45.8	108	131	54	78
Bolivia	58.2	124	140	95	106
Brazil	53.9	130	83	57	44
Chile	52.1	93	39	43	46
Colombia	58.5	103	88	60	57
Costa Rica	50.3	64	55	47	35
Dominican Republic	48.4	75	104	99	122
Ecuador	46.9	135	138	90	110
El Salvador	46.9	120	108	105	127
Guatemala	55.1	126	98	100	91
Guyana	43.2	27	91	79	99
Haiti	59.2	1	89	141	139
Honduras	57.7	119	135	108	101
Jamaica	45.5	32	80	85	94
Mexico	51.7	104	114	72	63
Nicaragua	43.1	61	96	117	130
Panama	51.0	110	115	78	72
Paraguay	53.2	132	127	116	133
Peru	48.0	47	43	77	113
Uruguay	42.4	67	118	42	55
Venezuela	41.0	127	142	67	126

Notes. The higher education index is pillar 5. The labour market efficiency index is pillar 7, the innovation index is pillar 12.

Source: Wikipedia for column 1 (available at: <http://www.en.wikipedia.org/wiki/List_of_countries_by_income_equality>) and CIA GINI; these figures are close to those in Table 2.1 of Chapter 2; Fraser Institute (2009, 2011: Table 1.4) for column 2; WEFForum (2011: Tables 6 and 7) for columns 3–5.

income differential reached an all-time high of 3.33 to 1. Viewing Gini coefficients in the Latin American range as dangerous to social stability, the Chinese government has adopted labour market and social policies designed to shift the distribution of income towards lower-wage workers and lower-income families.

The third big difference between labour in developing countries and advanced countries is in the distribution of skills among workers. Most developing country labour forces contain a rapidly growing population of highly educated younger persons in urban areas, a population of less educated older persons, and a large number of young persons in rural areas who drop out of school at an early age. This dualistic structure is far wider than the distribution of education in advanced countries today and wider than the distribution in those countries when they were experiencing their growth spurts. The reason is that from the end of the twentieth century to the 2010s developing countries invested more heavily in higher education and graduated relatively more people with university degrees at an earlier stage of development than countries have ever done before (Freeman 2010, see also Chapter 15). Table 13.3 shows data on enrolments and degrees in tertiary institutions in the USA, China, and Latin America in 2007. China had the largest number of students and graduates in the world—enrolling over 25 million students in tertiary education and graduating 5.9 million with bachelor's degrees—the result of expanding mass higher education following the virtual closure of the university system in the Cultural Revolution. US and Latin American undergraduate enrolments were about 75 per cent of Chinese enrolments but the number of US graduates was less than 50 per cent of Chinese graduates and the number of Latin America's graduates was just 37 per cent of Chinese graduates.⁵ In addition to enrolling large numbers in domestic colleges and universities, developing countries send an increasing number of students for study in the advanced countries.⁶ Relative to population, the Chinese obtain nearly twice as many PhDs in the USA as do Latin Americans.

Table 13.3. Enrolments and degrees in tertiary education in USA, China, and Latin America, 2007

	Higher education enrolments	Degrees granted
China	25,346,000	5,873,000
USA	17,759,000	2,704,000
Latin America in entirety	16,737,000	2,011,000
Argentina	2,202,000	223,000
Brazil	5,273,000	820,000
Colombia	1,373,000	106,000
Mexico	2,529,000	422,000

Source: UNESCO (2009: Tables 8 and 11).

⁵ The gap between graduates and enrolments in the USA results from the high proportion of US students enrolled in community colleges, where many obtain the associate's degree as a final degree. The gap in Latin America reflects the fact that many students take a long time to get their degrees and many also do not complete their education.

⁶ Of the 49,562 PhDs granted in the USA in 2009, one-third (14,567) went to the foreign-born, with students from mainland China obtaining 4,100 PhDs. Latin Americans earned 1,065 PhDs, of whom 20 per cent were from Mexico (NSF 2012: Tables 40, 49).

The large increasing supply of graduates in developing countries gives those countries the capacity to 'leapfrog' to the forefront of modern technology and compete with advanced countries in high-tech sectors which economists once viewed as the comparative advantage preserve of the advanced countries. In the labour market, the increased supply of graduates drives down the wage advantage of educated workers, which reduces inequality. In the case of China, Fang and Wang (2010) estimate that between 2003 and 2009 the earnings advantage of starting college graduates in China fell relative to the earnings of migrant workers from 2.25 to 1.65. But a higher share of the work force with university education can also add to inequality by increasing the proportion of workers with above-average wages and, given the above-average levels of within-group inequality among college graduates, by increasing the proportion of workers from a high within-group level of inequality. Perhaps most important, the number of graduates increased so rapidly in China from the 1990s to the 2010s as to create a huge disconnect between the career aspirations and earnings expectations of graduates and employment prospects available to them in an economy with a large informal sector. Since a disconnect among the educated young can readily erupt into social disorder, Chinese leaders gave priority during the great recession to finding jobs for university graduates as well as for the displaced migrant workers.

Having substantial numbers of university graduates and less skilled informal sector workers in the same economy requires developing countries to have labour policies that deal not only with the traditional labour-relations issues pertaining to formal sector industrial workers per advanced country labour law and institutions but also to develop policies for the labour market for university graduates and for informal sector workers as well.

13.2 Labour Institutions

Think tanks, international agencies, and independent researchers provide measures of the institutional differences among countries in the form of readily available indexes of economic freedom, competitiveness, business climate, etc.⁷ The organizations that construct these indexes generally take an ideal competitive market as the benchmark for assessing economies. Thus they treat reliance on market forces as a positive attribute of a labour system and treat collective bargaining and other institutional processes for setting pay or employment as a negative attribute. The indexes put countries whose

⁷ Among the many such measures are the Fraser Institute's Economic Freedom index, the Heritage Foundation Wall Street Journal Economic Freedom index, the World Bank's Doing Business indicators, and the World Economic Forum's Global Competitiveness indicators.

institutions resemble those of the USA and other Anglo-American economies (Freeman, Boxall, and Haynes 2007) above countries with EU-style institutions. But the orientation does not distort assessments of where a country's labour institutions lie on a scale from primarily market-driven to primarily institution-driven (Chor and Freeman 2005). Analysts who favour EU-style institutions can simply 'reverse code' the ratings so that instead of reporting that countries with an institutional bent rank low on a market-freedom scale, they can report that they rank high on an institution-oriented scale.⁸

Column 2 of Table 13.2 gives the ranking of countries by labour market regulations from the Fraser Institute *index of economic freedom*. Fraser scores the labour regulations in 140 countries on the basis of hiring regulations and minimum wage, hiring and firing regulations, centralized collective bargaining, hours regulation, mandated cost of worker dismissal, and conscription. Indicative of Fraser's preference for market solutions, the 2009 rating placed the USA fifth in economic freedom in the labour market (i.e. having few regulations), far above Sweden at 107 and Germany at 112. The Fraser labour regulation index ranked China at 103. The ranking for Latin American countries varied widely. Fraser gave Haiti the number one spot in its index as having the least regulated labour market in the world. By contrast, it placed Brazil at 130 in its ranking for having extensive labour regulations. The median ranking of 108 for Latin American countries puts the continent high in labour market regulations.

On average, the Fraser rankings for labour regulations differ only modestly between advanced economies and other economies while differing substantially within the groups. One interpretation of this pattern is that development does not select any particular institutional structure for regulating the labour market. Countries have considerable leeway or choice in structuring their labour institutions. They can be Sweden or the USA...or Haiti or Brazil.

But while labour institutions have no noticeable relation to the level of economic development, institutions are closely related to the distribution of earnings and income, as argued also in Chapter 12. Studies invariably find that the greater the extent of trade unionism or collective bargaining the lower is the level of inequality. Countries with greater union density or with more centralized or coordinated collective bargaining have lower dispersion of earnings among advanced countries (OECD 2004: Chapter 3) and among all countries (Freeman and Oostendorp 2000). Studies that examine particular economies over time find a similar pattern: when union density/collective

⁸ To reverse code a rating system one simply subtracts the ratings from the sum of the highest and lowest values of the scale. To reverse a code or a scale that rates countries from 1 (least regulated) to 5 (most regulated) to a scale that rates countries in the opposite direction, subtract the rating from 6.

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bargaining coverage increases, inequality tends to fall, and when unionism/bargaining coverage falls, inequality increases (OECD 2011: Table 2). In its 2013 *World Development Report*, the World Bank summarizes its review of the evidence:

It is also clear that unions and collective bargaining have an equalizing effect on earnings distributions by compressing wage differentials. Research has shown that wage inequality falls during periods when union density is increasing and rises when union membership is in decline (World Bank 2013: 263).

The remaining columns of the table record the rankings of countries by three criteria from the 2011–12 World Economic Forum's Global Competitiveness Report (GCR). The GCR scores countries on the basis of its annual Executive Opinion Survey of executives in each country and on relevant objective data from national or international sources. The 2011–12 survey was based on 13,395 responses from executives, giving an average of 98 respondents per country (WEForum 2011: 75).

The labour efficiency measure in column 3 is a composite index that combines the answers to nine questions. Four of the questions enter the Fraser index: flexibility of wage determination; rigidity of employment; hiring and firing practices; and redundancy costs. The other questions ask about: cooperation in labour–employer relations; the link between pay and productivity; reliance on professional management; brain drain; female participation in the labour force. The GCR ranks the USA fourth in efficiency, nearly identical to the Fraser Institute ranking of the USA in terms of labour regulations. But the additional factors in its measure of labour efficiency place Germany, Sweden, and China higher in the GCR scale than in the Fraser labour regulation scale. Germany and Sweden rank high in cooperation in labour relations, reliance on professional management, and brain drain (they gain rather than lose from it). China has a higher rating because executives view China as being high in linking pay and productivity and in other dimensions with the noticeable exception of regulations—where executives score poorly on rigidity in employment decisions and required severance pay in lay-offs. While Latin American countries evince wide differences in GCR ratings, every Latin American country has a lower score in labour market efficiency than China. The Fraser number 1 country, Haiti, rates near the middle of the ratings in labour efficiency. In the eyes of executives the only thing that Haiti does right in the labour area is to provide limited or weak regulations for workers.

Column 4 gives the country rankings by 'higher education and training'. This is a composite measure that includes sub-indexes for producing qualified university-level labour, including secondary school enrolments and quality of mathematics education. The advanced countries score well on this indicator. Sweden and Germany rate higher than the USA. China scores above the

median Latin American country but falls short of the advanced countries. China's huge expansion of higher education came at the cost of the quality of education.

Column 5 ranks countries by the 'capacity for innovation'. This composite is based on indicators of the supply and deployment of science and engineering graduates and investments in research and development: availability of scientists and engineers; quality of scientific research institutions; company spending on R&D; university–industry collaboration in R&D; and government procurement of advanced tech products. The USA, Germany, and Sweden rank high in these areas. Latin America scores poorly. The highest ratings for innovation in Latin America are for Brazil, Chile, and Costa Rica. China rates closer to the advanced countries on the innovation measure than it does on any other metric and exceeds all of the Latin American countries. In the 2000s China made huge investments in doctorate education and in R&D, which brought it to the frontier of knowledge creation in various areas. The Chinese share of scientific papers is on a sharp upward trajectory.

Overall, Table 13.2 shows that developing countries differ more from advanced countries in the three GCR indicators than in the Fraser Institute labour regulation index. The traditional debate over labour policies—decentralized markets US-style versus collective bargaining and institutional interventions in the labour market EU-style—that the Fraser index measures does not capture the fact that developing countries differ most from advanced countries in a broader labour space that includes the operation of the higher educational system, the graduate job market, and openness to innovation.

13.3 Institutions and Outcomes

If the labour markets of advanced countries performed markedly better than those of developing countries, it might make sense for developing countries to seek to follow the models of the advanced countries even though the labour situation in developing countries differs greatly from that in the advanced countries.

The great recession of 2008–9 and ensuing recovery tested the performance of labour markets worldwide. At the outset of the crisis, many analysts feared that workers in developing countries would suffer massively from the global recession. When the recession hit China in winter 2009 and South China factories laid off 20 million migrant workers, who returned to their villages, it appeared as if the contraction in global trade was going to devastate the Chinese economy. Past global recessions had caused great harm in Latin America, raising fears that the recession would undo the economic gains of the previous decade. Among the advanced countries, many believed that the

market-dominated labour system of the USA would fare better than the institution-driven labour markets of advanced Europe.

What happened was quite different. Employment proved to be more resilient in developing countries than in advanced countries. China recovered within a year and went on to experience rising wages and employment in 2010 and 2011. In Latin America employment fell less and recovered more quickly than in advanced OECD countries. One reason was that the informal labour markets in developing countries buffered job loss. The ILO estimates that when the recession cut formal sector employment from Q2 2008 to Q2 2009 in six Latin American countries, there was a near commensurate increase in informal sector employment (ILO 2010: Figure 1.7). Another reason was that Latin American GDP recovered quickly: in 2009 GDP per capita contracted by 2.9 per cent, but GDP per capita then increased by 4.2 per cent in 2010—a 7.1 percentage point turnaround.⁹ Among advanced countries also, the responses to the recession and recovery differed from prior expectations. The USA shed jobs quickly, due to its flexible labour market, but restored jobs slowly in the ensuing recovery and experienced a substantial increase in the length of spells of joblessness. Denmark, whose widely heralded ‘flexicurity’ policy relied on flexible hiring and firing strategies, also had a disappointing employment recovery. By contrast, Germany’s job-sharing policy maintained employment well, and other EU countries that relied extensively on institutions, such as Austria, the Netherlands, and Sweden, also did well.

There are lessons for developing countries from the experiences of the advanced countries with different labour institutions, but the overall performance of advanced countries in the great recession and its aftermath does not suggest that those countries have the answers to the labour issues facing developing countries. On the notion that developing economies can learn more from their own experiences and the experiences of other developing countries than from the experiences of advanced countries, I consider next some of the policies that China adopted to deal with its labour problems, compare them to policies in Latin America, primarily Brazil, and then consider what Latin America can learn from China and what China can learn from Latin America.

13.3.1 *China’s New Labour Policies*

Increased inequality has long troubled China’s leadership. In 1998 Jiang Zemin warned that ‘if certain social and economic problems are not tackled

⁹ See the CEPAL figures cited in Chapter 2 of this volume.

without delay, the overall stability of the country could be threatened'.¹⁰ In 2007 President Hu Jintao declared that the government intended to 'increase transfer payments, intensify the regulation of incomes through taxation, break business monopolies, create equal opportunities, and overhaul income distribution practices with a view to gradually reversing the growing income disparity'.¹¹ In March 2011 Premier Wen Jiabao pledged help to farmers and the urban poor to contain growing social dissatisfaction.

The concerns of the top leaders are rooted in reality. Social protests and wildcat strikes have become endemic in China. The number of labour disputes that workers brought to the Labour Dispute Arbitration Committees (the legal bodies set up to resolve disputes) increased from 47,951 in 1996 to 693,000 in 2008 and purportedly reached 1,280,000 in 2010.¹² The summer 2010 strike by Honda workers made headlines around the world. Indeed, the number of strikes in China has grown so rapidly that a website now maps them across the country based on news articles and other reports.¹³

The government's response to the perceived threat of inequality has been to: (i) strengthen the legal rights of informal workers; (ii) raise minimum wages and transfer payments, (iii) seek to transform the country's 'transmission belt' trade unions into something closer to a genuine representative of workers; and (iv) strengthen mediation and arbitration.

To help informal workers, China enacted a contract labour law that took effect on 1 January 2008. The law required that employers give migrant workers a written contract, which workers could take to court or arbitration committees to obtain their rights. Opponents of the law claimed that it would reduce competitiveness and recreate the 'iron rice bowl'¹⁴ labour conditions that had existed under state planning. Representatives of the All China Federation of Trade Unions (ACFTU) and academic experts on labour relations claimed that it would improve the labour market and channel discontent away from wildcat strikes or other protests.

The new law also increased the formal rights of informal workers. It limited probationary periods to two years, gave workers with ten years' experience with a firm permanent contracts, allowed dismissal only on just-cause

¹⁰ See *China Daily* (13 January 1999) reporting on a speech given by President Jiang Zemin on 24 December 1998 at a national conference on China's legal and political situation, in which President Zemin highlighted social stability as the most important task for China in 1999.

¹¹ Address to the 17th National Congress of the Communist Party of China (15 October 2007). The full text can be found at: <http://www.aboutxinjiang.com/topic/content/2011-06/27/content_5925466_9.htm>

¹² China Labour Bulletin (2009) for figures up to 2008, and *China Daily* (2011) for the 2010 figure.

¹³ China Strikes, see <<http://www.chinastrikes.crowdmap.com/main>>.

¹⁴ This is the phrase used to refer to the system of guaranteed lifetime employment and benefits in state-owned enterprises in which management could not fire workers and workers could not switch jobs, and where the enterprise paid wages and benefits set by the state.

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grounds, required firms to pay one month severance pay for each year of work, and allowed workers to refuse dangerous work. It further required that employers consult with unions on changes in rules, that they concur with local industry-wide agreements in some sectors, and it gave employees the right to elect representatives for bargaining if the official ACFTU union did not represent them. Further, it raised the fines for breaking the law.

Did the law have its desired effect? Xiaoying Li and I (Freeman and Li 2012) examined this question using surveys of migrant workers in the Pearl River Delta before and after the law took effect. Our main finding was that the law was effective. As Table 13.4 shows, from 2006 to 2009 the percentage of migrants with contracts increased, as did the percentage covered in social insurance programmes, while fewer workers reported violations of their rights. To strengthen the law, in February 2011 China made it a criminal offence for companies to intentionally withhold employee pay if it has money to pay or if it transfers assets to escape paying.

As occurred in Latin America during the last decade (see Chapter 12), China's Ministry of Human Resources and Social Security has set since 2004 a national minimum wage to cover town and village enterprises, employees in small private businesses, and part-time workers. But the more important minimum wages are set by local and provincial governments, which often set a minimum far above the national ministry level. The level of the minimum varies greatly across Chinese cities. In 2007 the monthly minimum ranged from 430 yuan in Gansu in the west to 850 yuan in Zhejiang, Jiangsu, and Guangdong in the east (Wang and Gunderson 2011: Table 1). To increase earnings at the lower parts of the income distribution, Chinese provinces and municipalities raised minimum wages substantially in 2011. Over half of the 12 municipalities and provinces in China raised their minimum wages

Table 13.4 Percentage of workers covered by contracts and with social insurance and percentage reporting rights violations before and after the Contract Labour Law, China, selected years

	2006	2009	Change
Contract coverage	42.76	62.36	19.6
Open-ended contract	15.19	17.28	2.1
Union existence	16.00	18.57	2.6
Medical insurance	33.02	52.03	19.0
Age insurance	21.94	37.91	16.0
Injury insurance	42.91	56.79	13.9
Unemployment insurance	8.3	20.46	12.2
Wage arrears	8.88	7.22	-1.7
Rights-violation experience	23.71	5.71	-18.0

Source: Freeman and Li (2012).

by over 20 per cent. The average minimum in the eastern and southern provinces exceeded 1,000 yuan. Zhejiang enacted a 1,310 yuan minimum, a 19 per cent increase over its 2010 level. Even Hong Kong, whose free-market orientation has produced one of the least regulated labour markets in the world, introduced a minimum wage in 2011.

Researchers have not studied distributions of pay before and after the changes in the city or province minimum, nor examined whether increases in minimum wages spread from covered workers to others. It is clear, however, that workers are aware of the minimum wage in China. One contributing factor to the summer 2010 Honda strike was that the firm sought to evade an increased minimum in Foshan City by lowering meal and living subsidies by the same amount as the minimum wage increase.

Trade unions are the traditional labour institution through which workers defend their interests in market economies. China's official union organization, the ACFTU, nominally has more members than any other union federation in the world. But most workers do not view their workplace union as representing them. The ACFTU has operated as a Leninist 'transmission belt' organization that supports state policies and promotes workplace cooperation with management rather than acting as a defender of worker interests. It 'organizes' unions by asking management to set up a union in a plant. If management accedes to the request it will often appoint a mid-level manager such as a human-resource executive as union leader. Indicative of this orientation, a senior ACFTU official seeking to unionize multinationals told executives that there was no reason to worry about unionism because 'unlike western unions, which always stand against the employer, Chinese unions are obliged to boost the corporation's development and maintain sound labour relations' (cited in *Guardian* 2011). The labour law requires that companies give 2 per cent of total payroll to the union for its activities, but most firms give much less.

This model of unionism cannot survive in a China where workers are prepared to strike and protest on their own. Recognizing this, the government has allowed the official unions to begin to act more as the representative of workers. The commentary on the Honda strike by Chen Weiguang, Chairman of the Guangzhou Federation of Trade Unions and Vice Chairman of the People's Congress of Guangzhou, represents this new attitude:

The workers did not accept the trade union as their representative... As the strike went on, the union wavered between management and the workers, and it saw itself as a mediator. Standing between the two sides is the worst position... In the labour conflicts at Honda's suppliers... in the Nansha district, our approach was very different and the trade union behaved proactively... we have educated the trade union cadres that they must represent the workers and not play the

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middleman. *In the event of a strike, even very short ones, the trade unions have to be on the side of the workers.*¹⁵

In summer 2011, Hong-Kong-based Han Dongfang, the leading voice for independent unions in China, called on the international union movement to help the ACFTU reinvent itself as a genuine union:

Constructive engagement with the ACFTU at this point in history could produce real benefits... If the ACFTU can show it can better serve the party's interests (ensuring economic growth and social stability) by standing up for the rights and interests of workers, the party will certainly take note (cited in *Guardian* 2011).

US unions, which traditionally shunned the ACFTU as a government bureaucracy, began meeting with ACFTU officials. Reformers in the ACFTU have tried different strategies to position local unions on the side of workers. The Beijing ACFTU central organization appoints union officials who do not work for a company to represent workers in bargaining. Shanghai union officials have endorsed worker elections of local officials. Chen Weiguang's statement above reflects the changed orientation in Guangzhou.

To deal with the increased number of labour disputes, in 2012 China introduced new regulations for labour mediation and dispute resolution. The new regulations sought to strengthen the ability of firms and workers to solve disputes, and thus prevent issues from reaching the labour dispute arbitration commission or producing mass protests or strikes. They required that every large/medium-sized enterprise establish a labour dispute mediation committee comprised of equal numbers of enterprise and worker representatives to facilitate enterprise-worker communications, and to negotiate and resolve labour disputes. The committees hire mediators to help reach a solution and to publicize laws, regulations, and policies related to labour-rights protection. The law further required a written statement signed by both parties to enforce implementation of the resolution.

Finally, to help move China to the forefront of modern science and technology, China encourages the country's best and brightest to become international students. It awards scholarships for overseas studies, and seeks to gain top graduate students' admissions in leading overseas universities, despite the likelihood that many will settle in advanced countries. The existence of a substantial diaspora population creates an ethnic network through which information about modern technology and practices flows more quickly, thus benefiting the immigrants' home country.

¹⁵ Interview with Chen Weiguang, 27 October 2010.

13.3.2 Latin American Labour Policies

In the 1990s Latin America led the world in 'Washington Consensus' reforms to jump-start economic growth. Argentina became the poster child of the IMF and the Clinton administration for Washington Consensus-style globalization. Using the Fraser Institute measure of economic freedom, Argentina raised its ranking from 97 in 1985 to 32 in 2000, one of the largest changes ever in the index. In addition to pegging the peso to the dollar, Argentina deregulated markets, privatized industries, reduced tariffs, lowered taxes on the wealthy, overhauled its pension system towards a defined-contribution system, and so on.¹⁶ Many other Latin American countries chose similar labour and social assistance policies. They moved from defined-benefit to defined-contribution pensions (Barrientos and Hinojosa-Valencia 2009; Chapter 16: Figure 16.1), privatized some government-run businesses, and reduced employment protection to increase labour flexibility. Union representation fell in most of Latin America. Inequality increased. The proportion of workers in the informal sector rose. In Brazil, conservative governments sought to undo or weaken the labour protections/rigidities built into the 1988 constitution.¹⁷ They ended the indexation of wages to consumer prices and allowed inflation to reduce the real value of the minimum wage by over a third from 1990 to 1995.

But the market-oriented reforms did not deliver on their promise of better functioning economies. Latin American economies that adopted the market reforms did not experience any spurt in economic growth. Argentina, which had high unemployment and rising inequality even as its GDP grew in the early and mid-1990s, fell into recession in 1999. The 2002 collapse of the Argentine peso put the finishing touches on the failed Washington Consensus model of growth (Hornbeck 2002).

In the 2000s most Latin American countries shifted policies to fight inequality and poverty. Brazil was the exemplar of the new orientation. It developed a set of anti-poverty programmes targeted at the very poor, such as the *Bolsa Família* cash transfer programme that gave financial support to about one-quarter of the population, a rural pension scheme that provided benefits to rural workers, the *Benefício de Prestação Continuada* programme that provided social assistance to the elderly poor and disabled, and other programmes as well. Targeting funds at persons in greatest need reduced poverty and inequality, even though the programmes were a relatively small share of GDP.

¹⁶ Data for Argentina from the Fraser Institute, available at: <http://www.freetheworld.com/2011/reports/world/EFW2011_chap2.pdf>.

¹⁷ For instance, by allowing workers/firms to form worker cooperatives to work for firms outside of the employment laws, by allowing workers/firms to bank hours worked, which would avoid overtime pay.

Reversing the 1990–5 reduction in the real minimum wage, Brazil raised the minimum wage faster than inflation, doubling the real minimum between 2000 and 2010. The Brazilian minimum generally spills over to social assistance payments and earnings elsewhere in the economy. It induces increased wages for informal workers not covered by the minimum through what is called the *El Farol* or lighthouse effect. Analysts attribute approximately two-thirds of the fall in inequality to the increased minimum (Berg 2011).

Over the same period, Brazil's economy boomed and the share of the workforce in the informal sector declined by 6 to 10 percentage points (as indicated in Table 13.1).¹⁸ Brazil increased its spending on enforcing labour regulations, with discernible effects on the level and location of employment and wages (Almeida and Carneiro 2007). It instituted policies that promoted formalization beyond the flow of informal sector workers to the formal sector in economic booms. To improve the incentives for small firms and micro-enterprises to formalize, the government enacted the SIMPLES law that exempted small firms from taxes and made it less costly for them to formalize. It also gave labour inspectors incentives to register informal workers and to help firms deal with the problems that might arise from formalization (Pires 2008).

13.4 Towards New Labour Institutions and Policies

China and the Latin American countries have to overcome similar problems to grow their economies for the benefit of the bulk of the population. They have to find ways to improve the economic wellbeing of informal sector workers, to reduce or at least arrest the growth of income inequality, and to balance the increased supply of university graduates with the development of knowledge-based industries.

There are similarities and differences in the ways in which China and Brazil and other Latin American countries have dealt with these problems. The biggest similarity is in the commitment of governments to policies that spread the benefits of economic growth to workers and throughout the income distribution. The rhetoric in China contrasts with the early days of Chinese reforms when in 1985 Deng Xiaoping famously said 'let some people get rich first'. The rhetoric in Latin America contrasts with the 1990s Washington Consensus policies.

China and Latin America rely extensively on minimum wages to help ensure that the wages of lower-paid workers increase as the economy grows. China's local determination of minimum wages creates extraordinarily wide

¹⁸ Berg (2011: 7–8 and Figure 2).

within-country variations in the minimum, though the range of minimum wages across all Latin American countries may approach that among Chinese provinces and cities.

What at first look seems to be the biggest difference between the efforts of China and Latin America to improve the incomes of workers is that China seeks to empower workers and unions whereas Brazil and other Latin American countries rely more on state initiatives, such as Brazil deploying its labour inspectorate to encourage firms to move into the formal sector and giving firms tax incentives to do so (Almeida and Carneiro 2011). Brazil has also built up knowledge of how to manage the inspectorate to carry out their jobs (Pires 2011). But this difference is less striking in the light of China's official unions being part of the government/party apparatus. China's union cadres are more like labour inspectorate officials than independent representatives of workers.

China's decision to empower workers and strengthen collective bargaining may seem paradoxical given the role of the communist party and government in China's version of state capitalism (*Economist* 2012). It reflects the division of power and incentives between a central government committed to reduce inequality and local authorities committed to expanding local business. It also reflects a belief that relying on workers and unions to defend worker rights strengthens social stability by channelling discontent to the private market rather than towards the state. This in turn allows the government to play the mediating role.

One other difference between the policies of China and Latin America deserves attention. China has been far bolder in building up its university graduate workforce and investing in R&D than has any Latin American country. Along with its policy of increasing the supply of university students, China raised R&D spending in the 2000s so rapidly that it became the second largest investor in R&D in the world (the USA being the lead country). China's R&D to GDP ratio increased to nearly twice that of Brazil, Latin America's leader in R&D (NSF 2012: Table 4.19).

Latin American analysts and decision-makers have much to learn from China's effort to give workers the legal status and tools to defend their rights, particularly in light of modern information and communication technology, its efforts to build up collective bargaining, and its investments in higher education and R&D. China has much to learn from the Latin American experience with formal labour inspectorates enforcing labour regulations and the informal *El Farol* spreading the effects of minimum wages. Paying increasing attention to the institutions and policies of the other is likely, in my view, to give each a higher pay-off in knowledge about ways to improve labour policies than each continuing to look primarily at what the advanced countries are doing in their labour markets.

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14

Tax Policy and Income Distribution During the Last Decade*

*Giovanni Andrea Cornia, Juan Carlos Gómez-Sabaini,
and Bruno Martorano*

14.1 Taxation During the Neoliberal Decades of the 1980s and 1990s

During the late 1980s and 1990s, many developing countries in Latin America introduced important fiscal policy changes owing to the new emphasis placed on government failures, the residual role to which the state had been relegated by the creeping privatization of social services and infrastructure, the distortive effect of many taxes, and the belief that high tax rates were ineffective in redistributing income. As a result, the new tax policy focused on reducing the efficiency costs of taxation, horizontal equity, and revenue adequacy, while income redistribution became a secondary goal.

In particular, the taxes on international trade—which were seen as the cause of inefficiency in the allocation of resources—were replaced by domestic consumption taxes. A value added tax (VAT) with rates ranging between 10 and 20 per cent (with exemptions for exports and wage goods) was considered a reliable source of revenue. As a result, the average regional VAT rate rose from an initial level of 11.3 per cent to 14.4 per cent in 2000 (Cornia, Gómez-Sabaini, and Martorano 2011: Table 1). The 1980s and 1990s also witnessed a simplification of the personal income tax (PIT), the progressivity of which, it was argued, depressed incentives, labour supply, and investments. In addition, in an increasingly open economy, high corporate tax rates were seen as

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a possible cause of capital flights and discouragement of FDI. The maximum marginal rate of PIT was thus reduced to between 25 and 30 per cent while ‘the increasing integration of the world’s capital markets and the dismantling of capital controls in most countries exerted considerable pressure to reduce or eliminate the taxes on interest income’ (Thirsk 1991: 40). The revenue losses entailed by these changes were to be compensated for by limiting tax exemptions and allowances (Stotsky 1995), subjecting more types of income to taxation, using more presumptive taxation, and other measures. Finally, there was a drive ‘to make the tax system neutral to inflation by indexing tax brackets, credits, standard deductions, and other nominal amounts to inflation’ (Stotsky 1995: 281).

As a consequence of these reforms, of slow growth, and of the erosion of the tax base by inflation, the average tax/GDP ratio fell perceptibly (Figure 14.1). With rising debt-servicing obligations and a fall in tax/GDP ratios, deficit reduction was achieved in several countries by means of cuts in public expenditure on infrastructure and human capital. However, despite the immediate improvements in fiscal balance, the decline in public investment had an adverse impact on growth, fiscal revenue, and the long-term budget deficit (Perry, Servén, and Suescún 2008).

The tax reforms of the 1980s and 1990s also had important implications for income distribution. Regression analysis shows that the fall in the ratio of direct to indirect taxes recorded during that period raised the Gini coefficient of the distribution of disposable income (Cornia 2010). Morley (2000) comes to similar conclusions by noting that the tax changes of the 1990s shifted the burden of taxation from the wealthy to the middle and lower classes, while Chu, Davoodi, and Gupta (2004) find that the fall in the tax/GDP ratio and decreasing contribution of direct taxes reduced tax progressiveness.

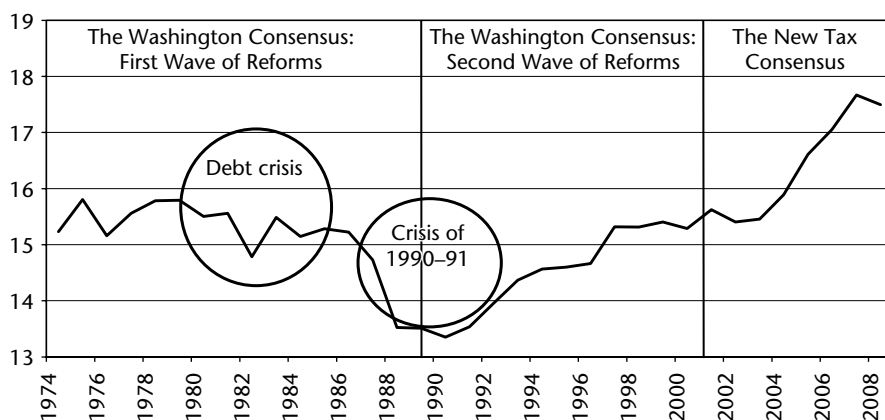


Figure 14.1. Trend in the average tax/GDP ratio, Latin America, 1973–2009

Source: IMF data and CEPALSTAT.

14.2 The Tax Reforms of the Last Decade and the Rise of Tax/GDP Ratios

Several policy and non-policy factors explain the shift in tax regimes illustrated below and the recent increase in tax/GDP ratios. The first, and probably foremost, is the failure of the liberal reforms to deliver adequate GDP growth and an improvement in income inequality. In particular, the reduction of PIT and corporate income tax (CIT) rates failed to improve microeconomic incentives and stimulate growth. Likewise, the reduction in tariffs generated not only a loss of revenue but did not lead to reallocation of production factors to new sectors, causing a loss of jobs in the formerly protected sectors compensated only in part by the creation of new workplaces in the tradable sector (Koujianou Goldberg and Pavcnik 2007). In addition, the revenue decline of those years entailed large cuts in public investments that led, as noted, to a vicious circle of low growth, low revenue, and new fiscal deficits. Such cuts in public investments run against the evidence of much of the literature which shows that investments in public infrastructure ‘crowd in’ private investments and raise the growth rate of GDP (Calderón and Servén 2004a, quoted in Fay and Morrison 2005).

A second factor that contributed to the shift in tax policy was a growing call for equity in the aftermath of the inequality surge of the 1980s and 1990s (see Chapter 2). Despite a return to democracy, the weakness of redistributive institutions in the region allowed the elites ‘to maintain a prominent role at all levels of government thanks to their traditional practices of clientelism, personalism, and patronage’ (Panizza 2000: 747). However, the majority of the population, including part of the middle class which traditionally supported conservative parties (Panizza 2005), grew increasingly disappointed with the slow growth, rising inequality, and social cuts of those years (Figure 14.2) and thus shifted its electoral support towards the leftist parties more sensitive to distributional issues (Cornia, Gómez-Sabaini, and Martorano 2011: Figure 5)

A third factor that made higher taxation acceptable was the rising emphasis placed on ‘fiscal exchange’, i.e. the fact that an increase in taxes was accompanied by a surge in the quantity and quality of social services provided (Fjeldstad, Katera, and Ngalewa 2009). Indeed, since the early 2000s there was an increase in social transfers to the poor and a broadening of access to primary healthcare and secondary education (Huber 2009; see also Chapters 15 and 16, as well as the country case studies in Part II). Finally, in a few countries, the rise in tax/GDP ratios was facilitated by higher commodity prices (see later), faster growth of GDP (which raised tax buoyancy), and labour policies favouring the formal sector and the expansion of the tax base.

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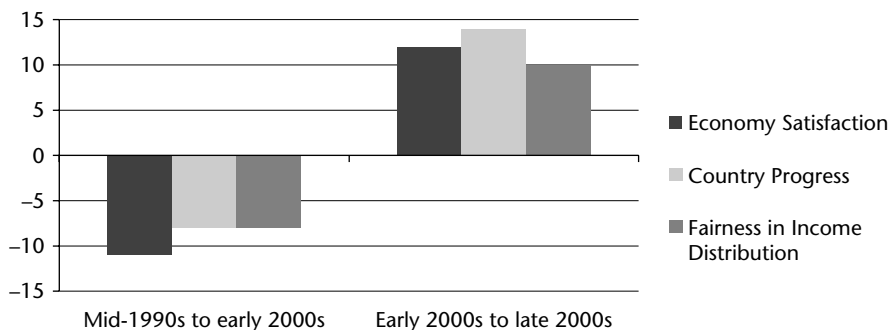


Figure 14.2. Changes in people's perception of economic performance, country progress, and fairness in income distribution during the late 1990s, early 2000s, and late 2000s, Latin America

Note: Questions refer to the variation in the percentage of positive answers.

Source: Authors' elaboration on LatinoBarómetro (2010).

14.2.1 Changes in Tax Policy During the 2000s

During the last decade, fiscal policy evolved in a pragmatic way towards greater progressivity and efficiency. The taxation of income and wealth underwent a number of changes. For instance, the 2007 Uruguayan tax reform introduced *ex novo* a progressive PIT and a flat CIT (see Chapter 6). In Ecuador, the 2008 reform introduced a progressive income taxation, though its real effect remains in doubt (see Chapter 4). And in 2008, Mexico introduced the IETU (*Impuesto Empresarial de Tasa Única*), a minimum tax to strengthen the collection of taxes on corporate incomes. Peru, in turn, modified income tax on physical persons in 2009, by shifting from a progressive tax schedule for all incomes to a dual system inspired by the Scandinavian model. Furthermore, with rare exceptions, the income per capita at which the highest direct marginal tax rate is applied was lowered substantially (Table 14.1: right panel). Most governments also eliminated or reduced a long list of exemptions, deductions, and tax holidays which had been introduced in the 1990s to attract foreign investors and which were found to produce only minimal benefits while causing substantial revenue losses (Table 14.1: left panel).

As these measures hardly affected the informal and small-scale sector, new forms of pragmatic and politically feasible taxation were introduced (Gonzales 2009) including a simplified presumptive taxation (Table 14.2) that replaces several taxes and is levied on an estimate of taxable income made on the basis of indicators of gross turnover, assets, number of employees, electricity consumption, and other parameters. For instance, since 1997 Brazil has adopted a presumptive system (SIMPLES) that replaced corporate

Tax Policy and Income Distribution During the Last Decade

Table 14.1. Revenue loss as a share of GDP due to tax exemptions and upper income bracket as shares of GDP per capita, 1985, 2001, and 2009, selected Latin American countries

	Revenue loss (as a share of GDP) due to income tax exemptions accorded to individuals and firms			Income level (as a multiple of GDP per capita) from which the upper income tax rate is applied		
	1985	2001	2009	1985	2001	2009
Argentina	0.8	1.4	0.3	21.4	16.5	4.5
Brazil	0.3	1.5	1.1	10.1	3.1	2.2
Chile	0.2	0.1	1.3	2.8	1.2	14.1
Colombia	0.0	4.1	2.5	20.5	16.6	9.4
Costa Rica	1.2	0.8	0.5	1.4	3.7	2.3
Dominican Republic	1.1	2.3	2.0	413.5	5.8	4.2
Ecuador	0.4	2.4	2.3	29.2	8.3	24.0
El Salvador	2.3	1.2	1.2	171.7	11.0	7.3
Guatemala	0.9	5.0	1.8	356.0	22.5	16.9
Honduras	0.0	3.6	2.2	600.4	36.0	16.0
Mexico	0.7	0.1	0.1	21.3	44.0	4.1
Nicaragua	1.7	7.7	2.9	56.9	61.2	28.8
Panama	0.3	0.9	1.5	89.0	57.8	5.1
Latin America	0.8	2.4	1.5	138.0	22.1	10.7

Source: Authors' elaboration on Stotsky and WoldeMariam (2002) and on USAID (n.d.).

Table 14.2. Tax collection in simplified tax regimes, selected Latin American countries and years

Country	Simplified tax regimes	Tax collection (% of total tax income)	Taxpayer (% of total taxpayers)	Year of adoption
Brazil	<i>Sistema Integrado de Pago de Impuestos y Contribuciones (SIMPLES)</i>	6.3	67.6	2004
Uruguay	<i>Impuesto a la Pequeña Empresa (IPE)</i>	0.6	–	2007
Argentina	<i>Régimen Simplificado para Pequeños Contribuyentes (Monotributo)</i>	0.5	–	2010
Nicaragua	<i>Régimen Especial de Estimación Administrativa</i>	0.5	–	2008
Peru	<i>Régimen Unico Simplificado (RUS) Régimen Especial del Impuesto a la Renta (RER)</i>	0.2	15.2	2008
Paraguay	<i>Tributo Unico</i>	0.1	62.9	2007
Chile	<i>Régimen Simplificado</i>	0.1	9.0	2007
Bolivia	<i>Régimen Tributario Simplificado (RTS) Régimen Agropecuario Unificado (RAU) Sistema Tributario Integrado (STI)</i>	0.1	18.2	2007

Source: Constructed by authors based on Arias (2009) and *Administración Federal de Ingresos Públicos* for Monotributo (Argentina).

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income tax, social contributions on net profits, tax on industrial goods, and social security payments.

Several countries (including Brazil, Venezuela, Mexico, and Argentina) introduced a surrogate tax on financial transactions which in 2008 generated a revenue ranging between 0.28 and 1.89 per cent of GDP (Coelho 2009). Standard economic theory suggests that such tax is distortive and could lead to financial disintermediation. Yet, in countries characterized by strong evasion, such tax is a low-cost second-best tool to improve revenue collection on assets and rents that would otherwise remain untaxed. No major changes were introduced in the field of trade taxes, property taxation, and the VAT which had witnessed a rapid expansion in the 1990s. However, several governments made greater use of progressive indirect taxes, as in the case of Ecuador's *Impuesto a los Consumos Especiales*, a tax on luxury items introduced in 2008.

14.2.2 Administrative Reforms

Most countries adopted reforms to lower the cost of tax collection, reduce tax evasion, and ensure greater accountability and independence. These objectives were achieved through a functional rationalization, further simplification, standardization and specialization of tax administration, and the creation of a semi-autonomous revenue authority (Table 14.3). Moreover, special units were created for large and small taxpayers subject to a particular form of taxation (Table 14.3) while standardized withholding was implemented more broadly, equipment was modernized, and staff increasingly selected on the basis of merit criteria. These changes permitted the modernization of

Table 14.3. Administrative structure of Latin American countries, 2008–2009

Reform	Countries
Functional organization of tax administration	Argentina, Bolivia, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Peru, Uruguay
Semi-autonomous revenue authority	Argentina, Bolivia, Colombia, Dominican Republic, Ecuador, Guatemala, Mexico, Peru
Large taxpayers unit	Argentina, Bolivia, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Peru, Uruguay
Simplified or presumptive taxation for small taxpayers	Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Guatemala, Honduras, Mexico, Nicaragua, Peru, Uruguay
Integration of customs and tax authority	Argentina, Brazil, Colombia, Guatemala, Peru, Venezuela

Source: Authors' elaboration on USAID (n.d.).

operations and the reduction transaction costs, corruption, and evasion. In Chile ‘...the simplification of the system was indeed accompanied by a noteworthy development in the computerization of the taxation process, which reached... a higher degree than in OECD countries’ (Cominetta 2007: 18)

14.2.3 Rising Commodity Prices and Their Impact on Tax and Non-Tax Revenue

In eight, but in four in particular, of the 18 countries of the region analysed in this volume (see footnote 1 of Chapter 1 for a list), revenue collection was favourably affected by a rise in international commodity prices and demand (Figure 14.3). Moreover, the governments of Bolivia, Chile, and Venezuela created new taxes to raise revenue from non-renewable resources by taxing their commercialization. The largest revenue increase in relation to 1999–2001 (a period of low commodity prices) was recorded in oil- and gas-rich Bolivia and Ecuador (see Chapter 4), where these additional resources accounted respectively for a hefty 5.7 and 4.1 per cent of GDP, while in the remaining six commodity exporters the rise in relation to 1999–2001 ranged between 1.1 and 2.8 per cent of GDP. Overall, the increase in the revenue/GDP ratio due to the recent commodity bonanza accounted respectively for 33 per cent of the total increase between 1999–2001 and 2007–9 in Argentina, 38 per cent in

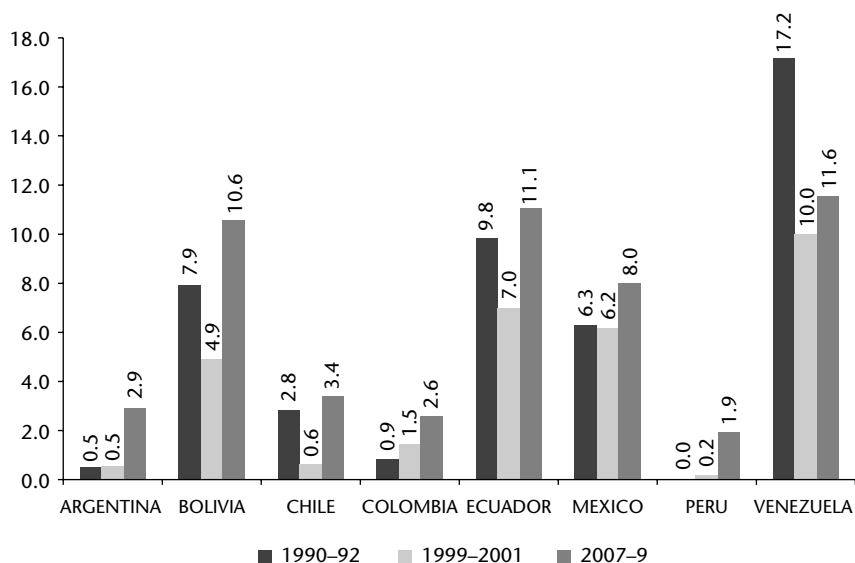


Figure 14.3. Fiscal revenues originating from primary commodities, selected countries (% of GDP)

Source: Authors' elaboration on the basis of CEPAL data.

Colombia, 51 per cent in Peru, and the quasi totality of the increase in Bolivia and Ecuador (Jiménez and Gómez-Sabaini 2009). In these six countries, the revenue bonanza allowed an increase in public expenditure and aggregate demand and affected income inequality both directly (via an increase in social transfers, see Chapter 16) and indirectly (via the employment effect of faster GDP growth). However, the relative importance of the commodity bonanza for the inequality decline is underscored by the fact that most countries (several of which experienced negative changes in terms of trade due to the increase in oil prices) also recorded important improvements in income inequality. In addition, similar improvements in income inequality were not observed during prior periods of high commodity prices. Thus, while the recent improvements in terms of trade facilitated revenue collection, their redistributive effects depended also on a more progressive utilization of these resources in relation to the past.

However, in most of the six countries mentioned above, the recent increase in commodity prices has led to an increase in fiscal dependence with respect to revenue derived from the exploitation of non-renewable natural resources, a fact which could threaten tax collection and the decline of inequality in the future. Beyond the risk posed by the physical exhaustion of these resources, the growing fiscal dependence on commodity rents calls for the introduction of measures to deal with the volatility of commodity prices which could affect significantly the soundness of public finances and future decline of inequality. To respond to this problem, some of the Latin American commodity exporters have in recent years deployed countercyclical measures through the establishment of stabilization funds, as in the case of Chile's copper stabilization fund (see Chapter 5) and of Colombia, Ecuador, Mexico, and Venezuela's oil stabilization funds.

In addition, while the exploitation of natural resources generates tax and non-tax revenue which is used to expand public expenditure, it often gives rise to a sort of 'fiscal laziness' that delays the introduction of much needed structural tax reforms. Such revenue is collected in the form of royalties, thanks to the participation of state companies in the exploitation of natural resources, by controlling part of the stock of private companies operating in this sector, and by taxing the net income of firms or commodity exports. So far, the measures introduced to diversify the revenue base in these countries have been modest, and this could pose a problem over the medium term.

14.2.4 Trends in Tax/GDP Ratio and Changes in Revenue Structure

The changes reviewed in the previous sections brought about a substantial increase in revenue and a change in its composition. Between 2001 and 2008,

Tax Policy and Income Distribution During the Last Decade

Table 14.4 Tax revenue/GDP^a (including social security contributions) by Latin American country groups, 1980–2009

Country group	1980 ^b	1990	2000	2008	2009	Δ (2000–2008)	Δ (2008–2009)	
Group 1	Brazil	20.60	26.36	30.39	35.50	34.28	5.11	-1.22
	Argentina	19.20	16.02	21.48	30.60	31.62	9.12	1.02
	Uruguay	20.00	21.24	22.53	23.30	25.07	0.77	1.77
	Bolivia	–	9.35	17.95	21.70	22.59	3.75	0.89
	Nicaragua	–	10.67	17.5	21.70	22.21	4.20	0.51
	Costa Rica	12.90	16.88	18.85	23.10	21.64	4.25	-1.46
	Ecuador	10.60	10.07	11.62	16.50	17.86	4.88	1.36
	Chile	25.61	15.54	18.92	20.90	17.20	1.98	-3.7
Group 2	Panama	18.57	14.73	16.01	16.50	16.96	0.49	0.46
	Honduras	14.70	12.87	14.3	15.90	15.67	1.60	-0.23
	Peru	17.50	11.73	14.06	17.40	15.25	3.34	-2.15
	Colombia	10.32	11.50	14.93	18.00	14.97	3.07	-3.03
	Venezuela	22.19	18.66	13.62	14.20	14.47	0.58	0.27
	Paraguay	8.80	9.88	12.04	13.70	14.46	1.64	0.76
	El Salvador	–	10.53	12.38	14.60	14.05	2.22	-0.55
Group 3	Dominican Republic	11.06	10.84	11.33	15.00	13.13	3.67	-1.87
	Mexico	11.90	11.44	10.98	9.40	11.25	-1.58	1.85
	Guatemala	9.20	7.62	10.88	11.60	10.75	0.72	-0.85
	Latin America	15.54	13.66	16.10	18.87	18.52	2.77	-0.35

Notes:

^a Tax revenue refers to central governments and thus it excludes taxes imposed by sub-national governments. Yet, the data for Argentina, Bolivia, Brazil, Chile, Colombia, and Costa Rica refer to the general government.

^b The data for 1980 are not fully comparable with those for the subsequent years.

Source: Authors' elaboration on CEPALSTAT.

the unweighted regional tax revenue/GDP ratio rose steadily to reach its highest historical level (Table 14.4).¹ Very large revenue increases were recorded in Argentina, Brazil, Bolivia, and Nicaragua that by the mid-late 2000s had reached taxation levels similar to those of the USA and Japan. On the other hand, in Guatemala, Paraguay, Venezuela, El Salvador, and Panama, the tax/GDP ratio rose considerably less than the regional average, while in Mexico it dropped by 1.6 points of GDP despite the accrual of considerable oil rents (see above). Such revenue increase is mostly structural. Indeed, as argued by Vladkova-Hollar and Zettelmeyer (2008: 5), ‘The business cycle cannot have played a significant direct role in raising revenue ratios. Improved fiscal

¹ While tax/GDP ratios rose in all developing regions, the increase recorded in Latin America was the fastest, and already by 2006–7 the region had the highest tax/GDP ratio of all developing regions (Cornia, Gómez-Sabaini, and Martorano 2011: Figure 8).

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positions seem mostly to reflect persistently higher commodity prices, as well as changes in taxation and tax administration'. This conclusion is supported by the observation that the regional tax/GDP ratio declined only marginally during the recession and the fall in commodity prices recorded in 2009 (Table 14.4).

These improvements mask, however, a very heterogeneous situation. Indeed, the 18 countries of the region analysed in this volume can be divided into three groups of high, medium, and low taxation on the basis of their distance from the regional tax/GDP ratio and of their tax structure (Tables 14.4 and 14.5).

The policy changes described in Sections 14.2.2 and 14.2.3 led also to a visible shift in revenue structure, particularly in country groups 1 and 2. While the liberal tax reforms of the 1990s had led to a fall in the share of taxes on international trade and 'other taxes' and a sizeable increase in that of VAT, the reforms of 2001–9 raised the share of taxes on incomes and capital gains, reduced that of regressive excises (while raising excises on luxury items in Argentina, Ecuador, and Uruguay), with no major changes in the share of property taxes, other taxes, and social security contributions.

Table 14.5. Tax pressure and structure (as a share of GDP) in three Latin American country groups, selected years

	Latin America			Group 1			Group 2			Group 3		
	1990	2001	2009	1990	2001	2009	1990	2001	2009	1990	2001	2009
Income	2.9	3.4	4.9	2.2	4.1	5.8	3.4	3.4	5.3	2.3	3.2	3.8
Property	0.5	0.7	0.7	1.6	2.2	2.1	0.3	0.5	0.4	0.3	0.1	0.2
VAT (general, on goods and services)	3.0	5.7	6.5	6.6	9.1	10.7	2.5	5.3	6.0	2.0	4.4	5.0
Excise taxes on goods and services	1.9	2.4	1.8	3.0	2.4	1.6	1.9	2.6	2.0	1.2	1.8	1.6
International trade	1.9	1.2	1.1	1.5	0.8	1.7	2.1	1.3	1.0	1.6	1.5	0.9
Other taxes	0.8	0.3	0.3	0.4	0.5	0.8	0.7	0.3	0.2	1.3	0.2	0.2
Total tax revenues	11.0	13.7	15.4	15.3	19.0	22.7	10.9	13.3	15.0	8.7	11.2	11.7
Social security	2.3	2.8	3.3	6.1	6.0	7.6	1.9	2.7	3.1	0.8	1.1	1.0
Total tax revenues (including social security)	13.3	16.5	18.7	21.3	25.0	30.3	12.8	16.0	18.1	9.5	12.2	12.7

Note: The country groups are defined in Table 14.4.

Source: Authors' elaboration on the basis of CEPAL data.

14.3 Impact of the Last Decade's Changes in Taxation on Growth and Income Distribution

14.3.1 *The Effect of Taxation on Growth*

Barro (1990) analyses how taxation and public expenditures affect growth under conditions of balanced budgets. His model suggests a positive government role in promoting growth via the provision of public goods that raise the marginal productivity of capital and stimulate investment. However, this positive effect depends on the initial level of taxation, as an excessive tax burden affects incentives and reduces the rate of growth. This model is, however, unsuitable in developing countries where the size of the taxable formal sector is small. For this reason, Loayza (1996) extends Barro's model by introducing into it a hard-to-tax informal sector. In particular, he focuses on how government policies influence the size of the latter, and how this affects long-run growth.² Loayza, too, notes that an initial rise in tax rates speeds up the growth of the private sector, thanks to an improvement in the quality of public infrastructure and institutions. Beyond a certain threshold, however, a further increase in taxes depresses growth. The main difference between the two models is that the optimal tax rate is lower in the presence of a large informal sector. These models provide a strong underpinning to the claim of Singh (2006) that the historic cause of the region's poor growth performance was a weak tax and fiscal policy.

Through which channels did the higher tax/GDP ratio affect growth? As noted, the first is the provision of public goods. In this regard, public investments in Latin America grew from 3.4 to 4.1 per cent of GDP between 1997 and 2008. Investment in infrastructure rose as well (reaching 1.25 per cent of GDP over 2001–6), although still below its 1980s level, the 3 per cent needed for sustained growth, and that of other developing regions (Calderón and Servén 2010). Likewise, public expenditure on education and health rose respectively from 3.9 and 2.6 to 4.4 and 2.9 per cent of GDP between 2000 and 2008, contributing to large gains in life expectancy, and a sizeable rise in secondary enrolments and the years of education of the workforce (Cornia and Martorano 2009; see also Chapter 15).

Second, higher tax/GDP ratios affect growth via greater macroeconomic stability. Indeed, governments that collect adequate amounts of revenue are less likely to monetize the budget deficit or borrow abroad, thus reducing the probability of budgetary crises. Greater macroeconomic stability also makes

² In his model, the informal sector grows in line with the tax rate and share of public services available only in part to informal agents, and falls due to a rise in the government's enforcement strength and the productivity of public services.

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it possible to adopt countercyclical policies during crises (as in 2009) so as to minimize the related loss of output and employment (see Chapter 10). In this regard, the increase in tax/GDP ratios observed during the 2000s allowed several countries to follow a countercyclical, weakly countercyclical or a-cyclical fiscal policy (Suescún 2008). Indeed, since 2004 most countries recorded primary surpluses due to a surge in revenue (Vladkova-Hollar and Zettelmeyer 2008; Figure 14.4).

Third, progressive taxation can raise growth by lowering income inequality. As suggested by most of the theoretical literature, high inequality depresses growth because of political economy effects (Alesina and Rodrik 1994), by exacerbating capital-market imperfections (Aghion, Caroli, and Garcia-Penalosa 1999), by raising political instability and crime rates which cause uncertainty among investors and reduce growth (Venieris and Gupta 1986), and by eroding microeconomic incentives and increasing labour shirking, free riding, and supervision costs (Cornia 2004).

Hereafter follows a simple econometric test of the impact of taxation on the growth rate of GDP per capita over 1990–2008 for the 18 Latin American countries analysed in this volume. The model to be tested takes the form:

$$GDP/c\ gr_{it} = \alpha + \beta Fiscal\ Policies_{it} + \gamma X_{it} + \eta_i + e_{it} \text{ with } i = 1, \dots, N \text{ and } t = 1, \dots, T \quad (1)$$

where i and t denote respectively the country and time period, X is a vector of determinants and control variables, η_i is the time-invariant country's fixed effect, and e_{it} is the idiosyncratic error term. Fiscal policies are proxied by the tax/GDP ratio and the fiscal balance/GDP ratio. The model also includes control variables such as the investment/GDP ratio, human capital (proxied

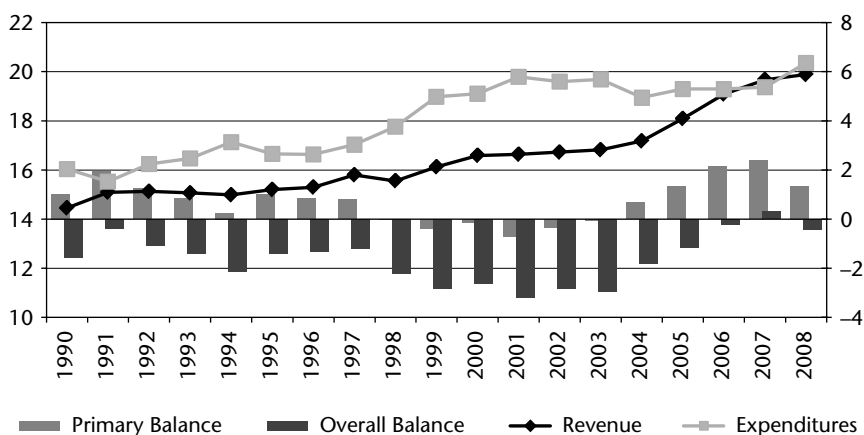


Figure 14.4. Fiscal indicators (% of GDP), 1990–2009, Latin America

Source: Authors' elaboration of CEPALSTAT.

by the ratio of workers with secondary and tertiary education to those with primary education), the international terms of trade, and the Gini coefficient of household income per capita. The macro-panel nature of the dataset suggests to use the fixed-effects (FE) estimator (Model 1, Table 14.6), though the results obtained with the random-effect (RE) estimator (Model 2) are similar. In turn, Model 3 presents the results of an FE regression including the lagged dependent variable, so as to capture growth persistence over time. Such inclusion, however, generates problems of endogeneity, which are dealt with by using in Model 4 the System GMM estimator.

The results in Table 14.6 support the hypothesis that the recent tax changes had a positive impact on growth, as the regression coefficients of the overall tax/GDP ratio (presumably through public goods provisions and improved macroeconomic stability), and of the other variables have the sign expected *ex ante*. The only exception is the ratio of workers with secondary and tertiary education to those with primary education, the sign of which changes across specifications. The results (especially those of Model 4) suggest that during the last decade growth was positively related to past performance,

Table 14.6. Regression results on 18 Latin American countries, 1990–2008 (dependent variable: GDP/c growth rate)

Variable (sign expected <i>ex ante</i> on the basis of theory)	Model 1 (FE)	Model 2 (RE)	Model 3 (FE)	Model 4 (System GMM)
GDP/c growth rate (t–1) (+)			0.1356	0.2601***
Investment/GDP (+)	0.2413**	0.1786***	0.2253**	0.0807**
Ratio of workers with 2ary and 3ary education on those with 1ary education (+)	–0.1985	0.2217*	–0.1552	0.1818**
Tax/GDP ratio (+)	0.3841**	0.1505***	0.2516**	0.0821**
Fiscal balance/GDP (+)	0.4775***	0.4876***	0.4606***	0.4053***
International terms of trade (+)	0.0161	0.0188	0.015	0.013
Gini coefficient of disposable income/c (–)	–0.1592	0.0970*	–0.1219	–0.0813**
Constant	–1.3015	–0.3706	–1.0218	2.025
Observations	311	311	298	298
R-squared	0.247		0.266	
Wald chi ² (<i>p-value</i>)		0.000		0.000
Sargan test (<i>p-value</i>)				0.110
AR(1) (<i>p-value</i>)				0.001
AR(2) (<i>p-value</i>)				0.122

Notes: *, **, *** = significant at 10%, 5%, and 1%, respectively. Sargan test for over-identifying restrictions.

AR(1) and AR(2) are the Arellano-Bond test for the first- and second-order autocorrelation of the first differenced residuals. Beyond the lagged dependent variable, tax/GDP ratio, fiscal balance, investment/GDP, and the Gini coefficient of disposable income/c are considered endogenous.

Source: Authors' calculations.

and that the 3–4 per cent increase in the tax/GDP ratio observed over 2002–09 raised the growth rate by between 0.3 and 1 per cent, thus contradicting claims about the supposed efficiency costs of taxation (Kneller, Bleaney, and Gemmell 1999).³ The results confirm also that every point of improvement in fiscal balance increased the growth of GDP/c by 0.4 points. Similar effects are observed in the case of the investment/GDP ratio (which rose, albeit modestly, due to an increase in investments in infrastructure made possible by higher revenue) and human capital investment. Model 4 shows also that income inequality hampers growth and that the average 5 Gini points decline observed in the 2000s in the region accounts for 0.4–0.5 points of GDP growth during the decade. Finally, in none of the specifications do the recent gains in the terms of trade appear to have affected growth.

14.3.2 Effects of the Recent Tax Reform on Income Inequality

Tax policy affects the distribution of income by generating the revenue used to increase public expenditure on human capital, raising in this way the wages of the newly schooled workers, subsequently improving the distribution of market income. In addition, progressive taxation influences directly the distribution of post-tax, pre-transfer income. In this regard, as shown by Gómez-Sabaini (2006) and Chu, Davoodi, and Gupta (2004), taxation in the OECD reduced the Gini coefficient by 3–5 points, although in these countries too the main redistributive effect of fiscal policy depends on the level and targeting of public expenditure.⁴ Until recently, taxation in Latin America played a modest or even negative equalizing role (Table 14.7), and only in Venezuela did taxation generate a modest redistributive effect. However, things appear to have started changing during the last decade, though it is not easy to document precisely the extent of this change given the limited availability of tax incidence studies, the differences in the years and unit of analysis, wellbeing criteria chosen, hypotheses made about incidence, and other assumptions which limit the comparability of different studies. Be that as it may, as a result of the changes in tax policies described in Section 14.2.1, the Reynolds-Smolensky index (i.e. the difference between the pre- and post-tax Gini coefficient) became positive or less negative in all countries. In spite of this, tax systems remain regressive in most of Central America (Table 14.7).

³ The direct tax/GDP ratio and indirect tax/GDP ratio were also introduced separately in the regression but, though yielding the expected positive signs, they were not statistically significant. Thus, they are not reported in Table 14.6. This result seems to further deny the claims that direct taxation generates—at these levels of direct revenue/GDP—a disincentive effect on growth.

⁴ Comparison of the redistributive effects of taxes and transfers in advanced, Latino, and middle-income countries.

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Table 14.7. Reynolds-Smolensky index (in Gini points) for Latin American countries, 1990s and 2000s

	1990s	2000s	2000s–1990s
Argentina	-1.95	1.92	3.87
Bolivia	-1.10	—	—
Brazil	-0.70	1.40	2.10
Chile	-0.78	0.27	1.05
Colombia	—	-0.10	—
Costa Rica	-0.98	1.24	2.22
Dominican Republic	—	-0.20	—
Ecuador	-0.70	0.70	1.40
El Salvador	-1.40	-0.75	0.65
Guatemala	-0.77	1.20	1.97
Honduras	-2.80	-0.10	2.70
Nicaragua	-5.20	0.17	5.37
Panama	0.00	0.90	0.90
Uruguay	-0.20	1.20	1.40
Venezuela	0.76	—	—

Note: A positive sign of the index indicates that the tax system is progressive, a negative one that it is regressive.

Source: Cornia, Gómez-Sabaini, and Martorano (2011).

Footnote 4 (Continued)

	Tax/GDP ratio	Gini coefficient of distribution of <i>net disposable inc. per capita</i>	Decline in Gini points btw before and after <i>taxes and transfers</i>	Decline in Gini points <i>due only to taxation</i>
Sweden	52.3	0.230	25.7	4.0(1990)
Finland	43.5	0.231	16.1	4.7(2004)
Germany	37.2	0.282	15.4	4.5(1994)
USA	28.7	0.344	11.1	3.0(1997)
Japan	—	0.265	7.5	—
Argentina	27.0	0.475	11.0	1.9(2006)
Costa Rica	22.0	0.479	8.0	1.2(2004)
Brazil	34.0	0.576	7.1	0.4(2003)
Mexico	12.0	0.497	4.0	0.3(2006)
Guatemala	12.0	0.543	3.0	0.8(2006)
S.Korea	20.6	0.370	—	1.7 (1996)
Egypt	27.8	0.422	—	0.9(1974–5) ^b
Turkey	20.7	0.490	—	-1.4 (1997)
Poland	33.0	0.332	21.3	1.9 (2005) ^a
Hungary	38.0	0.278	17.2	5.9 (2005) ^a

Notes: ^a refers to income tax; ^b refers to direct and indirect taxes

Source: Based on Appendix Table 1 in Cornia, Gómez-Sabaini, and Martorano (2011).

In conclusion, the recent changes in tax rates and composition have helped in most cases to equalize at the margin the distribution of market income, as the growing contribution of income taxes and reduction of excises on oil, alcoholic beverages, and tobacco offset in part the regressive effect of the increase in VAT contribution in the 1990s (Table 14.7).

The above analysis has assessed the distributional impact of the recent tax reforms by means of a partial equilibrium analysis based on survey data on the distributions of income before and after taxation, isolating in this way the pure impact of taxation on income distribution. However, taxation affects other aspects of economic life such as macroeconomic balance, public transfers, expenditure on human capital, and growth, all of which influence the distribution of net disposable income in a general equilibrium framework. This type of assessment is carried out in Chapter 2 by means of a regression analysis in which the Gini coefficient of the distribution of disposable income per capita is regressed, *inter alia*, on the ratio of direct taxes to indirect taxes. In all specifications in Table 2.6, the parameters of this ratio are sizeable, negative, and significant. A one point increase in such a ratio reduces the Gini coefficient by between 0.5 and 2.0 points, thus confirming that the recent shifts in revenue structure generated a favourable redistributive effect.

14.4 Limitations of the Recent Tax Reforms and Recommendations for Further Action

While important, the recent tax policy changes need to be intensified in the years ahead along the lines discussed below so as to maximize the redistributive effect of the tax system.

14.4.1 *Raise the Effective Tax/GDP Ratio to Its Potential Level*

In most of the region the effective tax/GDP ratio is considerably lower than the potential one. Thus, raising the effective tax/GDP ratio to its potential level would generate a large revenue increase in most of the region. The results in Table 14.8 suggest that only Argentina and Brazil show effective tax/GDP ratios higher than the potential ones while tax collection in Nicaragua, Bolivia, Uruguay, and Honduras is broadly in line with their level and structure of development. In the remaining 12 countries, the effective tax/GDP ratios are way below those expected on the basis of their level of development. For the region as a whole, tax revenue could thus increase on average by an additional 3.66 points of GDP, or more than four if Argentina and Brazil are excluded from the calculation (Cornia, Gómez-Sabaini, and Martorano

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Table 14.8. Effective tax/GDP, revenue effort index, and additional revenue that could be raised to reach the potential tax/GDP ratio, averages for 1999–2007, Latin America

Country	Effective tax/GDP (net of social security contribution)	Revenue effort index	Potential tax/ GDP (net of social security contribution)	Additional revenue that could be raised
	(a)	(b)	(c)	(c) –(a)
Brazil	24.51	1.33	18.48	–6.02
Argentina	20.70	1.15	17.98	–2.73
Nicaragua	15.42	1.04	14.83	–0.58
Bolivia	16.68	0.98	17.09	0.41
Uruguay	16.37	0.94	17.42	1.05
Honduras	14.90	0.93	16.08	1.18
Chile	17.80	0.86	20.83	3.02
Paraguay	11.07	0.78	14.25	3.18
Costa Rica	13.81	0.81	17.10	3.29
Colombia	14.42	0.78	18.52	4.10
Guatemala	11.35	0.72	16.11	4.75
Dominican Republic	13.23	0.73	18.02	4.79
El Salvador	11.59	0.69	16.74	5.15
Peru	13.35	0.70	19.04	5.69
Panama	9.22	0.52	17.79	8.57
Venezuela	13.21	0.55	22.66	9.45
Mexico	9.61	0.50	19.25	9.64
Ecuador	10.11	0.48	21.05	10.95
Latin America	14.30	0.80	17.96	3.66

Notes: The ‘revenue effort index’ is the ratio of effective to potential tax/GDP ratio (both net of social security contributions). The potential tax/GDP ratio was calculated by regression on a panel of 92 developing and developed countries, including as independent variables GDP/c, the share of (relatively easy-to-tax) manufacturing on GDP, and the share of (hard-to-tax) agriculture on GDP.

Source: Authors’ elaboration on data from WDI, CEPALSTAT, and ERS.

2011). The case for increasing tax pressure is particularly acute in Ecuador, Mexico, Panama, Peru, and Venezuela where governments, however, count on considerable but volatile non-tax revenue linked to the exploitation of natural resources that compensates in part for their comparatively low level of tax collection. Catching up to the potential tax/GDP ratio would generate smaller but important revenues in the remaining countries.

14.4.2 Achieve a Better Balance Between Direct and Indirect Taxes

Making taxation more equitable requires strengthening direct taxation, while reducing the weight of the regressive indirect taxes which still dominate revenue collection in the region. For instance, as suggested by Jorratt (2010) in a

study on Chile, income and wealth taxes should be raised to account for some 40 per cent of total revenue while making them more progressive at the same time. Although tax structures in the region have already evolved in this direction, a comparison with other regions suggests there is further room for doing so (Cornia, Gómez-Sabaini, and Martorano 2011: Figure 11) while at the same time keeping in mind the impact on economic efficiency. In this regard, an analysis of the 2007 Uruguayan tax reform shows there are no good theoretical reasons to believe that the introduction of a moderate income tax and greater tax equity would be achieved at the cost of lower growth and a contraction in labour supply (Martorano 2012; see also Chapter 6).

The increase in direct taxation needs to be carried out by emphasizing in particular the PIT which at the moment is often levied on only 10–15 per cent of the active population. As a result, the corporate sector generates on average an income tax revenue of 3.6 per cent of GDP as opposed to the 1.4 per cent paid by individuals (Cornia, Gómez-Sabaini, and Martorano 2011: Table 15). In extreme cases, as in Paraguay, individuals pay no income tax at all. Reducing this imbalance depends, of course, on the expansion of the formal sector, but also requires measures to reduce tax exemptions on interests, dividends, capital gains, and incomes received by nationals residing abroad. At the same time, it is necessary to protect the tax base of the CIT through legal changes with respect to transfer prices, deductibility of interests, limits to the credits originating from firms incorporated in tax havens, a broadening of direct taxation at the source, and other norms in the field of international taxation.

Also with regard to the taxation of capital income, the evidence about its supposed efficiency costs is far from clear (Tanzi 2007: 10). The risk of capital flight can be reduced by greater international or regional coordination in the taxation of capital income, and the introduction of non-distorting dual tax reforms (like that adopted in Uruguay) by which a relatively low flat tax rate is levied on the capital income of households and a higher flat tax rate on corporate profits.

Property taxation is an under-used tool for raising revenues progressively, as the potential yield of this tax is significantly eroded by exemptions, asset undervaluation, low tax rates, and low local administrative capacity. Beyond the need for determining the optimal tax rate and tax base and of considering the differential treatment of different classes of property, the crucial question consists in the measurement of property value (Bird and Slack 2002). A value-based assessment is suitable in countries with developed asset markets and a regularly updated property cadastre.

Thus, an important part of the revenue increase advocated in Section 14.4.1 can be achieved by taxing income and assets while reducing regressive import and selective indirect taxes without reducing the contribution

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Table 14.9. Regression analysis of the determinants of the Reynolds-Smolensky (RS) index 1990–2000s, Latin America

	Variables expressed as a share of GDP			Variables expressed as % of total revenue		
	1	2	3			
Tax/GDP ratio	—	—	—	-0.0006	0.0002	0.0008
Direct tax	0.0122***	0.0094**	0.0095**	0.0025**	0.0023**	0.0055***
Indirect taxes	-0.0062			-0.0007		
Trade taxes	-0.0149***	-0.0110**	-0.0100*	-0.0019*	-0.0012	0.0031
General indirect taxes		-0.0009	-0.0008		0.0002	0.0034*
Selective indirect taxes		-0.0087*	-0.0090*		-0.0008	0.0013
Social security contributions			0.0027			0.0047**
Constant	-0.0492*	-0.0482*	-0.0516*	-0.0777	-0.0466	-0.4271**
Observations	36	36	36	36	36	36
R-squared	0.42	0.44	0.41	0.43	0.44	0.61

Notes: *, **, *** = significant at 10%, 5%, and 1% respectively.

Source: Authors' calculations.

of VAT at the same time. In this regard, the regression results in Table 14.9 (left panel) suggest that an increase in income tax revenue equal to three per cent of GDP would improve the Reynolds-Smolensky index by between 2.7 and 3.3 Gini points, while a decline of two GDP points in the revenue from selected indirect taxes would improve it by 1.7 points, with an overall gain of 4.4 to 5 points, which would bring the average Latin American country close to the levels of redistribution via taxation achieved in Europe (see footnote 4).

14.4.3 Increase Tax Compliance by Improving Tax Administration

A higher level of tax compliance and a sizeable reduction in tax evasion constitute obvious elements of any approach aimed at improving tax equity. A first step in this regard consists of reducing the tax exemptions and privileges granted during the 1980s and 1990s with the aim of attracting domestic and foreign investments. In many cases such incentives did not lead to an increase in capital formation but offered an opportunity for reducing tax payments by modifying the regional and/or sectoral allocation of investments. Despite the difficulties encountered in estimating it, the empirical evidence suggests that the revenue loss due to tax incentives varied in 2007 between two and eight points of GDP (Cornia, Gómez-Sabaini, and Martorano 2011: Table 16).

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A second major step in improving compliance consists of reducing tax evasion (Cornia, Gómez-Sabaini, and Martorano 2011: Table 17). Though still sizeable, the percentage evasion of VAT has declined as a result of the emphasis placed on its control during the last two decades, especially in Argentina, Chile, Ecuador, and Mexico. In contrast, tax evasion has declined less in the case of income tax. To further reduce it, it is necessary to promote registration of informal firms and tighten control of firms that issue false invoices in return for a fee. It is necessary also to introduce substitute regimes for hard-to-tax activities and special regimes for VAT collection from large firms.

An intensification of the administrative reforms discussed in Section 14.2.2 will also be needed, for instance by shifting from a tax-by-tax to a functional approach while integrating all entities with responsibility for tax collection in a centralized semi-autonomous revenue authority that may be granted greater autonomy and incentives linked to the taxes collected. Third, greater emphasis should be placed on internal efficiency, effectiveness, and staffing of tax administration (OECD 2010). In this regard, Table 14.10 presents data on key indicators of the efficiency of tax administrations. It shows that in 2009 the cost of revenue collection was noticeably higher on average than

Table 14.10. Indexes of efficiency of tax administrations, 2009, Latin America

Country	Efficiency ratios		Staffing indicators		
	Cost of collection (% of revenue collected)	Administrative expenditure to GDP	Citizens/tax staff	Labour force/tax staff	Taxpayers/tax staff
Argentina	2.35	0.63	1741	863	100
Bolivia	—	0.12	7610	3606	—
Brazil	1.00	0.21	6109	3054	—
Chile	1.52	0.13	4248	1717	—
Colombia	0.99	0.13	4830	2607	—
Costa Rica	2.02	0.23	3749	1817	—
Dominican Republic	1.86	0.17	3839	1670	—
Ecuador	1.26	0.14	4483	2333	—
El Salvador	1.37	0.07	5622	2757	184
Guatemala	2.37	0.25	3451	1131	—
Honduras	—	0.84	2778	1362	—
Mexico	0.96	0.08	3056	1308	740
Nicaragua	—	0.22	3194	1288	—
Panama	—	—	6567	3078	—
Paraguay	2.44	—	6111	3163	—
Peru	2.05	0.28	3987	2041	531
Uruguay	1.45	0.19	2680	1479	—

Source: Authors' elaboration on data from CIAT and USAID data (last column).

in the OECD countries, thus suggesting there is room for reduction. Similar considerations can be made for the ratio between cost of collecting taxes and GDP, and for staffing indicators.

14.4.4 Place Greater Emphasis on 'Fiscal Exchange' and the Strengthening of the Social Contract

During the last decade a new social contract started emerging in the region, as the election of democratic governments weakened the vicious cycle linking an excessive concentration of power to the lack of legitimacy in tax collection (see Chapter 3). In Chile the democratic government elected in 1990 was able to reduce the elite's opposition to an increase in the tax/GDP ratio of about two points, enlarge the political decision-making process, and expand social expenditure, which benefited the poor and middle class (Breceda, Rigolini, and Saavedra 2008). To strengthen their political and social equilibrium, several countries in the region will thus need to place greater emphasis on a simultaneous increase in tax revenue and an expanded and equitable provision of public goods.

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15

Inequality in Education: Evidence for Latin America*

Guillermo Cruces, Carolina García Domench, and Leonardo Gasparini

15.1 Introduction

Formal education is certainly one of the main determinants of an individual's income and arguably the main key for accessing a wide set of economic and social opportunities. Therefore, understanding the distribution of welfare in a population requires an assessment of the distribution of educational outcomes and their changes over time. This assessment is particularly relevant for Latin America, a region with high levels of education and income inequality, which however have changed substantially over the last decades. Indeed, after two decades of distributional setbacks—the 1980s with macroeconomic crises, and the 1990s with market-oriented reforms—income inequality started to fall consistently in the 2000s in almost all Latin American countries (see Chapter 2). At the same time, these decades witnessed a substantial expansion in education. Although the expansion was widespread across countries, educational levels, and socioeconomic groups, the resulting changes were not uniform, raising the issue of measuring the pattern in education inequality and its differential impact on income distribution.

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This chapter documents the main features and patterns of education inequality in Latin America, highlighting its links with income distribution.¹ In fact, ‘education inequality’ is the shorthand for a wide range of issues with regard to differences in educational outcomes and opportunities across populations. The concept encompasses the analysis of inequality in the years of education, gaps in school enrolment, wage skill differential and labour demand factors, public social expenditure, school segregation, and other related topics. This chapter tackles most of these important issues, providing original empirical evidence for Latin American countries.

15.2 Inequality in Education

This section briefly discusses the measurement of education inequality. We present a large set of indicators for the Latin American countries, documenting changes in these indicators over the last two decades, and we provide a long-term view going back to the 1940s for the region as a whole. Our main source of information is the Socioeconomic Database for Latin America and the Caribbean (SEDLAC), jointly developed by CEDLAS at the Universidad Nacional de La Plata (Argentina) and the World Bank’s LAC poverty group (LCSPP). This database contains consistent information on more than 300 official household surveys in 25 LAC countries (see sedlac.econo.unlp.edu.ar).

15.2.1 *Measuring Inequality in Education*

Measuring inequality in educational outcomes is not a trivial task, since it involves dealing with the choice of the education variable to be used in the analysis, and of the inequality measure. Regarding the first issue, we follow most of the literature and focus on the years of education of the working-age population. The choice is less clear for the second issue, as there is a multitude of inequality indicators used in the literature. The first conceptual point is whether or not to make the inequality measurement conditional on a welfare indicator, such as household income. Are we concerned, for instance, with the educational gap between the rich and the poor (conditional inequality), or between the most and least educated (unconditional inequality)? By conditioning on income we assume a concern for the association between education and income rather than for the disparities in educational levels per se.

¹ An extended working paper version of this chapter (Cruces, Gasparini, and García Domench 2011) also includes a section on educational mobility and segregation of schools attended by different socioeconomic strata.

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The second point has to do with the nature—relative or absolute—of the comparisons. The usual assumption of scale invariance in the measurement of income inequality is not obviously translated into estimations of inequality in non-monetary variables such as education.² Suppose that in a certain period of time there is an increase of three years of education for all the relevant populations: is this change inequality-increasing, neutral, or inequality-reducing? Relative inequality measures—the ones used when analysing income distribution—assess this change as inequality-reducing, since the increase in years of education is proportionally more relevant for the least educated. Absolute inequality measures, on the other hand, evaluate the change that results from identical additions of years of education to all individuals as neutral for the level of inequality in the distribution of education.

Table 15.1 presents six alternative measures of education inequality for Uruguay over the period 1992–2009 (see also Chapter 6). The first three indicators are unconditional, in the sense that they are computed using only the distribution of years of education, while the rest are conditional on income. In the first group we include two measures of absolute inequality (the education quintile gap and the adjusted Gini coefficient) and one measure of relative inequality (the traditional Gini coefficient). In the group of conditional measures we include the educational gap between income quintiles, the dissimilarity index, and the concentration index.³

It is interesting to notice how the assessment of the changes in education inequality differs as we use different indicators. The unconditional

Table 15.1. Alternative education inequality indicators, years of education, adults aged 25-65 years, 1992–2009, Uruguay

	Unconditional			Conditional		
	Gap	Adjusted Gini	Gini	Gap	Dissimilarity	Concentration
1992	11.4	2.3	0.274	4.5	0.080	10.9
1998	11.0	2.3	0.248	5.3	0.090	12.1
2004	11.1	2.3	0.236	6.2	0.099	13.2
2009	10.9	2.2	0.232	6.4	0.103	14.0
Change 92–09	–4%	–2%	–15%	42%	29%	28%

Source: Authors' own calculations based on microdata from household surveys.

² See Cowell (2000) and Lambert (2001) for discussions on axioms behind the measurement of inequality.

³ The set of potential indicators includes the standard deviation, the Kolm index, and others. See Gasparini, Cicowiez, and Sosa Escudero (2013) for illustrations for Latin America.

measures indicate a fall in inequality, while the conditional measures unveil an increase in education inequality. In particular, the gap in years of education between the bottom and top income quintiles widened substantially over the period under analysis.

These different conclusions illustrate the relevance of methodological choices regarding inequality indicators for assessing the evolution of education inequality. Keeping these issues in mind, the rest of this section focuses the analysis on two indicators: the Gini coefficient for the distribution of years of education and the gap in years between quintiles 1 and 5 of the income distribution. These two measures illustrate well the variety of possible results, they are widely used in the literature, and are relatively easy to communicate when compared to other alternative indicators.

15.2.2 *Inequality in Years of Education: The 1990s and 2000s*

We start by documenting the average years of education in the Latin American countries with information obtained from the latest available national household survey for each nation (Table 15.2) for adults aged 25–65 (i.e. those deemed to have completed their education). The region presents some heterogeneity in the distribution of this indicator: only a minority of the countries (mostly from the Southern Cone) have an average of more than nine years of education for adults in the 25–65 age range, while some Central American countries have an average below six.

The third panel in Table 15.2 indicates that the average difference in years of education for adults in the top quintile compared to those in the bottom quintile is very large, at around 6.5 years. The Gini for years of education varies over a wide range: it is about 0.40 or higher for Bolivia, El Salvador, Guatemala, Honduras, and Nicaragua, and below 0.25 for the Southern Cone countries.

Figure 15.1 illustrates the significant increase in the average years of education in the Latin American countries during the last two decades, continuing a process trend of decades ago.⁴

Education levels in all countries increased among all social classes. This chapter, however, is more concerned about the *differences* in educational achievements than the trends of the mean. In this regard, Figure 15.2 shows the changes over time for each country in the gap between the bottom and top income quintile and the Gini coefficient of the distribution of years of education.

⁴ The average number of years of education for the adult population is a 'sticky' indicator since the accumulation of formal education typically stops when people are in their twenties.

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Table 15.2. Years of education by gender and income quintile and inequality in education, adults aged 25–65 years, selected Latin American countries and years

Country	Year	All	By gender		By income quintile					Inequality	
			Females	Males	Q1	Q2	Q3	Q4	Q5	Gap	Gini
Argentina	2009	11.0	11.2	10.8	8.4	9.4	10.3	11.5	13.6	5.2	0.205
Bolivia	2005	7.7	6.8	8.8	3.6	5.7	7.1	8.5	11.7	8.1	0.399
Brazil	2009	7.7	8.0	7.6	4.9	5.9	6.8	8.2	11.2	6.3	0.349
Chile	2009	11.0	10.9	11.1	8.9	9.6	10.2	11.3	13.7	4.8	0.195
Colombia	2006	7.9	7.9	7.9	5.3	5.5	6.6	8.1	12.0	6.7	0.357
Costa Rica	2009	8.7	8.8	8.6	5.8	6.7	7.3	9.0	12.7	7.0	0.283
Dominican Rep.	2007	8.2	8.4	8.1	5.9	6.5	7.5	8.6	11.3	5.5	0.348
Ecuador	2009	8.7	8.7	9.0	6.3	6.8	7.7	9.0	12.2	5.9	0.323
El Salvador	2008	7.1	6.7	7.6	3.5	5.0	6.1	7.5	11.3	7.8	0.418
Guatemala	2006	4.8	4.3	5.4	1.4	2.3	3.4	5.1	9.0	7.7	0.560
Honduras	2009	5.9	5.9	5.7	3.4	3.6	4.7	6.3	9.6	6.2	0.425
Mexico	2008	8.4	8.1	8.7	5.3	6.7	7.5	8.9	12.0	6.8	0.324
Nicaragua	2005	5.8	5.8	5.8	2.7	3.8	5.0	6.2	9.4	6.8	0.473
Panama	2009	9.9	10.1	9.7	5.8	7.8	9.3	10.6	13.7	7.9	0.270
Paraguay	2009	8.3	8.1	8.4	5.3	6.1	7.7	9.1	11.4	6.1	0.317
Peru	2009	8.9	8.2	9.5	4.9	6.8	8.5	10.0	12.2	7.3	0.330
Uruguay	2009	9.4	9.7	9.1	6.7	7.5	8.6	10.1	13.0	6.3	0.237
Venezuela	2006	8.9	9.3	8.6	6.8	7.3	8.1	9.3	11.6	4.9	0.284

Source: Authors' own calculations based on SEDLAC (CEDLAS and World Bank).

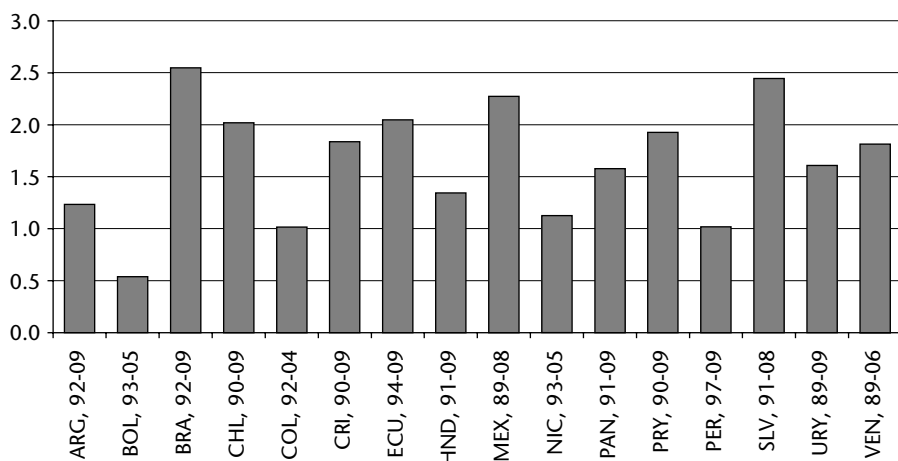


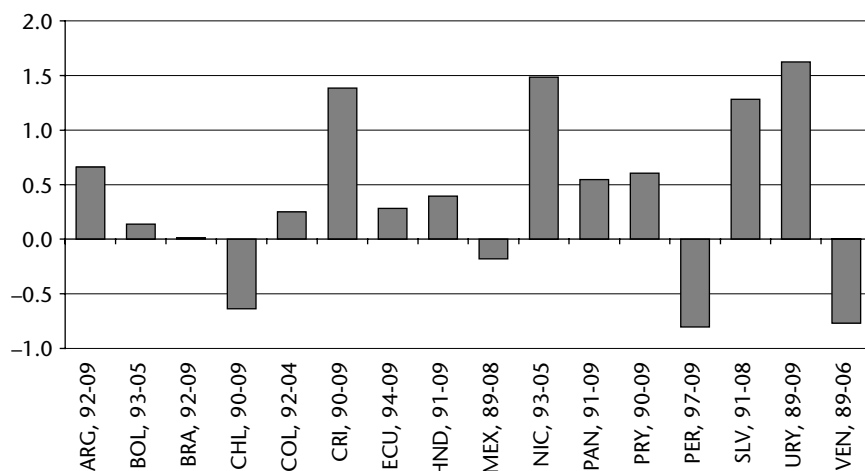
Figure 15.1. Changes over time in the average years of education for selected Latin American countries and years, adults aged 25–65 years

Note: Notice that bars are not strictly comparable since they represent different time spans.

Source: Authors' own calculations based on SEDLAC (CEDLAS and World Bank).

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Change in educational gap



Change in educational Gini

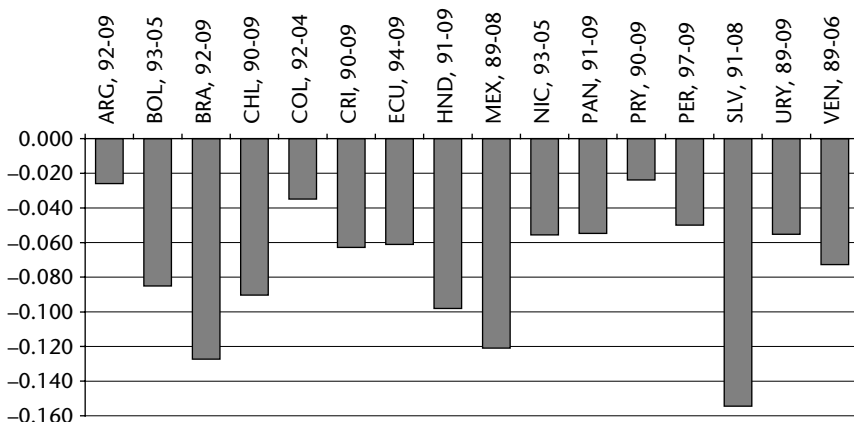


Figure 15.2. Change in education inequality, Gini of years of education and years gap between Q5 and Q1, adults aged 25–65 years in Latin American countries
Source: Authors' own calculations based on SEDLAC (CEDLAS and World Bank).

The assessment of the pattern in education inequality is not robust to the choice of indicator. While the Gini for years of education has fallen for all the countries considered, the gap between quintiles has increased or remained virtually unchanged for most countries in the sample. Only in Chile, Peru, and Venezuela has the gap shrunk more than 0.5 years. Changes in the quintile gaps and the Gini are loosely correlated: the Pearson linear correlation coefficient is just 0.09. Indeed, as education expands the Gini tends to fall, while changes in the gap are more erratic. However, a closer inspection unveils

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Table 15.3. Changes in average years of education and in education inequality measures, adults aged 25–65 years, selected Latin American countries and years

	Average years of education			Gap in years Q5–Q1			Gini		
	1990s	2000s	All	1990s	2000s	All	1990s	2000s	All
Argentina	0.4	0.8	1.2	1.2	-0.6	0.7	-0.003	-0.023	-0.026
Bolivia	0.4	0.1	0.5	0.4	-0.3	0.1	-0.067	-0.018	-0.085
Brazil	0.9	1.7	2.5	0.8	-0.8	0.0	-0.049	-0.078	-0.127
Chile	1.1	0.9	2.0	0.4	-1.0	-0.6	-0.044	-0.047	-0.090
Colombia	0.7	0.4	1.0	0.3	0.0	0.3	-0.022	-0.013	-0.035
Costa Rica	0.5	1.3	1.8	0.2	1.1	1.4	-0.031	-0.032	-0.063
Ecuador	0.8	1.2	2.0	0.8	-0.6	0.3	-0.030	-0.032	-0.061
El Salvador	1.5	1.0	2.4	1.2	0.1	1.3	-0.097	-0.058	-0.154
Honduras	0.6	0.7	1.3	0.1	0.2	0.4	-0.045	-0.053	-0.098
Mexico	1.6	0.7	2.3	1.5	-1.6	-0.2	-0.074	-0.047	-0.121
Nicaragua	0.5	0.6	1.1	0.1	1.4	1.5	-0.035	-0.021	-0.056
Panama	0.8	0.8	1.6	0.2	0.3	0.5	-0.032	-0.023	-0.055
Paraguay	0.5	1.5	1.9	0.6	0.0	0.6	0.008	-0.031	-0.024
Peru	0.1	1.0	1.0	0.0	-0.8	-0.8	0.000	-0.050	-0.050
Uruguay	1.1	0.5	1.6	0.6	1.1	1.6	-0.044	-0.012	-0.055
Venezuela	1.1	0.7	1.8	-0.4	-0.3	-0.8	-0.048	-0.025	-0.073
Average	0.8	0.9	1.6	0.5	-0.1	0.4	-0.038	-0.035	-0.073

Source: Authors' own calculations based on SEDLAC (CEDLAS and World Bank).

an interesting fact. In most countries the gap increases in the 1990s, and falls in the 2000s. Table 15.3 summarizes this finding. Education expanded and the Gini fell at almost the same rate in the two decades. However, the quintile gap widened in all countries but Venezuela in the 1990s and narrowed in the 2000s.

The reasons behind the differences in the changes in education distribution between the decades may lie partly in the intensified efforts by governments in the 2000s to extend education to the poor, but may naturally also reflect the efforts of previous decades that are materializing in the 2000s. We return to this topic in sections 15.4 and 15.5.

15.2.3 Inequality in Years of Education: A Long-Term Perspective

By computing the years of education by age group in a given survey we can get an assessment of changes in the extension of education from a longer-term perspective. In our companion paper we analyse the years of education by age group and income quintile. Educational attainment has been increasing in cohort after cohort in all Latin American countries, indicating a secular growth in the stock of human capital, even among the poorest.

In some countries, the gap between the rich and the poor in the years of education has remained rather constant across age groups (Argentina, Uruguay, Venezuela), as a consequence of a parallel increase in the years of education across socioeconomic strata over the century. However, for the majority of the Latin American countries the gap displays an inverse-U shape, implying shrinking differences in years of schooling between the top and bottom income quintiles for the younger cohorts. This pattern is the result of differences in the timing of the increase in education across quintiles: years of education for the top quintile increased over time first strongly but then more moderately, as most individuals in that strata completed secondary school. Conversely, the years of education for the poor population increased very slowly in the 1940s and 1950s and started to peak in the 1970s. In some countries the gap starts to shrink for people in their forties (those who attended high school in the 1980s), while in some very poor Central American countries the gap shrinks for people in their thirties (who attended high school in the 1990s). In almost all countries the gap is smaller for people aged 25–30 than for people in their thirties or forties.

15.3 Education and Income Inequality

There is vast evidence for the strong positive link between education and earnings at the individual level. At a more aggregate level the relationship between the distribution of these two variables has proved harder to analyse. In this section we provide evidence for Latin America following three alternative approaches.

15.3.1 The Correlation Between Income and Education Inequality: A Cross-Country Regression Analysis

The literature that explores the relationship between income and education inequality in a regression framework has been growing in the last decade. Checchi (2004), for instance, assembles an unbalanced panel of 454 observations in 94 countries and runs fixed-effects models. The author finds that the relationship between the Gini for education achievement and the income Gini is rather unstable, being U-shaped and non-U-shaped depending on the specification. In turn, Chapter 2 of this volume runs a model of the Gini of the distribution of income per capita on a panel of 18 Latin American countries in the years 1990–2009 including the ratio of workers with secondary and tertiary education over those with primary education as one of several explanatory variables. The regression is estimated both by fixed-effects

methods, as well as by the 3SLS and GMM estimators. The results consistently show that, after controlling for all other factors, the parameter of the educational variable mentioned above is always negatively and significantly related to the Gini of the distribution of income under the three different estimators mentioned.

In what follows we use the SEDLAC data to explore this issue. On average, countries with higher inequality in the distribution of education are those with higher income inequality. However, the association is rather loose. When using the last available household survey for each Latin American country (2009 for most countries), the linear correlation coefficient between the Gini coefficient for the earnings distribution and the educational gap is 0.455, while it drops to 0.340 when taking the educational Gini. Both coefficients increase, to 0.634 and 0.503 respectively, when dropping Chile, the main outlier for this relationship in the sample, a country with high measured income inequality and relatively low education inequality. When taking the correlations between changes into account, there is still a positive relationship between changes in education inequality and income inequality, although weaker than in levels. The linear correlation coefficients are 0.344 for the gap and 0.304 for the Gini. On average countries that experienced a greater reduction in the dispersion of years of education also benefited from a larger reduction in income inequality. However, the association is weak, suggesting the presence of many other factors affecting both variables in different directions.

To analyse this relationship further we run a fixed-effects model of income inequality on alternative measures of inequality in education with Latin American microdata. In particular, we take advantage of the panel assembled in Alejo (2011) for all Latin American countries in the period 1992–2009 with observations at the sub-national level. We work with two panels: the short one includes six biannual observations for regions in 10 countries (Argentina, Brazil, Costa Rica, El Salvador, Honduras, Mexico, Paraguay, Peru, Uruguay, and Venezuela) in the period 1995–2006. The long panel includes 17 annual observations in regions of five countries (Argentina, Brazil, Costa Rica, Honduras, and Uruguay). This panel is larger in observations but encompassing fewer countries and is unbalanced.

Table 15.4 shows the results for the fixed-effects models. The dependent variable is the Gini for the distribution of earnings for workers aged 25 to 65. As right-hand side variables we alternatively include two indicators of education inequality—the Gini for the distribution of years of education and the gap in years between education quintiles—and mean years of education (either that variable or its inverse to capture non-linearities). Mean earnings and its square are included as controls.⁵

⁵ Results are robust to alternative specifications.

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Table 15.4. Coefficients of model for earnings inequality, dependent variable: Gini coefficient for the distribution of earnings for Latin America, early 1980s to 2010

	Long panel				Short panel			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Educational Gini	-2.07 (2.01)*	-1.18 (1.18)			-1.94 (2.52)*	-1.22 (1.60)		
Educational Gini ²	0.049 (2.63)**	0.035 (2.01)*			0.047 (3.43)**	0.036 (2.88)**		
Educational gap			-2.53 (2.24)*	-2.38 (2.10)*			0.39 (0.26)	0.32 (0.21)
Educational gap ²			0.407 (3.52)**	0.395 (3.40)**			0.100 (0.83)	0.101 (0.81)
Years of education		1.037 (2.04)*		-0.238 (0.69)		1.064 (2.46)*		-0.657 (2.55)*
1/years of education	-39.7 (1.97)*		1.8 (0.13)		-31.7 (2.03)*		28.9 (2.80)**	
Observations	478	478	478	478	366	366	366	366
No. of sub-countries/ regions	27	27	27	27	61	61	61	61
R ² (within)	0.06	0.03	0.13	0.13	0.13	0.13	0.10	0.10

Notes: Estimation was carried out with a fixed-effect procedure; t-statistics in parentheses. * significant at 5%; ** significant at 1%.

Source: Authors' own estimates based on data from household surveys.

The evidence suggests the existence of a conditional nonlinear positive relationship between education and earnings inequality.⁶ Regions with higher education inequality tend to be regions with larger disparities in earnings, even after controlling for some factors and taking fixed effects into account. The relationship between mean years of education and earnings inequality looks somewhat more opaque. When controlling for the educational Gini, more years of education seem to be associated with higher earnings inequality. A proportional increase in education that will not alter the Gini implies a greater rise in absolute value for the more educated, a fact which, when compounded with the increasing returns to scale, could generate a surge in earnings inequality. The next section has more on this. Notice that when controlling for the educational gap, the relationship vanishes.

⁶ Notice, however, that the statistical results are not very strong.

15.3.2 *Exploring the Direct Impact of Education on Earnings Inequality*

Given the convexity in the returns to education, even an equalizing increase in schooling may generate an unequalizing change in the distribution of labour incomes. In this section we report the results of Battistón, García Domench, and Gasparini (2011) who explore whether this ‘paradox of progress’ (Bourguignon, Ferreira, and Lustig 2005) is just a theoretical possibility with little relevance in practice, or if it is in fact a widespread phenomenon across Latin America (see also Chapters 7 and 9). To that aim they carry out microeconomic decompositions that isolate the direct effect of changes in the distribution of education on earnings inequality.⁷ The methodology is applied to household survey microdata for most Latin American countries for the period 1990–2009 exploiting a dataset that contains homogeneous definitions for the education and labour variables involved in the analysis (SEDLAC).

Figure 15.3 reports the counterfactual change in the Gini coefficient of the earnings distribution after altering the education structure of the population. The results indicate that if only individual education in the 1990s had changed over time, we would have observed increases in earnings inequality across all Latin American economies. This result is not surprising since educational changes were unequalizing in this period. Instead, in the 2000s educational changes were more balanced or even biased towards poorer groups. However, in most countries these equalizing changes in education were not enough to compensate for the unequalizing effect of the highly convex structure of returns, and hence the effect on earnings inequality remained positive. In almost all countries, however, the increase in the Gini for the distribution on earnings driven by educational changes was substantially lower in the 2000s than in the 1990s.

15.3.3 *Exploring Wage Skill Gaps—Supply and Demand Factors*⁸

The counterfactual analysis of the previous section illustrates the first-order impact of education on the income distribution. The impact of education on earnings, however, also depends crucially on returns to human capital, which were held constant in the previous analysis. The purpose of this section is to present empirical evidence on the evolution of remuneration

⁷ The methodology follows closely Gasparini, Marchionni, and Sosa Escudero (2005) which, in turn, follows Bourguignon, Ferreira, and Lustig (2005).

⁸ The material and text in this section are based on Gasparini et al. (2011).

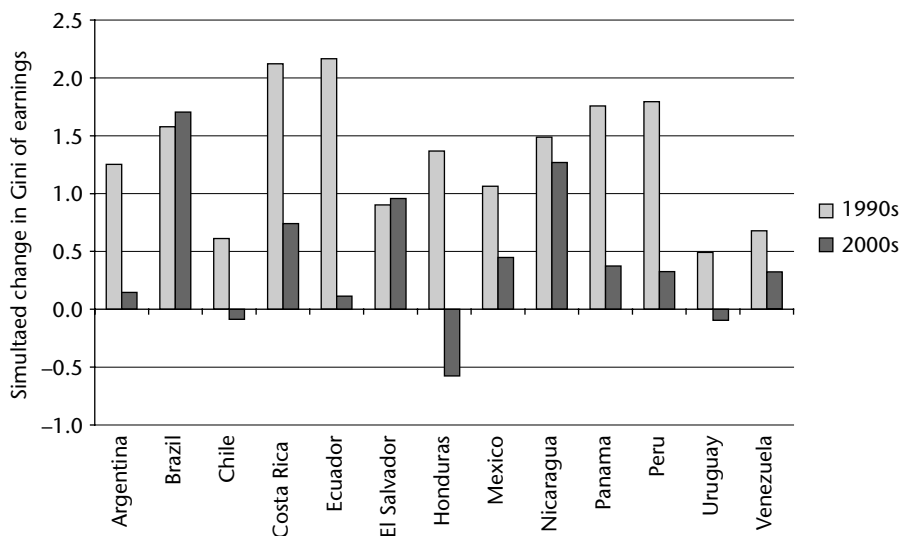


Figure 15.3. Effect of changes in distribution of education on earnings inequality (Gini index), results from microeconomic decompositions for selected Latin American countries

Source: Battistón, García Domench, and Gasparini (2011).

differentials by skill level over the decades of the 1990s and 2000s. The analysis is based on Tinbergen's (1975) seminal contribution on the relationship between human capital accumulation, technical change, and income inequality, which provides a framework for interpreting the role of labour supply and demand factors in the evolution of the earnings distribution. Tinbergen's discussion is often referred to as 'the race between education and technology', because he postulates that secular technological change would favour the relative demand for skilled labour, thus increasing the skill premium (and thus inequality), whereas educational upgrading would provide a counterbalancing force reducing this premium.

Following Goldin and Katz's (2008) study of the USA in the twentieth century, it is possible to simplify the analysis by assuming only two levels of skills among workers (high and low), which facilitates the interpretation of the underlying patterns in terms of the evolution of the relative supply of high-skill to low-skill workers, and the corresponding relative wage—the wage skill premium.

Evidence on increasing levels of education for Argentina, Brazil, Mexico, and Peru is presented in López-Calva and Lustig (2010). Although the authors do not develop a full analysis of the relationship between education upgrading and the wage skill premium, they interpret their partial evidence

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as consistent with a Tinbergenian setting with a prevalence of supply factors that reduce aggregate inequality. Manacorda, Sánchez-Páramo, and Schady (2010), on the other hand, develop a full analysis of the relationship between changes in the wage skill premium and in the relative supply of skilled workers for Argentina, Brazil, Chile, Colombia, and Mexico in the 1980s and the 1990s, and find an increase in the supply of skilled workers and a simultaneous rise in the relative wages of skilled workers, which they attribute to a ‘generalized shift in the demand for workers with tertiary education’.

The evidence presented in this section originates in Gasparini et al. (2011), who carry out a Goldin and Katz (2008) type of analysis for 16 countries in the region from the early 1980s to 2010 (although most of their observations correspond to the period 1990–2009). The analysis requires the construction of country- and time-consistent aggregate measures of labour supply and wages by skill level.

Figure 15.4 sums up the main findings from the analysis at the regional level. The figure depicts the skilled–unskilled wage premium and the relative supply of skilled to unskilled labour. Both series are plotted net of country effects (averages), but allowing for time variation. The first remarkable finding is the constant and strong increase in the relative supply of skilled labour

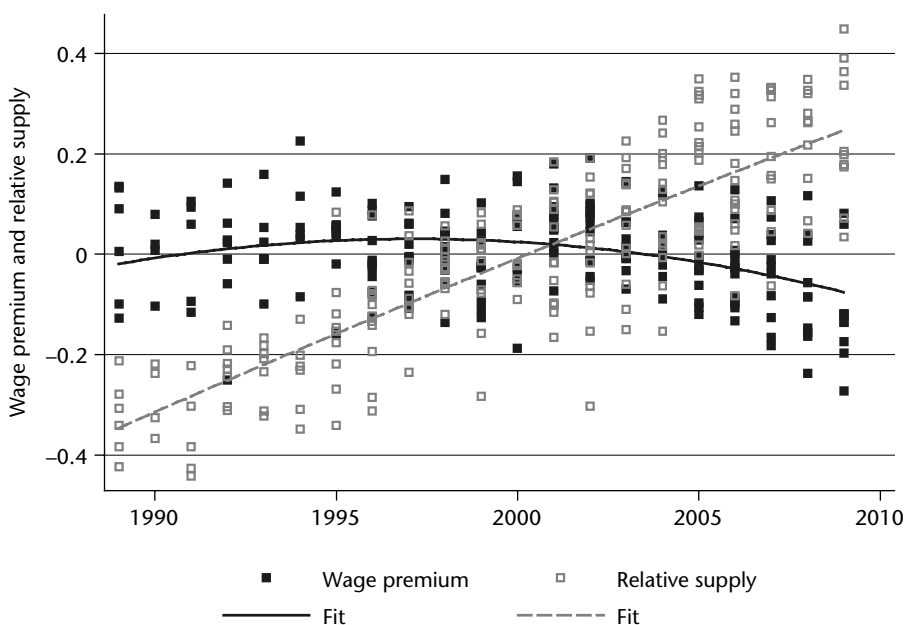


Figure 15.4. Skilled–unskilled wage premium and relative supply over time, net of country effects, 1989–2009, 16 countries, Latin America

Source: Gasparini et al. (2011), also calculations based on SEDLAC (CEDLAS and World Bank).

over the whole period under analysis. This is a relative measure of supply, and this evidence, combined with the increase in years of education for all countries in the region (documented in Section 15.2), indicates an educational upgrading of the labour force. The wage skill premium, on the other hand, exhibits a modest quadratic trend, consistent with the previously documented increase in earnings inequality in the 1990s and its subsequent fall in the 2000s. Moreover, Gasparini et al. (2011) also report a strong positive correlation between this wage skill premium and the Gini coefficient of the distribution of household per capita income—in fact, the two variables follow the same pattern for the decades of the 1990s (increasing) and 2000s (decreasing) in terms of regional averages. The evidence suggests that a secular increase in the relative supply of skilled labour, *ceteris paribus*, was a factor behind the reduction in the wage skill premiums in Latin America over the 1990s and the 2000s.

As stated previously, there is a constant increase in the relative supply of skilled labour over this period, while the wage skill premium has at first an increasing trend and then a decreasing tendency, resulting in a relatively flat tendency over the 1990s. This relatively constant wage skill premium, combined with a strong increase in the relative supply of skilled labour, can be interpreted in a Tinbergenian framework as denoting the presence of a strong demand shift towards skilled labour, which neutralizes the equalizing effect expected from the increase in relative supply. This interpretation is consistent with some country-specific studies which highlight the importance of privatization, trade openness, and other structural reforms during the 1990s in facilitating skill-biased technical change and, more generally, spurring the demand for skilled labour (see, for instance, the account of the Argentine case in Cruces and Gasparini (2009)). For the years 2000–9 there is a marked downward tendency in the wage skill premium. In terms of the Tinbergenian model, such reductions in the wage premium accompanied by an increase in the relative supply of skilled labour indicate the presence of weaker shifts in the relative demand for skilled labour with respect to those implied by trends in the previous decade. Further analysis carried out by Gasparini et al. (2011) indicates that some of this shift in the relative demand for unskilled labour is related to the increase in commodity prices and in the terms of trade of the first decade of the twenty-first century.

15.4 School Enrolment

While the previous pages concentrate on the educational attainment of the adult population, in this section we report the level and distribution

of enrolment rates.^{9,10} Enrolment rates at all levels for all countries have increased.¹¹ For primary education, the quintile gap has remained almost constant or fallen for all countries. There is a clear relationship between higher enrolment and smaller gaps, since the top quintile has historically been close to the 100 per cent ceiling—any improvement would narrow the gap. Notably, a set of countries has achieved increases of more than 10 percentage points in net primary enrolment rates in relatively short periods of time. The increase was low for those countries that were already close to universal coverage at the time of the first available survey.

While net enrolment rates also increased substantially for secondary schooling (by 20 percentage points or more in several countries), the quintile gap has increased in some cases, including Nicaragua, El Salvador, and Honduras. Finally, the increases in tertiary enrolment have been accompanied by rising quintile gaps in all countries, which implies that the increase has happened mostly at the upper level of the income distribution.

When examining changes by decade, an interesting fact emerges (Table 15.5). Although the average speed of educational upgrading did not increase in the 2000s, the pattern of that process was substantially different both in secondary and tertiary schooling. Compared to the previous decade, the growth in school enrolment rates for the poor was considerably higher in these educational levels. In contrast, changes in primary schooling were not very different between decades. As most countries in the region approached universal enrolment the expansion in the access to primary education slowed down in the 2000s, and the educational gap between income quintiles slowly narrowed down at almost the same rate as in the 1990s. The story has been dramatically different for the secondary level of education. On average, the increase in enrolment was similar in both decades, but while the educational gap in the 1990s widened in most countries, the first decade of the 2000s witnessed on average a widespread pattern of shrinking gaps. On average, for the sample of countries with consistent observations in the early 1990s and during the first decade of the millennium, the gap between the fifth and first quintiles in secondary school enrolment widened 2.6 points in the 1990s and shrunk 8 points in the 2000s. The gap was reduced in all countries except El Salvador, Nicaragua, and Uruguay (see Chapters 6 and 8). Active educational policies and the inception of massive cash transfer programmes conditional on school attendance in many countries surely contributed to

⁹ The net enrolment rate is defined as the share of individuals in a given age group who attend the educational level corresponding to their age.

¹⁰ The longer version of this study includes a section on education quality with evidence taken from other studies showing a strong positive relationship between educational quality and achievements, and socioeconomic status.

¹¹ See the longer version of this chapter for evidence on this point.

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Table 15.5. Change in net enrolment rates and gap Q5–Q1 by decades, selected Latin American countries and years

	Secondary					
	Change in enrolment			Change in gap Q5–Q1		
	1990s	2000s	All	1990s	2000s	All
Argentina	16.9	8.3	25.2	–4.6	–12.7	–17.4
Bolivia	9.0	8.8	17.9	18.5	–17.4	1.1
Brazil	16.3	21.2	37.5	16.5	–14.3	2.2
Chile	10.9	7.4	18.2	–3.8	–14.0	–17.9
Costa Rica	7.6	23.6	31.2	2.0	–8.0	–6.0
El Salvador	9.0	9.7	18.6	9.4	3.3	12.7
Honduras	12.4	7.7	20.1	13.3	–5.6	7.7
Mexico	15.3	6.8	22.1	–13.2	–17.0	–30.1
Nicaragua	12.4	3.2	15.5	3.1	14.6	17.7
Panama	4.8	9.9	14.6	–2.4	–20.5	–22.9
Uruguay	6.5	1.1	7.6	–7.3	2.0	–5.3
Venezuela	1.5	10.4	12.0	0.3	–6.6	–6.3
Average	10.2	9.8	20.1	2.6	–8.0	–5.4

	Tertiary					
	1990s	2000s	All	1990s	2000s	All
Argentina	4.7	5.7	10.4	21.5	1.5	23.0
Bolivia	2.1	2.7	4.9	9.3	11.0	20.3
Brazil	3.5	7.2	10.7	15.5	11.3	26.9
Chile	9.9	3.3	13.2	14.8	–10.8	3.9
Costa Rica	2.2	7.0	9.2	6.1	19.4	25.4
El Salvador	5.7	0.8	6.5	15.1	2.7	17.8
Honduras	2.8	1.2	4.0	14.8	3.3	18.1
Mexico	6.4	4.2	10.6	10.7	–7.4	3.3
Nicaragua	6.4	–0.3	6.1	18.1	–0.1	18.1
Panama	4.1	2.0	6.1	7.9	–1.6	6.2
Uruguay	7.3	2.0	9.4	23.4	6.5	30.0
Venezuela	4.5	9.0	13.5	9.3	3.3	12.6
Average	5.0	3.7	8.7	13.9	3.3	17.1

Source: Authors' own calculations based on SEDLAC (CEDLAS and World Bank).

this substantial increase in enrolment for the poor. For tertiary education the difference between the decades is also striking. While the Latin American average gap increased almost 14 points in the 1990s, it rose only 3.3 points in the 2000s. In some countries that gap has even shrunk during the last years.

15.5 Spending, Growth, and Demographics

Latin American countries have committed increasing resources to support education, with the aim of expanding access and fostering quality. This

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higher fiscal and private effort has been the consequence of deliberate action to give priority to education, but also was possible due to a favourable economic and demographic scenario. In this section we take a preliminary view of this issue.

In what follows we concentrate on public spending, since the government is by a long way the main actor in the education sector, but also because consistent information on private spending in education is not readily available. In any case, the evidence suggests a sizeable increase in the relevance of the private sector, both in absolute and relative terms, which adds to the increase in public spending that we document in this section.

In Table 15.6 we compute a measure of the potential of public investment in education to increase access and quality. Specifically, the table shows public spending in education for each country/year in US\$ PPP for children

Table 15.6. Public spending in education (in US\$ PPP) per child aged 0–14 years, 1990–2010, selected Latin American countries

	1990	1995	2000	2010
Argentina	657	1128	1678	3052
Bolivia	...	377	456	807
Brazil	514	1016	1216	2394
Chile	370	685	1334	2749
Colombia	264	445	536	877
Costa Rica	475	706	1146	2520
Dominican R.	68	172	399	648
Ecuador	276	325	289	666
El Salvador	137	220	478	741
Guatemala	115	147	246	354
Honduras	218	226	434	873
Mexico	489	880	1257	2068
Nicaragua	90	113	192	425
Panama	397	544	874	1649
Paraguay	93	311	376	575
Peru	135	332	416	801
Uruguay	508	693	995	2604
Venezuela	645	886	1291	2312
Average *	320	511	756	1451

Note: The table assumes constant share of spending in education from 2006 to 2010.

* To compute the LA average we estimate missing observations using information from close years.

Source: Authors' own calculation based on information from CEPAL (share of public spending in education, and population) and World Bank (GDP).

under 14.¹² There is a sustained increase in all countries in the public funds available for education per child. The average for Latin America steadily increased from US\$320 in 1990, to 511 in 1995, 756 in 2000, and 1451 in 2010: this figure has increased fourfold in just twenty years. The increase in the 2000s was roughly the same as in the 1990s in proportional terms, but much larger in absolute terms.

A simple decomposition can be useful to characterize this increase. We write public spending in education per child $g_N = G/N$ as the product of three terms: the share of spending in education in GDP (G/Y), per capita GDP (Y/P), and the inverse of the share of children in the population (P/N)

$$g_N = \frac{G}{Y} \cdot \frac{Y}{P} \cdot \frac{P}{N} \quad (1)$$

Of course, this decomposition is exact by definition, but it illustrates the forces that can allow a change in public spending per child g_N : changes in social policy that modify the share of public spending for education in GDP, economic growth that affects per capita GDP, and demographic changes that alter the share of children in the population.

Table 15.7 shows public spending in education as a share of GDP in all Latin American countries. The dispersion across countries is remarkable: while the share was 2.3 in Dominican Republic, it was 7.6 in Honduras.¹³ However, it should be taken into account that public spending figures are not easy to be harmonized, and that recorded gaps between countries might be largely driven by differences in accounting procedures.

Despite the fluctuations, there is a clear pattern in all countries towards an increase in fiscal efforts to support public education. On average, the pace of this increase seems to have been constant over time. The mean share of public spending in education in total GDP was 2.8 in 1990, 3.3 in 1995, 4.0 in 2000, and 4.4 in 2010. From these data there is no discernible change in public spending in education during the 2000s, a decade characterized by the election of many progressive regimes, some with new approaches to educational policy.

It is a well-known fact that there have been dramatic changes in the demographic pattern of the Latin American populations in the last fifty years. Fertility rates increased until the 1960s, implying a peak in the proportion of young people in the 1970 national censuses. From that point on, the region experienced a significant reduction in fertility rates. The fall in the ratio of

¹² Spending includes all educational levels. We restrict the youth population to 14 years due to data availability.

¹³ The share reported for Cuba is 14.6. Due to data limitations we do not include this country in the analysis.

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Table 15.7. Share of public spending in education in GDP, 1990–2010, selected Latin American countries

	1990	1995	2000	2010
Argentina	3.6	4.2	5.1	5.3
Bolivia	—	5.5	5.8	6.3
Brazil	3.4	5.1	5.0	5.6
Chile	2.3	2.6	3.9	4.1
Colombia	2.4	3.0	3.3	3.0
Costa Rica	3.9	4.2	5.1	5.9
Dominican R.	0.9	1.6	2.5	2.3
Ecuador	2.8	2.6	2.1	2.6
El Salvador	1.9	2.0	3.4	3.1
Guatemala	1.8	1.9	2.9	3.0
Honduras	4.3	3.7	6.2	7.6
Mexico	2.6	3.9	3.9	4.1
Nicaragua	2.6	2.8	3.7	5.5
Panama	3.6	3.5	4.2	4.0
Paraguay	1.3	3.6	4.3	4.1
Peru	1.6	2.7	2.8	2.6
Uruguay	2.5	2.5	3.0	4.3
Venezuela	3.5	3.8	5.1	5.5
Average *	2.8	3.3	4.0	4.4

Note: * To compute the LA average we estimate missing observations using information from close years.

Source: CEPAL (various issues).

children in the population has been speeding up over time: it was 7 per cent in the 1970s, 8 per cent in the 1980s, 12 per cent in the 1990s, 13 per cent in the 2000s and is forecasted to be 15 per cent in the 2010s. The figures are even larger for the weighted average, since the fall in fertility rates is larger in Brazil and Mexico. While the share of children in Latin America dropped 35 per cent from 1970 to 2010, the fall in both Brazil and Mexico was 40 per cent. With constant real resources and education costs, this demographic pattern has implied, and does imply, a great opportunity to increase school enrolment rates.¹⁴

Based on Equation (1), Table 15.8 reports the results of a simple decomposition that simulates the change in g_N for each country if all but one factor remained constant between 1990 and 2010.

¹⁴ The situation is different for the youth population: in the LA aggregate, the share in the total population has not changed much over the last few decades. The population share of the age group attending at high school, college, and graduate programmes is expected to fall 5 per cent between 2010 and 2020, so the ‘demographic bonus’ at that level would be small or negligible. In fact, in some poor countries, such as Bolivia, El Salvador, or Guatemala, the share of the youth population is expected to increase in the coming years, posing an additional challenge from the perspective of expanding superior education.

Table 15.8. Decomposition in the change of public spending in education per child aged 0–14 years, 1990–2010, selected Latin American countries

	Social policy	Growth	Demographics	Total
Argentina	26.1	60.0	13.9	100.0
Brazil	32.7	45.7	21.6	100.0
Chile	29.9	54.5	15.6	100.0
Colombia	19.0	60.4	20.5	100.0
Costa Rica	25.5	53.0	21.5	100.0
El Salvador	29.1	54.9	16.0	100.0
Guatemala	45.3	46.6	8.1	100.0
Honduras	41.0	43.4	15.6	100.0
Mexico	31.8	45.2	23.0	100.0
Nicaragua	47.7	33.3	19.0	100.0
Panama	8.0	77.2	14.8	100.0
Paraguay	60.9	26.8	12.3	100.0
Peru	28.3	57.1	14.6	100.0
Uruguay	34.0	56.6	9.4	100.0
Venezuela	35.5	44.2	20.3	100.0
Average	33.0	50.6	16.4	100.0

Source: Authors' own calculation based on information from CEPAL (share of public spending in education, and population) and World Bank (GDP).

Three factors have contributed to the increase in spending per child. On average, economic growth contributed approximately half of the increase, while changes in social policy contributed roughly a third and demographics the remaining one-sixth. The figures illustrate the central role of economic growth in sustaining the efforts to increase education, and at the same time alert us to the difficulty of sustaining education upgrading in less favourable economic scenarios. The table also illustrates the key role played by policy: most countries have made substantial progress in the accumulation of human capital due to consistent efforts to increase fiscal funds assigned to education.

15.6 Concluding Remarks

This chapter suggests that Latin American countries have made substantial progress in increasing overall levels of human capital. This expansion has been encouraged by social policy, fuelled by economic growth, and favoured by the region's demographic transition. Although the size of this expansion was roughly the same over the past decades, the evidence suggests a significant difference between the decades of the 1990s and 2000s in terms of both the assessment of the equity of the education expansion and its impact on income distribution.

While the gap in the years of education across the income quintiles widened in the 1990s in all Latin American countries, during the first decade of the 2000s it shrunk as a regional average and in several countries. This difference is due in part to the intensification of efforts by governments to extend education to the poor during the 2000s, but also to the efforts of the previous decades that are bearing fruit in the new millennium. The recent encouraging patterns for the indicators of inequality in the years of education are also present in other dimensions as enrolment rates and educational mobility. Latin America might have reached a turning point where educational upgradings are becoming unambiguously equalizing.

Increases in education did not have a visible equalizing impact on the earnings and income distributions in the 1990s due to at least two factors: educational upgrading was unbalanced, and the relative demand for unskilled labour fell during the decade due to several factors including some market-oriented reforms, technological changes, international prices, and weak labour policies. In contrast the increase in education in the 2000s seems to have had a full equalizing impact on earnings, given the more pro-poor pattern of education upgrading and a more stable or even increased relative demand for low-skill labour.

There are some caveats with respect to the educational trends' effect on future inequality. It might be difficult to sustain high-quality schooling systems in the context of large increases in enrolment rates. While gaps in the quantity might be closing, it is possible that the gap in quality (especially between public and private schools) might be increasing in the region. This may reduce the probability of access to tertiary education for poor children, since they will compete with better-prepared children from richer households. Increasing the quality of public schools should be a priority in the agenda of governments interested in equalizing opportunities through education. Also, despite a reduction in income disparities in the 2000s, there is no evidence of a reduction in the degree of school segregation between public and private schools across children from different socioeconomic strata (Gasparini et al. 2010), a fact that raises some concerns over the degree of social cohesion in the near future.

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16

On the Distributional Implications of Social Protection Reforms in Latin America

Armando Barrientos

16.1 Introduction

Social protection reforms in Latin America over the last two decades can be described, in football terminology, as a game of two halves. The 1990s were dominated by reforms to social insurance funds, with a majority of countries replacing pay-as-you-go defined-contribution schemes with individual retirement accounts and the rest relying on changes to the parameters of pension schemes (Mesa-Lago 2007; see also, for instance, Chapter 5 on Chile). The 2000s have been dominated by the rapid expansion of anti-poverty programmes, human development conditional income transfer programmes, non-contributory pensions, and child and family transfers (Barrientos and Santibañez 2009b). This chapter tracks the shift in policy focus and examines the implications for poverty and inequality and for the future of social protection institutions in the region.

The reforms of social insurance funds in Latin America¹ in the 1990s have been subject to detailed examination. They came as part of a liberalization reform package introduced under structural adjustment programmes in the region. Pension reforms acquired flagship status as the World Bank became a strong advocate of Chilean-style individual retirement accounts managed by private providers. Individual retirement accounts chimed with several features of the liberalization orthodoxy: individual choice, an increasing role of

¹ Space restrictions required an abridged list of references; a full list is available in Barrientos (2011).

the private sector, financial management, and flexible labour markets. Amid the hype, it was easy to lose sight of the fact that the core objective of the reforms was to reduce budget deficits and the size of the state. Looking back, it is remarkable that the distributional implications of the reforms attracted very little attention.

The 2000s have been dominated by the expansion of social assistance.² In policy terms, the shift in focus to social assistance makes a lot of sense. In the year 2000, one in every two workers in the region relied on informal employment, and only one in every four workers made regular contributions to a pension fund (ILO 2001). In Latin America, social protection has been described as truncated, because it reaches mainly groups in formal employment. The reform of social insurance funds, even if successful beyond expectations, could affect at best a minority of the labour force and their dependants. Social insurance and social insurance reforms bypassed a majority of the labour force and population in the region taken as a whole. The expansion of social assistance is intended to reach those sectors in the population excluded from social insurance. Social assistance programmes contribute to fill in the gaps in truncated social protection systems in the region.

From the perspective of social protection systems in the region, the focus on social assistance in the 2000s is of great significance. The political conditions needed to facilitate this shift are challenging. Social assistance was highly residual and intensely politicized.³ Direct income transfers to households in poverty had long been associated with short-term measures from populist incumbents aimed at aligning support before an election. The derogatory term *asistencialismo* was commonly used to describe these practices. Political support for social assistance was conspicuous by its absence. The rapid growth of social assistance programmes in Latin America signals an important shift within political and policy discussions. Anti-poverty transfer programmes are widely credited with having contributed to downward trends in poverty in the region, maintained through the recent financial crisis, and to the reversal of rising inequality trends (Cornia 2010; López-Calva and Lustig 2010). Social protection, and especially anti-poverty policy, has risen to the top of the political and policy agenda. Lula's re-election in 2006

² Social assistance comprises tax-financed programmes and policies addressing poverty and vulnerability, whereas social insurance includes contribution or premium-based institutions providing coverage against life-course and work-related contingencies. Together with labour market policies, whether 'passive' or 'active', social insurance and social assistance make up social protection. Social protection, together with programmes and policies, providing basic services, health, education, and housing, for example, constitute social policy.

³ Prior to the 1988 constitution in Brazil, government responsibility for social assistance was limited to contributing financially to charitable institutions, often faith-based (Jaccoud, Hadjab, and Chaibub 2009).

is credited by many to his success with *Bolsa Família*. It is not surprising that emerging left-of-centre governments in Latin America pay attention to poverty and inequality, given their natural support-base and ideology (see Chapter 3). It is unusual that right-of-centre governments, like those of Fox in Mexico or Piñera in Chile, singled out social protection as a priority area of policy and felt the need to commit themselves to the expansion of existing anti-poverty programmes.

The chapter provides an account of this policy shift, sections 16.2 and 16.3 discuss in turn social insurance reforms and the expansion of social assistance, but it is particularly concerned with two key questions. Firstly, what are the distributional implications of these reforms? The chapter traces the implications of these changes for poverty and inequality in the region, and in Section 16.4 makes a case for focusing attention on public subsidies to social insurance and assistance as means of assessing the distributional effects of social protection systems. Secondly, what does this shift in policy focus tell about the future of social protection systems in the region? Section 16.5 considers the reformed social protection institutions in the context of Latin America's open economies and left-wing governing coalitions. A final section draws out the main conclusions.

16.2 Social Insurance Reforms in the 1990s

A handful of Latin American countries began to implement social insurance funds in the 1920s, with other countries following suit in the second half of the century. Social insurance funds followed the Southern European model, collecting contributions from workers and their employers into a fund which covered old age, disability pensions, and, in some countries, health insurance. Over time, governments consolidated the various occupational funds into larger pay-as-you-go pension funds and used the accumulated savings. The transition from Bismarckian occupational contributory social insurance funds to Beveridgean state-supported social insurance enabled governments to reward workers in the public sector and industry and sustain the political coalitions supporting import-substitution strategies. In Southern Cone countries, and especially Uruguay and Argentina, governments were able to extend coverage to broader sections of the labour force. The evolution of these social insurance schemes varied across countries in the region, but by the 1990s, most schemes had become heavily dependent on government support to plug growing deficits. Structural adjustment programmes implemented in the region incorporated pension reforms as a means to stem growing public-sector deficits and enhance financial and labour market liberalization.

16.2.1 Social Insurance Reforms

Following Chile’s 1981 pioneering changes, pension reform was implemented in Peru in 1993, Argentina and Colombia in 1994, Uruguay in 1996, Mexico and Bolivia in 1997, El Salvador in 1998, Costa Rica in 2001, and the Dominican Republic in 2003. Enabling legislation was approved in Venezuela but was never implemented. The reforms share common traits. They replaced, fully or partially, unfunded social insurance pension schemes with individual retirement accounts, managed by private providers. In the new pension environment, employees in formal employment are required to contribute a fraction of their earnings to a retirement account. Pension fund managers compete for savings, manage workers’ accounts, invest the pension fund, and surrender balances at retirement. They also provide disability and survivor benefits. At retirement, workers use their retirement account balances to make pension arrangements, which include purchasing an annuity from insurance providers or agreeing a scheduled withdrawal of the balances from their pension accounts.

Resistance to the reforms led to diverse outcomes, see Figure 16.1. In Chile, Bolivia, Mexico, El Salvador, and the Dominican Republic, individual retirement

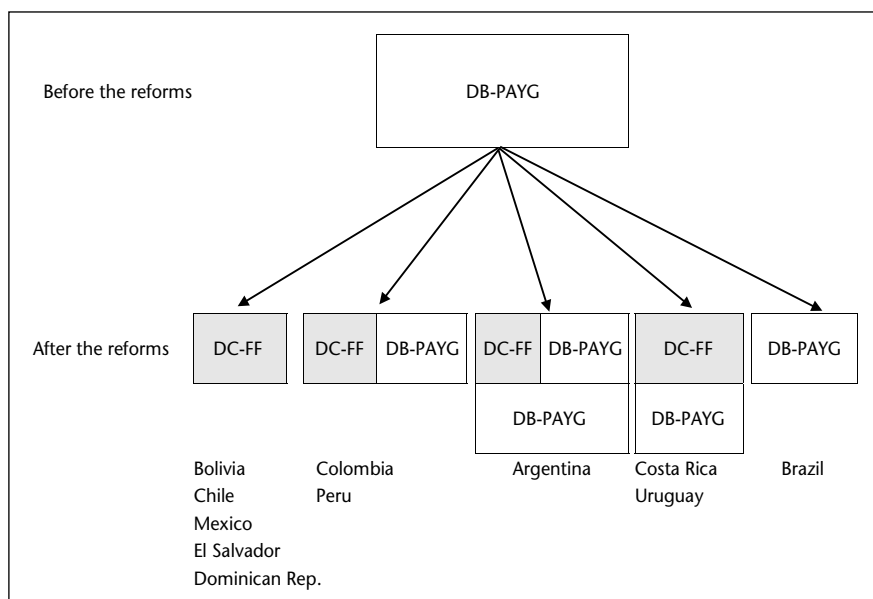


Figure 16.1. Pension reform in Latin America

Notes: DB-PAYG: defined-benefit pay-as-you-go; DC-FF: defined-contribution fully funded.

Source: Compiled by the author.

plans replaced pay-as-you-go pension schemes in full. Governments absorbed the liabilities associated with the old pension plans and the costs of the transition to the new plans. In Colombia and Costa Rica, defined-benefit pay-as-you-go schemes and defined-contribution individual retirement pension plans operate side by side. In Argentina, the two types of pension plans also operate side by side, but with a first pillar pay-as-you-go pension scheme. In Costa Rica and Uruguay, the two types of pension plans each have a dedicated pillar.⁴

Brazil was included in the Figure as an example of a country that did not embark on structural reforms but implemented instead parametric reforms (Pinheiro 2005).

16.2.2 Distributional Effects of Social Insurance Reforms

The main objective of pension reforms was to reduce public subsidies to social insurance and therefore fiscal deficits. Introducing individual retirement plans with a direct link between contributions and benefits for individual workers raised the expectation that public subsidies would no longer be required. One area in which the reforms had explicit distributional implications was in the provision of minimum pensions. Even here, the distributional channels were minimized. Some countries, such as Peru, did not include a minimum pension in the reformed pension plans. Other countries, such as Chile and Argentina, included a minimum pension guarantee but restricted entitlements to workers with unfeasibly long contribution records (20 years in Chile, 30 years in Argentina). Colombia was the only country to introduce a limited redistributive component to its minimum pension. The limited provision of minimum pensions meant that coverage of low-income groups remained the responsibility of the government through non-contributory pension schemes and social assistance.

On paper, social insurance reforms were supposed to have limited distributional effects. In practice, the mounting costs of the transition, the costs associated with maintaining deficit pay-as-you-go schemes where these remained in place, and the growing costs of preventing old-age poverty through non-contributory pensions, all have some distributional effects. In fact, pension reform has resulted in rising public subsidies to social insurance. Chile is a good case in point. The public subsidies associated with the pension reform were 3.8 per cent in 1981, at the start of the reforms. They rose to 5.4 per cent in 1990 and 6 per cent in 2000, and were predicted to remain at around 4 per cent in 2010 (Arenas de Mesa 2005).⁵ The bulk of the deficit is

⁴ Argentina 'nationalized' individual retirement accounts in 2008.

⁵ These estimates do not include an additional 1.3 per cent of GDP required to finance the pension plan of the military and police.

associated with the transition costs of the reforms. Public subsidies to finance non-contributory pensions are around one-tenth of the public subsidies to the supposedly private individual retirement accounts. The reform of social insurance in Chile did not achieve a reduction in public subsidies to social insurance, but the opposite.⁶

16.3 Social Assistance Expansion in the 2000s

From the turn of the century, there has been an observable shift in the priority given to the extension of social assistance programmes by governments in the region. Large-scale direct income transfer programmes focusing on the poor and the poorest households have been introduced in the majority of countries in the region. The earlier programmes, Mexico's *Progresa/Oportunidades* and Brazil's *Bolsa Escola/Bolsa Família* now reach around a quarter of all households, while Ecuador's *Bono de Desarrollo Humano* reaches about 40 per cent of all households.⁷ Human development income transfer programmes have dominated attention from international policy makers, who branded them as conditional cash transfers or CCTs. In fact, there is considerable diversity in the design of anti-poverty transfer programmes in Latin America. There is also an expansion of non-contributory pension programmes in the region, a more traditional form of social assistance. More recently, child transfers have been reformed and extended in Uruguay (see Chapter 6) and Argentina. Integrated anti-poverty programmes such as Uruguay's *PANES* and Chile's *Chile Solidario* illustrate yet a different approach.

16.3.1 Design and Incidence

A useful typology of social assistance programmes in developing countries distinguishes three 'ideal types'.⁸ *Pure income* transfer programmes provide direct transfers in cash to households in poverty. Non-contributory pensions are a good example of pure income transfers. *Income transfers plus services* combine income supplements with basic service provision or utilization. Human

⁶ In 2008 the Chilean government introduced a solidarity pension which was intended to replace the existing non-contributory pension programme, *PASIS*, and also provide partial transfers to low-income older pensioners.

⁷ Mexico's *Progresa* was first introduced in 1997/8 in selected rural areas. It was later extended nationwide as *Oportunidades* in 2003 (for more details see Chapter 7). *Bolsa Escola* in Brazil developed out of municipal initiatives in 1995, which received support and financing from the federal government in 1997 before becoming a federal programme in 2001, and together with other direct transfer programmes combined into *Bolsa Família* in 2003.

⁸ Programme information is from the Social Assistance in Developing Countries database version 5 (Barrientos, Niño-Zarazúa, and Maitrot 2010).

development conditional transfers, for example, provide direct income transfers to participating households linked to service utilization conditions, especially healthcare, schooling, and nutrition. *Integrated anti-poverty programmes* provide tailored transfers and preferential access to services covering a range of deficits and have a focus on reducing social exclusion.⁹ These three ideal types are grounded on different understandings of the underlying causes of poverty: poverty as lack of income; poverty as multidimensional deficits; poverty as multidimensional deficits and social exclusion. What all these programmes have in common is that they are tax-financed interventions led by public agencies and addressing poverty and vulnerability, i.e. social assistance.

Large-scale anti-poverty programmes or social assistance have grown rapidly in all development regions in the last decade, especially in middle-income countries. In a Latin American context, it is important to emphasize their focus on intergenerational poverty persistence (Barrientos and Santibañez 2009b). The programmes are often focused on households in extreme poverty, and have beneficiary selection procedures that take account of differences in poverty intensity. Anti-poverty programmes are increasingly multidimensional in nature. They aim to address the cumulative effects of deficits in income, employment, education, and healthcare, widely perceived to be the main factors explaining poverty persistence. The focus on children, and on regular and reliable transfers, is intended to maximize the impact of the programmes on poverty persistence. Figure 16.2 notes the incidence of human development conditional transfer programmes in the region. Across countries in the region these programmes have a combined reach of 12 per cent of the population (unweighted average) in circumstances where the population in extreme poverty was 12.9 per cent and the population in poverty 32.1 per cent (ECLAC 2009).

16.3.2 Lower-Middle- and Upper-Middle-Income Countries

The spread of social assistance has been slower and more difficult in lower-middle-income countries than in upper-middle-income countries (Barrientos and Santibañez 2009a). Lower-income countries in the region face constraints in delivery capacity and financing, which slow down the scaling-up of anti-poverty programmes. The influence of donors in the design and implementation of these programmes has not been universally positive. In upper-middle-income countries, the main challenge has been the

⁹ In integrated poverty programmes, income transfers are not the main component.

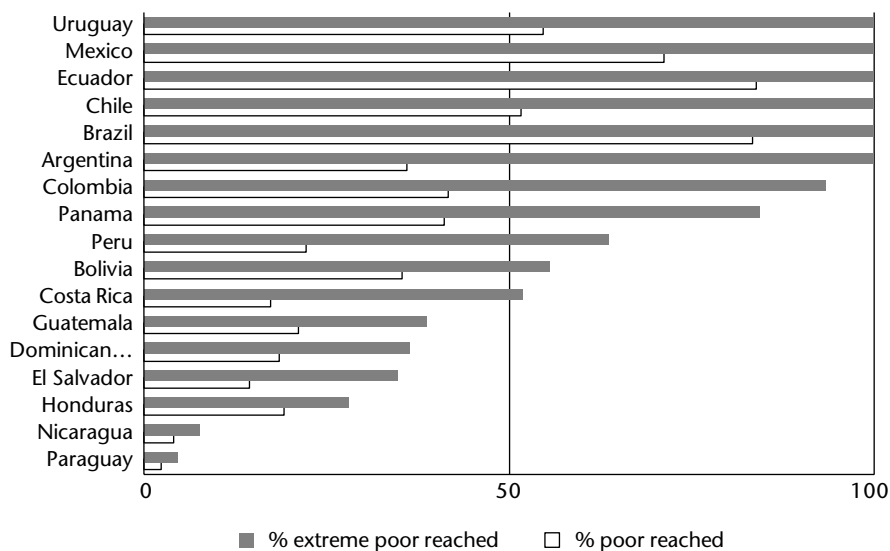


Figure 16.2. The reach of human development conditional transfers, 2000s, Latin America

Source: ECLAC (2009).

institutionalization of social assistance. Often anti-poverty programmes have been introduced as short-term interventions, akin to development projects, as opposed to long-term institutions tasked with the reduction, prevention, and eventual eradication of poverty. This is an important challenge, which many countries are addressing through the establishment of ministries of social development separate from the ministries of labour and social protection that have traditionally managed social insurance institutions in the region. As will be discussed in more detail below, the integration of social assistance and social insurance is a particular challenge in the region.

16.3.3 Why the Growth in Social Assistance?

The expansion of social assistance has been long overdue in Latin America, but its rapid growth in the 2000s must be explained in terms of changes in the political-economy environment. The truncated nature of social insurance in Latin America matched the political coalitions that evolved from and sustained the import-substitution-industrialization development model, dominant in the post-Second-World-War period. The often-unfunded expansion of social insurance entitlements to workers in the burgeoning public sector and industry provided a channel through which the surpluses extracted from

agriculture were redistributed to the emerging middle classes.¹⁰ The export-led growth strategies, which became dominant in the 1980s, undermined these political coalitions, for example by restructuring public-sector employment and by dismantling the protection from international competition available to industrial sectors. The diversity in institutional outcomes from social insurance reforms described in Figure 16.1 reflects the strength of the political coalitions behind import-substitution strategies in resisting change, often in the context of restricted or suspended democratic processes.

The growth in social assistance has also coincided with the left turn in Latin American politics following the consolidation of democracy (see Chapter 3). Left-of-centre coalitions were expected to address the acute deficits in social protection, which are the legacy of structural adjustment and dictatorship in Latin America, the *deuda social*. Expanding anti-poverty programmes is an appropriate means of addressing poverty, social exclusion, and social cohesion—especially in a context in which governing coalitions find limited room to change macroeconomic or labour market policy. It is uncontroversial to posit a ‘natural’ affinity between left-of-centre governments and pro-poor policies,¹¹ but care must be taken not to overstate this point. In fact, right-of-centre governments in Mexico (Fox), Colombia (Uribe), El Salvador (Saca), and more recently Chile (Piñera) have also supported anti-poverty programmes. It is also the case that populist left-of-centre governments in Nicaragua (Ortega) and Venezuela (Chavez) have explicitly avoided making direct income transfers to households in poverty a cornerstone of their social protection policies. The influence of left-of-centre governments on the growth of social assistance in Latin America should not be overstated.

The perceived effectiveness of flagship human development conditional transfer programmes has been important in aligning public and political support in Brazil and Mexico. This comes in no small part from their social investment orientation in programme design. Their main objective is not mitigating poverty but a more ambitious upgrade in the productive capacities of younger generations. Poverty research has demonstrated the multidimensional nature of deficits faced by households in extreme poverty. It has also shaped policy tools to improve programme effectiveness, for example techniques to rank households in poverty and to evaluate the impact and effectiveness of programmes. Improvements in beneficiary selection and in programme evaluation have contributed to bolstering credibility among policy makers and the general public. The fact that social assistance budgets

¹⁰ This point was made by Huber (1996), who notes that social protection systems expanded the most in countries that followed import-substitution-industrialization policies.

¹¹ Cross-country studies on poverty find a link between left-of-centre governments and lower poverty rates (Birdsall, Lustig, and McLeod 2011; López-Calva and Lustig 2010).

amount to a fraction of one per cent of GDP has not escaped the attention of policy makers and taxpayers. The emergent social assistance in Latin America is perceived as grounded in research, focused on social investment, and able to deliver poverty reduction outcomes.

16.3.4 Distributional Effects of Social Assistance

The poverty reduction effectiveness of social assistance measures the extent to which a particular intervention can be accredited with a reduction in poverty among beneficiary households. In the context of anti-poverty transfer programmes in developing countries, their impact on poverty is best captured by changes in the poverty gap and the poverty gap squared measures. Attributing a reduction in poverty to social assistance interventions requires that attention is paid to economic trends and behavioural responses to the transfers. Anti-poverty programmes operate in inauspicious circumstances, often against a backdrop of structural transformation. They are focused on groups in extreme poverty facing a range of deprivation including limited access to employment and basic services. The effectiveness of anti-poverty programmes is enhanced by economic growth and investment in basic services. It is often hard to disentangle the influence of different factors on measured poverty.

Figure 16.3 provides estimates of the poverty reduction effectiveness of Mexico's *Progresa* (Skoufias 2005). These provide perhaps the most accurate set

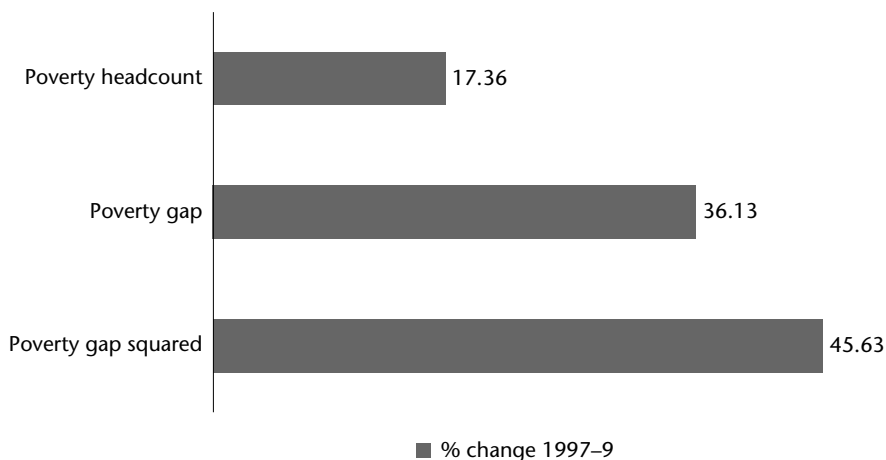


Figure 16.3. Difference in difference estimates of the impact of Progresa on poverty
Notes: Poverty line is 50th percentile of per capita household consumption. Difference in difference (Dif2) is calculated by subtracting the change in measured poverty of the treated group from the change in the control group. % change is calculated as: $\text{Dif2}/\text{measured poverty of the treatment group in 1997}$.

Source: Skoufias (2005).

of figures on the impact of social assistance on poverty because they compare poverty among households similarly eligible for participation in *Progresa*, but where one group joined at the start of the programme in 1997 and another group joined two years later in 1999. The assessment of impact, therefore, controls for environmental trends as well as behavioural responses. Using as a poverty line the 50th percentile of household consumption, Skoufias (2005) finds that *Progresa* had a very limited impact on the poverty headcount rate, with a further 11.7 per cent of beneficiaries reaching the poverty line; but a stronger impact on the poverty gap and the poverty gap square. *Progresa* reduced the poverty gap among beneficiaries by more than one-third compared to eligible but not yet participating individuals. It reduced the poverty gap squared by just over 45 per cent. These estimates confirm that *Progresa* had a stronger impact among the poorest beneficiaries.

Surprisingly, much less is known about the impact of social assistance on poverty than about its impact on inequality.¹² The impact of anti-poverty programmes on inequality has been scrutinized closely in Brazil, where the long-standing rising trend in inequality appeared to have turned sharply about the turn of the century just when anti-poverty programmes were being scaled up. Several studies have come to the conclusion that *Bolsa Família* has made an important contribution to the reduction of inequality in Brazil (Barros, Carvalho, and Franco 2007; Barros, Foguel, and Ulysea 2007; Soares et al. 2010; Soares et al. 2007).¹³

The identification of the impact of *Bolsa Família* on inequality relies on factorial decomposition of the Gini coefficient into the contribution of the different income sources. Denoting G for the Gini; C_k for the concentration coefficients of income source k ; and w for the weight of each source in total income; the Gini of per capita household income is decomposed dynamically as (with the caps indicating the initial observation):

$$\Delta G = \sum_k [\bar{W}_k \Delta C_k + (\bar{C}_k - \bar{G}) w_k] \quad (1)$$

Table 16.1 summarizes data on *Bolsa Família* and on its effects on inequality reported in Soares et al. (2010). The contributions of two sources of income linked to social assistance are reported in the table: basic pension income and

¹² ECLAC estimated the contribution to inequality of different types of transfers with household survey data circa 2008 for 18 Latin American countries (ECLAC 2009). Unfortunately, ECLAC lumped social assistance together with private transfers from civil society organizations and included non-contributory pensions as pension income, separate from social assistance. Their conclusion is that social assistance transfers, thus computed, have a very marginal but positive effect on inequality.

¹³ Soares et al. (2007) extend this analysis to the impact of human development conditional transfer programmes in Mexico and Chile on inequality and find they had contributed to the fall in inequality between 1996 and 2003 in Chile and between 1996 and 2004 in Mexico.

On the Distributional Implications of Social Protection Reforms

Table 16.1. Estimated impact of *Bolsa Família* on inequality (monetary values in R\$2009; all figures estimated from PNAD), 2001–2009, Brazil

	2001	2003	2005	2007	2009
<i>Bolsa Família</i> data from PNAD					
Beneficiaries millions	9.7	27.4	31	33.1	41.2
% population	5.8	16	17.2	18.1	22.2
Beneficiaries mean income R\$	336	222	225	219	233
Beneficiaries mean income less transfer R\$	328	212	211	200	212
Mean transfer R\$	8	10	15	19	21
% of beneficiary income	2.5	4.7	6.5	8.8	9.5
Impact on inequality	1999–2001	2001–2003	2003–2005	2005–2007	2007–2009
Change in Gini attributed to basic pension income = MW	0.094	–0.387	–0.126	–0.236	–0.123
Change in Gini attributed to BF transfers	–0.081	–0.208	–0.116	–0.106	–0.212
Change in overall Gini	0.181	–1.228	–1.386	–1.35	–1.384

Source: Soares et al. (2010).

Bolsa Família transfers. In the Brazilian social protection system, *Benefício de Prestação Continuada* is a non-contributory pension scheme for older and disabled people living in households in extreme poverty; *Previdência Social Rural* is another non-contributory pension programme providing transfers to workers in informal employment in agriculture, mining, and fishing. They provide a pension equivalent to one minimum wage. Workers affiliated to contributory social insurance who fail to accumulate enough contributions at retirement also receive a minimum guaranteed pension of one minimum wage, which makes it difficult to identify these two groups with precision in the survey data. Reported pension income at one minimum wage in value covers all these types of transfers. The other income source selected is *Bolsa Família* transfers, although in practice this includes reported income from all direct transfer programmes. The decomposition indicated above finds that these two sources of income associated with social assistance appear to be responsible for 15 and 16 per cent respectively of the overall decline in the Gini in the period 1999–2009 (Soares et al. 2010). Social assistance transfers would have contributed around one-third of the reduction in the Gini in Brazil over a decade.

Some caution must be exercised in interpreting these figures. The *Bolsa Família* budget stands at around 0.4 per cent of GDP, while the combined budgets of the non-contributory pension schemes are around 1.8 per cent of GDP (see Figure 16.4). The results above suggest that spending 0.4 per cent of GDP on *Bolsa Família* could have the effect of reducing the Gini by just less than one point. Soares et al. (2010) attribute the effectiveness of *Bolsa Família* in reducing inequality to the fact that it reaches extremely

Main Policy Changes and Inequality During the Last Decade

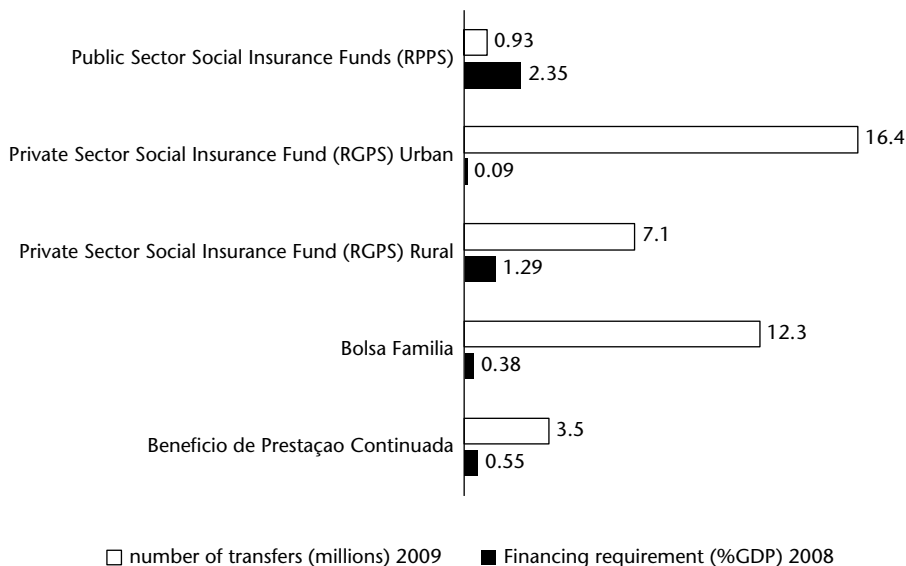


Figure 16.4. Social protection: financing requirement and transfers, 2008–2009, Brazil
Source: Author's own calculations from data in Mesquita, Jaccoud, and dos Santos (2010).

poor households. There are issues with data and methodology which need to be considered. The PNAD household surveys do not allow a direct identification of *Bolsa Família* beneficiaries, so identification is made by examining the amounts reported by potential beneficiaries, an approach widely agreed to be imperfect.¹⁴ The impact on inequality from the introduction of an anti-poverty transfer programme is likely to be a one-off change. It is intriguing to see from the table that *Bolsa Família* appears to have a cumulative effect on the Gini. This might have arisen from the expansion of *Bolsa Família* beneficiaries and/or from increases in the value of the transfers. The table provides some confirmation of these; but concerns remain about the size of the changes in beneficiary numbers and in the value of transfers compared to the size of the effects on the Gini.¹⁵ The factorial redistribution considers only the contribution of changes in income sources to inequality, but it is important to take on board the changes in policy that are responsible for the changes in income sources in the first place. In the case of Brazil, minimum wages are a fundamental policy lever because they set the value of social assistance benefits apart from *Bolsa Família*, but they are also a benchmark for informal workers' wage-setting. During Lula's two administrations the minimum wage increased in real terms by over 50 per

¹⁴ Soares et al. (2010) provide a detailed discussion of data and methodological issues.

¹⁵ An alternative explanation is that anti-poverty transfers might have more than proportionate effects on the productive capacity of households, and that these effects unfold over time (Barrientos 2012). This would be the case if transfers help beneficiaries overcome poverty traps, for example.

cent (see Chapter 12 and Table 2.5). This policy change had an impact on labour earnings of low-income workers, non-contributory pension benefits, and indirectly on *Bolsa Família*. Changes in labour earnings remain the single most important influence on inequality in Brazil, accounting for 59 per cent of the reduction in the Gini between 1999 and 2009. As noted above, the impact of pension benefits where the benefit is equivalent to a minimum wage accounted for a further 15 per cent of the fall in the Gini. The influence of the minimum wage on the decline in inequality is likely to be of prime importance. Another issue recommending caution is that the estimation and decomposition of the Gini do not take account of the distributional impact of raising the revenue to finance social assistance. The implicit assumption is that fiscal revenues have no distributional effects. A more comprehensive perspective on this would require examining the combined effects of taxes and transfers, as is done in Chapter 14. The studies on this issue in Brazil suggest that the tax-transfer system generates very little redistribution.

16.4 Rebalancing Public Subsidies to Social Insurance and Assistance

A productive way to bring together the discussion on the distributional effects of social insurance reforms and the growth of social assistance and link it to policy is to focus on the balance of public subsidies to social protection in Latin America. This approach acknowledges that in practice social insurance schemes in Latin America, whether 'public' pension schemes or 'private' individual retirement plans, absorb a significant amount of public subsidies. Social assistance, on the other hand, is wholly financed through public subsidies. The point is to fix attention on the allocation of public subsidies. The expansion in social assistance in the region will inevitably involve a rebalancing of public subsidies to social insurance and social assistance.

The analysis above concluded that because the reach of social insurance is restricted to workers in formal employment, public subsidies to social insurance will have a limited impact on poverty and, depending on the revenue mix, adverse effects on inequality. The analysis of the distributional effects of social assistance, on the other hand, suggested that its impact on poverty is significant, but its impact on the distribution of income is limited. This is in line with the findings from an emerging literature studying the distributional effects of taxes and transfers in the region (Skoufias, Lindert, and Shapiro 2010). A rebalancing of public subsidies from social insurance to social assistance is bound to be welfare-improving.

It is illustrative to consider the current situation in Brazil. Figure 16.4 shows the financing requirements as a proportion of GDP of the different components of the social protection system in Brazil in 2008.

The distribution of public subsidies within social protection is highly regressive. They include highly generous pension entitlements to civil servants to the tune of 2.35 per cent of GDP (Pinheiro 2005). The urban component of the private-sector social insurance fund is close to break-even point, but there is considerable inequality in the distribution of entitlements within the fund. A majority of social insurance pensioners manage to qualify only for the minimum guarantee pension benefit equivalent to one minimum wage. The rural component, which includes *Prêvidencia Social Rural*, a programme aimed at extending social insurance entitlements to workers in informal employment, had a deficit of 1.29 per cent of GDP in 2008. The rural component of the private social insurance fund is best understood as non-contributory or partially contributory. The two explicit social assistance components, *Bolsa Família* and the *Benefício de Prestação Continuada*, absorb just less than 1 per cent of GDP. Public subsidies are marginally tilted towards social insurance, but public subsidies per beneficiary are heavily biased towards privileged civil servants. As much as 2.35 per cent of GDP in public subsidies goes to less than one million civil servants, while 0.38 per cent of GDP is shared by over 12 million *Bolsa Família* beneficiary households.

Consideration of the distributional effects of public subsidies to social insurance and social assistance would recommend a rebalancing away from social insurance and towards social assistance as a means of maximizing the welfare effects of public transfers. In fact, the expansion of social assistance in the region in the 2000s indicates that this rebalancing is under way. It is an explicit objective of government policy in several countries in the region, including Brazil, Mexico, and Argentina. The rebalancing has been facilitated by a context of growth and rising fiscal revenues. The fact that social assistance programmes absorb a very small proportion of GDP has largely kept these changes at a low key. The substantial public subsidies to social insurance suggest that the scope for rebalancing these subsidies is large in upper-middle-income countries in the region.

16.5 Options for the Future of Social Protection in Open Economies

16.5.1 Growing Social Insurance?

Social insurance schemes in the region have been consolidated after the bout of reforms in the 1990s.¹⁶ Argentina's 'nationalization' of private

¹⁶ This is not to ignore subsequent reforms to individual retirement plans in some countries (Bertranou, Calvo, and Bertranou 2009).

pension funds in 2008 appears to indicate a different trend, but there are conflicting views on the motivation and sustainability of the changes. Individual retirement plans have emerged from the 2008 financial crisis with slightly fewer contributors, but the swift recovery has contributed to minimizing the financial impact. Trends in the density of contributions among workers affiliated to individual retirement accounts will need to be closely scrutinized in the future as they provide clues on the extent to which these plans will provide satisfactory levels of retirement income for current contributors.

There are few indications that, in the absence of growing public subsidies, social insurance institutions in the region are capable of reaching groups currently excluded. Efforts to 'grow' social insurance have been heavily dependent on the government support. Brazil's *Prêvidencia Social Rural* represents an important attempt to incorporate informal workers in rural areas within social insurance institutions. The strategy adopted was to adjust the requisites for entitlement to take account of the specific nature of rural employment. A lower contributory requirement of ten years was granted to informal workers, and its implementation was suspended for ten years to provide incentives for workers to join and start contributing. In practice, the contributory requirement was never introduced, and the benefits are financed largely through government subsidies. Chile's introduction of the *Pilar Solidario* in 2008 provides a guaranteed floor to pension income, through a mix of non-contributory benefits and subsidies to contributory benefits. Argentina's *Plan de Inclusion Previsional* effectively lowered the conditions for accessing benefits for self-employed workers and other workers excluded from social insurance. The child subsidy programmes introduced in Uruguay and Argentina are aimed at filling the gaps in coverage left by child benefits provided under social insurance funds and by child tax credits available for high-income groups.

There is some common ground in these examples. They are limited to upper-middle-income countries with relatively high social insurance coverage (in the context of Latin America). They are all financed in full from public revenues. There are no cross-subsidies from social insurance contributors. They were all explicitly developed and implemented as a response to the perceived deficiencies of social insurance schemes, and as a means to sustain them. Are they a case of governments trying to find effective ways of supporting the inclusion of low-income and vulnerable workers within social insurance? Or are they a case of public funds being employed to cover social insurance's 'bad risks'? The absence of cross-subsidies from social insurance suggests that the latter interpretation might be closer to the truth.

16.5.2 Social Protection after the Growth of Social Assistance

There are strong arguments supporting the view that social protection systems in the region have been strengthened by the growth of social assistance in the last decade. Social assistance helps to extend social protection coverage to sections of the population traditionally excluded from social insurance institutions, and is effective in reducing extreme and persistent poverty. It also has the potential to improve human development and economic inclusion among low-income groups. Social assistance absorbs a very small fraction of public revenues, and there is every prospect that social assistance budgets will reduce in the future as poverty reduces. The growth in social assistance is a welcome development because it fills in a missing component from social protection systems in the region.

On the other side of the balance sheet, social assistance is effective in reducing poverty only as part of a successful development strategy that includes economic growth and the provision of basic services. Anti-poverty programmes of the type currently in place in Latin American countries have more limited impact on poverty in contexts of low growth and acute deficits in service infrastructure. The spread and effectiveness of social assistance in lower-middle-income countries in the region have been limited compared to upper-middle-income countries. Social assistance in these countries has not reached the scale required to make a strong contribution to the reduction of poverty and vulnerability, and there are large deficits in their institutionalization. Social insurance is also much weaker there. A different set of issues and problems influence the paths to social protection systems in lower-middle-income countries in the region.

The growth of social assistance has resulted in a change in the truncation of social protection systems in the region, but in the direction of a segmented or 'hyphenated' configuration of social protection components. With few exceptions, the growth of social assistance in the region has not been a case of an outward expansion of social insurance (as in the 'folk' view of the expansion of social protection in Europe). Instead it has worked through the introduction of a set of institutions with a different rationale, institutionalization, and financing. The spread of social assistance might have reduced the truncated nature of social protection, but this has been achieved by exacerbating segmentation. In most countries, social assistance is being institutionalized separately from social insurance, through ministries of social development as opposed to ministries of labour and social security. This suggests a long-term cleavage.

How will this situation evolve in the future? Current research and policy discussions have not led to a settled view on this issue. The emerging orthodoxy argues for a stronger integration of social insurance and social assistance, and

an urgent upgrade of labour market policies (Levy 2008; Ribe, Robalino, and Walker 2010). The outlook is different for lower- and upper-middle-income countries in the region. In middle-income countries the conditions for integrating well-developed and long-standing social insurance institutions with emerging social assistance are hugely complex.¹⁷ In lower-middle-income countries, with underdeveloped and weak social insurance institutions, the expansion of social assistance as opposed to integration with social insurance is the urgent challenge for the medium term.

16.6 Conclusions

The main objective of this chapter was to trace the changes in social protection systems in the region and assess their distributional implications. It revisited the social insurance reforms of the 1990s, and the expansion of social assistance in the 2000s, discussing their implications for poverty and inequality and for the future of social protection in the region.

The development of social protection systems in the region relied upon social insurance as its main component, and paid very little attention to social assistance. At the turn of the century, social protection systems in Latin America could be described as truncated. The reforms of social insurance in the 1990s were supposed to reduce fiscal deficits and expand coverage, but managed neither of these two goals. The expansion of social assistance in the 2000s has contributed to filling in this gap. Large-scale anti-poverty programmes in upper-middle-income countries in the region provide a basic form of social protection to groups previously excluded from social insurance. In lower-middle-income countries, the expansion of social assistance has been more tentative and limited in scope. Social assistance is now a significant component of social protection in the region.

What are the distributional effects of these changes? The chapter focused on the allocation of public subsidies to social insurance and assistance. In the context of Latin America, public subsidies to social insurance make a very small contribution to poverty reduction, and the impact on inequality is in the main regressive. Social assistance can be effective in reducing poverty, particularly where programmes prioritize the population in extreme poverty; but the size of the transfers relative to household income limits their impact on the poverty headcount rate. There is some evidence that social assistance can have a small, positive, impact on inequality.

¹⁷ This is a classic case of balancing the demands from welfarist approaches on the design and implementation of tax and transfer schemes with the demands from non-welfarist poverty eradication objectives.

It follows that a rebalancing of public subsidies away from social insurance and towards social assistance has the potential to improve welfare. The growth of social assistance shows this rebalancing is under way. The size of public subsidies to social insurance suggests the scope for this rebalancing is significant. Economic growth and the enhanced fiscal space mentioned in Chapter 14 have facilitated this rebalancing in the last decade.

Have the changes in social protection been associated with the spread of left-of-centre governments? The social insurance reforms of the 1990s were part of a liberalization project, in many cases pushed through in exceptional political conditions. The expansion of social assistance in the 2000s coincided with a shift of the political centre of gravity in the region to the left. However, both left- and right-of-centre governments have supported it. The influence of left-of-centre political coalitions was associated with a rapid scaling up of social assistance. More generally, there is a stronger link between democratization and the expansion of social assistance, regardless of the politics of ruling parties.¹⁸

Do these changes fit in with Latin America's open economies? There is little doubt that the stagnation of social insurance funds in Latin America is associated with the changes in the employment relationship brought about by the new conditions in liberalized labour markets. Social insurance works best for workers in long-term and stable employment. Multidimensional social assistance programmes are on paper better able to address 'new' vulnerabilities associated with irregular employment, and periods of low earnings and unemployment. Social assistance is better able to provide a floor to household consumption and investment in human development. In this sense, social assistance provides a better 'fit' with conditions in open economies with liberalized labour markets.

What do these changes tell us about the future of social protection in the region? There is little doubt that the growth in social assistance signals a reconfiguration of social protection systems in the region. The growing institutionalization of social assistance is a welcome step forward in the transition towards comprehensive social protection systems in the region. The impact of the recent financial crisis on the economies of Latin America has underlined the urgency attached to developing and strengthening active labour market policies. There remains uncertainty over the evolution of the linkages between social insurance and social assistance. Innovative policies will be needed to achieve progress on a greater integration of social insurance and assistance; but in lower-middle-income countries the expansion of social assistance constitutes a more urgent challenge.

¹⁸ Birdsall, Lustig, and McLeod (2011) draw a distinction between social democratic and populist left regimes, with most Central American and Andean countries falling into the latter group. Their analysis concludes that redistribution is less effective and sustainable in these countries.

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