Latin American Economic Outlook 2011

HOW MIDDLE-CLASS IS LATIN AMERICA?

OECD

CENTRE DE DÉVELOPPEMENT
DEVELOPMENT CENTRE

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Foreword

Countries in Latin America have managed to resist the global economic and financial crisis more successfully than in many other regions of the world. Similarly, they are showing relatively faster signs of recovery. Economic growth in the region is expected to be stronger than in most OECD countries in 2010, confirming the trend signalled in last year's OECD *Latin American Economic Outlook*.

Improved macroeconomic management contributed to Latin America's economic resilience. But more should be done. On the one hand, consolidation of good practices in monetary policy – for example, inflation targeting with flexible exchange rates – has advanced in many countries, with clear benefits. On the other hand, a similar level of institutionalisation of good practices has not yet been achieved on the fiscal front, though prudent fiscal management helped some economies weather the crisis. The task at hand is to consolidate counter-cyclical policy mechanisms.

The *Latin American Economic Outlook 2011* focuses on the situation of middle-income groups in Latin America. The report shows that this group is economically vulnerable: few have university degrees, for example, and many of them work in the informal sector. This is a "middle class" that is not quite similar to that which became the engine of development in many OECD countries.

To decrease this vulnerability and ensure that middle-income groups play a larger role in economic development, policies to promote upward social mobility are needed. This includes pensions to protect today's middle-income workers from falling into poverty later in life. Better education policies, too, can contribute critically to ensuring that the children in these income groups achieve more secure livelihoods than their parents, while improving productivity and competitiveness of the economy as a whole.

Upward mobility can make Latin American societies fairer, more stable and more cohesive. The report argues why, and how, upward mobility should and can be promoted, and how safety nets can be put in place to protect the most vulnerable segments of people within those middle-income groups, as well as the poorest and most disadvantaged households.

The policy recommendations put forth in the *Latin American Economic Outlook 2011* build on the OECD Development Centre's ongoing work on fiscal legitimacy. Latin American and Caribbean countries need to undertake reform of their public finances in order to strengthen the social contract and provide better opportunities for disadvantaged and vulnerable people. Such an approach could help governments raise fiscal revenues and, at the same, time provide better quality public services. This can in turn help build a constituency for needed tax reform. Indeed, the *Outlook* confirms what is intuitively obvious: that the region's middle-income citizens are more willing to pay taxes for services, such as health care and education, if they perceive them to be of high quality.

This fourth edition of the *Latin American Economic Outlook* illustrates the OECD's commitment towards emerging economies and, in particular, towards Latin America and the Caribbean. The OECD has just celebrated the accession of its second Latin American member country, Chile. It has also launched the Latin America and the Caribbean Initiative, which aims to support the region's policy makers in the fields of fiscal policy, innovation, investment and public-service delivery, providing a forum to share best practices and know-how.

The Latin America and the Caribbean Initiative and the *Latin American Economic Outlook* are both premised on the fact that decision makers have much to learn from each other. This is the kind of peer learning that is at the very heart of the OECD's mission and which we want to contribute to the region's well-being.

Angel Gurría

OECD Secretary-General

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We would like to acknowledge the special contribution that the *Latin American Economic Outlook Informal Policy Board* makes to enhance the excellence and impact of our annual flagship publication. The Board is composed of some of the most noted policy makers and experts on Latin American affairs, and we are honoured to have their support. Co-chaired by OECD Secretary-General Ángel Gurría and Secretary General of the Secretaría General Iberoamericana, Enrique Iglesias, members of the Board include Cesar Alierta (President, Telefónica), Joaquín Almunia (European Commissioner for Competition), Alicia Bárcena (Executive Secretary, United Nations Economic Commission for Latin America and the Caribbean), Guillermo Calvo (Columbia University, Professor of Economics, International and Public Affairs), José Manuel Campa (Secretary of State for Economic Affairs, Spain), Luciano Coutinho (President, Banco Nacional de Desenvolvimento Econômico e Social, Brazil), Pamela

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Preface

The 2009 global economic crisis affected Latin American and Caribbean economies severely, as demand for the region's goods and services plummeted. However, thanks to improved domestic macroeconomic management and regulation, Latin America was better equipped to tackle this crisis than ever before. Domestic demand, fuelled by the expanding purchasing power of those Latin American households in the middle of the income distribution, explains at least part of the Latin American resilience. Because of their capacity to change the region's economic and political landscape, these middle-income households are the thematic focus of this Outlook. Here referred to as "middle sectors," they are defined as households with income per capita between 50% and 150% of the national median. This definition is often used as a basis for the analysis of the middle class in OECD countries; in the case of the Latin American region, does this definition identify the same type of people?

The following pages paint a somewhat surprising picture of these middle-income households. In particular, the region's middle sectors are economically vulnerable and are closer to the disadvantaged than to the affluent in many aspects. For example, few middle-sector household heads hold college degrees and many work in the informal sector. Many risk falling into the ranks of the poor if they fall ill or lose their jobs. Why? This vulnerability is closely linked to Latin America's long-standing and deeply ingrained inequality, and to the existence of perverse incentives that in some instances continue to favour rent-seeking behaviour rather than the development of formal economic activities and effective institutions.

The middle sectors are also vulnerable because the consolidation of their economic position has not necessarily been a priority for policy makers. In order to promote upward social mobility and strengthen Latin America's middle sectors, three concrete policy issues are especially relevant: high levels of labour informality, a relatively young (although rapidly ageing) population and limited fiscal resources. First of all, social safety nets should have a broader coverage; secondly, better access to high-quality education must be at the heart of measures to boost upward social mobility; and finally, tax and public spending should be fairer and more effective in order to overcome the vulnerabilities and improve the living conditions of these middle sectors.

Social protection, education and fiscal policies will continue to be central features in the OECD Development Centre's work and dialogue with Latin American policy makers. In fact, the Centre is currently strengthening its work for more and better public-sector dialogue among countries in the Latin American and Caribbean region. Seven Latin American and Caribbean countries are now members of the Development Centre's Governing Board, including Chile, which became a full member of the OECD in early 2010. This increasingly close collaboration with the region will continue to serve the region's development and growth agenda.

Mario Pezzini
Director
OECD Development Centre
December 2010

ACRONYMS ABBR.

Acronyms and Abbreviations

BIS	Bank for International Settlements
CASEN	Encuesta de Caracterización Socioeconómica Nacional (Chilean National Socio-economic Characterisation Survey)
DIPRES	Dirección de Presupuestos, Ministerio de Hacienda, Gobierno de Chile (Chilean National Budget Office)
DMP	Disadvantaged Mobility-Potential Index
ECD	Early Childhood Development
ECLAC	UN Economic Commission for Latin America and the Caribbean
ENIGH	Encuesta Nacional de Ingresos y Gastos de los Hogares (Mexican Household Income and Expenditure Survey)
EPF	Encuesta de Presupuestos Familiares (Chilean Family Budget Survey)
ESCS	Economic, Social and Cultural Status
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
IDB	Inter-American Development Bank
ILO	International Labour Organization
ILPES	Instituto Latinoamericano y del Caribe de Planificación Económica y Social (Latin American and Caribbean Institute for Economic and Social Planning)
IMF	International Monetary Fund
MSMP	Middle Sectors Mobility-Potential Index
NBER	National Bureau of Economic Research
PISA	Programme for International Student Assessment
POUM	Prospect of Upward Mobility
PPP	Purchasing-Power Parity
RES	Middle Sector Resilience Index
SCHP	Secretaría de Hacienda y Crédito Público (Mexican Ministry of Public Finance and Credit)
SEDLAC	Socio-Economic Database for Latin America and the Caribbean
SMI	Social-Mobility Index
UNDP	United Nations Development Programme
VAT	Value-Added Tax

Executive Summary

What do the people in the middle – neither the richest nor the poorest in society – contribute to economic development? How well are these middle sectors doing, economically and socially, in Latin America? Certainly, the growth of a segment of the population with higher living standards than those of their poorest compatriots signals success in the ongoing struggle to alleviate poverty, as well as offering new markets and opportunities for entrepreneurs.

This year's *Latin American Economic Outlook* focuses on the fortunes of those in the middle of the income distribution in Latin American economies. If these middle sectors have stable employment and reasonably robust incomes, then, arguably, they provide a solid foundation for economic progress. Moreover, they might also support moderate but progressive political platforms in Latin America's democracies – the political role often attributed to middle classes by historians and sociologists. Conversely, if those in the middle have precarious incomes and unstable employment, their consumption cannot be counted upon to drive national development, their growth is barely a sign of social progress, and their political preferences may veer toward populist platforms not necessarily conducive to good economic management.

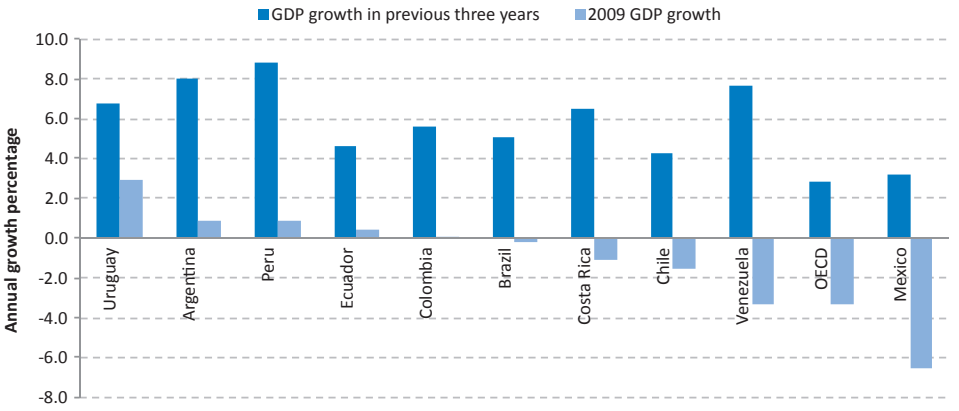
Those in the middle of the income distribution are far from being a homogeneous group. So much so, that this *Outlook* generally refers to these households as Latin America's middle sectors. Those in the middle are often quite economically vulnerable, subject to the risk of falling down the economic ladder. In fact, they do not correspond to stereotypical notions of the "middle class" in terms of their education, job security or purchasing power. The precarious position of Latin America's middle sectors has to do with high levels of economic inequality, as well as a structure of economic institutions and incentives that have too often rewarded rent-seeking over formal-sector entrepreneurship, for example. Nevertheless, there are public policies that can consolidate the livelihoods of middle-sector households, and policies such as social protection and public education, that promote upward mobility more generally. In this vein, fiscal policy has a critical part to play, to finance the needed reforms and programmes and engage the Latin American middle class in a renewed social contract.

THE MACROECONOMIC LANDSCAPE: OPPORTUNITIES OUT OF THE CRISIS

Does the macroeconomic context in the region allow for better public policies to consolidate these middle sectors? The 2009 global economic crisis affected Latin American economies severely: as demand for the region's goods and services plummeted, export volumes fell by 3.5%, and GDP fell by 1.8%.[1] However, despite Latin America's high level of integration with international markets and the poor growth showing in 2009, several economies in the region displayed noteworthy resilience in the crisis, performing well relative to economies elsewhere in the world and reversing the downturn fairly quickly. Furthermore, growth forecasts are quite favourable compared with OECD economies.

Two external factors in particular are responsible for this good performance: the quick recovery of China and its demand for commodities, and the timely monetary action of the international community. But the resilience observed during and after the crisis was also fruit of improved domestic macroeconomic management: price stability, stabilised aggregate balance sheets on the fiscal and external front and, for some countries, the ability to adopt counter-cyclical fiscal policies.

16 Recessionary impact of the crisis on Latin America and the OECD



Source: ECLAC and OECD, 2010.

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Moreover, Latin American financial systems – in sharp contrast to previous crises – have held up remarkably well during the current crisis. In general, financial systems in the region have not witnessed significant deteriorations in the quality of loans, nor in solvency or market liquidity. This positive performance by banks in Latin America is explained by improved prudential regulation and supervision already in place at the onset of the crisis.

Currently, Latin America's long-term growth prospects are positive, but important challenges for the future remain. The measures that led to macroeconomic stability now need to be institutionalised. Policies based on the knowledge that good times are inevitably followed by bad have been demonstrably rewarded by a rapid recovery and strong performance. Sustainability of external and fiscal balances needs to be secured against political pressures for short-term gains. In the near term, interest-rate and currency risks remain important obstacles for increasing the financial system's effectiveness to capture more savings and channel them to productive investments in the region. These risks will need to be addressed through public action such as regulation and financial education. But if the financial sector is to stop "punching below its weight" and play its appropriate role in development, the main challenge is to deepen financial markets while maintaining sound lending practices.

Sound macroeconomic policies have served the region well in these turbulent times and have created space for improved public policies that could consolidate the middle sectors into a stable middle class. Since the early 2000s, economic growth has been accompanied by modern and innovative social policies, causing a decline in inequality and poverty in most countries in Latin America. This has created and enlarged an incipient middle class, potentially a key player for a new phase of development in the region. But new opportunities come also with new risks to be mitigated and needs to be addressed by public policies. This *Outlook* shows that to entrench recent gains in reducing poverty and unleash the potential of Latin America to enhance its competitiveness, the position of the middle class has to be cemented by social-protection policies to avoid downward mobility. At the same time, education policies should aim at lifting more people into the middle class and allow for more upward social mobility, while fiscal policies and institutions – taxes and expenditures – have to be redesigned to create a new social contract that includes the middle class.

MIDDLE CLASSES: WHAT ROLE FOR DEVELOPMENT?

The critical importance of middle classes can be found through careful assessment of the patterns of successful economic growth across many countries: a sizeable and relatively prosperous middle class is significantly correlated with long-term growth. At the same time, a growing middle class is evidence of success in the pursuit of two crucial development objectives, in Latin America and the Caribbean as elsewhere: a reduction of both poverty and inequality.

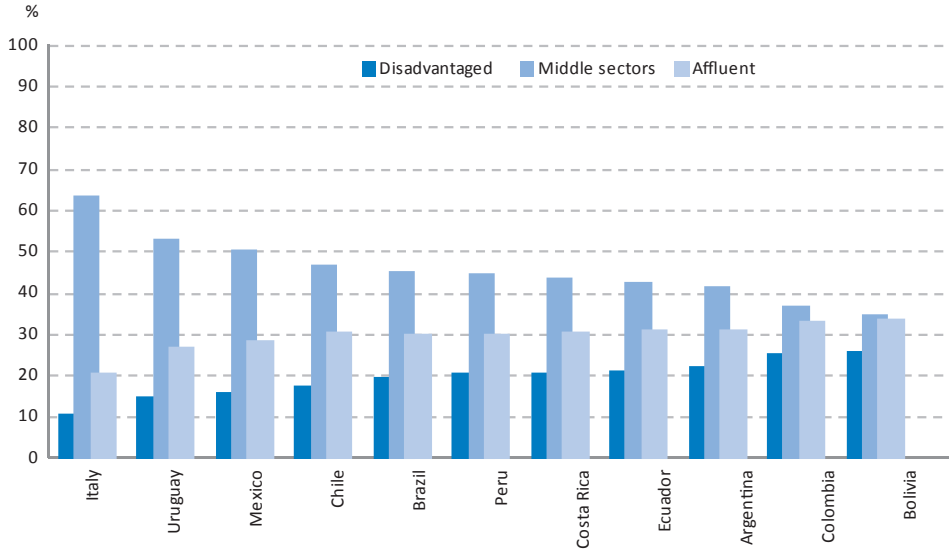
A strong middle class is not only good for economic growth *per se*, but can influence this economic development through its support for advisable political programmes and electoral platforms, in particular the sort of reasonably progressive social policies in education and labour rights that promote inclusive growth. But political engagement is not the only mechanism whereby the middle classes can influence development; it plays an economic role as well. Middle-class households have historically favoured economic growth through vigorous capital accumulation, be it physical (plant, equipment or housing) or human (education and health). Recent enthusiasm for the growing incomes of the middle sectors in many developing economies has risen around the perspective to consolidate a stable middle class that could serve as a motor for consumption and domestic demand.

Are those in the middle of Latin America's income distribution playing this role? That is the question posed by this year's *Outlook*.

WHO ARE THE "MIDDLE SECTORS" IN LATIN AMERICA?

Having in mind these potential roles of middle sectors in economic development this *Outlook* measures and describes a group of households in the middle of the income distribution based on household income. The middle sectors are defined as households with income between 50% and 150% of median household income. We refer to those with income below 50% of the median household as "disadvantaged", and those with incomes superior to 150% of median income as "affluent". While any single-variable definition has limitations, our definition has important advantages in terms of comparability and consistency across countries, and between the middle sectors and the relatively more disadvantaged and affluent groups of society. The spectrum ranges from Uruguay, where around 56% of the population is in the middle sector according to our definition, through Mexico and Chile, with middle sectors of around 50% of the population, to Bolivia and Colombia, where middle sectors are equal to just over a third of the population.

Size of the middle sectors in Latin America and Italy
(as percentage of total households, 2006)



Note: Data for Bolivia and Uruguay are from 2005, and Colombia from 2008. All estimations are based on households. A household is considered middle sector if its income is between 50% and 150% of household median income.

Source: Castellani and Parent (2010), based on 2006 national household surveys.

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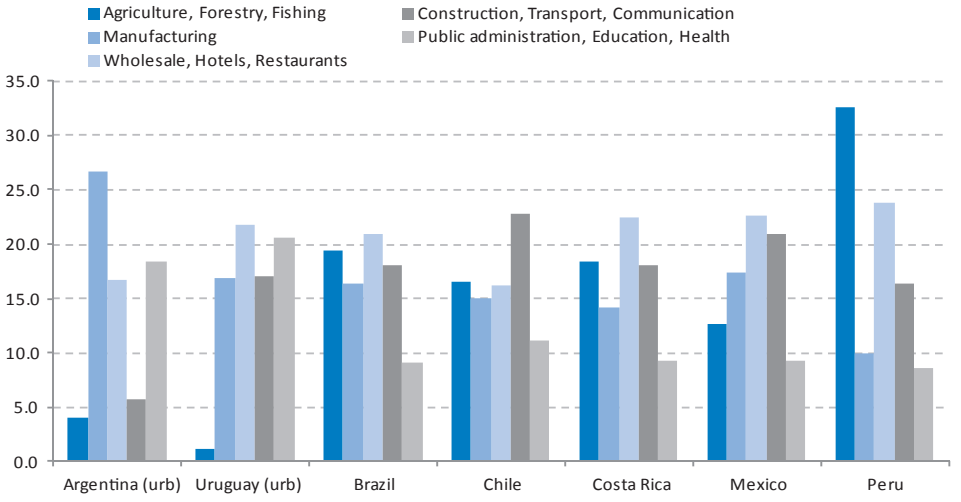
What does it mean to belong to the middle sectors in developing economies such as those of Latin America? Middle-sector households in Latin America are heterogeneous and a closer look at household-survey data from Latin America reveals a number of these households' characteristics. For example, most middle-sector households are headed by a pair of adults – between 57% (Uruguay) and 72% (Mexico) – though the proportion of married household heads is even higher among the affluent. Middle-sector working people are not as likely as the affluent to be public-sector employees – teachers or civil servants for example. Only between 9% (Peru) and 21% (Uruguay) of employed middle-sector household members work in public administration, education and health. Nor is the middle sector the cradle of entrepreneurship: it is among the affluent where the share of entrepreneurs is highest.

Main sectors of economic activity of middle-sector workers
(percentage of household heads working in a given sector, for middle sector)



Notes:

1) Figures shown are for the middle-sector household heads; for disadvantaged and affluent see Table 1.A1. in the statistical annex.

2) Columns may not sum to 100% as some sectors of economic activity are not reported here (see Table 1.A1. in the statistical annex).

3) Survey samples for Argentina and Uruguay include only urban households.

Source: Castellani and Parent (2010), based on national household surveys.
StatLink http://dx.doi.org/10.1787/888932338098

WHAT PROSPECTS FOR THE MIDDLE SECTORS?

Given the potential contribution of the middle sectors to economic growth and development, social mobility should be an important public-policy objective in the region. But how stable is the middle sector? Where do countries stand in policies promoting upward social mobility?

Indices of mobility potential can aid policies to promote social mobility, by measuring how "close" disadvantaged households are, on average, to the middle-sector threshold, and similarly, how close middle-sector households are to falling into the ranks of the disadvantaged. These measures of proximity provide information on the resources and targets necessary to move disadvantaged people into the middle sectors, and the vulnerability of middle-sector people to falling into disadvantaged status. The *Disadvantaged Mobility-Potential* (DMP) index indicates that in Uruguay, the Latin American country with the proportionally largest middle sector, disadvantaged households are on average closer to the middle sector than in other countries of the region. Surprisingly, Argentina, with its relatively large middle sector, is the country whose disadvantaged are furthest from the middle sector. The

Middle Sector Resilience (RES) index, meanwhile, shows that, once again, Uruguay's middle sector is relatively resilient to the risk of falling into disadvantaged status, in the sense that it is further from the lower middle-sector income threshold than in other countries. What is perhaps more surprising is that Chile's middle sector is the least resilient among the countries surveyed: the Chilean lower middle sector is closest to the disadvantaged income threshold. One may think that Chile should persevere beyond its success in reducing poverty over the last two decades: poverty reduction created many households in the lower reaches of the middle sector, just over the disadvantaged income threshold, and therefore close to falling back into disadvantaged status.

In general, countries should design policy packages that include measures promoting upward social mobility but also those reducing the vulnerability of the middle sector to adverse shocks, such as illness, accident, a death in the family, unemployment, retirement or natural disasters.

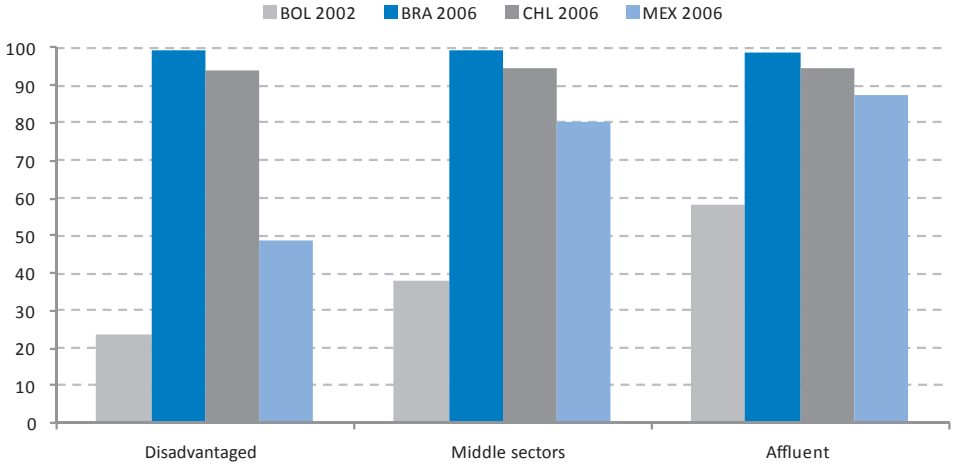
SOCIAL PROTECTION FOR ALL: VULNERABLE AND INFORMAL MIDDLE SECTORS

Coverage of social-protection schemes in Latin America remain low despite the reforms introduced during the 1990s in many countries in the region. Pension reforms introducing mandatory individual capital accounts – managed by the private sector – aimed to reach financial sustainability and to strengthen incentives to participate. However, on average the rate of workers contributing actively to pension systems in Latin America has remained well below 50% of workers, similar to those in non-reformed systems. Meanwhile, health reforms aimed to universalise access, separating access to health care from payment of contributions. However, a two-tier (contributory and non-contributory) system has emerged, in which the lower tier is characterised by low-quality treatment due to lack of resources. This two-tier system compounds the problem of low contributory coverage, and translates into a regressive impact on out-of-pocket health-care expenditure by the middle class. Finally, coverage rates for traditional unemployment insurance systems have also remained low.

The dual structure of labour markets in Latin America and the Caribbean contributes to explaining the limited coverage of social-protection schemes. Labour informality remains high and the interaction of informality with contributory social-protection systems creates a vicious cycle: the majority of informal workers contribute irregularly, if at all, weakening those systems and providing insufficient support to those workers when they need it. Coverage rates of informal workers are extremely limited, below 15% in Brazil, Chile and Mexico, and almost negligible in Bolivia. Besides, coverage is more clearly linked to income levels than in the case of formal workers. Poverty in old age is likely to maintain, or even exacerbate, inequalities observed among the working-age population, in absence of reforms. Pension coverage rates for formal-sector workers – defined as those working with an employment contract – at all income levels are broadly adequate, except in Bolivia. Almost all formal middle-sector workers contribute, from 80% in Mexico in 2006, to 99% in Brazil and 95% in Chile (well above the 38% in Bolivia in 2002).

How much are the middle sectors affected by the limited coverage of social-protection schemes? As it happens, the informal sector is not composed only of disadvantaged workers, but it is also a middle-sector issue. Indeed, the number of middle-sector informal workers in Latin America is high. Focusing on four countries alone – Bolivia, Brazil, Chile and Mexico – we find 44 million informal middle-sector workers, a large share of the total population of 72 million middle-sector workers in those countries. There are more informal than formal workers among the middle sectors in all countries except Chile. Not surprisingly, social protection systems fail to reach even half of middle-sector workers, leaving many middle-sector informal workers without adequate employment protection and access to social safety nets. This situation represents a pressing challenge for public policy, since low levels of affiliation and irregular contribution histories put people at a high risk of significant downward social mobility when they get sick, lose their job, or retire.

20 Pension coverage rate of formal workers by income level
(percentage of workers covered)



Source: Based on national household surveys.

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Pension coverage rate of informal workers by income level
(percentage of workers covered)

Note: Informal workers are composed of all self-employed (agricultural and non-agricultural) and all informal employees (agricultural and non-agricultural).

Source: Based on national household surveys.

StatLink http://dx.doi.org/10.1787/888932338345

Three key features of Latin America's economic situation must be taken into account when designing a pragmatic social-protection reform: high levels of labour informality, a relatively young (although rapidly ageing) population and limited fiscal resources. Thus, given the predominance of labour informality – even among the middle sectors – social insurance for many people will have to be provided by means other than via formal employment. Such policies must encourage participation in contributory systems by the informal middle sector – people who are both able to save and likely to desire social-protection coverage. Successful policies of this type will mobilise the savings for social insurance and in so doing will help to build a fairer and more efficient social risk-management system.

To aid decision makers in the design of appropriate policies, this *Outlook* assesses alternative pension reforms. *Ex post* policies (*i.e.* after retirement) include spreading social pensions not linked to individuals' history of contributions to the system; such schemes are expensive but effective in the fight against poverty. Within the scope of mandatory contributory pensions systems, policy makers should evaluate reducing the number of years of necessary contributions to qualify for a minimum pension to hold the promise of covering informal middle-sector people with spotty contribution records.

Ex ante policies (*i.e.* during working life) seem to have the greatest scope for pension reforms benefiting the middle class: from compulsory affiliation for the self-employed (especially for the more educated segments), to a range of hybrid approaches for workers in the lower reaches of the middle sectors who may not be able to afford to contribute (*e.g.* "semi-compulsory" affiliation), in which workers are automatically enrolled, but are able to opt out. Greater flexibility regarding contributions, with respect to both amounts and timing, permitting withdrawals in limited circumstances, such as long-term unemployment or health problems, are other policy tools that can benefit workers in the lower middle sector. Reforms to address the concerns of upper middle-sector workers should focus on so-called matching defined contributions: transfers made by the state into an individual's defined-contribution pension plan, conditional on their own voluntary contributions. Such schemes, already introduced in some countries in Latin America, provide the right incentives for long-term saving.

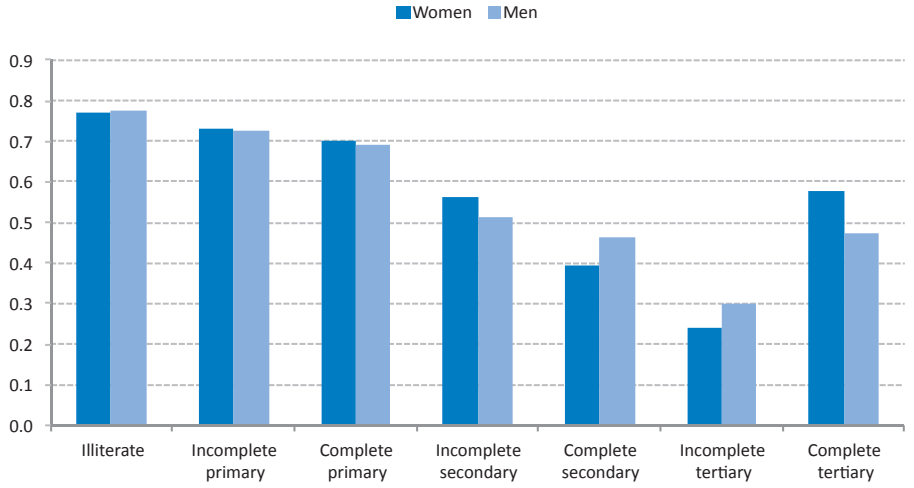
EDUCATION: FOSTERING UPWARD SOCIAL MOBILITY FOR THE MIDDLE SECTORS

Preventing the middle sectors from falling into the ranks of the disadvantaged and strengthening their resilience are as important as promoting upward social mobility. How can it be done? Education is probably the first public-policy domain that comes to mind when thinking about measures to foster upward social mobility. Indeed, in OECD countries, the persistence of educational achievements across generations – *i.e.* the similarity in schooling levels between parents and their children – is a key driver of the persistence in earning differentials among different members of society. Among the Latin American middle sectors, education is additionally associated with increased life satisfaction, pride and sense of identity. At the same time, increased human capital – the outcome of good education policies – is a major driver of economic growth, both through its direct positive effect on labour productivity or its complementarities with innovation and the absorption of new knowledge into the production process.

But opportunities are unevenly distributed in Latin America – the region of the world with the highest levels of income inequality and very unequal opportunities to progress up the social ladder. Access to educational services in terms both of quantity and quality is low for the region's middle sectors if compared with their middle-sector counterparts in OECD countries as well as to affluent households in Latin America. Public policies to reduce inter- and intra-generational inequalities are therefore amply justified. To be effective in promoting upward social mobility, education policies must build equity considerations into their design from the outset.

The good news is that for those with the most unfavourable family background in terms of educational attainment there seems to be upward mobility, and for those at the top downward mobility is very unlikely. Nonetheless, the Latin American middle sectors seem to be stuck, with the level of education attained by their children peaking around complete secondary education. The gap with respect to those whose parents have tertiary studies remains large. For example, out of every 100 children whose parents did not complete secondary education, roughly 10 finish tertiary studies, while for those who have parents with completed tertiary education the equivalent figure is 58 for women and 47 for men. To put this in context, about 80% of Latin Americans between 25 and 44 years old have parents with incomplete secondary education or less.

22 Probability of achieving a higher level of education given parental education



Notes: The bars represent the estimated child's average probability of achieving a higher level of education than his/her parents' educational attainment, except for "complete teritary" where it represents the probability of achieving the same level. The sample children are men and women aged between 25 and 44 years at the time of the survey.

Source: Based on *Latinobarómetro* (2008).

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Guarded optimism is justified, nevertheless: experiences in OECD countries show that inter-generational social mobility is amenable to policy action. However it needs sustained and long-term effort, since success can only be measured over the period of a school career.

Regarding enrolment: Early childhood development (ECD) is important in boosting opportunities for the poor in developing countries. Higher enrolment rates and increased public spending on pre-school education in early childhood significantly weakens the link between parental education and child secondary education performance. ECD, complemented by subsequent investments in skills, is a precondition to ensure equal opportunities later on and an area where public policy action could be extremely powerful. Secondary schooling is far from being universal across either the disadvantaged or the middle sectors in most countries in the region, but it should be. In several countries, compulsory education covers only nine years of education (and so ends at age 15). Here an extension to a 12-year requirement is feasible – Argentina went from 10 compulsory years to 13 in 2007. Such an extension of compulsory education requirements might have the greatest impact for the middle sectors. For disadvantaged households there may need to be a material incentive to ensure compliance.

Second, the complement to increasing the "quantity" of public education is increasing its quality. An important aim in itself, better quality would also boost equity in education. It would narrow the gap between public and private education, reducing the differences in the skills acquired by the disadvantaged and the middle sectors with respect to the affluent. It should also reduce the drop-out rate and increase demand for education, given the greater returns that would flow from a set investment of time. Middle-sector parents, well placed to support their children yet with much scope to increase education, might be placed to respond to such measures, especially at the secondary level.

How to increase quality? Although there is no unique path or instrument to achieve this goal, schools and teachers are going to be at the heart of any meaningful reform. Better administration of schools, meaning greater flexibility combined with more accountability and a modern system of evaluation and incentives for school administrators, can improve the return on current expenditures. Countries need to think about effective incentive structures for teachers, while also upgrading the skills and

qualifications of the teaching base. Experiences in OECD countries provide a useful guide to what has proved effective and ineffective.

Other policy options discussed in this *Outlook* include: financing tertiary education through grants and loans, redistributive policies and income support, and policies to increase the social mix within schools.

THE MIDDLE SECTORS: KEY PLAYERS IN A RENEWED SOCIAL CONTRACT?

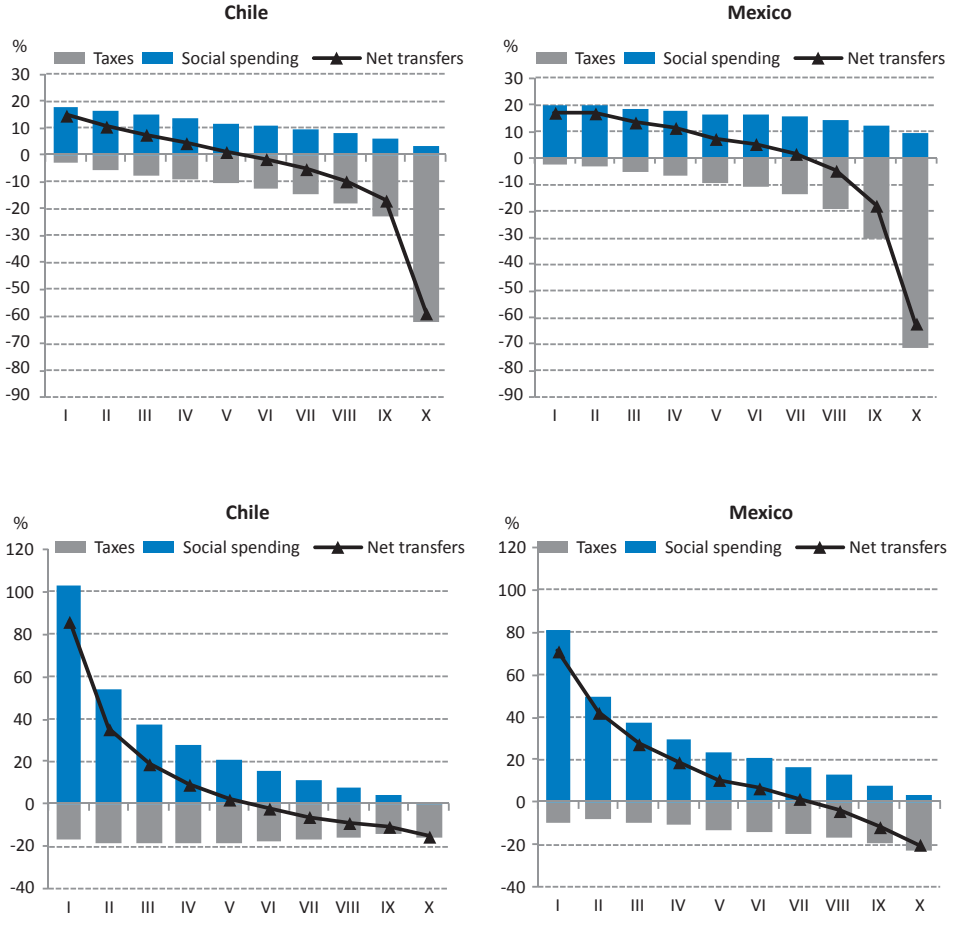
In a democracy, voters' preferences for the amount and type of income redistribution shape important aspects of fiscal policy. In turn, fiscal policy may influence citizens' perceptions about the level and quality of services delivered by the public sector. A better understanding of how perceptions regarding the role of fiscal policies are formed, and of the practical effects these policies have on income distribution, are vital elements in an informed debate on how to finance and deliver essential services in Latin America.

This *Outlook* analyses the links between the middle sectors and fiscal policy from two perspectives. First, what role do Latin American middle sectors play in shaping fiscal policy and redistribution in particular? The Latin American middle sectors express strongly support for democracy, but they are critical of how it works. This view is largely shaped by the low quality of the public services delivered by governments.

Second, what are the effects of fiscal policies on the middle sectors? A detailed tax-benefit incidence analysis for Chile and Mexico, combining information of household characteristics with government programmes, shows that net transfers – the combined effect of direct and indirect taxes, social-security contributions, as well as transfers received and the value of in-kind services provided by the state – in Latin America benefits disadvantaged households. For the middle sectors, things are much less clear-cut. What middle-sector people pay in taxes is close to what they receive in the form of social spending. The middle (decile) in Chile pays on average taxes equivalent to 18.6% of its disposable income, while receiving benefits of 20.6%. Similarly, in Mexico taxes amount to 16.5% of disposable income and benefits are equal to 23.8%. In sum, the net effect of fiscal policy for middle-sector families, while marginally positive, is not large, and they benefit most from in-kind services such as education and health care.

24 Effective net receipt of benefits by household income deciles

(weighted average, percentage of mean disposable income, 2006)



Note: Deciles are defined according to household per capita disposable income including cash transfers.

Source: Based on national household surveys.

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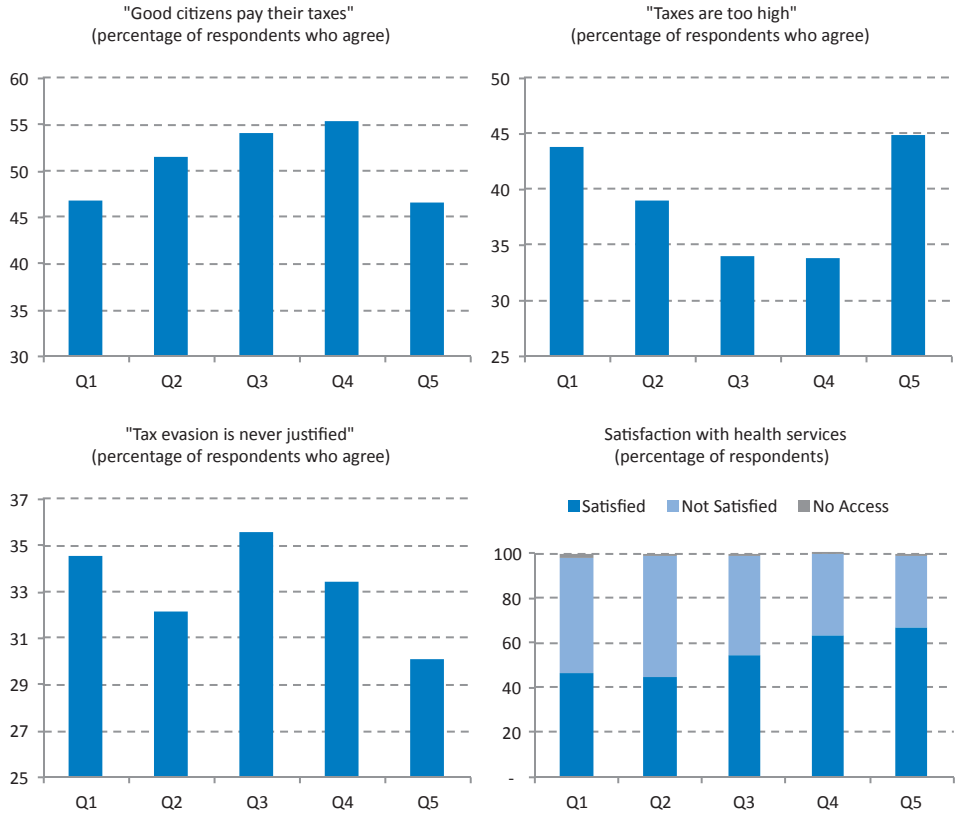
As a result, if education, health care and other publicly provided services are of low quality, then the middle sectors are more likely to consider themselves losers in the fiscal bargain and less willing to contribute to financing of the public sector. The low perception of quality of public services such as education and health care drives the middle sectors to seek them from the private sector, even where the extra cost imposes a significant additional burden on household budgets.

The current moment is in many ways timely for reforms. Most countries in Latin America and the Caribbean have weathered the international financial turmoil with a new-found resilience, increasing citizens' confidence in the quality of economic management in their countries. Expanding middle sectors and their contribution to domestic demand have played a part in the region's economic resilience. Prior to the financial crisis, poverty fell in many countries, at a faster pace than during previous expansions, and the mechanisms that lie behind this, such as conditional cash-transfer programmes, have created a new faith in government action among the vulnerable segments of society. In this context, the middle sectors have the potential to become an agent of change in the region.

The middle sectors, taxation and satisfaction with public services
(responses by self-perceived income quintiles)



Source: Based on *Latinobarómetro* 2007 and 2008.

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How can governments continue to foster more pragmatic economic policies while strengthening the social contract? It is easy to point to a lack of resources for public action and focus on government income through tax, but the best place to start may be reforms aimed at improving the quality of public services, so that current users increase their demand and support for them. This would build a social constituency for expansion of public spending and for the taxes necessary to finance it. A way forward is to frame tax reforms that raise more revenue while paying greater attention to their distributional effects. The bedrock for such reforms must be continued improvements in tax administration and the transparency of public expenditure and revenues.

26 NOTES

1. According to the IMF's April 2010 *World Economic Outlook* database.

PART ONE

Macroeconomic Overview

ABSTRACT

The 2009 global economic crisis affected Latin American and Caribbean economies severely. However, despite Latin America's high level of integration with international markets and its poor growth showing in 2009, several economies in the region displayed noteworthy resilience, reversing the downturn fairly quickly while performing well relative to economies elsewhere in the world. Major external factors contributing to this comparatively good performance were Chinese demand for commodities and timely monetary action of the international community. Nonetheless, this superior economic outcome was also the fruit of internal factors, such as improved domestic monetary and fiscal macroeconomic management on the one hand and prudential microeconomic regulation on the other. Now that Latin America's long-term growth prospects are positive, the policy measures that led to macroeconomic stability need to be further institutionalised, especially on the fiscal front, and financial system risks need to be addressed through further public regulatory action and financial education.

INTRODUCTION

This year's *Outlook* identifies why Latin America has done so much better than other regions during the crisis. Its countries were certainly tested – the region experienced a significant economic downturn in 2009 – but this time they were able to deploy policy in a way which was both effective and sustainable. Sustainability, which means implementing policies consistent with the long-run evolution of external, fiscal and monetary balances, was a critical difference. The region proved able to protect its hard-won gains in growth potential and so its scope for long-term economic development. But there is an unresolved question about what lay behind this good result: was it internal factors such as sound macroeconomic and microeconomic policy; or was it external ones, such as China's economic emergence or timely multilateral action? Although this debate will not be conclusively settled in the near future, we will argue that both sets of factors played an important role. The crisis certainly revealed notable examples of good practices, but to work these also relied on the external environment.

Latin America has weathered the crisis relatively well, though there is no room for complacency. Fertile ground for the further institutionalisation of sustainable macroeconomic policy has been created by its evident success.

The conclusion is that there is no room for complacency. Global economic prospects remain highly uncertain. Although initial response to the crisis has depleted resources and reduced the scope for future action, there is still room for policy action on both the fiscal and monetary fronts. Combining this with citizens who now appreciate and acknowledge the fruits of sustainable macroeconomic policy brings the chance for the region to improve and further institutionalise structural macroeconomic policy.

This year's macroeconomic overview looks first at the nature and scale of the negative shock that hit Latin America in 2009, and then at the external and internal factors that lay behind the region's comparatively good performance. Armed with this, we turn to the options that policy makers have available today, including – in particular – the role that financial regulation might play.

THE GLOBAL CRISIS AND THE ECONOMIES OF LATIN AMERICA

Late in 2008 the world economy stumbled when a banking crisis revealed financial problems at the heart of most developed economies. World trade fell 11% in a year and global savings 16%, their biggest falls in more than three decades (Figure 0.1).[1] Commerce and finance thus both propagated the recessionary tide round the world, leading global gross domestic product (GDP) to fall by 2.5% in 2009 – its steepest drop since the Great Depression.[2]

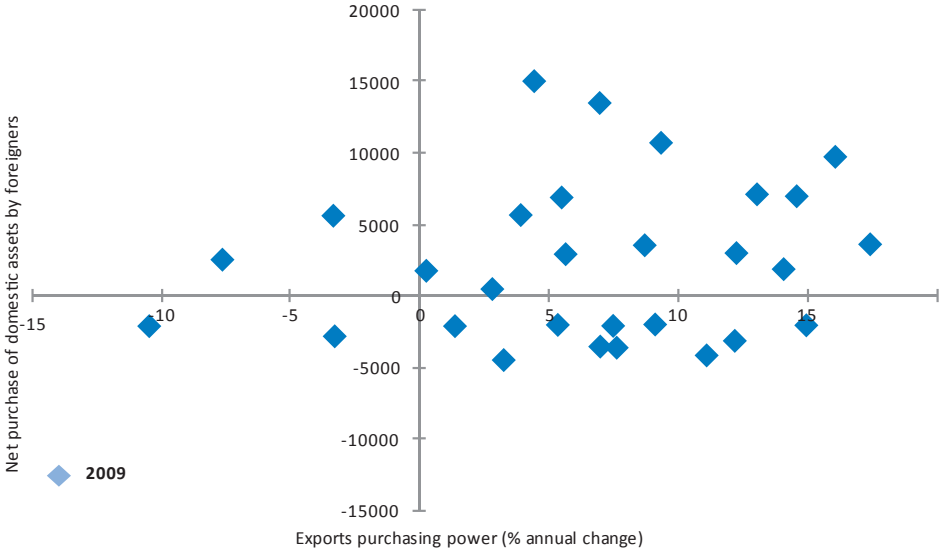
Figure 0.1. Global trade and global saving
(per cent annual growth)

Source: IMF (2010a).
StatLink http://dx.doi.org/10.1787/888932337756

The joint collapse of the commercial and financial channels of global markets was strongly felt in Latin America. Demand for Latin American goods and services plummeted, exports falling 3.5% by volume in 2009. A 10% deterioration in the region's terms of trade compounded this to produce a 14% decline in Latin America's export purchasing power – the proportion of annual imports covered by a year's exports. This shock was the worst experienced in the three decades for which there are standardised data for the region (Figure 0.2).

The 14% decline in the purchasing power of Latin America's total exports in 2009 was the worst shock in three decades.

Figure 0.2. External commercial and financial shocks
(years 1985-2009)



Note: Quarterly purchases of domestic assets covers only the three largest regional economies — Argentina, Brazil and Mexico — for reasons of data availablity. The points are plotted for the worst quarter in 12-month periods comprising the second and first halves of consecutive years.

Source: Based on IMF (2010a) and ECLAC (2010).
StatLink http://dx.doi.org/10.1787/888932337775

In balance-of-payments terms the shock in the last quarter of 2008 was likewise the worst since 1985. Much was restored in 2009, but not all. Latin America's net private portfolio flows reversed from an inflow of USD 42 billion in 2007 to a net outflow of USD 24 billion in 2009. Similarly, in the four quarters following the start of the crisis in September 2008 the volume of domestic assets purchased by foreign investors fell by more than half against the preceding four quarters – from more than USD 200 billion to less than USD 100 billion (the outlined blue diamond in Figure 0.2 representing 2008Q3 to 2009Q2). Foreign direct investment (FDI), a subcomponent of purchases, also fell despite its historical stability.

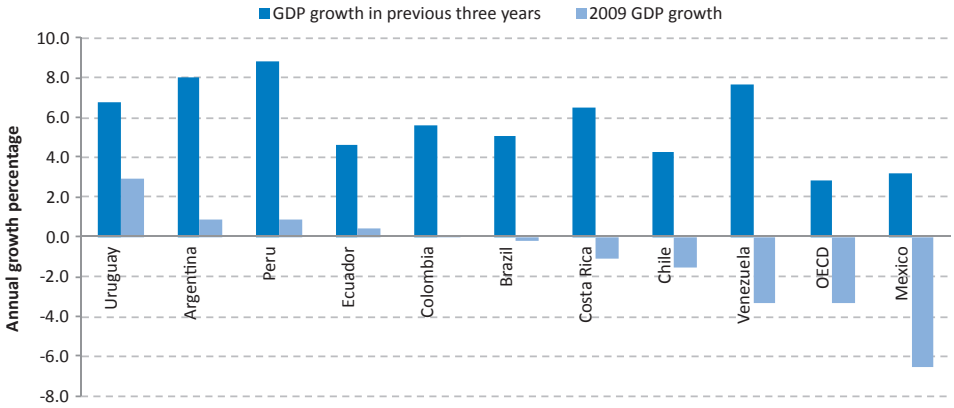
The immediate balance-of-payments shock was the worst since 1985, and the 2009 recession deeper than those following the Asian and Russian crises.

Contrary to the hope expressed by many before the event that Latin America had somehow decoupled from future global crises, this external commercial and financial pressure pushed the region into deep recession. Latin America's GDP fell by 1.8% in 2009, a greater drop than followed the Asian and Russian crises in 1997 and 1998 or the US recession in 2001.[3] On the other hand, the region performed significantly better than the 3.5% average drop observed in OECD economies or the 2.5% fall which Latin America had sustained at the onset of the debt crisis in 1983.

The downturn was widespread, affecting all Latin American countries. Data for ten selected economies are shown in Figure 0.3. All slowed significantly from the average annual growth they had experienced between 2006 and 2008, and some fell into negative territory. The extent and co-ordination of the falls mean that this was more than a correction to the strong growth of preceding years.

Although all economies suffered, the extent differed. The worst hit were Venezuela and Mexico with loss of 10 percentage points, but even Uruguay — the least affected — suffered a 4 percentage-point drop. Amid these two extremes, Argentina, Costa Rica, Mexico and Peru saw a slowdown of more than 7 percentage points; followed by Brazil, Chile and Colombia which suffered less but still lost over 5 percentage points of growth.

Figure 0.3. Recessionary impact of the crisis on Latin America and the OECD



Source: ECLAC and OECD, 2010.

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Despite this huge loss of economic activity, expectations of medium-term economic performance remained untouched.[4] As emphasised in last year's *Outlook* (OECD, 2009a), the impact of a global crisis on a single year's GDP matters far less than any sustained damage to a country's longer-term growth prospects. The "lost decade" that followed the debt crisis of the 1980s is a good and recent example. This low-growth phase in fact extended for as much as a quarter of a century in several Latin American economies and, looking back, the apparently dramatic 2.5% fall in regional GDP in 1983 dwindles in comparison to the cumulative 30% loss of potential GDP wrought by 25 years of lower long-term growth rates. It is still far too soon to draw long-term conclusions about the effects of the crisis, but there is early evidence that Latin America did better in 2009 – at the micro as well as the macro level of the economy (see Box 0.1). Current expectations of a prompt recovery certainly contrast sharply with the 1980s.

This time, however, medium-term expectations were untouched; there is no expectation of a "lost decade" ahead.

Box 0.1. The impact of the crisis on investments in innovation

When trying to assess the significance of an economic slowdown it is relevant to look at how innovation activities were affected since they will play a crucial role in any future growth (Grossman and Helpman, 1991; Aghion and Howitt, 1998). Credit tightening across Latin America combined with demand uncertainties contributed to an estimated fall in tangible capital investments of 13.6% in 2009 (World Bank, 2010). In a recent survey of (mostly large) manufacturing firms in Latin America conducted for the OECD Development Centre and analysed in Paunov (2010) most respondents said they had introduced new products and processes since 2008. Firms were equally confident about their country's future economic performance and innovation performance. Yet, one in four of them had discontinued innovation investment projects in response to the global financial crisis.

Such evidence is economically unsurprising given that investments in innovation projects tends to be pro-cyclical (OECD, 2009b). The crisis has constrained access to financing, through both its effect on internal cash-flows and access to external funds, and this is likely to have played an important part. A deeper analysis of the survey data confirms it: more vulnerable firms were more likely to discontinue innovation projects than their less vulnerable counterparts. Notably, firms with access to public financing were less likely to discontinue their projects, while young firms – a group which chronically suffer from weaker access to credit than older firms – were more likely to do so (Paunov, 2010).

WHAT IS BEHIND LATIN AMERICA'S GOOD PERFORMANCE?

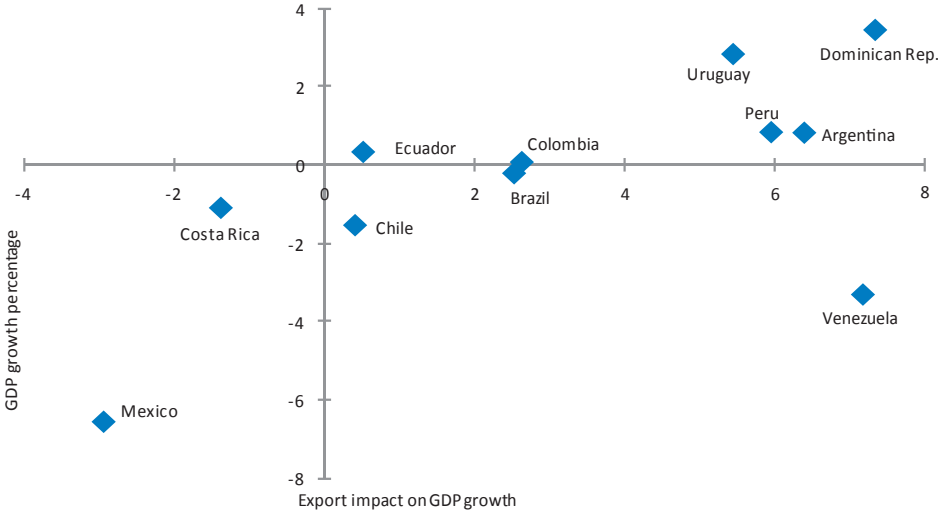
The optimism may be shared, but there is no consensus on the primary cause for Latin America's good macroeconomic performance. Did it lie within the region, its newly found economic resilience the result of its own prudent fiscal and monetary policies? Or was it external, the result of timely multilateral liquidity injections from the International Monetary Fund (IMF) or the emergence of China as a source of both financial resources and demand? There is not enough evidence yet to determine the quantitative impact of each of these possibilities, but certainly the region benefited from both external mitigating factors and internal resilience. There is in this a place for the pride of some policy makers in the region, but at the same time a warning for them about hubris.

Possible explanations for this better performance include prompt multilateral liquidity injections and the rise of China, as well as the region's own prudent policies.

The importance of the IMF's efforts has already been subject to some testing. Izquierdo and Talvi (2010) regressed EMBI spreads[5] against an indicator of whether countries had access to the IMF as lender of last resort, and conclude that the IMF did significantly mitigate financial risk.

The other external factor is China. The Asian country fared well throughout the crisis – real GDP growing 8.7% in 2009 – and its sustained demand for commodities served as an important buffer to the drop in global trade. Figure 0.4 shows the strong link between the size of external trade shocks and economic performance. The horizontal axis measures 2009 GDP growth under a counterfactual scenario where all demand components of GDP grew at the average rate during the four years previous to the crisis with the exception of exports which are assigned their actual value. In other words, the horizontal axis illustrates changes in economic growth induced solely by changes in export demand (assuming no Keynesian multipliers on the one hand, nor neoclassical factor flexibility on the other). It can be seen that Mexico, with exports targeted towards battered consumers in the United States, is far to the left in the graph as a result of a significantly larger trade shock in 2009 than countries such as Brazil, Chile and Peru that had diversified their exports towards China.

Figure 0.4. Shock to exports and GDP slowdown
(2009)



Source: Based on ECLAC.

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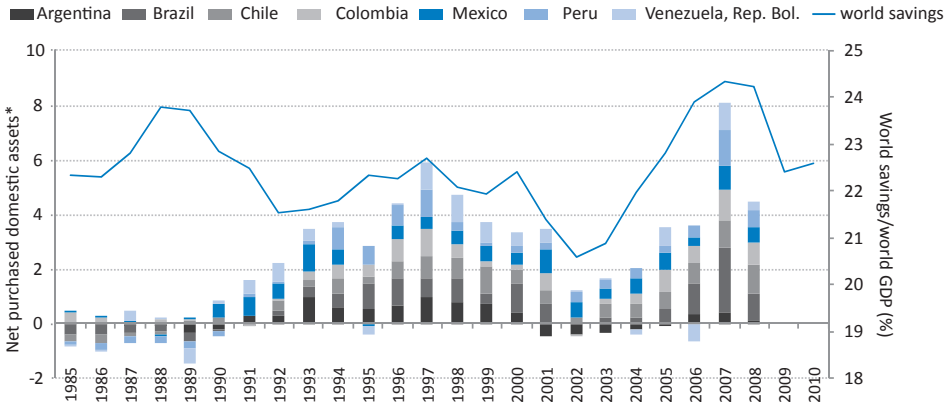
But deviations from a straight increasing line in Figure 0.4 indicate that external trade factors do not tell the whole story behind Latin America's different responses to the crisis. Internal resilience, the product of responsible domestic policy, explains another part of countries' differing responses. The importance of this resilience is most discernible when analysing the financial transmission of the crisis, as countries with poor policy fundamentals quickly lose the trust of foreign investors. The disruptive capital flows which follow can exacerbate and prolong the direct effects of a crisis.

Figure 0.5. Net purchase of domestic assets by foreign investors in selected countries



Notes: * Constant dollars, normalised for each country to the maximum annual purchase during the 1990s.

Source: Based on IFS data.

StatLink http://dx.doi.org/10.1787/888932337832

Figure 0.5 illustrates a significant mechanism of transmission of global crises, from global savings to investment in Latin America. The bars in Figure 0.5 represent net purchases of domestic assets by foreign investors in each of seven Latin American countries (measured in constant dollars and normalised for each country to the highest level experienced by it during the 1990s).[6] The effect of the debt crisis of the 1980s can be seen at once. This kept most of the region below the radar of foreign investors until about 1992. But from then on net purchases track the line for world savings, suggesting a clear channel of financial transmission into the region. The link is also significant at the level of certain individual economies, with correlation between world savings and net asset purchases greater than 0.7 in each of Chile, Colombia and Brazil.

Net purchases of domestic assets by foreign investors provide a test of how a country's policy fundamentals are perceived abroad...

The collapse of global savings in 2009 thus potentially created significant downward pressure on foreign investors' net purchases in Latin America, and they certainly turned negative in all countries during the last quarter of 2008. But Latin American countries then bounced back, with purchases returning to pre-crisis levels in most countries over the three subsequent quarters. The horizontal axis in Figure 0.6 shows cumulative purchases between the last quarter of 2008 and the third quarter of 2009 in a scaled way (see the note to the figure). There is significant heterogeneity across countries, implying that the responses of foreign investors were as differentiated as those in the trade channel examined above.

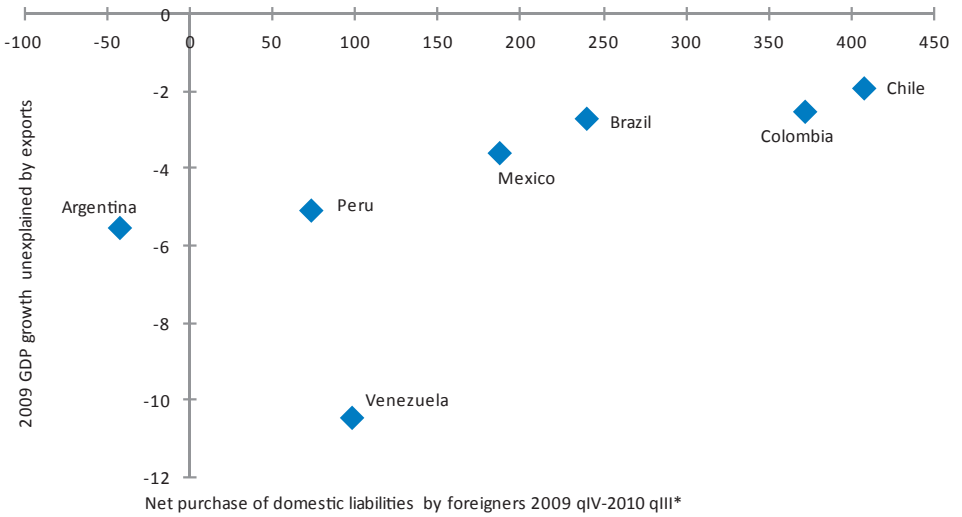
...this time, purchases bounced back for most, but not all, countries.

The vertical axis in the figure is the part of GDP growth unexplained by the counterfactual scenario considered in Figure 0.4 (that is, the difference between

the two co-ordinates in Figure 0.4). What Figure 0.6 shows is that financial transmission explains a large share of this residual: those countries which foreigners continued to favour with purchases of domestic liabilities coincide with those where a larger share of positive growth is left unexplained by trade shocks.

Figure 0.6 shows that the response of foreign investors during the crisis was highly correlated with GDP growth – Venezuela being the only country with significant losses still left unexplained. But is this relation causal? Liability purchases constitute external, although not exogenous, decisions made by foreign investors. In other words, variation of investor behaviour observed in the horizontal axis is not driven only by exogenous external factors, but also endogenous domestic circumstances. China's role is less relevant explaining this heterogeneity, even though foreign investors are likely to take a more favourable view of countries which, thanks to China, have a more secure stream of export revenues than those which do not. Far more significant to investor response is internal macroeconomic stability associated with domestic policy resilience at the outset of the crisis.

Figure 0.6. Foreign investors' net purchases and "unexplained" GDP growth
(2009)



Note: *Financial purchases are adjusted for the size of a "country's economic possibilities" in the eye of foreign investors, a concept proxied by the volume of export growth in dollar terms in previous years.

Source: Based on IFS data.

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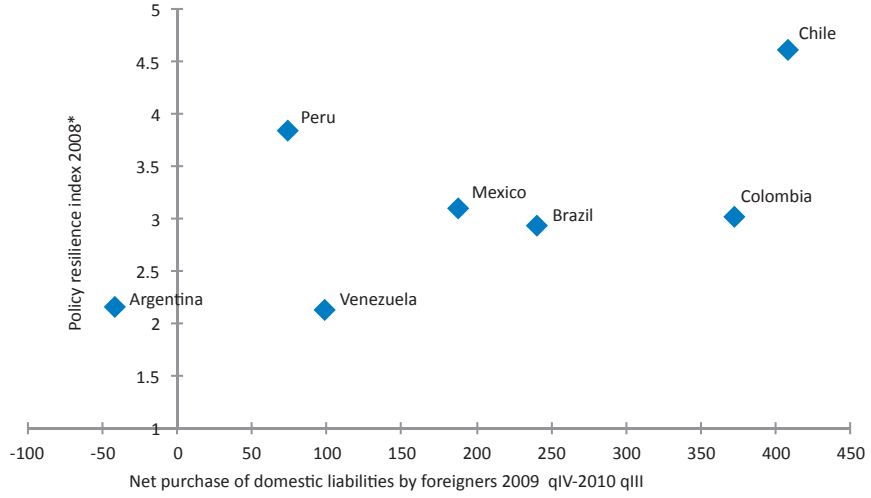
Internal macroeconomic stability, or policy resilience, appears to be a very important factor for foreign investors.

The concept of policy resilience, and how to measure it, was discussed in last year's *Outlook* (OECD, 2009a), where we introduced the "Policy-Resilience Index": that included a composite measure of factors that enlarge policy space on both the fiscal and monetary fronts.[7] Figure 0.7 plots such an index for selected countries against the net purchase figures from Figure 0.6.The observed positive correlation highlights the strong link between internal resilience and net domestic purchases by foreign investors.

Figure 0.7. Foreign investors' purchases and fiscal policy resilience



Note: * The Policy Resilience Index is described in OECD (2009a). Policy-Resilience Index calculated using 2008 data.

Source: Based on IFS data and OECD (2009a).

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Fiscal aspects

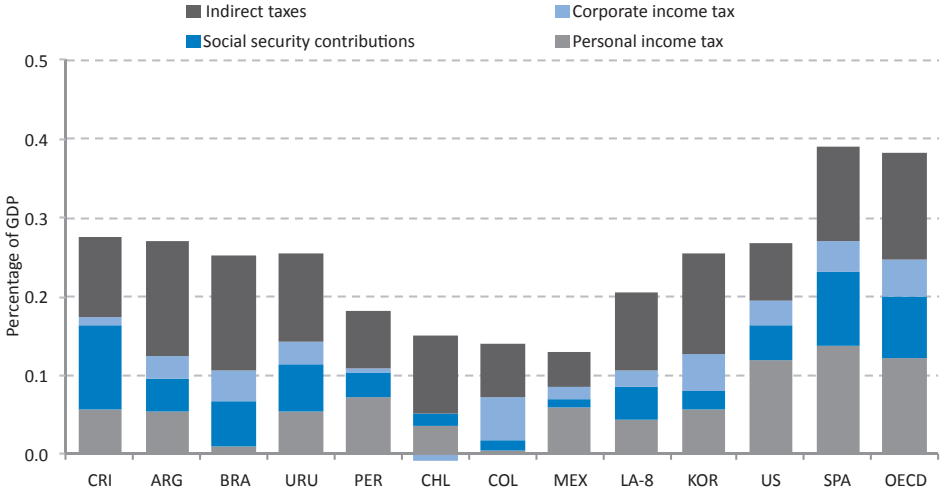
Historically, fiscal policy in the region has been at best acyclical, and often pro-cyclical: that is, in good economic times governments spend more and in bad times they cut back. This runs counter to conventional textbook recommendations for macroeconomic management, which counsel counter-cyclical fiscal policy, using government spending to ameliorate the worst effects of a recession for example. There is a political angle of course, but specifically economic problems for Latin America in running counter-cyclical policy include the small size of automatic stabilisers in the region and its relatively narrow scope for discretionary policy.

In Latin America, the sort of automatic stabilisers that benefit other economies have very little impact because of the small tax base (on the revenue side) and low unemployment benefits (on the spending side – see Chapters 1 and 2 for more on this). Output semi-elasticity of total taxes is around 0.2 – only half the size of observed automatic responses in OECD economies (Figure 0.8).[8]

Counter-cyclical policy in Latin America depends particularly on discretionary measures, given the limited effect of automatic stabilisers in the region.

Counter-cyclical fiscal policy is thus left to discretionary measures. The scope for these in turn is typically constrained by a significant deterioration of fiscal balances during recessionary episodes, led by weakening commodity-related revenues. Such revenues tend to be both highly responsive and positively correlated with the economic cycle and can have a significant, if temporary, effect on fiscal balances. Rather than automatic stabilisers, many economies in fact faced an "automatic fiscal deficit" further constraining scope for counter-cyclical measures.

Figure 0.8. Output elasticity of total taxes



Note: Unweighted OECD average, excluding Chile and Mexico.

Source: Daude *et al*. (2010) for Argentina, Chile, Costa Rica, Mexico, Peru and Uruguay; de Mello and Moccero (2006) for Brazil; and Girouard and André (2005) for the rest.

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Figure 0.9 shows net fiscal structural balances between 1990 and 2009 for eight countries in the region. Structural fiscal balances (the black line) represent the fiscal balance if GDP had been at potential with no cyclical gap.[9] Thus, if other revenues and spending grow smoothly at a rate equal to potential growth, the structural budget balance would remain constant. A decrease in the structural balance can thus be interpreted as a net "discretionary" stimulus (be it from a reduction in the growth of tax revenues or higher growth in fiscal spending).

Comparing the black line with the bars in Figure 0.9, discretionary policy thus defined is clearly pro-cyclical in Argentina and Uruguay, and acyclical in the remainder of the countries in the figure. Argentina's and Uruguay's pro-cyclicality was most evident during the 2001 crisis. During this their governments had no fiscal scope to counteract economic collapse – fiscal resources and access to capital were both severely reduced, resulting in a painfully pro-cyclical response to the crash. Other countries, while less obviously pro-cyclical, exhibit no clear counter-cyclicality. In most countries, boom years without precautionary fiscal policy are followed by recessions during which credit is unavailable. How can this pattern be broken?

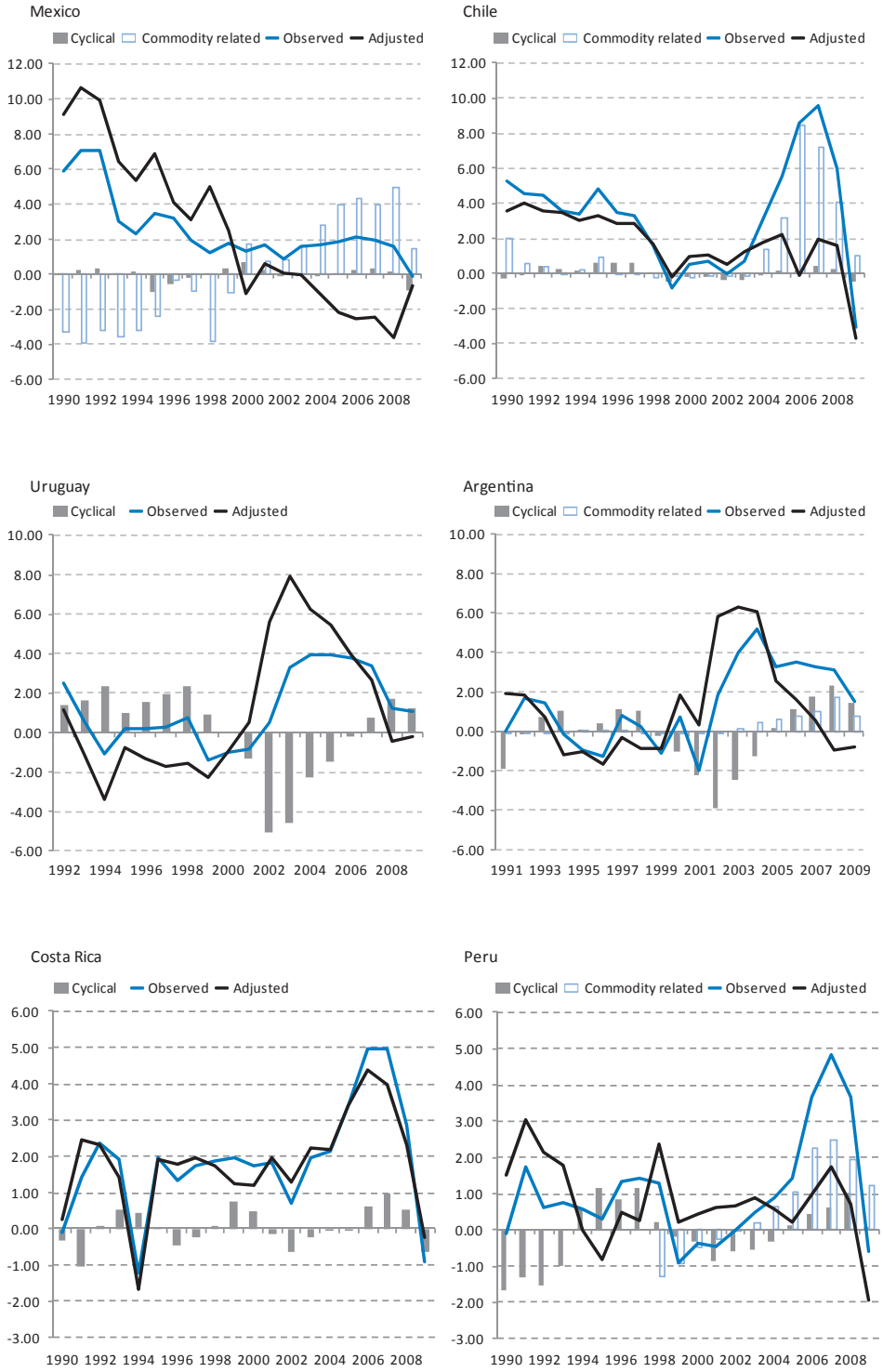
A balanced structural budget is not enough; governments should run precautionary surpluses in the good times to give them the discretionary headroom they will need in recessions.

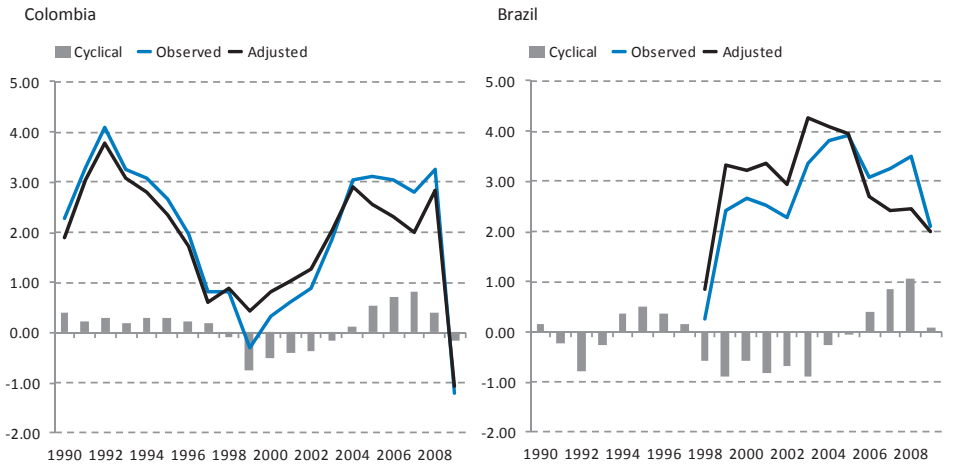
Governments have an opportunity to establish their credibility during the height of the economic cycle. Because they cannot rely on automatic stabilisers, it is not enough to aim at a balanced structural budget. Governments need a pro-cyclical structural balance, building assets on top of any accumulated by automatic stabilisers, by running precautionary surpluses in good times that may be put to use during recessions. Figure 0.9 shows that Chile, and to a lesser extent Peru, did just this in the years leading up to the crisis, maintaining a positive structural balance when enjoying a commodity boom.

In most Latin American countries, the post-crisis stimulus programmes did not jeopardise the credit standing of their governments. This suggests that countries designed their packages taking sustainability and credibility constraints seriously.

Building market credibility is expensive. Fighting demands for increased spending in good times, when resources are by definition available, means governments must expend large amounts of political capital to exercise restraint. It is also economically costly since governments might need to save more than the level that would be dictated by a simple precautionary "rainy-day" motive while they first build their credibility.

Figure 0.9. Cycles and observed primary and structural balances
(percentage points of GDP)





Notes: Primary budget balance is adjusted for deviations of GDP and commodity prices (for Argentina, Chile, Mexico and Peru) around their trends. Non-financial public sector figures in Argentina, Colombia, Mexico and Uruguay, and general government figures for Chile, Costa Rica and Peru (ECLAC-ILPES and IDB databases).

Source: Daude *et al.* (2010).

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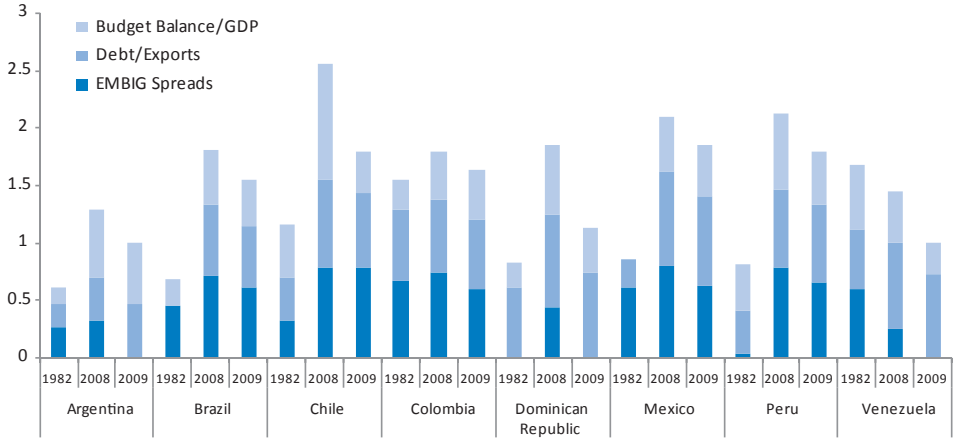
The funds so accumulated can be used to reduce government debt, but they can also be used to create reserves or precautionary funds. These have the advantage of being able to provide liquidity during a liquidity crunch. They serve also as visible collateral, discouraging the creation of self-fulfilling capital crunches and/or interest-rate rises.

There are political as well as technical difficulties in determining how large a surplus to run.

Such fiscal discipline is not easy. Aside from the political pressures, it is technically hard to determine how much of output growth during boom years is permanent (affecting potential growth) and how much is cyclical – a combination of problems that usually results in over-optimistic forecasts. This uncertainty exists when making such estimates in any economy, but is accentuated in emerging ones where both production and terms of trade are more volatile. Nevertheless, successive reforms have given hope that, at last, a significant and long-lasting improvement is in the offing.

Figure 0.10. Fiscal-resilience index
(pre-1980s crisis, pre-2009 crisis, 2009)



Note: The Fiscal-Resilience Index is described in OECD (2009a).

Sources: Based on World Bank GDF and WDI databases, ECLAC (2010) and the IMF IFS database.

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Prudence builds resources, but these are finite and use of the war chest to fund counter-cyclical measures depletes it, particularly over the course of a prolonged crisis (Figure 0.10). It is worth noting, nonetheless, that by the end of 2009 fiscal policy remained more resilient than at the *onset* of the 1980s crisis. Were the global crisis to enter a new and deeper phase, other things being equal, the economies of Latin America might expect to suffer more than they have in their most recent recession, but still far from the debacle that followed the 1980s. The exception to this brighter pattern is Venezuela, which shows steady weakening from its once leading position.

Measured by resilience, Latin America still remains better placed than at the outset of the crisis of the 1980s.

Monetary aspects

From the 1990s onwards Latin American countries began to rein in the pervasive inflationary dynamics that had done such harm to their economic development for so long. The mechanisms by which this shift was achieved were similar: fiscal prudence and *de facto* independence for the central bank, which was given an unequivocal mandate to control inflation. With the move to flexible exchange rates, inflation-targeting regimes were introduced to anchor inflationary expectations. Generally, although central banks allowed exchange-rate flexibility in the medium term, the monetary authorities adopted a policy of loose foreign-reserve management aimed at smoothing out any potentially disruptive short-term capital flows or current-account swings which could in turn trigger a liquidity crisis.

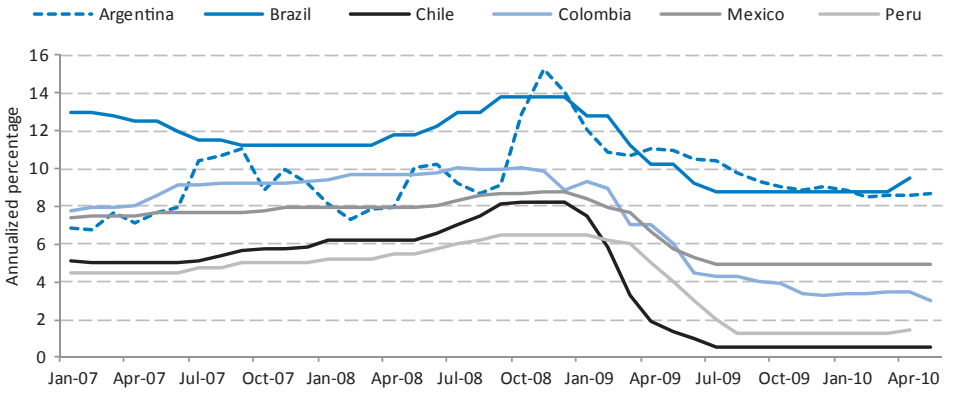
Upward pressure on exchange rates during 2007-08 led to central banks accumulating significant reserves – reserves that were to prove useful, in combatting the global liquidity shortage after September 2008. Stability in external balances, coupled with a flexible-exchange rate policy, then allowed many countries to adopt a successful expansionary monetary-policy stance during 2009.

The success of monetary policy can be seen in the reductions in interest rates during 2009 – reductions that were not accompanied by a rise in inflationary expectations (Figures 0.11 and 0.12). Control of inflation (and credibility over inflationary expectations) meant that real wages did not collapse, as they generally had done in previous Latin American crises.

Monetary credibility, won from the 1990s onwards, was rewarded by this crisis not being accompanied by a collapse in real wages.

As with aggregate economic performance, it is still too soon to quantify how much of this monetary success was due to internal or external factors. On the one hand is the region's hard-earned central-bank credibility and on the other improving external conditions, including the increased liquidity in OECD countries which led to low interest rates around the world. Differences in the responses of different Latin American economies are certainly suggestive that acquired domestic credibility, if not the only factor, did contribute in no small measure to the effectiveness of monetary policy. Furthermore, monetary policy – measured as control of inflation, reserve accumulation and exchange-rate flexibility; – remained mostly intact by the end of 2009, despite the pressure on reserves from their active use to counteract episodes of liquidity scarcity.

Figure 0.11. Interest rates in selected Latin American countries
(2007-10)



Notes: Peru — *Tasa de referencia de politica monetaria*; Colombia — *Tasa interbancaria*; Chile — *Tasa de politica monetaria*; Mexico — *Tasa de interés interbancaria de equilibrio a 28 días*; Brazil — *Selic rate; Argentina — Tasa interbancaria*.

Sources: Central bank databases and Thomson Datastream, 2010.

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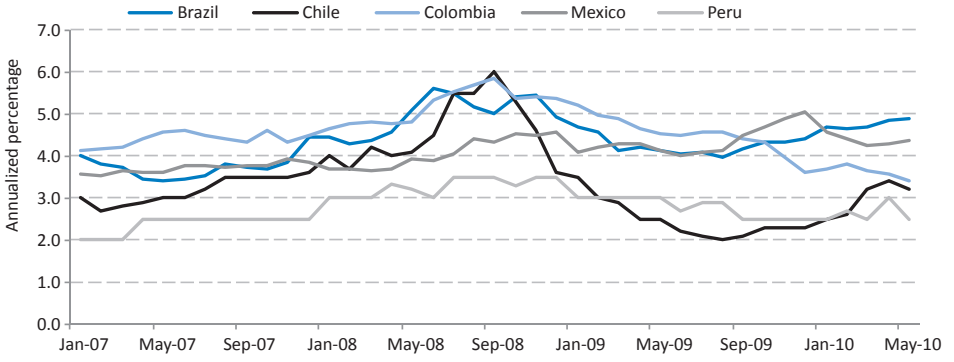
Figure 0.12. Inflation expectations in selected Latin American countries
(2007-10)



Notes: Inflation expectations constructed from national private sector surveys. Inflation expectations for the next 12 months (with the exception of Peru). For Peru, from January 2007 to February 2007, inflation expectation for 2008; from March 2007 to November 2007, inflation expectation for 2009; from December 2007 to January 2009, inflation expectation for 2010; from February 2009 to January 2010, inflation expectation for 2011; and from February 2010 to May 2010, inflation expectation for 2012.

Source: Central bank databases, 2010.

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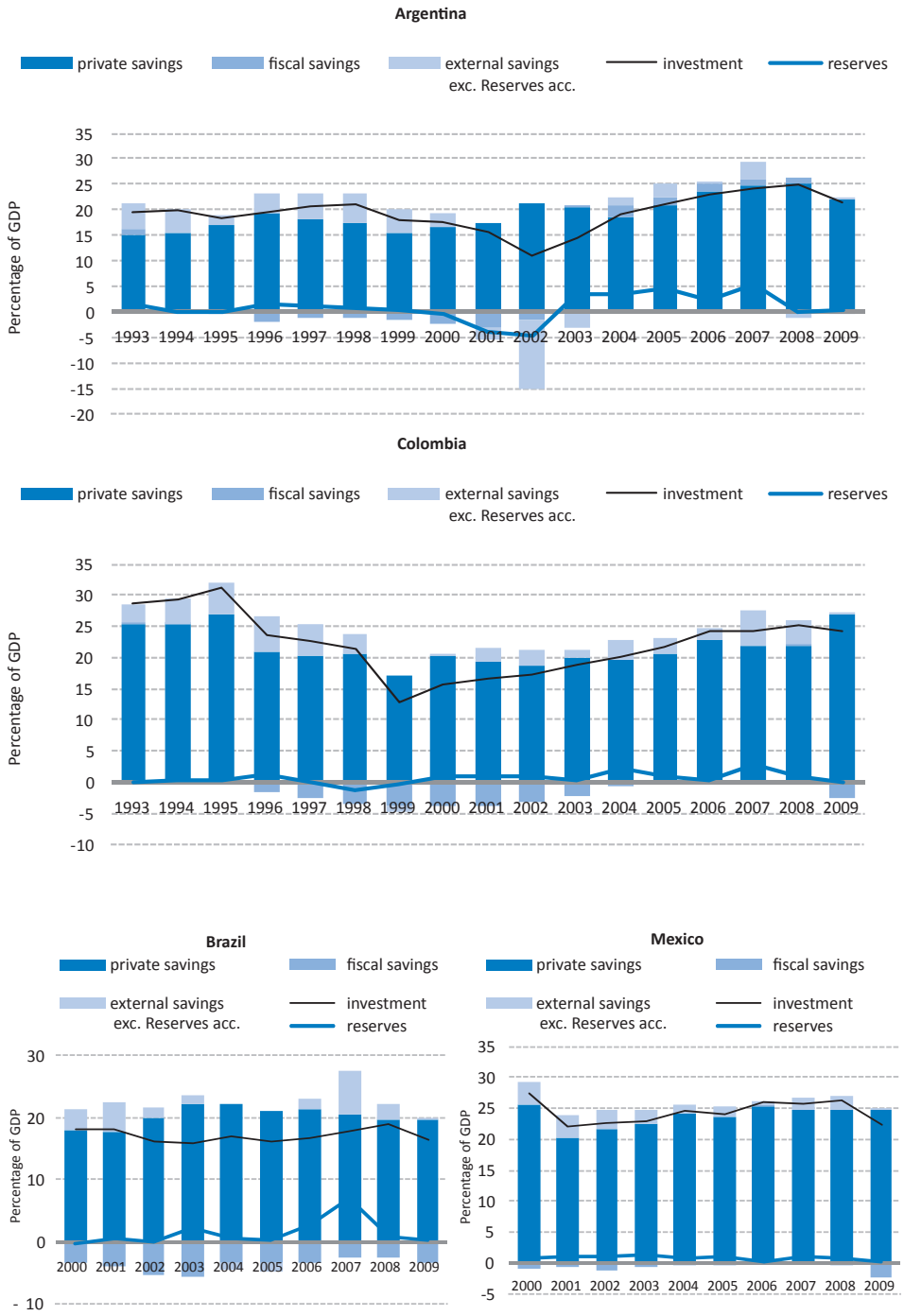
THE BALANCE SHEET

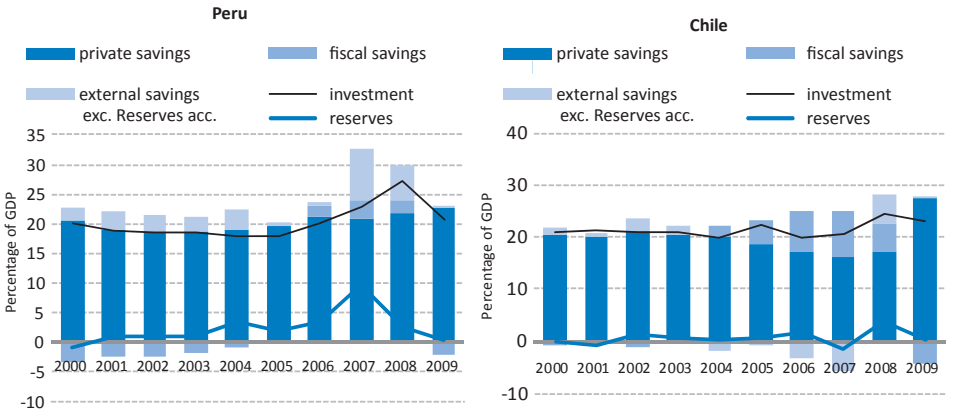
The crisis has damaged the balance sheets of OECD members, but is the same true in Latin America?

Where does Latin America stand after the crisis? Since early 2010, OECD governments have started to look at the damage to their own balance sheets, which have suffered greatly as a result of their counter-cyclical stimuli. Latin America as a region has a long history of episodes of unsustainability, not only in terms of the balance sheets of its governments, but also within its private sector and in the relationship of both with the rest of the world. It is therefore natural to look at where balance sheets are now in Latin America. We assess

these by breaking total savings down into key qualitative components: fiscal (government) savings – the difference between total government revenues and expenditures; private-sector savings – the excess of saving by households and firms over their investment expenditure; and external savings – net capital inflows from abroad less foreign-reserve accumulation.

Figure 0.13. Composition of savings flows
(1993-2009)





Note: Total net external savings are decomposed into external savings excluding reserve accumulation (bar) and reserve accumulation (line).

Source: Based on ECLAC database.

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The corresponding data are shown as a proportion of GDP for selected Latin American countries in Figure 0.13. A negative value can be interpreted as a "financial need" – in the case of the private sector, financial need would be the excess of investment over savings. External savings – equal to current-account deficits – have been disaggregated further into net capital inflows and changes in foreign reserves.

Exchange rate management, and reserve accumulation, prevented an investment boom and provided liquidity in the face of external pressures.

The figure shows that during the boom years leading up to the 2009 crisis, positive net capital inflows did not translate into lower domestic savings or an investment boom. This is in notable contrast to the position in Colombia and Argentina prior to their 1999 and 2001 crises. The difference this time was reserve accumulation. Central banks were clearly actively using monetary policy to smooth liquidity inflows from abroad. Although exchange-rate interventions have proven costly and ultimately ineffective when trying to set long-term exchange rates, they have proven useful in managing volatile capital markets over the shorter term. Several countries used their accumulated reserves to counteract sudden liquidity pressures from abroad during the crisis.

The public sector, it seems, has weathered this crisis better than previous ones. Can the same be said of the region's banks?

BANKING POST CRISIS

If any further proof were needed that a sound financial sector is a key to the stability and growth of an economy it can be seen in how the 2009 crisis flowed out from problems in the financial sector of the developed world. In particular, low domestic savings and underdeveloped private capital markets in Latin American countries make firms and households highly dependent on the financial system.[10] We therefore look now at how the financial systems of Latin America have weathered the crisis and then how they might be developed and deepened in the face of the current economic background.

The impact of the crisis

Better prudential regulation, on a counter-cyclical basis, helped protect the region's banks during the crisis.

Latin American financial systems have held up remarkably well during the current crisis, in sharp contrast to the aftermath of previous ones – of which the region has seen many.[11] Good management of fiscal and monetary policies helped the whole economy as we discussed earlier.[12] But the banks were also supported by greatly improved regulation and supervision. The lessons of previous crises may have been very expensive, but they have been learned in terms of better – and counter-cyclical – prudential regulation (see Box 0.2).

Box 0.2. Taking measures to face the future: counter-cyclical regulation in Latin America

From roughly 2000 onwards, many countries in Latin America have adopted a new approach to prudential regulation. They have moved to a model where monitoring focuses on risk assessment and regulation uses tools to mitigate this risk.

Their basis has been the Basel agreements on convergence of capital measurement and capital standards (BIS, 2006). Within this framework many Latin American countries are working towards risk-measurement techniques, under which required capital and loan provisions reflect the assessed probability of default of borrowers and the potential recovery of collateral. Regulators in Brazil, Chile, Colombia, Mexico and Peru have committed to the full implementation of the Basel standards (by varying dates between 2011 and 2016), and have already put in place most of the necessary statistical systems for measuring market and credit risk.

This focus on the immediate exposure of banks has the danger of leading regulators into a pro-cyclical trap in which prudential rules get tougher in bad economic times. This would amplify a credit-crunch, since credit-risk measures will rise and so reduce banks' capacity to make new loans. An example is the use of published credit ratings in setting banks' capital requirements, which will transmit the pro-cyclical effect of the rating agencies to the activities of the regulated banks.[13]

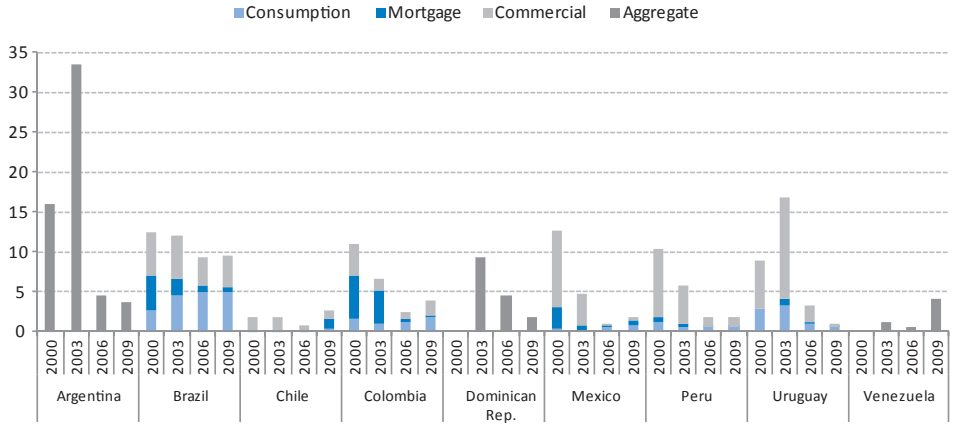
Some regulators in the region have, therefore, introduced measures to smooth any cyclical deterioration in the quality of banks' balance sheets in time of crisis through the inclusion of savings in good times. As an initial step, countries including Colombia, Peru, Chile and Uruguay adopt a loan provisions policy that increases banks' provisions above those required in the past with the aim of securing additional resources for use in potential crises.

The stability of the financial systems in the countries that have taken this approach in the face of the global crisis is evidence of its success. Nevertheless, it probably does not go far enough in incorporating clear counter-cyclical elements to ensure the continued availability of credit at a reasonable price.

Effective counter-cyclical regulation needs to be based on quantitative measures of risk and provide clear guidance on the use of the resources it requires to be put aside. Colombia, Peru and Uruguay have made considerable efforts in this direction since 2008.[14] Loan provisions are broken down into two types: a pro-cyclical element that represents risk quantification; and a counter-cyclical one that represents savings in good times to counter credit deterioration in bad. Behind these, clear rules state how the resources thus diverted can be used.

A first sign of the improvement can be found in the quality of banks' loan books, (Figure 0.14). The ratio of non-performing loans to total loans is a proxy for loan quality; when the ratio is high, the quality of loan portfolios is low. Having started high in most countries in 2000, it has fallen significantly since, with the improvement most notable in commercial and mortgage loans.

Figure 0.14. Non-performing loans to total loans
(percentages 2000-09)



Note: Owing to differences in national accounting and supervisory regimes, this information is not strictly comparable across countries.

Source: National central banks and supervisory institutions.

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The impact of the crisis can be seen in the deterioration between the figures for 2006 and those for 2009, for example in Brazil, Chile, Colombia, Mexico, Peru and Venezuela. Household consumption loans were most affected by the crisis. Nevertheless, the deterioration was small and ratios remain well below the levels observed during earlier episodes of financial instability.

Cross-country comparisons of loan quality need to be treated with care since national authorities define "non-performing loans" in different ways. However, it can be noted that the non-performance ratio is below 5% in most of our sample countries (close to 3.5% on average in 2009), and generally lower than observed in other emerging regions.[15]

Other financial indicators show similar results. The ratio of provisions to non-performing loans, for example – a measure of the available cushion in case of adverse shocks – show the largest Latin American countries remaining above 100% throughout the crisis, again comfortably above other emerging countries.[16] Given continuing uncertainty in the region, higher provisions act to promote the stability of domestic financial systems and access to financial services.[17] Liquidity measures, which measure the capacity of banks to face market shocks and bank runs, likewise remain at levels similar to those observed prior to the crisis.[18]

Measures of financial health show the region's banks in relatively good shape, and stronger than their emerging peers.

Capital ratios provide additional useful information regarding the solvency of the financial sector. Most of the countries in the region have seen the ratio of bank capital to assets maintained or even increased. A more nuanced measure is the capital adequacy ratio, which takes account of the risk-profile of the underlying assets. In general, national authorities in Latin America require banks to maintain a higher capital adequacy ratio – capital over risk-weighted assets – than the 8% established in Basel I.[19] And, in most countries in the region the observed capital adequacy ratios are above even these higher levels. Among the largest countries in the region, the capital adequacy ratio is either above or similar to that observed prior to the global crisis – an average for the region of 15.6% in 2009 against 15.0% in 2006.[20]

This is not to say that there is room for complacency among the regulators or banks. Two potential structural exposures in particular remain: interest-rate mismatches in those countries where loans are typically at fixed rates while deposits are at variable rates; and currency mismatches more generally. The

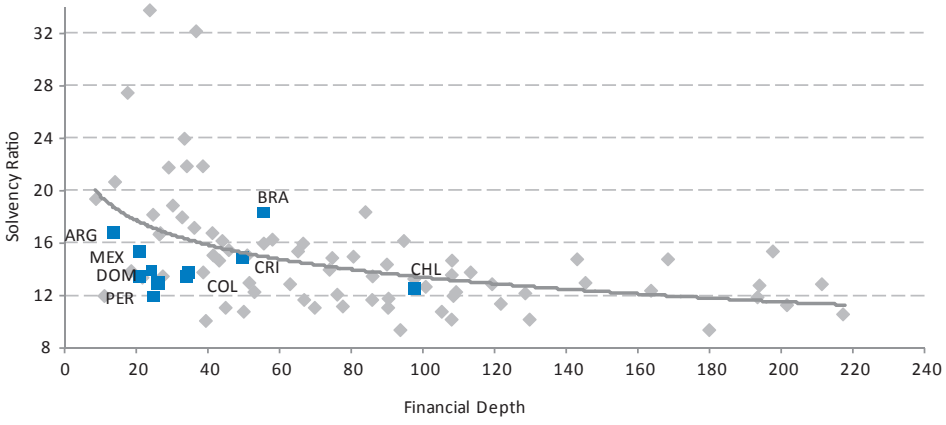
interest-rate exposure may come to the fore if monetary policy tightens in response to inflationary pressures as the crisis recedes.

Currency and interest-rate mismatches could be the target of both financial literacy and regulation.

Currency mismatches – where households and firms have obligations denominated in a different currency from their revenues – creates an exposure for the private sector, and consequently a risk to the stability of the financial system. This typically arises from the so-called "carry trade" where borrowers take loans in a currency which has a lower interest rate than their local currency.[21] They gain an immediate cash saving at the cost of exposure to potentially large increases in the capital owed if exchange rates move against them. Given the hidden nature of these costs (at least until they materialise), the best ways to address the issue will be through promoting financial literacy and prudential regulation. Regulators can provide information about the risks associated with foreign-currency loans and introduce regulatory measures to reduce the attractiveness of such business to lenders. The good news is that while interest rate differentials still exist – rates in Latin America tend to be high – there is a trend toward lower exposure to foreign currency in several countries of the region.[22]

Overall, then, the picture is bright, or at least much brighter this time round. There is plenty of evidence that Latin American banks are largely solvent – but this does not mean that the financial system is contributing all that it could to economic development. High capital adequacy ratios in the region are associated with low loan-to-GDP ratios, suggesting sub-optimal levels of financial intermediation (Figure 0.15).

Figure 0.15. Solvency ratio and financial depth
(Latin America and the rest of the world; 2008)



Notes: Latin American countries (Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Mexico, Peru, Uruguay and Venezuela) are indicated by a square.

Financial depth is defined as the ratio of domestic private loans to GDP and the solvency ratio is defined as Bank Regulatory Capital to Risk-weighted Assets.

Sources: Based on IMF (2010b) and World Development Indicators (World Bank).

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Financial deepening

Given their relative strength, are the region's banks doing all they could for development?

Achieving greater financial depth remains probably the main challenge for the financial systems of Latin America. Financial depth – as measured by the ratio of total loans to national income – has improved since 2000 in many of the region's economies. Nevertheless, with the exception of Chile, Latin American countries still have shallower financial systems than economies elsewhere in the world.[23]

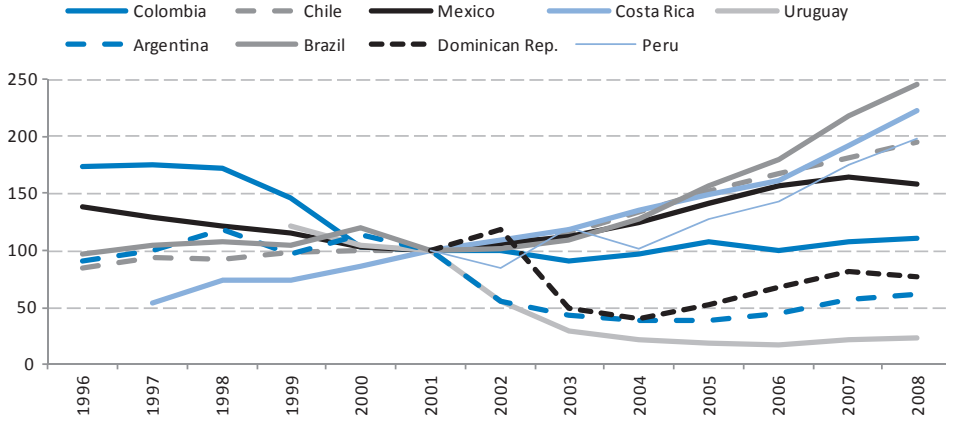
Financial depth is closely associated with the capital adequacy of banking systems. Figure 0.15 compares the ratio of private loans to GDP (as a measure of financial depth) with the solvency ratio (for capital adequacy). Blue squares represent the largest economies in Latin America. As noted earlier, with the exception of Chile, the region has low financial depth (35% on this measure, against 76% for the rest of the world) while the capital adequacy ratio of the region (14.5%) is close to that of the rest of the world (14.8%).

As we have already noted, the two measures are not in general independent, high solvency ratios being explained in part by low financial depth. This is in particular evident for developing and emerging countries. Solvency ratios above 20% are observed only for countries with a financial depth below 40% of GDP. Likewise most countries with a solvency ratio higher than 15% have financial depth below 100% (the exceptions being Hong Kong, China; Luxembourg; Singapore; and Switzerland).

The challenge is to expand lending to the private sector while maintaining solvency ratios; some countries are already succeeding in this.

For Latin American countries the ratio lies near or below the average for their depth of financial system (depicted by the logarithmic function in the figure). This implies that a main challenge for the region is to increase private lending without reducing the solvency of the financial system. Lending growth will have to be linked to the private sector's capacity to pay. Measuring this as the ratio of household loans to labour income at the national level reveals how past banking crises have wrought damage throughout the region (Figure 0.16). In those countries that suffered (Argentina, Colombia, Dominican Republic and Uruguay), the ratio remains even today below its pre-crisis level. On the other hand, the analysis confirms that sound financial supervision and regulation can permit the ratio to expand in a sustainable way. In Brazil, Chile, Costa Rica and Mexico, the loans-to-income ratio has grown steadily over the last eight years without jeopardising loan quality or the solvency of the banking system.

Figure 0.16. Household loans to labour income
(1996-2008)



Note: Rebased as 2001=100.

Source: National central banks and supervisory institutions, and ECLAC (2010) database.

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CONCLUSION

The 2009 global crisis affected Latin American economies strongly. Their deeper integration into the international markets for both trade and finance had the negative consequence of spreading the crisis to the region. But while they undoubtedly suffered, the performance of the region's economies was surprisingly strong particularly when compared to past crises, and this time their medium-term prospects have emerged largely unscathed. China's sustained demand for the commodity exports of the region and the timely monetary action of the international community, including IMF liquidity provisions, are two external factors that are undoubtedly part of the explanation. However, positive internal factors played a major role too including greater macro policy resilience, stabilised aggregate balance sheets and, for some countries at least, the ability to adopt counter-cyclical fiscal policies. Stronger financial institutions too were a factor, the result of financial sector reforms in most countries over the last decade.

Important challenges for the future remain. Sustained macroeconomic stability now needs to be institutionalised. Policies pursued based on the knowledge that good times are inevitably followed by bad have been demonstrably rewarded by a rapid recovery and strong performance. But once economies start growing this experience can start to fade. Sustainability of both external and fiscal balances needs to be secured against political pressures for short-term gains.

In the near term, interest-rate and currency risks remain important obstacles for domestic financial development. These risks will need to be addressed through public action such as regulation and education. But if the financial sector is to stop "punching below its weight" and play the role it should in development, its main challenge is to deepen its markets while maintaining sound lending practices.

NOTES

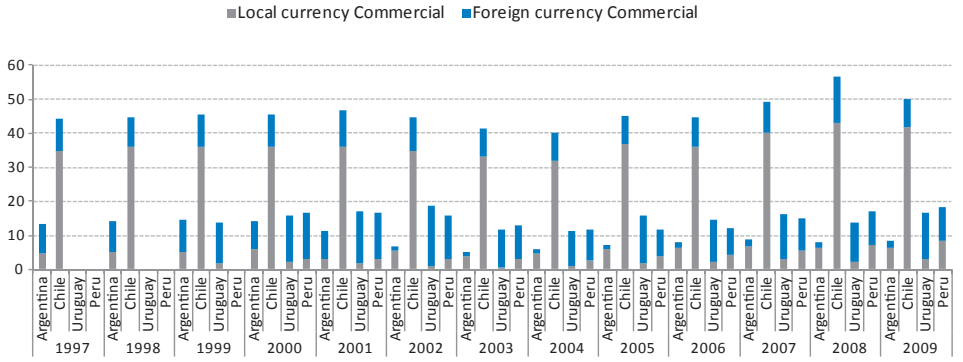
1. IMF (2010a).
2. IMF (2010a).
3. IMF (2010a).
4. OECD *Going for Growth 2010* notes that OECD countries must expect a reduction of 0.5 percentage points in potential growth for reasons unrelated to the crisis, in particular the slower growth in potential employment stemming from their ageing populations (OECD, 2010).
5. EMBI spreads are the interest rate premia of a country's public bonds relative to interest of US treasury bonds.
6. Domestic liabilities include foreign direct investment into the country, portfolio liabilities, credit in the capital account and "other liabilities" as classified by the IFS. This measure is only part of the more traditional measure of net capital inflows, as it does not include the purchase (or sale) of foreign assets by domestic agents. Although increasingly important, the latter purchases are part of the response rather than the external shock faced by each country.
7. More specifically, the "Policy Resilience Index" is the sum of the "Monetary Resilience Index" and the "Fiscal Resilience Index" discussed in the previous LEO.
8. The semi-elasticity is the increase in the tax/GDP ratio of four different sources of revenues when faced with an increase of 1 percentage point in the output gap.
9. Structural balances are defined as fiscal balances after adjusting for the cyclical effects of automatic stabilisers and, in Argentina, Chile, Mexico and Peru, the cyclical effects of fiscal revenues derived from commodity exports. These balances are illustrated as a ratio to potential GDP.
10. See Borensztein *et al.*(2008) for an analysis of the development of bond markets in the region.
11. One might cite any of the crises in the 1980s and more recently (in alphabetical order) Argentina in 2001, Bolivia in 1999, Colombia in 1999, Dominican Republic in 2003, Ecuador in 1998, Peru in 1999, and Uruguay in 2002. Moreover, external crises, such as Asia in 1997 and Russia in 1998, have provoked instability in Latin American financial systems. Such crises are characterised as long, deep and costly for the public sector (Reinhart and Rogoff, 2010).
12. Last year's *Outlook* (OECD, 2009a) looked at this in detail.
13. See Amato and Furfine (2003).
14. Glen de Tobón (2008).
15. The average of non-performing loans to total loans in 2009 for Asian, and Central and Eastern European emerging countries is close to 4.7% and 11.2% respectively (IMF, 2010b).
16. The Latin American average of bank provisions to non-performing loans is 165% in 2009, well above the Asian (108%) and Central and Eastern European (75%) averages for the same year (IMF, 2010b).
17. For an analysis of the main risks to corporate and household balance sheets see local financial stability reports (Banco Central do Brasil, 2010; Banco Central de Reserva del Perú, 2010; Banco Central del Uruguay, 2009; Banco Central de la República de Argentina, 2010; Banco de la República de Colombia, 2010; Banco Central de Chile, 2010).
18. Several indicators are used to measure the liquidity of a bank. See Banco Central do Brasil (2010), Banco Central de la República de Argentina (2010), Banco de la República de Colombia (2010) for descriptions of these.
19. For instance, capital requirements in Argentina, Brazil, Colombia, Peru and Venezuela are above the 8% established by the Bank of International Settlements.
20. However, most of this recent good performance in capital ratios is explained by a decrease in total assets rather than an increase in capital (see Izquierdo and Talvi, 2010, for an analysis showing the reduction in credit growth in the region in 2009). See IMF (2010b) for data on regulatory-capital ratios in emerging countries.

21. To give just one example, in Uruguay it costs 16.1% to borrow in local currency and just 6.1% in some foreign currencies (see Banco Central del Uruguay, 2009).
22. See statistical annex Figure 0.A1 for the commercial, consumption and mortgage loans made in foreign and domestic currency, for a sample of Latin American countries exposed to currency risk.
23. Figure 0.A2 in the statistical annex shows the ratio of loans to GDP broken down into consumption, mortgage and commercial components. Loan-to-GDP ratios lie below 50% for Latin American economies with the exception of Chile. On average, domestic credit to the private sector is close to 35% of GDP, contrasting with the levels seen in high-income countries (155%), East Asian and Pacific countries (100%) and even with middle-income countries as a whole (63%). (Data following Beck *et al.*, 2000 updated to 2008). See also Honohan (2006) and FELABAN (2007).

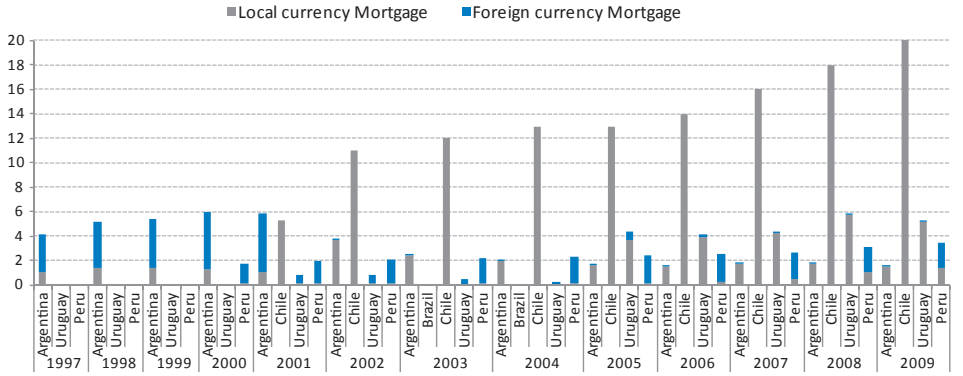
STATISTICAL ANNEX

Figure 0.A1. Currency denomination of financial system assets
(percentages 1997-2009)

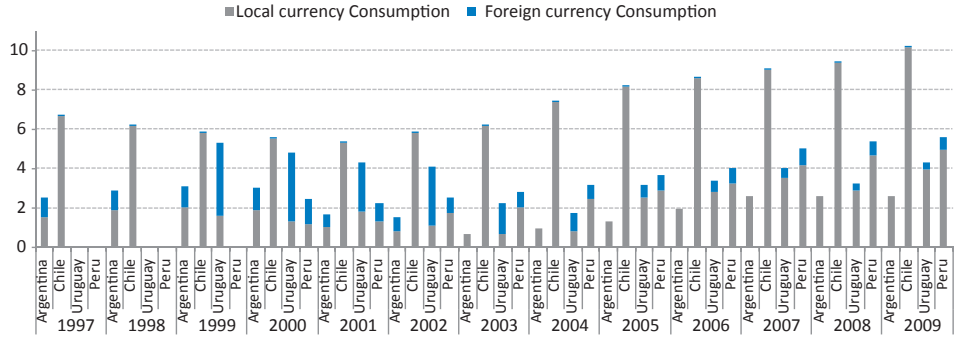
Panel A: Commercial loans to GDP



Panel B: Mortgage loans to GDP



Panel C: Consumption loans to GDP



Source: National central banks and supervisory institutions.

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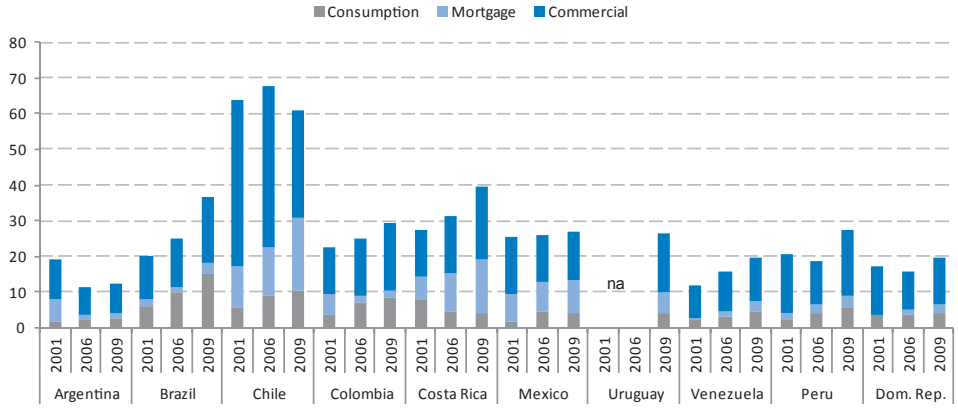
Figure 0.A2. Financial depth in Latin American countries – total loans to GDP
(total loans as percentage of GDP)



Source: National central banks and supervisory institutions.

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PART TWO

How Middle-Class is Latin America?

CHAPTER ONE
Middle Sectors and Latin American Development

CHAPTER TWO
Social Protection and Labour Informality in the Middle Sectors

CHAPTER THREE
Education, Social Mobility and the Middle Sectors

CHAPTER FOUR
The Middle Sectors, Fiscal Policy and the Social Contract

CHAPTER ONE

Middle Sectors and Latin American Development

ABSTRACT

The *middle sector* is defined as households with income between 50% and 150% of the national median. The relative size of Latin American middle sectors ranges from a high of 56% of the population (Uruguay) to below 40% (Bolivia, Colombia). Household survey data reveal that most middle-sector households are headed by a pair of adults, though the proportion is even higher among the affluent. In most countries, middle-sector working people are not as likely as the affluent to be public-sector employees such as teachers or civil servants. Nor is the middle sector the cradle of entrepreneurship: the share of entrepreneurs is highest among the affluent. Indices of mobility potential are computed to measure how "close" disadvantaged households are, on average, to the middle-sector threshold, and similarly, how close middle-sector households are to falling into the ranks of the disadvantaged.

What do the people in the middle – neither the richest nor the poorest in society – contribute to economic development? Many economists have recently begun to talk about the importance of the developing world's "middle class".[1] Others point to the size of the middle-class market and its potential role as a motor of growth, particularly in the largest developing countries such as China and India.[2] The long-run econometric analysis across many countries by New York University economist William Easterly, meanwhile, demonstrated that the existence of a sizeable and relatively prosperous middle class was significantly correlated with long-term growth.[3] Certainly, the growth of a segment of the population with higher living standards than those of their poorest compatriots signals success in the ongoing struggle to alleviate poverty, as well as offering new opportunities for entrepreneurs.

This year's *Latin American Economic Outlook* focuses on the fortunes of those in the middle of the income distribution in Latin American economies. If these middle sectors have stable employment and reasonably robust incomes, then, arguably, they provide a solid foundation for economic progress. Moreover, they might also support moderate but progressive political platforms in Latin America's democracies – the political role often attributed to middle classes by historians and sociologists. Indeed, as early as 1958, political scientist John Johnson formulated the influential thesis that middle sectors had emerged in many Latin American countries, and that they championed state-sponsored development, public education, social-welfare programmes and democracy itself.[4] Conversely, if those in the middle have precarious incomes and unstable employment, their consumption cannot be counted upon to drive national development, their growth cannot be taken as a sign of social progress, and their political preferences may veer toward populist platforms not necessarily conducive to good economic management.

This year's *Outlook* will characterise the middle sector and show how public policy might respond to its special features and needs.

This *Outlook* analyses the economic characteristics of Latin America's middle sectors, including their income levels, the kind of jobs they perform, but also their attitudes and values regarding inequality, economic policy and democratic politics more generally. We find that the middle sectors in Latin America are often quite economically vulnerable, subject to the risk of falling down the economic ladder. The precarious position of Latin America's middle sectors has to do with high levels of economic inequality, as well as a structure of economic institutions and incentives that have too often rewarded rent-seeking over formal-sector entrepreneurship, for example. Accordingly, we look carefully at the public policies that can protect the livelihoods of middle-sector households, and policies such as social protection and public education, that promote upward mobility more generally.

IDENTIFYING THE MIDDLE SECTORS

In order to assess the economic characteristics of the middle sectors of Latin American and Caribbean countries and compare these sectors over time and across countries, we need a precise definition. Briefly, we seek a measure with three characteristics. First, it must be based on data that are readily available for most countries in the region. Second, it should be a measure that allows us to compare countries at somewhat different levels of economic development, given that Latin America and the Caribbean countries span a considerable range of such levels; moreover, it would be useful to be able to compare Latin American countries with OECD countries, where development levels are higher on average. Third, our measure of the size of the middle sectors should be related in some consistent way to inequality in the economy: a larger middle sector should signal relatively lower inequality.

The key variable for identifying the middle sectors is income per head, which is taken from household surveys carried out in many Latin American countries. Income per head is computed on the basis of the household's total income, adjusted for the number of household members.[5] Income per head is converted to United States dollars and is further adjusted for differences in international prices – purchasing power parity – to allow comparison between one country and another. The household survey data sets furthermore contain information on the economic characteristics of middle-sector households that is useful for elaborating a statistical portrait of this group later in this chapter.

Income-based definitions of the middle sector can be relative or absolute. Relative measures allow for comparisons between societies at different stages of development.

The rule for determining a middle-sector income level can be relative or absolute. Thus, many recent studies have defined middle-sector income levels in absolute terms: for example, the World Bank's Martin Ravallion assigns households to the middle sector if their daily income per head is between USD 2 and USD 13 (in 2005 dollars on a purchasing-power parity basis).[6] An influential study by Abhijit Banerjee and Esther Duflo of the Massachusetts Institute of Technology, meanwhile, defines the limit of the middle sectors at USD 2 and USD 10 per day (roughly USD 800 to USD 3 600 per year). The lower bound of the range in both studies – two dollars a day – is the standard international poverty line. Absolute definitions like these are transparent and easy to understand, but they make it difficult to compare the size of the middle sectors across countries with different levels of economic development. Thus, using either the Ravallion or Banerjee-Duflo definitions, there will be sizeable middle sectors in China and India, relatively smaller middle sectors in upper middle-income economies like those of many Latin American countries, and virtually all households in OECD economies will be in the income category above that of the middle sectors.

For these reasons, this *Outlook*'s definition of the middle sector will be anchored at the median level of income per head – which varies from one country to another. By definition, there are exactly as many households ranked below the median household as ranked above. Median household income therefore does not suffer the same potential distortions as the mean, which can be pushed upwards by a small number of very high-income households. The middle sectors can then be defined as the group within some specified distance of the median.[7] Using a relative definition, of course, means that a Honduran with income close to the Honduran median household would be classified as belonging to the Honduran middle sector, but the same level of income would likely be too low to qualify for the Italian middle sector.

We consider the middle sectors to be those households with income per head between 50% and 150% of the median income. The 50% cut-off is frequently used by researchers as an internationally comparable poverty or low-income line in empirical studies of poverty and income distribution. A major OECD study on income inequality followed this practice and OECD statistics routinely use 50% of median income as a poverty line for OECD countries.[8] This is reasonable given that the middle sectors are meant to comprise households not on the lowest rung of the ladder of income distribution. Given that the middle sectors are not meant to include the relatively well-off, a symmetrical upper bound of 150% of median income is straightforward.

Relative measures also provide a direct link to inequality, a topic of importance to the region.

Finally, a definition of the middle sectors anchored around median income in this way varies with income inequality in a way that other relative definitions do not. The Easterly study discussed at the start of this chapter, for example, defines the middle sectors as those households in the second, third and fourth income quintiles. Under the Easterly definition, the middle sector will invariably comprise 60% of the population. Our definition, in contrast, has the attractive property that the size of the middle sector varies from one country to another, and in particular varies with income inequality.

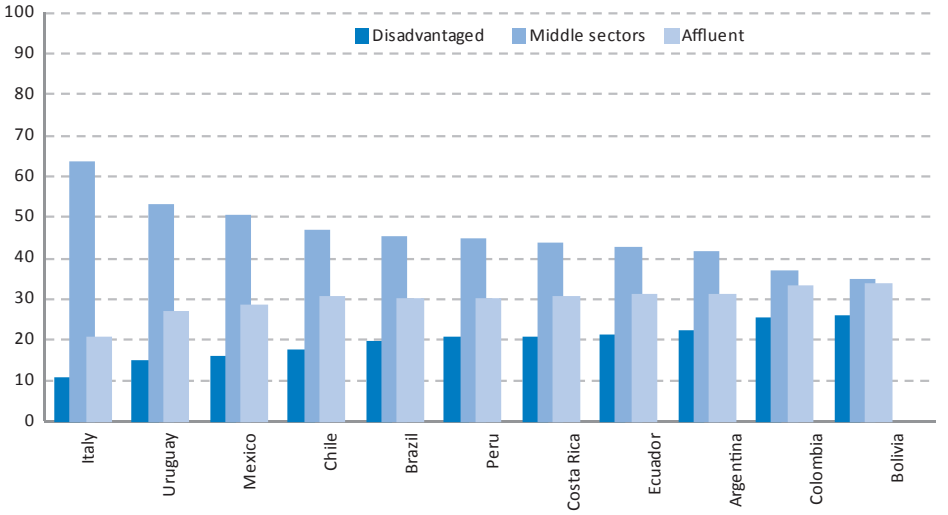
To summarise, we formulate a workable relative definition of the middle sectors:

> *The middle sector comprises those households with income between 50% and 150% of median household income. Those households whose income per head lies below the 50% threshold will be referred to as "disadvantaged"; those whose income lies above the 150% threshold will be referred to as "affluent."*

This is the definition that will be used in this *Outlook*.[9] For brevity we refer to it as the "50-150 definition".

Figure 1.1 illustrates the relative sizes of the middle sectors, the disadvantaged and the affluent in selected countries. The figures are based on household-survey data using 2006 as the base year and use total household income adjusted for household size. The countries examined (with survey years in parentheses) are Argentina (2006), Bolivia (2005), Brazil (2006) Chile (2006), Colombia (2008) Costa Rica (2006), Ecuador (2006), Mexico (2006), Peru (2006) and Uruguay (2005). Between them these ten countries cover more than 80% of the population of Latin America and the Caribbean.[10] Italy is included in the figure for purposes of comparison. The spectrum ranges from Uruguay (in which the size of the middle sectors is only 10 percentage points below Italy), through Mexico and Chile, with middle sectors around 50% of the population, to Bolivia and Colombia with middle sectors equal to just over a third of the population.

Figure 1.1. Size of the middle sectors in Latin America and Italy
(as percentage of total households, 2006)



Note: Data for Bolivia and Uruguay are from 2005, and Colombia from 2008. All estimations are based on households. A household is considered middle-sector if its income is between 50% and 150% of household median income.

Source: Castellani and Parent (2010), based on 2006 national household surveys.

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A STATISTICAL PORTRAIT OF THE LATIN AMERICAN MIDDLE SECTORS

The national household surveys in Latin America permit a closer look at the economic and demographic characteristics of middle-sector households in the light of our income-related definition, allowing analysis by age, household structure, labour-force participation and type of work.

Age

The cross-sectional evidence used compares different households at a single point in time, rather than the fortunes of a single household over time. For this reason, if for example the proportion of older households in the middle sector is lower than for younger households, one cannot conclude that today's younger households risk falling into poverty as they age. The difference may instead be a reflection that today's older households had fewer economic opportunities and have accumulated less wealth and education during their lives. Bearing this in mind, two patterns emerge in the relationship between age of household head and middle-sector status (Table 1.1).

In most countries, older households are more likely to be middle-sector than younger ones, a pattern consistent with wealth accumulation and social-insurance coverage.

First, in Mexico and Costa Rica the proportion of middle-sector households falls for older household heads, while in the remainder older households are in fact more likely to be in the middle sector than younger ones. The latter pattern is consistent with a life-cycle of wealth accumulation by households, and reasonably good social insurance coverage.

Table 1.1. How does the likelihood of being in the middle sectors change with age?
(age of household head in middle sectors, 2006)

	Share of cohort in middle sectors (%)					
Age of Household Head	**Argentina**	**Brazil**	**Chile**	**Costa Rica**	**Mexico**	**Uruguay**
Under 30	43.7	47.8	47.6	52.0	55.2	54.1
31-40	40.0	46.2	46.4	49.5	54.5	50.7
41-50	40.1	44.4	48.2	46.8	52.0	50.6
51-65	40.7	44.9	48.2	41.6	52.4	53.1
Over 65	54.5	58.2	55.1	38.5	50.0	63.5

Notes: Data for Uruguay are from 2005. All estimations are based on households. A household is considered middle-sector if its income is between 50% and 150% of household median income.

Source: Castellani and Parent (2010), based on 2006 national household surveys.

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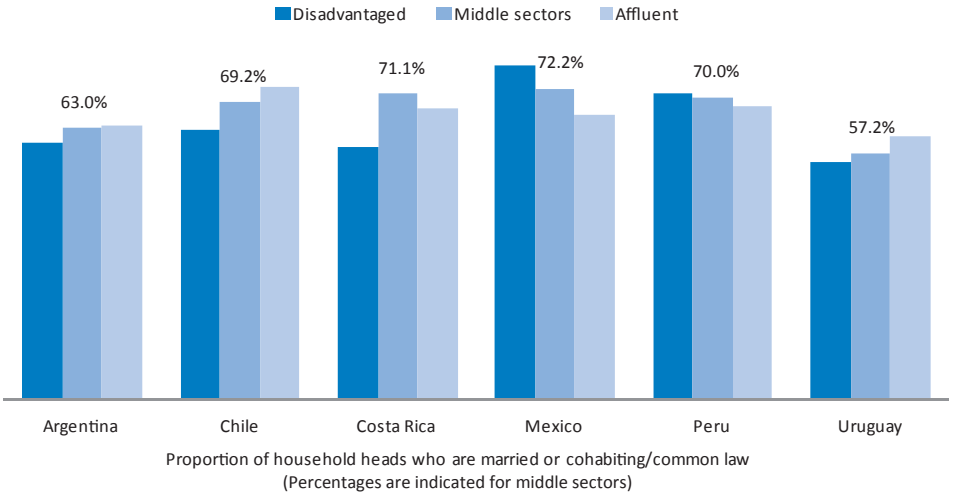
Marital status

Having a partner seems to be important, at least in securing a middle-sector income level (Figure 1.2). Between 57% (Uruguay) and 72% (Mexico) of middle-sector households are headed by a pair of adults, either married or living in an unmarried partnership. In all countries except Peru and Mexico, the share of married household heads rises with income; middle-sector household heads are more likely to be married than disadvantaged household heads, and affluent household heads are more likely to be married than either of the other two groups (in Costa Rica middle-sector household heads are more likely to be married than either of the other income categories). The differences among income categories, though statistically significant, are small. Not surprisingly, fewer households achieve middle-sector levels of income with a single head, be they separated, widowed, or unmarried and living alone. Changing household structure can by itself influence trends in inequality; an OECD study argues that changes in the composition of households have resulted in increased economic inequality in several OECD countries.[11]

Most middle-sector households are headed by a pair of adults, either married or living together.

Figure 1.2. Marital status of middle-sector households (2006)



Source: Castellani and Parent (2010), based on 2006 national household surveys (heads of household only).

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Employment and informality

Middle-sector working people are not most likely to be found among the ranks of government bureaucrats, despite stereotypical views to the contrary. The share of middle-sector workers employed in government services ranges from just under 9% in Peru to 21% in Uruguay (Figure 1.3).[12] It is in fact the affluent who have the highest proportion of household heads working for the government in all countries except Argentina.[13]

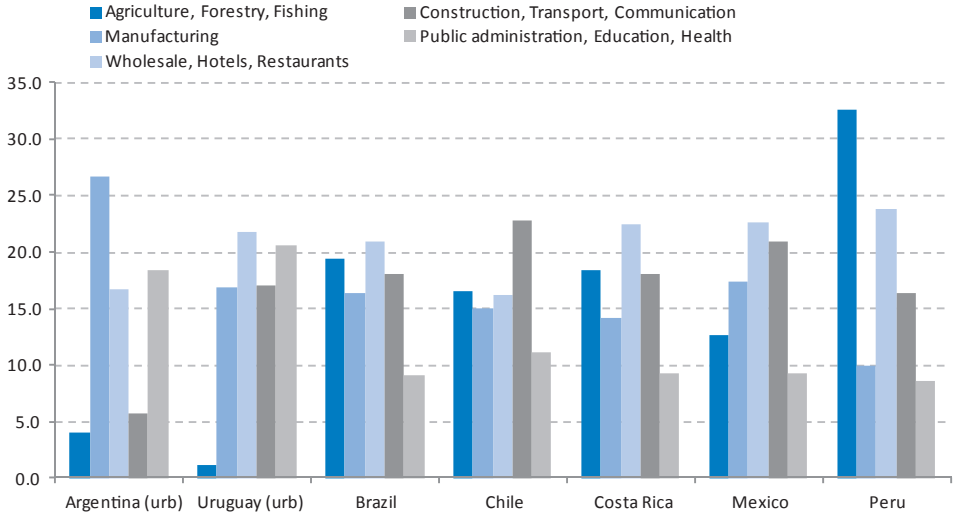
The stereotype of the middle-sector employee in government service is wrong: no single sector dominates their employment, and many are informal.

No sector is predominant among the middle sectors across all countries, though construction, transport and communication are relatively more important as sources of employment for middle-sector households than for disadvantaged or affluent ones in all countries except Peru and Uruguay (see Table 1.A1).

In addition to information on the principal sectors of employment of working middle-sector people, Table 1.A1 highlights differences in employment patterns among income categories. Sectors such as agriculture become relatively less important sources of employment as income rises in most countries: 45% of disadvantaged Mexican households, but only 5% of affluent ones, work in agriculture, for example. Conversely, employment in wholesale, hotels and restaurants becomes relatively more important in most countries as income rises.

Informality is a prominent feature of many working middle-sector households. Chapter 2 looks closely at information from Bolivia, Brazil, Chile and Mexico, and shows that a significant proportion of the Latin American middle sectors work in the informal sector (see Figures 2.3 to 2.6 in that chapter). The income category to which most informal workers belong in absolute terms (with the exception of Bolivia) is the middle sector – and there are more informal than formal workers among the middle sectors and the disadvantaged in all cases except Chile.

Figure 1.3. Main sectors of economic activity of middle-sector workers
(percentage of household heads working in a given sector, for middle sector)



Notes:

1) Figures shown are for the middle-sector household heads; for disadvantaged and affluent see Table 1.A1. in the statistical annex.

2) Columns may not total 100% as some sectors of economic activity are not reported here (see Table 1.A1. in the statistical annex).

3) Survey samples for Argentina and Uruguay include only urban households.

Source: Castellani and Parent (2010), based on 2006 national household surveys (household level).

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Education

On average, people in the middle sectors have 8.3 years of education, 3.7 years less than the affluent and 2.2 years more than the disadvantaged (see Table 3.1). In all countries the middle sector is less educated than the affluent and better educated than the disadvantaged. While the disadvantaged basically have just primary education, the middle sectors have some secondary education, but it is the affluent who on average exhibit the highest levels of education across all countries and age cohorts. In most countries, the educational attainment of the middle sectors is closer to the disadvantaged than the affluent. Chapter 3 looks at the whole question of education and the middle sectors in detail.

The educational profile of the middle sector – some secondary – is closer to the disadvantaged than the affluent.

Entrepreneurship

Many champions of the middle sector have stressed its importance as a cradle of entrepreneurship. Critics, in contrast, have argued that this specific group is not as entrepreneurial as its counterpart in other countries. The entrepreneurship of the Latin American middle sectors is therefore an interesting question (Box 1.1).

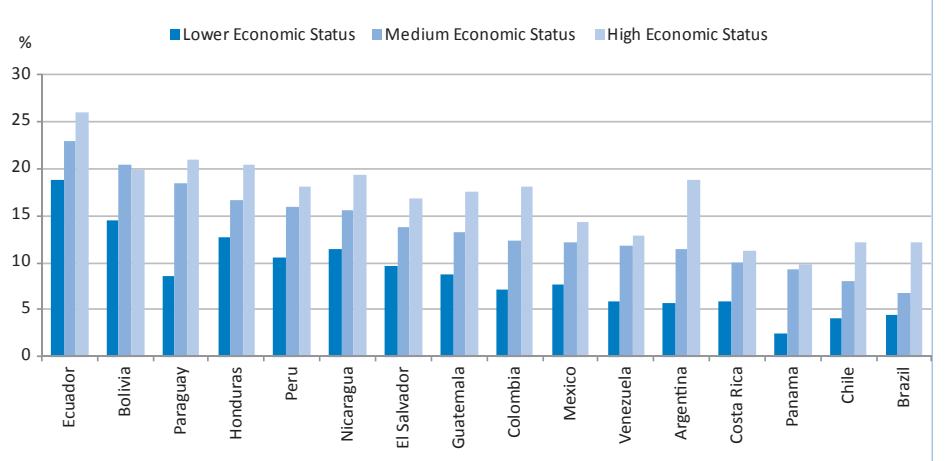
Box 1.1. Entrepreneurship and the middle sectors

Entrepreneurship is a powerful engine for economic growth, spurring a country's comparative advantage, creating jobs and accelerating innovation.[14] Entrepreneurs introduce innovative products and processes to the market place in situations where established corporations have fewer incentives to do so. Do the middle sectors play a role in entrepreneurship?

Even if talent is evenly distributed across the population, there are reasons to think the middle sectors should play an important role in entrepreneurship. In order to start a business, for example, a certain level of material and human resources is necessary, which militates against the disadvantaged. On the other hand, while the affluent have the resources, they may have much lower incentives to take risks because they are already at the top of the income distribution. Of course, the affluent may be well-off precisely *because* they are entrepreneurs. The causality may run in either direction, and survey data like those used here cannot always determine which factor is the cause of the other.

A rough empirical test of this proposition can be made using the *Latinobarómetro* surveys. These surveys, comparable across countries, include data on respondents' occupations that differentiate between four types of self-employment. This allows us to exclude farmers, the self-employed and salesmen – categories that may mainly be "necessity entrepreneurs" – and also professionals, given their somewhat special status. Unfortunately the surveys do not contain information on income which would enable us to identify the middle sectors using the 50-150 definition employed in the rest of this chapter. Instead we rely on the interviewer's perception of the economic status of the respondent, based on the quality of the respondent's housing and other characteristics. Figure 1.4 shows the average share of business owners within each socio-economic category over 1996-2008. Consistently across all countries in the sample it is the richest group of the population that has the highest share of entrepreneurs, rather than the middle sector.

Figure 1.4. Share of business owners by socio-economic sector
(average over survey years 1996-2008)



Note: Reported statistics are based on a question regarding occupational status with respondents affirming they were self-employed or owned a business.

Source: *Latinobarómetro* 1996-2008.

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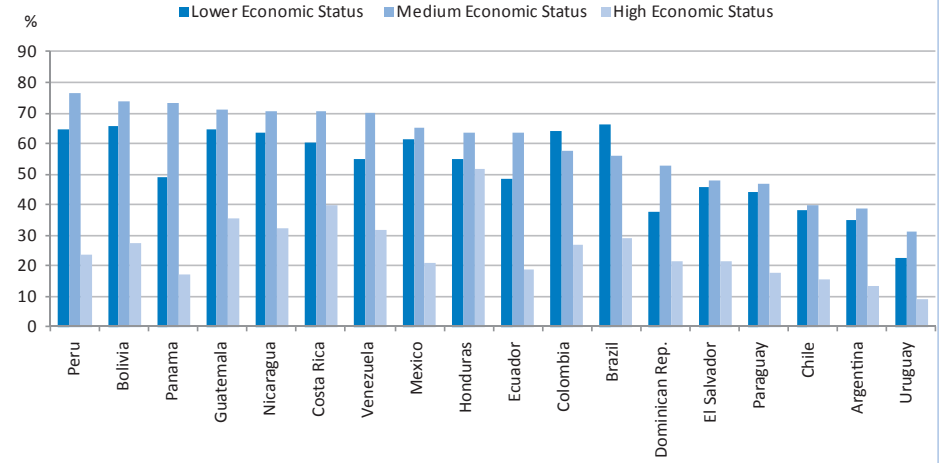
Attitudes to entrepreneurship

The *Latinobarómetro* surveys also provide information about attitudes towards entrepreneurship and opportunity. Interestingly, there are no systematic differences in attitudes to entrepreneurship across social groups – all share a common view of the importance of entrepreneurship for development, for instance. Also, an overwhelming majority of respondents across all income groups believes that opportunities for the affluent are larger than for others in their country.

Figure 1.5. Perception of the opportunities to become rich



Note: Reported statistics are based on responses to the question "Do you think that in your country a person who is born poor and works hard can become rich, or do you think it is not possible to be born poor and become rich?"

Source: Latinobarómetro, various years.

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However, there is one aspect where opinions differ significantly. The share of those identified as belonging to the middle sectors by the Latinobarómetro survey who believe that there are opportunities for a person born poor to become rich by working hard is substantially higher than that of the affluent (Figure 1.5). This raises several questions, not all of which can be answered in this *Outlook*. Are Latin American societies meritocratic, as so many low- and middle-income people seem to believe, or are these respondents simply over-optimistic about the prospects for advancement? Are market failures – such as poor access to credit, or bad infrastructure – thwarting the initiative of opportunity entrepreneurs?

Home ownership and access to financial services

Whether or not someone owns their house or apartment is closely linked to their access to financial services, since credit is generally needed for purchases of this type.

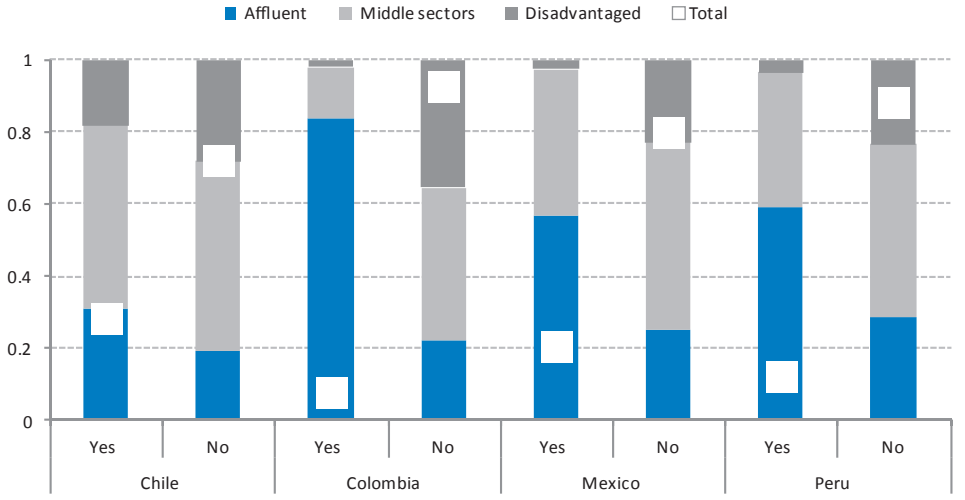
Access to finance is linked in turn to certain aspects of macroeconomic performance. Higher levels of financial access are usually accompanied by higher per capita income. However, on all indicators of financial development – for example, credit or deposits relative to GDP – Latin America consistently scores badly compared with OECD countries or even other developing countries. Many factors have been put forward to explain this: low confidence in the banking

sector, low capacity of households to accumulate savings, low bank penetration, inadequate competition, or inefficiency and high intermediation costs. There is certainly a problem with financial literacy among the large part of the population who lack awareness of the advantages (and costs) of financial services. At the institutional level, deficiencies in the legal framework undermine access, and there is also little competition in the banking sector in most countries.[15]

Lack of access to suitable finance seems to be holding back home ownership in the middle sector.

By facilitating home ownership, the mortgage market provides a genuine service to middle-sector consumers. It should also represent an attractive opportunity to banks in Latin America since mortgages are linked to the purchase of a non-tradable good. Yet the needs of most households in Latin America are not being served by this market. The white squares in Figure 1.6 show that in Chile, Mexico and Peru on average close to 80% of households do not have mortgage loans from the financial sector.

Figure 1.6. Access to the financial sector by income category
(proportion of households with loans for real-estate acquisition or improvement)



Note: Owing to differences in the questions in national households' surveys, this information is not strictly comparable across countries. However, all the questions are related to the financial access for housing activities.

Source: Based on national household surveys.

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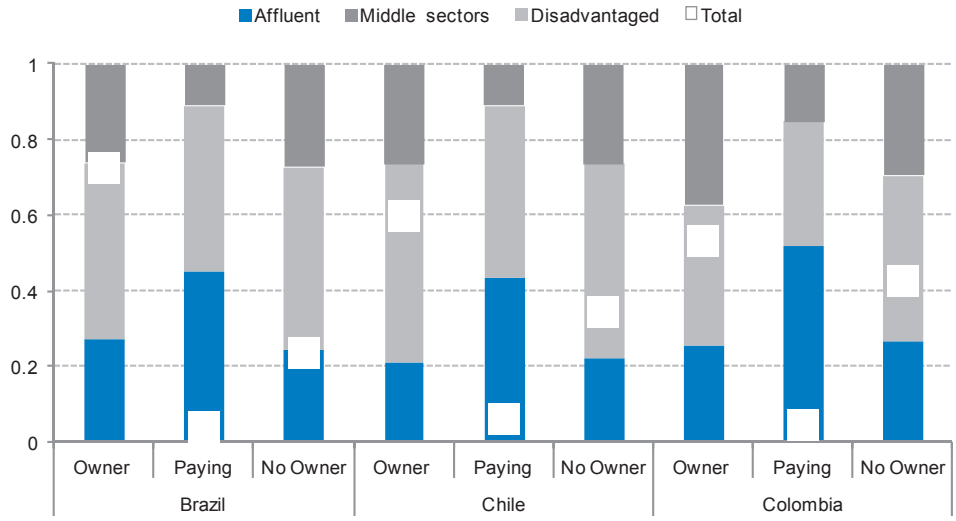
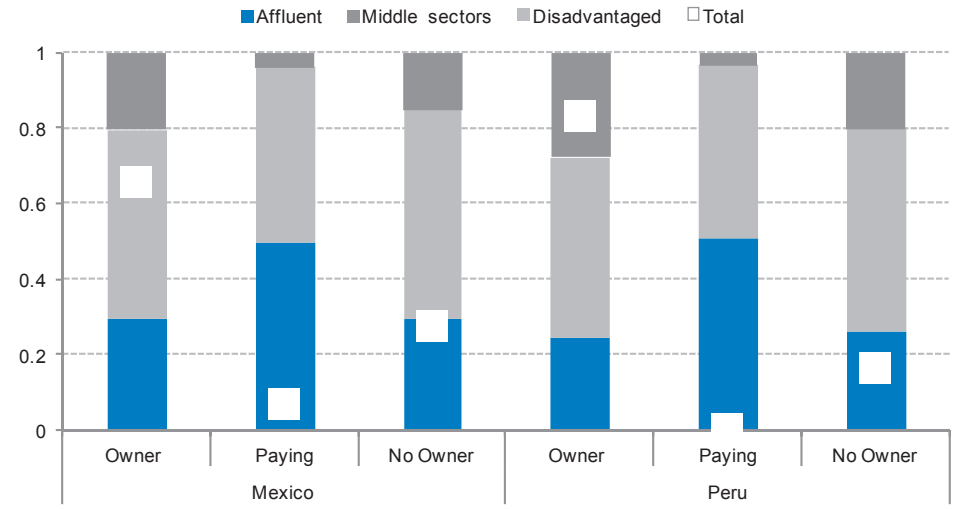
In Mexico and Peru, more than half of affluent households use the mortgage market, while less than 5% of disadvantaged households do. In Chile, these differences are lower: 20% of disadvantaged households and 30% of the affluent households use the financial sector for mortgage activities. On average across these three countries, close to 80% of the households without access to mortgages are from the disadvantaged and middle sectors.[16]

How prevalent, then, is home ownership in Latin America? Consistently more than half of households own their dwelling, ranging from 53% in Colombia to more than 80% in Peru (Figure 1.7). Less than 10% of Latin American households are paying off mortgage loans (indicated by the white square in the figure). Of this 10%, close to half are affluent households.

Figure 1.7. Real estate ownership in Latin America by income category





Source: Based on national household surveys.

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SOCIAL MOBILITY

Our 50-150 definition of the middle sector provides useful information about inequality in a country. A large middle sector, by this measure, means that a greater share of the total population is within reasonable distance of the median household income. A smaller middle class means that more households are at the extremes of the income distribution, most likely swelling the ranks of the disadvantaged. This section looks more closely at the income distributions in a selection of Latin American countries, in part inspired by the need for better information about prospects for social mobility.

The link between the middle sector and social welfare makes social mobility an important policy objective.

If a substantial and economically healthy middle sector contributes to social welfare, social mobility becomes an important policy objective. Social mobility is often examined in terms of inter-generational mobility, comparing the socio-economic status of parents and children.[17] Such mobility is the product of several components, ranging from inherited abilities and social context to environmental factors. The latter are shaped by the policies determining access to human-capital formation, such as public support for education at all its stages, as well as redistributive policies (such as tax and transfer schemes) that may influence access to higher education. These issues are covered in detail in the following chapters of this *Outlook*.

For all their detail, national household surveys tell us very little about social mobility. To examine the phenomenon properly we need panel data, generated by surveys that repeatedly gather information from the same set of households over many years. Such data would show disadvantaged households entering the middle sector and middle-sector households falling into the ranks of the disadvantaged, as well as providing information about how many middle-sector households retain that status over a given period.

Such panel data are available for Chile from 1996, 2001 and 2006 and studies of these show that there is considerable mobility both up and down – opportunity and risk are both evident.[18] For example, 55% of households that were poor in 1996 were not poor in 2001; while 11% of households that were not poor in 1996 had fallen into poverty by 2001 (the poverty lines used in this analysis do not necessarily coincide with 50% of median household income, the threshold used in this *Outlook*). The data also reveal a relatively immobile group of poor households which seem to be excluded from opportunities for advancement.

Unfortunately such panel data are only rarely available. A promising alternative is retrospective data, derived from surveys which ask people about the socio-economic status of their parents. These provide information about inter-generational mobility at least.[19]

Ideally, mobility would be studied using panel data. These are rarely available, creating a need for an alternative approach.

Simply comparing the size of the middle sector from one wave of a survey to the next is substantially less satisfactory, since it does not capture churning in the income distribution. This can be material and is certainly very important to the well-being of the individuals involved. If the middle sector grows from, say, 40% to 45% of the population between two household surveys, and at the same time the disadvantaged population drops by exactly 5 percentage points it is tempting – but false – to conclude that 5% of the population climbed out of disadvantage and into the middle sector. It may equally be the case that many middle-sector households fell into disadvantaged status and that many more disadvantaged households moved into the middle sector, or that there was substantial movement in both directions across the threshold separating the middle sector from the affluent. That said, such comparisons across time are readily calculated using available data and do enable some conclusions to be drawn.

Measures of mobility and resilience

Before examining the mobility data, it is first worth looking at how "close" the disadvantaged are to the middle sector, and how "close" the middle sectors are to the lower threshold equal to 50% of median income. Precise measures of these notions of closeness are useful in two ways. They give a crude sense of the possibilities for social mobility and they illuminate the scale of intervention required by policy makers if they are to be effective.

We calculate two indicators of social mobility to test this: the "Disadvantaged Mobility-Potential Index" (DMP), and the "Middle Sector Resilience Index" (RES). The DMP measures the average distance of the income of disadvantaged people from the threshold of 50% of median income; it asks how "close" disadvantaged people are to entering the middle sector. DMP ranges in value between 0 and 1. A value near 1 implies a small average income shortfall from the threshold to the middle sector and so a greater potential for upward social mobility. Conversely, a value closer to 0 indicates that the average income shortfall among disadvantaged households is large.

RES, for its part, measures the mean distance above 50% of the median income of the incomes of those middle-sector households which earn less than 100% of the median income – what might be thought of as the "lower middle sector". RES is the mirror image of DMP in the sense that it provides a measure of the negative income shock that would be needed to push lower middle-sector households into disadvantaged status. Such shocks can take many forms, some of which are all too familiar to households in the developing world: things such as illness, accident, a death in the family, unemployment, or a natural disaster. RES again ranges from 0 to 1. A value close to 1 implies a lower risk of falling into disadvantaged status, or put differently, a greater resilience to staying in the middle sector. Detail on the definition and calculation of these indices is set out in Box 1.2.

Our DMP index is a measure of the ability of the disadvantaged to join the middle sector, while RES tests the ability of the middle sector to withstand shocks.

Comparing several Latin American countries, Uruguay, with the largest middle sector in the region, exhibits the highest value of DMP (Figure 1.8). The Uruguayan disadvantaged, relative to the other countries depicted, are "closest" to crossing the threshold into the middle sector. It is perhaps surprising that Argentina, with its relatively large middle sector, has the lowest value of DMP. The implication is that the disadvantaged in Argentina, though less numerous than in other Latin American countries, are less able to move up into the middle sector. In this regard, the shape of Argentina's income distribution most resembles Bolivia's, though centred on a substantially higher median income.

Box 1.2. Mobility-potential indicators

The Disadvantaged Mobility-Potential Index (DMP) is calculated as follows. For a given country, first calculate the difference between a disadvantaged household's income and 50% of the median income for that country. This is the shortfall between actual income and the minimum needed to be in the middle sector, on our 50-150 definition. Second, sum these income shortfalls over all disadvantaged households. Third, divide this aggregate shortfall by the total income that all disadvantaged households would earn if they each earned exactly 50% of the median income. Expressed algebraically the formula is:

$$\text{DMP} = \frac{\sum_{i=1}^{M_1} w_i\,(y_i)}{0.5\,y_m\,(\sum_{i=1}^{M_1} w_i)}$$

where: M_1 = number of people in the disadvantaged group (income less than 50% of the median); y_m = median income; y_i = income of the ith household; w_i= weights.

DMP is a variant of standard poverty-gap indices, which seek not only to measure the incidence of poverty, but also its depth. The DMP index can be interpreted as the average distance between disadvantaged households and the middle sector.[20]

The Middle Sector Resilience Index (RES) measures the mean distance between the incomes of those middle-sector households earning less than the median income and 50% of the median income. The following formula is used:

$$\text{RES} = \frac{\sum_{i=1}^{M_2} w_i \, (y_i - 0.5\, y_m)}{0.5\, y_m \left(\sum_{i=1}^{M_2} w_i\right)}$$

where: M_2 = number of people in the lower middle-sector group (income between 50% and 100% of the median); y_m = median income; y_i = income of the ith household; w_i= weights.

It is straightforward to construct in the same fashion an index of the ease with which middle-sector households with incomes above the median income – the upper middle sector – can move into the ranks of the affluent. A Middle Sector Mobility-Potential Index (MSMP) can be calculated according to the formula:

$$\text{MSMP} = \frac{\sum_{i=1}^{M_3} w_i \, (y_i - y_m)}{0.5\, y_m \left(\sum_{i=1}^{M_3} w_i\right)}$$

where: M_3 = number of people in the upper middle-sector group (income between 100% and 150% of the median income); y_m = median income; y_i = income of the ith household; w_i= weights.

The closer the value of MSMP to 1, the smaller the average income shortfall from the lower threshold of the affluent category, and the higher the potential for the upper middle-sector to move up into the ranks of the affluent.

Finally, the Middle Sector Cohesiveness Index (COH) is defined as the mean distance of the middle sector from the median income as a proportion of the median income. The mean is taken over the whole middle-sector population, according to the following formula:

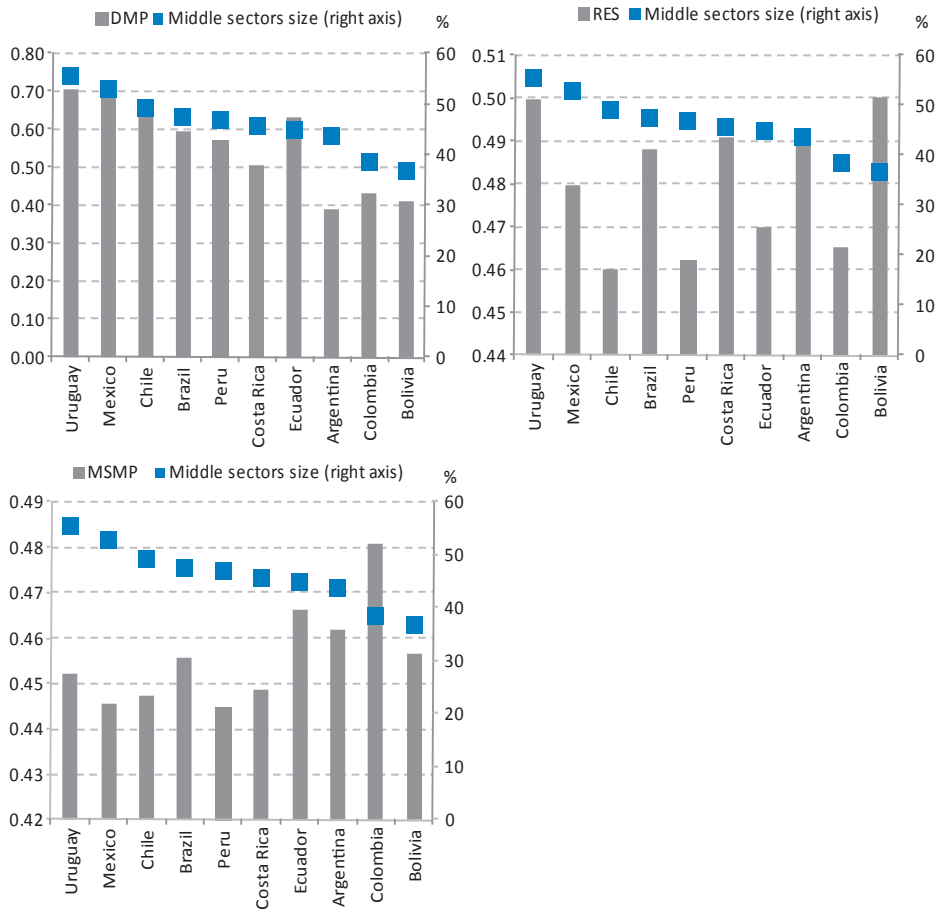
$$\text{COH} = \frac{\sum_{i=1}^{M_4} w_i \, |\, y_i - y_m \,|}{y_m \left(\sum_{i=1}^{M_4} w_i\right)}$$

where: M_4 = number of people in the middle sector (income between 50% and 150% of median); y_m = median income; y_i = income of the ith household; w_i= weights.

COH is a rough measure of the spread of middle-sector incomes. A value close to 1 implies incomes are clustered near the median income and, therefore, greater cohesiveness of the middle sector.

See Castellani and Parent (2010) for more details on all of these measures and an overview of the evolution of inter-category mobility over time.

Figure 1.8. Indicators of social-mobility potential in Latin America
(household level, 2006)



Notes: DMP, RES and MC=MSMP are defined in Box 1.2.

Source: Castellani and Parent (2010), based on 2006 national household surveys (household level for middle-sector size). See text for definition of these variables.

StatLink http://dx.doi.org/10.1787/888932338193

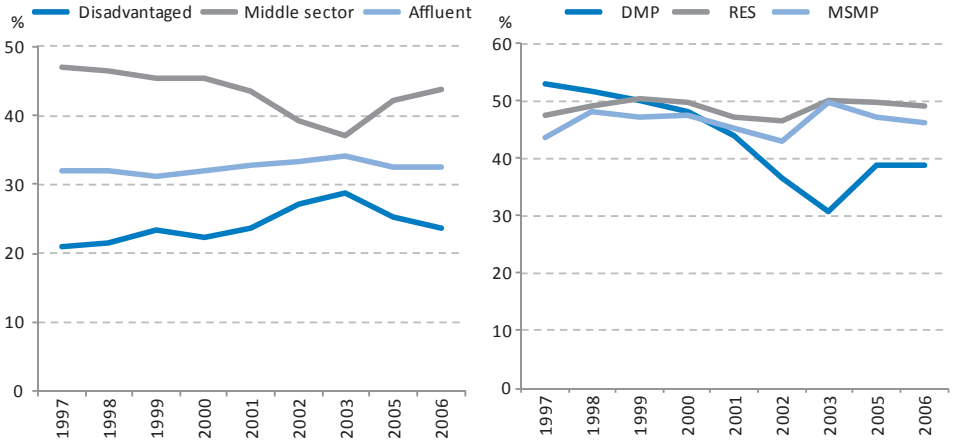
Uruguay's middle sector is relatively resilient to the risk of falling into disadvantaged status, with a value of RES near 0.5 (Figure 1.8, top right-hand panel). What is perhaps more surprising is that Chile's lower middle sector is the least resilient among the countries surveyed. This may reflect Chile's remarkable success in reducing poverty over the last two decades: as a result, there are disproportionately many lower middle-sector households just over the 50% of median income threshold, and therefore close on our measure to falling back into disadvantaged status.

Argentina, Chile, Costa Rica and Mexico, 1996-2006

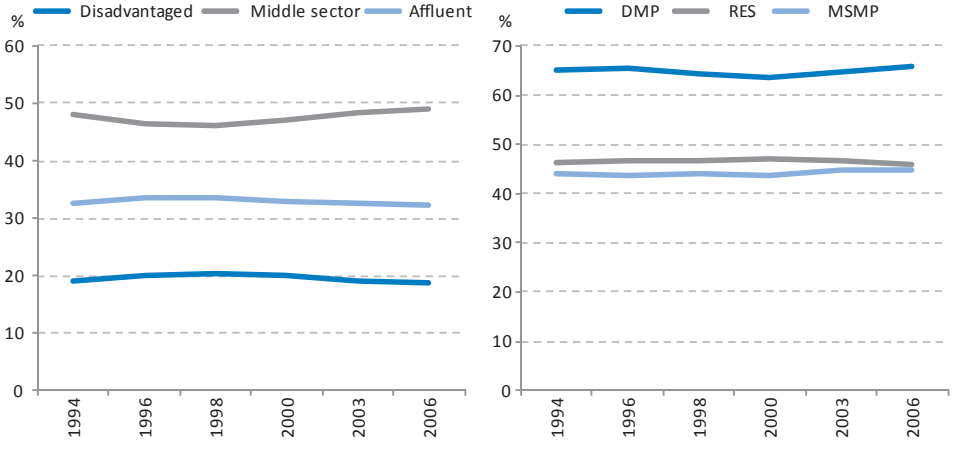
This section looks at how the size of the middle sector and the indices of potential mobility have developed over time in four countries. These countries have been chosen both because they have available the necessary longitudinal household-survey data, and because of the variety of stories that their experiences tell (Figure 1.9).

Figure 1.9. Changes over time in the middle sectors: size and mobility potential

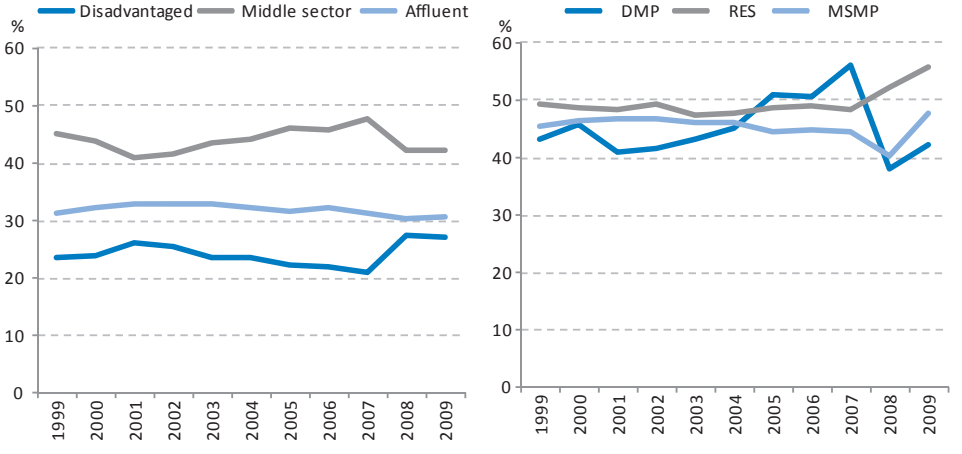
a) Argentina



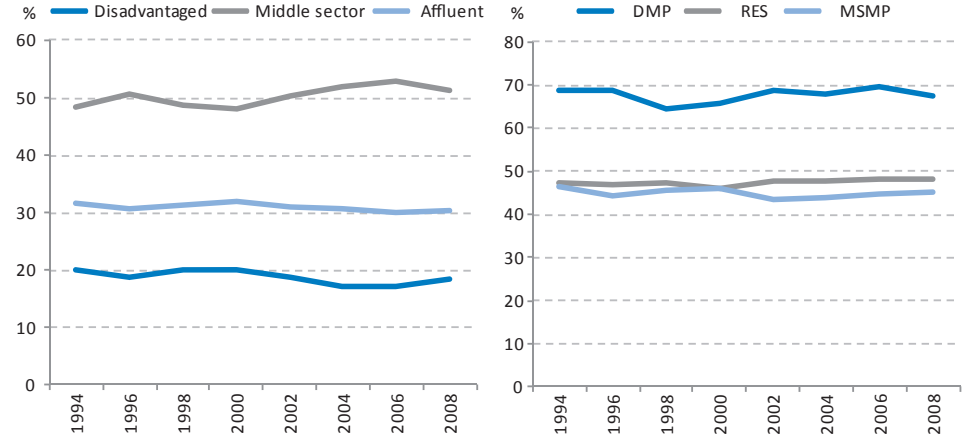
b) Chile



c) Costa Rica



d) Mexico



Note: Middle sector size is calculated at household level following the median income definition (0.5 to 1.5 of median income). "Mobility Potential" Indicators are defined in Box 1.2 and discussed in the text.

Source: Castellani and Parent (2010), based on national household surveys.

StatLink http://dx.doi.org/10.1787/888932338212

The data show a substantial retrenchment for the Argentinean middle sector. Between 1996 and 2006, the middle sector there shrank by almost 20%. At the same time, the disadvantaged population grew while the affluent stratum remained unaffected. Unstable economic performance over the decade – most notably the economic crisis of 2001 – hit lower-income groups disproportionally and dragged down the indices of potential social mobility. Since 2003, conditions have been improving for the disadvantaged. The middle sector on the other hand still looks immobile based on its index levels, historically or when compared to other countries.

The experience of Chile contrasts sharply. The middle sector there is stable in size over the period. This stability extends also to the indices of potential social mobility which change little over the years for which survey data are available.

Chile shows stability on both measures, but there is evidence of strain in the other countries examined.

Costa Rica exhibits progress on reduction of the size of the disadvantaged population and growth of the middle sector until 2007. Since then, however, the disadvantaged proportion has surged and indices of potential social mobility fallen. Both are linked to poorer economic performance with higher inflation and lower growth. The resilience of the lower middle sector has partially recovered in recent years suggesting less vulnerability to falling into disadvantaged status.

Indicators in Mexico picked up following the crisis at the end of the 1990s. Nevertheless, unsatisfactory economic performance since has pushed some people from the middle sector back into disadvantaged status. The middle sector has shrunk and disadvantaged households are displaying lower potential mobility.

MIDDLE SECTORS AND MIDDLE CLASSES

Much of the recent attention by journalists, researchers and others to the economic role of middle sectors in economic development has referred to these people as "middle class". We have chosen not to use the middle-class terminology for various reasons. In sociological terms, a social class is expected to have a certain homogeneity of characteristics, and possibly a consciousness of its identity and role as a group. Marx emphasised property ownership; Weber educational

credentials; and Erikson and Goldthorpe employment status.[21] The Latin American middle sectors described in the preceding sections of this chapter, in contrast, are heterogeneous, both within a country and in comparison with the middle sectors of other Latin American countries. This heterogeneity within the middle sectors is particularly pronounced in the area of labour-market behaviour and informality. As such, it would be imprecise to equate the middle sectors as identified in this *Outlook* with the Latin American middle class.

The middle sector is not the same as the traditional middle class: it is much more heterogeneous and does not hold typical "middle-class" values.

Historians of the middle class, meanwhile, have emphasised the values and perceptions of the group as much as its income level. This sort of middle-class dynamism is the cornerstone of the "Protestant ethic" identified by Max Weber as the source of capitalist development.[22] As this chapter has shown, middle-sector Latin Americans are not the most likely to be entrepreneurs; affluent Latin Americans are more likely to be business owners (Box 1.1). Similarly, the political attitudes of middle-class members – in favour of democratisation and moderately progressive political platforms, for example – are a feature of many histories of the group in other parts of the world. Chapter 4 will show that the political preferences of the Latin American middle sectors are considerably more complicated. In general, the attitudes and perceptions of the middle sectors are heterogeneous and not generally consistent with stereotypically middle-class values (Box 1.3).

Box 1.3 *Being* middle-class and *feeling* middle-class

Being middle-class is not the same as feeling middle-class.[23] In Latin America only 40% of people who consider themselves middle-class would be classified in the middle sectors as developed in this *Outlook*. The remaining self-identified middle-class Latin Americans are, with almost equal probability, disadvantaged or affluent. If you ask Latin Americans where they fall on a ten-step ladder where 1 is "the poorest of their country", and 10 is "the richest of their country", 37% place themselves on steps 4 and 5; while 42% put themselves on the lowest steps and only 20% on the highest. Compare this with the 50-150 definition – those earning between 50% and 150% of median income: on this measure 42% of Latin Americans are in the middle sectors.[24]

It turns out that there are important differences between people in the middle sectors, and those who regard themselves as middle-class – and it may be the latter group which is more important for economic performance. Survey data complementary to national household surveys can be used to reveal characteristics of people who fall outside the 50-150 definition but nonetheless regard themselves as middle-class: typically they are relatively young and have completed at least secondary education, they have smaller families than the disadvantaged but larger than the affluent, they have managed to accumulate some durable household assets – although not as many as the affluent – and they work in a company under a boss or supervisor.

Middle-class motivations

It is difficult to be sure that the virtues often ascribed to the middle class — entrepreneurial energy, higher propensity to save, political progressivism — are really characteristic unless it can be shown that the middle class is motivated by factors different from the other income categories.

Gallup World Polls asked people how happy they feel with their life and about their economic situation and personal concerns. These data confirm that Latin Americans who put themselves in the middle class do indeed have different motivations from their disadvantaged or affluent compatriots. In particular, certain features of their lives make middle-class people happier than those same features do other people. Having one or more children makes them happier than those who consider themselves poor, for whom the family is a burden.

They derive great satisfaction from being bank customers, and having a cheque book or a credit card in their pocket. Paradoxically, however, their happiness is less dependent on possession of assets and they do not let economic concerns embitter their lives too much – in contrast to the poor (from need) and the rich (perhaps from ambition or fear).

Most importantly, people who *consider* themselves middle class do not think like people in the middle sectors. The former enjoy modernity – not just use of the financial system, but also being connected to each other through mobile phones and the Internet. Their satisfaction with life is less dependent on income level and economic uncertainties than that of people in the middle sectors, and their happiness depends less on the security of having a stable marriage. All this reveals that people who say that they are middle-class are more self-assured and satisfied with their economic situation and less slaves to income and possessions than the objectively identified middle sectors.

Arguably, the ideal for a society is not simply to have many people in the middle sectors, but rather many people who really identify with the post-modern and non-materialistic values of the self-described middle class. If *being* middle-class is seen as *feeling* middle-class, then it is educators, opinion formers, thinkers and artists – rather than just economists or governments driven by material well-being or economic growth – who will be the agents of effective change.

Source: Fajardo and Lora (2010).

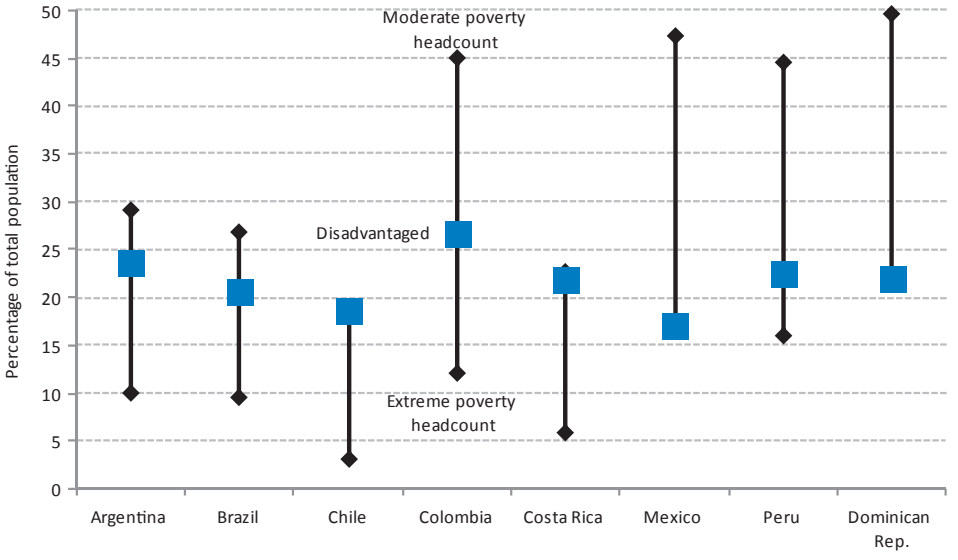
Common to both the sociological and historical objections to equating the middle sectors with the middle class is the problem that the middle class is typically defined with respect to variables only imperfectly correlated with income: attitudes, values, human capital levels, employment status. Indeed, middle-class people might have the *same* income as those in a lower stratum, and Latin American history provides examples. Take the *empleocracia* movements of the first half of the 20th century in Peru. Organisations of office workers struggled for higher wages, eight-hour days and other improvements in their working conditions precisely because their social station "obliged" them to spend more on clothing, housing and other markers of status than manual labourers – whose income was often in fact quite close to that of the *empleados*.[25]

Related to the question, "Are the middle sector and the middle class the same people?" is the question "Are the disadvantaged and the poor the same people?" Our interest in the middle sectors is explicitly motivated by the distinction between their economic role and that of people at the bottom of the income distribution. While many studies of OECD economies use 50% of median income as a relative poverty line, such a cut-off may be too conservative in the Latin American context. If so, our disadvantaged group will be smaller than the poor, as measured by national or international poverty lines, for some countries.

The middle sector can be a new way of looking at Latin American societies: distinct from national poverty lines and with a novel upper-bound.

In fact, the relationship of the lower middle-sector income cut-off and national poverty lines measuring the incidence of both extreme and moderate poverty varies from one country to another (Figure 1.10). In Chile and Costa Rica, 50% of median income is close to or even exceeds the moderate poverty line. In Mexico and the Dominican Republic, meanwhile, the lower middle-sector income cut-off is similar to the extreme poverty line. For Argentina, Brazil and Peru, the middle-sector income cut-off lies between the extreme and moderate poverty lines. For the region as a whole, 50% of median income is a not unreasonable poverty line, but tends to be conservative relative to national poverty lines; put another way, this *Outlook*'s measure of the disadvantaged population is, for many if not most countries in the region, a smaller and poorer group than the moderately poor.[26]

Figure 1.10. Disadvantaged population and national poverty lines



Notes: Poverty headcount figures refer to the number of individuals below the respective national poverty line, according to official statistics. (See SEDLAC documentation for more details.) The square refers to the percentage of disadvantaged population as per the 50-150 definition.

Source: SEDLAC database, accessed in August 2010.

StatLink http://dx.doi.org/10.1787/888932339428

CONCLUSIONS: A ROAD MAP TO THIS YEAR'S OUTLOOK

Ensuring that more Latin Americans can join the middle sectors, and improving the economic security of those who reach that standard of living are worthy objectives of public policy. A strong middle sector is certainly significant for economic growth, but also because the opportunities for personal fulfilment provided by that standard of living – materially relatively modest – are an appropriate goal for a society and its members.

The remainder of this year's *Outlook* develops these themes:

- Chapter 2 looks at the labour-market experience of the middle sectors, emphasising the importance of social protection – or its absence – for millions of middle-sector Latin Americans in the informal sector.
- Chapter 3 analyses education's potential to promote upward social mobility, allowing children from disadvantaged households to enter the middle sectors.
- Chapter 4 looks at the link between the middle sector and the fiscal system: are middle-sector households net payers or net beneficiaries of taxes and transfers? How do the middle sectors feel about taxes and the quality of government spending?

The answers to these questions determine both the scope of the state to strengthen the middle sectors, and the tools it has to do so.

NOTES

1. Banerjee and Duflo (2008); Ravallion (2009); Kharas (2010); Birdsall (2010).

2. Kharas (2010) estimates that more than half of the world's middle class, using his definition – households with daily incomes between 10 and 100 USD adjusted for purchasing-power parity – will be Asian by 2020, much of it concentrated in China and India.

3. Easterly (2001). He defines the middle class as those in the second, third and fourth income quintiles; countries where this group earns a larger share of national income are said to have a more robust middle class. This paper is one of a much larger group of empirical studies on the negative effects of inequality on growth, in the sense that the size of the middle class is inversely proportional to the level of income inequality in an economy. Bénabou (1996, 2005) reviews much of this enormous literature.

4. Johnson (1958). Reaction to Johnson's optimistic thesis tended to grant the middle classes a progressive role in confronting oligarchies in the early part of the 20th century, but claimed that thereafter they aligned themselves with elites and, post-1964, with military dictatorships; see Pike (1963) and Hoselitz (1962). The various schools of thought related to the historical role of the middle class are reviewed and situated in a Latin American context by Adamovsky (2009) for Argentina, Barr-Melej (2001) for Chile, Owensby (1999) for Brazil and Parker (1998) for Peru.

5. Per capita household income is "equivalised" in such measures to allow comparison of households of different sizes and structures. For the statistics reported in this *Outlook*¸ weightings for equivalised or household-size adjusted income are as follows: a weight of 1 is assigned to the income of the household head, a weight of 0.5 for each additional adult, and a weight of 0.3 for each minor aged 14 or younger. This is the "OECD-modified scale", which has been adopted by the European Commission, among others. Other scales used in international comparisons include the square root of household size (used in many OECD studies since the 1990s). In practice, the difference implied by the choice of one or another of these weighting schemes is small. See Castellani and Parent (2010) for more details.

6. Ravallion (2009); Banerjee and Duflo (2008). Both papers refer to the "middle class" rather than the "middle sector"; for reasons that will be explained later in this chapter, we prefer to call this group the "middle sectors" and not the "middle class".

7. Our definition is very much in the spirit of MIT economist Lester Thurow's (1987) classic definition of the middle sectors in the United States as the group with incomes lying between 75% and 125% of the median income.

8. OECD (2008). To assess the robustness of the study's results, the authors compared poverty lines at 40%, 50% and 60% of median household income. See also Chauvel (2006). This kind of relative poverty line is not as frequently used in analysis of low-income developing countries, though Birdsall *et al*. (2000) is an important exception.

9. A more thoroughgoing exploration of the empirical and conceptual issues surrounding relative and internationally comparable measures of the middle sectors is provided by Brandolini (2010).

10. These 10 countries account for 82.2% of the population of the 20 Latin American countries in 2006, according to ECLAC (2010), and 80.3% of the population of all 46 Latin American and Caribbean countries and territories. For the ten Latin American countries in Figure 1.1 the total number of middle-sector people in 2006 was just under 214 million. Allowing for population growth and assuming that the average proportion of middle-sector households is the same in the countries not included in this figure, a back-of-the-envelope calculation suggests that the size of the middle sectors in Latin America and the Caribbean in 2011 is 275 million. Given that we adopt a relative definition of middle sectors, with different income thresholds in every country, however, adding up the middle sectors across countries in this way may be akin to comparing apples and oranges.

11. OECD (2008, Chapter 2).

12. Table 1.A2 in the statistical annex extends this across the disadvantaged, middle sectors and affluent.

13. Our measure of government employees based on the occupational category "public administration, education, health" in household surveys is inexact for at least two reasons. First, that category may include private-sector health and education workers, so that this proportion tends to *over*state the size of public-sector employment. Second, people who work in public-sector enterprises in manufacturing, transport or communication might accordingly be counted in those sectors and not in public administration, so that the latter category tends to *under*state the extent of public-sector employment.

14. See Acs (2006) for a discussion of "opportunity entrepreneurship" – "an active choice to start a new enterprise based on the perception that an unexploited or underexploited business opportunity exists." This is contrasted with "necessity entrepreneurship," common in developing countries but with fewer positive externalities for economic development. On the links between entrepreneurship, job creation and the knowledge-based economy, see Audretsch and Thurik (2001), Audretsch (2002), and Agarwal *et al.* (2008). On entrepreneurship and economic growth see Audretsch (1995), Hopenhayn (1992) and Klepper (1996).

15. For instance, in Uruguay, Peru, Panama, Dominican Republic, Bolivia, Brazil and Mexico more than 60% of total assets are held by the three largest commercial banks. See Beck *et al.* (2000, updated November 2008) and Micco and Panizza (2005).

16. For other countries, similar results are obtained from household surveys related to other aspects of the financial sector. For instance, in Colombia, more than 90% of the population does not have access to credit cards, and of that group close to 80% belong to middle and disadvantaged sectors.

17. OECD (2010).

18. This paragraph summarises Marcel (2009), whose analysis of Chilean data is based on the CASEN surveys. Torche and López Calva (2010), meanwhile, use panel-survey data to analyse intra-generational mobility of the middle sectors in Chile and Mexico.

19. Torche (2009) summarises the available estimates of inter-generational mobility based on retrospective survey data in Latin America.

20. The complete class of poverty-gap indices is developed in Foster *et al.* (1984).

21. On Marx, see Elster (1986); Weber (1958) and Erikson and Goldthorpe (1992). See Chauvel (2006, Chapter 1) for more discussion on the relationship between median income and middle class from a sociological standpoint.

22. "When the limitation of consumption is combined with this release of acquisitive activity, the inevitable practical result is obvious: accumulation of capital through ascetic compulsion to save" Weber (1905, Chapter 5). See Acemoglu and Zilibotti (1997), Doepke and Zilibotti (2005, 2008), for economic analyses of these arguments. Banerjee and Duflo (2008), meanwhile, are as sceptical as we are about the evidence for above-average rates of entrepreneurship in the middle classes of developing economies, using an income-based definition of the middle class.

23. This text box was written by Eduardo Lora, based on Fajardo and Lora (2010).

24. Eisenhauer (2008) summarises different surveys from the United States, according to which the self-identified middle class ranges from 50% to 80% of the population.

25. This is the subject of Parker's (1998) fascinating history of the Peruvian middle class.

26. Figure 1.10 has been elaborated with data for the eight countries for which Country Notes are prepared for this *Outlook*: the eight Latin American and Caribbean countries that are members of the OECD Development Centre's Governing Board. These countries tend to have higher income per head than the region as a whole. Many of the countries not included in Figure 1.10 would likely exhibit a relationship between the extreme poverty line and 50% of median income more like that exhibited by Mexico and the Dominican Republic in the figure.

STATISTICAL ANNEX

Annex Table 1.A1. Sector of economic activity of workers by income sector
(percentage of household heads working in a given sector, for middle-sector households)

	Brazil			Chile			Costa Rica			Mexico			Peru			Argentina (urb)			Uruguay (urb)		
	Disad.	Middle	Affluent	Disad.	Middle	Affluent	Disad.	Middle	Affluent	Disad.	Middle	Affluent	Disad.	Middle	Affluent	Disad.	Middle	Affluent	Disad.	Middle	Affluent
Agriculture, Forestry, Fishing	41.96	19.46	7.06	29.61	16.52	6.88	33.67	18.44	6.46	44.6	12.68	5.13	82.03	32.61	8.83	8.06	4.02	10.85	2.72	1.13	1.01
Mining, Electricity, Water supply	n.a.	n.a.	n.a.	1.77	2.59	3.69	1.08	1.71	1.99	0.28	1.03	2.25	0.55	1.48	2.71	11.72	11.54	29.25	4.15	4.83	5.04
Manufacturing	9.93	16.31	18.04	12.69	15.04	13.86	10.5	14.21	12.34	11.57	17.43	15.27	4.21	9.89	13.77	26.68	26.6	26.29	16.56	16.81	11.69
Construction, Transport, Communication	13.98	17.98	12.78	21.11	22.81	19.45	10.83	18.1	16.48	16.57	20.88	12.71	2.98	16.43	16.91	3.43	5.78	5.07	19.36	17.01	11.76
Wholesale, Hotels, Restaurants	15.43	20.99	22.82	11.27	16.2	18.13	20.97	22.45	22.48	14.62	22.57	22.98	6.37	23.79	26.01	18.77	16.69	7.82	29.84	21.8	18
Public administration, Education, Health	4.86	9.18	21.13	7.31	11.17	18.87	5.58	9.32	22.18	1.89	9.29	23.2	1.49	8.68	18.75	14.43	18.48	11.42	4.14	20.52	28.42
Other services	13.83	16.08	18.17	16.24	15.67	19.13	17.38	15.79	18.07	10.47	16.12	18.45	2.37	7.12	13.02	16.91	16.89	9.29	23.24	17.9	24.09
% employed/ total	71.17	73.46	77.78	50.92	69.73	84.85	56.98	80.42	84.17	80.75	80.94	81.24	89.06	82.98	75.14	63.60	64.90	81.56	60.67	56.78	67.55
Geographic coverage of surveys	National			National			National			National			National			Urban Population			Urban Population		

Source: Castellani and Parent (2010), based on 2006 national household surveys (household level).

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CHAPTER TWO

Social Protection and Labour Informality in the Middle Sectors

ABSTRACT

Coverage of social-protection schemes in Latin America remains low, at well below 50% of workers. This can be explained by the dual structure of labour markets in the region: labour informality remains high, and the majority of informal workers contribute irregularly, if at all. The number of informal workers among Latin America's middle sectors is high. Social-protection systems fail to reach even half of middle-sector workers, leaving many of them without adequate employment protection and access to social safety nets. This situation represents a pressing challenge for public policy, since low levels of affiliation and irregular contribution histories put people at a high risk of significant downward social mobility when they get sick, lose their job, or retire. Three key features of Latin America's economic situation must guide a pragmatic social-protection reform: high levels of labour informality, a still relatively young population, and limited fiscal resources. To aid decision makers in the design of appropriate policies, this chapter assesses alternative pension reforms including *ex post* policies (i.e. after retirement, such as social pensions), and *ex ante* policies (i.e. during working life, especially matching defined contributions).

A relatively secure steady job is almost a defining characteristic of middle sectors in the developing world.[1] This has profound implications for well-being, since regular pay has benefits that go beyond the monthly cheque. People with regular pay are likely to have better access to credit, for example, and most social-protection systems, be they for unemployment benefits, health care or pensions, are contributory. They are the middle sectors, in steady employment, who are most likely to pay into these schemes – and most likely to be able to draw on them when needed.

Yet labour informality remains high in Latin America and the Caribbean. This interacts with contributory social-protection systems to create a vicious cycle, in which the mass of informal workers weaken those systems by contributing irregularly if at all and yet fail to secure themselves support when they need it.

Existing contributory social-protection schemes are often aimed at formal workers; the middle sector may be badly served by these.

These two worlds – middle-sector workers and the informal market – are not mutually exclusive. The existence of middle-sector households who are also informal should be of immediate concern for public policy since poor coverage and irregular contribution histories put this group at a high risk of downward social mobility. Even short-term shocks, such as a temporary lay-off or a period of illness, can permanently move them back into poverty in the absence of public support.

In this chapter, therefore, we look at how social protection works in practice for the Latin American middle sectors, and examine some of the policy responses this implies. We approach this from a global perspective, and focus on unemployment benefits, health insurance and old-age pensions as the main elements of social protection. The analysis looks in detail at how the pension system interacts with labour informality, drawing on micro data for Bolivia, Brazil, Chile and Mexico over the decade to the mid-2000s.

An immediate result of this analysis is confirmation that labour formality (defined as those working with a contract) is limited, even among the middle sectors and the affluent. Correspondingly, pension coverage rates are low – from a maximum of just 60% in Chile to as little as 9.5% of the labour force in Bolivia. Coverage by sector is similarly low – falling from around 75% of formal workers to less than 7% among self-employed workers in agriculture. Against this background, we look at how social pensions and schemes with matching defined contributions – already implemented in some countries in the region – might help improve coverage.

SETTING THE FRAMEWORK

The World Bank's 1994 report *Averting the Old Age Crisis: Policies to Protect the Old and to Promote Growth* set the agenda for structural pension reform in the world. Given rapid demographic transition, the weakening of informal protection networks, and both present and future financial burdens, they recommended a multi-pillar pension system. A key element was the introduction of mandatory individual capital accounts, managed by the private sector. Latin America became – by far – the most ambitious adopter of this reform agenda: Chile had already led the way in 1981 and was followed by Peru in 1993, Colombia in 1994, Argentina in 1994 (though reformed again in 2008), Uruguay in 1996, Mexico and Bolivia in 1997, El Salvador in 1998, Costa Rica and Nicaragua in 2000 and Dominican Republic in 2003.[2]

As well as improvements to their fiscal position, these "structural pension reformers" sought to secure macroeconomic benefits including higher productivity, higher domestic savings and investment, and a boost to the development of their domestic capital and financial markets.[3] They were also expected to enjoy positive labour-market effects. Individual pension systems – because of the clearer link in members' minds between the contributions they make and the benefits secured – should provide better incentives than traditional defined-benefit pay-as-you-go schemes (such as operate in OECD countries). In turn this should lead to a higher structural employment rate, higher labour supply, and lower levels of informality.[4]

Latin America was in the vanguard of the last wave of pension reform. Its labour market benefits remain unproven.

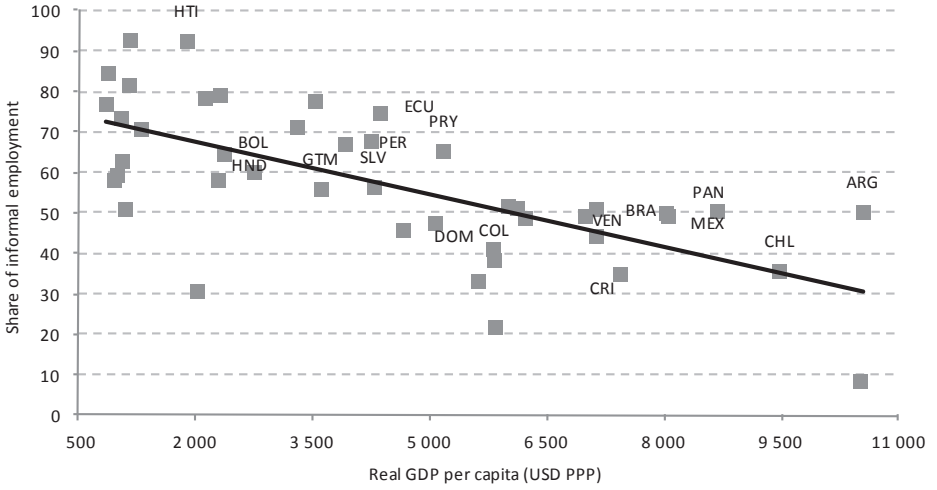
In practice evidence on these labour impacts remains controversial. The taxes needed to support the unreformed pension schemes may not have had as great an impact on employment as was supposed.[5] And, even allowing for the relatively short period of time since the reforms were adopted (around 15 years on average, with lengthy transitional rules), the incentives to join the formal sector and pay contributions to the new system have proved weaker than expected. In fact, only Chile among the reformers – and to a lesser extent Brazil, a non-reformer – seem to be bucking the regional trend. Some studies have been able to conclude that in Chile the pension reform has led to a significant increase in formal employment, and reduction in unemployment.[6] In Brazil, informal employment remains above 40% but has decreased steadily since 2003 with accelerating net annual generation of formal employment.[7]

Short-sightedness or lack of information on the part of workers, the interaction with labour and social legislation, rational decisions based on volatile returns or high start-up fees, and social preferences for anti-poverty (rather than savings) programmes all contribute to explain low overall coverage rates in the region.[8] This leads us to conclude that social-protection policies need to be designed in conjunction with a framework of appropriate social, labour and macroeconomic institutions. Pension systems – and social protection in general – should adopt a pragmatic "political economy of the possible" approach.[9] This means responding to three key social and institutional features in Latin American: high labour informality, a relatively young (although rapidly ageing) population, and limited fiscal resources.

Informality, the demographic shift and scarce public resources are all particularly important to social protection policy in the region.

The 2009 edition of the *Latin American Economic Outlook* (OECD, 2008) looked at the difficulties in measuring or defining informality in the region.[10] Informal employment is believed to account for more than 50% of total non-agricultural employment in Latin America, with the proportion ranging from around three-quarters in Ecuador and Peru, to a little over one-third in Colombia and Chile. The extent of informality in a country is in part inversely linked with per capita income, but – as Figure 2.1 shows – this measure does not explain everything. Informality in Argentina and Ecuador, for instance, is nearly 20 percentage points higher than per capita income in those countries would imply.

Figure 2.1. Informal employment and real GDP per capita
(percentage of informal employment in total non-agricultural employment in emerging countries, mid-2000s)



Source: Jütting and de Laiglesia (2009).

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Not all informal workers are poor and unproductive (nor do they all work outside the formal economy). Nor should they all be seen as victims of exclusion from the formal sector since some of the informality observed reflects a voluntary exit rather than exclusion.[11] Even so, many informal workers lack adequate employment protection and access to social safety nets.

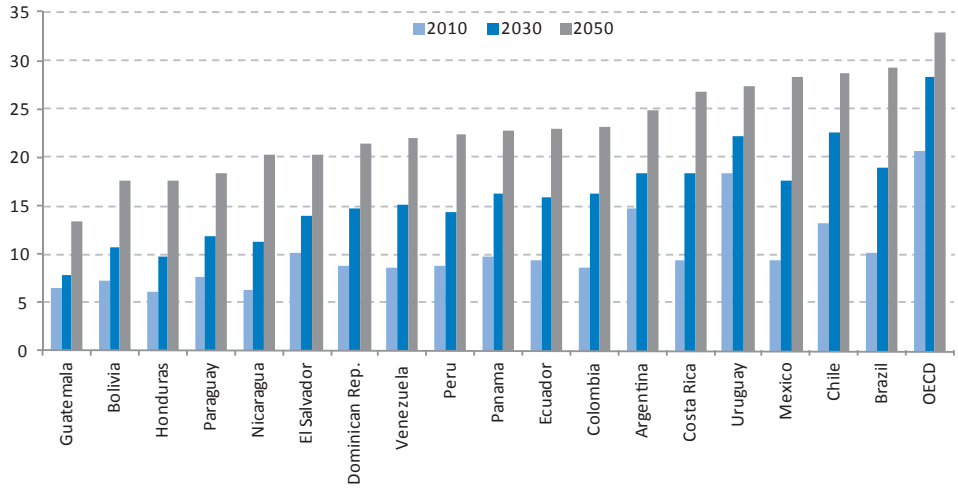
The second key influence on pension policy is the "demographic bonus". According to the latest projections by the United Nations, Latin America is in the second stage of its demographic transition. During this the ratio of dependants (defined as people under 15 or 60 and over) to working-age population is relatively low – particularly compared with the OECD average.[12] As a whole the region will enjoy this demographic bonus for the next two decades; slightly less in Chile, but 50 years and more in Guatemala and Bolivia (see Figure 2.2 for the old-age component of dependency).

The demographic "bonus", and the potential contributors it brings, represents a unique opportunity to extend social-protection schemes.

The bulge in potential workers implied by this one-off demographic shift presents a unique opportunity to extend social-protection schemes, as long as these new workers can be led to join the schemes as affiliates and – more importantly – as contributors. Moreover, the simultaneous relative ageing of the population should proportionately reduce demand for early-life expenditure, such as primary education, freeing public resources for other areas.

The third – and unsurprising – factor is the availability of funds. Public resources are scarce in Latin America. As will be discussed in Chapter 4 (and extensively analysed in OECD, 2008), this shortage can principally be laid at the door of low tax-collection rates, particularly in the case of personal income taxes – rates are low by international standards even controlling for differences in per capita income. The resulting lack of resources restricts the public sector's ability to take effective (and in many cases efficient) measures such as extending universal health care, or permitting wider access to minimum pensions.

Figure 2.2. Old-age dependency ratio in Latin America and the OECD



Note: Ratio of population over 60 to population aged 15-59 years.

Source: United Nations (2009).

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INFORMALITY IN THE MIDDLE SECTORS

Attempts to explain the limited coverage of Latin America's social-protection schemes often blame the duality of its labour markets. Indeed, some authors equate formal employment with job-linked pension entitlements.[13] More broadly, informality is often used to refer somewhat loosely to activities that are carried out outside of the legal or regulatory framework.

Informality in Latin America is very varied, and represents much more than merely a form of underemployment.

Such a generic term in fact spans a number of very different realities, from the outright illegal such as drug trafficking or smuggling, to very common exchanges which nonetheless take place outside formal and contractual environments, such as mutual help among neighbours. A job is informal when "the employment relationship … is not subject to national labour legislation, income taxation, social protection or entitlement to certain employment benefits" (ILO, 2003); in other words, when a labour relationship is neither observed nor protected by the government. It follows that informal employment includes not only many forms of self-employment, but also employment in informal enterprises (themselves usually excluded from labour inspection and social protection requirements), together with unregistered employment in formal enterprises or households.[14] Informal employment is therefore very heterogeneous and cannot be considered merely a form of underemployment.[15]

A substantial and growing body of evidence calls into question the view that informal workers are shut out of the formal sector as the sole result of a segmented labour market (the "exclusion" view).[16] In particular, the finding that mobility between formal and informal employment is relatively large in both directions suggests that at least part of the population in informal work chooses to be outside the regulated economy (the "exit" view).

This suggests that it is better to think of informal employment as two-tiered.[17] The lower tier includes occupations traditionally associated with informality: the majority of own-account workers whose firms do not offer growth prospects, and informal employees who are queuing for formal jobs. The upper tier comprises workers that are relatively better off, including informal sector employers and entrepreneurs with accumulated productive capital[18] and certain forms of false self-employment.[19] There are transition costs in moving from one tier to the other.

Informality may be voluntary as well as involuntary. It may be best thought of as two-tiered, and policy should reflect this distinction.

Acknowledging these tiers – and distinguishing between exit and exclusion – should be part of the design of policies that aim to increase the coverage of social protection. The distribution of earnings between formal and informal workers is similar and therefore there are workers in the upper tier who choose to opt out of the formal economy and its social-protection networks, but who could nonetheless afford the necessary contributions. On the other hand, most workers in the lower tier cannot afford to opt into social protection as independent workers and are not offered the possibility of providing payroll-linked contributions. There is unlikely to be a "one-size-fits-all" policy that will cover both of these situations, and the same conclusion can be expected to apply to pension policies for these two (admittedly stylised) groups.

Informality and work status

For the purposes of analysis, we define formal employment as that which is subject to a written contract or a document that certifies social protection entitlement through employee status (such as the Brazilian *carteira de trabalho)*. Using the existence of a labour contract to determine formality facilitates comparability since it echoes a form of regulation that is common to the countries of Latin America – the obligation to formalise and register an employment relationship.[20]

An alternative would have been to count workers covered by social-protection schemes. This is less comparable between countries, and also suffers from potential indeterminacies as a result of the unbundling of social benefits. Cover against health problems, occupational hazards, old age, maternity or unemployment may be provided separately, and coverage for different workers may differ across these dimensions, making them formal in one but informal in others. This is particularly true of pension coverage – one of the main outcomes we seek to analyse.

Formality defined, the task is then to subdivide informal employment in a way which reveals different labour-market and social-insurance behaviours within it.

To understand the motivations, incentives and behaviour of workers in different circumstances, it is necessary to look at the employment relationship and worker status within the set of informal workers.

In many countries in the region, self-employed workers are not obliged to register or contribute to social-security or pension systems. The first group is therefore self-employed workers all of whom we consider as informal, or at least not formal.[21] This group is subdivided according to the sector in which they work (agricultural or non-agricultural) and their level of education (in order to identify self-employed professionals). Informal employees make up the balance, and this group is similarly split into its agricultural and non-agricultural components. All in all, this leads us to define six categories: formal workers, self-employed with completed tertiary education, non-agricultural informal employees, non-agricultural self-employed, agricultural informal employees, and agricultural self-employed. Motivations, incomes and applicable labour legislation differ across all these categories. Armed with this more nuanced – but still practical – framework, the problems posed by informality for social protection can be better analysed.

Figure 2.3 shows the composition of each of the disadvantaged, middle sectors and affluent groups in terms of these six categories, using data from the latest available national household surveys. The four panels cover Bolivia, Brazil, Chile and Mexico.[22] This sample represents a good mix of country-specific and regional considerations. It covers the range of informality levels in the region (from the relatively low level in Chile, to the high in Bolivia) and the main forms of pension scheme (from the public pay-as-you-go system in Brazil to private ones based on individual capital accounts).

Our definition of middle sectors is the 50-150 one chosen in Chapter 1 – those with income between 50% and 150% of the household-adjusted median income. The disadvantaged and affluent are those below and above this range respectively. The middle sectors account for nearly 50% of the workforce, while the disadvantaged account for about 20% and the affluent 30%. (A notable exception to this pattern is Bolivia where the proportion is closer to one-third for each segment).

Informality falls with income; but absolute numbers are still high. The majority of the middle sector is informal in Bolivia, Brazil and Mexico.

In general – and unsurprisingly – the size of the formal workforce rises with income. Nevertheless, two important facets of informality in the middle sectors are revealed. First, the absolute number of middle-sector informal workers is high. In fact, other than in Bolivia, middle sectors are the income groups to which the greatest number of informal workers belong. Second, their proportion is high too: there are more informal than formal workers among the middle sectors in all countries but Chile.

Digging deeper, the composition of the informal workforce across income groups varies, reflecting the heterogeneity of informal work. The starkest example is Bolivia, where the majority of the working disadvantaged are in self-employed agricultural occupations at subsistence levels of returns.

The self-employed show up in all income groups across countries, reflecting a diversity not captured by our six occupational categories. Educated self-employed individuals are mostly found among the affluent, indicating their higher earning potential, except somewhat surprisingly in Brazil.

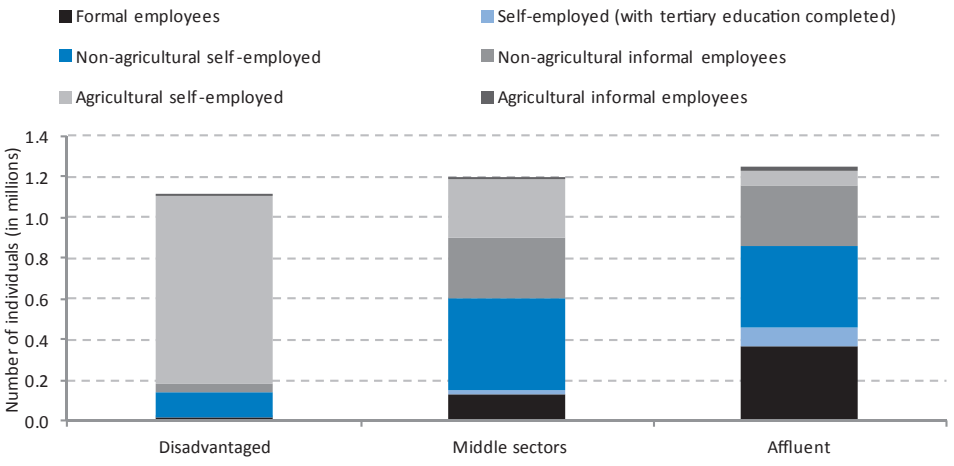
Those informal workers who are in an employment relationship are usually thought of as a particularly disadvantaged group, seen as excluded from social protection not by their own choice but by their employer (even if in practice it is often a joint decision).[23] The fact that there are informal employees even in the affluent group suggests that social-security provisions in labour law may in practice have only limited enforceability.

Over 60% of middle-sector workers are informal – a leading indicator of potential poverty for many in the region.

All in all, in the four Latin American countries considered 44 million of the total 72 million middle-sector workers are informal. Labour informality is therefore very much a middle-sector issue. It remains a prime factor behind their relatively low pension coverage – and a leading indicator of potential poverty for many of today's middle-sector households.

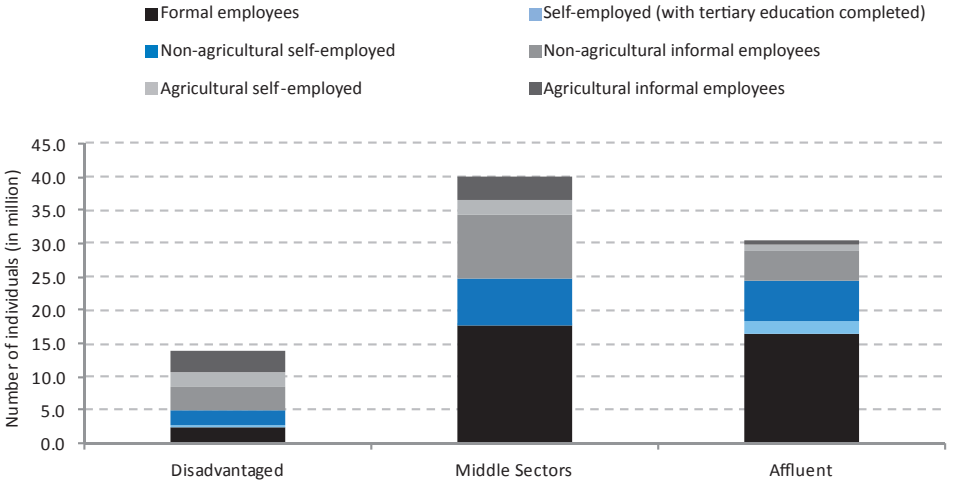
Figure 2.3. Workers by employment category and income group

(a) Bolivia, 2002



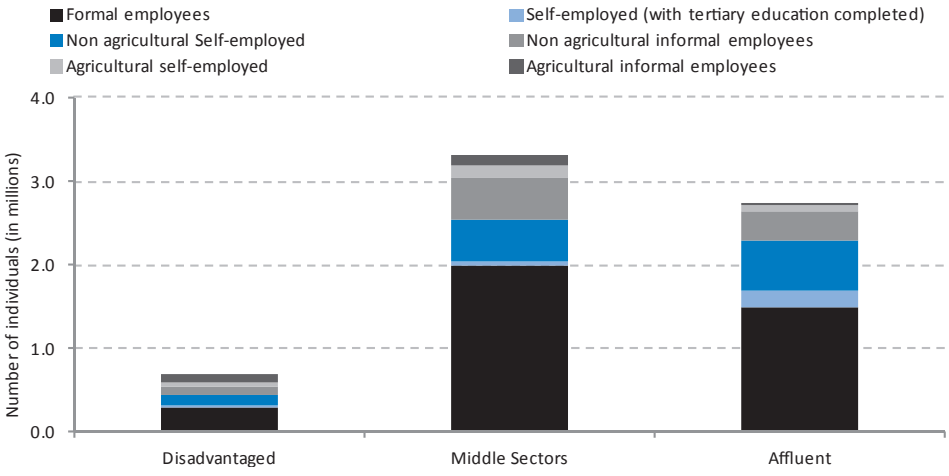
Source: Based on *Encuesta Continua de Hogares- Condiciones de Vida* 2002.

(b) Brazil, 2006



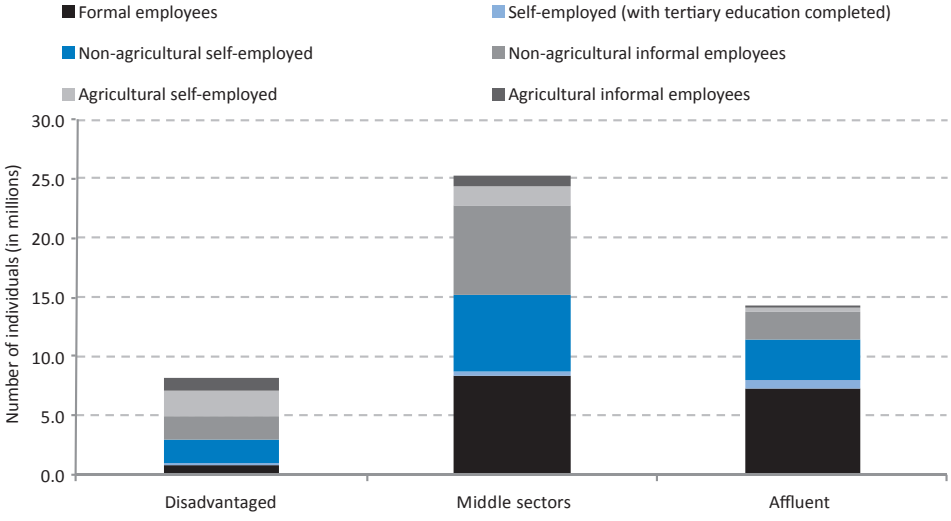
Source: Based on *Pesquisa Nacional por Amostra de Domicilios* 2006.

(c) Chile, 2006



Source: Based on *Encuesta de Caracterización Socioeconómica Nacional* 2006.

(d) Mexico, 2006



Source: Based on *Encuesta Nacional de Ingresos y Gastos de los Hogares* 2006.

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PENSIONS FOR ALL THE MIDDLE SECTORS – FORMAL AND INFORMAL

Defining pension coverage is not as straightforward as it seems. The most direct measure is affiliation[24] rates (the number of members of the pension system divided by a measure of the potential universe of members, be it working-age population, economically active population or employed workers). However, this point measure does nothing to capture the main outcomes of the system, such as the savings a member can expect to have accumulated at retirement or expected total years of contributions. The optimal definition is probably the

ratio of the total months of contributions over the total months affiliated to the pension system. An intermediate one, used in this chapter because of data availability, is the ratio of contributors to workers.

It is important that any measure be dynamic. Workers tend to shuttle frequently in and out of the labour force, between work and unemployment, and between formal and informal jobs (see Box 2.1). A cross-sectional analysis of the data may therefore be misleading. Proper analysis should instead seek to evaluate coverage from a life-cycle perspective, taking into account the effect of demographic change. It should also take into account the different contribution patterns revealed in the microdata, since there is significant variation across income levels, work status and gender.

If coverage rates are below 60% then many, if not most, current workers are failing to secure enough for their old age.

Broadly speaking, an individual needs to be contributing for at least 60% of their working life to get an adequate pension. Over a stylised 40-year labour career this corresponds to 24 years of contributions, although in practice the timing of pension gaps and the worker's wage profile matter as well. As a first approximation then, where a country's overall coverage rates are below 60% it is likely that many if not most current workers are failing to accumulate enough to cover their retirement.

Box 2.1. There and back again: mobility between formal and informal employment in Mexico

Recent evidence from Latin American countries suggests that there is high mobility between formal and informal work. Using data from the first two waves of the Mexican Family Life Survey, changes in status between 2002 and 2005 can be examined for different categories of workers. Overall mobility for men and women is high and the probability of remaining in any particular employment sector is relatively low – the highest value is 63% for self-employed males (Table 2.1).

Table 2.1. Mobility between formal and informal work in Mexico
(percentage of individuals aged 20 to 60, 2002-05)

Men

2002	2005			
	Informal salaried	Formal salaried	Self-employed	Not working
Informal salaried	46.7	22.3	20.0	10.9
Formal salaried	18.9	61.8	9.6	9.7
Self-employed	18.6	9.7	62.9	8.9
Not working	15.1	23.6	20.4	41.0
Total	**25.5**	**34.1**	**26.4**	**13.9**

Women

2002	2005			
	Informal salaried	Formal salaried	Self-employed	Not working
Informal salaried	36.3	14.3	8.4	41.1
Formal salaried	14.3	55.3	7.1	23.3
Self-employed	10.6	2.3	44.5	42.7
Not working	5.6	4.5	7.4	82.5
Total	**10.2**	**11.6**	**11.9**	**66.4**

Source: Mexican Family Life Survey, first and second waves (2002, 2005). Reproduced from Jütting and de Laiglesia (2009).

StatLink http://dx.doi.org/10.1787/888932339181

International comparisons of mobility are complicated by differences in methods and data. Bosch and Maloney (2005 and 2010) used mobility-intensity matrices (the continuous-time equivalent of the transition matrices in the table) to compare Argentina, Brazil and Mexico. They found Mexico to have the highest level of mobility, followed by Brazil and then Argentina. Mobility is certainly higher when large economic shifts are underway, such as in the transition countries during the late 1990s (Pages and Stampini, 2007).

Moreover, the rate of movement from formal to informal work is comparable to movement in the opposite direction. This impression derived from these simple transition matrices is confirmed when controlling for the effects of different rates of job separation and job creation across sectors (Bosch and Maloney, 2010).

This evidence on labour dynamics in Latin America has two key implications for labour-market and social-protection policy. First, at least part of the informal workforce – especially among the self-employed – is not rationed out of formal salaried jobs. Instruments to integrate them into health and pension systems will therefore need to consider their incentives and the ability of the state to harness their saving capacity and demand for social insurance. Second, a number of individuals transit from informality to formality and back. This may be evidence of effective allocation of labour if demands are similar, but creates a challenge in ensuring coverage particularly in pensions which typically have lengthy eligibility periods.

Who is covered and who is not?

Coverage rates in Latin America remain well below the critical level, with huge variations across income groups and countries.

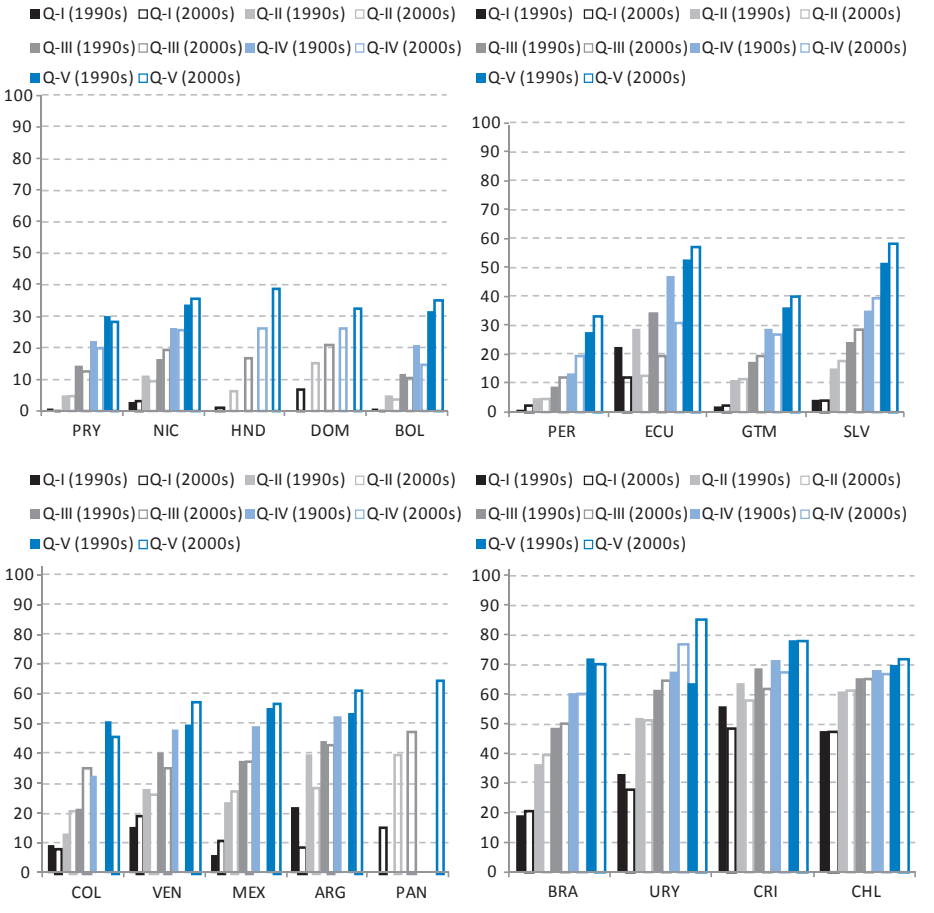
Despite the reforms we discussed earlier, pension coverage rates in Latin America have remained low – below 30% on average. This is low enough to suggest major funding issues in future decades.

Among a sample of 18 countries from the region, coverage of the labour force is positively correlated with income level (Figure 2.4).[25] Within these four sub-groups can be distinguished:

- Paraguay, Nicaragua, Honduras, Dominican Republic and Bolivia where the coverage ranges from a maximum of 40% for the highest quintiles to values close to zero for the lowest ones. In Bolivia from the 1990s to 2000s the gap actually widened, coverage increasing for the highest quintile, while falling for the fourth quintile.
- Peru, Ecuador, Guatemala and El Salvador, where coverage peaks at around 60% for the highest quintiles while lower quintiles have values ranging from below 5% to 20%. Except in Ecuador, this group sees significant variation in coverage between quintiles. This is particularly notable in Guatemala, where the difference in coverage of the first and the fifth quintiles is around 60%.
- Colombia, Venezuela, Mexico, Argentina and Panama have similar overall coverage rates (from 5% to 60%), but lower dispersion between income levels.
- Brazil, Uruguay, Costa Rica and Chile show the highest coverage rates for all income levels, with the highest quintiles reaching 80% (Uruguay), and even the lowest above 20% (Brazil).

Figure 2.4. Pension coverage rate by income quintiles in Latin America

(percentage covered out of the economically active population over 20 years old)



Note: Since available years are not identical across countries, the data presented in figures in this section represent the closest available years to 1995 and 2006.

Years used are : Argentina 1995-2006; Bolivia 1999-2005; Brazil 1995-2006; Chile 1996-2006; Colombia 1996-2006; Costa Rica 1995-2006; Dominican Rep. 2006; Ecuador 1995-2006; Guatemala 1998-2000; Honduras 2006; Mexico 1998-2006; Nicaragua 1998-2005; Panama 2004; Paraguay 1999-2006; Peru 1999-2006; El Salvador 1995-2005; Uruguay 1995-2006; Venezuela 1995-2006.

Source: Rofman *et al.* (2008).

StatLink http://dx.doi.org/10.1787/888932338288

The middle sector is particularly poorly covered, and there is no sign of an improving trend.

Perhaps surprisingly, coverage is particularly low in the middle three quintiles. This group can be taken as an approximation to our middle sectors. Rates for these workers in the first group of countries are around 15% in the 2000s (ranging from 10% in Bolivia to 20% in Dominican Republic). Coverage is a little over 20% in all countries in the second group other than Peru where it is only around 10%. In the third group, coverage is around 40% (ranging from 41% in Argentina and Panama to around 35% in Colombia). Coverage is higher in the fourth group at above 50% on average for all countries included – though this still falls short of the 60% minimum coverage identified earlier as necessary. Extending the analysis back in time finds no clear or reassuring pattern: between the 1990s and 2000s, coverage of these middle quintiles increased in about half of the countries of the region, but decreased in the other half.

Focus on the formal and informal middle sectors

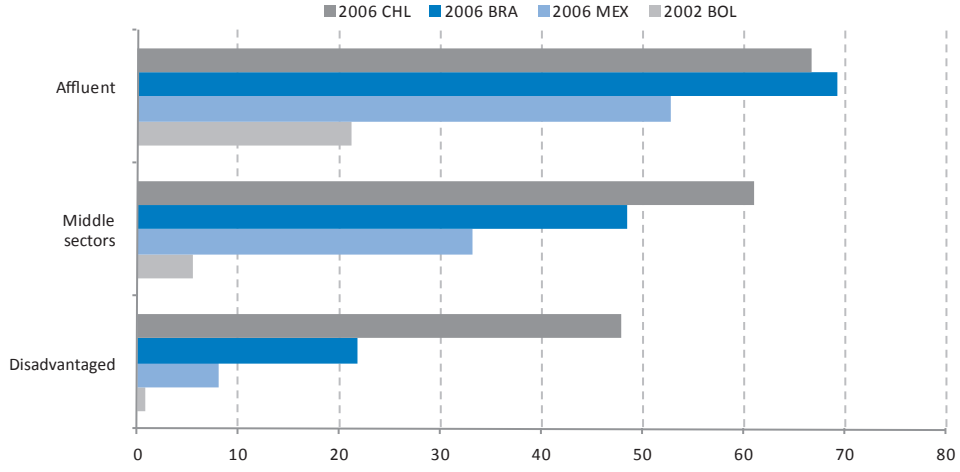
Given the extent and persistence of informality in the region's middle sectors, no analysis of their coverage rates would be complete without an examination of this dimension. The data are drawn from household surveys in Bolivia, Brazil, Chile and Mexico, from the mid-1990s to 2006.[26] As noted above, these four countries cover both different levels of informality and a range of approaches to pension provision.

We define an individual as "covered" according to their answers to questions in the relevant household survey regarding contributions to or enrolment in a public or private pension scheme.[27] The universe is the working population, taken here as those individuals aged 14 to 64 years, a span which adequately captures a typical labour career. We assign respondents to the middle sectors (or the disadvantaged or the affluent) according to our 50-150 definition.

Coverage rates unsurprisingly increase with income, though the extent to which this extends up the income distribution is noticeable (Figure 2.5). Although lack of coverage for the disadvantaged is the usual focus of analysis and comment, it is apparent that this is also a middle-sector problem. The difference in coverage between the middle sectors and the affluent is never lower than around 6 percentage points (in Chile) and rises to around 20 points in Brazil and Mexico. The consequence is that many people currently in the middle sectors are very likely fall into poverty in old age. There were no significant changes in the coverage of these workers of those four countries during the period studied (1996-2006; see Tables 2.A1 to 2.A4 in the annex).

The difference in coverage level between the middle sectors and the affluent is never less than 6 percentage points and can be as high as 20 points.

Figure 2.5. Pension coverage rate by income level
(percentage of workers covered)



Note: For Mexico and Bolivia the data cover enrolment, whereas for Chile and Brazil they capture contributors.

Source: Based on national household surveys.

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Another feature of middle-sector coverage is the extent to which "unexpected" combinations occur: formal workers who are not covered, and informal workers who are (Table 2.2). Bolivia has the highest percentage of informal middle-sector individuals among the covered (27.2%), and Chile the lowest (10.1%).

Table 2.2. Coverage rate and formality, by level of income
(percentage of workers covered)

	Disadvantaged		Middle sectors		Affluent	
	Formal	Informal	Formal	Informal	Formal	Informal
Bolivia	40.7	59.3	72.8	27.2	80.4	19.6
Brazil	83.2	16.8	88.8	11.2	78.0	22.0
Chile	87.9	12.0	89.8	10.1	79.7	20.2
Mexico	68.3	31.7	78.2	21.1	84.2	15.8

Source: Based on national household surveys.

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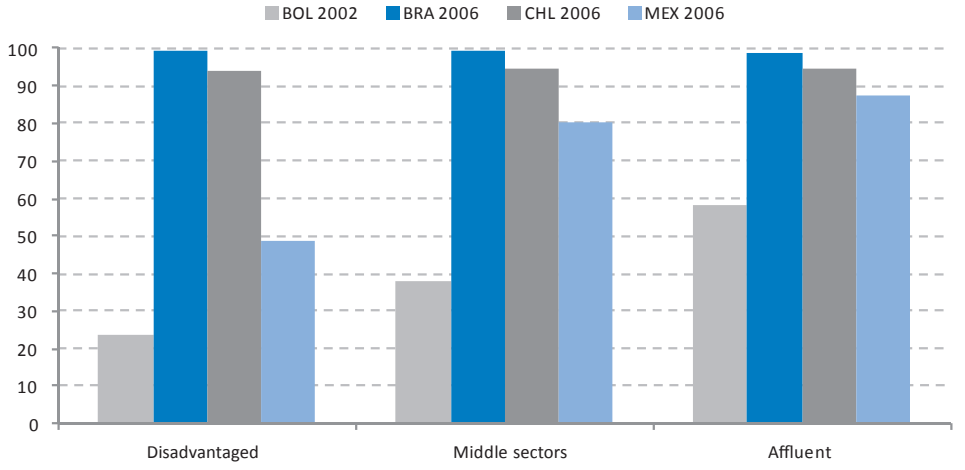
"Unexpected" combinations such as formal workers without coverage or informal workers who contribute are surprisingly common.

The issues arising from informality therefore extend even to individuals who in principle would be considered "protected". This highlights the importance of considering mobility between formality and informality during an individual's working life. Workers who make such transitions risk falling into poverty in old age since they will not have contributed sufficiently. How bad is this problem?

Pension coverage among formal employees is high (Figure 2.6) – above 80%, except in Bolivia and among the disadvantaged in Mexico (where coverage drops dramatically at low incomes, although these cases are not numerous). Despite differences across income groups and certain heterogeneity across countries, pension coverage among formal employees, at all income levels, is broadly adequate in three of the four countries analysed when measured against our 60% coverage threshold.

Figure 2.6. Pension coverage rate of formal workers by income level
(percentage of workers covered)



Source: Based on national household surveys.

StatLink http://dx.doi.org/10.1787/888932338326

All three income groups (disadvantaged, middle sectors and affluent) have similar coverage levels in Brazil and Chile; in Mexico, middle-sectors coverage is similar to the coverage of the affluent, although coverage for the disadvantaged

is lower. The picture is more worrying in Bolivia. Coverage there rises with income level – itself evidence of inequality among formal workers – but absolute levels remain low. Even formal employees in the affluent income group barely reach the 60% standard.

This generally adequate coverage of formal workers means that the persistent shortfall in coverage in the region is concentrated among the self-employed and informal employees. Coverage rates of informal workers are very low, and strongly linked to income level in all four countries (Figure 2.7). The informal middle sectors in Chile secure the highest level of coverage (14%), followed by Brazil and Mexico (11%) and Bolivia (2%). These coverage levels put the informal middle sectors closer to the disadvantaged than the affluent.

Coverage among the informal middle sector is very low, never exceeding 14%. In this, the middle sector is closer to the disadvantaged than the affluent.

Figure 2.7. Pension coverage rate of informal workers by income level
(percentage of workers covered)

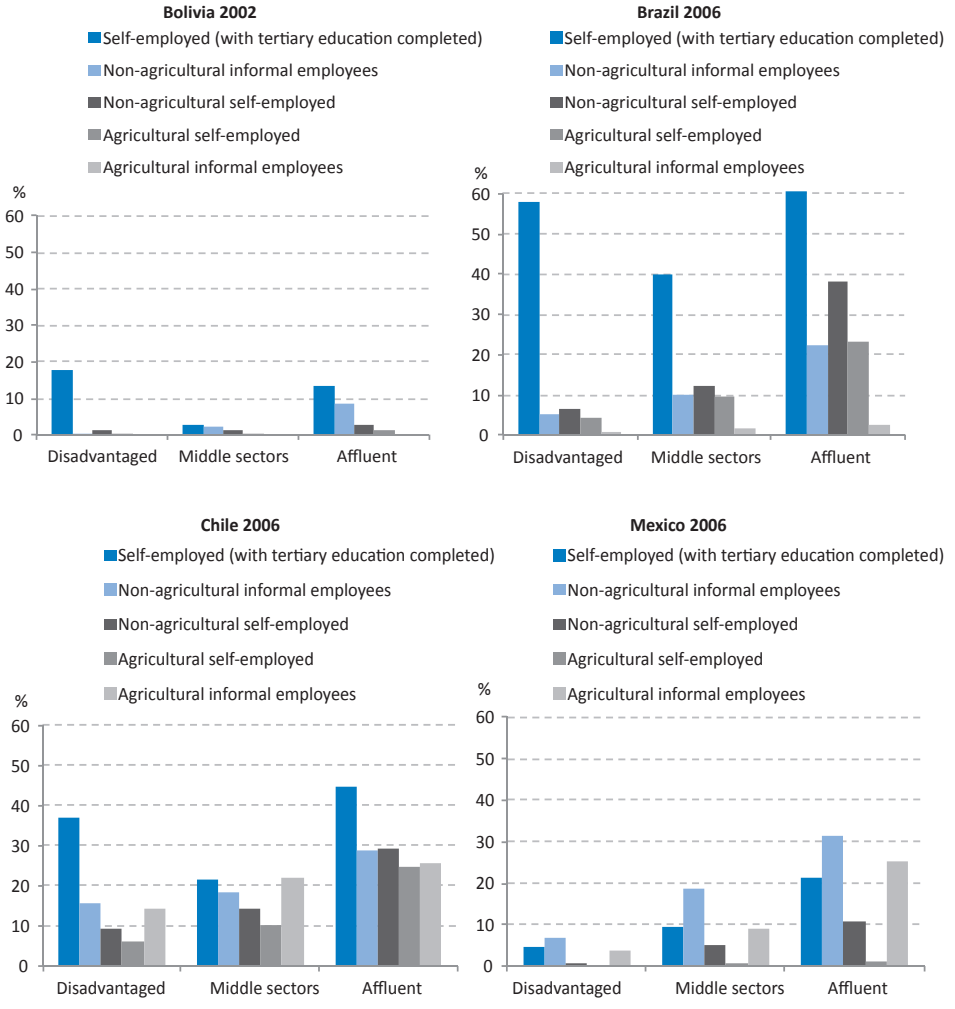
Note: Informal workers are composed of all self-employed (agricultural and non-agricultural) and all informal employees (agricultural and non-agricultural).

Source: Based on national household surveys.

StatLink http://dx.doi.org/10.1787/888932338345

Among the informal group, pension coverage is highest for professionals (self-employed with tertiary education) in all countries other than Mexico (Figure 2.8). There – surprisingly – coverage of professionals is lower than that of non-agricultural informal employees.[28] Coverage rates for professionals are U-shaped (with the exception again of Mexico), being lower for the middle sectors than the income groups either side. This contrasts with the rest of the self-employed where coverage in all countries rises with income level.

Figure 2.8. Pension coverage rate of informal workers by occupational group and income level
(percentage covered)



Source: Based on national household surveys.

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Compulsion for the self-employed in Brazil raises average contribution rates but has not succeeded in breaking the link with income.

Brazil is noteworthy because compulsory affiliation there extends to self-employed workers – it is voluntary in Bolivia and Mexico, and will be in Chile until 2012. Coverage as a result is indeed relatively high. However compulsion has not succeeded in breaking the link with income: the level of coverage of the less-educated self-employed is low, and coverage rises markedly from one income group to the next (from 12% for the middle sectors to 38% for the affluent). This points both to the limited effect of compulsion on the one hand and, probably, to low and irregular savings among middle-sector independent workers on the other. It certainly suggests that legal compulsion by itself is not enough to secure extended coverage.

Finally, coverage among informal employees is higher than coverage among the self-employed (except for the self-employed with tertiary education completed).

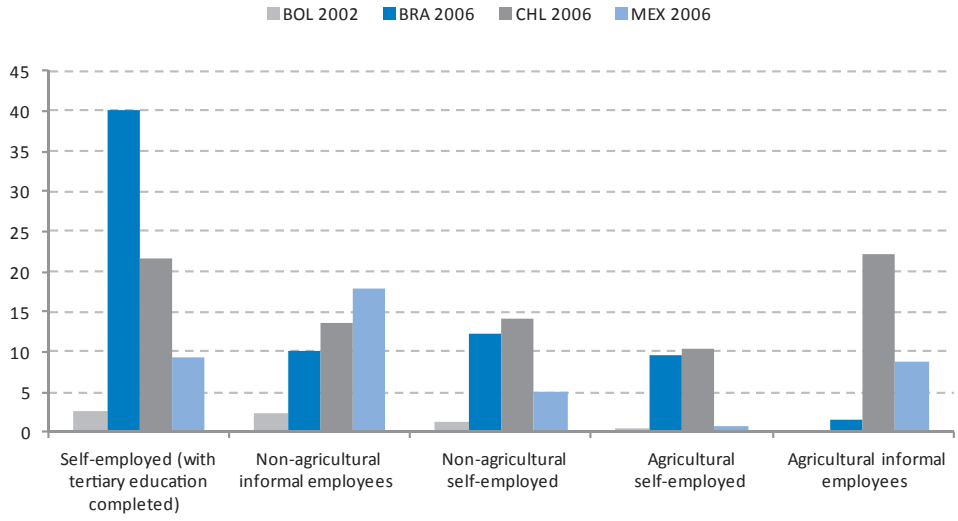
at all income levels in Chile, and more so in Mexico – the highest for any informal group. Any explanation based solely on this descriptive analysis must remain somewhat speculative; however it is possible that capitalisation provides incentives to remain in the system even after a transition to an informal job.

Figure 2.9 recasts these data by occupational class. Brazil has the highest coverage rate for professionals (around 40%), followed by Chile (around 20%). Non-agricultural informal employees are best covered in Mexico (around 17%), as noted above. Chile has the highest coverage rates for the non-professional self-employed, in both agricultural (around 14%) and non-agricultural (around 10%) occupations.

Summing up, the data presented confirm that informality reduces pension coverage for all income groups. Moreover, the link between coverage and income levels is much clearer among informal workers than formal, meaning that poverty in old age is likely to reproduce, or even exacerbate inequality.

The strongest link between income and coverage is among informal workers; inequality in old age can be expected to follow.

Figure 2.9. Pension coverage rate for the informal middle sectors (percentage covered)



Source: Based on national household surveys.

StatLink http://dx.doi.org/10.1787/888932338383.

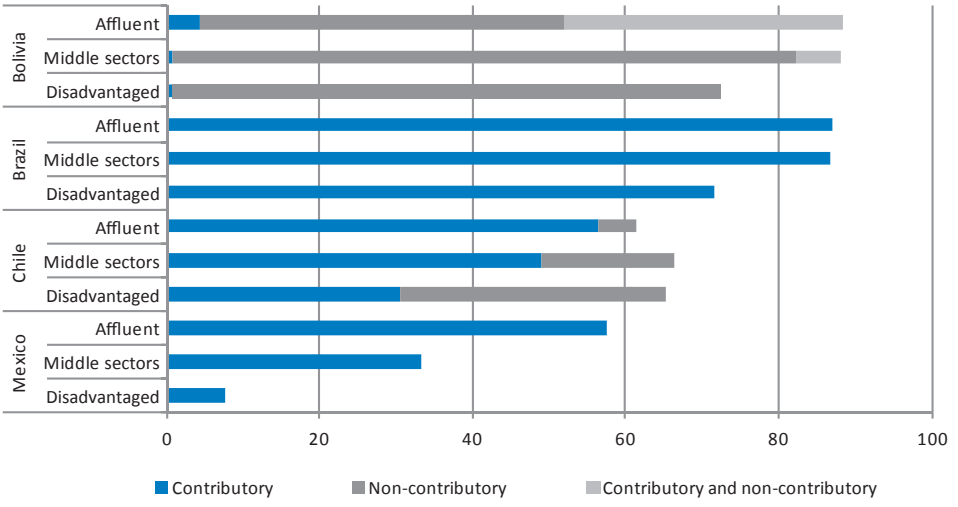
A look at those already retired

Calculating coverage rates for the elderly (over 65) is straightforward, since this is the group currently receiving benefits. The coverage of the elderly in Latin America is extremely low, and only in a few countries – Argentina, Bolivia, Brazil, Chile, Costa Rica and Uruguay – are rates above 60%.[29] The range is huge: from 85% in Uruguay to only 5% in Honduras.

As in the case of workers, coverage rates for contributory pensions are low – the exception is Brazil, where they are above 85% on average, and 87% among the middle sectors. Coverage rates are also positively correlated with income (Figure 2.10). Non-contributory pension schemes help to offset this regressive pattern (reaching up to 90% in Bolivia, and around two-thirds in Chile). These pensions are small however and significant regressivity remains.

Today's pensions remain regressive despite their corrective non-contributory elements.

Figure 2.10. Pension coverage rate of the elderly by income level
(percentage covered)



Note: Data for 2006 except Bolivia 2004. No data are available for non-contributory pensions in Brazil and Mexico.

Source: Based on national household surveys.

StatLink http://dx.doi.org/10.1787/888932338402

Covering the uncovered

The main goal of pension reform is to achieve "adequate, affordable, sustainable and robust pensions, while at the same time contributing to economic development".[30] Many of the countries in Latin American that were at the forefront of structural pension reform seem to have achieved some of these goals (affordability and sustainability), but run the risk of failing in others (adequacy and robustness). These challenges are shared by countries, such as Brazil, that did not participate in the reforms. In addition, informality severely limits the coverage of pension systems – even those based on individual capitalisation accounts, where the incentives to contribute are in principle the greatest.

Pension reform should not be seen as a "silver bullet" to reduce informality, instead its design should reflect this feature of the workplace.

Pension reform in Latin America will therefore need to be underpinned by appropriate social, labour and macroeconomic mechanisms. It cannot be seen as the "silver bullet" to reduce informality, as was hoped by the pension reformers of the 1990s. Instead, reform needs to take into account this reality. While reducing informality can be retained as a goal – and incentives aligned with this end – changes should focus on assuring adequate and sustainable pensions across the population.[31]

Mechanisms to guarantee pension coverage can be categorised as being of two types: those that act at the moment of retirement, called *ex post* interventions; or those that act *ex ante* during the working career.[32] *Ex post* interventions are themselves of two main types: transfers that are not linked to contribution histories, often referred to as "social pensions"; and transfers which guarantee a minimum pension within mandatory-contributory pension schemes (conditional on a given contribution history). Social pensions can be universal, paid to all individuals who reach eligibility age, sometimes with residency restrictions; this is the case in Bolivia and Chile. Or they can be means-tested as is the case in Argentina, Brazil, Chile, Costa Rica and Uruguay.

Given that informality is pervasive in Latin America, reliance on this solidarity pillar seems almost inevitable. Indeed calls to strengthen it have been made by the Inter-American Development Bank (to be financed by consumption taxes)[33] and by the Economic Commission for Latin America and the Caribbean.[34] One way of doing so would be to reduce the years of contributions required for a minimum contributory pension. This currently stands at over 20 years in many countries, compared with 15 in Spain for instance. Another option would be to introduce social pensions. This would be more expensive, but could have a significant impact on poverty reduction.[35]

Informality means an inevitable reliance on non-contributory benefits. Given the implied fiscal costs, careful design and timing are needed.

Unfortunately, a large fiscal commitment to a non-contributory basic pension can act as a strong disincentive to formalisation. The design of such a scheme must therefore be careful. A minimum pension which rises with contributions up to a certain level may address this risk at least in part – as has been done in Chile.[36] However, such reform will never be cheap, and estimates put the cost at the order of 1% of GDP.[37] These costs will not be immediate however, since all pension reforms include a transition period during which those who enter the new system accumulate resources or entitlement well before they begin to retire. Only after this, given that there are generally generous transition rules, is a social-pillar protection mechanism necessary.

In contrast to the *ex post* situation, there is little doubt that governments need to act now for workers in the active phase. Also with these *ex ante* policies there seems to be the greater scope for pension reforms benefitting the middle sectors.

The most direct policy option is to make affiliation compulsory for the self-employed. This is not currently the case in many countries (among our sample Bolivia, Mexico, and Chile at least until 2012). However the patchy coverage figures for Brazil, which does have compulsion, demonstrate that the effective implementation of such policy is not simply a matter of passing the necessary legislation. By definition, it is not evident how to enforce compulsory contributions for those in the informal sector. Furthermore, some informal workers can afford only to save to cover basic needs, so compulsory saving may not be optimal for low- or even middle-income households – unfortunately, household survey data are not adequate to answer this question, and estimates from alternative databases are not accurate either.

Several countries have been considering alternative hybrid approaches, such as "semi-compulsion". Under these programmes, workers are automatically enrolled, but are able to opt out. Modifications that would particularly respond to the needs of informal workers could accompany this. Greater flexibility on both the amount and timing of contributions is one example; permitting payment withdrawals in limited circumstances, such as long-term unemployment or health problems, is another.[38]

Matching-contribution schemes are relatively new. They mitigate the fiscal cost and have features that may attract the middle sector.

Finally, in recent years the debate has started to focus on "matching contributions" – transfers made by the state into an individual's defined-contribution pension plan conditional on their own voluntary contributions. In contrast to minimum and social pensions, matching contributions provide incentives for long-term saving by workers themselves. This may be particularly relevant for informal individuals with some savings capacity – a group that covers much of our middle sectors.

Matching contributions are still in the experimental design stage, and few countries have implemented them. In Latin America, the Colombian Solidarity Pension Fund subsidises the contribution of low-income self-employed workers, and the Mexican government partially matches the contributions of workers affiliated to the private defined-contribution system. Brazil does some matching within its rural pension scheme. Finally, Peru has recently introduced a matching-contribution scheme for informal workers of small firms, by which the government

matches 100% of the worker's contribution. Though they have the support of the World Bank,[39] it is still early days for these schemes and research assessing them is awaited.

HEALTH CARE FOR ALL?

Access to adequate and affordable health care is one of the main social protection challenges in Latin America. In this it needs to be recognised from the outset that in health care coverage is not the same as access. Basic treatments are usually offered universally, and financed out of general revenues. But "no coverage status" (that is without a contribution record for the public system or private/employer-sponsored insurance) tends to be associated with less and lower-quality treatment.

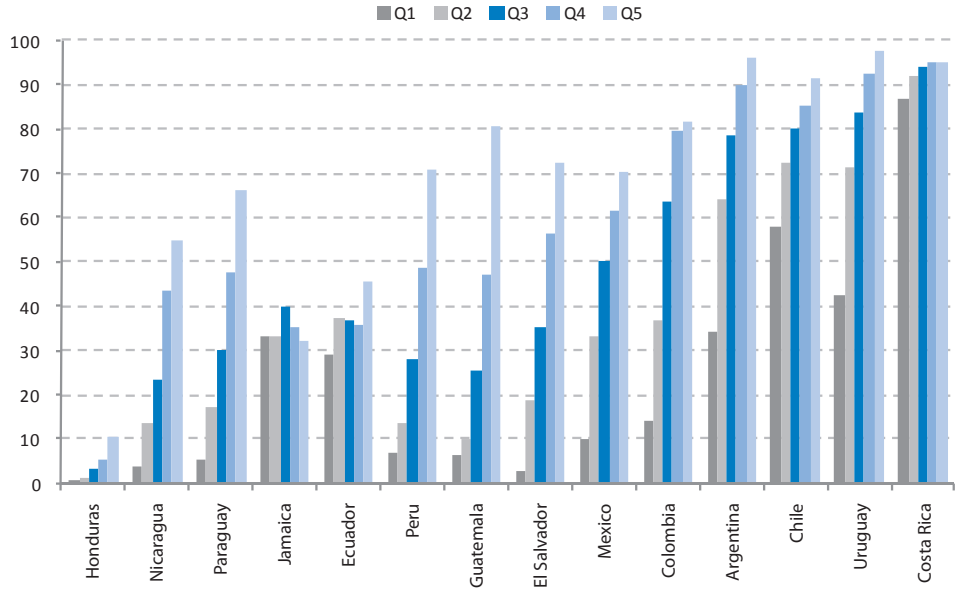
Health-care coverage remains highly income-correlated and universal schemes have been introduced.

Initial health-care reforms in Latin America were intended to increase contributory coverage. With the help of the market and private enterprise, it was expected that individuals would be enabled to satisfy their health needs from their own resources. However, available data suggest that even the opposite may have happened (Mesa-Lago, 2008a). For this reason, subsequent reforms have tended to universalise access, breaking the link to regular contributions – which are often lacking given the pervasiveness of informality. Nearly all countries in the region have introduced basic health packages covering the whole population, for an increasing number of medical conditions. Two of the more notable are the Mexican *Seguro Popular de Salud* established in 2003, and the Chilean *Plan Auge* established in 2005, which covers 56 conditions.

This universality contrasts with recent estimates by the World Bank of contributory health insurance coverage rates for Latin America by income level (Figure 2.11). With the sole exception of Costa Rica, contributory coverage rates increase sharply with income.

Non-contributory health systems effectively equalise coverage rates by income groups in Chile and Mexico, the only countries in our sample with available information (Figure 2.12) – albeit at very different levels: 92% and 34% on average, respectively.

Figure 2.11. Contributory health insurance coverage, by income quintile
(percentage of quintile covered)



Note: Quintiles of per capita income, Q1 lowest. Data are for mid-2000s.

Source: Ribe *et al.* (2010).

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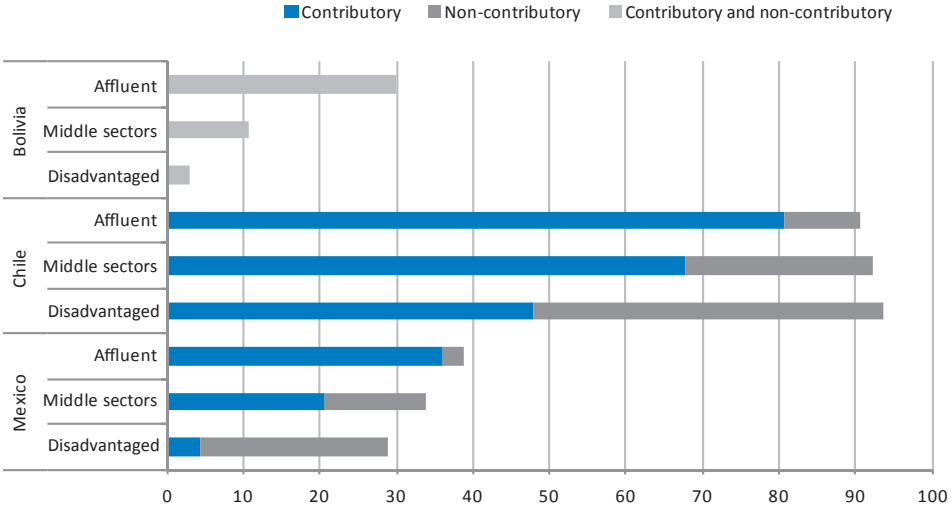
Figure 2.12. Health coverage rate of workers, by income level
(percentage of group covered)



Note: In Chile, "contributory" includes workers in the public system (groups B to D), in the private system, in the army, and in other groups, while "non-contributory" includes workers in the public system (group A, that is those with no income). In Mexico "contributory" includes workers in the public and private system and "non-contributory" includes the coverage of the *Seguro Popular*.

Source: Based on national household surveys.

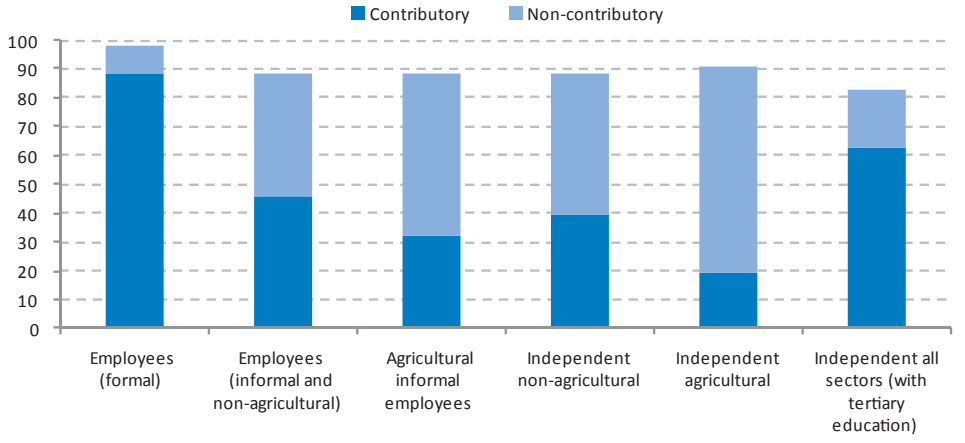
StatLink http://dx.doi.org/10.1787/888932338440

The result can be a two-tier system, which is regressive because of the costs it imposes on the lower income groups despite the lower quality services they receive.

Despite successful steps towards universal provision of health care in the region, the problem of segmentation remains and in some cases has even worsened. A two-tier contributory and non-contributory system, where lack of resources means the lower tier is characterised by low quality, compounds the problem of low contributory coverage. The result is that out-of-pocket health-care expenditure is regressive, with the lowest quintiles – extending in some cases into the middle sectors – spending a higher percentage of their income on health care than do more affluent quintiles.[40]

Figures 2.13 and 2.14 take a closer look at coverage rates for the middle sectors using the same occupational groups we defined earlier for pensions. The data cover Chile and Mexico. In both countries, formal workers are mainly covered by contributory health insurance whereas the informal (employees and self-employed in all sectors) are covered primarily by non-contributory schemes. This is particularly notable among the agricultural self-employed in both countries. The exceptions are the self-employed with tertiary education – the professionals – who are principally covered by contributory health insurance.

Figure 2.13. Health coverage rate of the middle sectors by occupational group in Chile
(percentage covered, 2006)

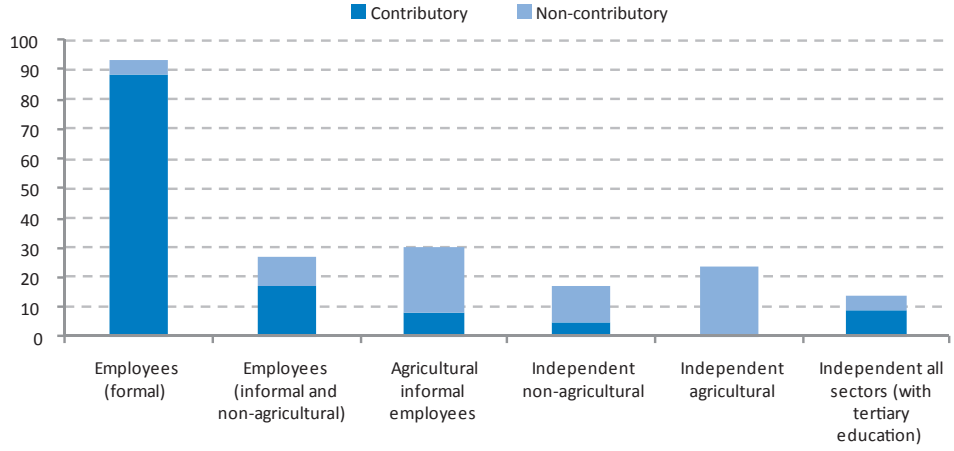


Source: Based on the *Encuesta de Caracterización Socioeconómica Nacional.*

StatLink http://dx.doi.org/10.1787/888932338459

In addition to closing the coverage gap and achieving effective universal health care (from "rights to reality", as Ribe *et al.*, 2010, put it), there are additional challenges to face. Basic health programmes which focus on specific medical conditions, for example, may send the message that health-care systems are only for acute care, rather than health promotion or the management of chronic illness. At the same time, even where the right to health is a constitutional one, a significant part of the population is not aware of this, nor how they could access the services available in practice.[41]

Figure 2.14. Health coverage rate of the middle sectors by type of worker in Mexico
(percentage of population covered, 2006)



Source: Based on the *Encuesta Nacional de Ingresos y Gastos de los Hogares.*

StatLink http://dx.doi.org/10.1787/888932338478

Reaching the middle sectors, who combine broad use of the systems with the political engagement and education to effect change, may be key. Better health care within the social-insurance system could entice the middle and affluent sectors to join and contribute. Better co-ordination – and eventually integration – between existing contributory and non-contributory schemes would also help break the cycle of segmentation. Such reforms may be particularly important to the middle sectors in a context of a regressive health system, given the persistent (and flexible) informality in this group.

Co-ordination, even integration, of contributory and non-contributory systems may help to break the cycle of segmentation.

EFFECTIVE UNEMPLOYMENT INSURANCE

The objective of unemployment insurance is consumption smoothing rather than poverty reduction,[42] but it nonetheless has an important role to play in limiting downward mobility among the middle sectors. Evidence from Central and Eastern Europe suggests that unemployment insurance reduced poverty among the unemployed by more than 50% in Hungary and 45% in Poland – noting its extensive coverage in this region (78% and 65% of households with unemployed members received the benefit, respectively).[43]

This income-smoothing role, the looser relationship between unemployment and poverty in Latin America (compared with OECD countries), and the scarcity of public resources all make it harder to implement non-contributory unemployment assistance schemes. Prevalent and flexible informality makes it hard to provide unemployment benefit even to formal workers. The typical conditions imposed by OECD countries in their unemployment insurance systems – being unemployed and available to work – become very difficult to enforce in these circumstances. The "moral hazard" problem, whereby incentives to seek work are diminished by the receipt of a benefit, is compounded with the possibility of "double dipping", that is claiming benefits while in fact working informally. Nevertheless, there remains substantial scope for policy to secure efficiency gains through risk-pooling or mechanisms for self-insurance.

OECD-member models of unemployment insurance may not translate well to the specifics of Latin American labour markets.

Severance pay alone cannot be relied on to provide for the unemployed. Many countries have therefore introduced additional schemes, though only some of these offer an element of risk pooling.

In most Latin American countries it is severance pay, rather than unemployment benefit, that is expected to provide for the unemployed during spells out of work. This brings the risk that workers who lose their job as a consequence of their employer's bankruptcy may not receive their due, at least where accrued severance pay is unfunded. To counter this many countries in the region have introduced self-insurance in the form of individual unemployment savings accounts. Argentina, Brazil, Chile, Colombia, Ecuador, Panama, Peru and Venezuela have all introduced such schemes, especially for salaried workers.[44] Such accounts do not constitute unemployment insurance, however, since they do not pool risk across individuals.

Six Latin American countries do offer unemployment insurance, in the sense that the schemes offer net payments contingent on unemployment. In Brazil, Ecuador and Uruguay these are integrated into the social security system. In Argentina and Venezuela unemployment insurance is compulsory but separate from the social security system. Chile relied on an unemployment assistance programme until 2001 when it put in place an innovative system that combines individual accounts with a solidarity fund. Brazil has both unemployment insurance linked to social security and severance pay based on individual accounts.[45] There are also some sub-national systems, such as the Mexico DF unemployment benefit, which acts rather like unemployment assistance – it is non-contributory and there is limited monitoring.

Coverage rates for traditional unemployment insurance systems have historically been low. Prior to the latest reform, only 6.7% of unemployed Chileans received the benefit. The highest coverage rate in the region in the early 2000s was in Uruguay, where 14.7% of the unemployed received benefits.[46] Coverage rates for Unemployment Insurance Savings Account (UISA) systems are better, but still low. Only Brazil has as many accounts as employed workers,[47] while in Chile, Panama and Colombia coverage rates are as low as 20%.[48]

The Chilean system combines the attractions of individual accounts with top-ups from a risk-pooling solidarity fund.

Among the existing schemes, the Chilean system (established in 2002) is often proposed as a possible model for other middle-income countries.[49] Instead of channelling workers' contributions into a single risk pool, employers and employees contribute a monthly percentage of salary into an individual savings account. Part of the employer's contribution is goes to a solidarity fund, which also receives public money from the state. This solidarity fund provides top-up benefits in cases where individual savings are low. Employees who have formal written contracts and who have contributed to the scheme for at least 12 months are entitled to access their savings accounts and withdraw funds. Individuals who have accumulated less than two months' salary in their accounts are covered by the solidarity fund, unless their dismissal was for fair cause (employee misconduct, for example). Since the individual account balance is owned by the worker, the scheme incentivises work search. Double dipping remains a possible issue, but the fiscal cost is limited to the solidarity-fund element.

However, despite its potential, unemployment insurance based on individual accounts currently covers only formal employees. Given the mobility of workers between formal and informal work, this means that the proportion of the unemployed with access to insurance remains low. Even in Chile, where informality is the lowest in Latin America, unemployed workers are much less likely than average to have been in formal jobs with written contracts – around one-third report having had an atypical contract in their last job, and around 30% no contract at all. What is more, about 60% of the unemployed had been in their last job for less than 12 months.[50]

Moreover, dependent on contribution history the replacement rates provided by such schemes can be low. Workers who just fulfil the minimum eligibility

criteria and who are not eligible for solidarity-fund top-ups would receive a single withdrawal worth about a third of their monthly salary. Unemployed workers who are eligible for solidarity-fund financing – which is the case only 22% of the time[51] – are guaranteed an initial replacement rate of 50%, decreasing by 5 percentage points every month until the fifth and final payment. This is at the lower end of replacement rates in OECD countries. Since unemployment is far more likely among the lower-income categories than the higher, a vast majority of the unemployed population will receive little or no benefit. The insurance element in the programme is therefore relatively modest, as is the potential coverage. On the positive side, programmes like the Chilean one that link unemployment insurance to individual savings accounts can easily be implemented in those countries that already have UISAs, with more or less generous insurance payments.

There may be fiscal and labour market benefits to linking UISA and pension accounts in a defined contribution system.

Integrating UISA and unemployment-benefit schemes with labour and social policy remains a challenge for most countries in Latin America. Informality and lack of administrative capacity seriously limit the scope for continuous eligibility monitoring, though a requirement to take up placement services or training could easily be made a condition of benefit receipt. On the social protection side, a possible avenue to more generous benefits without large increases in labour costs would be to link UISA accounts and pension accounts in a funded defined-contribution system.[52]

CONCLUSION

Policy for social protection in Latin America constantly runs up against the prevalence, flexibility and persistence of informal work throughout the region. These constrain the funding of social security systems financed through payroll taxes, and make it hard to create eligibility criteria that are inclusive yet limit abuse. Both militate against coverage, and have led to shortfalls that extend well beyond the poor. In most countries contributory systems fail to reach even half of middle-sector workers.

Difficulties do not mean, however, that it is impossible to design systems which provide adequate protection. Recent decades have witnessed substantial efforts in Latin America to reform social-protection systems with the twin objectives of financial sustainability and increased coverage. Reforms typically recognise that pensions, health care and unemployment cover have different characteristics and different priorities. They have therefore tended to separate previously bundled items. Health-care systems have been reformed in the direction of universal insurance against a set of predetermined eligibility criteria. Pensions systems have been reformed with financial sustainability and incentives in mind, in some cases complemented by social pensions to alleviate poverty in old age.

This chapter's detailed analysis of four diverse countries has shown that the middle sectors are largely informal in Latin America. Social insurance for a significant proportion of the middle sectors will therefore have to be achieved in ways other than through links to formal employment. Some reforms have already allowed for social protection among informal workers. Nevertheless, informal workers' participation in social-insurance systems remains strongly dependent on their income.

Social-assistance policy is typically seen in terms of the poor, with income support and health-care provision designed to alleviate poverty and preserve human capital. Though overlooked, insufficient coverage of the middle sectors

poses a serious challenge to traditional social protection systems. Left to – often incomplete – markets individuals are likely to under-insure or insure inefficiently, if they insure at all. Yet middle-sector workers combine a capacity to save with a potential demand for social protection – as we have mentioned, many of them would need only a relatively small shock to return to the ranks of the poor. Given Latin America's particularly constrained fiscal space, encouraging the informal middle sectors to join contributory social protection schemes will be a vital part of mobilising their savings for social insurance, and building fairer and more efficient social risk-management systems.

NOTES

1. See for example Banerjee and Duflo (2008).
2. Among these reformers (and note that Brazil and Venezuela did not join the trend), three models emerged: substitutive, parallel and mixed (Mesa-Lago, 2004). In substitutive systems (adopted in Chile, Bolivia, Mexico, El Salvador and Dominican Republic), the previous defined-benefit pay-as-you-go system is closed and replaced by individual capital accounts. Parallel systems (adopted in Peru and Colombia) are characterised by a deep reform of the public scheme, which then competes with new private ones. In the mixed systems (Argentina until the 2008 reform, Costa Rica, and Uruguay) provision is an aggregate of public (generally minimum) and private benefits.
3. See Lindbeck and Persson (2003), or Barr and Diamond (2006) for a more sceptical view. The evidence for these benefits has been mixed (Gill *et al.*, 2005). The general consensus is that the long-term fiscal position of reformer economies is significantly more robust. However, reformers face significant up-front fiscal costs, since active pensioners remain subject to the old rules, while some or even all contributors move to the new system. In addition, all the privately managed systems maintain some kind of redistributive pensions, financed out of general revenues. But on a long-term basis, reforms have reduced the financial burden of pensions on the state (at least with respect to future pensioners), and most of the implicit costs have been made explicit, increasing the transparency of the system.
4. See OECD (2007).
5. In the case of Chile, there is evidence that social security taxes were already borne by employees, and therefore did not affect labour costs (Gruber, 1997a; Cox-Edwards, 2002). On the other hand, studies covering Mexico and Colombia have found a smaller share being borne by workers, discouraging firms from hiring more workers (for Mexico see Cazorla and Madero, 2007; for Colombia Kugler and Kugler, 2003). Finally, Cruces *et al.* (2010) find partial shifting to wages, but no labour-market effects in Argentina.
6. Corbo and Schmidt-Hebbel (2003).
7. For informal employment see Menezes Filho and Scorzafave (2009), and for formal Côrtes Neri (2010).
8. See the estimates by Rofman *et al.* (2008) and the discussion in Gill *et al.* (2005).
9. Developed by Santiso (2006).
10. OECD (2008). See also Jütting and de Laiglesia (2009).
11. This heterogeneity responds to two dominant schools of thought, reviewed in Perry *et al.* (2007). On the one hand, the "exit" or voluntary view argues that entrepreneurs and workers opt for informality, based on a cost-benefit analysis. By contrast, the "exclusion" view supports the theory that workers are excluded from formal activities. Jütting and de Laiglesia (2009) argue for a third way, based on the lack of clear boundaries between formality and informality. In this framework, workers are neither 100% formal nor 100% informal; they may pay direct taxes, but not social contributions, for instance.
12. ECLAC (2008).
13. See Gasparini and Tornarolli (2007) for an example.
14. Domestic workers account for a sizeable share of informal employment in Latin America (15% according to ILO, 2009) and such employment explains much of the difference in informality rates between men and women in the region.

15. Informal employment has often been viewed as a residual sector. In classic development models of surplus labour (such as those of Lewis, 1954; Ranis and Fei, 1961; and Harris and Todaro, 1970) workers move from traditional agriculture to modern manufacturing, but may fail to find a formal job in the urban labour market. In that case, informal work is a form of underemployment that substitutes for outright unemployment.

16. The evidence is summarised for all emerging countries in Jütting and de Laiglesia, (2009), and for Latin America by Perry *et al.* (2007).

17. Fields (1990 and 2005).

18. Self-employed workers in a professional capacity (craftsmen and members of the liberal professions, among others) can also be thought of as pertaining to the upper tier of informal employment when their activities are undeclared and carried out personally, rather than as part of an incorporated enterprise.

19. False self-employment is the practice of registering as a self-employed worker with the labour or tax authorities while working in a formal firm in a role whose characteristics would normally be associated with a labour contract. An example would be a "sub-contractor" who is exclusively hired by a single firm while technically remaining self-employed.

20. See Kanbur (2009).

21. Following the definition of the 17th International Conference of Labour Statisticians, the self-employed should be classified as formal when their enterprise is formal. Given heterogeneity in the relevant survey questions across countries, a definition based on (homogeneous) questions on employment status has been preferred.

22. See Da Costa *et al.* (2010) for the technical details.

23. See Auerbach *et al.* (2007).

24. Workers are considered as affiliates from the point they are registered in the social security administration records. Affiliates are contributors in a particular period if they have paid the required social contributions to the public or private scheme.

25. Based on Rofman *et al*. (2008).

26. The information available is not identical across countries: Chilean data cover 1994 to 2006, with household surveys every two years; the data for Mexico cover 1998 to 2006, with data every two years; for Bolivia data cover the two years 2001 and 2002; and Brazilian data are drawn from annual household surveys from 1996 to 2006 (omitting 1997 and 2000). See Da Costa *et al.* (2010) for the details and a deeper analysis.

27. In Chile data cover contributors to both the private pension funds (*Administradoras de Fondos de Pensiones*, AFP), and to the previous public pay-as-you-go system (*Instituto de Normalización Previsional*, INP). In Mexico, they refer to enrolment in the private pension system (*Sistema de Ahorro para el Retiro*, SAR) managed by private pension funds (*Administradoras de Fondos para el Retiro*, AFORE), to the public institutions (*Instituto Mexicano de Seguridad Social,* IMSS; *Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado,* ISSTE), to the state company PEMEX scheme, and to university insurance programmes. In Bolivia, coverage is proxied by enrolment in the private pension system (AFP). In Brazil, data cover contributors to the *Instituto de Previdência* at all its levels: national (*Instituto Nacional Seguro Social*, INSS), federal and local.

28. Table 2.A4 in the statistical annex shows the evolution of coverage for this group from 1994 to 2006. It has increased only for the affluent.

29. This is stressed in Rofman *et al.* (2008).

30. Holzmann and Hinz (2005).

31. In a similar vein, see BBVA's study for Chile, Colombia, Mexico and Peru, Escriva *et al.* (2010), and Ribe *et al.* (2010) for the region as a whole.

32. See Holzman *et al.* (2009), and Hu and Steward (2009).

33. Levy (2008) and Pages (2010).

34. ECLAC (2006).

35. Dethier *et al.* (2010) tested this for 18 countries in the region. They simulated both universal and means-tested pensions, set at either 50% of the median income or USD 2.50 a day. On the universal basis fiscal costs were in the range 1% to 2% of GDP.

36. Described more fully in OECD (2009).

37. This cost estimate is from Arenas *et al.* (2008) and Melguizo *et al.* (2009).

38. See Hu and Steward (2009).

39. Ribe *et al*. (2010).

40. See ECLAC (2006) and Mesa-Lago (2008b).

41. See Mesa-Lago (2008b).

42. Studies in the United States have found that average consumption there would be about 20% lower without unemployment insurance (Gruber, 1997b).

43. Vodopivec *et al*. (2005).

44. See the overview by Ferrer and Riddell (2009). Argentina's system covers only construction workers.

45. Reyes Posada (2007).

46. Velásquez Pinto (2003).

47. Note that accounts correspond to jobs rather than people so that having as many accounts as workers does not automatically indicate full coverage.

48. Ferrer and Riddell (2009).

49. See Vodopivec (2009) and Sehnbruch (2006).

50. See Sehnbruch (2006).

51. Sehnbruch (2006).

52. Vodopivec (2009) proposes a system where individuals can receive benefits beyond the balance of their UISA by borrowing against their pension fund.

STATISTICAL ANNEX

Table 2.A1. Pension coverage rate by occupation and sector in Bolivia
(percentage of workers)

	Formal workers			Non-agricultural informal employees			Agricultural informal employees			Non-agricultural self-employed			Agricultural self-employed			Self-employed (with tertiary education completed)		
	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent
2001	66.2	61.9	74.2	7.4	4.3	12.7	0.0	0.0	0.0	0.2	1.1	2.9	0.1	0.6	1.0	13.2	6.7	17.1
2002	23.8	37.7	58.4	3.9	3.5	9.5	0.0	0.0	0.0	1.4	1.2	2.6	0.1	0.4	1.2	34.5	2.7	13.3

Note: The data on coverage are based on enrolment.

Source: Based on *Encuesta Continua de Hogares- Condiciones de Vida.*

StatLink http://dx.doi.org/10.1787/888932339219.

Table 2.A2. Pension coverage rate by occupation and sector in Brazil
(percentage of workers)

	Formal workers			Non-agricultural informal employees			Agricultural informal employees			Non-agricultural self-employed			Agricultural self-employed			Self-employed (with tertiary education completed)		
	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent
1996	91.7	94.6	94.0	4.8	6.4	16.1	0.7	1.6	3.1	9.4	17.5	41.3	2.0	5.4	18.9	61.7	33.7	69.2
1998	99.7	99.4	98.2	4.2	6.5	16.0	0.4	0.8	2.2	9.0	14.3	37.8	1.5	4.6	16.3	61.3	39.9	64.8
1999	99.6	99.4	98.4	3.9	6.4	16.0	0.5	0.9	2.8	6.4	13.0	38.2	1.8	5.1	16.9	63.6	43.8	65.7
2001	99.8	99.5	98.6	4.9	8.1	19.2	0.5	1.0	1.6	6.6	11.9	36.1	1.7	4.7	14.5	56.2	43.2	64.6
2002	99.9	99.6	98.9	4.4	7.5	19.1	0.3	1.0	1.5	4.8	12.0	34.4	1.4	4.1	15.5	51.2	34.2	59.7
2003	99.6	99.5	98.8	4.7	8.2	19.6	0.4	1.0	2.3	5.2	12.0	36.9	1.4	5.5	17.5	56.1	35.0	62.4
2004	99.5	99.4	99.8	5.1	8.4	20.6	0.4	0.9	1.8	5.3	11.6	36.4	1.9	5.1	18.2	61.5	39.6	62.3
2005	99.4	99.5	98.9	5.8	9.8	22.2	0.5	1.1	2.3	4.7	11.7	37.8	2.6	7.2	18.4	51.0	31.2	63.2
2006	99.4	99.4	98.9	5.1	10.0	22.3	0.9	1.6	2.6	6.4	12.2	38.1	4.3	9.7	23.1	57.8	40.1	60.7

Source: Based on *Pesquisa Nacional por Amostra de Domicilios.*

StatLink http://dx.doi.org/10.1787/888932339238

Table 2.A3. Pension coverage rate by occupation and sector in Chile
(percentage of workers)

	Formal workers			Non-agricultural informal employees			Agricultural informal employees			Non-agricultural self-employed			Agricultural self-employed			Self-employed (with tertiary education completed)		
	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent
1994	90.9	92.4	93.5	21.1	26.8	32.7	22.8	19.5	22.7	14.6	20.0	29.4	15.4	23.2	28.8	67.0	48.2	57.3
1996	90.3	93.0	93.3	15.6	22.6	31.5	14.1	18.7	19.4	8.0	16.9	31.6	3.8	9.3	22.9	6.1	16.1	47.8
1998	93.6	94.0	93.7	13.5	21.6	28.7	8.3	15.9	15.5	8.3	13.8	29.3	2.9	8.9	18.5	2.0	25.5	51.1
2000	89.7	94.1	95.1	13.5	20.8	30.8	9.5	14.1	26.8	5.0	14.4	30.0	3.9	8.6	25.1	45.5	27.5	53.6
2003	94.0	94.0	93.9	12.4	17.0	23.2	12.1	16.6	23.6	6.2	13.4	28.9	3.8	9.4	24.6	27.9	34.1	53.9
2006	92.4	91.8	92.9	10.3	13.5	29.7	14.1	22.2	25.6	9.2	14.1	29.4	6.1	10.3	24.8	37.2	21.6	44.6

Source: Based on *Encuesta de Caracterización Socioeconómica Nacional.*

StatLink http://dx.doi.org/10.1787/888932339257.

Table 2.A4. Pension coverage rate by occupation and sector in Mexico
(percentage of workers)

	Formal workers			Non-agricultural informal employees			Agricultural informal employees			Non-agricultural self-employed			Agricultural self-employed			Self-employed (with tertiary education completed)		
	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent
1998	74.7	87.2	90.1	5.1	16.9	25.5	3.3	14.2	20.6	2.0	3.4	7.3	0.3	0.8	2.2	0.0	5.9	9.1
2000	81.7	89.0	91.4	3.6	15.2	25.6	2.8	7.3	20.2	0.8	4.2	6.0	0.0	0.4	0.2	0.0	12.0	10.9
2002	79.2	91.1	92.5	7.6	18.1	24.8	4.8	20.0	20.2	1.9	3.6	7.1	0.2	1.2	0.1	0.0	8.6	12.1
2004	40.7	74.9	85.2	8.0	16.0	33.7	4.0	8.2	23.0	0.5	3.3	8.5	0.0	1.2	4.2	0.0	7.3	13.4
2005	38.7	75.0	84.5	5.3	16.8	30.9	1.7	6.3	16.5	0.9	3.5	9.3	0.1	0.8	2.9	0.0	3.6	19.7
2006	48.5	80.0	87.2	5.7	17.8	31.1	3.6	8.8	25.5	0.9	5.0	10.9	0.4	0.8	1.3	4.5	9.4	21.2

Note: The data on coverage are based on enrolment.

Source: Based on *Encuesta Nacional de Ingresos y Gastos de los Hogares.*

StatLink http://dx.doi.org/10.1787/888932339276

Table 2.A5. Population by occupation and sector in Bolivia
(thousands)

	Total	Formal workers			Non-agricultural informal employees			Agricultural informal employees			Non-agricultural self-employed			Agricultural self-employed			Self-employed (with tertiary education completed)		
		Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent
2001	5 013	4	102	333	41	334	295	10	56	28	1 013	810	493	869	386	122	5	25	88
2002	3 579	15	128	370	37	291	304	3	15	12	126	456	399	938	290	71	3	26	95

Note: The data on coverage are based on enrolment.

Source: Based on *Encuesta Continua de Hogares- Condiciones de Vida.*

StatLink http://dx.doi.org/10.1787/888932339295

Table 2.A6. Population by occupation and sector in Brazil
(thousands)

	Total	Formal workers			Non-agricultural informal employees			Agricultural informal employees			Non-agricultural self-employed			Agricultural self-employed			Self-employed (with tertiary education completed)		
		Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent
1996	68 664	2 349	10 757	13 771	2 648	6 191	4 093	3 227	2 447	4 082	1 494	4 489	6 081	2 800	2 130	865	37	30	1 173
1998	70 746	2 161	11 134	14 090	2 957	6 700	4 027	3 041	2 594	3 828	1 728	5 228	6 064	2 825	2 113	823	52	59	1 322
1999	68 703	2 070	11 316	14 131	2 884	6 953	4 091	3 081	2 831	440	1 814	5 421	6 225	2 791	2 364	854	54	61	1 322
2001	72 039	2 240	12 612	14 924	3 148	7 859	4 555	2 919	2 593	380	2 003	5 545	6 163	2 518	2 160	868	79	65	1 408
2002	74 802	2 276	13 268	15 204	3 286	8 315	4 697	2 928	2 842	451	2 052	6 029	6 193	2 494	2 241	877	57	77	1 515
2003	76 165	2 390	13 850	15 680	3 249	8 262	4 385	2 990	3 003	512	2 231	6 080	6 064	2 404	2 294	1 040	62	80	1 589
2004	78 921	2 363	15 015	15 884	3 351	8 917	4 557	2 939	3 115	478	2 259	6 218	5 916	2 577	2 548	1 054	87	97	1 546
2005	81 366	2 369	15 728	16 503	3 334	8 955	4 686	3 226	3 236	500	2 388	6 680	5 983	2 542	2 486	951	46	92	1 661
2006	84 384	2 525	17 626	16 579	3 398	9 486	4 600	3 120	3 335	463	2 343	7 037	5 988	2 406	2 520	947	85	115	1 811

Note: The data on coverage are based on enrolment.

Source: Based on *Pesquisa Nacional por Amostra de Domicilios.*

StatLink http://dx.doi.org/10.1787/888932339314

Table 2.A7. Population by occupation and sector in Chile
(thousands)

	Total	Formal workers			Non-agricultural informal employees			Agricultural informal employees			Non-agricultural self-employed			Agricultural self-employed			Self-employed (with tertiary education completed)		
		Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent
1994	5 283	252	1 425	1 293	113	355	160	49	78	10	105	476	518	92	189	46	1	10	111
1996	5 359	324	1 473	1 247	135	354	180	89	102	14	66	412	561	70	132	66	5	14	115
1998	5 415	283	1 486	1 266	152	384	189	82	116	10	66	433	539	66	113	52	1	16	161
2000	5 540	294	1 522	1 305	176	387	176	85	94	9	101	505	547	64	106	51	2	6	112
2003	5 844	270	1 651	1 350	159	440	189	69	103	9	91	542	600	51	119	63	0	6	131
2006	6 631	318	1 987	1 515	160	511	251	67	106	12	104	556	598	43	107	65	6	29	196

Source: Based on *Encuesta de Caracterización Socioeconómica Nacional.*

StatLink http://dx.doi.org/10.1787/888932339333

Table 2.A8. Population by occupation and sector in Mexico
(thousands)

	Total	Formal workers			Non-agricultural informal employees			Agricultural informal employees			Non-agricultural self-employed			Agricultural self-employed			Self-employed (with tertiary education completed)		
		Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent	Disad-vantaged	Middle sectors	Affluent
1998	38 003	422	5 437	6 029	1 520	5 153	1 686	1 284	870	100	1 756	4 719	3 213	2 996	1 647	496	4	53	620
2000	39 919	394	5 702	6 995	1 478	6 237	1 980	1 740	797	63	1 780	4 603	2 729	2 713	1 492	317	10	101	791
2002	42 209	452	6 490	7 269	1 846	6 473	1 702	1 371	1 005	29	1 700	5 290	3 082	2 777	1 595	292	3	122	711
2004	44 017	983	8 149	7 607	2 758	7 869	2 231	19	67	42	3 463	6 528	3 256	13	16	1	12	289	716
2005	45 061	956	7 993	7 821	1 741	6 761	2 453	1 049	950	75	1 759	5 562	3 275	1 978	1 297	303	22	272	794
2006	47 739	921	8 399	7 322	1 953	7 500	2 341	1 150	914	112	2 030	6 567	3 345	2 168	1 642	278	20	320	756

Note: The data on coverage are based on enrolment.

Source: Based on *Encuesta Nacional de Ingresos y Gastos de los Hogares.*

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CHAPTER THREE

Education, Social Mobility and the Middle Sectors

ABSTRACT

Education is a powerful tool to foster upward social mobility. The uneven distribution of opportunities in Latin America means that access to educational services in terms both of quantity and quality is low for the region's middle sectors, and the level of education attained by middle-sector children also seems to peak around complete secondary education. This chapter discusses a series of policy recommendations aiming to promote inter-generational social mobility: investing in early childhood development; increasing the quality of public education, through measures such as better administration of schools, a modern system of evaluation, a more effective incentive structure for teachers; financing tertiary education through grants and loans; redistributive policies and income support; and policies to increase the social mix within schools.

Education is probably the first thing that comes to mind when thinking about policies to foster upward social mobility. Building human capital is a major driver of economic growth, and empirical evidence from OECD countries shows that persistence of educational attainment across generations is a key factor behind persistence in earning differentials.[1] The microeconomic evidence supports this, showing sizeable returns to education. The investment households make in education tends to be profitable from both a social and private viewpoint – and in Latin America these returns are particularly strong.[2] Among the Latin American middle sectors, education is additionally associated with increased life satisfaction, pride and sense of identity.[3] All this should create fertile ground to use education policy in pursuit of both economic and social aims.

Education can be powerful in promoting social mobility. Regional factors such as discrimination and static income inequality mean that to succeed policy must go beyond just the provision of basic access.

Education can certainly be a powerful tool for upward mobility, at least for those able or willing to invest the time and resources. But if opportunities are unevenly distributed, public intervention in education can fail. Factors such as unequal access to educational services, significant differences in the quality of education between private and public schools, or constraints in access to finance can mean policies become regressive in their effect and act in practice to perpetuate inequality. To be effective in promoting mobility, education policies need to have equity considerations built into their design from the outset.[4]

Where other mechanisms of social exclusion such as discrimination by race or gender are present, simply providing equal access to education may not be enough – and evidence shows that such discrimination is still prevalent in Latin America. A recent study by the Inter-American Development Bank (IDB) found that differences in wages due to race, for example, are around 30% in the region.[5] Equalising education attainment across different ethnic groups would reduce this gap by 10 percentage points. This chapter presents some evidence that these problems are not confined to the disadvantaged, but extend also to the middle sectors. Education policies must therefore both rely on and be complementary to other policies to foster social inclusion.

This chapter also lays to rest the frequently heard assertion that Latin America's famously high level of static income inequality[6] might be a good thing when accompanied by high social mobility – by demonstrating the rewards to investment in human capital, for example. Public policies to reduce inter- and intra-generational inequalities are more than justified.

This chapter documents the degree of educational mobility in the region with a special emphasis on the middle sectors. Although the debate regarding the relative importance of innate and environmental factors ("nature versus nurture") is not settled,[7] there is evidence that inherited cognitive skills are only a moderate driver of inter-generational income mobility.[8] In this sense, an international comparison with OECD countries – especially high-mobility ones – can serve as a benchmark to assess the extent to which mobility in Latin America could be increased.[9] We have done this by drawing on a wide range of data: from the results of the *Latinobarómetro* surveys, through the latest OECD Programme for International Student Assessment (PISA) database, to results in the literature based on household surveys. While rich in information about the educational characteristics of parents and children, the first two datasets do not have detailed information about household income levels. Therefore, most of the analysis in this chapter must focus on income deciles rather than the 50-150 median-income definition introduced in Chapter 1.

The chapter also explores the relationship between educational mobility and static income inequality, the returns to education and public expenditure on education. It concludes with a discussion of educational policies that could enhance equal opportunities and mobility across generations in the region.

The chapter's emphasis on education can be justified by the importance of education and human capital as a determinant of earnings and the possibility for concrete public policy action in this area as well as by the availability and quality of data.[10] But education can also be seen as an exemplar of broader traits in the multidimensional and complex matrix of influences on social mobility and status, providing examples and evidence of how policy can seek to influence these too.

EDUCATIONAL ATTAINMENT OF THE MIDDLE SECTORS

Where do the middle sectors currently stand in terms of educational attainment? Table 3.1 presents years of education for different cohorts of the population using our 50-150 definition of middle sectors.[11]

Table 3.1. Years of education by age and income group in Latin America

Country	Income	Avg. 25-65	14-20	21-30	31-40	41-50	51-60	61-65
Argentina	Disadvantaged	9.11	8.94	10.17	9.44	9.24	8.22	7.51
	Middle	9.73	9.73	11.13	10.45	9.65	8.33	7.58
	Affluent	12.64	10.69	13.10	13.42	12.64	11.70	10.83
Bolivia	Disadvantaged	4.08	7.71	6.62	4.63	3.59	2.91	1.78
	Middle	6.91	8.89	9.30	7.69	6.37	4.44	3.38
	Affluent	10.65	9.62	12.43	11.35	10.41	8.71	7.76
Brazil	Disadvantaged	4.65	7.19	6.59	5.01	4.11	3.01	2.45
	Middle	6.61	8.69	9.08	7.47	6.26	4.33	2.91
	Affluent	11.61	10.48	13.13	12.38	11.51	10.15	8.64
Chile	Disadvantaged	7.10	9.69	9.69	8.11	7.14	5.29	4.01
	Middle	8.58	10.17	11.10	9.72	8.54	6.67	5.15
	Affluent	11.70	10.78	13.39	12.67	11.66	10.32	8.66
Colombia	Disadvantaged	4.42	7.50	6.54	4.91	4.21	3.08	2.81
	Middle	6.28	8.57	8.42	6.97	5.98	4.33	3.37
	Affluent	10.80	10.00	11.96	11.73	10.50	9.35	7.51
Costa Rica	Disadvantaged	6.21	6.36	6.79	6.57	6.87	5.65	4.92
	Middle	6.60	6.57	7.00	6.68	6.93	6.22	5.65
	Affluent	10.94	8.08	11.34	10.43	11.20	10.95	10.79
Ecuador	Disadvantaged	7.79	9.72	9.31	8.53	7.61	6.71	4.69
	Middle	9.46	10.34	11.26	10.19	9.21	7.87	6.04
	Affluent	12.52	11.02	13.48	13.32	12.47	11.34	10.32
Mexico	Disadvantaged	4.93	7.98	6.95	5.66	4.59	2.89	2.12
	Middle	7.67	9.03	9.52	8.59	7.53	5.45	4.30
	Affluent	12.08	10.17	12.90	12.82	12.19	10.73	9.27
Peru	Disadvantaged	4.51	7.65	7.02	5.46	3.57	2.46	1.79
	Middle	8.00	9.15	10.43	8.82	7.23	5.30	3.60
	Affluent	12.12	10.32	13.10	12.90	11.73	10.16	8.69

Source: Based on national household surveys (latest available).

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On average across countries members of the middle sectors have 8.3 years of education, 3.7 years less than the affluent and 2.2 years more than the disadvantaged. In all countries the middle sectors are less educated than the affluent and better educated than the disadvantaged.[12] In general terms, the disadvantaged in Latin America have primary education; the middle sectors some secondary education, and the affluent completed secondary education. The middle sectors, from this point of view, are certainly in the middle – but in most countries in the region they are closer to the disadvantaged than the affluent.

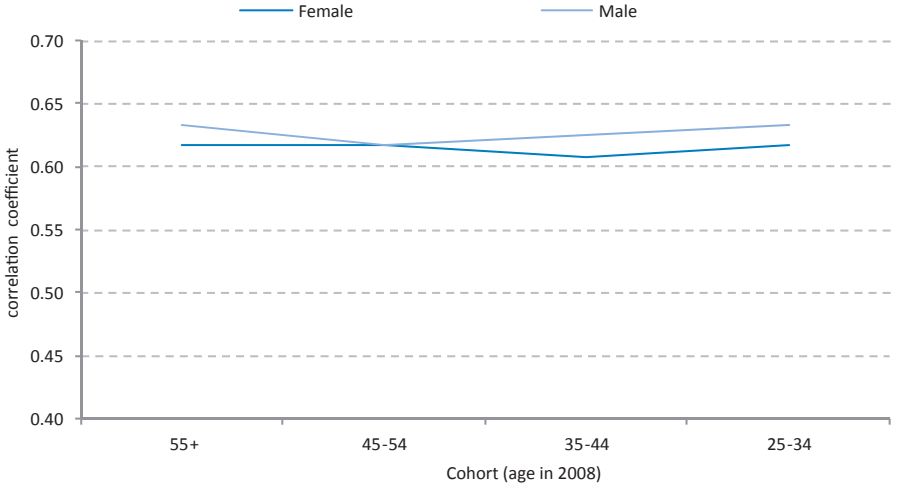
Levels of educational attainment are converging over time, but the middle sector remains closer to the disadvantaged than the affluent.

Of course, the averages mask large differences. Overall educational attainment is higher in Argentina, Chile, Costa Rica and Ecuador. The disadvantaged in these countries typically finish primary education (and may have some secondary education) while in the other five countries outcomes are much lower.

In all countries, there is convergence over time in educational attainment. This trend of extensions to education particularly favouring the disadvantaged has also been documented elsewhere in the world.[13] In Latin America, it is the result of the expansion of coverage across age groups generally having been faster within the disadvantaged than the middle sectors, and within the middle sectors than the affluent. Consequently, for many countries even the disadvantaged younger cohorts have more years of education than affluent 61- to 65-year olds. The exceptions are Colombia and Argentina, where the educational attainment of the middle sectors increased at the same pace as the disadvantaged.

EDUCATIONAL MOBILITY

Figure 3.1. Inter-generational correlation of educational attainment in Latin America



Notes: The correlations are based on pooled regressions for the 18 countries tested, including country dummies. The 18 countries are: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela. Educational attainment is measured by years of schooling.

Source: Based on *Latinobarómetro* (2008).

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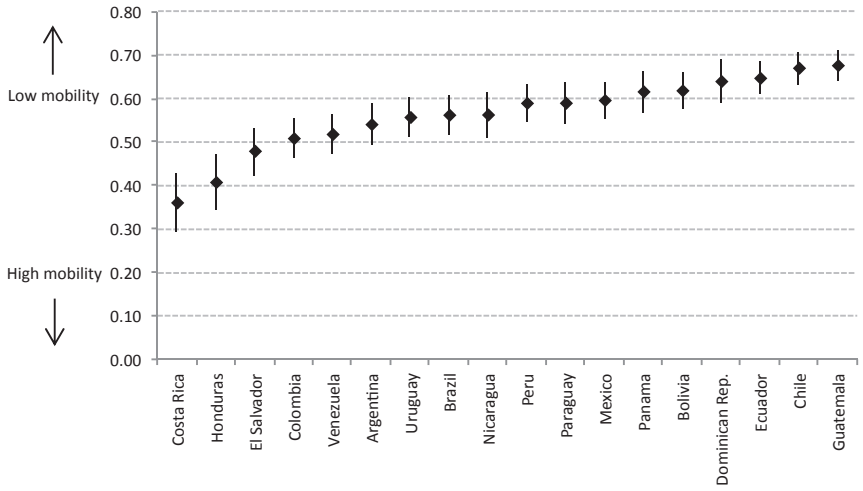
It seems parental education matters a great deal for children's educational outcomes (Figure 3.1).[14] Measured as the proportion of the variation in a child's educational attainment that is explained by variation in parental educational attainment, there is a significant degree of transmission from one generation to the next. [15] Furthermore, there is no downward trend – even among younger cohorts parental education explains more than 60% of the variation.[16] In general, these results are consistent with those obtained from those household surveys that contain information on parental education.[17]

Breaking this regional result down reveals considerable differences at the country level (Figure 3.2). Guatemala exhibits the highest coefficients for all indicators, implying the lowest mobility. At the other end of the scale, Costa Rica, Honduras, El Salvador and Colombia present considerably higher levels of mobility. Chile's position is surprising, showing low levels of mobility on this measure.

Figure 3.2. Inter-generational correlation of educational attainment by country



Notes: The dots represent the ordinary least-squares point estimate for the correlation coefficient for men and women over 25 years. The lines represent the corresponding 95% confidence interval. Educational attainment is measured by years of schooling.

Source: Based on *Latinobarómetro* (2008).

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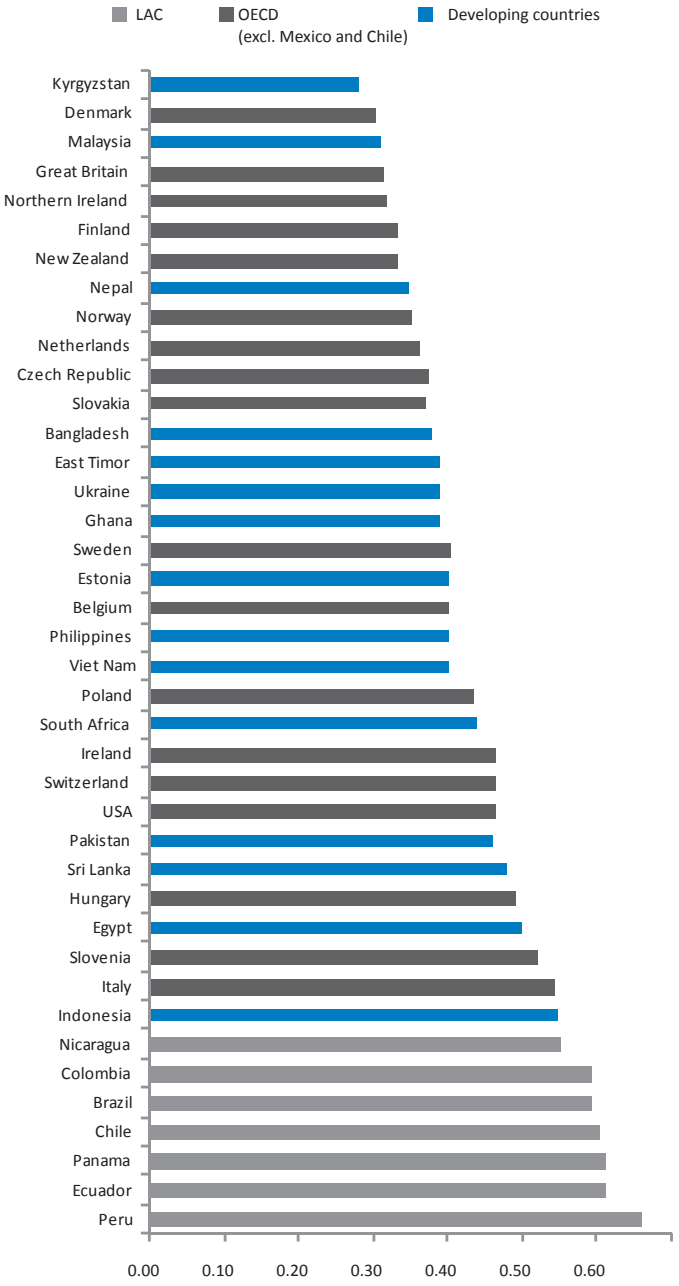
These differences are economically significant. For example, the underlying elasticities imply that a 4-year difference in parental education would on average imply 1.6 years more of education for the next generation in Costa Rica, while in Guatemala the equivalent figure would be 3.4 years. Given a year of additional education is worth 12% – the average return to education in Latin America[18] – these extra years could translate into a differential in wage earnings of 19% and 41%, respectively.[19]

Latin America in the global context

Latin American countries are well down the world rankings in terms of educational mobility. They rank below not only OECD countries but also their developing peers (Figure 3.3). To the region's high level of static income inequality can, it seems, be added very unequal access to opportunities to progress.[20]

Figure 3.3. Correlation between parental and child education
(average parent-child schooling correlation, ages 20-69)



Note: United Kingdom (OECD) is broken down into Great Britain and Northern Ireland, as per Hertz *et al.*

Source: Hertz *et al.* (2007).

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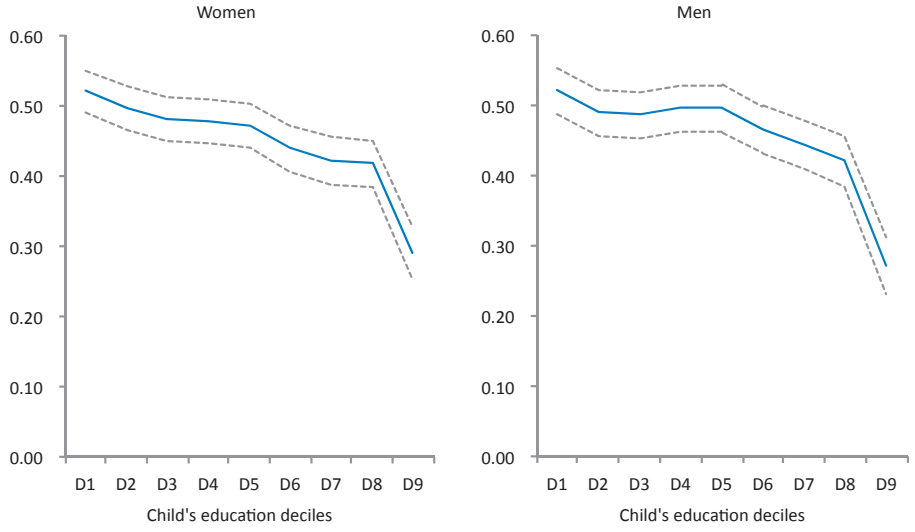
Mobility and the middle sectors

Is this bleak picture repeated across all levels of education? The answer can be explored from two viewpoints.

The first is the correlation between parental and child education for different levels of child education (Figure 3.4). For women and men alike, the importance of parental education decreases at higher levels of educational outcomes. Thus, for those with low or medium levels of education, parental background is more important than for those at the higher ends of the distribution. How do the middle sectors perform within this? Combining the household data from Table 3.1 with the data used in Figure 3.3 suggests that middle-sector children will typically lie in the fifth and sixth deciles of Figure 3.4. The importance of parental education in these deciles is not significantly different from that at the lower tail of the distribution, while it is significantly higher than for the ninth decile (where people on average have 15 years of education).

Figure 3.4. Correlation between parental and child education

The influence of parental background is strongest for the disadvantaged and middle sectors; but of these the disadvantaged are showing the greater mobility.



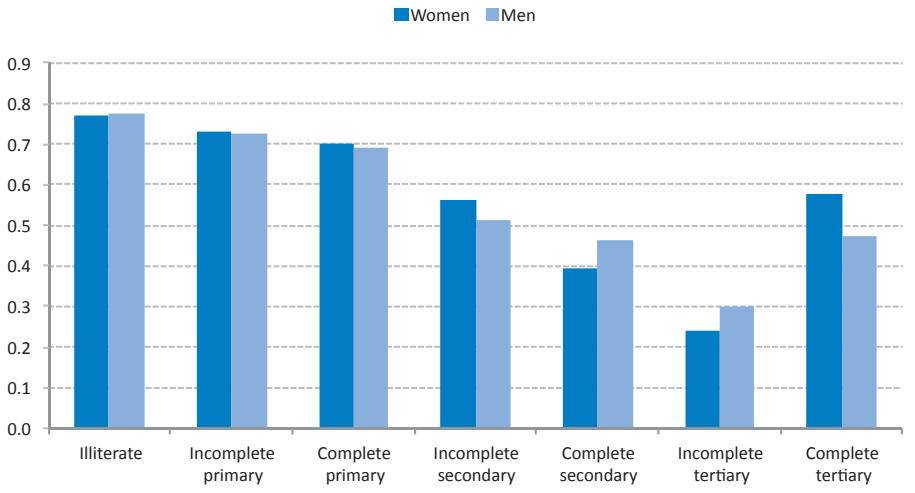
Notes: The correlation coefficients are based on quantile regressions estimated for people aged between 25 and 34 years at the time of the survey. The dotted lines represent the 95% confidence interval.

Source: Based on *Latinobarómetro* (2008).

StatLink http://dx.doi.org/10.1787/888932338554

The other way of looking at educational mobility is to compute transition matrices between the highest level of education reached by the parents and the highest degree reached by the child, differentiating by gender (Figure 3.5). For very low levels of parental education there is a high likelihood that children will perform better. A person whose parents were illiterate, for example, has an almost 80% probability that they will achieve at least some primary education. This is the same general trend identified in Table 3.1 of faster increase in educational attainment at the bottom of the distribution. However, at levels of education linked to the middle sectors ("some secondary education" and up) mobility is much lower, while at the upper end the positive influence of parental achievement again rises. Table 3.A1 in the statistical annex presents the entire transition matrices.

Figure 3.5. Probability of achieving a higher level of education given parental education



Notes: The bars represent a child's average probability of achieving a higher level of education than his/her parents, given the parents' educational attainment, except for "complete tertiary" where it represents the probability of achieving the same level. The sample children are men and women aged between 25 and 44 years at the time of the survey.

Source: Based on *Latinobarómetro* (2008).

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The middle sector appears trapped, unable to break into tertiary education.

The overall conclusions are the same. At low levels of parental education ("illiterate" to "complete primary"), the child generally performs better. At the middle of the distribution ("incomplete secondary" and "complete secondary"), the level of education attained by the offspring tends to peak around complete secondary education. Even though this group has better access to tertiary studies, the gap with those whose parents have tertiary studies remains large. For example, out of every 100 children who have parents with incomplete secondary education roughly 10 finish tertiary studies, while for those who have parents with completed tertiary education the equivalent figures are 58 for women and 47 for men. To put this in context, about 80% of the 25- to 44-year-old cohort have parents with incomplete secondary education or less.[21] The good news is that for those with the most unfavourable family background there seems to be upward mobility, and for those at the top downward mobility is very unlikely. But the middle sectors seem to remain trapped, unable to break into tertiary education.[22] In this regard, the U-shape of the graph is striking.

Younger cohorts

The data used so far to measure mobility are based on people who have already completed their educational cycle (at least 25-years old in 2009). The analysis is therefore open to the criticism that more recent policy changes may not be captured. From a policy perspective, it is interesting to focus on the population still in the educational system, since they would be the target of any interventions made today.

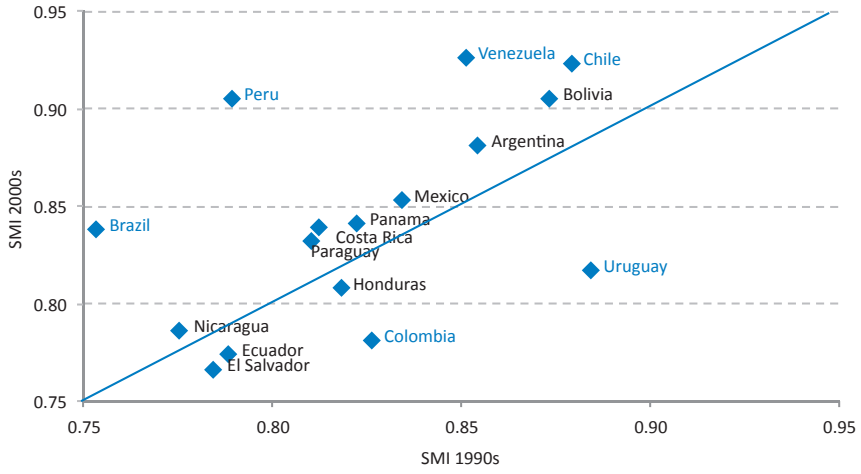
A number of researchers have pursued this idea in Latin America.[23] These studies have analysed the importance of parental background (education and income, among other variables) in explaining variations in the schooling gap between

households – the difference between the highest grade the child has achieved and where it should be according to its age. The thinking behind this is that when family background is an important explanatory factor these characteristics are more likely to persist across generations and therefore mobility will be lower.

Younger cohorts provide evidence that mobility in most countries has improved in recent times.

We can test this by looking at the evolution of a suitably constructed social-mobility index (Figure 3.6). For 11 out of the 16 countries considered, mobility has increased (though the change is only statistically significant for Brazil, Chile, Peru and Venezuela), while mobility has declined significantly only in Colombia and Uruguay. The picture painted supports the view that some countries have improved mobility in recent times. Chile and Peru, for example, which seem low-mobility countries when analysed using older cohorts, appear much more mobile here. In the case of Chile, this is consistent with evidence that the importance of family background in explaining test scores in mathematics has diminished significantly over the last decade.[24]

Figure 3.6. Social-mobility index
(mid-1990s against mid-2000s)



Notes: Countries in light blue present changes that are significant at a level of 95% confidence. The social-mobility index (SMI) is computed using a Fields decomposition of the importance of the household's income per capita and the highest level of parental education in explaining the schooling gap of 13-19 year-old children in a regression that includes other control variables. The SMI is bounded between 0 and 1, with higher values representing higher levels of social mobility. See Conconi *et al.* (2007) for more details.

Source: Conconi *et al.* (2007).

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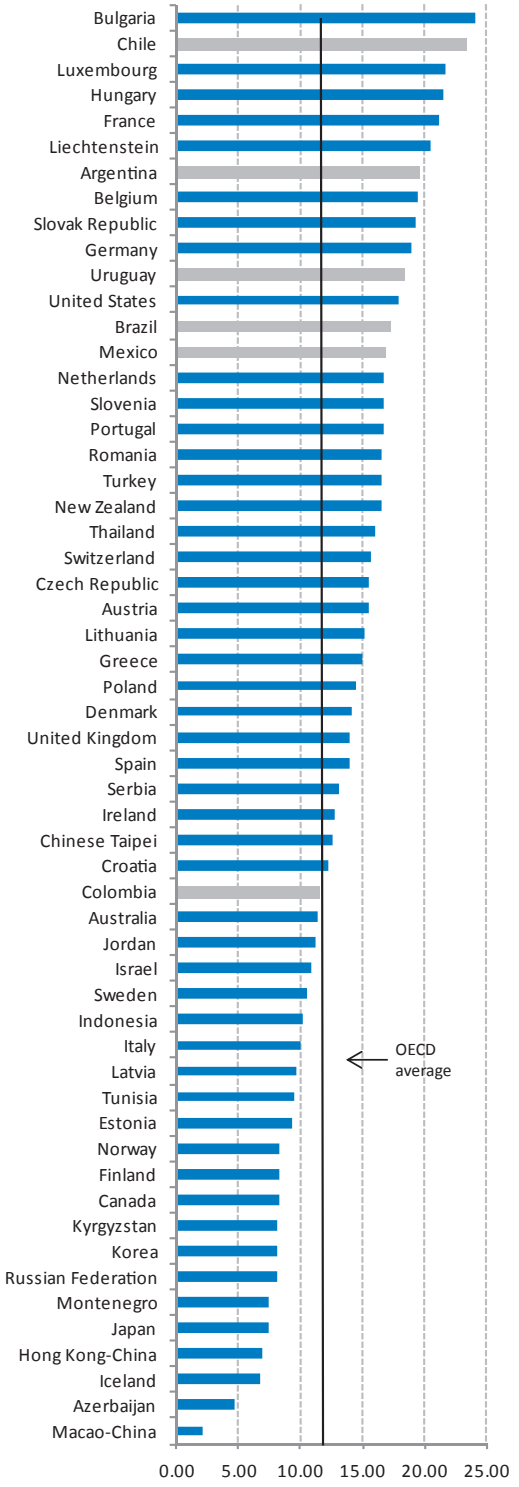
Programme for International Student Assessment (PISA)

Six Latin American countries are included in the OECD's PISA database.

Another pool of data that can be used to test the importance of a child's socio-economic background is the OECD's PISA database. For the six Latin American countries included in PISA, background factors are generally more important than the OECD average (Figure 3.7). Chile in particular presents a very high correlation between students' performance in science tests and their socio-economic background. The exception is Colombia.[25]

Figure 3.7. Contribution of economic, social and cultural background to PISA test performance



Notes: The indicator measures the proportion of the variance in PISA science scores explained by the PISA ESCS index of economic, social and cultural status of the household. Higher values imply a greater importance for these factors.

Source: OECD PISA database 2006.

StatLink http://dx.doi.org/10.1787/888932338611

The PISA data point therefore in a similar direction to the indicators based on *Latinobarómetro* surveys: social mobility in Latin America is considerably lower than in the average OECD country. The apparent discrepancies with the analysis based on SMI indices, notably in the case of Chile, are the result of differences in the underlying educational measures. While the SMI index improves when the *quantity* of education expands (as well as when completion rates increase), PISA scores measure *cognitive skills* – more linked to the quality of education students receive. Given that most reforms during the 1990s focused on expanding coverage and reducing repetition rates, it is no surprise to observe an improvement in mobility indices that are based on these measures. Indicators based on quality, on the other hand, show that the quality of education a child receives in any of the six Latin American countries is still very much linked to his/her socio-economic background.

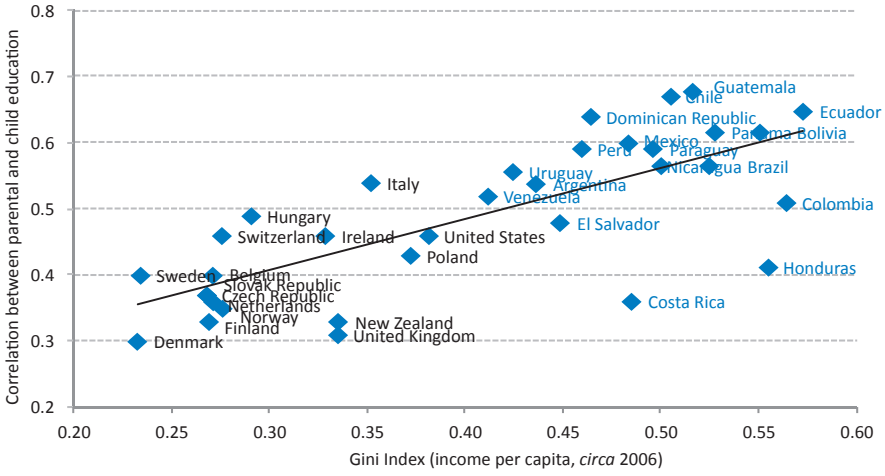
Test scores show that performance is still very much linked to a child's socio-economic background.

SOCIAL MOBILITY AND INCOME INEQUALITY

Inter-generational mobility in education outcomes is significantly associated with static income inequality as measured by the Gini coefficient (Figure 3.8).[26] Societies that are less mobile tend also to exhibit high levels of inequality. In Latin America, only Costa Rica and Honduras seem to be outliers, with social mobility much higher than expected given their distribution of income.[27]

Societies with low educational mobility tend also to be unequal on the Gini measure.

Figure 3.8. Social mobility and income inequality

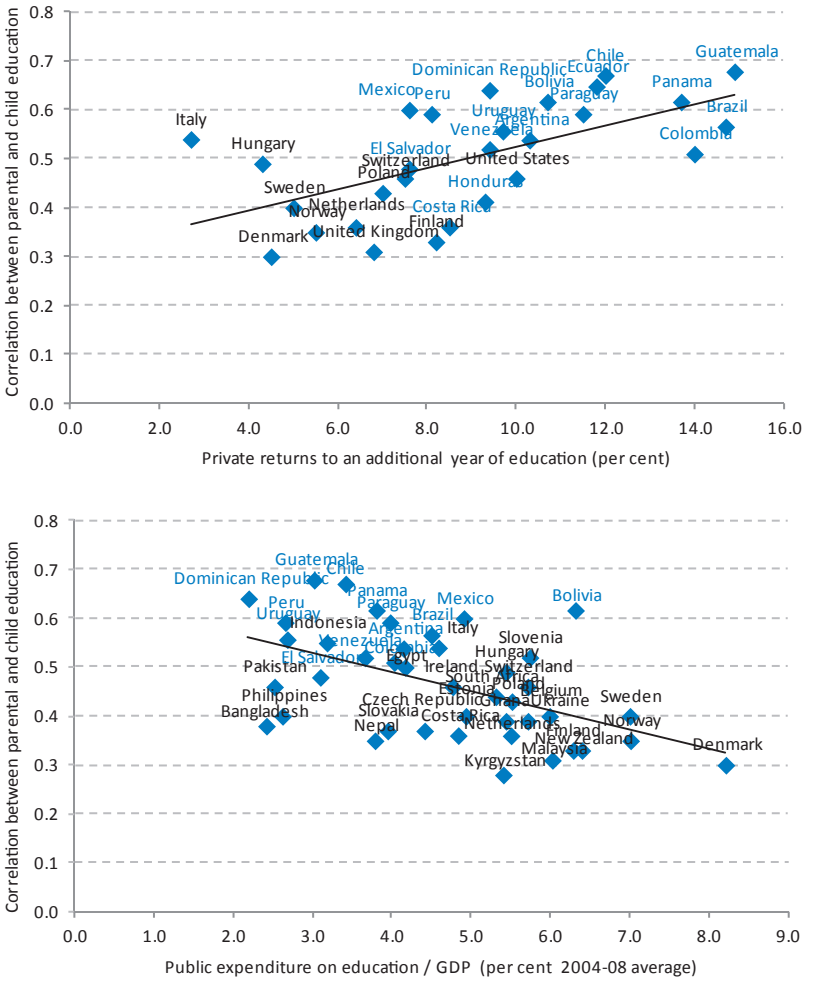


Source: Based on *Latinobarómetro* (2008), Hertz *et al.* (2007), and the SEDLAC database 2010.
StatLink http://dx.doi.org/10.1787/888932338630

There are several ways this correlation can be interpreted. According to the model by Solon (2004), the same factors that affect inter-generational mobility (private returns to human capital, progressivity of public investment in education, and other transmissible factors such as abilities, race and social networks) also determine the cross-sectional distribution of income in the long run. In the transition period, a decline in income inequality (perhaps due to changes in the skill premium or returns to education) or an increase in the progressivity of public expenditure on education would cause an increase in social mobility.

There is certainly a significantly positive correlation between lower mobility and higher returns to education (Figure 3.9, upper panel). In particular, most countries in Latin American present both higher returns to education than OECD countries, and a higher correlation between parental and child education.

Figure 3.9. Returns to education, public education expenditure and social mobility



Source: Based on *Latinobarómetro* 2008, Hertz *et al.* (2007), UNESCO indicators database and Menezes-Filho (2001).

StatLink http://dx.doi.org/10.1787/888932338649

Public investment in education encourages mobility. Latin America spends little and its effectiveness in generating mobility is low.

Progressive investment funded by the public sector could, in principle, equalise opportunities for children of different social and economic background. The empirical evidence shows a negative relationship between the inter-generational correlation of educational outcomes and public expenditure on education,[28] suggesting that public investment in education could foster mobility in the region (Figure 3.9, lower panel).

The problem is that not only is little spent on education in the region, but its effectiveness in generating mobility is low. All countries, with the exceptions of Costa Rica and El Salvador, present lower levels of mobility than would be expected for their current rate of public investment on education. To be effective policy actions will need to address quality as well as quantity – a conclusion very

much in line with findings for OECD countries which show that how spending on education is used often matters more than how much is spent.[29]

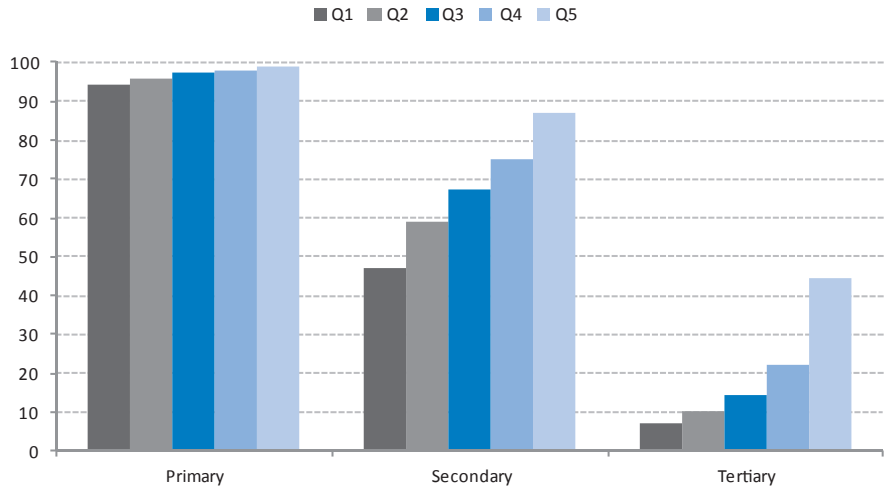
Public expenditure is only part of the picture. Limited access to credit or savings for disadvantaged and middle-sector households can also be a significant hurdle to investment in human capital,[30] and in Latin America access is limited to the point that it is likely to be holding children back from pursuing further studies. This is in spite of the fact that surveys suggest that the region's middle sectors both value education and are able to contribute to its direct or indirect costs – see Box 3.1 for the Andean countries. There are thus good efficiency reasons in education for policy to seek to increase middle-sector access to finance, to which can be added the spin-off mobility benefits flowing from more developed domestic financial markets and greater access.[31]

ENROLMENT AND SOCIAL EXCLUSION

Enrolment rates at the primary level in Latin America do not vary much by income quintile (Figure 3.10).[32] Most countries secure good compliance with mandatory primary education, through public policies to guarantee universal access and the success of conditional cash-transfer programmes. It is probably also the case that in most countries child labour for this age group is not cost-effective and relevant laws better enforced.

Enrolment rates at the primary level do not vary greatly by income. Unfortunately this pattern is not maintained at later stages of schooling.

Figure 3.10. Enrolment rate by income quintiles



Notes: Data cover Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela. The net enrolment rates presented in this graph are simple averages of the number of children enrolled as a percentage of the total population in the relevant age group.

Source: Based on the SEDLAC database accessed April 2010, itself drawn from the latest available national household surveys, *circa* 2008-09.

StatLink http://dx.doi.org/10.1787/888932338668

Unfortunately, by the time these children reach secondary education, enrolment rates start to exhibit a strong correlation with economic status.[33] The situation deteriorates again at the tertiary level to the point that tertiary education in Latin America is still mainly associated with the affluent. Post-primary educational enrolment in Latin America is still highly related to a family's economic background.

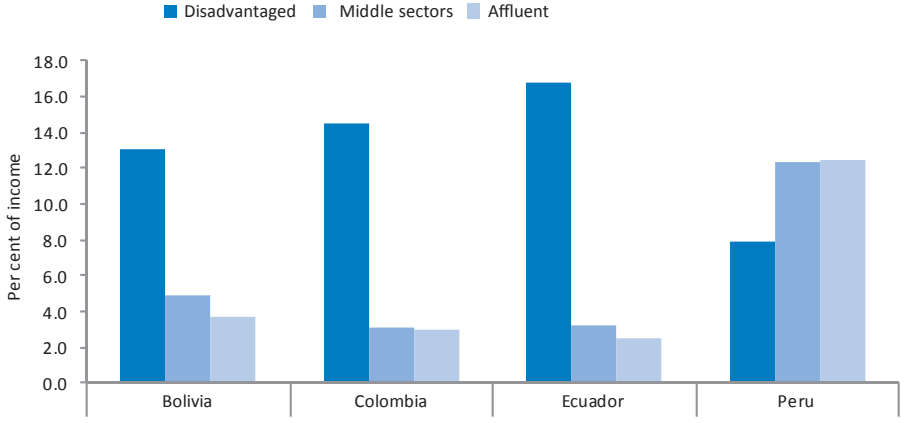
Box 3.1. Private expenditure on education and educational mobility in the Andean countries

Parents paying for private education is common in most Latin American countries. Private schools are perceived to provide higher quality and people in Latin America, as elsewhere, see education as an important way to move up the social ladder – 56% of them in the 2006 *Latinobarómetro* survey said it was the most important factor determining success in life. Middle- and high-income families back this expressed view up by devoting significant financial resources to sending their children to private establishments.

This box looks at four Latin American countries, chosen because of the availability of suitable data from their national household surveys: Bolivia (2005), Colombia (2008), Ecuador (2006) and Peru (2006). The questions it seeks to answer are: do the middle sectors make a special "financial effort" (measured as the portion of household income devoted to education related expenses), and what reward do they get for their investments, in terms of improvement in educational achievement?

Sending children to school involves costs – even if they are attending public schools. The household surveys identify these and allow them to be compared across different socio-economic groups; items included are the cost of uniforms, school supplies, books, transport, food and other linked expenses. To these can be added school registration and tuition costs, where appropriate. On the basis of these data, low-income families make the largest effort relative to income in all countries except Peru, where the proportion of income allocated to education rises with income (Figure 3.11).

Figure 3.11. Percentage of household income devoted to education



Source: Based on national household surveys.

StatLink http://dx.doi.org/10.1787/888932338687

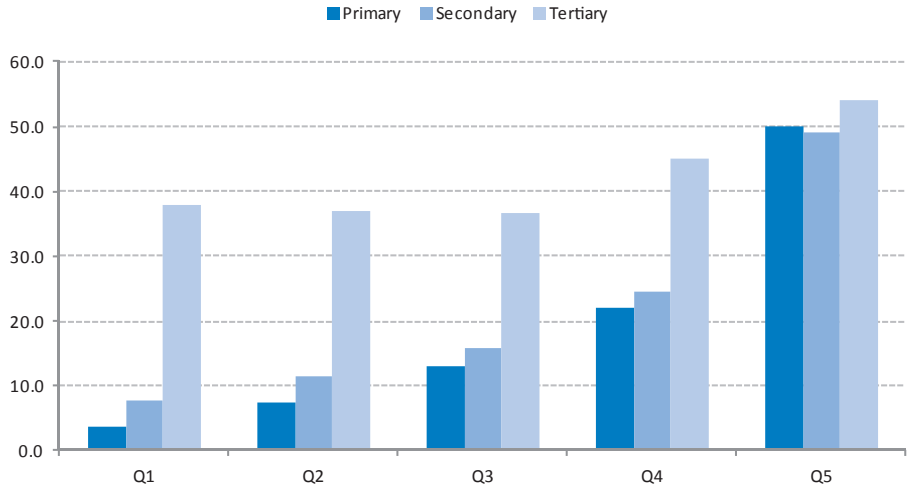
In absolute terms, each middle-sector household spends USD 57 a year in Ecuador, USD 100 in Colombia, USD 120 in Bolivia, and USD 420 in Peru (on a purchasing-power parity basis). In each country expenditure by middle-sector households is more than twice that of disadvantaged households but only around a third that of affluent. Overall, the middle sectors seem to make an intermediate investment effort in relative and absolute terms in the four countries.

What are the payoffs to these investments? Econometric analysis of the schooling gap of 15-year olds in these countries shows that household expenditures significantly decrease the schooling gap in Bolivia and Peru, while for Colombia and Ecuador the effect is not significant. However, these national results hide important differences across income groups. While in Colombia and Ecuador expenditure returns for the middle sectors are significantly higher than for the disadvantaged and affluent, in Bolivia and Peru expenditure returns for the middle sectors are not significantly different from those of the disadvantaged.

Private schools and social exclusion

Looking at the proportion of students in each income quintile that attend private schools reveals interesting differences in the pattern of enrolment (Figure 3.12). At the tertiary level, between about 35% and 50% of each income group attend private establishments. This contrasts with the division evident at both primary and secondary levels, with the affluent going to private schools and the disadvantaged and middle sectors concentrated in the public system.

Figure 3.12. Percentage of students enrolled in private establishments by income quintiles



Notes: Countries included are Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela. The net enrolment rates presented in this graph are simple averages.

Source: SEDLAC database, accessed April 2010, based on the latest available national household surveys, *circa* 2008-09.

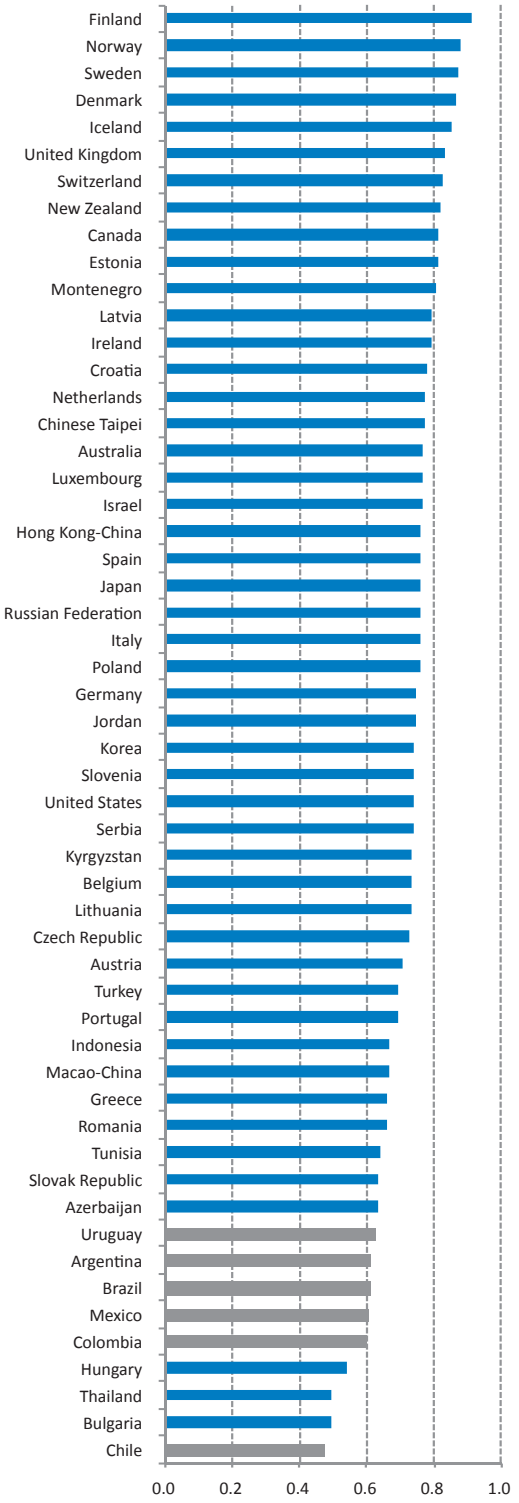
StatLink http://dx.doi.org/10.1787/888932338706

The region's schools score poorly on measures of social inclusiveness.

This shape is consistent with the relatively poor performance of the region's schools in the PISA measures of social inclusiveness (Figure 3.13).[34] The six countries from Latin America are clustered at the bottom of the distribution, less inclusive than either the OECD average or most of their developing peers.

This low inclusiveness reduces inter-generational social mobility in two ways. Where private education is better – as it usually is – then the access problem for middle sector and disadvantaged children is compounded by the lower yield in the labour market for each year of their education. Then they lose again when lack of mixing across class groups compromises their social networks.

Figure 3.13. Social inclusion in secondary schools by country



Notes: The Index of Inclusion is based on a variance decomposition of the PISA index of economic, social and cultural status (ESCS). It represents the proportion of the variance in the ESCS index within schools.

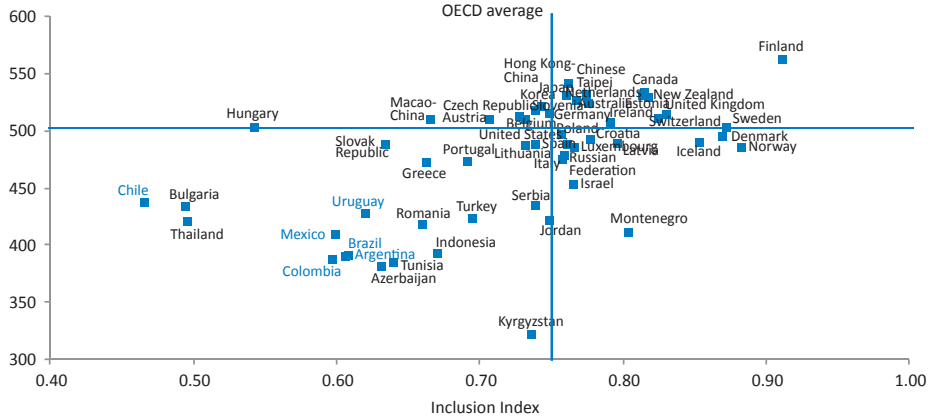
Source: OECD PISA 2006 database, Table 4.4b.
StatLink http://dx.doi.org/10.1787/888932338725

There is evidence for this in data from Peru which show that returns to private education are significantly higher than to public in terms of wage-earning power, and have been increasing over the last two decades.[35] The difference is greatest at the primary and secondary level, precisely where the class groups are most split. In assessing the causes of this it is difficult to disentangle the value of access to "high-value" social networks from differences in the quality of education. However, there is some suggestive evidence that both problems play their role in the region (see Box 3.2).

This selectiveness in private schooling might work to society's advantage if the private and public schools play to their respective pupils' strengths. But plotting the inclusiveness of a country's education system against its average PISA science test score shows this is not the case (Figure 3.14). Inclusiveness is generally associated with better overall educational outcomes, and more-detailed analysis shows that this relationship is statistically significant. Nor does Latin America buck this trend – all six countries are in the "bad" quadrant of below average performance even given their low levels of inclusiveness.[36]

The social cost of exclusion is not offset by gains in terms of quality for the students at the private schools.

Figure 3.14. Correlation between PISA science test scores and index of inclusion



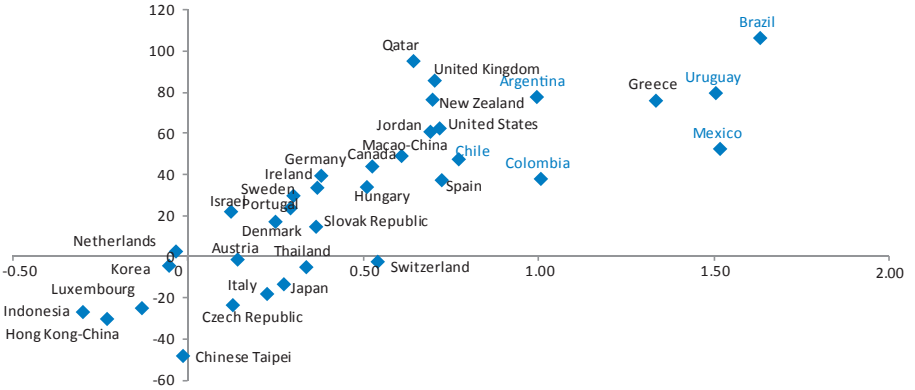
Notes: The Index of Inclusion is based on a variance decomposition of the PISA index of economic, social and cultural status (ESCS). It represents the proportion of the variance in the ESCS index within schools. The test scores refer to the national average score in science normalised to have an average across OECD countries of 500 and a standard deviation of 100.

Source: OECD PISA 2006 database, Figure 3.4.11.

StatLink http://dx.doi.org/10.1787/888932338744

The close association between differences in the socio-economic background of secondary school students at private and public institutions and the differences in their average science test scores perhaps show why parents persist with private education when they can afford it (Figure 3.15).[37] The differences in both socio-economic background and test scores of students in Latin America are huge – even compared with other developing countries. For example, in Brazil, students in the private system on average perform better than those in the public system by a little more than 100 points. This implies that a student in the private system in Brazil has additional cognitive skills approximately comparable to almost three extra years of education.[38]

Figure 3.15. Private and public education: differences in performance and socio-economic status



Source: OECD (2006), Table 5.4.

StatLink http://dx.doi.org/10.1787/888932338763

The problem, as we have noted, is that this outperformance is not the result of private schools in Latin America being particularly good. If they did as well as the average outside the region would imply, their test score differences would be significantly higher: in Brazil the advantage would be 136 instead of 106 (a difference equivalent to almost an additional year of schooling); in Uruguay 124 instead of 80; in Mexico 125 instead of 53; in Colombia 80 instead of 38. Only in Argentina and Chile do they perform close to the average.

The current framework promotes selection for those who can afford it. The result is lowered educational outcomes, compounded by the failure of the private schools to get the best from their pupils.

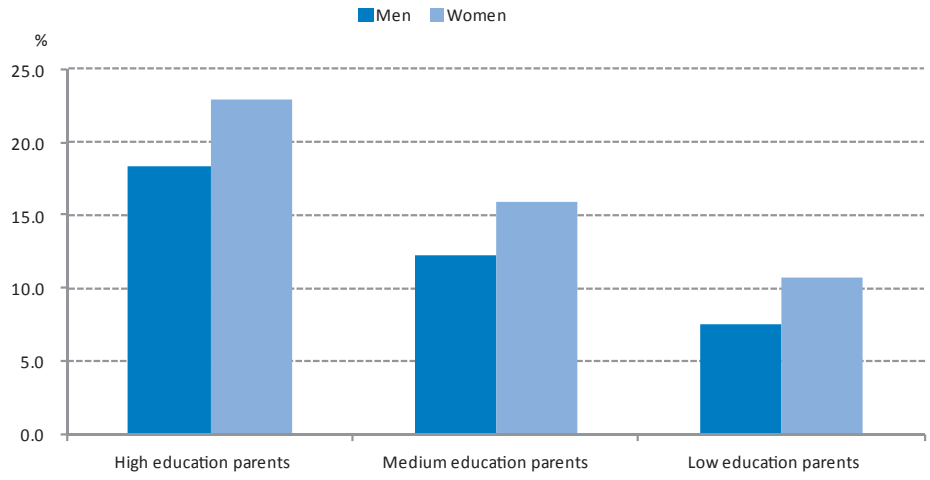
In summary, the current education framework in the region promotes selection for those who can afford it. But by itself selection tends to depress overall educational outcomes, and the region's private schools compound this by failing to make the most of their privileged intake. Nevertheless, selection succeeds in boosting the relative position of those in the upper layer. A system that under-delivers and comes at the price of perpetuating inequalities will therefore continue to be something that parents aspire to – at least until policy provides them with an attractive alternative.

Box 3.2. The effect of parental background on returns to education: the case of Chile

Most household surveys in Latin America contain little information on the parental background of those people who are active in the labour market. This makes it difficult to evaluate inter-generational mobility issues and their relationship with wage earnings. However, in Chile the 2006 National Socio-economic Characterisation Survey (*CASEN, Encuesta de Caracterización Socioeconómica Nacional*) elicits information on the highest level of education attained by the father and mother of all surveyed individuals. This can be used to perform an econometric estimation of the return to education with the aim of exploring the effects of socio-economic background on labour-market earnings. Variables include years of education, as well as age and the square of age as a proxy for experience-related human capital and also to allow for decreasing marginal returns over time.[39]

The wage equations are estimated for three different levels of parental education: high (tertiary education completed), medium (secondary education completed) and low (primary completed or less). Overall, the results show significant differences across parental backgrounds (Figure 3.16). One additional year of education yields more than twice as much for a person from a high or medium background as for a similar person whose parents have a low level of education. These differences are not only statistically significant, but also significant from an economic point of view. For example a man (woman) with 12 years of education from a high-education family would earn around 1.3 times (1.5 times) as much as their analogue from a low education family. Even for those in the middle the implied differences are large: 73% for men and 85% for women.

Figure 3.16. Private returns to education by parental educational background in Chile



Source: Based on the Chilean National Socioeconomic Characterisation Survey (CASEN) 2006.

StatLink http://dx.doi.org/10.1787/888932338801

Of course, it is difficult to separate the effects of differences in the quality of education from other factors that may be at work, such as network effects, early childhood factors that influence the ability to learn (including pre-school education, as well as exposure to reasoning practices and language skills at home), or even plain discrimination (since parental educational background and social class is often associated with race, for example). Nevertheless, a paper by Núñez and Gutiérrez (2004) found that returns in Chile for upper-class professionals were around 50% higher than for professionals from less-favoured socio-economic backgrounds, even after controlling for ability. Even though the returns to tertiary education are significant for individuals that do not belong to the upper class – by itself some support for the idea of meritocracy – this 50% gap is larger.

ENHANCING UPWARD MOBILITY

The analysis in the previous sections has documented the relatively low degree of inter-generational social mobility in Latin America and the importance of parental background in determining educational success. Low access to educational services in both quantity and quality is a problem for the region's middle sectors compared with their peers in OECD countries as well as affluent households in

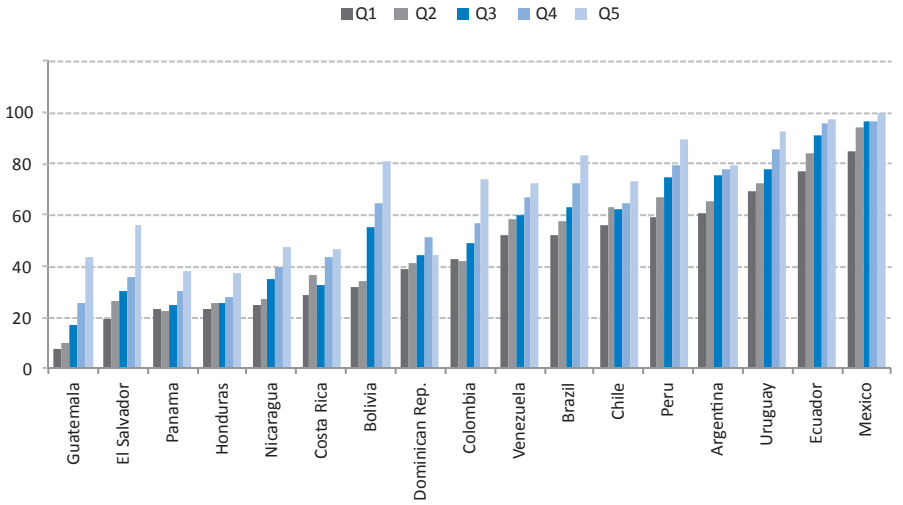
their own countries. The good news is that these issues are amenable to policy action, as empirical evidence for OECD countries shows (see OECD, 2010). The bad is that any deep reform of education system will take sustained effort, since success can only be measured over the period of a school career.

Early childhood development

Policies supporting early childhood development have much scope in Latin America and have been shown to be effective in promoting mobility elsewhere.

Recent research points towards the importance of early childhood development (ECD) – comprising cognitive and emotional development as well as adequate health and nutrition – in boosting opportunities for the disadvantaged in developing countries.[40] Conditional cash-transfer programmes (like *Bolsa Família* in Brazil, *Chile Solidario* or *PROGRESA/Oportunidades* in Mexico), which are often conditional on participation in ECD activities, have shown to be a useful tool for increasing early childhood investments and protecting these investments from adverse shocks.[41] Furthermore, evidence from OECD members shows that higher enrolment rates and increased public spending on pre-school education in early childhood significantly weakens the link between parental education and child secondary education performance.[42] There is no reason to suppose that an expansion of ECD programmes to cover a significant part of the population in Latin America would not bring similar benefits.[43] Yet there are many countries in the region where enrolment rates of children in pre-school programmes are still low, even among the richest quintile (Figure 3.17). Of course, ECD by itself is not enough to ensure equal opportunities later on, but given its complementarity with subsequent investments in skills, it is a precondition – and an area where public policy action could be extremely powerful.

Figure 3.17. Enrolment in pre-school programmes
(3- to 5-year-olds)



Notes: Proportion of 3- to 5-year olds enrolled in pre-school programmes. Data are not strictly comparable between countries, because of differences in the counting of kindergarten and pre-school enrolment. Unfortunately, these categories cannot be separated in most surveys.

Source: SEDLAC database, accessed April 2010, based on the latest available national household surveys, *circa* 2008-09.

StatLink http://dx.doi.org/10.1787/888932338820

More and better secondary education

While enrolment rates in primary education have generally reached the Millennium Development Goals,[44] secondary schooling is far from being universal across either the disadvantaged or the middle sectors in most countries in the region. Making secondary education universal is therefore a natural target for education policy in Latin America.

How best to achieve this will vary from country to country depending on its circumstances. For example, in several countries compulsory education covers only nine years of education (and so ends at age 15). Here an extension to a 12-year requirement is feasible – Argentina went from 10 compulsory years to 13 in 2007. There is a secondary benefit to this: even compulsory changes in educational level have transmissible consequences. Evidence from OECD countries – where extensions to compulsion typically have been at the secondary level – confirm that even increases in parental education as a result of the expansion of compulsory education have a significant positive effect on the educational outcomes of their offspring.[45] Such an extension of compulsory education requirements might have the greatest impact for the middle sectors. For poorer households there may need to be a material incentive to ensure compliance.[46]

The complement to increasing the quantity of public education will be increasing its quality. An important aim in itself, better quality would also boost equity in education. It would narrow the gap between public and private education, reducing the differences in the skills acquired by the disadvantaged and the middle sectors with respect to the affluent. It should also reduce the drop-out rate and increase demand for education, given the greater returns that would be expected to flow from a given investment of time. Middle-sector parents, able to support their children yet with much scope to increase education, might be well placed to respond to such measures, especially at the secondary level.

There is scope to increase the quantity of secondary education. Increasing its quality will require restructured incentives for the teaching base and upgrading of its skills.

How to increase quality? Although there is no unique path or instrument to achieve this goal, schools and teachers are going to be at the heart of any meaningful reform. Better administration of schools, meaning greater flexibility combined with more accountability and a modern system of evaluation and incentives for school administrators can improve the return on current expenditures. Countries need to think about effective incentive structures for teachers, while also upgrading the skills and qualifications of the teaching base. Experiences in OECD countries provide a useful guide to what has proved effective – and ineffective (OECD, 2009b).

Better social mix within schools

Social policies should seek to reduce inequalities in access to high-quality education. Within the public system, instruments should aim to limit selection to prevent schools picking only students from similar socio-economic backgrounds.[47] Reserving slots for children from outside a school's catchment area and allowing parents to choose public schools in other neighbourhoods would foster greater social diversity. Housing and urban planning policies have a role to play in this too. As academic selection – highly correlated to socio-economic background – is often the solution in the case of over-subscribed schools, some combination of residence criteria and lotteries have been used in several OECD countries to avoid a deterioration in equity.[48]

Policies to improve the social mix in schools will have to address both public and private sectors. To work they will need the support of families and students.

Given the importance of private provision of educational services in the region, policies aimed only at public schools may not be enough – though combined with an increase in the quality of public education they would help reduce the

current gap. However, programmes that promote a better social mix, such as vouchers and school choice or affirmative action, are likely to be ineffective if students and their families do not identify themselves with the objectives of the school and their peers.[49]

Financing tertiary education

Grants and student loans are an important tool in boosting middle-sector access to tertiary education. Evidence for OECD countries shows that the probability of students from less favourable family backgrounds completing tertiary studies is higher in countries that provide universal funding, available in principle to all students.

Redistributive policies and income support

Family finances are important: better funding and social protection both have roles to play.

Finally, many of the policies discussed in Chapter 2 will prove complementary to those discussed here. Better access to unemployment insurance, health services and social protection would allow disadvantaged and middle-sector families to withstand the kind of liquidity shocks that currently often require teenagers to postpone or abandon their studies in order to provide supplementary income for the household.

NOTES

1. See OECD (2010), Causa *et al.* (2009), and Blanden *et al.* (2005, 2006). Of course, looking beyond income, education is in itself also associated with social status.
2. Psacharopoulos and Patrinos (2004).
3. Fajardo and Lora (2010).
4. A clear example is a publicly funded university system to which mainly the affluent have access.
5. Atal *et al.* (2009).
6. OECD (2009a).
7. See Björklund *et al.* (2007).
8. OECD (2008).
9. This is true provided "nature" factors do not vary greatly across countries, which seems a reasonable working assumption.
10. While the literature on mobility in principle is concerned with income mobility across generations, parental income is subject to considerably larger measurement errors than education. Even when income data are available many researchers focus on the transmission of educational outcomes. The sociological literature often focuses on occupational categories in addition to education as an indicator of social status.
11. The middle sectors are defined as individuals in households with household-adjusted income between 50% and 150% of the median; with the disadvantaged below this range, and the affluent above.
12. This could be almost tautological, especially for older cohorts: education determines a significant part of income and people are classified by income group.
13. Thomas *et al.* (2001).
14. The primary source of data for this analysis is the 2008 *Latinobarómetro* survey conducted in 18 countries of the region, covering around 1 000 persons in each. This captures several socio-economic characteristics of its subjects as well as their opinions and perceptions regarding public policies and politics.
15. Parental educational attainment is taken as the higher of the mother's or the father's, whether the measure is years of education completed or highest level of education achieved.
16. Daude (2010) does find a downward trend, such that for younger generations a difference in one year of parental education matters less than it did for the older generations if an alternative measure of inter-generational transmission is considered (the elasticity coefficient underlying the regressions used to compute the correlations). However, this effect is mainly driven by the reduction in the dispersion of parental education documented in Table 3.1.
17. Hertz *et al.* (2007).
18. Psacharopoulos and Patrinos (2004).
19. Of course, many of the differences between the point estimates are not statistically significant at standard levels of confidence.
20. It is interesting to note that these estimates based on those household surveys that have information on parental education are confirmed (in magnitude) by those based on the *Latinobarómetro* database, although the resulting country ranking is slightly different.

21. The figures are 81.6% for women and 78.2% for men.

22. Of course, there are differences across countries that are ignored in Figure 3.5. In a very similar exercise, Torche (2007) shows that in Chile the greatest hurdle is access to tertiary education, while in Mexico it falls much earlier in the educational system, in the steps between primary and secondary education.

23. See Anderson (2001), Behrman *et al.* (2001) and Conconi *et al.* (2007). The region is a good target as the required data are available for a large number of countries.

24. Larrañaga and Teilas (2009).

25. This is consistent with the evidence presented in Figure 3.2. Of the six countries covered by PISA, Colombia exhibits the lowest inter-generational correlation for educational attainment.

26. The correlation coefficient is 0.74, significant at standard levels of confidence.

27. Of course, it is hard to establish causality. If the objective were to analyse the impact of income inequality on inter-generational mobility, the Gini index lagged by at least one or two decades should be considered.

28. Again, the correlation coefficient (-0.52) is significant at standard levels of confidence.

29. See OECD (2010).

30. Becker and Tomes (1979 and 1986); and Solon (2004).

31. Of course, such financial policy instruments should also be available for disadvantaged households. In practice, though, for poorer households public interventions in early childhood would probably be more relevant in most countries, given their stage of development. Even if financing were available to all households, it would probably be used most intensively by the middle sectors.

32. A country-by-country analysis shows that the exceptions to this are among the poor countries, in particular El Salvador, Guatemala, Honduras and Nicaragua.

33. There are important differences across countries. The best in terms of relatively high rates of enrolment at the secondary level and minor differences across quintiles are Chile, Colombia, Mexico and Venezuela. Differences are severe in the poor countries of Central America where a child from the highest income quintile is four to five times more likely to be enrolled at the secondary level than a child from the first quintile. Brazil, Uruguay and Panama are middle-income countries that also exhibit large disparities across income quintiles in secondary enrolment. The good performers at the secondary level, in addition to Argentina, also exhibit fewer differences across income groups at the tertiary level. On the other hand, Central America, Bolivia, and to some extent also Brazil, Uruguay and Panama, present higher levels of inequality in tertiary enrolment.

34. The index is based on a variance decomposition between and within schools of an index of economic, social and cultural status (ESCS). Values close to 0 imply that most of the variation in the ESCS is due to differences across schools, such as that individuals who go to the same school tend to have similar backgrounds, while a value close to 1 implies that students with very different socio-economic backgrounds go to the same school.

35. Calónico and Ñopo (2007). Not all private schools are the same; within the private system there is a considerable amount of heterogeneity in terms of the quality of education.

36. Of course, this finding does not necessarily imply any causality.

37. The correlation coefficient is 0.82, significant at conventional levels.

38. Studies based on PISA data for OECD member countries show that a difference of 38 points in science scores corresponds on average to a difference of one year of study.

39. Estimations were performed separately for women and men to adjust the female wage equation for self-selection (given that the decision to participate in the labour market is not random). Therefore, we estimate a standard Heckman-correction estimation for women, and simple ordinary least-squares estimates for men (the number of children under 5 and elderly over 65 years in the household is used as exogenous shift variable to identify the participation equation).

40. See Vegas and Santibáñez (2010).

41. de Janvry *et al.* (2006).

42. Causa and Chapuis (2009).

43. Of course, a careful analysis of the incentives and cost-recuperation aspects for non-poor households should be an important part of any public programme in this area.

44. The main exceptions are the extremely poor in the region's middle-income countries and some of the poorer countries in Central America.

45. Oreopoulos *et al.* (2006).

46. Of course, compulsory education could also be extended to pre-school levels, in combination with ECD programmes.

47. MacLeod and Urquiola (2009).

48. See Field *et al.* (2007) for more details, especially chapters 3 and 5.

49. See Akerlof and Kranton (2002).

STATISTICAL ANNEX

Table 3.A1. Inter-generational transition matrix of educational outcomes in Latin America, by gender

		Parent Education						
	Women (25 - 44 years)	**Illiterate**	**Incomplete primary**	**Complete primary**	**Incomplete secondary**	**Complete secondary**	**Incomplete tertiary**	**Complete tertiary**
Own Education	Illiterate	0.230	0.041	0.010	0.013	0.004	0.000	0.005
	Incomplete primary	0.304	0.229	0.074	0.077	0.031	0.056	0.005
	Complete primary	0.177	0.199	0.213	0.107	0.065	0.000	0.009
	Incomplete secondary	0.149	0.185	0.240	0.241	0.117	0.148	0.041
	Complete secondary	0.096	0.243	0.298	0.298	0.388	0.278	0.177
	Incomplete tertiary	0.028	0.054	0.073	0.171	0.189	0.278	0.186
	Complete tertiary	0.016	0.048	0.092	0.094	0.207	0.241	0.577
	Total	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Men (25 - 44 years)							
	Illiterate	0.226	0.038	0.014	0.021	0.004	0.000	0.000
	Incomplete primary	0.309	0.238	0.077	0.097	0.033	0.000	0.012
	Complete primary	0.168	0.208	0.218	0.080	0.054	0.000	0.016
	Incomplete secondary	0.149	0.204	0.261	0.290	0.120	0.085	0.040
	Complete secondary	0.090	0.209	0.264	0.269	0.328	0.340	0.209
	Incomplete tertiary	0.031	0.061	0.086	0.139	0.223	0.277	0.249
	Complete tertiary	0.026	0.042	0.080	0.105	0.238	0.298	0.474
	Total	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Note: The total number of observations in this subsample is 4 319 women and 3 729 men.

Source: Based on the *Latinobarómetro* 2008 survey.

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CHAPTER FOUR

The Middle Sectors, Fiscal Policy and the Social Contract

ABSTRACT

This chapter analyses the links between the middle sectors and fiscal policy. Latin American middle sectors strongly support democracy, but they are critical of how it works, largely due to the perceived low quality of public services delivered by governments. Moreover, the net effect of taxes and transfers for middle-sector families is not large, and they benefit most from in-kind services such as education and health care. If these services are of low quality, the middle sector is more likely to consider itself a loser in the fiscal bargain and less willing to contribute to financing of the public sector. This chapter proposes that in order to strengthen the social contract — particularly with the middle sectors — governments need to improve the quality of public services and carry out tax reforms based on greater transparency and more effective administration.

Implementing the policies we have discussed so far means financing them. Fiscal policy — how revenue is raised and expenditure allocated — constitutes the core of public policy and sets the political equilibrium in a society. In a democracy, voters' preferences for the amount and type of redistribution shape important aspects of fiscal policy and, in turn, fiscal policy influences their perceptions about the level and quality of services delivered by the public sector.

Fiscal policy sits at the heart of the state's relationship with its citizens – all the more so in Latin America, given weak social contracts and consolidating democracies.

Never simply secondary or technical concerns, for most countries in Latin America they are particularly important given that their social contracts are extremely weak or in some cases broken.[1] Throughout the region this is reflected in tax revenues that are low relative to GDP, the corresponding importance in the public finances of non-tax revenues which are often linked to volatile commodity prices, high levels of tax evasion, and a tax structure biased towards indirect taxes. Most governments find themselves unable to raise the resources needed to deliver the level of public services necessary for development; while at the same time the quality of public services such as education and health is low compared not only with OECD countries but their developing peers. The tensions inherent in this weak social contract have come to the fore since the mid-1980s as countries in the region have increasingly embraced democracy.

What then is the role of the region's middle sectors in shaping the social contract and fiscal policy? Do its members demand more social insurance? Would they be willing to pay more taxes to finance more or better public services? This chapter explores these issues, in particular the attitudes of the middle sectors towards taxation and redistribution. It also looks at the other side of the coin: the effects of fiscal policies on the middle sectors. Are they a net contributor or recipient? Which expenditures and taxes redistribute the most? A detailed tax-benefit incidence analysis for Chile and Mexico sheds some light on these issues.

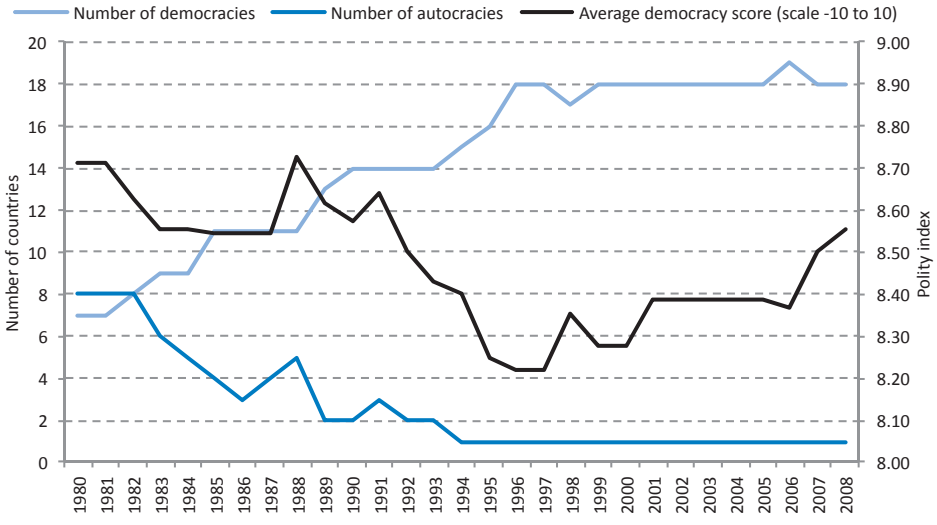
A better understanding of how perceptions on the role of fiscal policies are formed and the practical effects these policies have on income distribution are vital steps in an informed debate on alternative ways to finance and deliver essential services in the region.

ATTITUDES TOWARDS DEMOCRACY AND FISCAL POLICY

The region has been becoming steadily more democratic since the 1980s...

Many analysts have stressed the important role of the middle sectors in the functioning of the democratic system and social cohesion. Latin America has been steadily becoming more democratic since the mid-1980s, according to the "Polity IV" ranking, a widely used data series in political science research (Figure 4.1).[2] Out of 23 Latin American and Caribbean countries included in this database, 18 were ranked as democracies in 2008, with only Cuba left as an autocracy – whereas in 1980 there were eight autocracies and only seven democracies. From the early to the mid-1990s this expansion was accompanied by a decline in the average quality of democracy, a reflection of the relatively imperfect nature of the new regimes. Since then there has been a fairly steady democratic consolidation in the region.[3] There are of course considerable differences across countries – from consolidated democracies such as Costa Rica, Chile and Uruguay (with a Polity score of 10, the same as most OECD countries), to countries such as Ecuador and Venezuela where democratic consolidation is considerably weaker.

Figure 4.1. Democratic consolidation in Latin America and the Caribbean



Notes: Following the criteria of Marshall and Cole (2009) countries are classified as a democracy if their Polity score is equal to or greater than 6.

Source: Based on the Polity IV database, accessed in May 2010.

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Democratic consolidation is often associated with increased demand for social expenditure, as sections of the population that were previously excluded from the decision-making process begin to exert their civil rights. Brazil's transition towards democracy is emblematic, being accompanied by a substantial increase in government expenditure to meet the state's new obligations under the country's 1988 constitution (Figure 4.2). There are potentially important development challenges here: if the state does not gather sufficient financial resources to meet voters' legitimate demands, then its choice is between satisfying them at the cost of unsustainable macroeconomic policies, or leaving them unfulfilled and undermining the democratic system.[4]

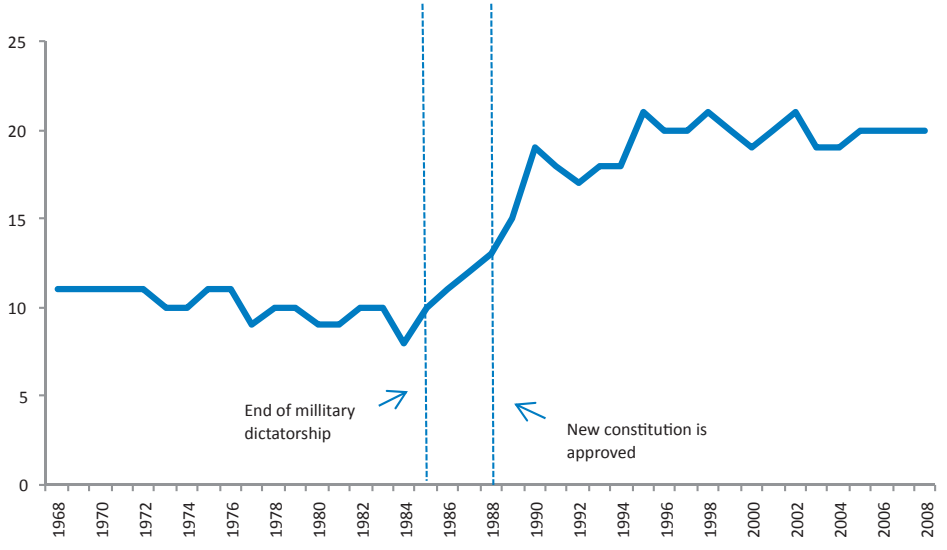
...which changes expectations and demands on public expenditure.

How Latin America is navigating this dilemma can be tested by looking at two key indicators of public perceptions: support for the proposition that democracy is the best system; and satisfaction with the actual way democracy functions in their country (Figure 4.3). The picture that emerges is one of preference for democracy in principle, but low satisfaction with how democracy is working. With the sole exception of Uruguay (where over 70% of the population is satisfied), the *majority* of people in every country in the region are not satisfied with the way democracy is currently working.

This does not reflect disillusion with democracy itself, support for which is much higher in most countries. In Venezuela, Dominican Republic, Uruguay, Paraguay and Guatemala more than 70% of the population support democracy. In a second group, though levels are lower, democracy still clearly enjoys the support of the majority. This group includes Nicaragua, Chile, Honduras, Argentina and Peru. In the rear, Bolivia, Colombia, Mexico, Panama, Costa Rica, Ecuador Brazil and El Salvador see support from around just 50% of the population – among this group are the two most populous countries in the region, Brazil and Mexico. Democracy is far from having consolidated either support or satisfaction across the region.

Support for democracy is high, but fewer citizens say it is working well.

Figure 4.2. Democratic transition in Brazil and government consumption
(percentage of GDP)



Source: Based on the *World Development Indicators* database.

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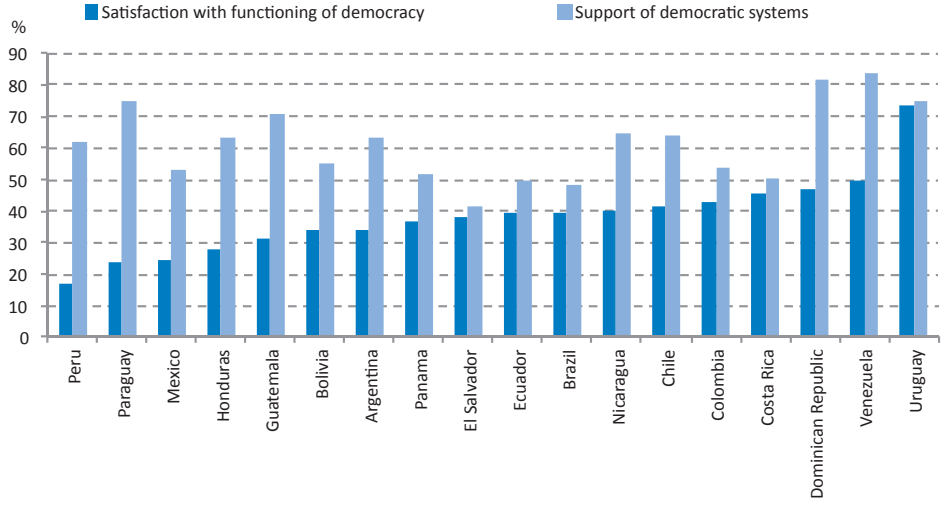
Figure 4.3. Satisfaction with and support for democracy by country
(percentage of respondents, 2008)



Notes: Satisfaction with the functioning of democracy refers to answers "very satisfied" and "fairly satisfied" to the question: "In general, would you say you are very satisfied, fairly satisfied, not very satisfied or not satisfied at all with the way democracy works in your country?" Support for the democratic system refers to the proportion of respondents who selected "Democracy is preferable to any other kind of government" from a list of three statements about the organisation of government.

Source: Based on the *Latinobarómetro* survey 2008.

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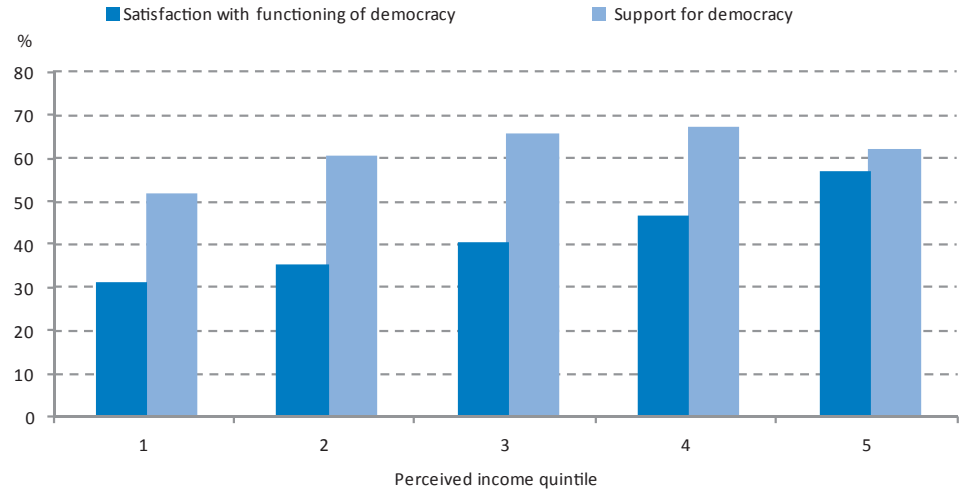
What part do the Latin American middle sectors play in this? The data available allow analysis across self-perceived income quintiles (Figure 4.4).[5] Satisfaction with democracy increases steadily with perceived economic status. A person who puts him or herself in the highest quintile is almost twice as likely to be satisfied with the way the democratic system works than a person in the first quintile (57% satisfaction against 31%).[6] Support for democracy is more nuanced. It is the self-declared middle sectors that value democracy most.

Figure 4.4. Attitudes towards democracy by perceived income quintiles in Latin America
(percentage of respondents)



Notes: See Figure 4.3 for definitions of the variables.

Source: Based on the *Latinobarómetro* survey 2008.

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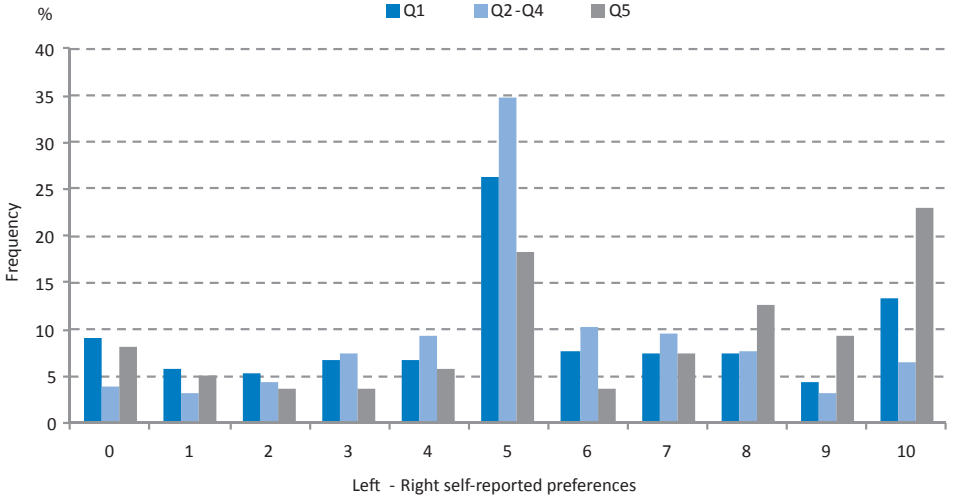
Political stance can also be analysed by where people place themselves on a left-right scale (Figure 4.5). These positions are often used as an approximate measure of the demand for redistribution, with the left being associated with more redistribution and the right with more economically liberal views.[7] Two interesting results emerge. First, people who perceive themselves as part of the middle sectors (those in the second to fourth quintiles) tend also to put themselves in the centre of the distribution of political preference. For example, over 54% of these middle sectors put themselves between 4 and 6 (the political centre). The equivalent figure for the disadvantaged is around 41% and for the affluent 28%. Second, the proportion of the middle sectors that place themselves at the extremes (of either left or right) is lower than the disadvantaged or the affluent. This is reflected also by a lower dispersion in political preferences within the middle sectors against the other groups.[8]

The middle sectors tend to hold moderate political views and be supporters of democracy in principle, but not always of how it works in practice.

Figure 4.5. Distribution of political preferences by perceived income quintiles
(percentage of respondents)



Note: Respondents classify themselves on a scale from 0 to 10, where 0 is the extreme left and 10 is the extreme right.

Source: Based on *Latinobarómetro* survey 2008.

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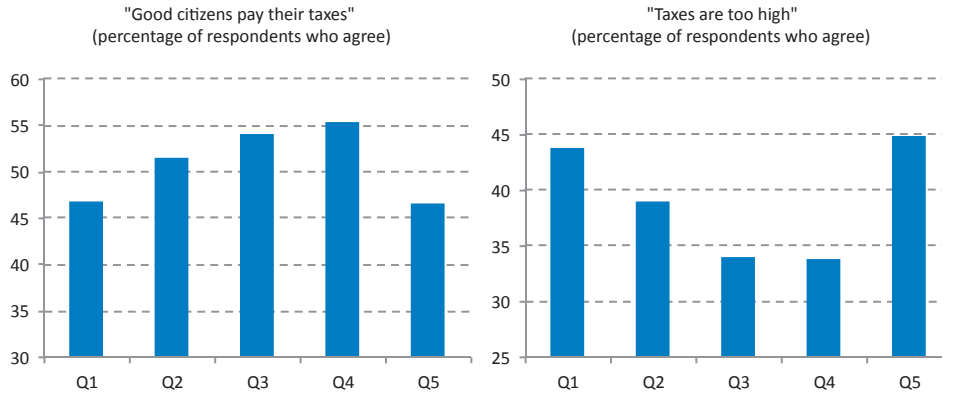
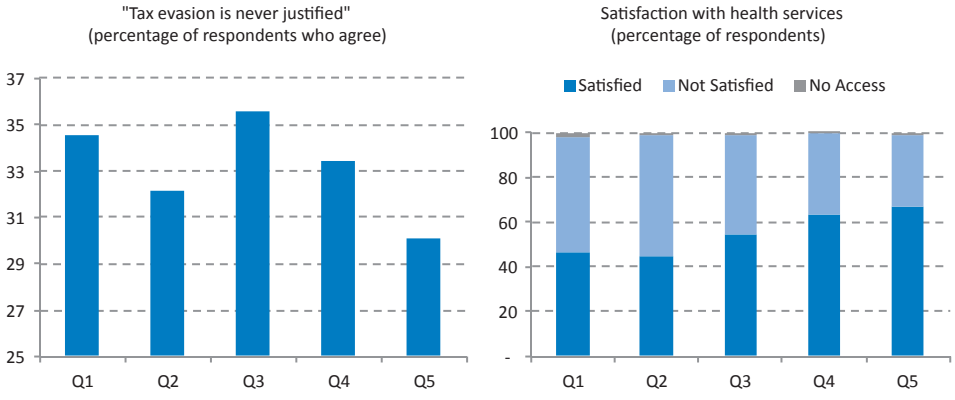
The middle sectors are "dissatisfied customers" of the state: supportive of taxation but unhappy with the services they receive.

The evidence, then, shows the middle sectors in Latin America are in principle supporters of democracy and have rather moderate views on politics, yet remain dissatisfied with how democracy actually functions. Is this dissatisfaction evident in their views on taxation and public services? Figure 4.6 synthesises the main findings. Clearly, the middle sectors display greater "tax morale": members of the middle sectors are more likely than other members of society to consider that citizens should pay their taxes, are less likely to consider that taxes are too high, and less likely to justify tax evasion. However, they are also less satisfied with the provision of public services, compared to the affluent. In short, members of the middle sectors have a "dissatisfied customer" relationship with the state: while relatively supportive of taxation, they are not satisfied with the services they receive.[9]

Figure 4.6. The middle sectors, taxation and satisfaction with public services
(responses by self-perceived income quintiles)





Source: Based in *Latinobarómetro* surveys 2007 and 2008.

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Engaging the middle sectors – the theory

In principle, the middle sectors should be naturally interested in participating in the social contract. According to the median-voter model (see Downs, 1957) if inequality is high before taxes and public expenditure, as it is in Latin America, democracy should lead governments to raise revenue and effect significant redistribution. However, while democracy may be a necessary condition for this, it may not be sufficient even in theory.

Personal preferences towards redistribution stem from numerous sources. Attitudes are affected by individual history, in the form of mobility experiences and perceptions regarding mobility (Piketty, 1995). The organisation of the family matters, as do national and regional cultural and social values (surveyed by Alesina and Giuliano, 2009). Furthermore, the potential beneficiaries of redistributive policies may take into account the effects of taxation on the labour-leisure decisions of their fellow citizens when voting, choosing as a result to limit the size of government and the degree of redistribution (Meltzer and Richards, 1981).

It has been argued that voter perceptions of meritocracy and high social mobility should create support for low levels of taxation and redistribution.

Social beliefs about the degree of fairness in social competition also matter (Alesina and Angeletos, 2005). If a society believes that it is a meritocracy – individual effort determining income – and that everybody has the right and opportunity to enjoy the fruits of individual effort, it will choose low levels of redistribution and taxes. In fact, even the disadvantaged may vote for low levels of redistribution if they think that in the future they or their offspring could progress to the point that they would become net losers under such a policy (Bénabou and Ok, 2001). Societies with high mobility, or more precisely where people think that there is high mobility, may therefore opt for low levels of redistribution. This is the "prospect of upward mobility" (POUM) hypothesis. Conversely, in societies perceived as low-mobility the median-voter model is more likely to hold with a majority voting for more redistribution.[10]

All of these factors may be temporary though. Hirschman (1973) spoke of a "tunnel effect" of disadvantaged and middle-sector individuals willing to accept and support high (or even increasing) levels of inequality during the early stages of development. He likened this to people staying in the slow lane of a traffic jam in a tunnel, which they will do only as long as they keep their faith in future progress – that at some point their lane will start to move faster. Government credibility, risk aversion and expectations therefore play crucial roles.[11]

Where public policies do not reduce inequality of outcomes, this may undermine support for what redistribution there is.

Przeworski (2007) adds an additional and challenging dimension. Even where governments are elected with a mandate to equalise rents and set out to do so, they may fail. Modern redistributive policies mainly aim to equalise human capital by investing in health and education, in contrast to the past's focus on redistribution of land or productive assets. Such redistribution may not result in an equalisation of outcomes since, as Chapter 3 has shown, the same educational system may produce very different outcomes depending on the socio-economic background of the pupils. In other words, equalisation of opportunities may not be enough. Furthermore, if voters are aware of these weak effects, they will attach low value to publicly provided services and hence have low willingness to fund them.

The data

Among the few rigorous empirical studies in this area, Profeta and Scabrosetti (2008) find that democracy in the region has no significant effect on either the level of taxation or its progressivity. One factor behind this is low institutional capacity, especially in tax administration. Another is the low quality of democracy, which remains vulnerable to populism, as well as "termites" who erode the tax base and "*devoradores*" who capture social expenditure, using the language of Elizondo and Santiso (2009). To this can be added inefficiencies in the tax and expenditure systems, with both tending to benefit the high-income population disproportionately (see Breceda *et al*., 2008, and OECD, 2008a). Torgler (2005) highlights the low level of tax morale in Latin America, which ultimately undermines willingness to pay taxes. Finally, Gaviria (2007) argues that the high demand for redistribution and the weak support for market outcomes in Latin America in the late 1990s and early 2000s stem from pessimistic views on social justice, equality of opportunities and mobility.

Empirical research does however highlight the crucial part education plays in fostering support for taxation.[12] Latin Americans with higher education (controlling for other socio-economic factors) are less tolerant about tax evasion and are less likely to think taxes are too high. This result highlights a potentially important role for education in fostering social responsibility among citizens.

The evidence undermines the theory: Latin Americans who have benefitted from social mobility (or expect to do so) tend to be supportive of redistributive policies.

The same study supported the view that people who feel they (or those near to them) have benefitted from social mobility or who are more optimistic about future mobility tend to think that good citizens should pay taxes, and that current levels of taxation are not too high. They also tend to disapprove of tax evasion, although this result is statistically weaker. A similar result holds for belief in meritocracy: the proposition that taxes are too high is rejected by the majority of people who think that success depends on hard work rather than connections, or those who believe that a poor person in their country can become rich by working hard.

Together these results do not support the POUM hypothesis for the region. It seems that risk aversion and the demand for social insurance against downward mobility dominate the POUM effect.

The final piece of the jigsaw is the link between better public services, better institutions, and higher tax morale. Satisfaction with health-care and educational provision reinforce the view that good citizens should pay taxes and, in general, reduce the share of the population that thinks that taxes are too high (the results are weaker for pensions). Similarly, satisfaction with the functioning of democracy increases tax morale, as do lower levels of perceived corruption. On preferences for redistribution – unfortunately – no clear result emerges.

Reinforcing the social contract

The social contract may be weak, but these results show how it could be reinforced. A catalyst may be improvements in the quality of public services and institutions – including political reforms[13] – that foster greater satisfaction with the functioning of democracy. Improvements in those areas should allow for higher levels of taxation in return – the relationship of citizens with their government, after all, is not just one of coercion but also based on trust.[14] This virtuous circle may be consolidated by promoting education which has a positive effect on all the social attitudes measured, albeit one that takes time.

These results can be calibrated against the *ECosociAL 2007* survey. This found that only a minority of Latin Americans think that the disadvantaged or middle sectors have a good chance to progress – meaning access to university, home ownership, or establishment of a business.[15] It also found that households in the region were exposed to many of the risks that can break the social contract and undermine social integration, such as crime, labour insecurity, and poor or absent health-care cover. However, at the same time, Latin American citizens have strong beliefs in the value of effort, in the benefits of education, and in the shared responsibility of the state and the individual – backed by a willingness to pay more taxes to finance social insurance. All in all, the results are an indication of a potential basis for a stronger social contract in Latin America, with the middle sectors playing an important role in its consolidation.

The beliefs necessary for a stronger social contract – shared responsibilty, the value of effort, the need for taxes – exist among the region's middle sectors.

FISCAL POLICY AND THE LATIN AMERICAN MIDDLE SECTORS

The middle sectors are often seen as a net contributor to government coffers, not rich enough to avoid paying taxes but too well-off to qualify for targeted social benefits. Is this a true reflection? This section presents evidence on how the tax burden and benefit of public expenditure are distributed across income groups. Our focus is Chile and Mexico and our approach is to derive the net position of families in the middle sectors after both taxes and public expenditure by combining microdata from household surveys with information from national accounts.

An important step forward relative to earlier studies in this area is that we seek to go beyond cash benefits, by including the value of public services provided in-kind. Given that middle-sector households are unlikely to benefit significantly from government cash transfers, in-kind benefits such as education and health care may in fact represent the major part of what they get from the public sector – these components certainly make up the bulk of the benefits perceived by them.[16]

Are the middle sectors net contributors to the state? Finding the answer means extending the traditional analysis to take into account the value of services provided in-kind.

Pensions – which are often a large part of public expenditure – are excluded from the analysis. For Chile and Mexico, the main part of the pension system is handled by private pension funds. However, there are also life-cycle issues that make the finances of pay-as-you-go systems difficult to evaluate. It is hard, for example, to separate that part of today's contributions which is a transfer from the active population to the retired population – effectively a tax – from that part which relates to future pensions – a contribution. From the data available it is also almost impossible to evaluate the transfers and subsidies involved in publicly funded pension schemes in the region. We have therefore excluded pensions on the expenditure side and social-security contributions to pension schemes on the revenue side. This is not to deny that they have a direct impact on income and consumption.[17] In general, pensions in the region (both the old and new schemes) tend to be very regressive on static income distribution,

since only a rather privileged part of Latin American societies is eligible to get an adequate contributory pension, and minimum pension coverage is limited (see Chapter 2).[18]

Subsidies, including those on items such as fuel and electricity which might be presumed to disproportionately benefit middle-sector households, also fall outside the scope of our analysis.

All in all, the imputed values we look at still cover over two-thirds of total taxes and expenditure. The total taxes and expenditure covered represent respectively 13.2% and 9.3% of GDP in Chile, and 6.0% and 5.0% in Mexico.

Allocating benefits and taxes

Capturing the influence of government services and taxes on household incomes requires enlarging the traditional concept of disposable income, which by itself does not fully describe the living standard of the population. Public services provided in-kind, such as education, health care and social protection, expand households' consumption possibilities. This is an offsetting item to the taxes households pay, which act to reduce their purchasing power.

To capture this value,we have used a tax-benefit incidence analysis, based on actual data about household composition and the operation of government programmes. Chile and Mexico have the data necessary for this.

We have employed a tax-benefit incidence analysis. This enables the computation of tax liabilities and benefits by combining data on household characteristics with institutional records about government programmes. Even where individualising the corresponding benefits relies on imputation techniques (and is therefore subject to error), the great appeal of this technique is the flexibility it allows for the definition of alternative income categories and the assignment of expenditures across households. The methodological annex to this chapter provides more details about this and an in-depth analysis can be found in Castelletti and Gutiérrez (2010).

We compute the combined impact of social spending and taxation by income decile, and analyse this with special focus on the middle sectors. How do their members fare relative to those above and below them on the income scale? Which channels of fiscal policy affect them most? The first step is an assessment of the overall effect of the fiscal policy, followed by a more detailed look at the separate patterns of social spending and taxation.

We have used two complementary measures to assess the effect of the fiscal system on household income. The first considers an "absolute" approach using as the denominator the total disposable income in each country. The second measure aims to capture the progressivity of the tax/benefit system, accounting for what households receive (or pay) in terms of their income group. While the second measure allows us to understand the redistributional impact of taxes and expenditure (by computing their incidence and progressivity), the first measure is robust to income sub-declaration which is a typical problem at the tails of the distribution in household surveys.

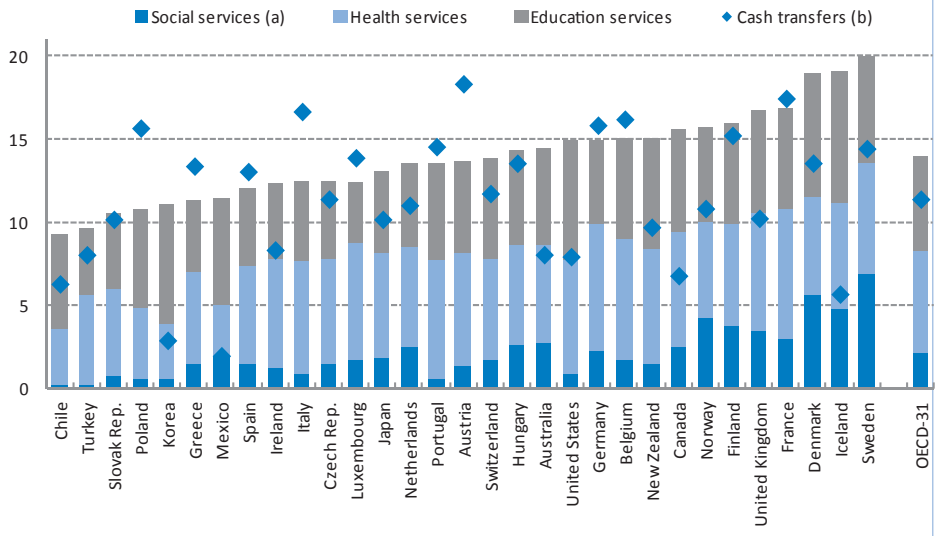
Box 4.1. Latin American benefit systems in a comparative perspective

One of the main features of social policies since the beginning of the 1990s has been the significant effort made by Latin American governments to assign a higher priority to social spending. As a result, resources allocated to social policies such as education, health care and social protection have risen from 8.5% of GDP in 1990-91 to 11.4% in 2006-07 (ECLAC, 2009). However, Latin American social spending is still a long way behind OECD countries, which spend on average 27% of GDP.

On the other hand, most of the evidence regarding the effect of public policy on households' wellbeing relies on indicators of cash income transfers, thus ignoring services provided by governments. The OECD publication *Growing Unequal?* (OECD, 2008a) shows that public services in education and health care reduce inequality in a typical OECD country by a quarter (cash transfers reduce it by a third). A current project on "redistributive impacts of publicly provided services" is being jointly undertaken by the OECD Directorate for Employment, Labour and Social Affairs and the European Commission. It seeks to assess the impacts of education, health care, housing and other services on income inequality and poverty in OECD countries. The results will permit a better comparison of the social-welfare systems between OECD members and the Latin American economies studied in this chapter.

A significant part of public social-welfare expenditures are provided through in-kind services to households, mainly in education and health care (Figure 4.7). Together these constitute 14% of GDP across the total sample. Though there is substantial variation between OECD countries, social expenditure in Chile and Mexico is considerably below levels for the rest of the OECD. In-kind services account for only 9% and 11% of GDP in Chile and Mexico, respectively.

Figure 4.7. Public expenditure on in-kind and cash transfers
(percentage of GDP, 2005)



Note: Countries are ranked in increasing order of total expenditure on all social services. Data for Chile refer to 2006.

a) Social services to the elderly, survivors, disabled persons, families, unemployed, as well as housing and social assistance.

b) Cash transfers to the elderly, survivors, disabled persons, families, unemployed, as well as those in respect of social assistance.

Source: OECD Social Expenditure Database, OECD Education Database.

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Total public social spending also differs in its structure between countries. In many continental European OECD economies a significant part of these resources – more than half – is made up of cash transfers, constituting 13% to 18% of GDP. This type of expenditure in Chile and Mexico is much more limited, reaching only 6% and 2% of GDP, respectively.

For the interested reader, more information on the project on the redistributive impacts of public services can be found in OECD (2008a) and Förster *et al.* (2010).

Pro-poor tax-benefit systems in Chile and Mexico

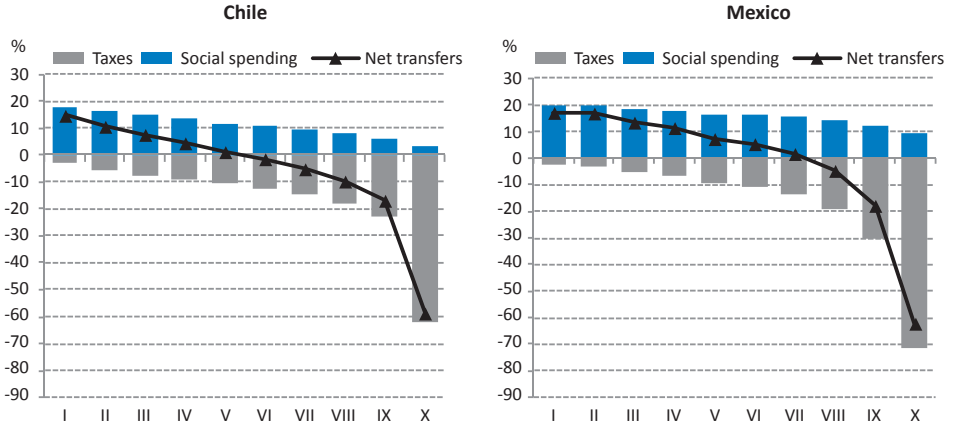
Net transfers are clearly pro-poor in both countries. For the middle sector the net effect is much smaller, slightly positive in Mexico and slightly negative in Chile.

Net transfers in Latin America have a clearly pro-poor profile, providing a significant boost to the income of disadvantaged households (Figure 4.8). At the same time, the more affluent families are net contributors, paying more in taxes than they receive in benefits. On average, the first to fourth deciles in Chile see their disposable income boosted 37.4%, while the ninth and tenth make net payments of 12.9% of their disposable income. In Mexico the corresponding figures are 40.0% and 15.7%, respectively.

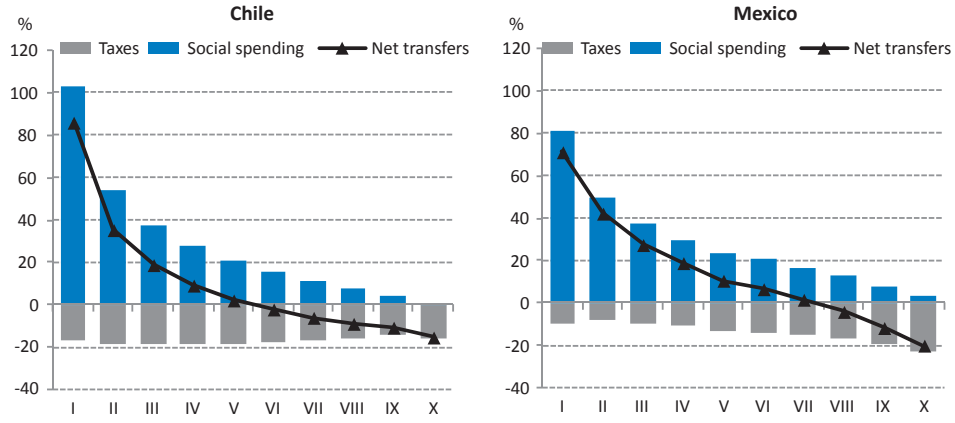
For middle-sector households, things are much less clear-cut. Their losses to taxation are close to their gains through social spending. The net effect of fiscal policy for middle-sector families, while positive, is not substantial. Households in the fifth to eighth deciles make on average a net payment of 3.6% in Chile and take a net benefit of 3.8% in Mexico (again as a proportion of their disposable income).

The results reveal an interesting dynamic. The positive net effect of the tax-benefit system on households in the lower deciles increases their income to levels comparable with those of middle-sector families. But the fourth and fifth deciles are left potentially exposed, receiving less in net terms from social programmes than households below them.[19]

Figure 4.8. Effective net reception of benefits by household income deciles
(weighted average, percentage of mean disposable income, 2006)



(percentage of decile mean disposable income)



Note: Deciles are defined according to household per capita disposable income including cash transfers.

Source: Based on national household surveys.

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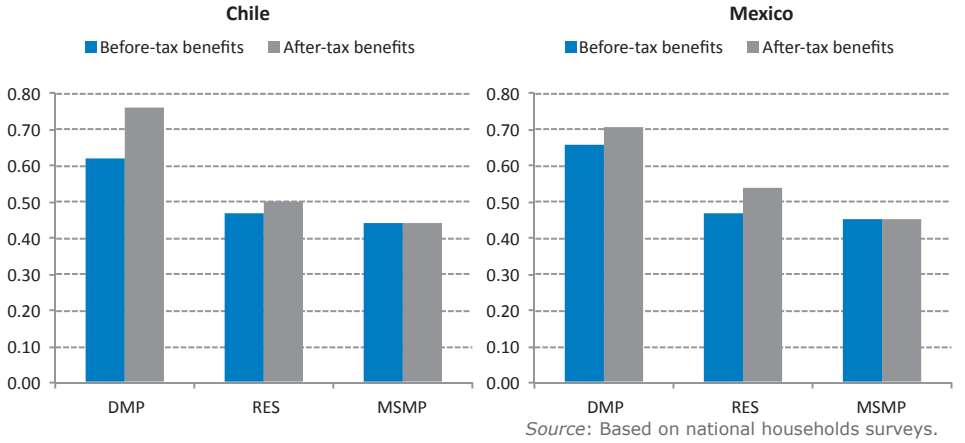
In order to test this further and quantify the impact of the tax-benefit system, we have computed the three indices of social mobility developed in Chapter 1 before and after government action (Figure 4.9).

The upward mobility potential of the disadvantaged is greatly improved by the net transfers they receive.

A first question is how public action can help disadvantaged households move up in the income scale; the "Disadvantaged Mobility-Potential Index" (DMP, defined as in Chapter 1) provides an indication of the effort needed. Before government intervention Chile has a DMP index of 0.62, while for Mexico it is 0.66 (recall that DMP ranges between 0 and 1, with higher values indicating greater potential mobility). Both results indicate that it would not need large increases in income to move these households into the middle sectors. The effect of the tax-benefit system is to improve both indices, to 0.76 and 0.71 respectively, highlighting the important impact that the government has for households at this income level.

A second question is the fragility of the middle sectors – given an adverse shock how great is the impact in terms of loss of income? The "Middle Sectors Resilience Index" (RES, again defined in Chapter 1) proxies this (Figure 4.9). It measures the average distance of the incomes of the lower-middle sectors group from 50% of the median income (the lower-middle sectors being those households with income between 50% and 100% of the median). The range of RES is 0 to 1, with higher values here implying that incomes are generally close to the median and hence display a greater level of resilience.

Figure 4.9. Mobility indicators
(before and after government intervention, 2006)



Source: Based on national households surveys.

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The tax-benefit system may provide little protection for those in the lower part of the middle sector...

Before government intervention the index for both countries is 0.47. After taxes and benefits, Chile improves slightly to 0.50 while Mexico increases to 0.54. This result underscores the story told by Figure 4.8; as one moves upwards along the income distribution, the positive impact of the tax-benefit system tends to fade away. It also stresses that the government does not necessarily provide a buffer against adverse shocks for those in the vulnerable segments of the middle sectors. While their initial situation is not exactly bleak, it cannot be argued that they are in a strong position to weather adverse conditions. Nevertheless, it is noteworthy that fiscal policy has on average a positive effect on the resilience of the middle sectors in both countries.

...and does not risk making the upper part affluent.

The mirror-image of the resilience index for households in the upper-middle sectors is the "Middle Sectors Mobility-Potential Index" (MSMP). This tests the strength of households within the upper-middle sectors and how able they are to join the ranks of the affluent. It turns out that fiscal policy has practically a zero effect for Chilean and Mexican households in this group (with the index before and after the government action rounding up at 0.44 and 0.45, respectively). These results have the positive interpretation that fiscal policy does not render the upper-middle sectors more likely to become affluent.

Middle-sector households benefit little from social spending

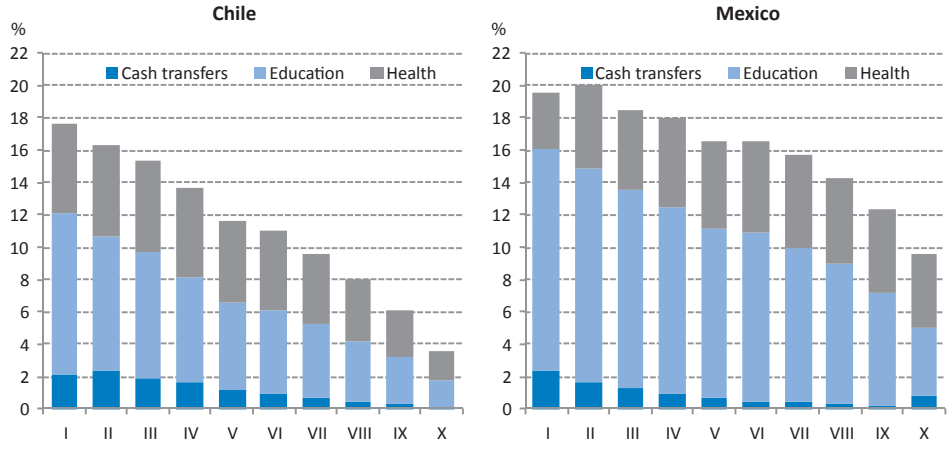
The importance of the public sector to the well-being of the disadvantaged is evidenced by the fact that, on average, public benefits make up about 50% of total resources for low-income households in both the countries we are considering. Middle-sector families benefit much less from social programmes. Access to public education and health-care services by the middle sectors, for example, is demonstrably much more limited (Figure 4.10).

The provision of public support for basic services is strongly affected by the income position of families. More affluent families, who can afford private substitutes, have little incentive to use public services where they have a poor perception of their quality. As Chapter 3 amply demonstrated, this is certainly the case in

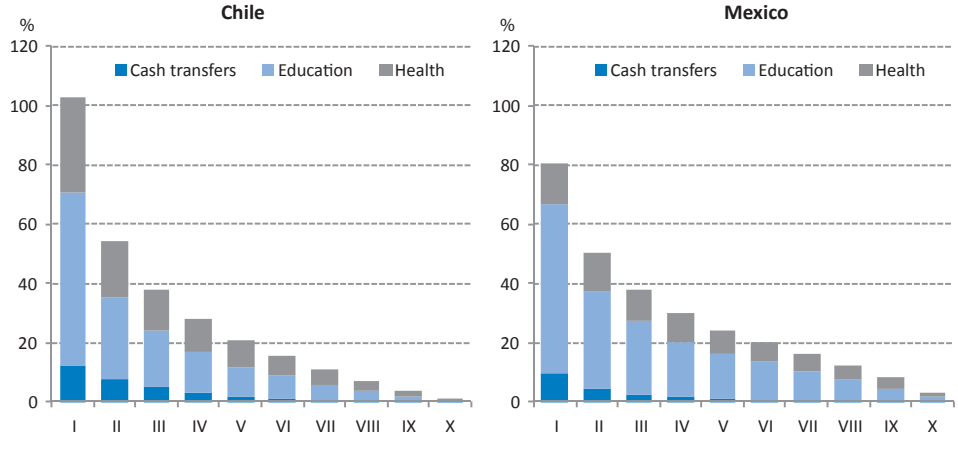
education. Therefore, middle-sector families – who are precisely the group with both the means and incentives to see their children educated – are likely to favour private provision. The same may be true in health care. This highlights a limitation of the tax-benefit analysis which implicitly assumes that public services are of similar quality to the private sector. If the education and health-care services provided by the public sector are of low quality (services that are mostly received by the disadvantaged and middle sectors), then the benefits will be valued less.

Figure 4.10. Effective receipt of benefits by household income deciles

(weighted average, percentage of mean disposable income, 2006)



(weighted average, percentage of decile mean disposable income)



Note: Deciles are based on household per capita disposable income including cash transfers.

Source: Based on national household surveys.

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Splitting out the components finds that the value of public education is the biggest single contributor in the tax-benefit calculation for disadvantaged families

Education is the largest programme in terms of effect, followed by health care. Cash transfers, as expected, play a less significant role for the middle sectors.

(Figure 4.10).[20] Educational spending then displays a progressive pattern as incomes decrease. Public education to low-income families is worth an estimated 8.1% of mean disposable income in Chile compared with 4.7% for the middle sectors; and 12.6% in Mexico against 9.8% for the middle sectors. Expressed as a proportion of average income within the relevant deciles, the contrast is even starker: a boost to family budgets of 29.5% for low-income families in Chile against 6.4% for their middle-sector compatriots; and 33.3% against 11.4% in Mexico.

Health care is the second largest programme in terms of effect. Health-care expenditure presents a relatively progressive pattern in Chile and Mexico and accounts for 19.0% and 11.6% of disadvantaged households' disposable income, respectively. The equivalent figures for the middle sectors are 6.1% in Chile and 6.3% in Mexico.

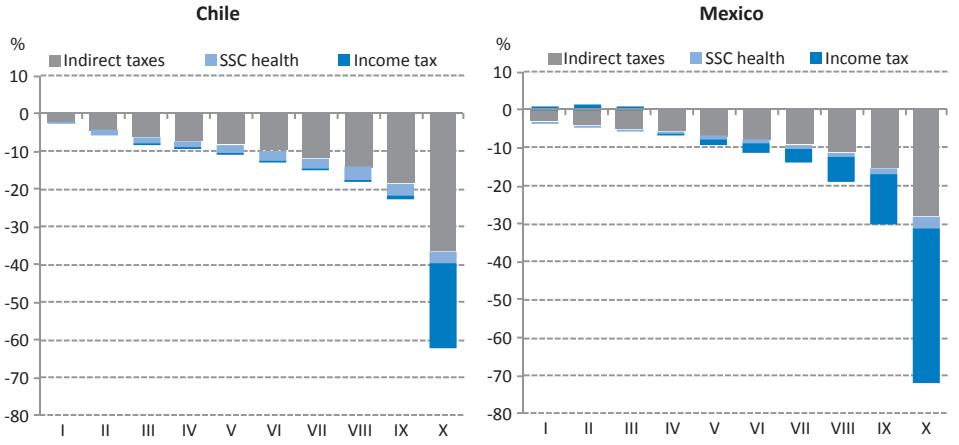
As is to be expected, the bulk of cash transfers go to disadvantaged families – for whom they represent a substantial proportion of disposable income. For the middle sectors, cash transfers play a less significant role given that households in this group are typically sufficiently well-off not to qualify for most types of such assistance. While the effect is positive, it is very small.

Who pays the taxes?

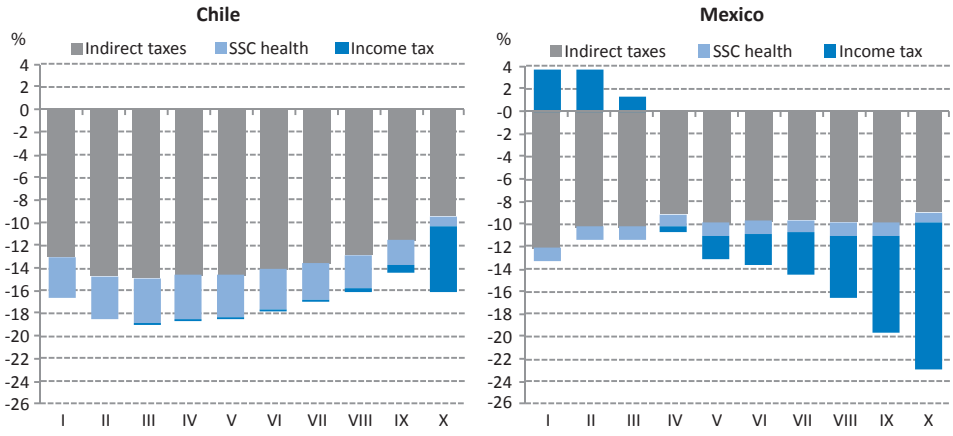
Contrary to the commonly held belief, it is the affluent rather than the middle sectors who pay the bulk of taxation.

Our analysis dismisses the – commonly held – belief that middle-sector families are the ones supporting the heaviest total tax burden (Figure 4.11). Of course, this is relatively large, and there is considerable variation in the total amount of tax paid by particular families within it. But the bulk of the overall tax take (51% in Chile and 53% in Mexico) is generated in the highest deciles, with affluent families being net taxpayers in both countries. This overall behaviour may not be reflected across indirect taxes, health-care contributions and personal income tax. We have analysed the incidence of each of these – though the results should be treated with caution given incompleteness in the data.

Figure 4.11. Tax incidence by household income decile
(weighted average, percentage of mean disposable income, 2006)



(weighted average, percentage of decile mean disposable income)



Note: Deciles are defined based on household per capita disposable income including cash transfers.

Source: Based on national household surveys.

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The indirect taxes are principally VAT and excise duties, the former having the greater take. Such consumption taxes have the greatest impact on the income of middle-sector households, accounting for 13.8% and 9.8% of the mean per capita income for Chilean and Mexican families respectively – personal income tax being mainly paid by the affluent (see also Box 4.2). When measured relative to decile disposable income, indirect taxes exhibit a different pattern in Chile from that in Mexico. While in Chile the top-two and bottom-two deciles pay a lower share of their income than the rest, in Mexico the share of income taken is essentially similar across income groups.

Indirect taxes are the principal burden paid by the middle sector. They pay little income tax if any...

Mexico exempts many goods regarded as essential, such as food or medicine, from VAT in an effort to make the tax less regressive. In practice this proves to be a poorly targeted (implicit) subsidy and the absolute benefits from these exemptions increase with household income.

Social-security contributions for health care present different patterns in the two countries. While they are neutral in Mexico (accounting for about 1% of income in each decile), in Chile they are regressive – something explained by the fact that in Chile households higher up the income scale tend to opt for private insurance.

The top two deciles pay the bulk of the take from income tax. This reflects both the skewing of the income distribution in the region and the fact that more than 60% of income earners have sufficient exemptions to mean they pay nothing.[21] Their burden is still low nonetheless: 3.3% in Chile and 10.8% in Mexico as a proportion of the mean income in their decile. For middle-sector families, the net effect is even lower, and – given the effect of tax credits on salary – low-income groups, in Mexico at least, have effective negative contributions.

...the bulk of which comes from the affluent.

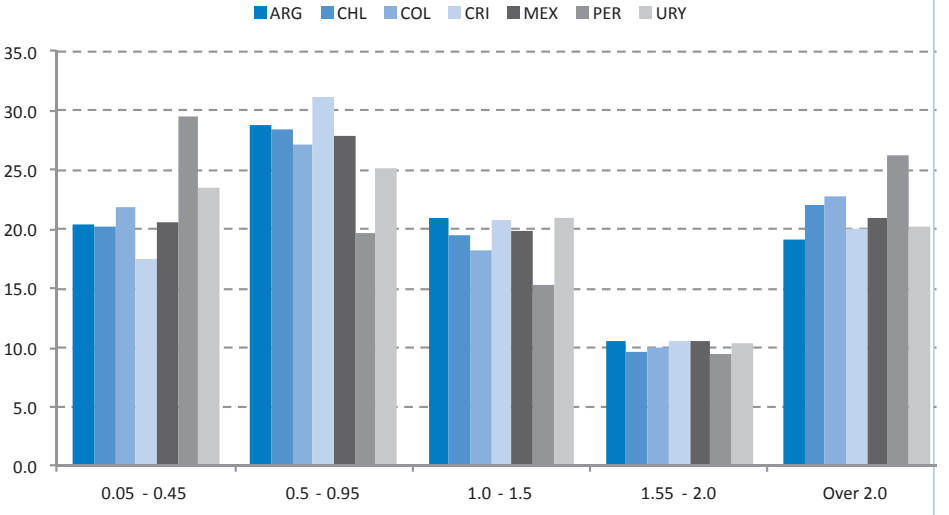
Box 4.2. Who pays personal income tax in Latin America? Not the working middle sectors

Compared with OECD countries revenues from personal income tax in Latin America are very low. Only a small proportion of the population is a net payer of this tax – and almost nobody within the middle sectors. This is the result of the region's highly concentrated income profile, a tendency to under-report income, and tax codes full of credits and exemptions.

This small tax take is a problem for the region. Of course, it limits the public sector's potential for redistributive policies. It also has a less obvious impact in removing a useful stabiliser from the economy. Daude *et al.* (2010) estimate that the automatic stabilisers inherent in Latin America's tax systems are around half the size of their OECD equivalents. To these can be added, from a political economy perspective, the additional legitimacy that a stronger personal income tax would bring to the fiscal systems of the region.

So who does pay this tax? To find out we have modelled its incidence in seven countries of the region, according to the following methodology. First, a distribution of potential tax payers is computed using the latest available national household surveys. These have data from 2005 in Uruguay, 2006 in Argentina, Chile, Costa Rica, Mexico, Peru, and 2008 in Colombia. The "adjusted first-earner income" distribution is then calculated by taking into account household composition, using the OECD methodology for estimating structural balances (Girouard and André, 2005). The analysis is restricted to labour income (whether from employment or self-employment), and the sample is limited to households with at least some income of this type. All households with income above 6 times the national median are grouped together – on average these households earn from 8.6 times the median in Uruguay to 12.1 times in Colombia. Figure 4.12 shows the resulting distribution of households.

Figure 4.12. Distribution of households by income bracket
(relative to national median labour income)



Note: Percentage of households by income level. 1 represents the national household labour income median.

Source: Based on national household surveys.

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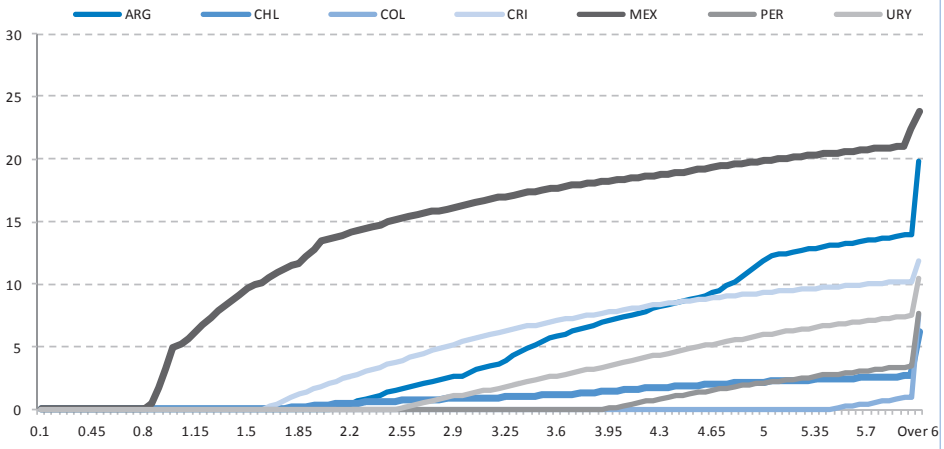
Given the high levels of informality and income inequality in the region, the conventional OECD analysis (calibrated within OECD countries for those earning from 0.5 to 3 times the median income) is extended to households earning from 0.05 times the median income (so from almost the first peso, sol or real of labour income) to more than 6 times the median income – De Mello and Moccero (2006) follow a similar procedure in their analysis for Brazil.

The effective tax burden is then computed for some 120 representative household types, assuming they differ only in their income level. Figures for Chile and Uruguay were provided by the respective finance ministries, while rates for Mexico were calculated using the OECD Taxing Wages simulator, developed by the OECD Centre for Tax Policy and Administration. For the remaining countries, calculations were based on the legislation in force during fiscal year 2006, a relatively neutral year in cyclical terms. For Uruguay survey figures were updated with the observed CPI up to 2009 to permit the incorporation of the new personal income tax framework introduced from 2008. In those cases where fiscal legislation allows individual and household declaration, the option more beneficial to the tax payer was chosen. (Tax declarations are at the individual level in Chile, Colombia, Peru and Uruguay, and by household in Argentina, Costa Rica and Mexico.) Allowances for both spouse and children were included in Argentina and Mexico.

Figure 4.13 shows the computed average effective rate by income level for each country. It is apparent that personal income tax in all countries of the sample is formally progressive, with average tax rates increasing with income. However, labour-income earners only become net payers of personal income tax at levels well above the national median wage – ranging from 1.7 times the reported household median labour income in Chile and Costa Rica, to 5.5 times in Colombia. The only outlier is Mexico, owing to the interaction of limited exempted income and tax credits. Here net tax becomes payable at about 0.85 times median income.

Figure 4.13. **Average personal income tax rates by income**
(relative to national median labour income, percentage)



Note: On the horizontal axis, 1 represents the national household labour median income.

Source: Based on national household surveys and corresponding national tax codes.

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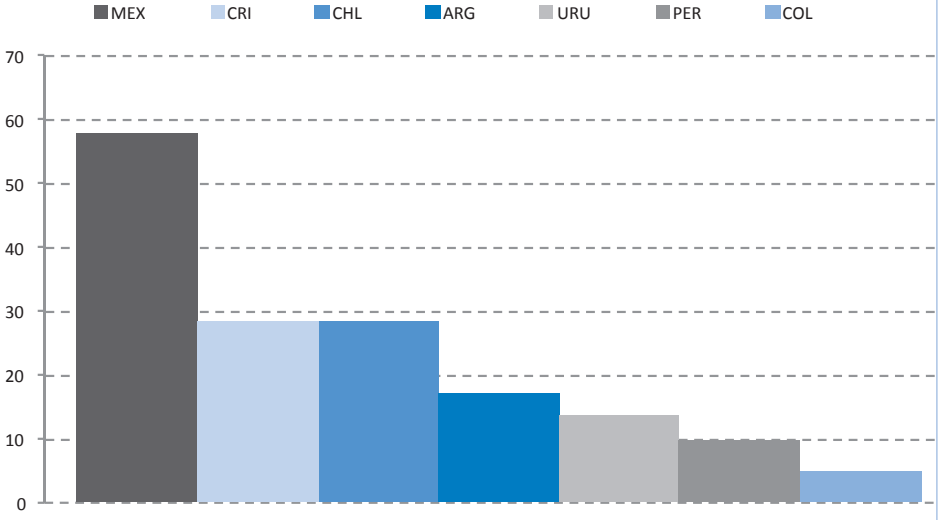
These very high effective thresholds combine with the concentration of households in the lower part of the income distribution to mean that only a very small proportion of households pay net income tax (Figure 4.14). The largest tax base is 60% of households in Mexico, and this dwindles to less than 10% in Colombia and Peru.

Focusing on the working middle sectors, Mexico gets net taxes from about half of this group (those earning from 50% to 150% of the median national household labour income). But south of here *no* working household from the middle sectors pays any net personal income tax – on average at least.

Figure 4.14. Proportion of households which are net payers of personal income taxes



Source: Based on national household surveys and corresponding tax codes.

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THE WAY FORWARD

The middle sectors in Latin America find themselves in a dilemma. They are a strong supporter of democracy as an idea, but also critical of how democracy actually works. A key source of this dissatisfaction is how public policies influence income distribution, social protection and opportunity creation. The middle sectors have the potential to become an agent of change in the region. Their centrist political values could facilitate the consensus building needed for the sort of structural reforms discussed in Chapters 2 and 3 – and if poverty reduction continues to advance, members of the middle sectors could soon represent an absolute majority in several countries of the region.

But this positive outcome will not materialise automatically. In many countries of the region, a large part of the middle sectors do not see themselves as part of the social contract. Willingness to pay taxes is low, reflecting perhaps the meagre public goods the middle sectors receive. The perceived quality of public services is also low and this drives the middle sectors to seek alternatives from the private sector, even where the extra cost is a significant additional burden on household budgets. This – rational – behaviour can perpetuate exclusion, with the disadvantaged having no choice but to use low-quality publicly provided services and the better-off having their own private arrangements. The social and economic consequences of this are large and enduring.

The current moment is in many ways very timely. Most countries in the region have weathered the international turmoil with increased confidence. Their

renewed strength is due, in many cases, to expanding middle sectors which have served as a source of domestic demand. Poverty has fallen in many countries at a higher pace than during previous expansions, and the mechanisms that lie behind this, such as conditional cash-transfer programmes, have created a new faith in government action among the vulnerable segments of society. At the same time, democracy has advanced on many fronts and policy makers have become more pragmatic about economic policies. Parties of the left and right have alternated in power maintaining policy credibility and without creating panics about abrupt policy U-turns. However, these changes mean that policy itself must change. The successful policies of the past may no longer serve a changed population profile. This is a chance to renew the social contract – explicitly seeking to draw the middle sectors into it.

Because expenditure needs tax to support it, it is tempting to think of tax first. This may be the wrong way round. Given current poor perceptions, the best place to start may be reforms aimed at improving the *quality* of public services, so that current users increase their demand and support for them. This would build a social constituency for expansion of public spending and for the taxes necessary to finance it. A way forward here may be to frame tax reforms that raise more revenue while paying far more attention to the distributional effects. The bedrock for all of this should be continued improvements in tax administration and the transparency of public expenditure and revenues.

METHODOLOGICAL ANNEX

Incorporating the value of government services and cost of taxes into household incomes raises a range of methodological and conceptual questions. Household surveys generally do not contain information on taxes or benefits or, at least, not with the required level of disaggregation, and little consensus exists on the best way of valuing these services and distributing the result across individuals, matters which can importantly affect the results.

The use of incidence analysis techniques is widely exemplified by Euromod (2009) and the OECD (2008a). The work carried on by ECLAC (2007) and the World Bank (Breceda *et al*., 2008; and Goñi *et al*., 2008) are regional examples of this technique. Finally, national studies such as the Chilean Planning Ministry (Mideplan, 2007) and the Mexican Ministry of Public Finance and Credit (2008) use this approach to evaluate the outcomes of policies captured by household surveys.

The methodology we have adopted is similar to these examples. The main data sources and methods are described below.

Data sources

Tax-benefit incidence analysis relies on diverse sources of information and uses imputation techniques to splice them together. In order to estimate the impact of taxes and benefits the following information was used:

- **Household surveys**: Individual records from the 2006 National Characterisation Socio-economic Survey (CASEN) for Chile and the 2006 Household Income Survey (ENIGH) for Mexico. Both surveys provide data on income of households as well as information on their economic characteristics that can be used to impute public services and taxes to individuals. In Chile, estimates of the effects of value-added taxes and excise duties drew also on the 2006-07 Family Budget Survey (EPF).
- **Government statements and institutional records**: The analysis covers health and education services, using data on public expenditures at institutional level from the Chilean National Budget Office (DIPRES) and the Mexican Ministry of Public Finance and Credit (SHCP). In addition, the distributive impact of health in Chile relies also on the Satellite Account for Health.
- **Tax records**: Statistics drawn from personal income-tax returns provide another source of information about the tax base. In the case of Chile, specially commissioned data was obtained from the SII, analysing the number of taxpayers, their assessed income, its composition and the taxes paid by income bracket.

In terms of coverage, the analysis covers 72% and 66% of total social expenditures for Chile and Mexico, respectively; while on the other side it includes 69% and 71% of total tax revenues.

Determination of tax burdens and benefits

The boundaries of what items can be imputed to households are not always obvious. Certainly items such as health care and education are good candidates. However, any public expenditure or tax is in theory a candidate, having at least some direct or indirect impact on households' consumption possibilities. For the purposes of this analysis, the approach must be a pragmatic one, with the inclusion of questions on specific programmes in household surveys driving the extent to which we can include such items in the analysis. Though in practice the impact is typically at the level of the individual, we treat it as evenly distributed across household members.

- **Cash transfers**: Since they are generally targeted at people in the lower income strata, in developing countries these programmes are usually among the most visible types of social spending. Household surveys treat them directly, and our calculations take the value that families surveyed declared as received.
- **In-kind transfers**: Following OECD (2008a), the incidence of education is obtained applying the actual-use approach (beneficiaries are those students using the educational services) and for health care the insurance-value approach (imputing the insurance value of coverage to each person based on specific characteristics, such as age and sex). Because of the lack of market prices, the value of the transfer is assumed equal to its production cost. Even when this approach neglects differences across countries in terms of quality and efficiency in the provision of the service and in the value individuals assign to these services, similar assumptions are a regular feature in the specialised literature (including OECD, 2008a; and Euromod, 2009).
- **Direct taxes**: Personal income taxes are estimated for each individual according to their reported income in the household survey, the tax law in force in the survey year and information on effective income tax collection. Some income reported in household surveys is collected on an after-tax basis. Therefore, a first step was calculating the incidence of taxes paid in 2006 to construct pre-tax estimates for these items. "Income taxes" in Chile include the second category (tax on income from dependent employment) and the withholding income tax, and in Mexico they are the taxes on personal labour income, income derived from interest, rents and self-employment activities. Statutory tax rates are then applied in order to obtain the income tax that individuals should pay. These figures are then compared with the effective tax collection. In the case of Chile, tax-return information was available and the amount of income tax that individuals chose to pay was computed as follows. The number of non-filers in each decile was estimated as the difference between the number of individuals in the household survey with incomes high enough to be subject to the income tax, and those who actually filed a tax return, and then imputing these randomly within the survey. Then, for the tax filers the proportion of income tax due that individuals actually paid was estimated from the tax-return information and then distributed in the survey proportionately to the estimations of income tax due.
- **Indirect taxes**: The total tax take for indirect taxes is estimated from the effects that both value-added taxes and excise duties have on the price of final goods. Following Euromod (2009), the total tax liability T_i for commodity i is calculated on the basis of observed expenditures e_i

$$T_i = \frac{\tau_i}{1+\tau_i} e_i \quad \text{being} \quad \tau_i = \frac{t_i(1+\alpha_i+\upsilon_i)+\upsilon_i}{1-(1+\tau_i)\,\upsilon_i} + \frac{\alpha_i}{1-(1+\tau_i)\,\upsilon_i}$$

t_i : VAT rate

α_i : fraction between the excise duty and the producer price

υ_i : *ad valorem* tax rate applied on the consumer price

The effect of each tax is then constructed by applying the statutory tax rates and deductions in force for each type of product in the survey and then aggregating these into 17 categories of goods and services. Then, the proportion of indirect taxes that households actually pay is adjusted to the effective tax collection on these items that is transferred to private consumption and then distributed in the survey proportionately to the total tax liability. The amount of indirect taxes that is transferred to private consumption is estimated from the Tax Matrix information in National Accounts.

In the case of Chile, a matching procedure was used to impute household expenditure from the input data (EPF) into the survey on the basis of budget shares for different population groups identified by disposable income and the largest set of demographic variables – age, gender, educational level, professional status, and number of adults and children – common to both datasets.

- **Health-care social-security contributions**: In Mexico contributions include those made in respect of the sickness and maternity insurance within the compulsory scheme (*seguro de enfermedades y maternidad del régimen obligatorio*). In Chile contributions were calculated according to the scale applicable to the different FONASA health groups. These groups are defined by household characteristics such as income level and number of beneficiaries.

Measurement errors and under-reporting

Household and expenditure surveys are an important source of information on the allocation of tax benefits within households. Nevertheless, systematic misreporting of some income sources, such as capital income, income from self employment or income from social transfers, can provide a misleading view of the income distribution and redistribution profiles.

Reconciling household-survey data and national-accounts data is a well-known problem. Macro aggregates from household survey data normally present discrepancies with published national accounts, even though the sample weights are designed to represent the national population. Table 4.A1 illustrates the extent of such discrepancies in recent household budget surveys in Chile and Mexico.

Table 4.A1. Comparison of national accounts and household survey estimates

Country	Household survey	Household income according to survey	Household income according to NA	Discrepancy
Chile	CASEN (2006)	28 722 719	33 817 612	15.1%
Chile	EPF (2006)	24 674 222	33 817 612	27.0%
Mexico	ENIGH (2006)	2 483 230	8 132 999	69.5%

Sources: As noted in the table for surveys, national statistical agencies for national accounts.

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The differences between the surveys and estimates from national accounts highlight potential biases in the totals. In particular, household surveys tend to under-report household incomes. A common approach in the literature has been to adjust aggregate reported household incomes so as to match the corresponding items in national accounts, though no agreement exists on the best way to do this – even assuming that national-accounts aggregates are correct. Assumptions are needed, for example, in order to assign under-reported income across the population and such assumptions can be material to the results, particularly when discrepancies are high. Allocation of income from capital is a good example, since such income in practice tends to be found only among upper-income households.

Following OECD (2008a), we have made no adjustments to household-survey income aggregates and all calculations were based on data gathered directly from published records. In the case of Chile, official data are already imputed using estimates from the national accounts (more details about this procedure can be found in Mideplan, 2006); while for Mexico income is not adjusted in the survey. For the interested reader, this effect is examined in Mexican Ministry of Public Finance and Credit (2008).

NOTES

1. This topic is developed in OECD (2008b).
2. The Polity democracy score relies on experts' assessments along six dimensions which include qualities of executive recruitment, constraints on the executive, and the degree of openness of polities and political competition. See the website of the Polity IV project (www.systemicpeace.org/polity/polity4.htm) for more details.
3. Nevertheless, the average index of almost 8.6 for Latin America and the Caribbean in 2008 is still below the average of 9.6 for OECD member countries (out of a maximum score of 10).
4. Blyde *et al.* (2009).
5. It is important to point out that perceived positions in the income distribution differ significantly from objective positions, with relatively rich individuals self-classifying themselves at lower income quintiles and the poor considering themselves relatively less deprived (see Chapter 1, and also Fajardo and Lora, 2010). However, it can be argued that in political views and actions it is the perceived position rather than the objective one that matters more.
6. The differences between the different quintiles are statistically significant at conventional levels of confidence for both variables.
7. For example Alesina and Angeletos (2005) and Gaviria (2007).
8. The coefficient of variation, a measure of dispersion, is 0.44 for the middle sectors, compared with 0.52 for the affluent and 0.57 for the disadvantaged.
9. Similar results are found for education. See Daude and Melguizo (2010) for more details.
10. It is important to note, though, that for the POUM model to hold, certain premises are necessary: policies should be expected to persist, agents should not be very risk-averse, and those poorer than average should expect to become richer than average. Rodríguez (2004) proposes an alternative explanation for this effect, by which in societies where the rich can influence politics such that they do not pay taxes, the median voter will prefer low levels of taxation to reduce the incentives to rent-seeking.
11. Przeworski (2007) generalises the case, pointing out that those without assets, even if they constitute a vast majority, either do not want to or cannot use their political rights to equalise wealth, incomes, or even opportunities. This may be due not only to their expectation of becoming rich, but also to ideological domination since the media are owned by the elite, or to difficulties the poor face in co-ordinating actions when they have heterogeneous preferences over non-economic aspects of life. In a somewhat similar vein, Chong and Olivera (2008) show that countries with compulsory voting exhibit lower income inequality. Therefore, since developing countries have relatively more unequal distribution of income, the authors support the promotion of compulsory voting by them.
12. See Daude and Melguizo (2010). These results are in line with Torgler (2005).
13. A recent example would be Brazil's *Ficha Limpa* reforms of July 2010.
14. Torgler (2005).
15. Marcel (2008).

16. The quality of these goods therefore has an important impact on the perception of how effectively public funds are used, and so willingness to pay taxes – the virtuous cycle, discussed in the preceding paragraphs. An important limitation of our approach, therefore, flows from the fact that the data in the household surveys do not capture differences in the quality of services, differences which could affect their value. Chapter 3 has shown that in education these differences are often large and could be material to the results presented here.

17. In Brazil, for example, pensions are found to propel households with low or zero market income into high-income groups. For more details see Immervoll *et. al.* (2006).

18. See also ECLAC (2009).

19. It should be noted that poverty headcount levels differ significantly between Chile and Mexico. According to ECLAC (2009), for 2006 13.7% of all households in Chile were poor, while poverty is significantly higher in Mexico (31.7%).

20. Using household surveys, only current income is considered and the results do not capture the dynamic distributive effects of public expenditure. Therefore, the long-run effects of education on wage earnings of the children currently in school are not included.

21. This topic, and how it might be addressed, is discussed in detail in the 2009 edition of the *Outlook* (OECD, 2008b).

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Latin American Economic Outlook 2011

HOW MIDDLE-CLASS IS LATIN AMERICA?

This year's *Latin American Economic Outlook* focuses on those in the middle of the income distribution in Latin America. If these middle sectors have stable employment and reasonably robust incomes, then, arguably, they provide a solid foundation for economic progress. Moreover, following the political role often attributed to the middle classes by historians and sociologists, they might also support moderate but progressive political platforms in Latin America's democracies. In fact, this report shows that, contrary to expectations, in Latin America this group is still economically vulnerable, few have university degrees and many work in informal employment. This is a "middle class" quite different from the group that became the engine of development in many OECD countries. In Latin America, what are the economic characteristics of these vulnerable middle sectors? How do they perceive inequality, public policies and democracy? How can public policies protect the livelihoods of these middle-sector households? These questions guide the *Outlook* to discuss why and how upward mobility should and can be promoted, and how safety nets can be put in place to protect the most vulnerable segments of people within those middle-income groups, as well as the poorest and most disadvantaged households in the economy at large. The report tackles policies such as social protection and education that promote upward mobility, and underscores the importance of fiscal policy as a tool to finance the required reforms and programmes that can engage the Latin American middle sectors in a renewed social contract.

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