# Latin American Economic Outlook 2009

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# Latin American Economic Outlook 2009


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# Foreword

When the first edition of the OECD *Latin American Economic Outlook* was presented in November 2007, on the eve of the Ibero-American Summit of Heads of State and Government in Santiago de Chile, worries about the sub-prime lending crisis and rising oil and food prices were already gathering ground. Now, there is clear cause for concern and the main question in the region today relates to Latin America's capacity to confront the current global economic instability.

There is certainly no *decoupling* for Latin America, especially as the region's integration in global markets has deepened in recent years. The latest period of economic bonanza in Latin America reached its peak in 2007, with annual GDP growth of 5.6 per cent and record levels of foreign direct investment that exceeded USD 100 billion. Rating companies recently upgraded the public debt of Brazil and Peru to Investment Grade. But the continent is beginning to feel the effects of the global slowdown. Current account surpluses are weakening, inflation is rising and foreign credit is shrinking. In June, the Economic Commission for Latin America and the Caribbean (ECLAC) reviewed its growth projections for the region in 2008 down to 4.7 per cent, while the International Monetary Fund already predicts that the region's annual average GDP growth will fall below 4 per cent in 2009.

The current situation confronts Latin American economies with their first major challenge in years. Navigating the rough waters of the global economic deceleration will require, among others, to focus on strengthening the policy framework to foster development. The OECD *Latin American Economic Outlook 2008* stressed four areas — fiscal policy, pension funds, telecommunications and trade with Asia — where adequate policies could boost growth with equity. This year's edition explores fiscal policy in further depth and underlines the message that sound fiscal management, both on the revenue and spending side, can be a key element for sustained growth in times of global economic uncertainty.

Latin American governments will need to strengthen fiscal policy as an instrument to promote growth, reduce inequality and provide their citizens with the necessary means to succeed. This publication acknowledges that during the last decade, Latin America has experienced some improvement in the realm of fiscal policy, particularly from a macro perspective. But fiscal systems in the region still fall short of their potential and expectations: taxes fail to reduce acute inequalities in income distribution, the quality of public goods and services is low, and monitoring and evaluation mechanisms are still weak.

The OECD *Latin American Economic Outlook 2009* highlights areas where governments can do more and better. In order to improve public revenue generation, it calls upon Latin American countries to rationalise their tax collection systems, making them simpler and more functional while taking into account the nature and structure of the local economy, including workers and employers in the informal sector. With respect to public spending, it calls for a higher quality and better targeted provision of public services, taking the example of education as a key to advance equity and well-being. The *Outlook* also pays particular attention to the impact of politics and elections on external investors' perception of public debt, another pillar of fiscal policy management.

Fiscal policy is instrumental to promote social cohesion and democratic consolidation in Latin America. I hope that this new publication by the OECD Development Centre contributes to meeting the objective set for this series: to bring Latin America and the OECD closer by stirring informed policy debate around those policy areas most relevant for the region.

Angel Gurría
OECD Secretary-General

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# Preface

These are fascinating times for Latin America. Only a decade ago, an economic slowdown like the one the world is witnessing today would have sent the economies of the region toppling like dominoes. Today, in contrast, fiscal and monetary anchoring make Latin American economies more resilient to external shocks. Above all, the region has diversified its external sources of growth away from reliance on the United States by strengthening its economic ties with Europe and Asia in recent decades.

Latin America's relatively rosy outlook, in spite of the growth slowdown in OECD economies and the consequent tightening of financial markets, illustrates the shift of Copernican proportions which has taken place in the global economy: a major rebalancing of the wealth of nations. A half century ago, OECD countries accounted for 75 per cent of world GDP: today they make up little more than half. The emergence of world-class multinationals headquartered in developing countries is perhaps the most evident sign of this shift: *multilatinas* such as Petrobras, Cemex and Vale are already leading players in their respective areas of activity.

At the OECD Development Centre, we are increasing our attention to these changes and their impact on development and wellbeing. This is reflected in our publications, with two books on the region published in 2007 – the *Latin American Economic Outlook 2008* and *The Visible Hand of China in Latin America* – and a range of working papers analysing the emerging role of Latin American multinationals – the most recent of which was published in the *ECLAC Review*. But it also finds echo in the Centre's own membership, which includes several of the emerging economies at the heart of the phenomenon of shifting wealth. In 2008, the Development Centre welcomed Colombia as its fourth Latin American member country, joining Mexico (a full member of the OECD since 1994); Chile, advancing in the negotiation of its accession; and Brazil, actively committed to enhance its engagement with the Organisation. Colombia's entry signals the growing importance the Development Centre attaches to Latin America and its commitment to provide a forum for informed dialogue between OECD countries and the region.

The *Latin American Economic Outlook* is the centrepiece of our objective to bring the OECD and Latin America closer. Our first report was launched in November 2007 on the eve of the Ibero-American Summit in Santiago de Chile, with the participation of four Latin American secretaries-general of international organisations and many regional ministers. During the last 12 months it has formed the focus of policy dialogue activities in many OECD and Latin American countries, and been a springboard for considerable media attention. This second *Outlook* continues our pursuit of the twin objectives of marshalling OECD expertise to provide a fresh analysis of Latin America's reality while at the same time promoting greater awareness of the region's development challenges in OECD member countries.

This year the *Outlook* focuses on fiscal policy. Most Latin American governments have taken positive steps toward putting their fiscal houses in order. They have improved public debt management, lowered fiscal deficits, adopted fiscal responsibility laws and created stabilisation funds, among other measures. Much of Latin America's strong growth during the last five years is certainly the result of the global macroeconomic bonanza of the new millennium – buoyant commodity prices, favourable terms of trade, cheap capital and plentiful foreign investment – but it is also the consequence of sound management and effective policy frameworks.

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Throughout this period of fiscal consolidation, many observers have focused on the importance of fiscal policy as a macroeconomic management tool, celebrating the appreciably improved conditions in Latin America for using fiscal policy in that way. This *Outlook* insists that fiscal policy is at least as much a tool for economic development: through the promotion of growth and the reduction of poverty and inequality. Increased public revenue and expenditure, coupled with macroeconomic responsibility and progressive decentralisation, have yielded impressive gains in macroeconomic stability, but much remains to be done to exploit the potential of fiscal systems to boost development in the region.

This *Latin American Economic Outlook* argues that a focus on fiscal quality is the way to go. A review of Latin American tax-collection and spending systems shows high levels of volatility and underdevelopment of personal income taxes on the revenue side, coupled with poor public services and a limited reach and progressivity of social transfers on the expenditure side. Reforms aimed at fostering fiscal quality need to take into account the various constraints on fiscal policy, such as the impact of low income and unequal income distribution on the government's ability to raise revenue. To get the most out of fiscal policy's potential for development, measures to fight tax evasion and to bring more economic activity into the formal sector need to align better the costs of formality with its benefits. Simplified regimes and the provision of social services to formal and informal workers on an equal footing are necessary steps in this direction, together with improvements in the delivery of those services. This *Outlook's* analysis of education spending, for instance, demonstrates that the problem is one of quality rather than quantity and advocates more effective and more progressive spending as the keys to better educational performance.

While Latin America is a veritable laboratory of interesting fiscal innovations, including fiscal responsibility rules, conditional cash transfers and participatory budgeting, the challenge remains to make those innovations sustainable, particularly in the context of the current global economic downturn. To what extent emerging fiscal institutions in Latin America can endure the difficult times ahead is something to be observed in the coming months. We are guardedly optimistic about the region's economic resilience. Moreover, looming dark clouds in the economic realm provide Latin American countries with an opportunity to tap the potential of fiscal policy to promote development. In doing so, decision makers will need to put pro-growth and pro-equality policies at least at the same level as policies to stabilise output and prices. Such an approach, based on fairness and effectiveness, may prove the best antidote against the fiscal *caudillismo* from which many Latin American systems continue to suffer, and which explains the low levels of fiscal legitimacy our first *Outlook* found in the region.

Better and fairer fiscal systems that deliver high-quality public goods to all citizens are a cornerstone for democratic consolidation in Latin America. The pages that follow furthermore highlight the relevance of political economy considerations to any discussion of fiscal reform. In short, fiscal policy is as political as it is technical. I sincerely hope that this new edition of the *Latin American Economic Outlook* will be a catalyst for dialogue between Latin American and OECD countries which actively contributes to this important debate.

Javier Santiso
Director and Chief Development Economist
OECD Development Centre

September 2008

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# Acronyms and Abbreviations

| | |
|---|---|
| BARCLY | Barclays Capital |
| BS | Bear Stearns |
| BTI | Bertelsmann Transformation Index |
| CBOE | Chicago Board Options Exchange |
| CCTs | Conditional Cash Transfer Schemes |
| CDS | Credit-Default Swap |
| CEDLAS | Centro de Estudios Distributivos Laborales y Sociales |
| CERES | Centro de Estudio de Realidad Económica y Social |
| CSFB | Credit Suisse formerly Credit Suisse First Boston |
| DB | Deutsche Bank |
| DK | Dresdner Kleinwort Wasserstein |
| DYMIMIC | Dynamic Multiple-indicator Multiple-cause Models |
| ECLAC | Economic Commission for Latin America and the Caribbean |
| EMBI | Emerging Markets Bond Index |
| EMU | European Monetary Union |
| EQxIS | Information System on Social Indicators and Equity - Disaggregated data on social indicators for monitoring development goals (Inter-American Development Bank) |
| EUROMOD | Tax-benefit Microsimulation Model based on National Household Micro-data (15 countries) |
| EVAC | Association Espacio de Vinculación |
| FE | Fixed Effects |
| Fedesarrollo | Fundación para la Educación Superior y el Desarrollo |
| FIIAPP | Fundación Internacional y para Iberoamérica de Administración y Políticas Públicas (International and Iberoamerican Foundation for Public Policies and Administration) |
| GDP | Gross Domestic Product |
| GMM | Generalised Method of Moments |
| GNI | Gross National Income |
| GNP | Gross National Product |
| GS | Goldman Sachs |
| GSCI | Goldman Sachs Commodity Index |
| IADB | Inter-American Development Bank |
| ICMS | Imposto sobre Circulação de Mercadorias e Serviços (Tax on the Circulation of Goods and Services) |
| IEA | International Association for the Evaluation of Educational Achievement |
| ILO | International Labour Organization |

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| | |
|---|---|
| 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 |
| GFS, IMF | Government Finance Statistics, International Monetary Fund |
| Inbraco | Instituto Brasileiro de Pesquisas, Participação Social e Acompanhamento do Orçamento Público |
| INDEC | Instituto Nacional de Estadística y Censos |
| Inesc | Instituto de Estudos Socioeconômicos |
| IPO | Initial Public Offering |
| IVA-E | Imposto sobre Valor Agregado Estadual |
| IVA-F | Imposto sobre Valor Agregado Federal |
| JPM | JPMorgan |
| LB | Lehman Brothers |
| LLECE | Laboratorio Latinoamericano de Evaluación de la Calidad de la Educación |
| MECOVI | Program for the Improvement of Surveys and the Measurement of Living Conditions in Latin America and the Caribbean (Inter-American Development Bank) |
| MIMIC | Multiple-Indicator Multiple-Cause Model |
| ML | Merrill Lynch |
| MS | Morgan Stanley |
| MSCI | Morgan Stanley Capital International |
| NBER | National Bureau of Economic Research |
| NGO | Non-Governmental Organization |
| ODA | Official Development Aid |
| OREALC | Oficina Regional de Educación para América Latina y el Caribe (UNESCO) |
| PIRLS | Progress in International Reading Literacy Study |
| PISA | Programme for International Student Assessment |
| PPP | Purchasing Power Parity |
| PRAF | Programa de Asignación Familiar |
| REPECOS | Régimen de Pequeños Contribuyentes |
| S&P | Standard & Poor's |
| SIEMPRO | Sistema de Información, Monitoreo y Evaluación de Programas |
| SIMPLES | Sistema Integrado de Pagamento de Impostos e Contribuições |
| SNA | System of National Accounts |
| SNTE | Sindicato Nacional de Trabajadores de la Educación |
| SSC | Social Security Contributions |
| TC | Tax Collection |
| TIMSS | Trends in International Mathematics and Science Study |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| VAT | Value Added Tax |
| VIX | CBOE Volatility Index |
| WDI, WB | World Development Indicators, World Bank |
| WVS | World Values Survey |

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# Executive Summary

## FISCAL POLICY AND DEVELOPMENT IN LATIN AMERICA: WHAT IS THE LINK?

Fiscal policy is not just an instrument for macroeconomic management, but also a tool which can be wielded by Latin American governments in the pursuit of development. Thoughtful and active use of tax policy, public spending and debt management can boost Latin America's development by promoting growth and reducing poverty and inequality.

What is more, the performance of a country's fiscal system provides a snapshot of the social contract that links its government and its citizens. Publicly provided goods and services of reasonable quantity and quality for the one part, and transparent and progressive tax systems for the other, are signs of a healthy social contract. These two parts go hand in hand: if public goods such as health, education and infrastructure are scarce, low-quality or inequitably provided, the social contract is weakened. The same is true of fragile or regressive tax regimes.

This social contract is especially relevant to Latin America today because the region is in the midst of a democratic consolidation. In this context the performance of a country's fiscal system – and citizens' perceptions of that performance – is closely linked to the legitimacy of democracy itself. Fiscal legitimacy, the belief that the tax and public spending system is fair, is the key mediator in this. High levels of fiscal legitimacy are found where the tax and transfer system is effective in addressing income inequality; high-quality public services are equitably delivered; obligations and entitlements are governed by fair and transparent rules; and there exists a reasonable level of public support for the government's management of the fiscal system.

Fiscal policy choices do not exist in a vacuum and are always subject to politically determined constraints. Politics matters because fiscal policy is inextricably interwoven with the nature of the welfare state, the shaping of which is a profoundly political process. In short, political economy matters: a consideration of political constraints needs to be added to the technical design of fiscal systems in order to boost prospects for lasting reform in the region.

Contrary to conventional views of fiscal policy as a threat to growth (via the disincentive effect of taxes on work and investment) or as no more than a macroeconomic stabiliser for inflation and unemployment, this *Outlook* argues that fiscal policy can be a key tool for economic, political and social development in Latin America. Fiscal systems can provide the resources needed to carry out pro-growth investments and structural transformations. Taxes and public spending can directly attack poverty and inequality, twin problems that continue to beset the region.

This potential for good is substantially unrealised in Latin America. While taxes and transfers reduce inequality by 19 Gini points in Europe, the difference is less than two Gini points in Latin America. Social security spending, strongly regressive in the region, is a major culprit in the unfulfilled potential of redistributive fiscal policy. And the quality of basic public goods and services such as health or education neither meets the region's development needs nor provides a spur to citizens' engagement with the state. A change of approach is needed if Latin American governments are fully to exploit the potential of fiscal policy as a development tool.

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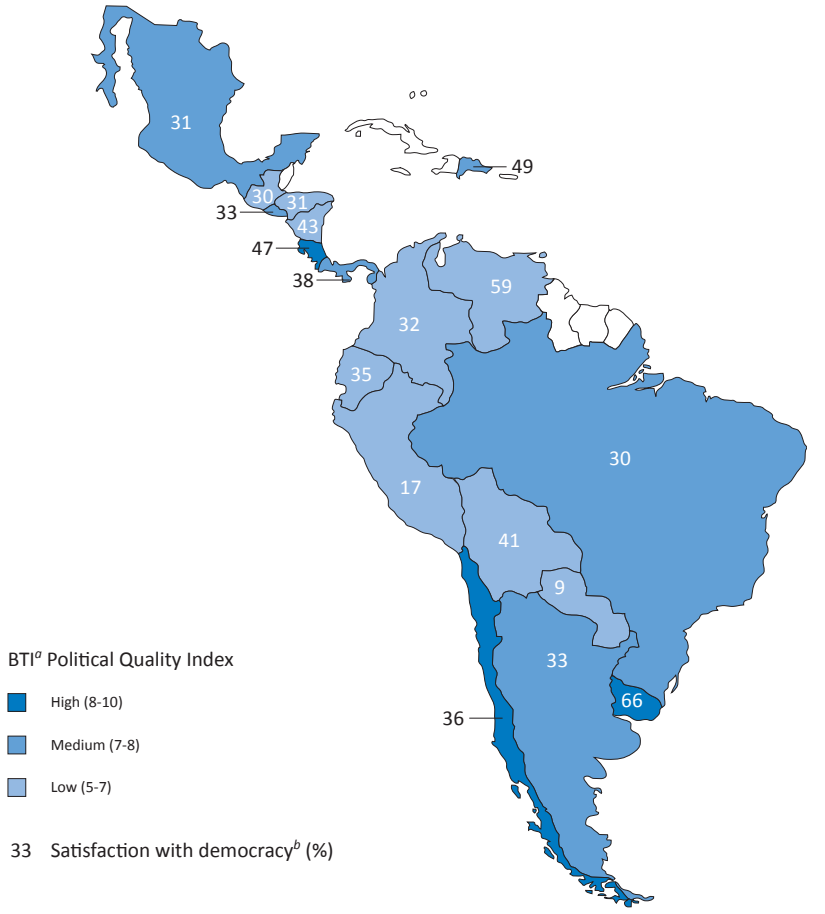
**Figure 1. Democratic Consolidation in Latin America: Experts' and Citizens' Views**




*Notes:*

*a)* The Bertelsmann Transformation Index (BTI) is a combination of a political and an economic transformation index. In this map only the political index is represented, its value ranges going from 0 (low quality) to 10 (high quality). The categories – high, medium and low - are defined as the world mean plus one world standard deviation (high), the world mean plus half of one world standard deviation (medium) and the world mean minus half of one world standard deviation (low).

*b)* Satisfaction with democratic performance is measured as a percentage of survey respondents who are fairly or very satisfied with the performance of democracy in their country.

*Sources:* BTI Index (2008) and Latinobarómetro (2007).

StatLink http://dx.doi.org/10.1787/450154556467

# LATIN AMERICA'S FISCAL PERFORMANCE: RECENT TRENDS

Since 1990, Latin America's fiscal performance has been encouraging. Fiscal deficits in the region, for example, have fallen from 11 per cent of public revenues in the 1970s and 1980s, to only 8 per cent since 2000. Is this change due to good luck or good policies? Evidence for better policies includes increased expenditures, credible macroeconomic management and greater decentralisation. These have been accompanied by creative innovations such as new fiscal responsibility rules, conditional cash transfer schemes and participatory budgeting.

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However, fiscal performance is still a long way from closing the gap with OECD benchmarks. Moreover it remains to be seen how resilient positive trends and institutional innovations will be to any change in the good fortune brought to the region by buoyant commodity prices, favourable terms of trade, and cheap and plentiful capital. That test may come soon.

This *Outlook* assesses that performance gap by comparing and contrasting fiscal performance in Latin American and OECD countries. Both public revenues and public expenditures in Latin America are below the OECD average, though there is substantial variation across both groups of countries. Over the period 1990-2006, total government revenues averaged 23 per cent of GDP in Latin America, and 42 per cent in OECD countries. Total expenditures over the same period averaged 25 per cent of GDP in Latin America and 44 per cent in OECD countries. Revenues and expenditures alike have been rising as a share of GDP in Latin America.

Taxation and expenditure also differ substantially in their structure between Latin American and OECD countries. Consider just the revenue side of the ledger. Non-tax revenues are far more important to the public finances in Latin America, averaging fully 8 per cent of GDP. Pure tax revenues only come to 16 per cent of GDP in the region versus 35 per cent in OECD countries. Of these Latin America raises 25 per cent from direct taxes, compared with 42 per cent in OECD countries. Within this, only 4 percentage points is attributable in Latin America to income taxes on individuals, where the OECD comparator is 27 percentage points.

Contrary to the textbook prescription, Latin American fiscal policy is pro-cyclical: governments generally spend more during booms and less during slumps. Moreover, a range of important fiscal variables – including revenues, spending and deficits – are more volatile in Latin America than in OECD countries. This *Outlook* shows, however, that this fiscal volatility has been falling in the region and since 1990 has been closing the gap with the OECD. An index of deficit volatility calculated for this *Outlook* shows a fall of a third from 1990-94 to 2000-06, with Latin America standing just 6 per cent above the level in the OECD in the latter period. Over the same timescale revenue volatility in Latin America fell by a quarter and expenditure volatility by some 40 per cent.

Local governments in Latin America are flexing their fiscal muscles but relative to their counterparts in the OECD remain relatively small and heavily dependent on central government transfers. While the level of local government expenditures was around 41 per cent of central government expenditures in OECD countries during the period 1990-2006, the corresponding figure for Latin America was only 23 per cent. The ratio for revenues was similar. In terms of transfers, the gap is slowly closing but it remains large: inter-governmental transfers as a share of GDP averaged 4.9 per cent in OECD countries and just 2.7 per cent in Latin America.

Despite this positive overall trend in fiscal performance, Latin America still has plenty to do in terms of fiscal reform. Revenue generation should diversify away from its reliance on non-tax sources and indirect taxes. Fiscal volatility, a drag on growth, could fall further. And social transfers do not yet play their proper role. Achievements and innovations in the fiscal realm need to translate into sustained policies and lasting institutional reforms.

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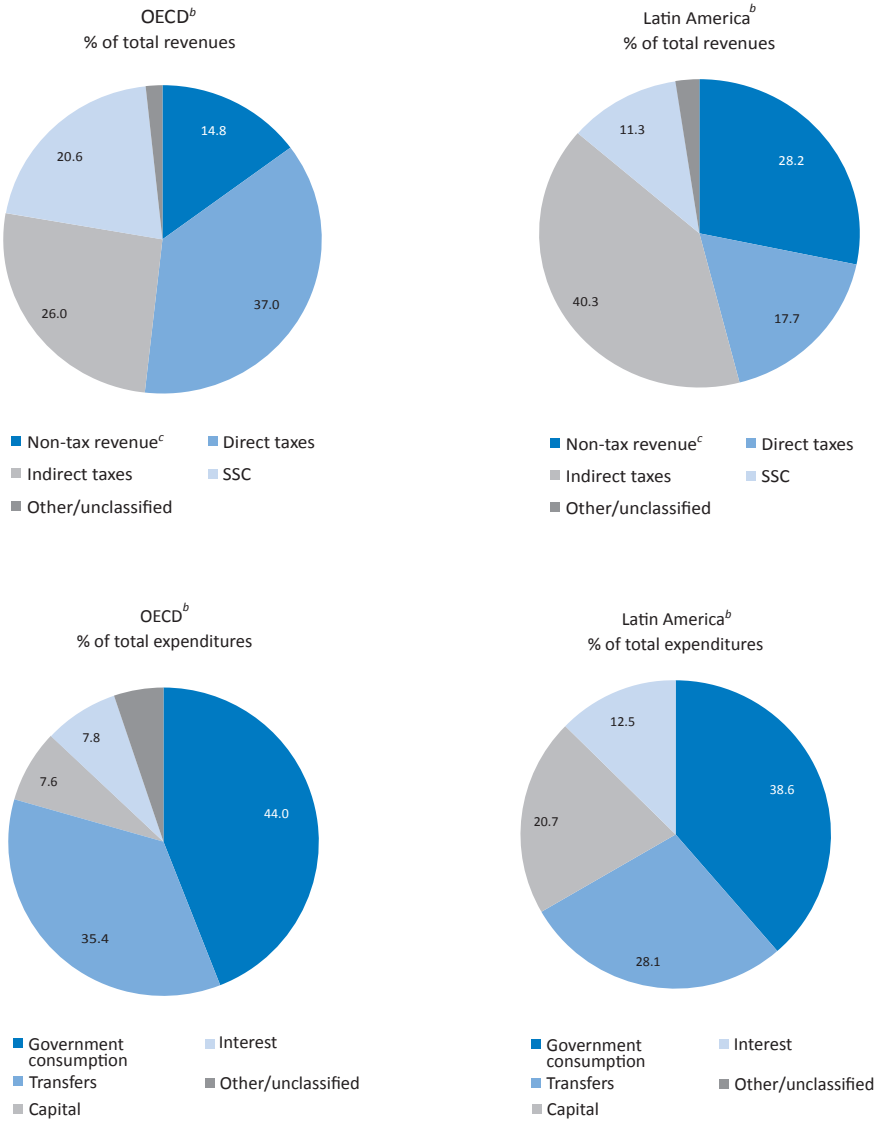
## Figure 2. Composition of Revenues and Expenditures in Latin America and OECD Countries[a]

(Regional averages, 1990-2006)




*Notes:*

*a)* OECD data refer to the consolidated general government sector. In Latin America coverage corresponds to the non-financial public sector where possible, otherwise uses the widest measure available.

*b)* Mexico is included in both groups.

*c)* ECLAC ILPES data on non-tax revenues in Mexico have been adjusted to reclassify the fees levied on hydrocarbon production as taxes, in accordance with OECD revenue statistics guidelines.

*Source:* OECD Development Centre calculations based on the ECLAC ILPES Public Finance database, the OECD Development Centre Latin American Revenue Statistics database, the OECD Revenue Statistics database (OECD 2007*a*) and OECD General Government Accounts data (OECD 2008).

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# THE POLITICAL DIMENSION OF FISCAL POLICY MAKING: PUBLIC DEBT, POLITICAL CYCLES AND CAPITAL MARKETS

Compared with the OECD, revenues and expenditures claim a small share of GDP in Latin American countries. But the differences between them have often produced OECD-sized deficits. The legacy of those deficits is public debt, the management of which has long posed problems for governments in the region. Latin America still has high levels of debt, leaving countries in the region vulnerable to adverse shocks. But this fact should not obscure the considerable progress made by Latin American countries in managing the composition of that debt, in particular reducing their exposure to currency mismatches – where government revenues and debt-service obligations are denominated in different currencies.

A market for public debt denominated in Latin American currencies is not new; what is new is that Latin American governments have been increasingly able to place local currency debt abroad, aided by the strong economic conditions. But challenges remain. For instance, while available maturities in domestic bond markets have increased over recent years, the overall maturity profile of the region's debt is short when compared to other emerging markets as well as developed countries.

A major characteristic of Latin American sovereign-bond markets is that they have been keenly sensitive to political events – for example reacting negatively to the uncertainty that is an inherent feature of democratic elections. Not just economic policies but also the economic policy platforms of electoral candidates have a significant influence on the behaviour of Latin American sovereign-bond markets at these times.

First, investors worry that incumbent political parties will expand spending to encourage political support, with costs for post-election economic performance. This is not unreasonable: evidence of such political business cycles has been observed in rich and poor democratic countries alike. Second, capital markets are unsettled by uncertainty about the economic policies that will be pursued following the election.

The different reactions in the capital markets to the two elections won by Brazilian president Luiz Inácio Lula da Silva provide a clear example of the role political parties and candidates play in this regard. Perceived as the populist opposition to a fiscally conservative government in 2002, markets reacted with apprehension to Lula's candidacy as soon as his campaign began to gain momentum and investment bank recommendations moved sharply negative on Brazil. Yet once in power a communication campaign and a commitment to credible policies reassured the markets and confidence returned. When the same Lula was re-elected in 2006, against an opponent who also espoused credible policies, the presidential elections caused hardly a ripple in the markets.

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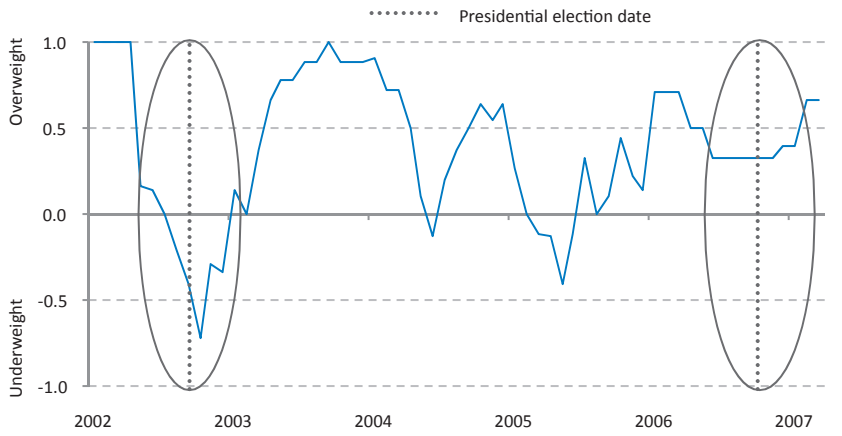
**Figure 3. Bank Recommendations and Elections in Brazil**




*Note*: Banks' recommendations can be classified into three groups: "overweight" (1), "neutral" (0) and "underweight "(-1).

*Source*: OECD Development Centre calculations based on published investment bank recommendations.

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# PUBLIC REVENUE GENERATION: TAXATION IN LATIN AMERICA

Management of the public debt is one dimension of fiscal policy making; taxes are another. As already noted, tax takes a lower share of GDP in Latin America than in OECD countries. It does not follow, however, that tax revenue in Latin America is "too low" or indeed "too high". Countries in the two groups start from different historic bases and face different constraints and opportunities. This is evident even in the substantial variation between Latin American countries themselves, where tax revenues range from over 30 per cent of GDP in Brazil, to little more than 14 per cent in El Salvador.

These lower levels of fiscal resources are among the factors that explain the poor redistributive performance of the fiscal system in Latin American economies. Latin Americans themselves, however, are as concerned as OECD nationals about inequality and the welfare state. Expressed preferences for or against redistribution are on average the same in the two groups, though opinion is generally more polarised in Latin America than in the OECD.

The tax-collection gap in Latin America does not have a single cause. Personal income taxes, which provide more than a quarter of tax revenues in OECD countries, are a good example. Contrast GDP per head of over USD 30 000 in Finland with Colombia's figure of less than USD 6 000 and it is at once clear that low levels of personal income limit the scope for income taxes. In many countries, the vast majority of working people – approximately 90 per cent in Brazil, Chile, Colombia and Costa Rica, for example – have incomes below the minimum threshold at which personal income taxes must be paid. Also important is the skewed distribution of income in Latin American countries, which means that for a given average income, fewer working people in an economy are in the income brackets where they are liable to pay tax.

Reliable cross-country evidence on the extent of tax evasion is scarce. But simple – yet plausible – simulations suggest that even eliminating evasion completely would do little to close the tax-collection gap between OECD and Latin American countries. Indeed, bringing informal workers and employers into the tax net might create a net fiscal loss, since many would be eligible for benefits and incentives of various kinds and administrative costs for tax authorities would rise. Nevertheless, measures to limit evasion – in addition to those legal means of avoiding tax – can play an important role in increasing fiscal legitimacy.

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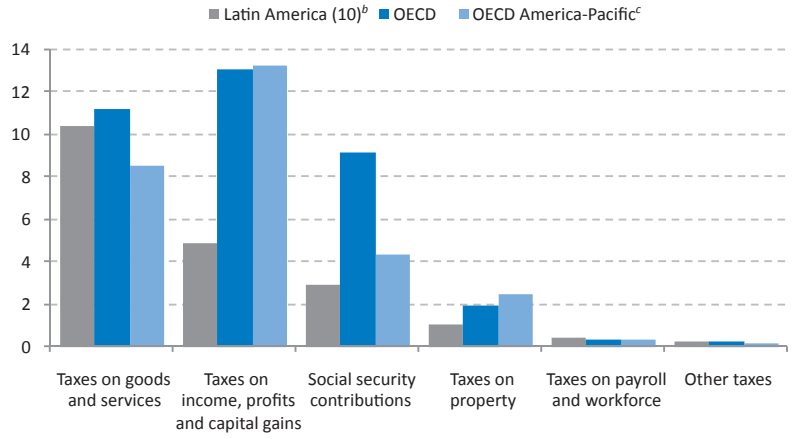
**Figure 4. Tax Revenues in Latin America and OECD Countries**[a]
(Percentage of GDP, 2005)




*Notes:*

*a)* Where possible, coverage corresponds to general government, otherwise the statistics are restricted to central government.

*b)* The Latin American countries covered are Argentina, Brazil, Chile, Colombia, Costa Rica, El Salvador, Guatemala, Mexico, Peru and Venezuela.

*c)* OECD America-Pacific comprises Australia, Canada, Japan, Korea, Mexico, New Zealand and United States.

*Source:* OECD (2007a), OECD Revenue Statistics database for OECD countries and OECD Development Centre calculations for Latin America.
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# FISCAL POLICY AND LATIN AMERICA'S SOCIO-ECONOMIC REALITY: ACCOUNTING FOR INFORMALITY

The informal economy is large in Latin America and its existence is intimately related to the fiscal system. Almost by definition, employers and workers in the informal economy do not pay personal or corporate income taxes (either because their incomes are too low, or because they are not registered with tax authorities), nor do their customers generally pay any relevant sales taxes. Against this, the people left out of the social safety net mean that informality is associated with lower public-sector expenditures.

Whether informality is defined in terms of those who do not contribute to tax revenues, or those who are not covered by social security, it is an important indicator of a weak or broken social contract. Some people in the informal economy are there as the result of a deliberate choice not to engage with the state, based on a personal cost-benefit calculation – even if they might not see it that way. Others have been excluded from the formal sector, and for them informal employment is really disguised under-employment stemming from rigidities in labour-market institutions. A comparison with Europe is telling. In Europe informality is largely a matter of tax evasion. In Latin America informality is much more complex, and firms and workers are rarely either entirely formal or informal. There is evidence in the region of a pick-and-mix approach to taxes and benefits, with individuals or enterprises accepting some but not all of the engagements the state offers. A survey in Mexico, for example, found that only half of micro-enterprises questioned were fully informal, while one in Bolivia found firms twice as likely to comply with their municipal obligations as be registered for value-added tax.

Fiscal policy makers in Latin America, in addition to taking into account the scale of the informal sector in their economies, need to respond to the multiple ways the phenomenon expresses itself and its diverse causes.

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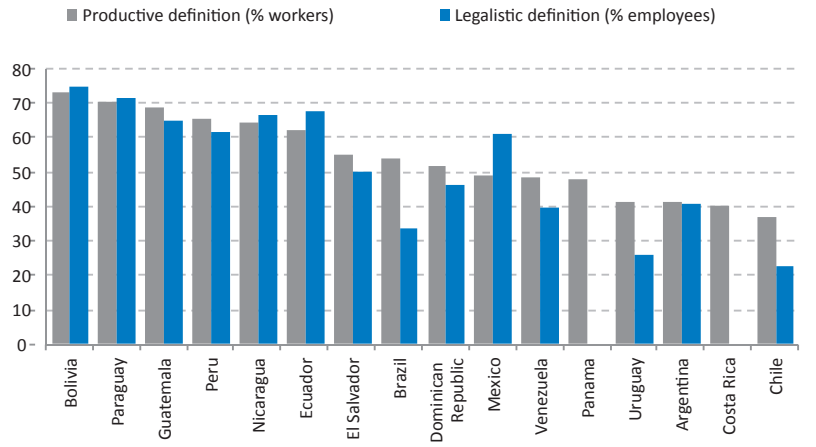
Policy must also balance the attractions of special regimes for firms and individuals in the informal economy against universal tax and benefits for all; each of these policy packages can create unintended incentives that are counterproductive. Typically, governments (not only in Latin America) craft special tax regimes to formalise particular parts of the economy. But these regimes can become barriers to expansion by small firms. And where from a quarter to more than half of workers hold informal jobs then piecemeal extensions to tax and spending regimes are likely to be inadequate, particularly as eligibility for the expenditure side (social protection and all the state's benefits) is often linked to formal-sector employment. Universal social protection, meanwhile, could encourage informal employment since it decouples formal work from eligibility. On the other hand it protects vulnerable workers and may improve national productivity by promoting inter-sectoral and inter-regional labour mobility.

Innovative policy experiments in Latin America and beyond show that tax compliance can be facilitated by better aligning the costs of formality for an individual with its benefits, adopting simplified regimes for all tax payers, and offering formal and informal workers social services on an equal footing.

**Figure 5. Labour Informality[a] in Latin America[b]**




*Notes:*

*a)* Informal employment, as defined in Gasparini and Tornarolli (2007) and Perry *et al.* (2007), includes unskilled self-employed workers, workers in firms of less than five workers and unpaid workers.

*b)* Additional information is available in the Statistical Annex, Tables 5.A1 and 5.A2.

*Sources:* Gasparini and Tornarolli (2007), Perry *et al.* (2007) and CEDLAS, Socio-Economic Database for Latin America and the Caribbean.
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# IMPROVING THE QUALITY OF PUBLIC SPENDING: THE CASE OF EDUCATION

Taxes and transfers have a powerful potential to redistribute income; but social spending on human development – in particular, health and education – can play an enormous role in equalising opportunities for all. With this in mind, this *Outlook* takes a close look at education spending and performance in Latin America. What emerges is that the main challenge the region faces is to improve the quality of education, as measured by student learning and cognitive abilities. At the same time, quantity must also be improved, as Latin American countries must increase rates of participation and completion beyond universal primary education.

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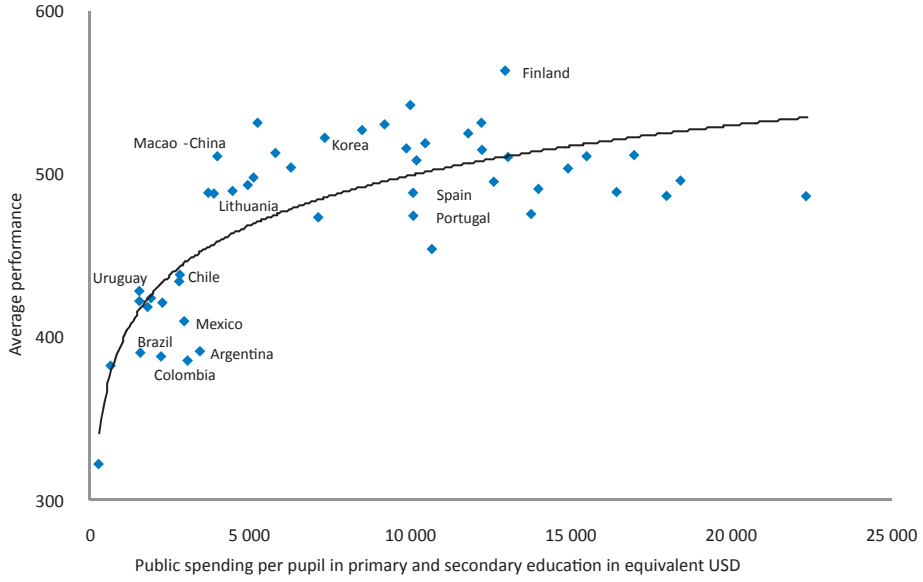
Public expenditure on education in Latin America is substantial and rising. Spending on education as a share of total public expenditure has been growing in Latin America; as a share of GDP education expenditure now stands at around 4 per cent, a level similar to that observed in OECD countries. But spending per pupil is still five times lower in Latin America, as the school-age population accounts for between a quarter and a third of the total, compared with less than a fifth in the OECD.

Latin American countries spend proportionally more on primary education than OECD countries, and less on tertiary and secondary. The gap is particularly evident in secondary education, where Latin American countries spend on average 13 per cent of GDP per head, while OECD countries spend over 24 per cent of GDP per head. Partly as a result of this allocation of spending, gross secondary-school enrolment rates in Latin America average under 77 per cent while the OECD average is over 100 per cent.

To assess quality of education-expenditure outcomes, this *Outlook* focuses on performance (measured by the average and distribution of test scores in the OECD Programme for International Student Assessment [PISA] study) and equity (measured by the degree to which a student's socio-economic background determines his or her test scores). On both counts, Latin America's PISA results give cause for concern.

PISA test scores in Argentina, Brazil, Chile, Colombia, Mexico and Uruguay – the six Latin American countries that participated in the study – are poor compared with the OECD. The performance gap between Latin American pupils and their OECD peers is equivalent to three years' worth of schooling, while the gap for other emerging countries in the study is only about half as large. The good news is that between the 2003 and 2006 PISA rounds scores for Latin American countries generally improved.

**Figure 6. Public Spending[a] on Education and Performance in PISA[b]**




*Notes:*

*a)* Public spending is the average of available data since 2000.

*b)* Countries performance average on the PISA science scale.

*Source:* OECD Development Centre calculations based on the OECD (2007*b*) and OECD and UNESCO World Educational Indicators, UNESCO's Institute of Statistics database.

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The right policies can help. Economies such as Lithuania and Macao-China spend similar amounts per pupil to Latin America yet do better on both performance and equity. In the OECD, school and educational policies such as the time students spend in regular lessons, better accountability and merit-based admission policies could have a powerful effect on student learning. The PISA study furthermore shows that there is not necessarily a trade-off between performance and equity. Policy makers in Latin American countries can benefit from studies such as PISA, as they grapple with the political economy of educational reform.

Education spending is but one example of how fiscal policy can foster development, not just economic growth, in Latin America. The challenge is to channel public spending towards policies that encourage demonstrated best practice and secure the social support needed to leverage the state's own actions. Certainly there is a need for more expenditure on the key areas of physical and human capital formation, but the real priority for the region is to improve the quality of that expenditure by making it more efficient and better targeted.

The PISA study also shows that there is no necessary trade-off between performance and equity – but there is a precondition: schools must mirror society at large. Where a system's schools are inclusive in the sense that the distribution of their students' backgrounds resembles the socio-economic distribution of families nationwide, they achieve more on both dimensions.

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CHAPTER ONE

# Fiscal Policy and Development



## THREE VIEWS OF FISCAL POLICY

In his classic book *Facundo* (1845), Domingo Faustino Sarmiento took stock of his native Argentina, and identified a deep-seated tension at its core: "The nineteenth and twelfth century live side by side: one in the cities, the other in the countryside." Sarmiento did not mince his words in labelling those two sides of Argentine and by extension Latin American life: they represented civilisation and barbarism[1]. This striking dualism would exercise a powerful influence on Latin American intellectuals for many decades to come.

Some 90 years earlier in Scotland, the political economist Adam Smith, using precisely the same terminology, had offered a recipe – a simple one, on the face of it – for moving from barbarism to civilisation. In one of his most frequently cited passages, Smith said in a 1755 lecture: "Little else is requisite to carry a state to the highest degree of opulence from the lowest barbarism, but peace, easy taxes, and a tolerable administration of justice; all the rest being brought about by the natural course of things."

This 2009 edition of the *Latin American Economic Outlook* examines how the great issues raised by Sarmiento might be addressed, according to Smith's recipe, in the apparently dispassionate domain of fiscal policy. The call for "easy taxes" is the most remarked upon part of this policy recommendation surely; but no less important is the provision of the public goods needed for the functioning of a dynamic market economy. It was no accident Sarmiento himself became a tireless advocate for national education, an area of public expenditure that promotes better economic performance. Of course, the list of publicly provided goods needed to underpin market exchange has expanded dramatically since Smith's day.

It is perhaps unusual to put Smith in the company of Sarmiento. More to the point, it may seem surprising to link fiscal policy with the grand theme of civilisation and barbarism. In part this apparent peculiarity stems from disagreements about the nature of fiscal policy – disagreements that this introductory chapter will try to disentangle.

As is so often the case in economics, the basic issues can be thought of as an optimisation problem. There is an objective function, measuring the quantity we would like to maximise, a set of tools to get the most out of that function, and an opportunity set, which marks out the boundaries of the choices available to the decision maker. Keeping these three elements in mind clarifies a great deal of the confusion and misunderstanding that arise in debates about fiscal policy and its contribution to development.

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Turning first to the objective function that we seek to optimise, let us agree that fiscal policy is the use of the government budget, in the broadest sense, to influence economic performance. Even that uncontroversial definition leaves room for divergence between those accustomed to thinking about fiscal policy as a tool to manage the macroeconomy – to curb volatility and avoid crises – and those accustomed to thinking about fiscal policy as a tool to promote development – that is, economic growth, structural transformation and reduction of poverty and inequality. As we shall see, it is this former macroeconomic aspect that has enjoyed the lion's share of the analysis in Latin America and elsewhere. This *Outlook* argues the case for using fiscal policy to promote development – or in the more poetic language of Smith and Sarmiento, that transition from low barbarism to the highest opulence.

Fiscal policy is the use of both sides of the government budget to influence economic performance in the broadest sense

Of course, this raises the question of what objectives are held by the political leaders, decision makers, businesses and citizens of Latin America. Do they explicitly pursue economic development as we have defined it here? On a simple legalistic approach, all Latin American countries are signatories to the United Nations' 2000 Millennium Declaration[2], and, through its associated Millennium Development Goals, are committed to reducing poverty by half by 2015. From this perspective, the development focus is entirely appropriate. Others will note, however, that some fiscal decision makers (in Latin America as elsewhere), while not opposed in principle to the Millennium Declaration, seem considerably more exercised by channelling resources to their constituents. Perhaps a reasonable working hypothesis is that most of the relevant decision makers, most of the time, place some weight on each of promoting growth, fighting poverty and reducing inequality[3]. The relative weightings chosen by any given decision makers – a minister of finance and the local leader of a teachers' union, say – might differ substantially, and their operational understanding of the goals in question might likewise differ. But even if one cannot go so far as to claim the existence of an aggressive pro-development consensus in Latin America, there is nevertheless broad agreement that the three dimensions of development we have identified are of importance.

Box 1.1 presents a recent survey, in which Latin American university-level students were asked to identify their priorities for public policies. The themes of this *Outlook* – fiscal policy and economic development – are near the top of these young people's list of priorities.

The macroeconomic uses of fiscal policy are well understood and in Latin America well studied; its role in development has been given much less emphasis

What, then, are the instruments at the disposal of decision makers who wish to optimise economic development? Within the fiscal policy sphere, they have control of: revenues (chiefly taxes), spending (both spending on transfers such as social security and unemployment benefits and spending on the purchase of goods and services, including health care or education) and the level of public debt. The chapters that follow will look at each of these within the Latin American context in much greater detail.

Finally, what are the constraints on decision makers as they deploy these instruments? Some have to do with fundamental features of the economy in which they operate – natural resource endowment, the level of education of the population and the stock of productive capital. But the feasible set of options is also constrained by political concerns.

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Perspectives on the role of fiscal policy can genuinely differ from one concerned citizen to the next. But much of this apparent disagreement stems simply from diverging emphases on various formal aspects of the problem. So, some observers pay a lot of attention to just one part of the instrument set – taxes, say – and worry especially about their effect on one part of the objectives, such as growth. Others are more concerned with social expenditures and poverty reduction.

The link between fiscal policy and the level of economic activity is clear: by increasing spending (while keeping revenues unchanged) or reducing taxes (while keeping spending unchanged) the government raises the level of aggregate demand which has an expansionary impact on the economy in the short run. The opposite happens when spending is reduced and taxes increased. These macroeconomic management relationships will be familiar to readers of the financial press and first-year students of economics. What is not so clear is how these policy tools are related to economic *development*. There are arguably three schools of thought on this relationship.

## Less is More?

One view is that taxes discourage growth; fiscal policy should be minimalist to avoid crowding out development

The first of these is primarily concerned with the promotion of economic growth, which, in turn, depends fundamentally upon capital accumulation. Government is necessary for investment and the smooth functioning of the economy, and taxes are necessary to support the government's activities. But taxes – and fiscal policy more generally – distort the incentives facing decision makers be they looking for a job, or choosing whether or not to save money or make an investment.

This line of reasoning has been used to explain why, for example, in the face of relatively high taxes, European working hours are lower than in the United States. Prescott (2004) ascribes it – in a controversial study that has drawn considerable critical fire[5] – largely to differences in the marginal rate of taxes on earned income between Europe and the United States. Complementary arguments about the relative generosity of unemployment benefits – an aspect of the spending side of fiscal policy – have been put forward to explain international differences in unemployment rates.

Of course, dampening labour supply is only one way in which fiscal policy might have a negative effect upon economic growth. The most important from a long-term perspective would be any tendency to create negative incentives for capital formation. Investment can be directly discouraged by tax-based distortions, or indirectly because government borrowing pushes up interest rates. Romer and Romer (2007) confirm this in their analysis of what they call exogenous tax increases in the United States – that is, increases unrelated to countercyclical fiscal policy, or to changes in government spending. When correctly measured, tax increases are seen to have large and persistent depressive effects on output – an increase in taxes of 1 per cent of GDP reduces output by 2 to 3 per cent of GDP. The primary channel behind this, the Romers find, is a large negative effect on investment.

This school of thought concludes that the primary objective of fiscal policy should be to stay out of the way of investment, and thereby minimise the inevitable negative effect upon growth. In matters of taxation – and fiscal policy generally – for development, then, Mies van der Rohe's advice would be correct: less is more.

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### Box 1.1. The Voice of Youth: Development as seen by the New Latin American Generation

Policy makers are not creative enough. And policy *takers* often feel they have not been heard. Latin America is by no means an exception to these general observations. What would young, politically engaged Latin Americans say to policy makers if given the chance?

*Vanguardia Latina* provides a meeting point for outstanding students, in Latin America and the United States, in which they can discuss socio-economic and political issues. Gathered at the Inter-American Development Bank (IADB) headquarters in Washington DC, in 2008, students shared their views with government officials and scholars over issues of common interest. Security, politics, education and migration emerged clearly at the top of their agenda.

The output of the event was a charter, drafted by the students and presented to the United States' secretary of education, the IADB president, the president of *Grupo Televisa* and the secretary-general of the Organisation of American States. The charter explained their main concerns and proposed solutions, from the students' angle.

The *Vanguardia Latina* meeting was the opportunity for the launch of a joint project between the OECD Development Centre, the IDB Youth Program and Association *Espacio Vinculación*, to enable students having a close link with Latin America to make their concerns and priorities heard. The partners surveyed the students, capturing their opinions on issues including democracy, fiscal policy and the economic situation of Latin America. The charter and the survey results are complementary, each reflecting the concerns of young Latin Americans represented by this group. Both showed pronounced optimism regarding the region's future, but both also stressed the need to recognise the lingering problems and obstacles in the way of its development.

The survey found that 28 per cent of the students considered inequality the major problem in their region, while 25 per cent believed it to be corruption, and 24 per cent poverty. Other concerns, including crime, unemployment and inflation, ranked far behind. On the measures of inequality, 67 per cent of the students identified wealth inequality as the most important, followed by gender and ethnic inequalities **(see Figure 1.1)**.

Surveyed students overwhelmingly considered fiscal policy to be an engine for development (70 per cent). Some 68 per cent agreed with the statement that efficient fiscal systems are an important tool against inequality, and 86 per cent were in favour of more progressive taxes. Though fiscal policy is regarded as a critical policy instrument, only 10 per cent of the group felt taxes were efficiently spent.

Asked to identify the most pressing priority for public expenditure, on a scale from 1 to 6 (where 6 indicates the highest priority), education obtained the highest weighted average score (5.4) within all sectors, followed closely by health (Figure 1.1). This finding is consistent with a related question in which 41 per cent of students reported they were very unsatisfied or not satisfied with the educational system in their countries. This result confirms the findings of the *Latinobarómetro* poll, which found that 45 per cent of the respondents were not satisfied with the educational services to which they had access.

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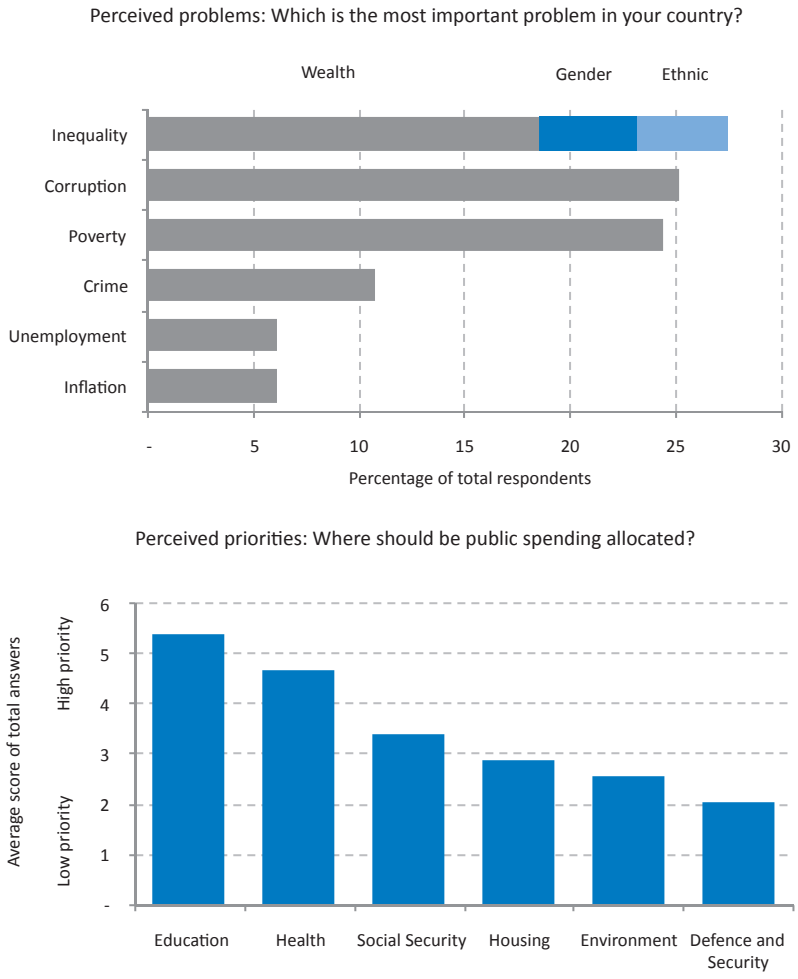
## Figure 1.1. Priorities and Public Spending in Latin America




*Note:* Joint survey based on a sample of 90 graduate students gathered at *Espacio Vanguardia Latina*, May 2008.

*Source:* OECD Development Centre calculations, IDB Youth and the Association *Espacio de Vinculación* (EVAC).

StatLink http://dx.doi.org/10.1787/450160612677

Only 17 per cent of the sample believed that students from private schools or universities are better prepared than those educated in public institutions; fully 89 per cent agreed with the statement that education should be a public good, and nearly 100 per cent of respondents agreed that there is a need for greater investment in education. On where this should be directed, the survey found that 56 per cent of students felt primary education should be the first to receive resources, 14 per cent favoured secondary and 29 per cent tertiary. Finally, asked to rate potential ways to improve the educational system, having *better prepared teachers* and *more transparency in school resources management* were identified as the most important, both scoring 4.7 out of a possible 5. The other factors, *higher public investment*, *better equipment* and *greater autonomy for schools*, were not far behind.

The students' charter echoed this, and went on to call for the strengthening of linkage programmes (inspired by the successful *Erasmus* exchange programme in the European Union), and initiatives for programmes of social action involving students and local communities[4].

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## Economic Stabilisation

A second view sees fiscal policy as a stabiliser, providing the macroeconomic conditions in which development can happen

A second view of fiscal policy differs fundamentally from the less is more approach, by focusing on the influence of policy on the management of the macroeconomy[6]. This view is largely Keynesian in its inspiration (though not all current proponents would identify with the label). In this view, fiscal policy should be countercyclical: the government budget is a tool for controlling inflation (by raising taxes or reducing spending, or both) and unemployment (by lowering taxes or increasing spending, or both). Modern welfare states, indeed, have "automatic stabilisers" that provide this helpful economic role even before the discretion of policy makers given that recession will boost expenditure on social security and booms reduce it. Discretionary fiscal policy, which seeks to amplify the effects of automatic stabilisers, might help economies to converge more quickly to their long-run potential levels of employment and growth.

Some economists, however, are as pessimistic about the putative benefits of short-term fiscal policy (or at the very least its discretionary component) as they are about the longer-term effects. The lag between predicting or observing a problem and approving new spending or tax cuts may be too great for the policy to be effective. Moreover, monetary policy might be better suited to address short-term macroeconomic ills.

The lack of enthusiasm with which economic actors responded to a monetary stimulus specifically intended to counteract the 2008 sub-prime crisis and the ensuing spectre of global recession has returned some of the lustre to fiscal policy as a short- to medium-term stabiliser. Policy makers in some countries – notably the United States – are looking with renewed interest at fiscal stimulus as a way of kick-starting a faltering economy. Moreover, evidence suggests that policy makers never completely lost their taste for expansionary fiscal policy, whatever their protests to the contrary.

## The Basis of a Social Contract

The third, on which this Outlook will concentrate, sees fiscal policy as the link between the citizen and the state and at the heart of the social contract

We have reviewed two conventional views of fiscal policy and economic performance, one essentially long-term in perspective, the other essentially short-term, both largely pessimistic about the prospects for activist policy making. This edition of the *Outlook* argues for the relevance to the region of a third way of looking at the relationship between fiscal policy and development. This sees it in the round as the cornerstone of a social contract in which fair and effective taxes are explicitly seen as underlying the provision of high-quality public expenditure. Such overt linkage reinforces the citizens' role in decision making and provides the opportunity for breaking out of a cycle of social exclusion whether voluntary or involuntary.

But can expenditure, or the taxes that fund it, have a genuine net benefit? The evidence that links higher taxes (and larger governments) with lower growth, whether via distorted incentives or macroeconomic crowding out, is powerful but does not tell the whole story. Indeed, the conundrum faced by Romer and Romer (2007) and others is that any sufficiently long time series will exhibit a strong positive correlation between tax revenues and GDP per head. Similarly, cross country comparisons (see for example Table 2.1 in the following chapter) show that richer countries have bigger governments and relatively higher taxes. Could public expenditure be pro-growth?

This is the question that Slemrod (1995) asks in an exhaustive survey of the evidence. Easterly (1995, p. 419), referring to Slemrod's survey, poses the question this way: "If the cost of government is so large, why is this cost so

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difficult to discern in time-series or cross-country studies?" The answer he gives is that tax *revenues* – generally used in the empirical literature – are a poor proxy for tax *rates*, which might genuinely dampen growth. He suggests that the true "cost" of government, measured in terms of growth forgone, is likely to be due to its "tax-like" interventions including high inflation, price distortions, black-market premia in foreign-exchange markets, and political control of interest rates (as opposed to management of the money supply by central banks).

Perhaps when one observes high levels of taxes in countries with reasonable economic performance, the association is explained by the expenditures made possible by tax revenues. Clearly, governments can raise the return to private investment by providing appropriate public goods – this is the essence of the admonition by Adam Smith that opens this chapter. Smith points to law and its enforcement (of which contract law is an important element) and social peace, but today many observers would extend Smith's reasoning to other goods not always efficiently provided by markets (Stiglitz, 2000). Notable among these would be the provision and maintenance of physical infrastructure, such as transport, communication and sanitation networks. World Bank economists have quantified the contribution of infrastructure spending to growth and development, and pointed out that recent fiscal adjustments in Latin America have often come at the expense of such investment (Calderón and Servén, 2003). The result is that short-term fiscal balance may have been pursued at the cost of investment which would have had its own pro-growth effects.



Public expenditure can promote growth directly and indirectly; but whether there is a net benefit remains moot...

And what of social spending – assistance to the poor, unemployment insurance, public pensions, public health spending, housing subsidies, public spending on education? On the one hand, such expenditures improve well being, frequently among the least fortunate in a society. The ever-sceptical economist, however, worries that such spending distorts incentives and is costly in terms of growth. Economic historian Peter Lindert's (2004) exploration of the genesis and growth of social spending since the 18th century raises the prospect, troubling for the latter camp, that the welfare state might be a free lunch – the benefits for growth of social spending exceeding the growth-retarding effects of the taxes needed to pay for them. To revisit Easterly's question, surely a budget line approaching 30 per cent of GDP in some OECD economies would leave a much more easily observed dent in growth rates?[7]

Not all economists interpret this evidence in the same way. Tanzi and Schuknecht (2000), for example, note that high social spending in OECD economies came only after World War II, and more importantly, after years of high rates of growth accompanied by quite low social spending. By this account, the welfare state is a luxury that rich states can entertain – a way they choose to spend some of their wealth – but ought not to be recommended uncritically to today's middle- and low-income economies. If correct, growth in high-income economies with generous social spending would have been even higher if social spending (and taxation, notably) were lower[8].

...but growth is not the only development impact of expenditure with which policy makers should be concerned

Growth, of course, is only part of what responsible governments seek to achieve. Any assessment of social spending needs to consider its contribution to other dimensions of development: for example, the benefits to social equality of the redistributive nature of public spending on health care or education. Figure 1.2 shows the incidence of public spending in these two categories across income quintiles for Latin America as a whole, and for the United Kingdom in 2006. This shows, for example, that in Latin American countries, on average 23 per cent of public spending on education benefits the poorest fifth of the population, versus 28 per cent of public spending on education in the United Kingdom, and so on.

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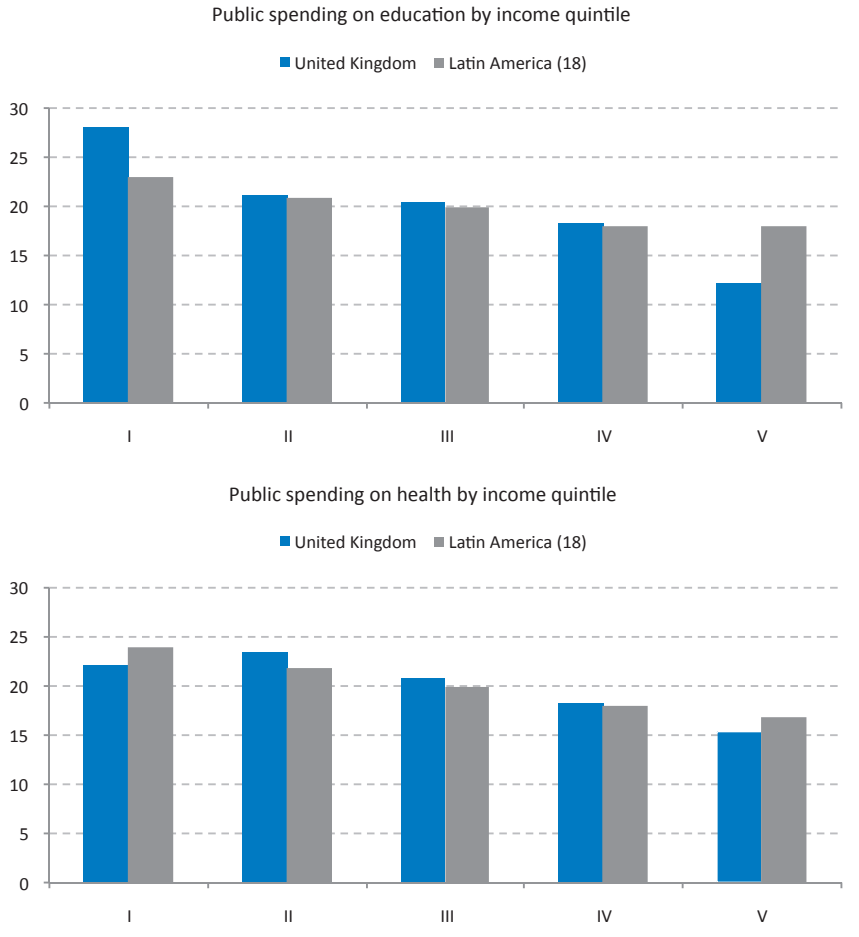
The figure supports two conclusions. First, public expenditures are progressive in both Latin America and the United Kingdom. Furthermore, these public spending categories are progressive in both an absolute and a relative sense: absolutely given that the poorer quintiles capture a larger share of the benefits than do the richer quintiles of the population; and relatively since the incidence of expenditures is more progressive than the underlying income distribution. A disaggregated assessment of some subcategories of health and education spending in Latin America reveals a flatter incidence across quintiles: in short, spending in such categories is relatively but not absolutely progressive. For other subcategories, like spending on tertiary education, spending is regressive even in the relative sense[9].

**Figure 1.2. Distribution of Social Spending on Education and Health**
(Proportion of total spending per quintile)




*Note:* ECLAC includes the following Latin American countries: Argentina (2003), Bolivia (2002), Brazil (1997), Chile (2006), Colombia (2003), Costa Rica (2004), Dominican Republic (1998), Ecuador (1999), El Salvador (2002), Guatemala (2000), Honduras (2004), Jamaica (2000), Mexico (2002), Nicaragua (2005), Panama (2003), Paraguay (1998), Peru (2004) and Uruguay (2003).

*Source:* Jones (2007) for the United Kingdom and ECLAC (2007) for Latin America.
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Second, spending in these categories is more progressive in the United Kingdom than in Latin America. Education spending is more absolutely progressive in the United Kingdom than in Latin America, where the poorest quintile captures less of the benefits, and the richest quintile more. The progressivity of health expenditures is not so straightforward. Latin American governments channel a larger share to the poorest quintile than does the government of the United Kingdom, but over the remaining four quintiles the United Kingdom is more progressive. This comparative finding is perhaps surprising given that Latin Americans in higher income quintiles (like United States citizens) depend to a far greater degree on private providers for health care and education than their counterparts in the United Kingdom and other European countries. As a result, one would expect public education and health care systems in Latin America (and the United States) to be more skewed to the poorer income quintiles than in European societies, given that their public systems are essentially a safety net for lower-income citizens.

Spending can be redistributive, but is less progressive in Latin America than in more developed countries



While public spending, and social spending more particularly, is fertile ground for those seeking pro-development impacts of fiscal policy, a more recent research literature looks at the development impact of taxes (Bräutigam *et al.*, 2008). This research identifies two promising channels through which taxation and development can reinforce one another. The first is through democratic representation: taxation can become the arena for "revenue bargaining", through which societies determine the parameters of a genuine social contract. Through this bargaining taxpayers (generally large taxpayers) agree, via the institutions that exist in a given society, the direct or indirect benefits from the state they will receive in exchange for the taxes they pay. A powerful example of a definitive breakdown in such bargaining, during Adam Smith's lifetime, was the American Revolution – the rallying cry of which was "no taxation without representation", taking as a given that citizens collectively have a right to determine their tax burden[10]. The second is the strengthening of the institutions of governance (including, but certainly not limited to, the tax administration authorities) that accompanies the maturation of a fiscal regime[11].

Fiscal policy is fertile ground for democratic debate and the strengthening of democratic institutions

Box 1.2 describes recent experiments in participatory budgeting in Latin America – examples of using fiscal policy as a platform for explicitly strengthening the social contract.

## Fiscal Policy, Growth, Development and Latin American Reality

This *Outlook* focuses on fiscal policy as a tool for development, and particularly for growth and the reduction of poverty and inequality. The link between fiscal policy and growth, we have seen, has two components: the growth-reducing aspects of fiscal policy which arise from distortions and crowding-out of savings and investment induced by taxes and subsidies (the "less is more" view) and the growth-enhancing ones which arise from using fiscal revenues to invest in complementary projects, public goods and innovation.

The link between fiscal policy and poverty and inequality, in turn, also has two components. The incidence – absolute and relative – of direct taxes and transfers, indirect taxes and subsidies and the imputed value of free and quasi-free services (education and health, for example) is one; this is the kind of question asked by Figure 1.2. The second component is the indirect effect of fiscal policy on poverty and inequality, for example through its impact on employment patterns – does the tax structure create a bias against employment or the employment of low skilled labour? Chapters 5 and 6, on informality and education spending, look at ways in which this indirect effect may operate[13].

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### Box 1.2. Participatory Budgeting: Fiscal Policy as a Social Contract[10]

Fiscal policy can serve as a platform for strengthening the social contract, if governments take steps to incorporate citizen participation in fiscal policy making. In this model, any new fiscal legislation should result from prior extended consultation with the various social stakeholders and should incorporate public accountability mechanisms. But beyond that, a well-functioning fiscal system can also provide the population with participatory mechanisms that have a certain input on budgeting decision-making.

Fiscal legitimacy is reinforced if citizens feel less like passive taxpayers, responding to coercion, and more like "active" citizens armed with tools that allow them to have a say over public spending priorities. The value added by this in policy making is likely to take the form of better information, stronger commitment by policy makers, and more effectiveness and efficiency (Schneider, 1999). It should also mean better targeting of public expenditure with limited resources; and even provide a boost to public revenue as a consequence of increased public participation and tax compliance by otherwise marginalised people imbued with a new sense of ownership and belonging.

Latin America has been at the forefront of many participatory budgeting initiatives at the local level. The best known is probably that initiated in 1989 in the Brazilian city of Porto Alegre, in which thousands of residents and elected delegates took part in assemblies identifying and voting on spending priorities. Local councils in towns and cities in Argentina, Bolivia, Brazil, Chile, Dominican Republic, Ecuador, Guatemala, Mexico, Peru and Venezuela have adopted different forms and degrees of participatory budgeting, and there have been examples in Europe, the United States and Canada too.

Brazil remains a reference in efforts to bridge the gap between citizens and fiscal policy making. For example, the *Instituto de Estudos Socioeconômicos* (*Inesc*) is a public-purpose NGO that works actively on fiscal issues to foster participatory democracy. *Inesc* proposes an annual medium-term budgetary plan for the federal government, incorporating suggestions from a vast network of NGOs and civil society groups. This plan has in recent years called for greater spending on environmental and indigenous people's issues, as well on food security and agriculture reform. The plan is formally considered by the federal congress's Joint Commission on Planning and Budget. *Inesc* is also developing a new project to strengthen the role of human, economic, socio-cultural and environmental rights in the budgetary process. Most importantly, the NGO's continuing monitoring of the implementation of budgeted public expenditure plays a critical role, given that one of the most frequent criticisms of public budgeting is the low rate of implementation of many participatory budgeting demands.

Civil-society organisations can also be instrumental in providing citizens with the information and knowledge they need on fiscal policy if they are to be more active in this realm. NGOs such as the Peruvian *Ciudadanos al Día*, formed by professionals with experience in the public administration, promote informed public debate on fiscal policies. They also encourage closer scrutiny of budgets and out-turns, in order to improve incentives for good public management. The *Instituto Brasileiro de Pesquisas, Participação Social e Acompanhamento do Orçamento Público* (*Inbraco*) is another good example of how training and participatory budgeting can be combined – training citizens in some municipalities in Mato Grosso state and providing them with the instruments and methodology to participate in the design of public budgets, follow their legislative approval and monitor their final implementation.

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The experience of institutions like *Inesc*, *Ciudadanos al Día* and *Inbraco* demonstrates that citizen participation throughout the whole public budgeting process can bring transparency to public policies and may prove to have a positive effect on the quality of public expenditure by bringing it closer to social needs and demands. While not a solution to all problems, nor is it a threat to decision makers' authority. Participatory budgeting has great potential, particularly at the local level, and in order to achieve that potential should be seen as a complement to efficient and responsible policy making by the relevant public bodies, and as a tool that can promote citizenship and participative democracy by strengthening the social contract dimension of fiscal policy.



So where does Latin America sit? A quick look at the aggregate statistics might suggest that the region has closely adhered to the "less is more" view. Table 2.1 (in Chapter 2), for example, shows that until recently both public revenues and expenditures as a share of gross domestic product (GDP) in Latin American countries have lagged substantially behind similar ratios in high-income OECD countries. Over the period 1990-2006, total government revenues averaged 23 per cent of GDP in Latin America, and 42 per cent of GDP in OECD countries. Note that in the case of Latin America, these revenues include a large share of non-tax revenues. As reported in Table 2.2, these non-tax revenues comprise 28 per cent of government revenues over the same period, meaning that tax revenues in Latin America averaged only 16 per cent of GDP. Total expenditures, meanwhile, averaged 25 per cent of GDP in Latin America and 44 per cent of GDP in OECD countries over the same period (see Table 2.1).

Though government is "small" in Latin America historically it has produced "big" problems...

For fiscal policy as a macro-management tool, the difference between revenues and expenditures matters more to their levels. Thus, "small" governments (in terms of their ratios of revenues and spending to GDP) could still have "big" macroeconomic problems if they run large deficits. Historically, this has been the Latin American experience: roughly between 1960 and 1990, many countries with low revenues and expenditures nevertheless ran large fiscal deficits, which led in turn to high and endemic inflation and recurrent balance of payments and debt crises. Fiscal policy of this level of macroeconomic imprudence has all but vanished from the region. Investors and capital markets have not entirely forgiven Latin America its earlier profligacy, however, and the inherited lack of credibility is a leading reason why Latin American countries cannot carry out standard counter-cyclical fiscal policy common to countries with histories of prudent macroeconomic management.

...in deficits

Moreover, such differences in the size of government reflect differences in the level of development between economies in the two groups of countries, and not an enthusiasm for small states in Latin America. Indeed, much of the recent debate surrounding fiscal reform in the region has been concerned with increasing the public resources available. A more appropriate comparison might be between fiscal aggregates in Latin America today and in OECD countries half a century ago. In this connection, Tanzi and Schuknecht (2000, Table I.1) report that general government expenditures averaged 24 per cent of GDP in 1937, and only 28 per cent as late as 1960, in 14 countries today among the high-income OECD economies. This does not entirely let Latin America off the hook: modern states are encumbered with many more responsibilities than they were 50 years ago, regardless of whether they are developing countries or not – and especially if they want to compete effectively in a global economy.

...in macroeconomic stability

It seems even less likely that Latin America is a stronghold of the perspective that fiscal policy is a great stabiliser of prices and output fluctuations. Fiscal policy in the region has been pro-cyclical rather than counter-cyclical for decades: that is, spending rises in good times and falls in bad times, counter to the stabilising role ascribed to fiscal policy in economics textbooks. Recent research suggests

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that the problem with short- to medium-term fiscal policy in Latin America is not so much that it is pro-cyclical, but that it is generally volatile, with consequent harmful effects on investment and output. Figure 2.4 (in Chapter 2) shows that the average standard deviation of year-to-year differences in public expenditures as a proportion of GDP was 1.18 for Latin American countries between 1990-2006, and 1.7 for OECD countries; for public revenues as a share of GDP, the corresponding measures are 1.6 (Latin America) and 1.1 (OECD). Volatility of fiscal policy has steadily declined since 1990, however, suggesting that it may play a less destabilising role in the future. Moreover, governments' handling of windfall revenues associated with booming commodity prices has been less pro-cyclical than might have been expected (see Box 2.1).

What of the contribution of fiscal policy to development goals, such as the reduction of inequality? The *Latin American Economic Outlook 2008* looked at inequality in the region, and the quite limited role fiscal policy has played in reducing this[14]. Income inequality before taxes and transfers is higher in Latin America than in Europe – by about four Gini points – but rather than reduce this difference taxes and transfers widen it[15]. While taxes and transfers reduce inequality by 19 Gini points in Europe, they reduce it by two Gini points in Latin America. Chapter 4 of this *Outlook* looks further at this issue. Moreover, social security transfers dominate the distributive impact of the fiscal system in Latin America, and these transfers are by design skewed toward the richer households: social-security spending is strongly regressive in both absolute and relative terms (ECLAC, 2007, Chapter II, Table II.18).

...in redistribution

More generally, much remains to be done to achieve better development outcomes in Latin America, and fiscal policy has a role to play in meeting those objectives. For this reason, the development-based perspective on fiscal policy maintains a particularly high relevance for the region. The discussion of spending and taxation as possible levers for state building and social cohesion takes us rather far from a technical discussion of raising or reducing spending to achieve a desired target for price inflation or output growth. That narrower, technical discussion of fiscal policy remains as relevant as ever, but is usefully complemented by a broader discussion of the quality, quantity and composition of public spending, and of the structure of government revenues.

## FISCAL POLICY: AS POLITICAL AS IT IS TECHNICAL

Fiscal policy, which seems at first blush a purely technical, even technocratic, affair, is ultimately political. The turbulent protests led by farmers against the Fernández government in Argentina in 2008, it should be remembered, were sparked by a tax on agricultural exports. The authorities, furthermore, justified the tax on redistributive grounds, seeking to redistribute the gains made by agricultural producers from recent rises in commodity prices, via social spending.

Fiscal policy is political in at least three ways: because fiscal policy choices are subject to politically determined constraints; because of the close connection between public expenditures and the welfare state; and because of the links between fiscal policy and democratic consolidation. Because of these three connections fiscal policy can be usefully thought of as a social contract among citizens and between citizens and governments; a social contract in which *fiscal legitimacy* plays an important role.

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## Political Constraints on Fiscal Policy

The first and most prosaic political phenomenon is obvious even if we limit ourselves to the first two, more conventional, views of fiscal policy (that is, "less is more" and macroeconomic stabiliser). Politicians like spending on their constituents, and don't like asking their constituents to tighten their belts. This is especially true of elected politicians – there are well-documented surges in public spending in the lead-up to elections – but can be seen too in more authoritarian regimes with an eye to public unrest. Thus the apparently bland policy recommendation "expand government spending" in practice will involve lobbying by legislators to bring that spending to their jurisdiction. Cutting spending will invite similar political pressure. Changes in tax collection can give rise to political jockeying, not necessarily geographic but certainly ideological.



The commonplace assertion that taxes and spending are politically charged is really an instance of a more general proposition and has to do with the optimisation problem introduced early in this chapter. The feasible set of policies that could be chosen by a policy maker in a given country at a given point in time is, of course, determined in part by the budget of the fiscal authorities, the general health of the economy, structural characteristics of the economy, and so on. But it is also determined by political constraints. Some choices might be optimal from a technical point of view, but not feasible because of the political cost. The optimal reform or policy configuration might lie outside the feasible set of reforms. The constraints on the feasible set have to do with the ability of some groups or interests to oppose or interfere with the implementation of reforms – as with the responses to Argentina's export taxes in 2008, or indeed the introduction of the poll tax in the United Kingdom, which in no small part led to the fall of the Thatcher government.

It is easy to envisage the links between politics and fiscal policy and the evidence of these links in practice is there in the data

A systematic example of these constraints and fiscal choices is the compression of infrastructure investment in Latin America during the 1980s and 1990s, in order to achieve a fiscal balance. In the extreme case of Brazil, public infrastructure investment fell by an amount equal to 174 per cent of the total fiscal adjustment between 1980-84 and 1995-98[16]. The enthusiasm with which policy makers cut infrastructure spending has been attributed in part to the untouchable status of certain "earmarked" spending allocations; some other patterns of spending cuts were impossible. The long-term cost of the reduced investment in terms of forgone growth is large.

The significance of this finding for this year's *Outlook* is that a technical analysis of fiscal systems must be accompanied by a political-economy analysis. The technical analysis can provide a set of recommendations for the optimal policy choices. But the political-economy analysis provides the information on the subset of options that are genuinely feasible and helps in the judgement of how politically costly reform options will be.

These political-economy constraints are not exclusively generated by internal political actors. External actors impose constraints on feasible choices. Chapter 3 considers the effect that analysts in global capital markets have on the market for public debt from Latin America. The chapter asks whether these external actors – whose recommendations to investors can have powerful effects on Latin American countries' access to capital – have changed their views about the economic effects of the electoral cycle in the region.

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### Box 1.3. Think Tanks and Fiscal Policy: Bridging the Gap between Technical Analysis and Policy Making

Think tanks – independent institutes conducting policy-oriented research – are particularly well-placed to promote better fiscal policy in most Latin American countries. Think tanks provide technical analysis and influence policy making by stimulating public debate, both key parts of increasing the politically acceptable range of policy options and generally enhancing transparency around fiscal issues.

The balance that think tanks are able to strike between political and technical rationality – that is, between research and practice – is especially valuable (Domínguez, 1997). Unlike simple watchdog organisations or pressure groups, think tanks base their recommendations on solid research; but unlike most academic institutions, they produce applied analysis with the specific aim of influencing the policy-making process (Santiso and Whitehead, 2006).

By making complex topics more accessible for the general public, think tanks can benefit the fiscal process, stimulating an informed public debate in ways which strengthen the sense of citizen proximity to fiscal affairs. At the same time, their independent monitoring of public spending and fiscal policy making can strengthen the sense of public ownership over fiscal processes (OECD, 2007).

Through the timely flow of information think tanks can explain the long-term benefits of sensible measures and weaken opposition to reforms. Equally, knowledge and information provide helpful allies against erratic policies. The advantage of local research on fiscal policy is its closer understanding of the immediate needs and particular characteristics of the country's political economy. Think tanks can therefore be catalysts to overcome the general mistrust that hinder the raising of tax revenue, frustrate public expenditure, and consequently undermine fiscal and democratic legitimacy.

With 408 recorded think tanks, Latin America has a higher density of these institutions than other developing regions such Africa or the Middle East, and absolute levels similar to those found in eastern Europe and east Asia (McGann, 2007). However, relatively few Latin American think tanks focus on fiscal policy issues, and only a handful of centres like the Instituto Brasileiro de Economia at the Fundação Getúlio Vargas (Brazil), Fedesarrollo (Colombia) or CERES (Uruguay) have carried out consistent work in this field. To a great extent, this reflects the economic and human constraints most Latin American think tanks face. For instance, in 2004 most employed fewer than 20 people, and only 13 per cent had budgets larger than USD 1 million (Braun *et al.* 2004). Contrast this with the position of leading think tanks in the United States such as the Brookings Institution, which had an operating budget of USD 61 million in 2007 and a permanent endowment of USD 374 million underwriting its long-term operations.

Funding remains the Achilles heel of think tanks in Latin America (Meller and Walker, 2007). If they are to fulfil their enormous potential for improving fiscal policy in the region they need to maintain research quality without compromising their integrity. With local philanthropy and the national private sector still reluctant to support independent think tanks to the extent needed – or not willing to do so without influence over the research agenda and results – the opportunity is there for donor agencies and external funders to play a very important role.

Unfortunately, foreign aid and development projects are often unaware of the value of think tanks around the world as watchdogs for adequate taxation policies, progressive public expenditure and innovative economic policies – or their potential to be so. Developing countries' research institutions only receive 6 per cent of the 1 per cent of official development aid (ODA) allocated to development research – that is, total ODA into local research in the developing world is only slightly higher than the annual operating budget of a single Western think tank such as Brookings.

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To do their valuable work in the fiscal arena think tanks need the resources necessary to guarantee the quality and relevance of their research, while preserving their independence of thought. The challenge to the broader community lies not only in the volume of funding – important as this is – but in the way it is provided. Contributions which are irregular and project-specific prevent think tanks from conducting long-term fiscal policy monitoring and research. Sustained funding for core activities would be an important step in providing Latin American think tanks with the financial framework they need and deserve.



## Fiscal Policy and the Welfare State

If fiscal policy is necessarily political in this essentially negative way – which emphasises politics as a set of constraints – it is also political in a positive way. The potential of fiscal policy to address poverty, vulnerability, inequality and the absence of opportunities means that it can be an important tool in the achievement of the most basic tasks of economic and social progress. How large that potential is in fact is something explored in this volume, particularly in the final chapter, which focuses on public education spending as a great equaliser of opportunities.

## Fiscal Policy and Democratic Consolidation

Latin America is undergoing a democratic consolidation, and starts from a position far ahead of other developing regions

A third link to politics is related to the ongoing process of democratic consolidation in Latin America. Virtually every country in the region has a democratic government – though this bald statement begs the question of the quality of democratic institutions. Figure 1.3 (overleaf) depicts the status of democracy for 18 countries in the region using the Bertelsmann Transformation Index (BTI, 2008), an analysis based on a multidimensional assessment of the rule of law and of horizontal accountability in governments[17]. The table illustrates a relatively high index of the quality of democracy in the region – the average is 7.3 (out of a possible 10), compared to 5.9 for the developing world. In every component of the index, the region scores ahead of all other developing regions, except Central and Eastern Europe[18]. Latin America's high scores on democratic consolidation relative to other developing regions might have something to do with its institutional head start: Latin American countries gained independence nearly a century and a half before the vast majority of Asian and African countries.

The map of democracy in Latin America sketched by Figure 1.3 also shows considerable variation between countries. This overall variation is mirrored in the components of the index. The greatest divergences among Latin American countries are in the indicators of the separation of powers, the independence of the judiciary and the vitality of the party system.

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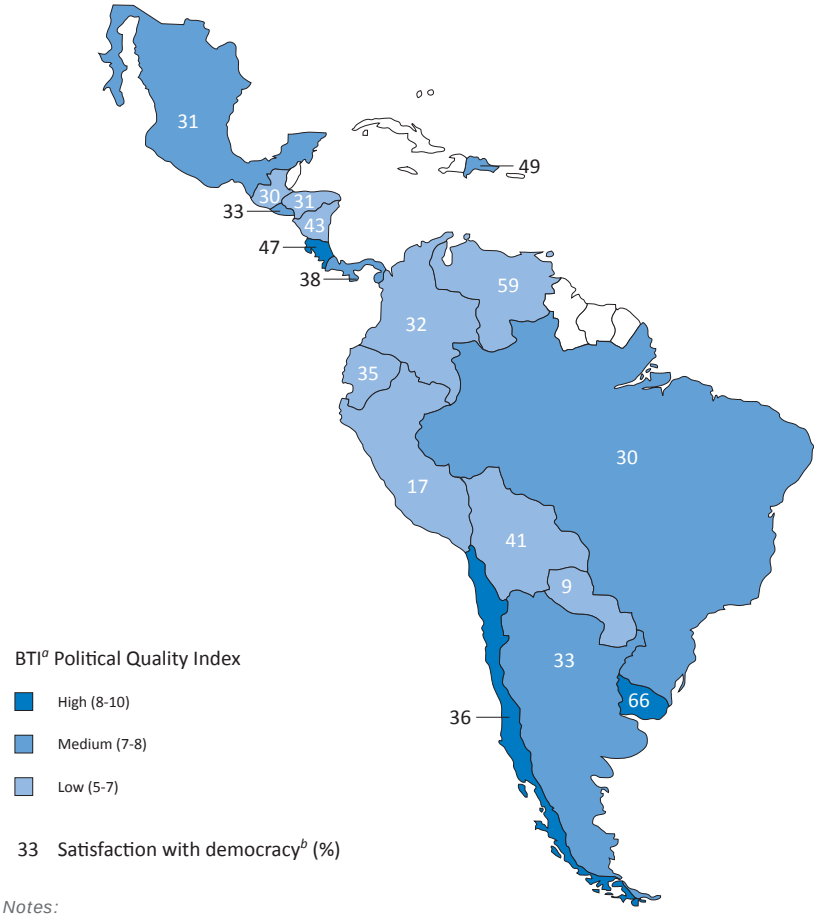
**Figure 1.3. Democratic Consolidation in Latin America: Experts' and Citizens' Views**




*Notes:*

*a)* The Bertelsmann Transformation Index (BTI) is a combination of a political and an economic transformation index. In this map only the political index is represented, its value ranges going from 0 (low quality) to 10 (high quality). The categories – high, medium and low – are defined as the world mean plus one world standard deviation (high), the world mean plus half of one world standard deviation (medium) and the world mean minus half of one world standard deviation (low).

*b)* Satisfaction with democratic performance is measured as a percentage of survey respondents who are fairly or very satisfied with the performance of democracy in their country.

*Sources:* BTI Index (2008) and Latinobarómetro (2007).
StatLink http://dx.doi.org/10.1787/450160612677

Whether citizens themselves share the experts' assessment of their democracy is a question of some interest and importance. Figure 1.3 accordingly reports the proportion of survey respondents who are "very satisfied" or "fairly satisfied" with "the way democracy works" in their country. The two sets of assessments are not perfectly correlated; indeed, a simple correlation coefficient between the BTI and citizens' opinion is about 0.35. The two could differ for many reasons, of which the most important may the temporal lag between improvement in the measurable quality of institutions and citizens' appreciation of that change.

The structure and development of democracy is reflected in the fiscal policy that accompanies it

Lindert's (2004) study of the historical development of social spending in Western Europe, the United States and Canada demonstrates that changes in the scope of social spending are intimately linked to changes in political voice – and not always in expected ways. The relatively generous poor relief in England in the 1780s, for example, arose in a society with remarkably restricted voting rights, Lindert argues, because of the interest of wealthy landowners in preventing

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labourers from emigrating to cities during lean, non-harvest months. When voting rights subsequently changed, granting more voice to industrialists in cities, this pattern of social assistance was fundamentally transformed[19]. More generally, the historical record shows that generosity of public spending – as measured, for example, by the enrolment rates of primary school-aged children – has closely tracked the share of adults with voting rights.

## Fiscal Policy as a Social Contract: The Importance of Fiscal Legitimacy



The emerging discussion of fiscal policy as the basis of a social contract between a state and citizens suggest that there are social actors – elites, the poor, middle classes, the state – negotiating a kind of bargain[20]. As with any contract, each party provides something (tax revenues in one case) and receives something in return (such as the promise of a basic minimum livelihood); this contract is struck in the shadow of implicit threats, such as extra-legal pressure or social disturbances such as strikes or lockouts[21].

There is, moreover, a kind of folk wisdom among observers of the fiscal scene that maintains that there will be different outcomes in different societies – multiple equilibria – in this bargaining game. These equilibria will be distinguished by different levels of social insurance, taxes and inequality.

One equilibrium might settle with low and regressive taxes combined with low levels of public spending, which is furthermore of poor quality. Citizens' confidence in the fiscal system – which might be called, variously, "fiscal legitimacy" (Elizondo and Santiso, 2008, Chapter 1) or "tax morale" (Wicksell, 1896; Torgler, 2007) – would be low. Inequality net of taxes and transfers would be high, with the economy paying a price in terms of forgone growth.

A second equilibrium, in contrast, features higher levels of high-quality public spending, financed by relatively higher levels of taxation which enjoy reasonably good public support. Taxes and transfers reduce static inequality, while spending on health, education and social insurance promotes human-capital accumulation, and thereby reduces inequality in a dynamic sense.

Fiscal policy in turn can play an explicit role in strengthening democracy and faith in the institutions that underpin it

A version of this multiple-equilibria picture can be closely linked to social policies addressing vulnerability. The welfare state itself can be seen as a risk-pooling mechanism: not only to protect citizens against the everyday risks of illness or unemployment, but against larger lifetime risks and even the fortunes of family lines (Sinn, 1996). In this setting, equality of opportunity – though universal high-quality education, for example – might be of vivid interest to elite members of society, even though they have long finished their schooling. That is because they are assured that their children and grandchildren, no matter what risks might befall them, are guaranteed a certain minimum quality of life. Moreover, equality of opportunity has a compelling social efficiency, in that the talents of more members of society are mobilised in promoting economic growth.

Against this members of the elite must weigh their personal ability to invest in the human capital of their descendants by opting out and purchasing services directly from schools and hospitals. The social contract must persuade elites not to opt out and to pool risks with other citizens. In return for their taxes they should see an insurance contract against downside risks to their family line. In a modern economy in which knowledge and its intergenerational transmission is at least as important as the transmission of wealth, the potential role of publicly provided goods such as education is stronger than ever.

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Each of these outcomes could be a stable equilibrium – that is, a self-sustaining state of affairs. This is good news for the virtuous circle that characterises the second equilibrium, and potentially bad news for societies stuck in the low-level first equilibrium[22].

The 2008 *Latin American Economic Outlook* (OECD, 2007) emphasised the importance of fiscal legitimacy to development, as well as highlighting its critically low levels in some Latin American countries.



**Table 1.1. Indicators of Fiscal Legitimacy**

| Indicators | Source |
|---|---|
| Good performance of the tax and transfer system in addressing income inequality | OECD (2007), Chapter 1; Goñi *et al.* (2008) |
| High-quality public services, such as education and health, equitably delivered | OECD Development Centre calculations, Chapter 4 of this publication; Reinikka and Svensson (2003) |
| Fair and transparent rules regarding execution of taxes and spending, not overtly or covertly favouring influential players such as large corporations or public-sector unions | Elizondo and Santiso[a] |
| Reasonable levels of public support for the government's implementation of the fiscal system | OECD (2007), Chapter 1 |

*Notes: a)* In a paper prepared for the OECD Development Centre, available on demand from www.oecd.org/dev/leo.

*Source:* OECD analysis and as noted.

StatLink http://dx.doi.org/10.1787/450160612677

Table 1.1 sets out the main indicators of fiscal legitimacy. From these it follows whether legitimacy is high or low is one of the key drivers of the social contract, the equilibrium struck among various social and economic actors. Indeed, the notion of fiscal legitimacy draws together politics, economic performance and long-term development goals.

These varied perspectives – historical, theoretical, quantitative – suggest that fiscal policy is reflective of the social contract between citizens and the state, all the more so in a context of democratic consolidation.

## THE SCALE OF THE FISCAL CHALLENGE

There is much to achieve...

If fiscal policy is a reflection of the current state of the social contract between a government and its citizens, how would citizens and their government like to see this policy and this contract evolve – in the language of the start of this chapter, "what is the objective function to be optimised?" These objectives will differ from one society to another, but economic growth and the reduction of poverty and inequality can be identified as nearly universal goals. What, then, is the state of progress in meeting these challenges in Latin America?

### Poverty

Among the regions of the developing world – those categorised by the World Bank as low- or middle-income countries – Latin America has the highest income per head, over seven times that of sub-Saharan Africa and South Asia[23]. This relative prosperity, and the fact that most Latin American countries are middle-income countries, should not mask the fact that there are large numbers of poor people in the region, who, with respect to the development process in the

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region, "remain" – in the words of novelist Alejo Carpentier – "sitting by the side of the road, inert, waiting for I don't know what, or maybe nothing, but who need, nevertheless, to be told something to get them moving[24]."

...comparative prosperity hides high absolute numbers of people living in poverty...



The incidence of *relative* poverty – that is, the number of people living below a poverty line that is some fixed proportion of the median income – is considerable in Latin America. But even using the more conservative criterion of *absolute* poverty, which is the same across countries after controlling for differences in the prices of basic commodities, there are many poor. The World Bank estimates that, in 2003, 9 per cent of the Latin American population lived on the equivalent of less than USD 1 per day – the international bench mark for extreme poverty. This corresponds to approximately 50 million Latin Americans[25].

The UN Economic Commission for Latin America and the Caribbean (ECLAC), meanwhile, has computed poverty and extreme poverty rates for countries in the region, using household survey data and information on local prices of basic goods consumed. Using the ECLAC measure of extreme poverty – an income insufficient to afford a basic food basket – some 13 per cent of the region's population, or 69 million people, are extremely poor. The proportion of the population with an income below twice the cost of that basic food basket is 35 per cent, representing 192 million Latin Americans. These numbers are expanded in Table 1.2, which reports poverty rates, and the number of the poor[26]. These figures are before recent rises in food prices which, according to updates from ECLAC, could leave nearly 16 million more Latin Americans in extreme poverty (Machinea, 2008).

### Table 1.2. Poverty in Latin America

| Country | Year | Rate of poverty[a] | Population below the poverty line (thousands)[b] | Rate of extreme poverty[c] | Population living in extreme poverty (thousands)[b] |
|---|---|---|---|---|---|
| Argentina[d] | 2006 | 21.0 | 8 104 | 7.2 | 2 779 |
| Bolivia | 2004 | 63.9 | 6 024 | 34.7 | 3 271 |
| Brazil | 2006 | 33.3 | 62 471 | 9.0 | 16 884 |
| Chile | 2006 | 13.7 | 2 229 | 3.2 | 521 |
| Colombia | 2005 | 46.8 | 21 016 | 20.2 | 9 071 |
| Costa Rica | 2006 | 19.0 | 821 | 7.2 | 311 |
| Dominican Rep. | 2006 | 44.5 | 4 212 | 22.0 | 2 082 |
| Ecuador | 2006 | 43.0 | 5 681 | 16.1 | 2 127 |
| El Salvador | 2004 | 47.5 | 3 265 | 19.0 | 1 306 |
| Guatemala | 2002 | 60.2 | 7 645 | 30.9 | 3 924 |
| Honduras | 2006 | 71.5 | 4 928 | 49.3 | 3 398 |
| Mexico | 2006 | 31.7 | 33 019 | 8.7 | 9 062 |
| Nicaragua | 2001 | 69.3 | 3 782 | 42.4 | 2 314 |
| Panama | 2006 | 30.8 | 994 | 15.2 | 491 |
| Paraguay | 2005 | 60.5 | 3 569 | 32.1 | 1 893 |
| Peru | 2006 | 44.5 | 12 128 | 16.1 | 4 388 |
| Uruguay[d] | 2005 | 18.8 | 624 | 4.1 | 136 |
| Venezuela | 2006 | 30.2 | 8 020 | 9.9 | 2 629 |
| Latin America[e] | 2007 | 35.1 | 191 879 | 12.7 | 69 426 |

*Notes:*
*a)* Persons with income equal to twice a basic food basket; *b)* Poverty rates multiplied by total 2005 population for each country; *c)* Persons with income less than or equal to cost of a basic food basket; *d)* Urban poor only (2005); *e)* Poverty data for Latin America based on rates for 19 countries multiplied by total 2005 population for 20 countries.

*Source:* OECD Development Centre calculations based on ECLAC (2007).

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## Social Exclusion

...many citizens have opted out or been shut out of the social contract...

A striking characteristic of Latin American economies is that so many workers and firms operate on the margin or completely outside the formal economy of taxes and benefits. On the one hand this restricts the tax base and makes it more difficult to marshal the resources the state needs to discharge its responsibilities. On the other it leaves a significant share of workers and employers beyond the scope of public policies that could help them: social protection, for example, or credit for small and medium-sized enterprises. When fiscal policy is viewed as a snapshot of the social contract linking citizens and their government, a large informal sector must be viewed as evidence of flaws in the working of this contract.



### Table 1.3. Social Security Coverage
(Percentage of employed workers who contribute)

| | Year | Total | Urban areas | Rural areas | Urban formal sector[a] | Urban informal sector, wage-earning[b] | Urban informal sector, non-wage earning[c] |
|---|---|---|---|---|---|---|---|
| Argentina[d e] | 2002 | .. | 56.0 | .. | 68.5 | 22.7 | .. |
| Bolivia | 2002 | 14.5 | 21.2 | 4.6 | 42.8 | 6.8 | 10.4 |
| Brazil | 2001 | 47.8 | 54.3 | 17.4 | 78.3 | 34.4 | 17.1 |
| Chile | 2003 | 64.9 | 67.0 | 48.8 | 81.6 | 50.8 | 20.7 |
| Costa Rica | 2002 | 65.3 | 68.2 | 60.5 | 87.7 | 43.3 | 35.0 |
| Dominican Republic[d e] | 2002 | 44.7 | 48.0 | 32.7 | 52.6 | 14.8 | .. |
| Ecuador[e] | 2002 | .. | 32.3 | .. | 57.4 | 12.8 | 10.9 |
| El Salvador | 2001 | 32.9 | 43.4 | 14.5 | 78.5 | 10.9 | 11.0 |
| Guatemala | 2002 | 17.8 | 31.1 | 8.5 | 63.6 | 10.0 | 0.3 |
| Mexico[d] | 2002 | 55.1 | 64.8 | 30.8 | 81.9 | 25.5 | .. |
| Nicaragua | 2001 | 18.3 | 25.1 | 7.6 | 53.8 | 7.4 | 1.3 |
| Panama | 2002 | 53.8 | 66.6 | 29.3 | 88.4 | 36.5 | 26.4 |
| Paraguay | 2000 | 13.5 | 20.2 | 5.0 | 48.9 | 4.1 | 0.8 |
| Peru | 2001 | 13.0 | 18.7 | 2.6 | 43.8 | 3.8 | 3.2 |
| Uruguay[e] | 2002 | .. | 63.8 | .. | 88.2 | 43.9 | 24.7 |
| Venezuela[d] | 2002 | 61.5 | .. | .. | 75.5 | 19.9 | .. |
| Unweighted average | | 38.7 | 45.4 | 21.9 | 68.2 | 21.7 | 13.5 |
| Weighted average[f] | | 46.4 | 53.5 | 20.5 | 74.4 | 27.3 | 15.2 |

*Notes:*
The variables used to define the contribution to social security vary according to the surveys in each country.
*a)* Wage earners in the public sector and in firms with more than five employees, professional and technical own-account workers, owners of firms with more than five employees.
*b)* Wage workers in firms with fewer than five employees and domestic service workers.
*c)* Non-professional and non-technical own-account workers, uncompensated family workers, owners of firms with fewer than five employees.
*d)* Rate corresponds to social security contributions by wage earners, excluding own-account workers, uncompensated family workers and owners of firms.
*e)* Urban areas only.
*f)* Weighted with relevant share of total population.

*Sources:* ECLAC (2006) for social security coverage; population figures used in weighting average from ECLAC (2007).
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Large segments of society have opted out, or have been shut out, of that social contract. Too often, fiscal policy making in economies with a large informal sector (not only in Latin America) ignores the phenomenon, at best tacking on some sort of informality module to fiscal and social security policies without seeing it in the social exclusion context.

An indicator of the extent of the problem is the coverage of social security programmes[27]; Table 1.3 compares this across several Latin American countries, for rural and urban workers and workers in large and small firms (often taken to be a crude proxy for the informal economy). Chapter 5 provides much greater detail on and analysis of this problem.



## Inequality of Opportunity

...too often expenditure is inefficient and regressive in effect

It is no secret that economic inequality is high in Latin America. While European evidence demonstrates that taxes and transfers can be effective in reducing market inequality, there are legitimate questions about the capacity of these instruments of fiscal policy to do the same in Latin America. Public spending, however, where it directly invests in human capital, is a powerful means of equalising opportunities. Arguably, providing tax-funded health care and education to all strata of the population is a more powerfully redistributive policy than simply taxing the rich and making transfers to the poor, since it is dynamic while the latter is static. Accordingly, the final chapter of this year's *Outlook* is devoted to an examination of the effectiveness of public spending on education in Latin America. Its analysis reaches several important conclusions for equalising opportunities. In particular, more spending is probably necessary, but certainly not sufficient, for better outcomes. Moreover, overall efficiency need not come at the expense of equity or fairness.

The remainder of this *Outlook* takes on the basic building blocks of fiscal policy – expenditures, revenues and public debt – from the perspective advocated in this chapter: namely, as tools to reduce poverty and inequality and to promote inclusion (in a word, "development").

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# NOTES

1. Domingo Faustino Sarmiento, *Civilización y barbarie. Vida de Juan Facundo Quiroga*, (1845), Part I, Chapter II. While ostensibly taking an ethnographic approach, Sarmiento's objective was apparently to discredit the violent and lawless life of the gaucho and his neighbours: contrasting their low condition to the European refinement of the city dwellers. However, it becomes increasingly clear to the reader that Sarmiento not only understood Argentine rural society, but also had a genuine fondness for the people and the landscapes, for their "notable special qualities, which one day will beautify and give an original tint to national life." This ambivalence – between civilisation and barbarism, with real affection for the barbarism – would reach its apogee in *Martín Fierro* (1872/1879), the epic gaucho poem by José Hernández, the publication of which partly overlapped Sarmiento's presidency. If Hernández initially celebrates the gaucho Fierro's wild exploits, by the later cantos of the poem, he transforms him, after a fashion, into a citizen: "*concluyó el vandalaje*", he has Fierro inform us drily.



2. United Nations Resolution 55/2, adopted by the General Assembly 8 September 2000.

3. Gaviria (2007) analysed survey data of Latin Americans' preferences for a more egalitarian income redistribution – for which he found widespread support, although these preferences differed according to socioeconomic class. Osberg and Smeeding (2006) carried out related analysis in a number of high-income OECD countries comparing survey respondents' preferred income distributions with actual income distributions. This evidence will be more systematically reviewed in the next chapter. Of course, even if citizens favour poverty reduction, this does not mean their elected leaders will seek it. This is not the place to delve into the huge political-science literature on the subject, but we will take it as a working hypothesis that politicians acting with self-interest will not systematically ignore the social preferences of their constituents (while acknowledging that this hypothesis is contentious).

4. For further information on the survey, its methodology and additional results, go to www.oecd.org/dev/leo.

5. Boarini *et al.* (2006) and Alesina *et al.* (2005) fault Prescott for his assumptions about the elasticity of labour supply, which differ from prevailing estimates by microeconomic researchers; the hypothesis of a zero labour-supply elasticity is supported by the survey of estimates in Blundell and MaCurdy (1999).

6. This summary draws heavily upon Weil (n.d.) and Mankiw (1990).

7. Sala-i-Martin (1997), noting a positive association between social insurance and growth in cross-country regressions, suggests that such transfers should be considered a kind of public good subject to congestion, not unlike the kind of state-provided infrastructure called for by Adam Smith, or later additions to the list such as roads or the regulation of the broadcast spectrum. Sala-i-Martin's hypothesis is that relatively generous transfers give the poor a greater stake in social peace.

8. A related line of research suggests that taxation does not have a negative growth impact in the presence of high government effectiveness (Doménech and Garcia, 2008).

9. Refer to Tables II.16 and II.17 in ECLAC (2007) for more details on Latin American countries. The classic reference on the redistributive impact of public spending is Musgrave *et al.* (1974).

10. Box 1.2 was prepared using information provided by Puentes Internacionales, an initiative of the Avina Foundation, which also supports the institutions mentioned in the text.

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11. Moore (2004) argues that the representational institutions and other institutional features that favoured, or at least permitted, such revenue bargaining between elites and states, particularly in European societies, have been absent in most developing countries. The relative autonomy of states *vis-à-vis* their citizens in developing countries has been strengthened by states' dependence upon revenues from external sources, most notably foreign aid; this, too, has limited the scope for revenue bargaining along European lines.

12. Older research on the relationship between taxation and economic development can still be quite usefully consulted. Burgess and Stern (1993) is a thorough review of the earlier literature, and Toye (1978) includes a number of even earlier, but nevertheless still useful, case studies.



13. Given this *Outlook's* focus, it will not discuss at length important macroeconomic management topics including how fiscal policy – in combination with monetary and exchange-rate policies – is used to smooth business cycles and manage positive and adverse external shocks. Nor will it discuss fiscal responsibility rules and stabilisation funds in Latin America, and the extent to which they can, by enhancing policy credibility, gradually shift fiscal policy making from being pro-cyclical to counter-cyclical. Chapter 3, which analyses changes in the credibility of Latin American public debt, necessarily touches upon many of them and an excellent starting point for a systematic consideration of the topic is Perry *et al.* (2008).

14. See OECD (2007), Chapter 1, and Goñi *et al.* (2008).

15. The Gini index is a standard measure of inequality in the income distribution that can range from 0 (perfect equality) to 100 (perfect inequality). A useful description of the derivation and interpretation of the index is provided by Ray (1998), Chapter 6.

16. Calderón and Servén (2003, Table 2.1). That is, public investment fell by 2.8 percentage points of GDP, while public investment in infrastructure fell by 3.1 percentage points of GDP. This is logically possible if capital spending on items other than infrastructure actually rose – as was the case in Brazil.

17. The BTI is based on an assessment of several indicators of "democratic status", including consolidation of the state (monopoly on use of force, citizenship agreement, absence of religious dogma, quality of basic administration), political participation (free elections, democratic rule, rights of association and assembly, freedom of expression), the rule of law (separation of powers, independent judiciary, abuse of office prosecuted, respect for civil rights), stability of democratic institutions (performance of democracy, acceptance of democracy), political and social integration (party system, interest groups, democratic norms, social self-organisation); see BTI (2008). Other indicators of democratic quality and consolidation could be drawn upon including the POLITY IV data set from the Centre for International Development and Conflict Management at the University of Maryland, the Political Constraints Index of Witold Henisz at the Wharton School, and the CHECKS database of political indicators of the World Bank. *Latinobarómetro*, in a different vein, reports public satisfaction with the functioning of democracy.

18. This category includes a number of OECD and European Union member countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Macedonia, Montenegro, Poland, Romania, Serbia, Slovakia and Slovenia.

19. Lindert (2004), Chapter 4.

20. ECLAC (2007), Chapter 2 also makes a case for a social contract in Latin America structured around social spending.

21. This is similar to the theoretical framework introduced by Acemoglu and Robinson (2006) in their model of the development of labour markets, in which the interaction of elites and majorities determines equilibrium institutions.

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22. Piketty (1995), Bénabou (2000) and Osberg *et al.* (2006) model these social contract processes in the context of OECD countries. They suggest that the United States and Western European countries, as a group, occupy two equilibria towards different ends of the spectrum described here. Breceda *et al.* (2008) characterise the social contract options for Latin America in this way, as well, suggesting that the region, with the possible exception of Chile, seems to be converging toward the United States end of the spectrum. The review by Agosin *et al.* (2005) of taxation systems in Central America can be read as describing a version of the low-level equilibrium.

23. The regional averages in 2006 were: Latin America and the Caribbean USD 4 329; Middle East and North Africa USD 1 862; East Asia and the Pacific USD 1 475; sub-Saharan Africa USD 578; South Asia USD 604 – Source: WDI, consulted July 2008.



24. Carpentier (1970), p. 229.

25. This is according to the World Bank's website devoted to monitoring progress toward the Millennium Development Goals: http://ddp-ext.worldbank.org/ext/GMIS/home.do?siteId=2, accessed in July 2008.

26. The country-specific rural and urban poverty lines are reported in ECLAC (2007) Statistical Annex Table 5.

27. Levy (2008) suggests that the problem of informality can be usefully studied in relationship to tax and social policy in ways that informality defined by the other criteria cannot.

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CHAPTER TWO

# Recent Trends in Latin America's Fiscal Performance

## A STATISTICAL APPROACH TO FISCAL POLICY

This chapter briefly reviews the structure, characteristics and performance of the fiscal system in Latin America. The period examined covers the transition from the years of crisis to the macroeconomic bonanza. It can at most brush up against the current global economic turmoil, but nevertheless provides a solid foundation for understanding where Latin America has been, and where it is going, in matters of fiscal performance.



The conventional wisdom would have it that Latin America has emerged from a long period of wandering in the fiscal-policy wilderness. Large fiscal deficits, volatile revenues and expenditures, and excessive public indebtedness (much of it denominated in foreign currency) have given way to fiscal pacts and binding rules, reflected in fiscal surpluses and plummeting borrowings. One telling indicator of this change is the upgrading of Brazilian debt to investment grade in early 2008. Shortly before (and not coincidentally) Brazil had become a net creditor economy, reversing centuries of structural indebtedness.

This rosy scenario – based on maturing institutions – has its sceptics. A 2008 report by the Inter-American Development Bank cautioned that "all that glitters is not gold" (Izquierdo and Talvi, 2008). The pessimists point to the weight of exogenous factors, underlying both the crisis years of the 1980s and the "macroeconomic bonanza" – to use José Antonio Ocampo's (2007) phrase – of recent years. The terms of trade, which were brutal in the crisis years, have been buoyed by soaring prices for petroleum, copper, natural gas and agricultural commodities. Foreign capital inflows, which suddenly dried up in 1982, have been generous in recent years, at least until the subprime crisis and the global credit crunch hit.

These trends are depicted in the two panels of Figure 2.1. Panel A shows the rise in prices, since 2000, for some of the most important Latin American exports. Panel B shows that capital was both cheaper and more bountiful. Sovereign bond spreads fell dramatically and foreign direct investment surged. By the end of the period, countries were enjoying both high inflows of capital for investment and relative ease of placing debt at lower cost.

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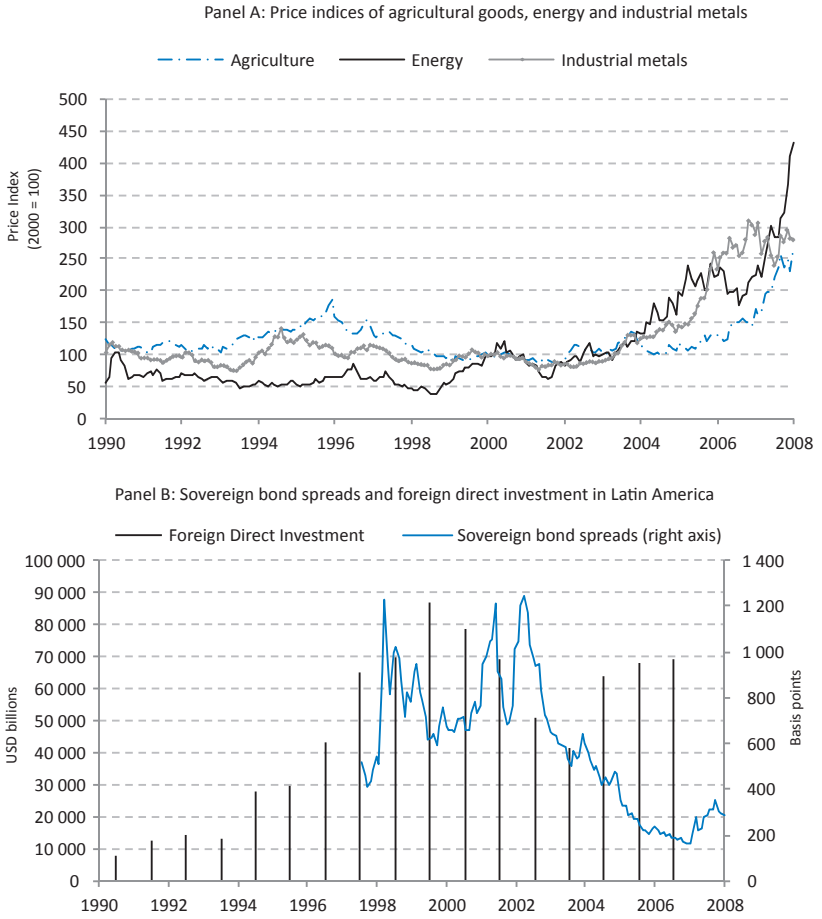
## Figure 2.1. Evolution of Commodity Prices and Foreign Capital Inflows in Latin America




*Source:* OECD Development Centre calculations based on Datastream database, the S&P GSCI Index, ECLAC foreign direct investment data and JPMorgan Sovereign Bond Spreads.

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Fiscal perfomance in Latin America has been anything but homogeneous, nevertheless it is possible to discern patterns in the data

Across a range of indicators, this chapter compares Latin American countries both with each other and with their peers in the OECD. It starts with an examination of revenues and expenditures in total, and then analyses disaggregated information. The volatility of fiscal measures such as the fiscal deficit is calculated and compared. The chapter closes with a look at the relative size of revenues and expenditures at the central and local government levels. Regional averages for Latin American and OECD countries are discussed in the body of the chapter, while detailed country-by-country information for Latin America is presented in the statistical annex. Information on the related trends in public debt can be found in the first section of Chapter 3.

The general outline of this presentation is modelled on the pioneering study by Gavin and Perotti (1997), which was the first systematic overview of fiscal policy in Latin America. Their study, looking at the period 1970-95, also compared countries in the region to industrial countries. Surprisingly, corresponding data have not been compiled in a single place in the decade since. This chapter does

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so and covers more countries in both Latin America and the industrial comparator. However, in common with the earlier study, some caveats must be made regarding uniformity of data. Not all variables are available for all countries for every year, and, more seriously perhaps, consistent definitions of the government sector are not universally available. For some countries, revenue statistics are for general government while for others they cover the narrower central government measure or the wider non-financial public sector. Averages cover the period 1990-2006 and accordingly the figures in these tables will provide scant evidence of the effects of recent tax reforms in the region, including that in Mexico in 2007, or that being discussed in the Brazilian congress during 2008. Detailed information on the data sources and their coverage is provided in the methodological note in the statistical annex to this chapter.

These country-by-country data demonstrate that fiscal performance in Latin America is anything but homogeneous. It presents a variety of experiences that can only be partially captured in summary statistics. Nevertheless, it is possible to distinguish between two broad groups of countries: the relatively more prosperous (Argentina, Brazil, Chile, Costa Rica, Mexico, Panama, Uruguay and Venezuela) and the relatively less prosperous (Bolivia, Colombia, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Paraguay and Peru), as measured by income per head[1].

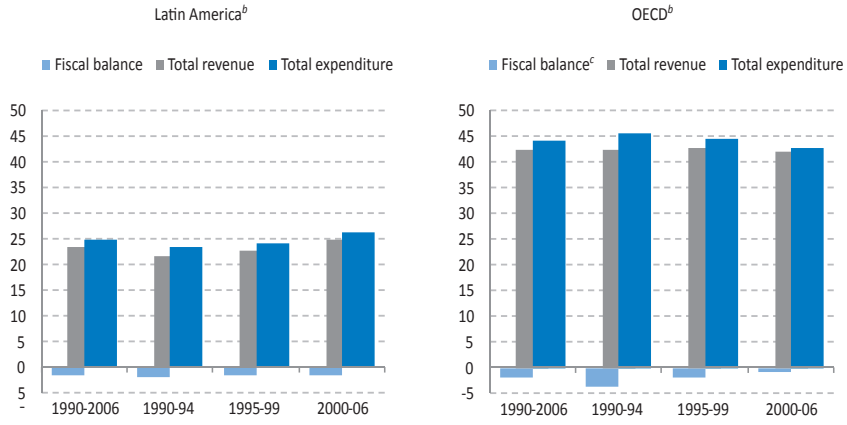


## Trends in Revenue and Expenditure

Both OECD and Latin American countries have run deficits, but those in the OECD have been falling

Both OECD and Latin American economies have run budget deficits during the last decade and a half, and as shown in Figure 2.2, their deficits have been proportionally similar (1.9 per cent and 1.6 per cent of GDP respectively). However, while the typical Latin American deficit remained around this level throughout the entire period, those in OECD countries fell from 3.5 per cent of GDP in the early 1990s, to 0.7 per cent in the 21st century.

**Figure 2.2. Fiscal Policy Measures, Latin American and OECD Countries**[a]
(Regional averages, percentage of GDP)




*Notes:*

*a)* OECD data refer to the consolidated general government sector. In Latin America coverage corresponds to the non-financial public sector where possible, otherwise uses the widest measure available.

*b)* Mexico is included in both groups.

*c)* In OECD countries, the fiscal balance corresponds to net lending/borrowing.

*Source:* OECD Development Centre calculations based on the ECLAC ILPES Public Finance database for Latin America, and OECD General Government Accounts data for OECD countries.

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This figure also highlights the significant differences between the two regions in terms of fiscal revenues and expenditures. Throughout the period expenditures accounted for 25 per cent of GDP in Latin America, against 44 per cent in OECD countries. Similarly, fiscal revenues exhibit a marked gap: 42 per cent in OECD countries but only 23 per cent in Latin America. Table 2.1 provides additional information.

**Table 2.1. The Size of Government, Latin American and OECD Countries**[a]
(Regional averages, percentages)

| | Region[b] | 1990-2006 | 1990-94 | 1995-99 | 2000-06 |
|---|---|---|---|---|---|
| Fiscal balance/GDP[d] | **Latin America** | **-1.55** | **-1.67** | **-1.58** | **-1.44** |
| | Upper middle income[c] | -1.14 | -1.32 | -1.19 | -0.97 |
| | Lower middle income[c] | -1.84 | -1.90 | -1.84 | -1.81 |
| | **OECD** | **-1.86** | **-3.52** | **-1.83** | **-0.69** |
| Fiscal balance/Total revenue[d] | **Latin America** | **-8.34** | **-9.83** | **-7.90** | **-7.59** |
| | Upper middle income[c] | -5.32 | -5.84 | -5.51 | -4.80 |
| | Lower middle income[c] | -10.51 | -12.41 | -9.62 | -9.78 |
| | **OECD** | **-4.51** | **-7.74** | **-4.35** | **-2.30** |
| Primary balance/GDP[e] | **Latin America** | **1.12** | **1.12** | **0.90** | **1.28** |
| | Upper middle income[c] | 2.16 | 1.77 | 1.84 | 2.68 |
| | Lower middle income[c] | 0.34 | 0.70 | 0.22 | 0.18 |
| | **OECD** | **1.87** | **1.43** | **2.07** | **2.05** |
| Primary balance/Total revenue[e] | **Latin America** | **3.98** | **4.53** | **3.57** | **3.89** |
| | Upper middle income[c] | 8.18 | 7.53 | 7.28 | 9.29 |
| | Lower middle income[c] | 0.87 | 2.64 | 0.86 | -0.38 |
| | **OECD** | **4.38** | **3.98** | **4.86** | **4.33** |
| Total revenue/GDP | **Latin America** | **23.24** | **21.69** | **22.65** | **24.78** |
| | Upper middle income[c] | 25.80 | 24.01 | 25.09 | 27.59 |
| | Lower middle income[c] | 21.34 | 20.09 | 20.87 | 22.57 |
| | **OECD** | **42.16** | **42.03** | **42.50** | **42.01** |
| Total expenditure/GDP | **Latin America** | **24.78** | **23.35** | **24.24** | **26.18** |
| | Upper middle income[c] | 26.94 | 25.32 | 26.28 | 28.57 |
| | Lower middle income[c] | 23.15 | 21.99 | 22.72 | 24.30 |
| | **OECD** | **44.02** | **45.55** | **44.32** | **42.70** |
| Primary expenditure/ GDP[e] | **Latin America** | **22.09** | **20.52** | **21.72** | **23.47** |
| | Upper middle income[c] | 23.64 | 22.23 | 23.25 | 24.92 |
| | Lower middle income[c] | 20.93 | 19.31 | 20.59 | 22.33 |
| | **OECD** | **39.84** | **39.88** | **39.91** | **39.77** |

*Notes:*
*a)* OECD data refer to the consolidated general government sector. In Latin America coverage corresponds to the non-financial public sector where possible, otherwise uses the widest measure available.

*b)* Mexico is included in both groups.

*c)* Following the World Bank categorisation, the upper middle-income countries are Argentina, Brazil, Chile, Costa Rica, Mexico, Panama, Uruguay and Venezuela. The lower middle-income group comprises Bolivia, Colombia, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Paraguay and Peru.

*d)* For OECD countries the fiscal balance corresponds to net lending/borrowing.

*e)* OECD primary balance and primary expenditure exclude the impact of gross interest payments. The OECD *Economic Outlook*, however, reports these measures excluding the impact of net interest.

*Source:* OECD Development Centre calculations based on the ECLAC ILPES Public Finance database for Latin America, and OECD General Government Accounts data for OECD countries.
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Debt service is a significant use of government resources in Latin America

As a share of government revenues – which may be a better measure of a country's capacity to meet its debt obligations – Latin America's deficits have been larger than those in OECD countries: 8.3 per cent versus 4.5 per cent. Upper middle-income Latin American countries had deficit-to-revenue ratios in the OECD range, at 5.3 per cent, but in lower middle-income countries the ratio reached 10.5 per cent. The gap between industrial and Latin American countries remains marked, though has narrowed considerably since the 1970-95 period analysed by Gavin and Perotti, who reported Latin American deficits of around 11 per cent of total revenues. To support the debt that these deficits imply, Latin American governments have run a consistently positive primary surplus (that is the difference between revenues and expenditures before debt service costs). In upper middle-income Latin American countries this surplus has been larger than in OECD countries, both relative to the size of the economy, and as a share of government revenues.

Government revenues take a much lower share of GDP in Latin America than in the OECD and the tax take is only half as large

Government revenues were substantially higher as a share of GDP in OECD countries (at 42 per cent) than in Latin America (23 per cent). Within Latin America, the ratios for upper middle-income and lower middle-income countries were separated by 5 percentage points, with greater revenue raised in the higher income countries. The relative stability of these ratios over time in OECD countries and Latin America is notable[2].



Fiscal revenues include non-tax revenues, which for many Latin American countries can be sizeable. Table 2.2 shows that pure tax revenues represented 16 per cent of GDP in Latin America, versus 35 per cent in OECD countries. Analysing this further, tax revenues amounted to only 13 per cent of GDP in lower middle-income countries in Latin America, compared with 20 per cent in the region's upper middle-income countries.

The Latin American average masks considerable variation across countries. In a typical year revenues were over 30 per cent of GDP in Brazil, Chile, Bolivia, Paraguay and Venezuela, but under 20 per cent in El Salvador, Honduras, Peru, Panama and Dominican Republic. In Guatemala government revenues were consistently little more than 11 per cent of GDP. Not surprisingly, the classification of Latin American countries into high-revenue and low-revenue categories yields essentially the same groups as a division of countries into high-expenditure and low-expenditure governments, as the tables in the statistical annex demonstrate.

Expenditures have grown slightly more rapidly than revenues in Latin America, but only just. Expenditures stood at 26 per cent of GDP in 2000-06, against 23 per cent in 1990-94. As with revenues, the gap between OECD and Latin American countries is substantial: 44 per cent in the OECD against 25 per cent in Latin America, measured as average share of GDP over the entire period. Compared with the 1970-95 figures reported by Gavin and Perotti, Table 2.1 suggests expenditures, as a proportion of GDP, have been growing over time in Latin America but stayed broadly constant in OECD countries; they report total expenditures of 23 per cent of GDP and 45 per cent respectively.

## The Composition of Revenues and Expenditures

Figure 2.3 looks more closely at the composition of revenues and expenditures in Latin American and OECD countries. It reveals striking differences. In Latin America indirect taxes and non-tax revenues make up most of government revenues, OECD countries rely much more heavily on direct taxes and social security contributions (SSC). On the other side of the ledger, capital expenditure and interest payments account for 33 per cent of Latin American expenditure while in the OECD social transfers play a major role.

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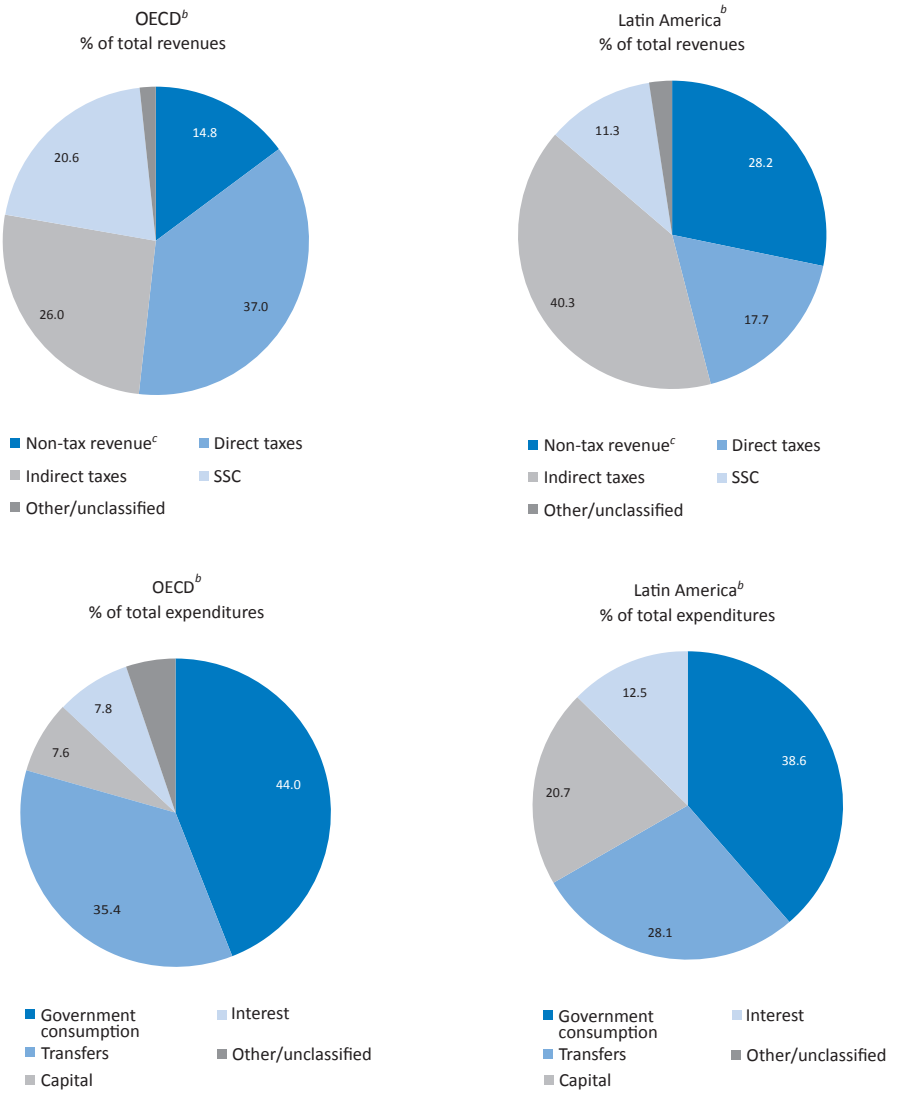
**Figure 2.3. Composition of Revenues and Expenditures in Latin America and OECD Countries**[a]
(Regional averages, 1990-2006)




*Notes:*

*a)* OECD data refer to the consolidated general government sector. In Latin America coverage corresponds to the non-financial public sector where possible, otherwise uses the widest measure available.

*b)* Mexico is included in both groups.

*c)* ECLAC ILPES data on non-tax revenues in Mexico have been adjusted to reclassify the fees levied on hydrocarbon production as taxes, in accordance with OECD revenue statistics guidelines.

*Source:* OECD Development Centre calculations based on Chapter 4 of this volume, the ECLAC ILPES Public Finance database, the OECD Revenue Statistics database (OECD, 2007a) and OECD General Government Accounts data (OECD, 2008).

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A look at the detailed data in Table 2.2 provides additional information about the former issues. On the revenue side, three critical distinctions stand out.



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First, Latin American countries rely far more on indirect taxes than do OECD countries. Between 1990 and 2006 indirect taxes made up 58 per cent of tax revenues in Latin America but only 33 per cent in OECD countries – with notable stability over time in these proportions. The distinction between upper middle-income and lower middle-income Latin American countries, on the other hand, is sizeable: respectively they raise 50 per cent and 64 per cent of their tax revenues from indirect taxes. Direct taxes, meanwhile, contributed only 25 per cent of Latin America's tax revenue (a proportion which grew slightly over the period) compared with 42 per cent in OECD countries. In only four Latin American countries – Colombia, Mexico, Panama and Venezuela – do direct taxes exceed 30 per cent of tax revenues.

Latin American countries rely on indirect taxes for two-thirds of their tax revenues, compared with one-third in the OECD

**Table 2.2. Analysis of Government Revenue, Latin American and OECD Countries**[a]
(Regional averages, percentages)

| | Region[b] | 1990-2006 | 1990-94 | 1995-99 | 2000-06 |
|---|---|---|---|---|---|
| Non-tax revenue/ Total revenue[d] | **Latin America** | **28.24** | **31.61** | **27.39** | **26.43** |
| | Upper middle income[c] | 29.80 | 31.45 | 29.32 | 28.96 |
| | Lower middle income[c] | 27.06 | 31.74 | 26.00 | 24.47 |
| | **OECD** | **14.80** | **16.00** | **14.69** | **14.03** |
| Tax revenue/GDP | **Latin America** | **16.18** | **14.69** | **15.98** | **17.39** |
| | Upper middle income[c] | 19.69 | 18.91 | 19.25 | 20.57 |
| | Lower middle income[c] | 13.37 | 11.32 | 13.36 | 14.84 |
| | **OECD** | **35.12** | **34.32** | **35.35** | **35.53** |
| Direct taxes/ Tax revenue | **Latin America** | **24.82** | **24.69** | **23.55** | **25.83** |
| | Upper middle income[c] | 28.52 | 29.22 | 26.92 | 29.16 |
| | Lower middle income[c] | 21.87 | 21.06 | 20.85 | 23.17 |
| | **OECD** | **42.34** | **43.05** | **42.24** | **41.91** |
| Individual income tax/ Tax revenue[e] | **Latin America** | **3.70** | **2.66** | **3.97** | **4.25** |
| | Upper middle income[c] | 2.98 | 1.03 | 3.47 | 4.03 |
| | Lower middle income[c] | 4.74 | 4.86 | 4.98 | 4.49 |
| | **OECD** | **26.65** | **28.23** | **26.84** | **25.38** |
| Indirect taxes/ Tax revenue | **Latin America** | **57.78** | **57.05** | **58.42** | **57.84** |
| | Upper middle income[c] | 49.97 | 48.16 | 50.93 | 50.58 |
| | Lower middle income[c] | 64.03 | 64.17 | 64.42 | 63.65 |
| | **OECD** | **32.81** | **32.85** | **33.12** | **32.57** |
| International trade taxes/Tax revenue | **Latin America** | **11.55** | **14.52** | **12.49** | **8.76** |
| | Upper middle income[c] | 7.27 | 8.95 | 7.22 | 6.10 |
| | Lower middle income[c] | 14.98 | 18.98 | 16.71 | 10.89 |
| | **OECD** | **1.17** | **1.88** | **1.17** | **0.67** |

*Notes:*

*a)* OECD data refer to the consolidated general government sector. In Latin America coverage corresponds to the non-financial public sector where possible, otherwise uses the widest measure available.

*b)* Mexico is included in both groups.

*c)* Following the World Bank categorisation, the upper middle-income countries are Argentina, Brazil, Chile, Costa Rica, Mexico, Panama, Uruguay and Venezuela. The lower middle-income group comprises Bolivia, Colombia, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Paraguay and Peru.

*d)* ECLAC ILPES data on non-tax revenues in Mexico have been adjusted to reclassify the fees levied on hydrocarbon production as taxes, in accordance with OECD revenue statistics guidelines.

*e)* In Latin America data for individual income tax cover Argentina, Bolivia, Brazil, Chile, Costa Rica, Dominican Republic, Guatemala, Honduras, Panama, Peru and Uruguay.

*Source:* OECD Development Centre calculations based on Chapter 4 of this volume, the ECLAC ILPES Public Finance Database and the OECD Revenue Statistics Database (OECD, 2007a).

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The contribution of individual income taxes, the most visible and most personal of the direct taxes, reveals a stark disparity: such taxes contribute 27 per cent of tax revenue in OECD countries, but only 4 per cent in Latin America. This means that only about a quarter of the income-tax take in Latin America is paid by individuals (rather than corporations), in comparison to about 70 per cent in OECD countries. In practice taxes on corporations are a more volatile revenue source than taxes on individual income, which has corresponding consequences for the stability of revenues in Latin America.

When Gavin and Perotti conducted their study, direct taxes were falling as a share of total tax revenue. That trend at least has been reversed. Table 2.2 shows that the share of direct taxes rose slightly in Latin America from 25 per cent of tax revenues in the first half of the 1990s to 26 per cent in the first six years of the new millennium. The implications of Latin America's continuing reliance on indirect taxes for fiscal policy, however, are analysed in Chapter 4.

Trade taxes and non-tax revenues such as hydrocarbon royalties are much more important in Latin America



A second striking feature of revenue composition in Latin America is that countries in the region rely to a far greater degree on non-tax revenues than do their counterparts in the OECD. Non-tax revenues, such as fees and royalties from natural-resource extraction and exports, comprised 28 per cent of total revenues in Latin America, but only 15 per cent in OECD countries. The Latin American average masks considerable variations. At one end of the scale the proportion was 15 per cent or less in Argentina, Brazil, Dominican Republic, Guatemala, Peru and Uruguay, and at the other 40 per cent or more in Bolivia, Colombia, Panama and Venezuela.

A third feature of government revenues is the comparative importance of trade taxes in Latin America. Such taxes tend to be higher in developing countries, reflecting their relative ease of collection and enforceability, and this is borne out by the data in Table 2.2. Trade taxes are more important to the lower middle-income countries in the region (15 per cent of tax revenues) than the upper middle-income countries (7 per cent), compared with more than 1 per cent in the OECD over the period 1990-2006. Among Latin American countries, Dominican Republic relies most on trade taxes with 28 per cent of its tax revenues coming from this source. Overall, the period under review saw a decline in the importance of trade taxes in most countries in Latin America, even if their absolute share remained well above OECD levels. From making up 15 per cent of tax revenue in the first half of the 1990s, the share of trade taxes declined to 9 per cent in 2000-06.

Capital expenditure and interest account for a third of total expenditure in Latin America, double the proportion in the OECD

On the expenditure side, the clearest distinction between OECD and Latin American countries emerges in the relative importance of capital expenditure and interest payments on the public debt (Table 2.3). Capital expenditures averaged 21 per cent of total expenditures over the period 1990-2006 in Latin America, and only 8 per cent in the OECD. Within this, the share of capital expenditure was substantially higher in lower middle-income countries (25 per cent) than in upper middle-income countries (16 per cent).

Interest, meanwhile, consumed 12 per cent of government expenditure in Latin America, and only 8 per cent in the OECD. Moreover, as the table shows, in the OECD this share has been steadily falling, while it has remained more or less constant in Latin America over the last decade. Table 2.3 also shows that government consumption as a share of expenditure has changed little, falling from 41 per cent in 1990-94 to 40 per cent in 2000-06 in Latin America, while rising slightly from 42 per cent to 45 per cent in the OECD.Transfers comprise a larger share of expenditures in the OECD than in Latin America, but the two have strongly converged over the last decade and a half. Transfers as a share of total expenditures in Latin America grew from 24 per cent in 1990-94 to 30 per cent in 2000-06, while the corresponding figures for the OECD are 34 and 37 per cent.

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**Table 2.3. Analysis of Government Expenditure, Latin American and OECD Countries**[a]
(Regional averages, percentages)

| | Region[b] | 1990-2006 | 1990-94 | 1995-99 | 2000-06 |
|---|---|---|---|---|---|
| Government consumption/Total expenditure[d] | **Latin America** | **39.87** | **41.43** | **38.78** | **39.52** |
| | Upper middle income[c] | 35.92 | 35.89 | 36.12 | 35.79 |
| | Lower middle income[c] | 42.90 | 45.40 | 40.99 | 42.49 |
| | **OECD** | **43.67** | **42.23** | **42.78** | **45.33** |
| | | | | | |
| Transfers/Total expenditure | **Latin America** | **27.88** | **24.20** | **27.41** | **30.86** |
| | Upper middle income[c] | 34.86 | 33.11 | 34.74 | 36.19 |
| | Lower middle income[c] | 22.41 | 17.53 | 21.44 | 26.59 |
| | **OECD** | **35.58** | **34.09** | **35.80** | **36.49** |
| | | | | | |
| Capital expenditure/ Total expenditure | **Latin America** | **20.92** | **21.02** | **23.43** | **19.05** |
| | Upper middle income[c] | 15.73 | 16.91 | 16.98 | 13.99 |
| | Lower middle income[c] | 24.63 | 24.13 | 27.95 | 22.63 |
| | **OECD** | **7.51** | **7.41** | **7.72** | **7.43** |
| | | | | | |
| Interest/Total expenditure[e] | **Latin America** | **11.59** | **13.19** | **10.95** | **10.91** |
| | Upper middle income[c] | 12.64 | 12.67 | 12.01 | 13.08 |
| | Lower middle income[c] | 10.77 | 13.60 | 10.15 | 9.20 |
| | **OECD** | **8.32** | **10.61** | **8.73** | **6.40** |

*Notes:*

*a)* OECD data refer to the consolidated general government sector. In Latin America coverage corresponds to the non-financial public sector where possible, otherwise uses the widest measure available.

*b)* Mexico is included in both groups.

*c)* Following the World Bank categorisation, the upper middle-income countries are Argentina, Brazil, Chile, Costa Rica, Mexico, Panama, Uruguay and Venezuela. The lower middle-income group comprises Bolivia, Colombia, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Paraguay and Peru.

*d)* Government consumption for Latin America is calculated as the sum of wages and salaries and purchases of goods and services.

*e)* For OECD countries interest payments on public debt are taken as the interest payable in the primary distribution-of-income account for general government.

*Source:* OECD Development Centre calculations based on the ECLAC ILPES Public Finance database for Latin America, and OECD General Government Accounts data for OECD countries.

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## VOLATILITY OF FISCAL PERFORMANCE

As Chapter 1 has shown, fiscal policy in Latin America has not in practice acted to stabilise the economy. Since at least the 1990s, economists have noted how policy has tended to be pro-cyclical in the region, rather than counter-cyclical[3]. Nevertheless, the tide may be turning. A wave of fiscal responsibility rules (starting with those adopted in Chile) and stabilisation funds, both of which divert revenue away from expenditure in the good times, may be restoring credibility to macroeconomic management in the region. In this vein, Box 2.1 demonstrates how macroeconomic responses in Latin America to recent commodity price booms have not been as pro-cyclical as might have been expected.

A recent World Bank study (Perry *et al.*, 2008) looks in depth at the pro-cyclical bias of Latin America's fiscal policy. Fatás and Mihov (2008), in that study, demonstrate that the most damaging effect is from the volatility – rather than simple pro-cyclicality – of discretionary government expenditures. This leads to macroeconomic volatility which, in turn, depresses growth. The potential for automatic stabilisers, meanwhile, is substantially unrealised. First, the relatively

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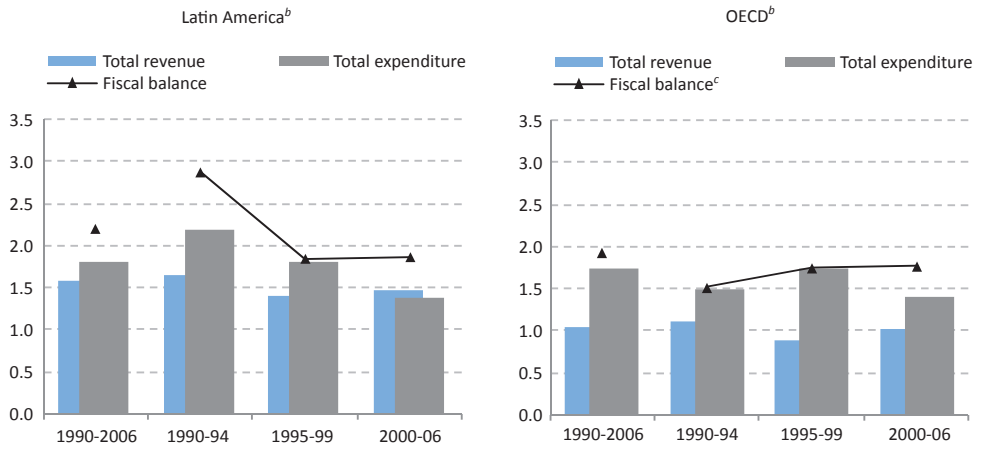
small size of government limits the influence that strategic use of the government budget can have on the macroeconomy. Second, the relatively lower importance of income taxes limits the damping effect of their automatic increase when growth is strong (indirect taxes, on the other hand, being linked more closely to consumption tend to vary less with the cycle). Suescún (2008) concludes that Latin America has an "acyclical" non-discretionary fiscal policy.

To illustrate the comparative volatility of fiscal policy in OECD and Latin American countries, Figure 2.4 presents measures of the variability of three of the fiscal aggregates examined in the previous section. Indices of volatility are constructed by computing the standard deviation of the year-to-year differences of a variable (for example the change in the fiscal deficit as a share of GDP)[4].

**Figure 2.4. Volatility of Fiscal Policy in Latin America and OECD Countries**[a]

(Regional averages, standard deviation)




*Notes:*

*a)* OECD data refer to the consolidated general government sector. In Latin America coverage corresponds to the non-financial public sector where possible, otherwise uses the widest measure available.

*b)* Mexico is included in both groups.

*c)* In OECD countries the fiscal balance corresponds to net lending/borrowing.

*Source:* OECD Development Centre calculations based on the ECLAC ILPES Public Finance database for Latin America and OECD General Government Accounts data for OECD countries.

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The volatility of each of revenue, expenditure and their difference, the fiscal balance, is higher in Latin America than the OECD...

As can be seen, the volatility of every fiscal outcome is greater in Latin America than in the OECD.

The index of volatility of the fiscal balance was 2.2 in Latin America and 2.0 in the OECD. Latin American levels of volatility are not unknown in the OECD, however. Over the period 1990-2006 the Czech Republic, Finland, Germany, the Netherlands, Norway and the Slovak Republic all had levels of deficit volatility substantially in excess of the Latin American average. The OECD/Latin American volatility gap was greater in revenues (1.6 in Latin America versus 1.1 in the OECD) than for expenditures (1.8 in Latin America versus 1.7 in the OECD).

The most volatile fiscal deficits have been in Venezuela and Nicaragua, with standard deviations of more than 4 percentage points of GDP over the period; the lowest levels (standard deviation less than 1.5 percentage points of GDP) were in Brazil, Colombia, El Salvador and Uruguay. The most volatile revenues were in Brazil, Venezuela and Nicaragua; the most volatile expenditures in Venezuela and Panama.

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A second pattern that emerges is that volatility in Latin America has been declining over the period, and is gradually converging with OECD levels. Fiscal balance volatility fell in Latin America from 2.9 in 1990-94 to 1.9 in 2000-06, while the same measure in OECD countries grew from 1.5 in the first period to 1.8 in the second. While revenue volatility remained unchanged in the OECD at around 1.0, it fell in Latin America from 1.7 in 1990-94 to 1.5 in 2000-06. Expenditure volatility fell from 2.2 in 1990-94 to 1.4 in 2000-06 in Latin America, while falling from 1.5 to 1.4 over the same two periods in OECD countries.

...though reducing volatility in Latin America means the two are starting to converge

### Box 2.1. Commodity Booms and Macroeconomic Management: Latin America's Response[5]

Fiscal policy in Latin America has a long tradition of dependence on the business cycle. For decades Latin American fiscal policies were pro-cyclical, with government spending as a share of GDP rising during booms and falling in recessions and deficits following the same pattern. This is true for many emerging economies[6], and in those countries with limited financial development the effects of pro-cyclical policies are stronger.

Pro-cyclical fiscal policy is bad for growth for many reasons. Aghion and Marinescu (2006), for example, found that pro-cyclical growth of public debt was negatively correlated with growth. Counter-cyclical budgetary policy, on the other hand, was found to foster growth by mitigating the impact of shocks on innovating firms.

In recent years, strong economic growth in China and India (in particular), has led to improvements in the terms of trade for those countries which export primary materials. This in turn has attracted capital and improved access to finance. In Latin America the long-term challenge that this brings with it is to avoid the "resource curse" – the apparently paradoxical phenomenon of poor economic performance in countries with an abundance of valuable natural resources. Moreover, these Asian economic drivers are contributing to heightened commodity-price and earnings volatility in Latin America (and other emerging economies) which raises a further challenge to macroeconomic management.

In a recent study from the OECD Development Centre, Avendaño *et al.* (2008) compared the fiscal experience of commodity-exporting countries in Africa and Latin America, before and after the advent of the Asian drivers. The authors estimated fiscal response functions for government spending and budget deficits for the period before the commodity boom (1987-99), and then looked at the impact of increasing commodity prices and improving terms of trade on public revenue management during the period 2000-06[7].

The study provides grounds for optimism about the overall macroeconomic policy response to commodity booms by countries in both Africa and Latin America. Fiscal control increased in a number of countries, suggesting a more strongly counter-cyclical policy stance. What is more, commodity-exporting countries have secured clear benefits – albeit still short-term ones – from the current boom, which has helped to broaden their client bases, enabling them to retire costly debt and improve their credit profile, while increasing foreign exchange reserves and reducing financial vulnerability. In contrast with earlier booms most countries have respected the Guidotti-Greenspan rule, maintaining high levels of official foreign exchange reserves as a proportion of their short-term foreign debt.

There were early signs of optimism too in the national responses to other potentially negative effects of the boom. Prudent macroeconomic management appeared to be mitigating the effects of Dutch disease (upward pressure on exchange rates, depressing the competitiveness of non-commodity exports), and increased, the so called, Leamer's corner solutions (increasing reliance on a small number of export products, especially commodities with little value added).



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# THE ROLES OF CENTRAL AND SUB-NATIONAL GOVERNMENTS

Good data covering sub-national government – at all its levels – are critical to proper fiscal analysis, for at least three reasons.

First, decentralisation of fiscal responsibilities itself requires monitoring. Tanzi (1995), for example, argued that decentralisation has the potential to increase the efficiency with which public resources are allocated, since sub-national governments – being closer to the community – may have better information about their preferences. Such advantages must be tested against possible disadvantages, such as the risk of sub-national governments being more susceptible to capture by local elites (Bardhan, 1997).

A second rationale for looking separately at sub-national governments is that they typically have less flexibility to engage in discretionary fiscal policy than central government. The relative share of central and sub-national governments in the economy thus plays a role in the volatility of fiscal policy in a country.



Finally, tracking only central government revenues and expenditures would provide an incomplete picture. Some reductions in central government expenditure, for example, reflect not contractionary fiscal policy but the reassignment of responsibilities to another layer of government.

The balance of expenditure between central and sub-national governments varies greatly between countries and good data on both are necessary for any analysis of fiscal policy

Table 2.4 compares revenue and expenditure (as shares of GDP) at the central and sub-national government levels for Latin American and OECD countries. The comparison is provided for all countries in the two groups, and then separately for federal countries where one would expect sub-national governments to be relatively larger. In order accurately to judge the degree of sub-national government autonomy, revenues and expenditures should include only resources mobilised and spent at that level; that is, "own" revenues and expenditures. This means, in particular, transfers from central to sub-national governments should be excluded. Moreover, such transfers should certainly not be double counted – once as central government expenditure and again as sub-national government revenue. For greater transparency, the size of intra-governmental transfers itself (as a share of GDP) is reported independently.

Table 2.4 demonstrates that sub-national governments in Latin America are smaller than their OECD counterparts, both with respect to the size of the economy and relative to their central governments. As a share of GDP, revenues and expenditures are lower at all levels of government in Latin America than in OECD countries. What is more, the share of sub-national government revenue and expenditure as a proportion of total public revenue and expenditure is much lower in Latin America. Over the period 1990-2006 sub-national government expenditures were equal to 23 per cent of central government expenditures in Latin America and 41 per cent in OECD countries, and the equivalent ratios for revenues were virtually identical.

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## Table 2.4. Sub-national Governments, Latin America and OECD Countries

(Regional averages, percentages)

| | | All countries | | | | Federal countries[a] | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Region | 1990-2006 | 1990-94 | 1995-99 | 2000-06 | 1990-2006 | 1990-94 | 1995-99 | 2000-06 |
| Sub-national government expenditure/GDP[b] | Latin America | 4.27 | 3.28 | 6.13 | 5.42 | 10.11 | 9.19 | 10.50 | 9.67 |
| | OECD | 13.96 | 14.66 | 14.02 | 14.06 | 19.56 | 20.29 | 20.66 | 18.57 |
| Central government expenditure/GDP | Latin America | 18.36 | 16.08 | 17.30 | 20.51 | 19.07 | 18.60 | 17.84 | 16.89 |
| | OECD | 34.18 | 35.26 | 34.32 | 33.20 | 27.72 | 28.01 | 28.53 | 26.98 |
| Sub-national government revenue/GDP[b] | Latin America | 4.51 | 3.86 | 7.36 | 6.73 | 10.82 | 9.81 | 11.27 | 10.59 |
| | OECD | 13.57 | 14.08 | 13.46 | 13.87 | 16.12 | 15.79 | 16.60 | 16.35 |
| Central government revenue/GDP | Latin America | 18.68 | 16.99 | 17.98 | 20.22 | 16.95 | 16.75 | 16.77 | 15.12 |
| | OECD | 33.77 | 32.76 | 33.52 | 33.73 | 26.56 | 25.84 | 27.18 | 26.58 |
| Intra-governmental transfers/GDP[c] | Latin America | 1.77 | 1.47 | 2.53 | 2.68 | 2.80 | 2.50 | 2.98 | 1.80 |
| | OECD | 5.07 | 5.72 | 5.30 | 4.87 | 4.60 | 3.97 | 4.86 | 4.84 |

*Notes*:

*a)* Latin American federal countries with available data are Argentina, Brazil and Mexico. OECD federal countries include Australia, Austria, Belgium, Canada, Germany, Mexico, Switzerland and the United States.

*b)* Sub-national revenue and expenditure are extracted from sub-national government data.

*c)* Intra-governmental transfers are defined as consolidated central government current and capital transfers to sub-national government units.

*Source:* OECD Development Centre calculations based on the IMF Government Finance Statistics database.

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Sub-national governments in even the most federal countries in Latin America handle less of total government expenditure than do typical counterparts in the OECD

Sub-national governments are, as might be expected, larger in federal countries. Federal countries in Latin America have much greater local expenditure relative to central-government expenditure than the regional average: sub-national government expenditure is about half of central-government expenditure in Argentina, Brazil and Mexico, against an average of only about a quarter for all Latin American countries. Those in Latin America, however, remain smaller in both absolute and relative terms than their federal OECD counterparts. Sub-national government expenditure in federal OECD countries is equal to 71 per cent of central-government expenditure. In highly federal Canada sub-national government expenditure actually exceeds that of central government.

The share of revenues of sub-national governments over the period was larger than their share of expenditure. Sub-national government revenues were 63 per cent of central government revenues in federal Latin America, virtually the same as in federal OECD countries. Here again, Canada shows itself to be the most devolved of the federal OECD countries: provincial governments' revenues were almost 50 per cent greater than federal government revenue over the period.

Intra-governmental transfers were smaller (as a share of GDP) in Latin America than in the OECD, but their importance has been increasing. Such transfers rose from 1.5 per cent of GDP in Latin America in the early 1990s, to 2.7 per cent of GDP in the 21st century. This contrasts with falling intra-governmental transfers in OECD countries, which declined from 5.7 per cent of GDP in the early 1990s to 4.9 per cent in the period since 2000.

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# CONCLUSIONS

The image of Latin America as a region of fiscal irresponsibility, whether deliberate or accidental, is out of date. By any measure a new maturity is evident, making itself seen in improved fiscal discipline almost throughout the region. Deficits are falling and difficult – and often long delayed – fiscal reforms are starting to get underway. Perhaps the strongest, and certainly the most topical, is the reaction to the macroeconomic bonanza of recent years which has been accompanied by policies less pro-cyclical than might have been expected on historical evidence.

This discipline and the relatively small size of tax revenues relative to the local economies combine to give Latin American countries an opportunity in fiscal policy that few of their OECD peers enjoy. The remainder of this *Outlook* examines how the two sides of fiscal policy – both revenue and expenditure – can support growth, development and inclusiveness. It starts by looking at how the region is seen by one external constituency, the financial markets.



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# STATISTICAL ANNEX

## Methodological Note

### Sources and coverage

The principal sources of data are:

- OECD General Government National Accounts Data, a data compiled by the OECD Statistics Directorate;
- Revenue Statistics 1965-2006 (2007), a publication of the Centre for Tax Policy and Administration;
- the OECD Development Centre Latin American Revenue Statistics database;
- the ECLAC ILPES database on public finances in Latin America; and finally
- IMF Government Finance Statistics database (GFS).

These sources have been combined and complemented as indicated in the text.



The sources listed are based on two different statistical systems: IMF Government Finance Statistics and the System of National Accounts (SNA) manual. Although the two are very similar, even in structure, there are noteworthy differences between the two. Of these the most important is a conceptual one. The SNA is designed to offer a wide macroeconomic perspective of activity looking on supply, demand and income balances. It views government as only one of the sectors of the national economy. The GFS, on the other hand, has been designed to focus on the measurement of government transactions in detail. For more information see Appendix 3 of GFS which describes the relationship between the GFS system and the SNA.

The 30 OECD member countries included are: Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. Latin America is represented by 18 countries: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela.

Mexico is included in both groups and the source used in this case is the ECLAC ILPES database for homogeneity purposes[8]. For comparability it has been necessary to adjust ECLAC ILPES data in respect of the treatment of fees levied on hydrocarbon production, which account for nearly half of Mexican government revenues. The Mexican government does not consider these taxes although they are classified as such in the OECD Revenue Statistics.

In Tables 2.1, 2.2 and 2.3, Latin American countries have been divided into two groups: upper middle-income and lower middle-income, following the World Bank classification of economies by gross national income (GNI) per head (2006). The World Bank thresholds are low income, USD 905 or less; lower middle-income, USD 906 to USD 3 595; upper middle-income, USD 3 596 to USD 11 115; and high income, USD 11 116 or more (in effect until 1 July 2008).

The institutional coverage in OECD data is mainly at the general government level. For Latin America data coverage uses the largest institutional unit available (non-financial public sector, general government or central government).

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## Compilation Methods and Classification Criteria

Tables in the body text indicate relevant sources and definitions; however, it is worth summarising some of the more important ones.

Primary surplus for OECD countries excludes the impact of gross interest payments on the financial balance. The *OECD Economic Outlook* however, in its primary surplus calculations, excludes the impact of net (rather than gross) interest payments, giving a slightly different result. Tax revenues for both sets of countries include social security contributions. Direct taxes are defined as taxes on income profits, capital profits, property and payroll and workforce. International trade taxes include customs and import duties, taxes on exports and other taxes in international trade. Government consumption for Latin American countries is the sum of expenditures on wages and salaries plus purchases of goods and services. Transfers in OECD countries include social benefits (other than social transfers in-kind), other current transfers and capital transfers.

Capital expenditure in OECD countries is defined by acquisitions less disposals of non-produced non-financial assets, plus gross capital formation and acquisitions less disposals of non-produced non-financial assets. Finally, interest on public debt for OECD countries has been equated to consolidated interest payable by general government, a measure which consists almost entirely of interest on public debt.



Volatilities have been calculated as the standard deviation of year-on-year differences.

In Table 2.4 countries are presented in two groups: the first includes all countries covered in earlier tables, and the second only those with a federal structure. The data source for Table 2.4 is the IMF Government Finance Statistics database. Accrual data have been used in preference to cash data when available.

Sub-national revenue and expenditure are extracted from sub-national government data. Intra-governmental transfers are defined as consolidated central government current and capital transfers to sub-national government units.

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**Table 2.A1. The Size of Government, Latin American Countries**[a]
(Country averages[b], percentages)

| Upper middle-income countries[c] | | 1990-2006 | 1990-94 | 1995-99 | 2000-06 |
|---|---|---|---|---|---|
| Argentina | Fiscal balance/GDP | -1.55 | -1.66 | -2.89 | -0.51 |
| | Fiscal balance/Total revenue | -7.32 | -8.49 | -12.43 | -2.85 |
| | Primary balance/GDP | 0.84 | -0.02 | -0.45 | 2.37 |
| | Primary balance/Total revenue | 2.57 | -1.01 | -1.96 | 8.36 |
| | Total revenue/GDP | 24.38 | 22.27 | 23.27 | 26.68 |
| | Primary expenditure/GDP | 23.54 | 22.29 | 23.72 | 24.31 |
| | Total expenditure/GDP | 25.93 | 23.93 | 26.16 | 27.19 |
| Brazil | Fiscal balance/GDP | -4.51 | | -5.52 | -4.17 |
| | Fiscal balance/Total revenue | -13.44 | | -17.53 | -12.08 |
| | Primary balance/GDP | 2.65 | | 1.34 | 3.09 |
| | Primary balance/Total revenue | 7.74 | | 4.25 | 8.90 |
| | Total revenue/GDP | 33.80 | | 31.49 | 34.57 |
| | Primary expenditure/GDP | 31.14 | | 30.15 | 31.48 |
| | Total expenditure/GDP | 38.30 | | 37.01 | 38.74 |
| Chile | Fiscal balance/GDP | 1.47 | 0.96 | 0.59 | 2.33 |
| | Fiscal balance/Total revenue | 3.78 | 2.88 | 1.80 | 5.59 |
| | Primary balance/GDP | 3.08 | 3.27 | 2.13 | 3.67 |
| | Primary balance/Total revenue | 8.63 | 9.80 | 6.83 | 9.42 |
| | Total revenue/GDP | 33.43 | 33.34 | 30.65 | 35.46 |
| | Primary expenditure/GDP | 30.36 | 30.06 | 28.52 | 31.80 |
| | Total expenditure/GDP | 31.96 | 32.38 | 30.06 | 33.14 |
| Costa Rica | Fiscal balance/GDP | -1.43 | -1.32 | -1.45 | -1.50 |
| | Fiscal balance/Total revenue | -6.31 | -6.52 | -6.37 | -6.12 |
| | Primary balance/GDP | 2.24 | 1.57 | 2.49 | 2.54 |
| | Primary balance/Total revenue | 9.39 | 7.01 | 10.73 | 10.14 |
| | Total revenue/GDP | 23.36 | 21.46 | 23.13 | 24.88 |
| | Primary expenditure/GDP | 21.12 | 19.88 | 20.64 | 22.33 |
| | Total expenditure/GDP | 24.79 | 22.78 | 24.58 | 26.38 |
| Mexico[c] | Fiscal balance/GDP | -0.10 | 0.92 | -0.57 | -0.51 |
| | Fiscal balance/Total revenue | -0.78 | 3.84 | -2.94 | -2.53 |
| | Primary balance/GDP | 2.83 | 5.08 | 2.33 | 1.59 |
| | Primary balance/Total revenue | 12.95 | 21.89 | 11.46 | 7.62 |
| | Total revenue/GDP | 21.11 | 22.73 | 20.07 | 20.70 |
| | Primary expenditure/GDP | 18.28 | 17.59 | 17.78 | 19.12 |
| | Total expenditure/GDP | 21.21 | 21.74 | 20.68 | 21.22 |
| Panama | Fiscal balance/GDP | -1.68 | -0.58 | -1.59 | -2.52 |
| | Fiscal balance/Total revenue | -11.13 | -5.35 | -9.71 | -16.28 |
| | Primary balance/GDP | 1.98 | 2.60 | 1.71 | 1.72 |
| | Primary balance/Total revenue | 10.91 | 13.55 | 10.23 | 9.50 |
| | Total revenue/GDP | 16.76 | 17.18 | 16.54 | 16.62 |
| | Primary expenditure/GDP | 14.79 | 14.58 | 14.84 | 14.90 |
| | Total expenditure/GDP | 18.44 | 17.75 | 18.14 | 19.14 |



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| Upper middle-income countries[c] | | 1990-2006 | 1990-94 | 1995-99 | 2000-06 |
|---|---|---|---|---|---|
| Uruguay | Fiscal balance/GDP | -1.64 | -0.55 | -1.48 | -2.23 |
| | Fiscal balance/Total revenue | -5.54 | -1.98 | -4.97 | -7.48 |
| | Primary balance/GDP | 1.10 | 0.72 | 0.00 | 2.05 |
| | Primary balance/Total revenue | 3.78 | 2.42 | 0.03 | 7.04 |
| | Total revenue/GDP | 29.44 | 28.97 | 29.61 | 29.52 |
| | Primary expenditure/GDP | 28.39 | 28.25 | 29.61 | 27.57 |
| | Total expenditure/GDP | 31.13 | 29.53 | 31.09 | 31.85 |
| Venezuela | Fiscal balance/GDP | -1.44 | -5.86 | 0.23 | 0.52 |
| | Fiscal balance/Total revenue | -5.96 | -20.37 | -1.16 | 0.91 |
| | Primary balance/GDP | 2.68 | -1.14 | 4.39 | 4.19 |
| | Primary balance/Total revenue | 7.76 | -3.89 | 12.99 | 12.35 |
| | Total revenue/GDP | 30.82 | 28.80 | 29.74 | 33.03 |
| | Primary expenditure/GDP | 28.14 | 29.93 | 25.35 | 28.84 |
| | Total expenditure/GDP | 32.26 | 34.66 | 29.51 | 32.52 |
| **Lower middle-income countries[c]** | | **1990-2006** | **1990-94** | **1995-99** | **2000-06** |
| Bolivia | Fiscal balance/GDP | -3.98 | -4.41 | -3.02 | -4.37 |
| | Fiscal balance/Total revenue | -13.33 | -13.83 | -9.72 | -15.56 |
| | Primary balance/GDP | -1.57 | -1.25 | -1.13 | -2.12 |
| | Primary balance/Total revenue | -5.59 | -3.97 | -3.61 | -8.17 |
| | Total revenue/GDP | 31.42 | 32.05 | 31.09 | 31.21 |
| | Primary expenditure/GDP | 33.00 | 33.31 | 32.22 | 33.33 |
| | Total expenditure/GDP | 35.41 | 36.46 | 34.11 | 35.58 |
| Colombia | Fiscal balance/GDP | -1.43 | 0.26 | -2.24 | -2.06 |
| | Fiscal balance/Total revenue | -4.76 | 1.19 | -7.93 | -6.75 |
| | Primary balance/GDP | 2.05 | 3.20 | 1.18 | 1.84 |
| | Primary balance/Total revenue | 8.43 | 15.74 | 4.53 | 5.99 |
| | Total revenue/GDP | 26.68 | 20.36 | 27.52 | 30.59 |
| | Primary expenditure/GDP | 24.63 | 17.16 | 26.33 | 28.75 |
| | Total expenditure/GDP | 28.11 | 20.10 | 29.75 | 32.65 |
| Dominican Republic | Fiscal balance/GDP | -1.69 | | -0.94 | -2.22 |
| | Fiscal balance/Total revenue | -12.44 | | -7.65 | -15.87 |
| | Primary balance/GDP | -0.70 | | -0.29 | -1.00 |
| | Primary balance/Total revenue | -5.23 | | -2.26 | -7.35 |
| | Total revenue/GDP | 13.54 | | 12.25 | 14.46 |
| | Primary expenditure/GDP | 13.83 | | 12.61 | 14.70 |
| | Total expenditure/GDP | 14.82 | | 13.27 | 15.92 |
| Ecuador | Fiscal balance/GDP | -0.48 | -0.40 | -3.25 | 1.43 |
| | Fiscal balance/Total revenue | -3.05 | -1.74 | -16.41 | 5.57 |
| | Primary balance/GDP | 3.71 | 4.34 | 1.42 | 4.90 |
| | Primary balance/Total revenue | 15.27 | 18.25 | 6.43 | 19.46 |
| | Total revenue/GDP | 23.33 | 23.57 | 20.60 | 25.11 |
| | Primary expenditure/GDP | 19.61 | 19.23 | 19.18 | 20.20 |
| | Total expenditure/GDP | 23.81 | 23.97 | 23.85 | 23.67 |



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| Lower middle-income countries[c] | | 1990-2006 | 1990-94 | 1995-99 | 2000-06 |
|---|---|---|---|---|---|
| El Salvador | Fiscal balance/GDP | -2.04 | -2.00 | -1.96 | -2.12 |
| | Fiscal balance/Total revenue | -12.90 | -12.34 | -12.62 | -13.50 |
| | Primary balance/GDP | -0.11 | 0.28 | -0.40 | -0.19 |
| | Primary balance/Total revenue | -0.95 | 1.68 | -2.78 | -1.53 |
| | Total revenue/GDP | 16.07 | 16.26 | 15.92 | 16.05 |
| | Primary expenditure/GDP | 16.18 | 15.97 | 16.32 | 16.24 |
| | Total expenditure/GDP | 18.11 | 18.25 | 17.88 | 18.17 |
| Guatemala | Fiscal balance/GDP | -1.52 | -1.26 | -1.39 | -1.79 |
| | Fiscal balance/Total revenue | -13.36 | -13.35 | -11.90 | -14.42 |
| | Primary balance/GDP | -0.23 | -0.02 | -0.20 | -0.39 |
| | Primary balance/Total revenue | -1.91 | -0.83 | -1.21 | -3.17 |
| | Total revenue/GDP | 11.32 | 9.95 | 11.13 | 12.44 |
| | Primary expenditure/GDP | 11.55 | 9.98 | 11.33 | 12.84 |
| | Total expenditure/GDP | 12.84 | 11.21 | 12.52 | 14.24 |
| Honduras | Fiscal balance/GDP | -3.44 | -4.83 | -2.12 | -3.39 |
| | Fiscal balance/Total revenue | -21.90 | -32.17 | -13.71 | -20.42 |
| | Primary balance/GDP | -1.15 | -1.49 | 0.66 | -2.20 |
| | Primary balance/Total revenue | -7.17 | -10.00 | 4.25 | -13.30 |
| | Total revenue/GDP | 16.04 | 15.12 | 15.74 | 16.90 |
| | Primary expenditure/GDP | 17.19 | 16.61 | 15.08 | 19.10 |
| | Total expenditure/GDP | 19.47 | 19.94 | 17.85 | 20.29 |
| Nicaragua | Fiscal balance/GDP | -2.29 | -2.95 | -1.44 | -2.42 |
| | Fiscal balance/Total revenue | -12.30 | -22.01 | -5.88 | -9.95 |
| | Primary balance/GDP | -0.11 | -1.30 | 1.18 | -0.18 |
| | Primary balance/Total revenue | -3.39 | -14.45 | 4.96 | -1.45 |
| | Total revenue/GDP | 24.10 | 19.99 | 24.31 | 26.88 |
| | Primary expenditure/GDP | 24.20 | 21.28 | 23.13 | 27.06 |
| | Total expenditure/GDP | 26.38 | 22.93 | 25.75 | 29.30 |
| Paraguay | Fiscal balance/GDP | 0.74 | 2.58 | -0.31 | 0.16 |
| | Fiscal balance/Total revenue | 2.72 | 9.35 | -0.76 | 0.46 |
| | Primary balance/GDP | 0.40 | 1.84 | -0.94 | 0.32 |
| | Primary balance/Total revenue | 2.90 | 13.02 | -5.32 | 1.55 |
| | Total revenue/GDP | 31.34 | 27.53 | 31.44 | 34.00 |
| | Primary expenditure/GDP | 30.61 | 24.95 | 31.75 | 33.84 |
| | Total expenditure/GDP | 30.61 | 24.95 | 31.75 | 33.84 |
| Peru | Fiscal balance/GDP | -2.24 | -4.07 | -1.77 | -1.27 |
| | Fiscal balance/Total revenue | -13.75 | -26.75 | -9.65 | -7.40 |
| | Primary balance/GDP | 0.75 | 0.72 | 0.69 | 0.81 |
| | Primary balance/Total revenue | 4.06 | 4.36 | 3.58 | 4.20 |
| | Total revenue/GDP | 17.63 | 15.99 | 18.68 | 18.05 |
| | Primary expenditure/GDP | 16.88 | 15.28 | 17.99 | 17.24 |
| | Total expenditure/GDP | 19.87 | 20.07 | 20.45 | 19.32 |

*Notes:*

*a)* In Latin America coverage corresponds to the non-financial public sector where possible, otherwise uses the widest measure available; *b)* Country averages do not add up to regional averages owing to incomplete information. *c)* Following the World Bank categorisation, the upper middle-income countries are Argentina, Brazil, Chile, Costa Rica, Mexico, Panama, Uruguay and Venezuela. The lower middle-income group comprises Bolivia, Colombia, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Paraguay and Peru; *d)* Data source for Mexico is ECLAC ILPES database.

*Source:* OECD Development Centre calculations based on the ECLAC ILPES Public Finance database.

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**Table 2.A2. Analysis of Government Revenues, Latin American Countries**[a]
(Country averages[b], percentages)

| Upper middle-income countries[c] | | 1990-2006 | 1990-94 | 1995-99 | 2000-06 |
|---|---|---|---|---|---|
| Argentina | Non-tax revenue/Total revenue | 11.21 | 8.10 | 11.94 | 12.92 |
| | Tax revenue/GDP | 21.67 | 19.82 | 20.57 | 23.77 |
| | Direct taxes/Tax revenue | 22.94 | 16.48 | 20.23 | 29.48 |
| | Individual income tax/Tax revenue | 4.23 | 1.58 | 4.62 | 5.85 |
| | Indirect taxes/Tax revenue | 58.18 | 57.56 | 60.54 | 56.94 |
| | International trade taxes/Tax revenue | 6.84 | 6.16 | 4.33 | 9.12 |
| Brazil | Non-tax revenue/Total revenue | 14.35 | | 17.71 | 13.23 |
| | Tax revenue/GDP | 28.78 | 26.24 | 27.12 | 31.78 |
| | Direct taxes/Tax revenue | 26.79 | 24.51 | 26.77 | 28.43 |
| | Individual income tax/Tax revenue | 5.09 | 0.83 | 7.33 | 6.52 |
| | Indirect taxes/Tax revenue | 48.69 | 50.62 | 47.72 | 48.00 |
| | International trade taxes/Tax revenue | 1.87 | 1.65 | 2.31 | 1.70 |
| Chile | Non-tax revenue/Total revenue | 20.69 | 22.38 | 18.89 | 20.77 |
| | Tax revenue/GDP | 18.87 | 18.36 | 18.79 | 19.29 |
| | Direct taxes/Tax revenue | 29.50 | 25.34 | 28.21 | 33.39 |
| | Individual income tax/Tax revenue | 6.49 | | 6.30 | 6.63 |
| | Indirect taxes/Tax revenue | 63.03 | 66.57 | 64.78 | 59.26 |
| | International trade taxes/Tax revenue | 7.74 | 11.46 | 9.31 | 3.96 |
| Costa Rica | Non-tax revenue/Total revenue | 20.44 | 20.06 | 20.87 | 20.40 |
| | Tax revenue/GDP | 18.13 | 16.82 | 17.64 | 19.42 |
| | Direct taxes/Tax revenue | 20.89 | 18.94 | 20.39 | 22.64 |
| | Individual income tax/Tax revenue | 0.64 | 0.14 | 0.12 | 1.94 |
| | Indirect taxes/Tax revenue | 52.32 | 54.34 | 52.28 | 50.91 |
| | International trade taxes/Tax revenue | 9.24 | 15.36 | 9.83 | 4.45 |
| Mexico[d] | Non-tax revenue/Total revenue | 38.29 | 43.47 | 39.13 | 34.00 |
| | Tax revenue/GDP | 17.47 | 16.38 | 16.37 | 19.02 |
| | Direct taxes/Tax revenue | 30.96 | 34.48 | 30.25 | 28.95 |
| | Indirect taxes/Tax revenue | 52.44 | 49.43 | 52.59 | 54.47 |
| | International trade taxes/Tax revenue | 0.94 | 0.03 | 0.01 | 2.26 |
| Panama | Non-tax revenue/Total revenue | 40.51 | 37.57 | 36.50 | 45.47 |
| | Tax revenue/GDP | 14.99 | 14.56 | 15.83 | 14.69 |
| | Direct taxes/Tax revenue | 30.50 | 31.51 | 29.35 | 30.61 |
| | Individual income tax/Tax revenue | 1.29 | 1.41 | 1.22 | 1.25 |
| | Indirect taxes/Tax revenue | 29.65 | 32.28 | 28.76 | 28.41 |
| | International trade taxes/Tax revenue | 15.53 | 16.92 | 16.61 | 13.76 |



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| Upper middle-income countries[c] | | 1990-2006 | 1990-94 | 1995-99 | 2000-06 |
|---|---|---|---|---|---|
| Uruguay | Non-tax revenue/Total revenue | 14.76 | 12.34 | 17.00 | 14.88 |
| | Tax revenue/GDP | 23.11 | 23.05 | 23.18 | 23.10 |
| | Direct taxes/Tax revenue | 14.97 | 10.69 | 14.64 | 18.26 |
| | Individual income tax/Tax revenue | 0.39 | 0.41 | 0.39 | 0.37 |
| | Indirect taxes/Tax revenue | 52.06 | 52.02 | 50.57 | 53.14 |
| | International trade taxes/Tax revenue | 6.08 | 8.43 | 4.70 | 5.40 |
| Venezuela | Non-tax revenue/Total revenue | 69.15 | 76.20 | 64.49 | 67.44 |
| | Tax revenue/GDP | 14.52 | 16.03 | 14.47 | 13.48 |
| | Direct taxes/Tax revenue | 51.61 | 71.81 | 45.54 | 41.52 |
| | Indirect taxes/Tax revenue | 43.38 | 22.43 | 50.19 | 53.49 |
| | International trade taxes/Tax revenue | 9.90 | 11.56 | 10.65 | 8.19 |
| **Lower middle-income countries[c]** | | **1990-2006** | **1990-94** | **1995-99** | **2000-06** |
| Bolivia | Non-tax revenue/Total revenue | 57.38 | 73.60 | 55.74 | 46.98 |
| | Tax revenue/GDP | 15.08 | 11.61 | 15.55 | 17.21 |
| | Direct taxes/Tax revenue | 12.85 | 12.87 | 11.59 | 13.74 |
| | Individual income tax/Tax revenue | 2.67 | 4.38 | 2.66 | 1.45 |
| | Indirect taxes/Tax revenue | 66.18 | 68.40 | 65.55 | 65.05 |
| | International trade taxes/Tax revenue | 8.89 | 12.23 | 9.22 | 6.27 |
| Colombia | Non-tax revenue/Total revenue | 44.67 | 39.87 | 44.17 | 48.45 |
| | Tax revenue/GDP | 14.79 | 11.67 | 14.97 | 16.88 |
| | Direct taxes/Tax revenue | 32.88 | 33.42 | 28.32 | 35.74 |
| | Indirect taxes/Tax revenue | 50.36 | 52.59 | 48.34 | 50.22 |
| | International trade taxes/Tax revenue | 6.36 | 8.28 | 6.01 | 5.24 |
| Dominican Republic | Non-tax revenue/Total revenue | 6.25 | | 6.10 | 6.37 |
| | Tax revenue/GDP | 11.48 | 9.41 | 11.29 | 13.11 |
| | Direct taxes/Tax revenue | 24.88 | 24.31 | 22.66 | 26.87 |
| | Individual income tax/Tax revenue | 6.11 | | | 6.11 |
| | Indirect taxes/Tax revenue | 73.44 | 73.06 | 75.30 | 72.38 |
| | International trade taxes/Tax revenue | 27.89 | 31.68 | 29.83 | 23.81 |
| Ecuador | Non-tax revenue/Total revenue | 35.83 | 47.13 | 35.03 | 28.33 |
| | Tax revenue/GDP | 11.05 | 9.52 | 9.68 | 13.12 |
| | Direct taxes/Tax revenue | 16.45 | 14.11 | 16.53 | 18.08 |
| | Indirect taxes/Tax revenue | 59.41 | 56.63 | 60.72 | 60.47 |
| | International trade taxes/Tax revenue | 17.40 | 19.01 | 22.08 | 12.91 |
| El Salvador | Non-tax revenue/Total revenue | 22.49 | 30.40 | 22.33 | 16.95 |
| | Tax revenue/GDP | 12.45 | 11.32 | 12.34 | 13.33 |
| | Direct taxes/Tax revenue | 25.71 | 24.40 | 25.45 | 26.82 |
| | Indirect taxes/Tax revenue | 60.21 | 62.26 | 59.04 | 59.58 |
| | International trade taxes/Tax revenue | 11.30 | 15.04 | 11.91 | 8.20 |



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| Lower middle-income countries[c] | | 1990-2006 | 1990-94 | 1995-99 | 2000-06 |
|---|---|---|---|---|---|
| Guatemala | Non-tax revenue/Total revenue | 8.79 | 15.38 | 6.55 | 5.67 |
| | Tax revenue/GDP | 11.56 | 8.92 | 11.54 | 13.46 |
| | Direct taxes/Tax revenue | 22.31 | 24.39 | 19.81 | 22.61 |
| | Individual income tax/Tax revenue | 1.69 | | 1.20 | 1.75 |
| | Indirect taxes/Tax revenue | 66.61 | 72.74 | 65.57 | 62.98 |
| | International trade taxes/Tax revenue | 14.81 | 21.23 | 14.75 | 10.28 |
| Honduras | Non-tax revenue/Total revenue | 15.50 | 14.80 | 14.78 | 16.52 |
| | Tax revenue/GDP | 14.23 | 13.33 | 13.66 | 15.29 |
| | Direct taxes/Tax revenue | 25.38 | 25.84 | 27.74 | 23.36 |
| | Individual income tax/Tax revenue | 6.44 | 7.29 | 6.25 | 5.97 |
| | Indirect taxes/Tax revenue | 70.61 | 69.49 | 68.56 | 72.88 |
| | International trade taxes/Tax revenue | 18.42 | 31.19 | 19.36 | 8.63 |
| Nicaragua | Non-tax revenue/Total revenue | 30.51 | 34.04 | 32.83 | 26.33 |
| | Tax revenue/GDP | 16.60 | 13.32 | 16.39 | 19.10 |
| | Direct taxes/Tax revenue | 15.74 | 14.62 | 12.16 | 19.08 |
| | Indirect taxes/Tax revenue | 66.80 | 69.68 | 70.21 | 62.32 |
| | International trade taxes/Tax revenue | 16.90 | 18.66 | 24.14 | 10.48 |
| Paraguay | Non-tax revenue/Total revenue | 29.02 | 27.43 | 26.71 | 31.82 |
| | Tax revenue/GDP | 11.82 | 10.36 | 12.69 | 12.23 |
| | Direct taxes/Tax revenue | 16.87 | 16.61 | 18.69 | 15.76 |
| | Indirect taxes/Tax revenue | 63.93 | 49.49 | 68.04 | 71.31 |
| | International trade taxes/Tax revenue | 17.93 | 20.02 | 19.21 | 15.52 |
| Peru | Non-tax revenue/Total revenue | 12.64 | 3.04 | 15.72 | 17.30 |
| | Tax revenue/GDP | 14.63 | 13.69 | 15.47 | 14.71 |
| | Direct taxes/Tax revenue | 25.59 | 20.01 | 25.56 | 29.60 |
| | Individual income tax/Tax revenue | 6.08 | 2.89 | 6.66 | 7.95 |
| | Indirect taxes/Tax revenue | 62.71 | 67.34 | 62.84 | 59.32 |
| | International trade taxes/Tax revenue | 9.88 | 12.42 | 10.58 | 7.56 |

*Notes:*

*a)* In Latin America coverage corresponds to the non-financial public sector where possible, otherwise uses the widest measure available.

*b)* Country averages do not add up to regional averages owing to incomplete information.

*c)* Following the World Bank categorisation, the upper middle-income countries are Argentina, Brazil, Chile, Costa Rica, Mexico, Panama, Uruguay and Venezuela. The lower middle-income group comprises Bolivia, Colombia, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Paraguay and Peru.

*d)* Data source for Mexico is ECLAC ILPES database. Non-tax revenues in Mexico have been adjusted to reclassify the fees levied on hydrocarbon production as taxes, in accordance with OECD revenue statistics guidelines.

*Source:* OECD Development Centre calculations based on Chapter 4 of this volume, the ECLAC ILPES Public Finance Database.

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**Table 2.A3. Analysis of Government Expenditures, Latin American Countries**[a]
(Country averages[b], percentages)

| Upper middle-income countries[c] | | 1990-2006 | 1990-94 | 1995-99 | 2000-06 |
|---|---|---|---|---|---|
| Argentina | Government consumption/ Total expenditure[d] | 40.06 | 43.35 | 39.24 | 38.29 |
| | Transfers/Total expenditure | 42.29 | 39.19 | 43.41 | 43.70 |
| | Interest/Total expenditure[e] | 9.06 | 6.89 | 9.28 | 10.46 |
| | Capital expenditure/ Total expenditure | 9.62 | 12.02 | 8.94 | 8.39 |
| Brazil | Government consumption/ Total expenditure[d] | 35.20 | | 35.15 | 35.21 |
| | Transfers/Total expenditure | 17.30 | | 17.00 | 17.40 |
| | Interest/Total expenditure[e] | 18.66 | | 18.55 | 18.69 |
| | Capital expenditure/ Total expenditure | | | | |
| Chile | Government consumption/ Total expenditure[d] | 34.96 | 33.10 | 35.69 | 35.76 |
| | Transfers/Total expenditure | 45.21 | 42.14 | 43.31 | 48.76 |
| | Interest/Total expenditure[e] | 5.02 | 7.13 | 5.16 | 4.02 |
| | Capital expenditure/ Total expenditure | 15.00 | 13.05 | 16.18 | 15.54 |
| Costa Rica | Government consumption/ Total expenditure[d] | 42.71 | 40.90 | 41.46 | 44.90 |
| | Transfers/Total expenditure | 28.94 | 33.85 | 28.63 | 25.66 |
| | Interest/Total expenditure[d] | 14.77 | 12.72 | 16.03 | 15.34 |
| | Capital expenditure/ Total expenditure | 17.15 | 17.79 | 17.60 | 16.39 |
| Mexico | Government consumption/ Total expenditure[d] | 47.18 | 43.38 | 47.73 | 49.50 |
| | Transfers/Total expenditure | 23.68 | 20.63 | 22.91 | 26.42 |
| | Interest/Total expenditure[d] | 13.63 | 18.49 | 13.99 | 9.89 |
| | Capital expenditure/ Total expenditure | 14.20 | 15.07 | 14.36 | 13.46 |
| Panama | Government consumption/ Total expenditure[d] | 37.92 | 40.94 | 40.44 | 35.27 |
| | Transfers/Total expenditure | 25.21 | 24.79 | 25.08 | 25.43 |
| | Interest/Total expenditure[e] | 19.77 | 17.92 | 18.24 | 22.19 |
| | Capital expenditure/ Total expenditure | 13.64 | 11.74 | 14.62 | 14.31 |
| Uruguay | Government consumption/ Total expenditure[d] | 30.76 | 32.94 | 32.64 | 28.47 |
| | Transfers/Total expenditure | 49.20 | 47.95 | 50.04 | 49.14 |
| | Interest/Total expenditure[d] | 8.78 | 4.33 | 4.74 | 13.56 |
| | Capital expenditure/ Total expenditure | 11.27 | 14.78 | 12.58 | 8.82 |
| Venezuela | Government consumption/ Total expenditure[d] | 17.97 | 18.62 | 16.04 | 18.89 |
| | Transfers/Total expenditure | 38.84 | 25.70 | 36.68 | 49.76 |
| | Interest/Total expenditure[e] | 12.90 | 13.81 | 13.96 | 11.51 |
| | Capital expenditure/ Total expenditure | 29.52 | 32.95 | 34.59 | 23.45 |



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| Lower middle-income countries[c] | | 1990-2006 | 1990-94 | 1995-99 | 2000-06 |
|---|---|---|---|---|---|
| Bolivia | Government consumption/ Total expenditure[d] | 49.52 | 52.62 | 53.02 | 44.81 |
| | Transfers/Total expenditure | 16.53 | 8.23 | 17.25 | 21.95 |
| | Interest/Total expenditure[e] | 6.82 | 8.66 | 5.61 | 6.36 |
| | Capital expenditure/ Total expenditure | 24.02 | 24.73 | 22.25 | 24.78 |
| Colombia | Government consumption/ Total expenditure[d] | 29.96 | 33.99 | 27.10 | 29.12 |
| | Transfers/Total expenditure | 24.16 | 19.61 | 26.82 | 25.50 |
| | Interest/Total expenditure[e] | 12.64 | 14.71 | 11.55 | 11.94 |
| | Capital expenditure/ Total expenditure | 26.41 | 31.90 | 29.98 | 19.95 |
| Dominican Republic | Government consumption/ Total expenditure[d] | 36.86 | | 35.00 | 38.18 |
| | Transfers/Total expenditure | 32.93 | | 30.97 | 34.33 |
| | Interest/Total expenditure[e] | 6.53 | | 5.00 | 7.62 |
| | Capital expenditure/ Total expenditure | 31.59 | | 35.34 | 28.92 |
| Ecuador | Government consumption/ Total expenditure[d] | 40.57 | 38.34 | 38.07 | 43.95 |
| | Transfers/Total expenditure | 19.59 | 23.27 | 15.34 | 20.00 |
| | Interest/Total expenditure[e] | 17.53 | 19.68 | 19.46 | 14.62 |
| | Capital expenditure/ Total expenditure | 24.43 | 27.04 | 24.24 | 22.70 |
| El Salvador | Government consumption/ Total expenditure[d] | 49.69 | 49.89 | 52.84 | 47.29 |
| | Transfers/Total expenditure | 10.87 | 10.08 | 11.37 | 11.06 |
| | Interest/Total expenditure[e] | 10.63 | 12.41 | 8.76 | 10.69 |
| | Capital expenditure/ Total expenditure | 21.39 | 23.65 | 22.07 | 19.28 |
| Guatemala | Government consumption/ Total expenditure[d] | 39.48 | 48.14 | 36.22 | 35.63 |
| | Transfers/Total expenditure | 35.38 | 27.53 | 31.64 | 43.68 |
| | Interest/Total expenditure[e] | 10.16 | 11.17 | 9.61 | 9.84 |
| | Capital expenditure/ Total expenditure | 29.87 | 23.21 | 33.79 | 31.83 |
| Honduras | Government consumption/ Total expenditure[d] | 53.10 | | | 53.10 |
| | Transfers/Total expenditure | 30.75 | | | 30.75 |
| | Interest/Total expenditure[e] | 11.98 | 16.86 | 15.65 | 5.86 |
| | Capital expenditure/ Total expenditure | 24.60 | 26.81 | 24.50 | 23.09 |
| Nicaragua | Government consumption/ Total expenditure[d] | 40.96 | 55.39 | 31.42 | 37.47 |
| | Transfers/Total expenditure | 15.53 | 4.77 | 11.80 | 25.88 |
| | Interest/Total expenditure[e] | 8.27 | 6.99 | 10.35 | 7.70 |
| | Capital expenditure/ Total expenditure | 27.99 | 23.06 | 38.66 | 23.90 |



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| Lower middle-income countries[c] | | 1990-2006 | 1990-94 | 1995-99 | 2000-06 |
|---|---|---|---|---|---|
| Paraguay | Government consumption/ Total expenditure[d] | 50.39 | 50.21 | 51.76 | 49.54 |
| | Transfers/Total expenditure | 25.31 | 25.56 | 24.82 | 25.48 |
| | Interest/Total expenditure[e] | 6.15 | 8.10 | 3.52 | 6.63 |
| | Capital expenditure/ Total expenditure | 20.11 | 18.52 | 26.27 | 16.86 |
| Peru | Government consumption/ Total expenditure[d] | 42.48 | 34.59 | 43.46 | 47.43 |
| | Transfers/Total expenditure | 24.69 | 21.17 | 22.93 | 28.47 |
| | Interest/Total expenditure[e] | 14.95 | 23.76 | 11.99 | 10.77 |
| | Capital expenditure/ Total expenditure | 18.12 | 18.24 | 22.43 | 14.96 |

*Notes:*

*a)* In Latin America coverage corresponds to the non-financial public sector where possible, otherwise uses the widest measure available.

*b)* Country averages do not add up to regional averages owing to incomplete information.

*c)* Following the World Bank categorisation, the upper middle-income countries are Argentina, Brazil, Chile, Costa Rica, Mexico, Panama, Uruguay and Venezuela. The lower middle-income group comprises Bolivia, Colombia, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Paraguay and Peru.

*d)* Government consumption for Latin America is calculated as the sum of wages and salaries and purchases of goods and services.

*e)* For OECD countries interest payments on public debt are taken as the interest payable in the primary distribution-of-income account for general government.

*Source:* OECD Development Centre calculations based on ECLAC ILPES Public Finance Database.

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# NOTES

1. The classification is made according to the World Bank's categorisation, which divides economies by 2006 gross national income per head using the Atlas method. Lower middle-income countries have incomes between USD 906 and USD 3 595 per head, and upper middle-income economies between USD 3 596 and USD 11 115. No Latin American economies considered systematically in this report have incomes above or below these limits, though Haiti is a low-income country and a number of Caribbean countries are in the high-income category.

2. This stability may be the result of deliberate policy making in some countries: the United Kingdom, for example, has set tax levels in part with an eye to meeting a target revenue/GDP ratio.

3. Gavin and Perotti (1997) found that while a 1 percentage point increase in the GDP growth rate was associated with an increase in the fiscal surplus equivalent to 0.37 percentage points of GDP in industrial countries, there was no measurable effect in Latin America in their regression results. The emphasis on the counter-cyclicality of policy is not to deny that under some circumstances optimal policy is pro-cyclical; see, for example, Caballero *et al.* (2006).



4. This is the variable used by Gavin and Perotti (1997) to measure the volatility of fiscal surpluses, and in Baldini's (2005) study of volatility in the Venezuelan economy. Ideally, one would measure the volatility of the level of expenditures, say, or revenues, rather than of these variables relative to GDP. The approach here yields a noisier measure of volatility, as year-to-year variation in GDP may distort the measured volatility of the underlying variable. The trade-off is that measuring volatility of levels rather than proportions would require controlling for inflation and exchange-rate movements, which would arguably introduce even greater noise, not to mention requiring more statistical data.

5. Based on Avendaño *et al.* (2008).

6. After Hausmann and Gavin (1996) and Gavin and Perotti (1997), it has been argued that pro-cyclicality was present not only in Latin America but in other emerging economies (Talvi and Vegh, 2000; Catão and Sutton, 2002; Kaminsky *et al.*, 2004; Jimenez and Tromben, 2006).

7. Functions were estimated following Alesina and Tabellini (2005), defining a selection and a control group for each region.

8. Nevertheless, in Chapter 4 the source for Mexico's tax revenues is OECD Revenue Statistics 1965-2006.

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CHAPTER THREE

# Public Debt, Political Cycles and Capital Markets

## IMPROVED PUBLIC DEBT MANAGEMENT IN LATIN AMERICA

Management of the public debt is a critical aspect of fiscal policy. Emerging countries – and Latin American economies in particular – are faced with a difficult trade-off. Pressing needs in infrastructure and social spending require public borrowing in order to boost development and economic growth, but "high" levels of debt are notoriously costly. Negative perceptions in the public markets about the management of sovereign debt, or the threat of default, increase the vulnerability of public finances and may even slow economic growth. In this context, seeking optimal fiscal rules and good public debt management are critically important to a country's growth prospects.

This chapter of the *Outlook* analyses how perceptions of public debt by key players in capital markets play a powerful role in the region's sovereign-bond market and how these perceptions in turn depend on public debt management and the credibility of economic policy. Economic policies and fiscal policy in particular are significant to these observers. First, there is the fear that incumbent parties will adopt expansionary economic policies in the lead up to elections. Second, there is the uncertainty about the policies put forward by competing candidates. Both of these concerns can be seen in an analysis of the implications of presidential elections for investment-bank recommendations to investors in public debt.

This chapter shows how governments, political parties and candidates can all affect capital markets' perception of public debt. Governments can do so by providing sound public debt management but all political players have an influence through the perception of the economic policies they champion. Even today, Latin American governments expand fiscal policy around elections and do so to a greater extent than their OECD peers. Pre-election announcements of economic policy also remain an issue in the region. It is dangerous to generalise too widely however and looking at individual countries in the region reveals a varied and complex picture[1].



### Public Debt Management and the Capital Markets

Research on sovereign debt in Latin American is abundant (see IADB, 2006 for an extensive survey). In part this is because Latin American countries are key players in the sovereign debt market – their outstanding external debt represents more than 50 per cent of the emerging market total (measured by the weight of the Latin American countries in the EMBI Global index developed by JPMorgan). In addition, Latin American countries have in recent years been exposed to financial crises in which debt played a prominent part. Finally, public debt management

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policies are very different around the region, which, conveniently – for the researcher at least – provides varied lessons on what to do and not do in the area of public borrowing.

Responsible public debt management requires policy makers to manage the risk factors inherent in their debt portfolio. Foreign currency exposure, the need to roll over short-term maturities and debt indexed to floating interest rates can all present risks if improperly used and not actively managed. Dealing with these risks is extremely difficult given the complex trade-offs they imply[2]. To give a simple example, reducing foreign currency exposure might require higher levels of short-term domestic debt with a higher interest coupon[3].

**High historic levels of external debt have been reduced**

Levels of public debt in Latin America have typically been high relative to other emerging economies, making the region vulnerable to external shocks and refinancing risks. Since 2004 however levels have fallen significantly. While in 2003 the value of public debt in the region exceeded 50 per cent of GDP, it has today been brought down to close to 35 per cent. International conditions during this time have certainly been exceptionally benign. High commodity prices, robust international economic growth and abundant financial liquidity have all contributed to the improvement of sovereign ratios and debt sustainability. Prudent economic policies in many Latin American countries have played their part too, explicitly promoting fiscal discipline and good management of public debt in a context of inflation targeting.

An analysis of structural debt as share of GDP (that is, debt levels adjusted for cyclical fluctuations in output and real exchange rate components, and taking into account structural fiscal balances), however, shows that public debt remains high in Latin America – higher even than levels of structural debt observed at the turn of the millennium (Izquierdo *et al.*, 2008). Latin American economies, therefore, remain vulnerable to adverse shocks.



First, high levels of public debt are naturally associated with higher default risk. But this is particularly true for countries with a record of default and high inflation. History matters and countries with a record of past defaults show a greater propensity to default anew. This has been called "debt intolerance" (Reinhart *et al.*, 2003): a history of default undermines a country's ability to borrow on reasonable terms, and thus some emerging economies are unable to tolerate levels of external debt easily tolerated elsewhere. Results suggest that external debt to gross national product (GNP) thresholds for debt-intolerant countries are relatively low, between 15 and 20 per cent.

Second, the current era of financial globalisation has exposed emerging economies to more crises than did the first era of financial globalisation at the end of the 19th century (Bordo and Eichengreen, 2002). Examples can be found in the many countries in Latin America which have defaulted on or restructured their external debt over the last 30 years[4].

Simple examination of levels of structural public debt, however, masks the considerable efforts Latin American governments have made to improve the composition of that debt. All the major players in the Latin American bond market (Argentina, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Mexico, Panama, Peru, Uruguay and Venezuela) have reduced their foreign currency exposure, thereby reducing currency mismatch problems. This is significant in a region where a major part of debt growth can be attributed in part to balance-sheet effects (Campos *et al.*, 2006). Recent transactions refinancing external debt denominated in foreign currency with domestic debt denominated in local currency have been costly for Latin American countries. This cash cost, however, can be seen as an insurance premium against future currency depreciation[5].

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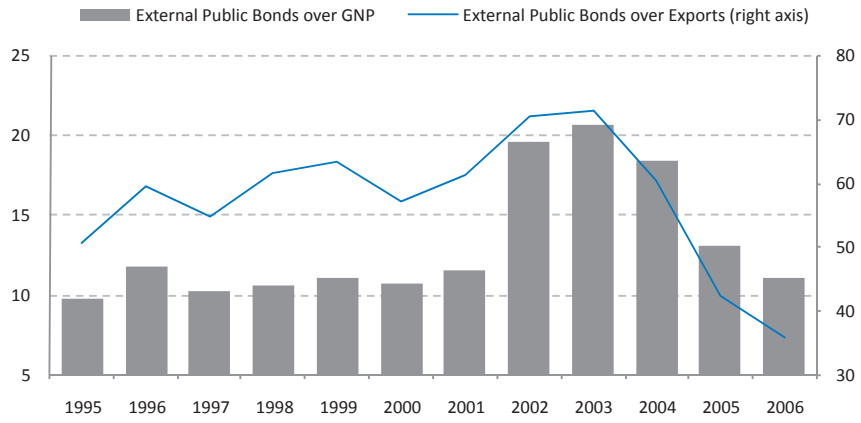
Against this background of favourable international conditions and good public-debt management, Latin American countries have improved the sustainability of their external debt. Figure 3.1 exhibits two common indicators of state solvency: the ratios of external public bonds to GNP and to exports of goods and services. Since 2004 both indicators have decreased significantly for Latin American countries overall. This latter ratio, a powerful determinant of investment-bank sentiment (see Box 3.3), is declining for all the principal players in the Latin American bond market.

**Figure 3.1. External Public Bonds in Latin America**
(Percentages)




*Note:* The Latin American countries covered are Argentina, Brazil, Chile, Colombia, Mexico, Peru, Uruguay and Venezuela.

*Source:* OECD Development Centre calculations based on World Bank (2008), *Global Development Finance* database.
StatLink http://dx.doi.org/10.1787/450175418864



This decline in external debt ratios was partly offset by an increase in domestic debt which, in recent years, has become an increasingly important source of financing in emerging markets[6]. Latin American economies have dedicated considerable energy to reducing foreign currency exposure in favour of local-currency bonds. A collateral benefit has been the deepening of the local bond markets, which Latin American corporations have not been slow to take advantage of.

Favourable international economic conditions have supported a move to more sustainable currency and maturity profiles

Exchange-rate-indexed domestic debt has been considerably reduced, the most impressive case being Brazil, where the share of such debt fell from 37 per cent in the crisis year 2002, to 2.3 per cent at the start of 2006. As a result of this trend, local fixed-income markets and local-currency bonds sold in international markets have become the dominant source of funding for both Latin American sovereigns and corporations. According to the Bank for International Settlements (BIS, 2008), outstanding domestic debt in Latin America rose from USD 200 billion in 1995 to nearly USD 900 billion in 2005. Global investors reallocated part of their portfolios towards these domestic bonds, while local pension funds and other institutional players have also become increasingly important.

This reallocation towards local-currency domestic debt is also bringing about a change in the risk profile of sovereign issuers[7]. Foreign-currency debt is decreasing, though for some this has been at the expense of shorter maturities[8]. Recently, however, some countries have succeeded in securing longer maturities in the domestic market, although liquidity does remain a concern for some of

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these issues. Examples (showing in parentheses the maturity of the debt and the issue date) include Brazil (2045 in 2004), Chile (2028 in 2008), Colombia (2023 in 2007), Mexico (2036 in 2006) and Peru (2037 in 2007). It is not only local investors that have been buying but foreign investors too. In Mexico, for example, investors from outside the country bought 80 per cent of the domestic long-term bonds issued in 2004 by the Mexican government (Castellanos and Martínez, 2006)[9].

Additionally, most Latin American countries have improved the local market framework in line with practice in OECD countries. In particular, technical measures to promote the efficiency of the domestic market, such as restricted number of issues and their denomination and a transparent and regular auction process in the primary market, have been implemented. Simultaneously, secondary markets have benefited from better market-making processes, the creation of benchmark yield-curves, the promotion of derivatives products and so on.

## Domestic vs International Debt: The Never-ending Latin American Debate

Financial constraints (such as crises) and institutional restrictions (deriving from IMF programmes, for example) have in the past restricted the access of emerging and developing countries to international capital markets. Today, however, the context is different. The growth of the domestic sovereign-debt market in Latin American countries in recent years has taken place against a solid financial background and without institutional restrictions on the issue of foreign debt[10].



Freed of these restrictions, however, emerging economies can still find it difficult to borrow abroad in their own currency. This is commonly known as the problem of "original sin". The explanation is not simply the existence of solid institutions and prudent fiscal and monetary policies. These are clearly factors when emerging markets are compared with those in more developed economies, but when differentiating among emerging economies themselves the explanation is less powerful. It seems emerging countries which have successfully managed fiscal and monetary policies and undertaken reforms to strengthen institutions are not always given credit in investors' eyes. For some the problem lies in the structure of the international financial system (see Eichengreen and Hausmann (2005) for interesting analyses).

Historic constraints on borrowing abroad in local currency - "original sin" - appear to be easing

Figure 3.2 illustrates an "original sin index" for Latin American countries that have issued local-currency debt internationally in recent years. For a given country its index value is one minus the ratio of local-currency international debt to total international debt. A country with no local-currency debt issued abroad would, therefore, have an index of one, and a country able to finance all of its borrowing in its own currency would have a value of zero. In the 1990s and the early 2000s almost all Latin American public debt issued abroad was denominated in foreign currency and consequently, the "original sin" value for the region was high[11]. In 2004 Colombia and Uruguay began to issue global bonds denominated in local currencies[12]. The following year, Colombia launched peso issues and Brazil began issuing global bonds in reais. These three countries continued such issues in 2006 and in 2007 Peru joined them. As the market has developed maturities have increased considerably. While in 2004 Colombia and Uruguay issued bonds of six and two years respectively, in 2007 Brazil and Colombia successfully sold 20-year bonds and Peru and Uruguay 30-year bonds. Meanwhile, both local- and foreign-currency bonds saw a material decrease in the underwriting spread (that is the fee paid by governments to investment banks in the primary bond market for the distribution of international securities).

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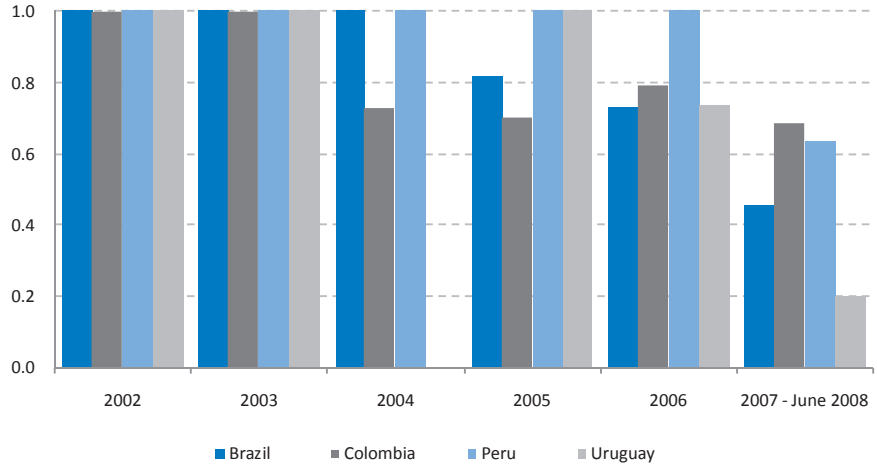
**Figure 3.2. "Original Sin Index"** *a b*




*Notes:*

*a)* Data on flows.

*b)* Following Eichengreen *et al.*, (2005), the original sin index is calculated as

$$1 - \frac{\text{international securities issued by country } i \text{ in local currency}}{\text{international securities issued by country } i}$$

*Source:* OECD Development Centre calculations based on *Dealogic* database.
StatLink http://dx.doi.org/10.1787/450175418864

Are these favourable changes sustainable? A useful source of evidence is those high-income countries that only started to issue local-currency external sovereign debt after 1973 – Canada, Australia and New Zealand are in this category. Their experience highlights the importance of strong financial institutions, credible monetary regimes and developed levels of financial intermediation. They remind, too, that negative external shocks can close off international markets for many players (Bordo *et al.*, 2005).



Over recent years OECD countries have continued to decrease the proportion of their external debt denominated in foreign currency, from 17 per cent in 1980 to 6 per cent in 2003 (OECD, 2005). For emerging economies, the picture is less clear. Success in issuing local-currency debt depends more on commercial and financial factors and the international currency liquidity that these provide, than on strong institutions. This is an echo of conditions in the first wave of globalisation, which is examined in Box 3.1[13].

The development of the domestic public debt market in Latin America is not new. But its drivers have changed. In the 19th and early 20th centuries, countries' lack of access to international capital markets, whether due to their own weak fundamentals or negative external conditions, boosted domestic markets. During the latter part of the 20th century access to international markets widened and by the 1990s, only Chile had a large proportion of domestic public debt (68 per cent of GDP in 1990).

In Brazil, Colombia and Mexico the growth of the domestic public debt market restarted in the mid-1990s. Limited access to international capital markets in the aftermath of crises in emerging countries (Mexico in 1994, East Asian economies in 1997 and Russia in 1998) was the spur for policy makers to develop reliable domestic sources of funding. Additionally, internal macroeconomic factors played a role. In Brazil, it was the implementation of the anti-inflation Real

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Plan and the non-use of monetary policy to finance fiscal deficits. Similarly, in Mexico, the adoption of stable and credible economic policies made sovereign bonds more attractive to the domestic market. By contrast, the high growth of government issuance since the 1990s in Colombia is explained by the growth in the government's funding needs (see Borensztein *et al.*, 2008).

### Box 3.1. External and Internal Debt in the First Era of Globalisation

During the first era of globalisation in the 19th century the main financial centres of the time – London, Paris, Berlin and Amsterdam – opened to international borrowers. Financial markets offered overseas borrowers the possibility to tap external resources, through public offerings intermediated by investment banks, in a very similar way to today's IPO mechanism (Flores, 2007), or through integrated and highly liquid secondary markets with investors, bankers or other agents reselling domestic bonds (national, provincial, or municipal) in external markets – a trade centred on Lombard Street, then the financial hub of the world.

Before the 1880s many Latin American countries were still negotiating prior defaults (notably Peru, Colombia, Ecuador, Mexico and the Central American countries). Governments therefore had access only to domestic financial markets, where resources were scarce and expensive. An exception was Brazil. Summerhill (2006) argues this was because Brazil could efficiently tap domestic savings through its unique institutional framework created and developed since independence in 1824[14]. The first panel of Figure 3.3 illustrates this position, for long-term debt, by comparing the proportions of internal to total debt for four Latin American countries. It also reveals that the trend was downward over time.



The 1880s marked the return of many Latin American countries to international financial markets (a return that was, in many ways, echoed in the Brady-bond led reopening of the markets in the 1990s). Brazil, Chile, Uruguay and above all Argentina were active at this time. However, boom was followed by bust and the Baring crisis of 1890 greatly restricted the market from that point on.

It took until the post-1900 *belle époque* for improved external conditions and increased international liquidity to permit countries to borrow again on more favourable terms, a state of affairs that was to last until the outbreak of the First World War. There is widespread evidence that countries preferred external to domestic markets at this time. This is despite the fact that such borrowing almost invariably required an "exchange-rate clause" linking the value of the bond to an underlying value expressed in an international currency. The currency mismatch that this introduced was presumably seen as worthwhile for access to the keen prices of the international market – spreads in that market over UK government debt were still narrowing over this period. In addition, domestic bonds issued for the local market also continued to circulate in Europe via secondary markets, particularly those which contained an exchange-rate clause[15]. This is the main reason why most of Latin American's debt service was paid in currencies from countries which were capital exporters and maintained the gold standard (Figure 3.3, second panel).

Carmagnani (1994) examined the example of Mexico and reached conclusions that may be of more general validity. He argued that the absence of a consolidated capital market in Latin America made a London listing for either external or domestic bonds in the early years of the 20th century attractive to investors in two ways: increased liquidity and a diminished (perceived) risk of default through the implied external monitoring of financial discipline it brought. (As an illustration of this latter point, Mexico, then a recent re-entrant to the international capital markets and wishing to protect its creditworthiness, certainly favoured debt service over other government expenses.)

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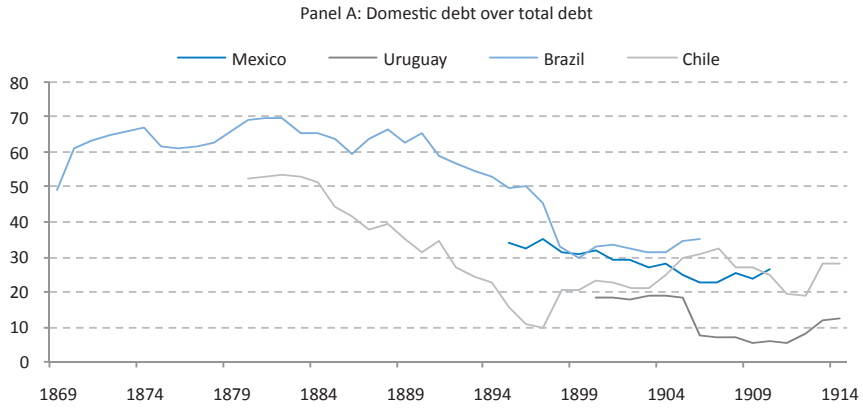
Flandreau and Sussman (2004) argue that almost all international bonds, regardless of country of origin, were denominated in foreign currency or had exchange-rate clauses because this was the very liquidity pool which the issuer wished to tap. The exceptions were those currencies which enjoyed international liquidity as a result of their role in international trade. Such "international currencies" had both a liquid domestic market and an international market outside their own borders which could be tapped for borrowing. This analysis implies that it was well-developed money markets that allowed countries to place domestic debt abroad – even in the absence of sound macroeconomic policies. Spain, Russia and Austria-Hungary would be examples of this. Certainly, exchange-rate clauses were common for "reputable" countries such as Denmark, Sweden or Norway whose currencies had little international liquidity.

**Figure 3.3. Public Debt in the First Era of Globalisation**
(Percentages)





*Source:* Flandreau and Zumer (2004) and Flores (2008).
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# CAPITAL MARKETS, DEMOCRACY AND THE COST OF DEBT

There is a paradoxical interaction between two genuinely positive trends in Latin America: the democratic consolidation observed in many countries in the region, discussed in Chapter 1, and the increasingly prudent and sustainable management of public debt summarised above. On the one hand, improvements in debt management have reduced the cost of fiscal policy for Latin American governments, by reducing spreads and underwriting fees. On the other, capital markets remain apprehensive about elections in a way that can raise the cost of issuing and servicing debt. This section will review quantitative and qualitative indicators of capital markets' confidence in the quality of economic policy (including fiscal policy) in Latin American countries. The indicators chosen are sovereign-bond spreads, underwriting fees, ratings and published investment-bank recommendations. While examination of these indicators shows clear evidence of a general improvement in sentiment towards Latin American economic policies, this still deteriorates in the period surrounding presidential and other elections.

What explains this nervousness at election time? First, fears that incumbents will adopt unsustainable expansionary economic policies prior to elections in order to attract votes – the pre-election boom that leads to the post-election bust. Second, uncertainty about the credibility of candidates' post-electoral economic policies. "Credibility" in this sense means the overall sustainability of an economic package and its implications for the service of existing and implied debt. A candidate might, therefore, make an entirely credible promise to introduce "non-credible" policies.



The analysis proceeds in three parts. The first introduces the set of indicators that measure changing perceptions of public debt; the second examines the impact of uncertainties surrounding political processes in Latin America; and the third looks at whether investors are right to be jittery about elections – whether they are indeed associated with unsustainable fiscal expansion and non-credible policy pronouncements, as capital markets seem to fear.

## Market Perceptions of Latin American Debt

The perceptions that market participants have of emerging countries and in particular Latin American countries have improved considerably since the end of 2004, with the end of the crises in Argentina and Brazil. These perceptions can be given quantitative form through each of the ratings given to sovereign bonds by the rating agencies, the spreads at which Latin American bonds trade over a given benchmark, the underwriting fees that banks charge for distributing new sovereign debt and the recommendations that investment banks give to their clients.

General perceptions of Latin American sovereign bonds are improving...

The first of these, sovereign-bond ratings (Figure 3.4) show a general reduction in the gap between Latin American countries and other emerging economies. This trend has continued recently thanks to upgrades since the end of 2006 of Argentina, Brazil (investment grade by Standard & Poor's in 2008), Chile (investment grade), Colombia, Dominican Republic, Ecuador, Mexico (investment grade), Peru (investment grade by Fitch Ratings in 2008) and Uruguay. These upgrades, in particular those to investment grade, open the market for a country's debt to new classes of institutional investor such as pension funds, mutual funds and insurance companies that are restricted by regulation in the assets they

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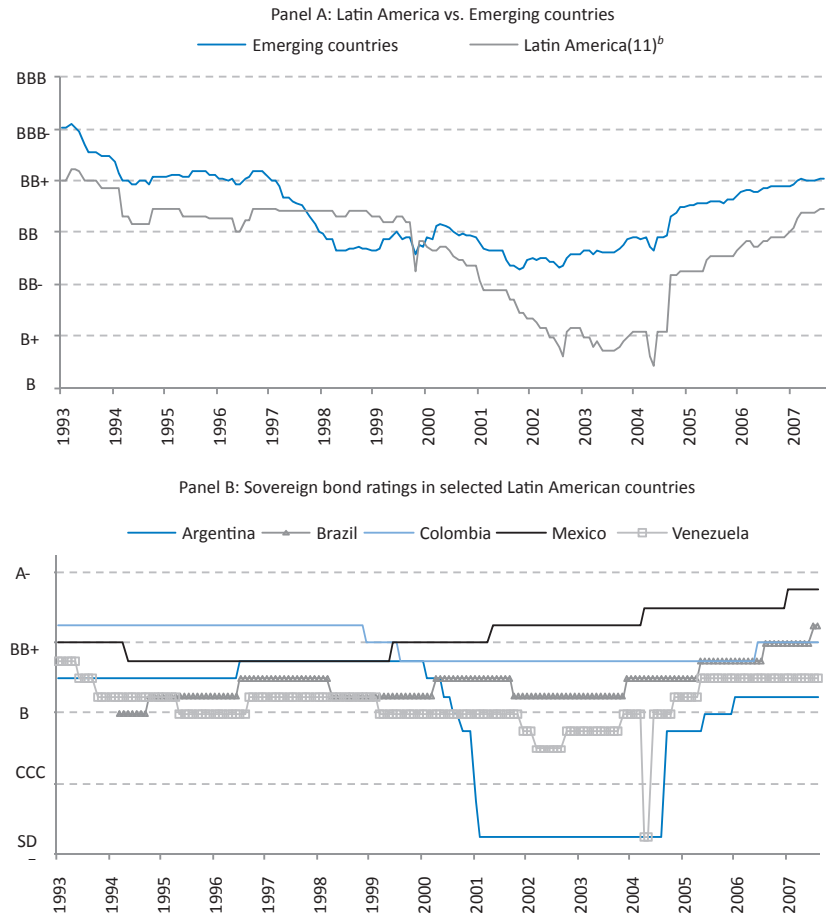
may hold. Welcome as these moves are, Latin America nonetheless continues to be rated lower than the emerging countries group as a whole – though, as Figure 3.4 illustrates, this has not always been the case.

## Figure 3.4. Sovereign-bond Ratings[a]




*Notes:*

*a)* Linear transformation of ratings. Higher ratings correspond to higher values (for example a bond rated D scores 1 and a bond rated AAA scores 23).

*b)* The Latin American countries covered are Argentina, Brazil, Chile, Colombia, Dominican Republic, Ecuador, El Salvador, Mexico, Peru, Uruguay and Venezuela.

*Source:* OECD Development Centre calculations based on Standard & Poor's data.
StatLink http://dx.doi.org/10.1787/450175418864

...which is reflected in better ratings and lower spreads

Similarly, sovereign-bond spreads show that investors today clearly view the credit risk of Latin American sovereign bonds more favourably than in the past[16]. The sovereign-bond spread for an emerging economy is defined as the difference between the yield on its bond and the yield of a bond with the same characteristics issued by a benchmark country[17]. A widening spread implies increasing perceptions of risk for this country; a narrowing in the spread signals a corresponding reduction.



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Since late 2002, Latin American and emerging countries as a whole have seen significant reduction in bond spreads. In Latin America an important factor behind this change is a perceived increase in the region's resilience to adverse shocks. Figure 3.5 compares sovereign-bond spreads with the implied volatility of the US stock exchange. The latter is used by the capital markets as an indicator of global risk aversion. In the past, emerging countries and in particular Latin American countries have been highly sensitive to changes in external conditions. Indeed, over the period 1998-2004 the correlation between sovereign-bond spreads and global risk aversion was slightly higher in Latin American countries than in emerging countries (0.8 and 0.7 respectively). Investors' attitude towards risk appears to be a key factor in explaining sovereign spreads and portfolio flows in Latin American countries (see García-Herrero and Ortiz, 2006).

Favourable international conditions in recent years certainly explain a large part of the reduction in sovereign-bond spreads in Latin America. However, the correlation between external conditions and sovereign spreads has fallen. It was lower during the period 2005-08 than in 1998-2004. This is particularly evident in the market response to the sub-prime crisis and credit crunch. Sovereign-bond spreads for Latin America increased only slightly relative to the increase in global risk aversion – less than would have been predicted by similar movements in the past.

For the mechanism behind this decoupling, Powell and Martínez (2008) point to the greater integration of capital markets, an improvement in available information and the greater discrimination of markets[18].



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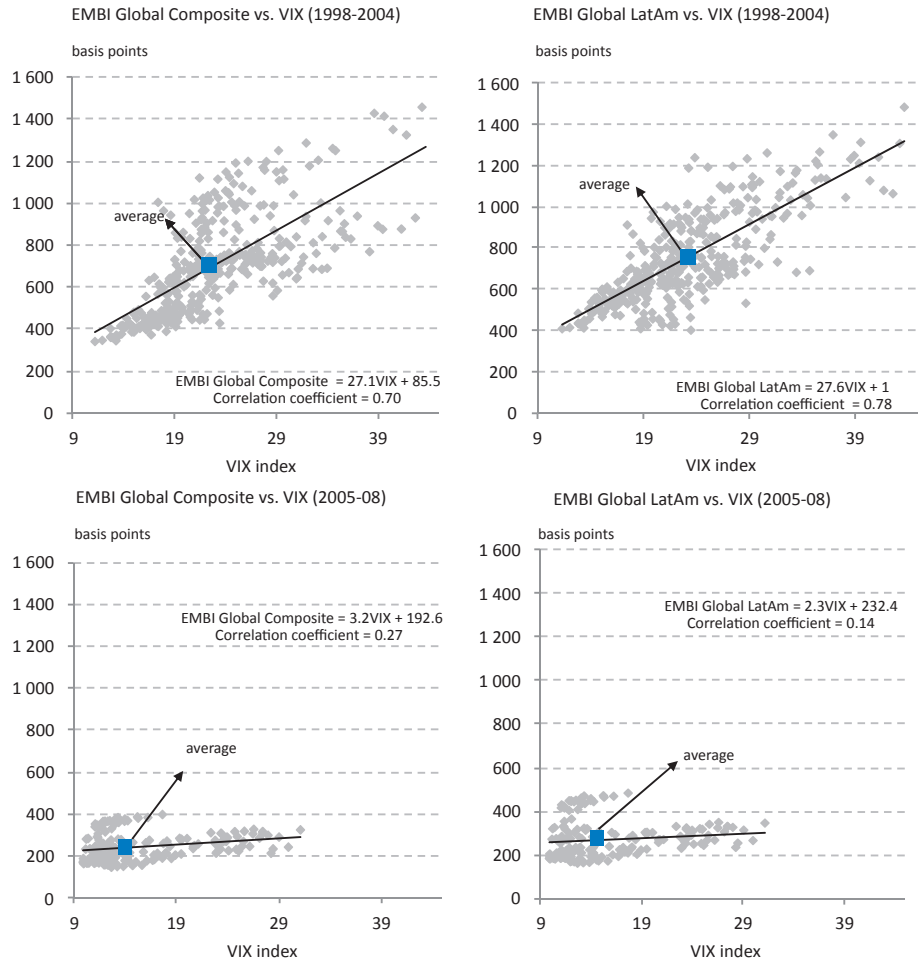
## Figure 3.5. Sovereign-bond Spreads vs. Global Risk Aversion: Latin America and Emerging Countries




*Note:* EMBI Global LatAm and EMBI Global Composite are the sovereign-bond spreads for Latin America and all emerging countries respectively, calculated by JPMorgan. The VIX index (CBOE Volatility Index) is the implied volatility of S&P500 index options.

*Source:* OECD Development Centre calculations based on *Datastream* database.
StatLink http://dx.doi.org/10.1787/450175418864

The flatter line in the second of each pair of graphs indicates a weaker correlation between changes in global risk aversion and sentiment towards given sovereign bonds (as measured by their spread). The performance of Latin American and emerging market debt generally is less influenced now by the overall state of the global economy and depends more on assessment of its particular fundamentals.

The performance of Latin American debt is now less influenced by the global economy and more by its own fundamentals

Another important variable measuring perceptions about sovereign bonds – often overlooked by policy makers and market participants – relates to price formation in their primary market: the remuneration governments pay investment banks to place bonds, that is the underwriting spread expressed as a percentage of proceeds. This variable is linked to the perception of investment banks regarding credit risk of issuers (Nieto Parra, 2008). Examination of this variable shows that prior to the onset of sovereign bond crises, investment banks demand high compensation. This contrasts with the high price paid by investors (evident in low sovereign-bond spreads) prior to the crisis (Figure 3.6).



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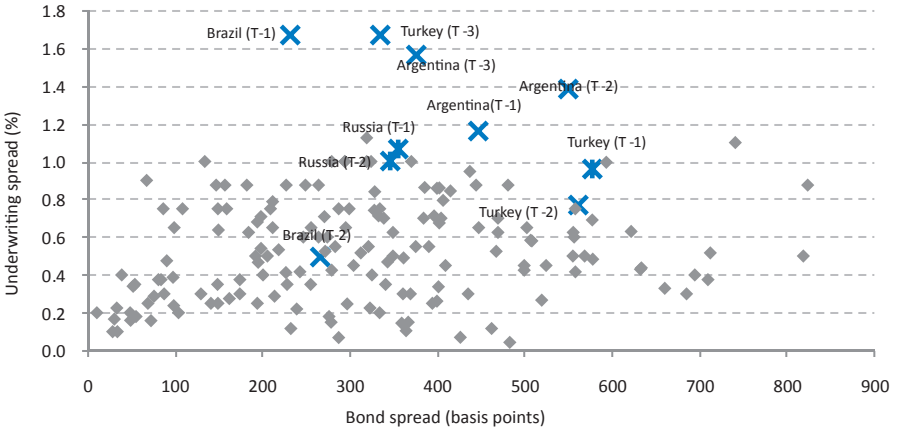
Present low underwriting spreads suggest a reduction in the market's perception of default risk

Today the underwriting spreads for the most important Latin American countries are low: an average 0.3 per cent for the region in 2007 with the highest not exceeding 0.5 per cent. Compare this to periods prior to sovereign debt crises as shown in Figure 3.6: 1.2 per cent for Argentina one year prior to the 2001 crisis and 1.7 per cent for Brazil one year prior to the crisis of 1998. The implication would seem to be that today's low underwriting spreads mean investment banks see a reduced risk of default in Latin America.

**Figure 3.6. Underwriting Spreads and Sovereign-bond Spreads**
(1993-2006, annual basis)




*Note:* The underwriting spread and sovereign-bond spread for countries between one and three years prior to sovereign debt crises (date T) are highlighted in blue. The Argentinian crisis was in 2001, the Brazilian 1998, the Russian 1998 and the Turkish 2000.

*Source:* Nieto Parra (2008).
StatLink http://dx.doi.org/10.1787/450175418864

The fourth and final indicator is the series of recommendations provided to institutional investors in emerging-country sovereign bonds by investment banks. These are typically published regularly for each emerging market. Although slightly different language may be used by individual banks, recommendations can be classified into three groups: "overweight" (given the value of 1), "neutral" (0) and "underweight" (-1). An overweight recommendation, for example, means achieving a holding which, relative to the investing institution's portfolio, has a higher weighting than does the bond in the relevant bond index (for example the EMBI+ calculated by JPMorgan) [19]. Of course this normally means buying in the market. Similarly "underweight" is likely to lead to selling.

The purpose and structure of recommendations differ fundamentally from ratings. Recommendations depend on the investment value of a bond and not simply on an assessment of its default risk. As a result, they are more volatile than sovereign ratings and it is quite common that they be changed during the course of a year as relative prices move.

Publication of these recommendations represents a direct link between financial intermediaries and investors and tends to have a significant impact on the asset allocation of bond portfolio investors[20]. Figure 3.7 illustrates the correlation between investment-bank recommendations and the allocations fund managers made to Latin American bonds within their emerging bond portfolio, during the period 2002-07. For Brazil, the largest player in the sovereign-bond market, the correlation is considerable.



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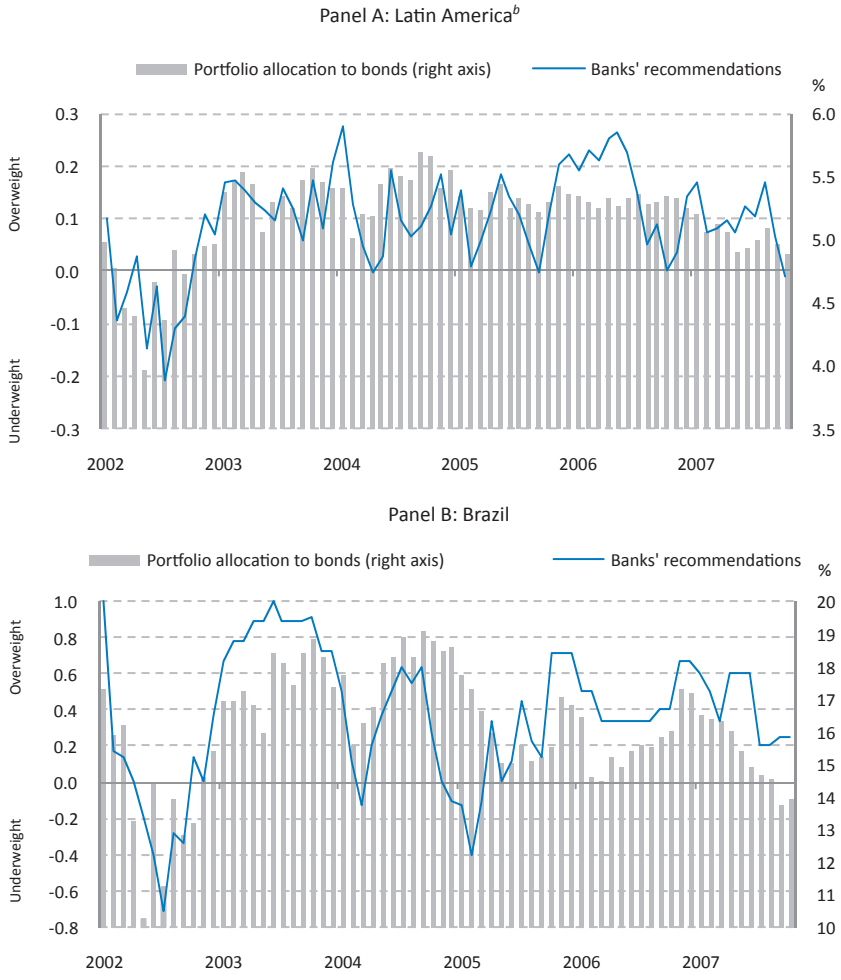
**Figure 3.7. Investment-bank Recommendations and Portfolio Allocation to Bonds**[a]




*Notes:*
*a)* Banks' recommendations can be classified into three groups: "overweight" (1), "neutral" (0) and "underweight "(-1).
*b)* The Latin American countries covered are Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Peru, Uruguay and Venezuela.

*Source:* OECD Development Centre calculations based on Investment banks' publications and *Emerging Portfolio Fund Research* database.
StatLink http://dx.doi.org/10.1787/450175418864

Bank recommendations can therefore be seen as a proxy for overall market sentiment towards particular bond issues (while acknowledging that the banks' principal purpose in issuing recommendations is to stimulate trading)[21]. Banks' views are important to investors. They are not formed in a vacuum however, and governments can influence them through their approach to debt-management and their announced economic policies (see Box 3.3 later in this chapter).

Bank recommendations have an impact on the asset allocation of bond portfolio investors

## The Paradox of Democracy and Debt

Politics is crucial to the sovereign-bond market. Market actors are sensitive to political developments in Latin American democracies, be they cabinet reshuffles or elections. In fact it would be possible to define emerging countries as those in which political uncertainty has significant resonance in financial volatility,



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or – putting it the other way round – to say a country exits from the emerging markets asset class when it decouples its political and financial cycles (Blázquez and Santiso, 2004).

### Box 3.2. Political Business Cycles and International Capital Markets: The Case of Spain

Spain has one of the youngest democracies in industrialised Europe, re-established only in 1976. Its subsequent dramatic economic development and historic and cultural ties with Latin America make it an interesting case study for the region.

Elections in Spain, regardless of whether they cause a change of government or a change in ideological stance, now have little impact on markets. The consolidation of democracy and its institutions together with the country's entry into the European Monetary Union (EMU) have contributed to an environment of market-oriented reforms and sound fiscal policies, which have been rewarded by the markets.

These positive institutional developments can be seen in the re-rating of long-term government bonds and the reductions in the country spread against benchmark German bonds. This is particularly evident since 1997; the point at which the markets ascribed a greater probability to Spain's joining the EMU. The average country spread from March 1978 to December 1996 was 572 basis points, while the average spread since then (to April 2008) has been 19 basis points. Given the magnitude of this change, it is useful to differentiate between pre- and post-EMU elections.

Consider the behaviour of stock market returns (using MSCI data) and the 10-year government bond yield in the nine months before and after the nine general elections, held in Spain between 1979 and 2008 (Figure 3.8).



A simple statistical and graphical test suggests that general elections did not have a noteworthy impact on long-term interest rates or on stock market returns. Focusing around electoral periods, long-term bond yields do not seem to fluctuate significantly. Yield on government bonds decreased before and after elections. These declines in fact reflect simply the ongoing process of reduction and convergence. As the first panel in Figure 3.8 shows, in the pre-EMU period, the long-term yield decreased both before and after elections, while one month prior to and one month after the cumulative effect was almost negligible. In the post-EMU period on average interest rates remained stable, signalling that bond yields, post-convergence, were affected by global or European factors and to a lesser extent by country-specific ones.

The uncertainty surrounding campaigns is more clearly seen in the behaviour of the equity market. Performance is slightly negative before an election (though this is not statistically significant), and begins to recover once the uncertainty is cleared (Figure 3.8, second panel). Before EMU the typical pattern in the Spanish equity market was a weakening one or two months before the election, followed by a return to positive territory immediately after the election. Following EMU, the pre-election pattern is similar, but the post-electoral development differs. The explanation for this counterintuitive result is that market performance around the elections of 2000 and 2008 was dominated by the end of the dotcom boom and the subprime crisis, respectively. An analysis of the relative performance of Spain's market against that of Germany (to strip out these external effects) shows that the Spanish market in fact performed slightly better. Nor was volatility related to Latin American factors, which might have had an influence given the increasing exposure of Spanish firms to the region. It seems that during this period the market was driven by global factors (international crises) and not by local political uncertainty.

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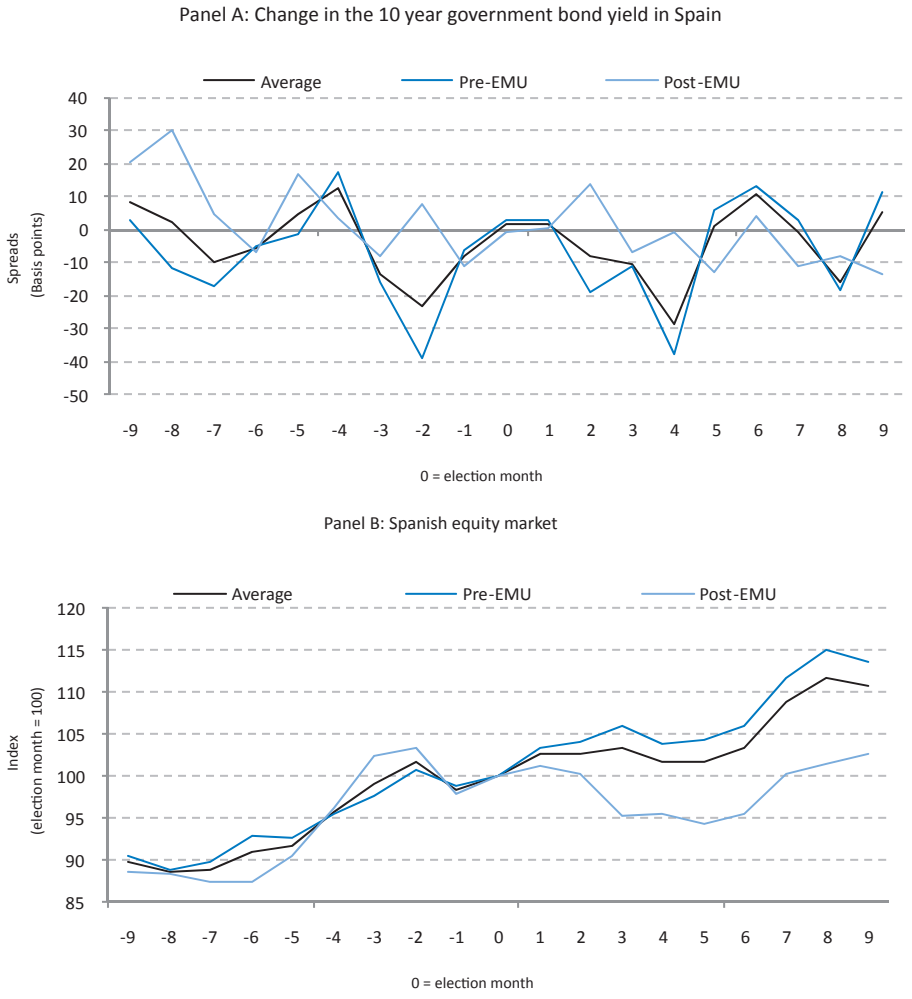
To sum up, the combination of a solid democracy, a political consensus supporting sustainable fiscal policies within the EMU, an independent and orthodox central bank, and credible economic policies with sufficient social safety nets, have succeeded in a relatively short period in overcoming any nervousness about the strength of a new democracy's institutions.

**Figure 3.8. Political Cycles and Capital Markets in Spain**
(1979-2008)




*Source:* OECD Development Centre calculations based on *Datastream* database.
StatLink http://dx.doi.org/10.1787/450175418864

Times of political change affect the markets everywhere, developed as well as developing (Snowberg *et al.*, 2007; Bernhard and Leblang, 2006; and Leblang and Bernhard, 2006). But the intensity of investors' focus and strength of their response is greater in developing than developed countries (Campello, 2007). Box 3.2 takes Spain as a case study and describes how the impact of Spanish elections on capital markets has been contained, thanks in part to the credibility of economic policies actually adopted by successive governments as well as the



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general commitment of political parties to the idea of credibility – a commitment reinforced by integration into external economic structures such as the European Monetary Union.

Empirical research analysing the impact of politics on emerging capital markets is abundant. Although the importance of electoral cycles for investors and financial intermediaries is strong in all emerging markets, their specific reaction may differ significantly even within a single region. How they react depends on the degree of democratisation, the transparency of the policy-making process, the existence of a historical tradition of democratic institutions, the scale of the government's legislative majority and its political cohesion (Hays *et al.*, 2003; MacIntyre, 2001).

Political colours in emerging democracies tend also to matter. Right-wing parties are associated with policies that are more concerned with inflation and less concerned with unemployment and GDP growth. Left-wing parties tend to have opposite preferences[22]. Sovereign-bond spreads for right-wing incumbents tend to increase as the likelihood of a left-wing victory increases (Block *et al.*, 2003) and investors in the sovereign-bond market tend to downgrade leftist governments even after other economic and policy outcomes are controlled for (Cho, 2007)[23].

**There are clear links between political processes, particularly elections, and instability in the debt and currency markets**

Political processes other than elections can also lead to volatility in sovereign -bond spreads. For example, political instability (as measured, for instance, by the turnover of finance ministers) affected bond spreads in Latin American countries in the period 1992-2005[24].

The links between political processes and exchange-rate turbulence show that financial crises and political crises tend to go hand in hand (Chang, 2007). Analysts find that institutional factors such as a divided government or government turnover are important determinants of investors' behaviour and increase the likelihood of currency crises (Leblang and Satyanath, 2006). In Latin America, all the major financial crises over the past decade and a half took place during an election year: the Tequila crisis of 1994 was a presidential election year in Mexico; the devaluation of the real at the beginning of 1999 took place a couple of months after the Brazilian elections of October 1998; the financial crisis suffered by Brazil in 2002 developed during a presidential election year, as did the massive debt default in Argentina of the previous year. Further back, the same was true of the 1980s debt crisis following Mexico's default.



**Currencies tend to revalue before elections and devalue after**

A study of a large number of Latin American countries over the period 1960-94 (Frieden *et al.*, 2001) found that during elections the average rate of nominal depreciation in the exchange rate in the second month after the election was 7 per cent, around 4.5 percentage points higher than in comparable non-election periods. The average behaviour of Latin American economies' real exchange rates (with respect to the US dollar) for the period 1997-2008 is shown in Figure 3.9. The pattern described above is clearly evident: There is an appreciation of the exchange rate (a downward movement of the line in the graph) prior to elections followed by a strong depreciation (3.5 per cent) starting two months after the election. From month five, the real exchange rate returns close to the level observed before the initial appreciation. While many factors could explain post-election depreciations, all are associated with this pre-election over-valuation of the currency.

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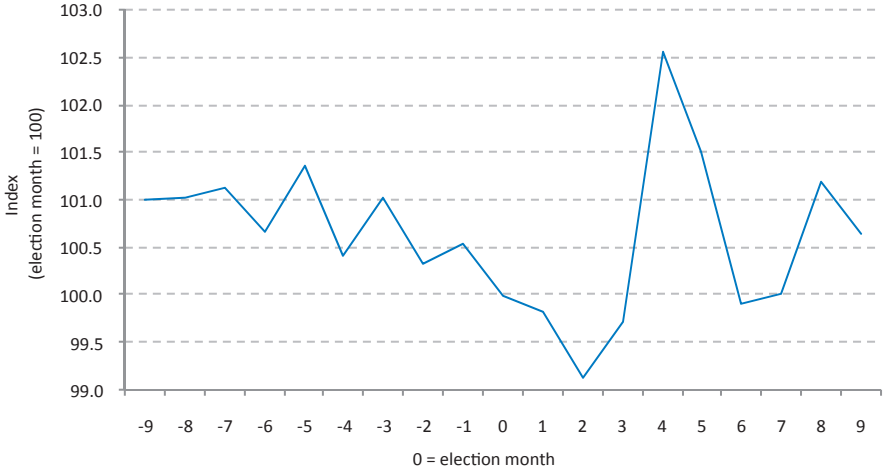
**Figure 3.9. Real Exchange Rates Nine Months Either Side of Elections in Latin America**[a b]
(1997-2008[c])




*Notes:*

*a)* The real exchange rate is calculated with respect to the US economy. Data are rebased so that the month of the presidential election (time 0) = 100. An increase in the index represents a depreciation against the dollar.

*b)* The Latin American countries covered are Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Peru, Uruguay and Venezuela. Averaging is geometric in order to reduce the effects of outliers.

*c)* Dataset covers the period from July 1997 to February 2008, including 23 non-overlapping presidential elections. For elections with a second (run-off) round, the second round is taken as the election date.

*Source:* Nieto Parra and Santiso (2008a), based on *Datastream* database.
StatLink http://dx.doi.org/10.1787/450175418864



What underlies this effect? First, exchange-rate adjustments tend to be postponed as long as possible. Outgoing presidents avoid devaluing in the months prior to elections in order to limit the damage to their electoral chances or those of their party's candidate (Stein *et al.*, 2005). Indeed, Blomberg *et al.* (2005) argue that the probability of abandoning fixed exchange rates is small prior to elections, and large following them. Second, increases in government spending (much of it on non-tradable goods) prior to elections will tend to see currencies appreciate only to depreciate later (Bonomo and Terra, 2005).

In other cases, pre-emptive depreciations of the exchange rate occur just prior to elections, perhaps because policy makers fear capital markets' judgements on the sustainability of economic policies (for example Mexico in 2006, and Brazil in 2002). The link with the public debt markets arises because market participants tend to be forward-looking when assessing the sustainability of the foreign-exchange anchor prior to elections. Precisely because they anticipate falls in the exchange rate following the election, investment banks downgrade Latin American public debt prior to elections.

The impact of elections on investor confidence can be measured by the impact on bank recommendations

During presidential elections in most Latin American countries, sovereign-bond spreads closely track exchange-rate movements. Figure 3.10 highlights the correlation of these variables for countries which are both active in the sovereign-bond market and have non-fixed exchange rates. A falling currency is associated with increases in sovereign-bond spreads (and vice versa). Chile is the only country where the correlation is negative, and volatility during electoral periods is small in Chile compared with other Latin American countries.

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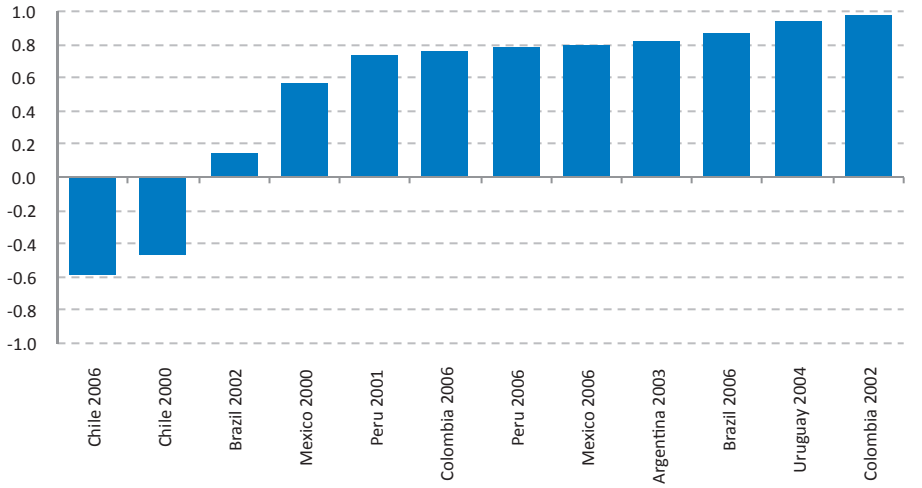
**Figure 3.10. Correlation Between Exchange Rate and Sovereign-bond Spreads During Presidential Elections**




*Note*: The coefficient of correlation is calculated between the nominal exchange rate and the EMBI Global sovereign-bond spread, using daily data, over the period 100 days prior to and after the relevant election.

*Source:* OECD Development Centre calculations based on *Datastream* database.
StatLink http://dx.doi.org/10.1787/450175418864

The information investors receive is influenced by the political situation. Rating agencies tend to downgrade sovereign bond during electoral periods[25]. And, as Box 3.3 makes clear, investment banks similarly respond to the electoral climate in the recommendations they make.



**Box 3.3. The Determinants of Investment-bank Recommendations on Sovereign Debt**

The recommendation an investment bank makes about a given security is a qualitative assessment of its investment value. A study by Nieto Parra and Santiso (2008*a*), covering the period 1997-2008, examined the role of elections on the recommendations investment banks made regarding Latin American sovereign bonds. The investment-bank recommendations were regressed against a wide set of potentially explanatory variables. The study concluded that the following measures were positively correlated with an improvement in sentiment (that is a recommendation moving from underweight to neutral, or from neutral to overweight):

Solvency indicators: an increase in the ratio of international reserves to imports; or a reduction in the ratio of public bonds outstanding to exports.

Investment value indicators: increases in bond returns over prior periods of 12 months and 3 months.

Sovereign-bond ratings: favourable changes in sovereign-bond ratings.

Sovereign-bond spreads: a high sovereign-bond spread. This apparently surprising relationship can be attributed to investment opportunities.

The depth of the bond market: higher trading volumes relative to GDP.

Domestic industrial production: rising industrial production.

Presidential elections have a negative impact on recommendations. The effect is particularly marked in the pre-election period, and during presidential elections in which at least one contender announced non-credible macroeconomic policies.

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In contrast to the standard literature on the interaction between politics and capital markets, this study found that the candidacy of an incumbent in the election was not significantly associated with changes in recommendations. Moreover, elections where the incumbent was a clear favourite (an apparent signal of continuity) did not favour positive recommendations.

The principal conclusions are:

Good management of the public debt does have a favourable impact on the recommendations made.

Politics matter. In particular, the credibility (in the macroeconomic sense) of the fiscal and monetary policies proposed by political parties and governments are crucial to the stability of recommendations.

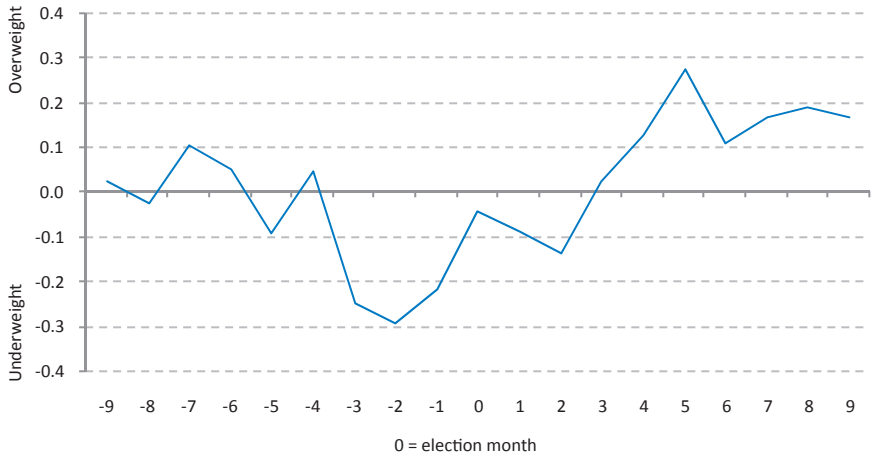
Recommendations depend above all on domestic macroeconomic and financial variables. External factors (such as US industrial production statistics or changes in global risk aversion) do not have an impact on Latin American sovereign-bond recommendations.

For further detail and methodological notes, see Nieto Parra and Santiso (2008*a*).

Figure 3.11 summarises recommendations made by investment banks in respect of Latin American bond markets either side of presidential elections in the region.

**Figure 3.11. Investment-bank Recommendations Nine Months Either Side of Elections in Latin America**[a b]
(1997-2008[c])






*Notes:*

*a)* Banks' recommendations can be classified into three groups: "overweight" (1), "neutral" (0) and "underweight" (-1). The index is calculated as the arithmetic average of all published recommendations.

*b)* The Latin American countries covered are Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Peru, Uruguay and Venezuela.

*c)* Dataset covers the period from July 1997 to February 2008, including 23 non-overlapping presidential elections. For elections with a second (run-off) round, the second round is taken as the election date.

*Source:* Nieto Parra and Santiso (2008*a*), based on published investment-bank recommendations.

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Bank recommendations are downgraded prior to elections, but tend to move positively again once the uncertainty has passed

Looking at Latin America as a whole, investment banks start to downgrade sovereign bonds three months prior to presidential elections. This is particularly evident where a non-credible candidate appears to have a significant chance of victory. The downgrade is then followed by negative recommendations until shortly before the election date. Finally, as banks become more confident of the election outcome, their recommendations improve, entering neutral territory and eventually turning positive[26]. This pattern is evident in numerous presidential elections, including those in Brazil in October 2002, Colombia in May 2002, Ecuador in July 1998, November 2002 and November 2006, Mexico in July 2000 and July 2006, and Peru in May 2000 and June 2006. The most striking demonstration of this turn-around in sentiment was in the first of these and Box 3.4 looks in detail at how this election unfolded.

### Box 3.4. Brazil 2002 and 2006: From *Lula Preta* to *Lula de Mel*

Figure 3.12 shows the recommendations made by investment banks for Brazilian external public debt from 2002 to 2007.

In 2002 the candidacy of Luiz Inácio Lula da Silva was seen as a populist threat to the continuity of the credible economic policies of President Fernando Henrique Cardoso, and his victory in the second round of voting led to a spate of negative recommendations. This was the investment community's reaction to what they feared would be "*Lula Preta*" – a pun on his name suggesting an ominous Dark Moon. Goldman Sachs, one of the most important players in the Latin American sovereign-bond market, said in the days after the election:

"We remain cautious about the prospects for this credit on the back of our perception that the incoming administration is poorly prepared to tackle the hard challenges of restoring confidence, stabilizing the stock of net public debt, and simultaneously engineering a recovery of economic activity...Given the balance of risks, and the recovery of asset prices, we remain comfortable with our recommendations to Underweight external debt and short BRL interest rates."

(Goldman Sachs, *Emerging Markets Strategy*, 7 November 2002).

Meanwhile, international capital markets were extremely cautious about the new Lula government. The campaign period had seen Brazilian spreads soar from 1 100 basis points 100 days before the election to more than 2 000 basis points in the days immediately prior to the vote. For a full year, from April 2002 to April 2003, the Brazilian government was effectively unable to issue public debt in international capital markets.

As president, Lula launched a vigorous communications programme. In particular, he convinced market-makers and investors that his administration would follow an orthodox macroeconomic approach. In that context, announcements about the implementation of economic policies promoting price stability and the solvency of the state were crucial. His reward was that recommendations changed dramatically for the positive. It was the beginning of the "*Lula de Mel*" – a new and different pun suggesting the beginning of a honeymoon.

The contrast with the next presidential elections in 2006 could hardly have been greater. Investment banks maintained bullish recommendations on Brazilian public debt during the campaign period, apparently now considering Lula as safe a choice as his market-friendly rival Geraldo Alckmin, candidate of Cardoso's party. In the lead-up to the vote Citigroup advised its customers that:

"whoever wins the election, the broad tenets of macroeconomic policies, including fiscal responsibility, inflation targeting, and a floating exchange rate, likely will remain in place."

(Citigroup, *Global Economic Outlook and Strategy*, 23 August 2006).



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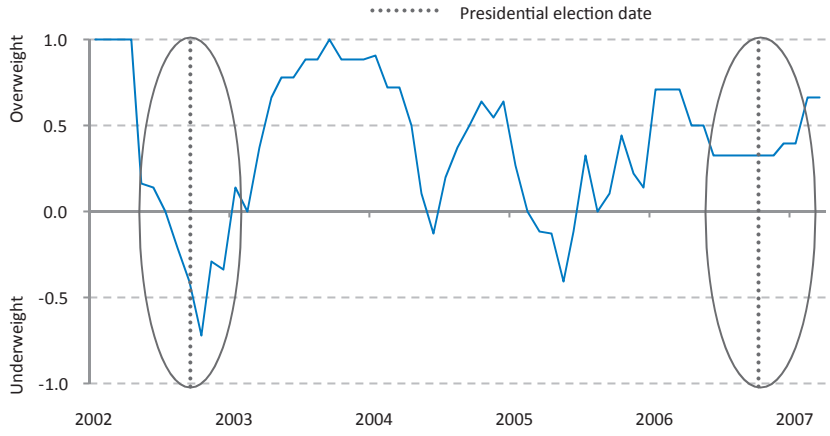
**Figure 3.12. Bank Recommendations and Elections in Brazil**




*Note*: Banks' recommendations can be classified into three groups: "overweight" (1), "neutral" (0) and "underweight "(-1).

*Source*: OECD Development Centre calculations based on published investment-bank recommendations.

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Spreads remained at historically low levels, between 175 basis points and 275 basis points, throughout the 100 days either side of the elections. More concretely, less than a month before polling day the Brazilian government issued a global bond denominated in reais with a 2022 maturity – something that would have been unimaginable in 2002.

## Are Capital-market Jitters around Elections Justified?



Emerging capital markets, then, react to elections because of worries that expansionary economic policies in the lead-up to elections will come home to roost later, and from uncertainty regarding the policies that will be adopted post-election[27]. The effects of these changes in sentiment are magnified in Latin America and in emerging markets generally, because of chronic difficulties in mobilising fiscal resources (Ames, 1987; Schuknecht, 1996; Alesina *et al.*, 1999). This and the following sections ask if these twin fears are warranted.

The market's fears have some justification: elections are indeed associated with fiscal volatility

A study of 28 OECD countries and 19 Latin American countries during the period 1990-2006 suggests that general elections are indeed associated with much greater changes to the major components of fiscal policy in Latin America than in high-income countries (Nieto Parra and Santiso, 2008*b*)[28]. Figure 3.13 summarises for these countries the development of four fiscal variables during election periods: the fiscal deficit before interest payments (primary balance), public expenditure excluding interest payments (primary expenditure), current expenditure, and public investment.

In Latin American countries, the average primary balance declines by an amount close to 0.7 per cent of GDP during an election year. Most of this movement is due to the expenditure component and within this it is current rather than capital expenditure that is most affected. There is little change in capital expenditures during election years themselves, but public investment increases by 0.3 per cent of GDP in the year prior to the election[29].

By contrast, in OECD countries, the observed changes in the primary balance and current expenditures during election years are minimal, less than 0.1 per cent of GDP for either measure[30]. This difference between Latin American and OECD countries is more remarkable considering the relatively small size of governments in Latin American democracies (see Table 2.1 in Chapter 2 for this comparison).

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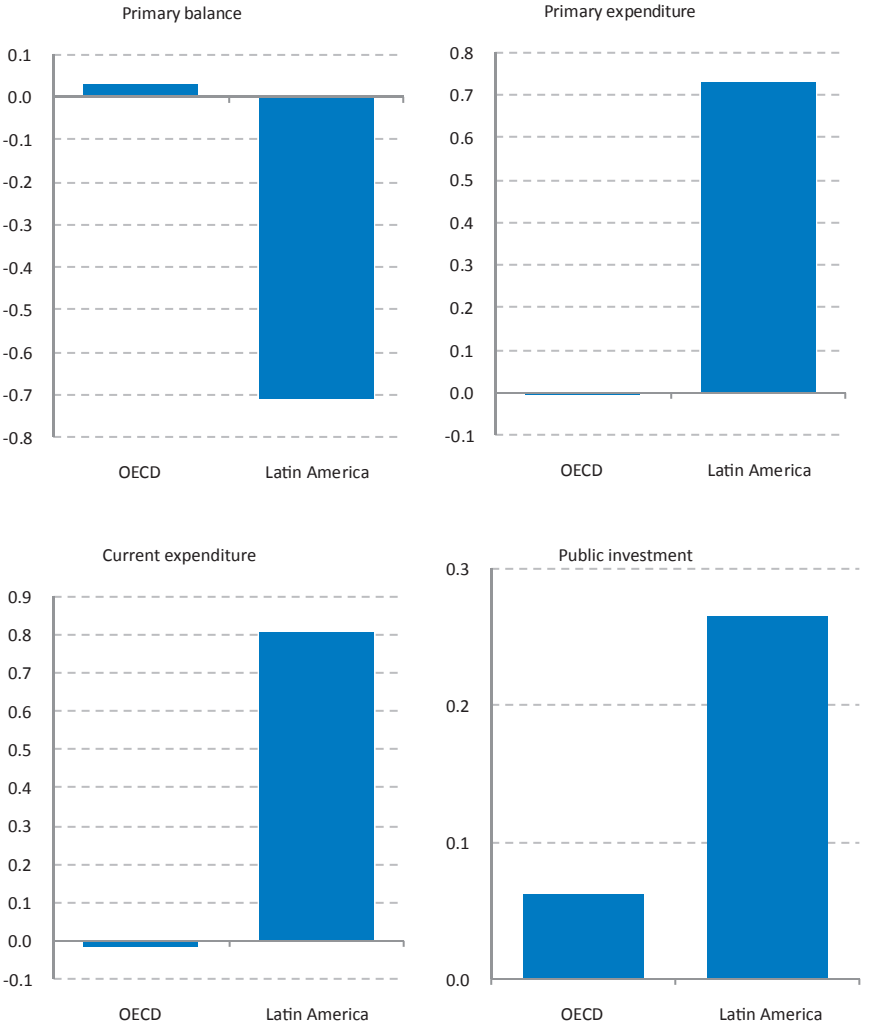
**Figure 3.13. Impact of Elections on Fiscal Policy in Latin American and OECD Countries**
(Changes in selected fiscal indicators, percentage of GDP[a b])




*Notes:*

*a)* The impact of elections on fiscal policy is calculated as the difference between the fiscal variable (as percentage of GDP) during the election year and non-election years. The exception is public investment which is assumed to lead the election by one year.

*b)* Legislative elections are used for countries with parliamentary political systems and executive elections for countries with presidential systems. Data on fiscal policy refer to central government.

*Source:* Nieto Parra and Santiso (2008*b*, forthcoming) based on Secretaria do Tesouro Nacional (in the case of Brazil); ECLAC ILPES, Public Finance database (for other Latin American countries) and OECD, General Government Accounts (for OECD countries).

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Figure 3.13 identified the importance of primary expenditure among the fiscal variables affected by electoral politics. Figure 3.14 analyses this across individual Latin American countries, showing the impact of elections on primary expenditure as a share of GDP. It exposes considerable variation. In Brazil, Bolivia and Nicaragua, for example, primary expenditure balloons by more than 1.5 per cent of GDP relative to non-election periods. By contrast, in Paraguay, Peru, Panama, Venezuela, Guatemala and Chile primary expenditure is apparently unaffected by the electoral process.



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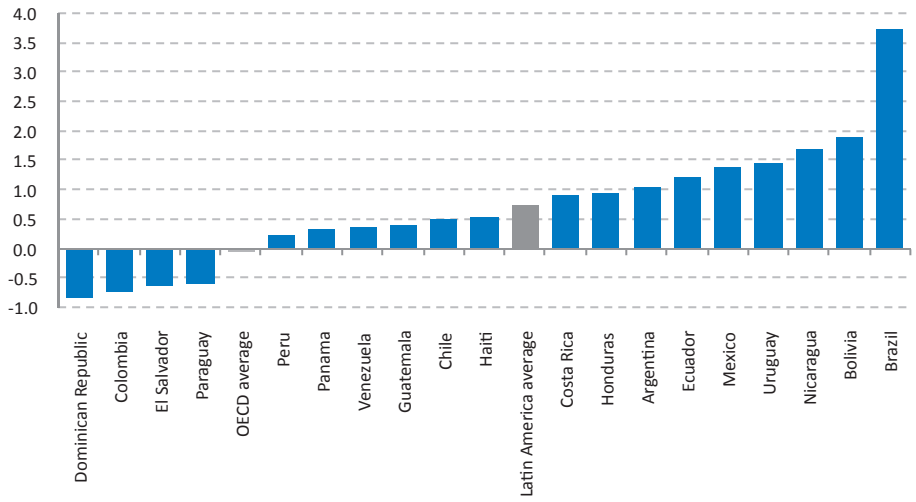
**Figure 3.14. Impact of Elections on Fiscal Policy in Latin American countries[a b], 1990-2006**
(Changes in primary expenditure, percentage of GDP)




*Notes:*

*a)* The impact of elections on fiscal policy is calculated as the difference between the fiscal variable (as percentage of GDP) during the election year and non-election years.

*b)* Legislative elections are used for countries with parliamentary political systems and executive elections for countries with presidential systems. Data on fiscal policy refer to central government.

*Source:* Nieto Parra and Santiso (2008*b*, forthcoming) based on Secretaria do Tesouro Nacional (in the case of Brazil); ECLAC ILPES, *Public Finance database* (for other Latin American countries) and OECD, *General Government Accounts* (for OECD countries).

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## Uncertainty around Elections: The Role of Economic-policy Platforms

At election time the policies of all realistic candidates matter and uncertainty can be magnified by the power of veto players outside the political process

Since a bond represents a long-term claim on the cashflows of a state, elections and in particular the credibility of the economic policies put forward by the main candidates are always a focus of interest for the capital markets. Their unease is greatest when a candidate with a realistic chance of victory is campaigning on the basis of non-credible policies. Of course, these fears may not be borne out in practice. A different candidate may win, or the feared candidate may act differently once in power. Certainly there are often substantial differences between the campaign platforms of populist candidates and their policies once in office (Archer *et al.*, 2007). There is a risk, however, of these fears becoming a self-fulfilling prophecy if they block government access to debt finance.

Credibility and uncertainty interact in different ways in relatively more – or less – consolidated democracies[31]. A relevant feature of imperfect democracies – and all are imperfect to some extent – is the role of veto players, unelected groups who nonetheless have the power to thwart political policies. The degree of influence wielded by such veto players – powerful public-sector unions, for example, or private-sector lobbies – is a useful indicator of the quality of democracy. Where veto players are powerful, financial markets face a further layer of uncertainty. An apparently credible candidate, for example, may be prevented from enacting necessary reforms. Effective checks and balances, in contrast, reassure the markets irrespective of electoral outcomes. Strong public institutions are perceived as solid anchors that limit the scope of extreme policy swings (Henisz and Mansfield, 2006).

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These damaging uncertainties can be mitigated without constraining freedom of political action, whether as candidate or when in power

Governments can use a variety of strategies to mitigate this "credibility gap". The adoption and entrenchment of monetary or fiscal policy rules limit the scope of veto players or subsequent administrations to change policies in non-credible ways (Keefer and Stasavage, 2002). Permitting re-election also tends to reduce uncertainty as the incumbent can remain in power, though it does not eliminate credibility problems.

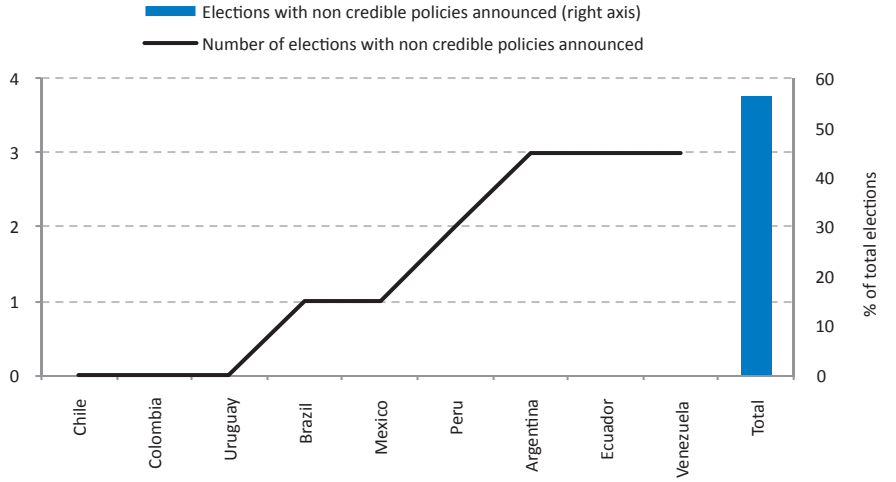
Political parties can play a crucial role in the creation and maintenance of market confidence. It is to the benefit of confidence but without material loss of flexibility that the selection of candidates and the development of manifestos take place though institutions in which the stability and credibility of economic policies are given due priority. This is not to cramp the development of distinct approaches to policy by different parties. The legitimacy of parties – as opposed to personalities – and the strength of party organisations are, therefore, fundamental pillars in the institutionalisation of party politics and the promotion of mature debate on policy formation (see IADB, 2005).

Once elected, governments can quickly signal credible strategies. This is particularly important for left-leaning governments whose overall policy platform may give less apparent weight to the credibility issues which concern the banks, investors and rating agencies.

Against this background, what economic-policy signals are in practice material to the financial markets? Figure 3.15 tracks the pronouncements made by Latin American electoral candidates reported in *The Economist* (2008) – an important source for international financial markets – and classifies them as "credible" or "non-credible". Almost by definition this coverage is restricted to the major candidates in any election. A pronouncement is deemed non-credible if reports express fears that expansionary fiscal policy will weaken debt sustainability; that debt payments might be suspended or renegotiated; that monetary policy will be inflationary; that an independent central bank or inflation targeting regime, where one exists, will be abandoned; or the fear that populist policies will be emulated. The analysis covers all 23 presidential elections in the selected countries during the years 1998-2008.



**Figure 3.15. Non-credible Policies Announced by Candidates, 1998-2008**




*Source:* Nieto Parra and Santiso (2008a, forthcoming), based on *The Economist* (2008).
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For the sample as a whole (the blue bar at right) the economic policies of at least one of the major candidates were seen as non-credible in more than half the elections. However, results differ markedly among countries. No threat of non-credible policies was perceived in Colombia (run alternately by political forces sharing the same market-oriented policies) or in Chile (run by the same governmental coalition during the entire period and with political forces sharing the same credible agenda). Indeed, non-credible economic policy rarely arises in press coverage of elections in Chile[32]. While differing on details, all leading Chilean presidential candidates in the period covered supported the country's counter-cyclical fiscal rules and inflation-targeting framework.

The economic pronouncements made by Latin American electoral candidates differ markedly among countries

For Mexico and Brazil, non-credibility was an issue only sporadically. Among the three presidential elections that took place in Brazil only one (October 2002) gave rise to credibility concerns. This was of course the initial election of Luiz Inácio Lula da Silva, discussed in detail above. In Mexico the (unsuccessful) candidacy of populist Andrés Manuel López Obrador in the 2006 presidential election was seen as a possible threat to the continuity of credible economic policies.

At the other end of the scale, Venezuela, Ecuador and Argentina all experienced significant swings in their policy orientations and were characterised by elections in which the variation between the manifestos offered to the electorate was extreme[33].

## IS LATIN AMERICAN DEMOCRACY MATURING IN THE EYES OF THE CAPITAL MARKETS?



There were elections in 2006 in all the large countries of Latin America other than Argentina. Over 80 per cent of the region's population went to the polls to elect their head of state, a quite exceptional total (Figure 3.16). In spite of this financial markets in the region did not experience major disruptions. This was a marked contrast to previous years and it is natural to wonder if this was a one-off or evidence of a permanent change in the attitude of the financial markets. It is too soon to confirm a new Latin American maturity in the eyes of the capital markets, but there are indeed encouraging signs that a transformation may be under way.

It is not straightforward to compare the effects of electoral cycles in different years, given the variation in the international financial and economic background. The relative stability in 2006, for example, may have been attributable to the general liquidity in financial markets and favourable external conditions at that time.

For this reason, investment-bank recommendations may be more useful than other indicators of capital markets' confidence, since – as explained in Box 3.3 above – such recommendations filter out exogenous factors. During 2006 overall recommendations for the region stayed out of negative territory with an average value of 0.13. This is better than previous electoral cycles in the region. In 1998, 1999, 2000 and 2002 average recommendations were -0.13, 0.09, 0.07 and 0.02 respectively.

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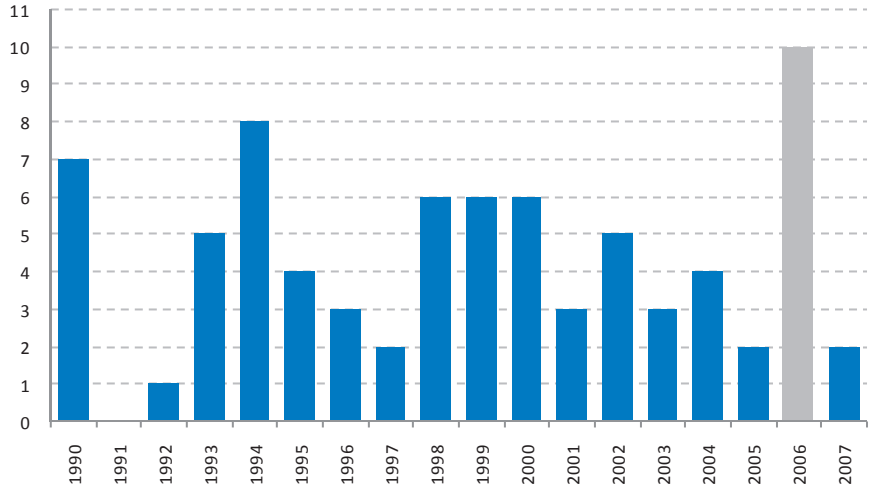
**Figure 3.16. Number of Presidential Elections by Year, Latin America**[a b]




*Notes:*

*a)* The Latin American countries covered are Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela.

*b)* For elections with a second (run-off) round, the date of the final round is used.

*Source:* OECD Development Centre calculations based on Nieto Parra and Santiso (2008*a*, forthcoming).

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Figure 3.17 takes this further and looks at the evolution of market analysts' perceptions of Latin American policies over time. Bank recommendations are divided into two sub-samples covering elections before and after the start of 2006. In both subsamples recommendations fell prior to elections, but for the latter group remained above those of previous electoral cycles.

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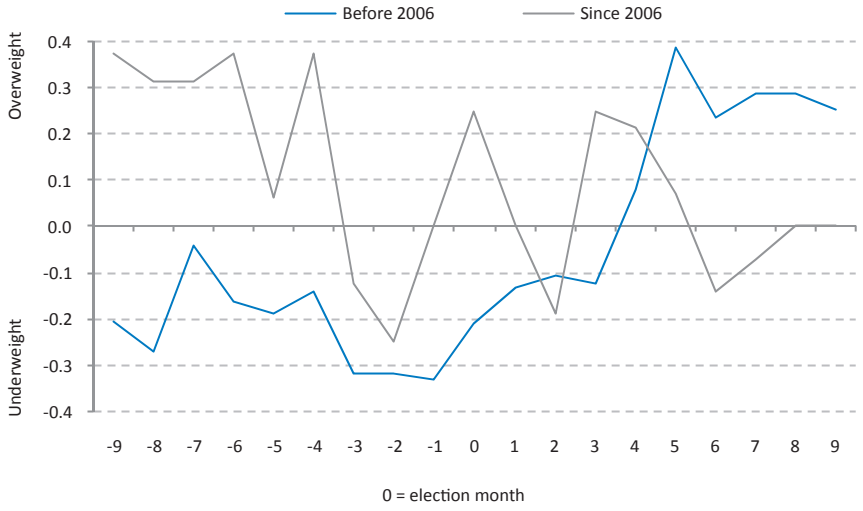
**Figure 3.17. Investment-bank Recommendations Nine Months Either Side of Presidential Elections in Latin America**[a b] (1997-2008[c])




*Notes:*

*a)* Banks' recommendations can be classified into three groups: "overweight" (1), "neutral" (0) and "underweight "(-1).

*b)* The Latin American countries covered are Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Peru, Uruguay and Venezuela.

*c)* Dataset covers the period from July 1997 to February 2008, including 15 presidential elections before 2006 and eight presidential elections since 2006. For elections with a second (run-off) round, the second round is taken as the election date.

*Source:* OECD Development Centre calculations based on investment-bank publications.
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The election effect has been much less marked since 2006 than before...

This comparison can be confirmed with simple econometric techniques, separately analysing the same periods[34]. Before 2006 banks downgraded Latin American countries prior to elections. Since 2006, in contrast, the impact of elections on recommendations is not statistically significant. Moreover, regression results suggest that the impact of elections on recommendations decreased in the 2006 electoral cycle with respect to previous electoral cycles. Given that the length of the two sub-samples differs caution is called for, however, in the interpretation of these results. Indeed, the smaller number of observations for the latter period (only two years long) may itself explain why the effect of the 2006 electoral cycle is not significant.

...and is partially supported by higher primary surplus due to high GDP growth rather than spending restraint ...

These reservations notwithstanding, a changed attitude on the part of the markets would certainly have some justification. Figure 3.18 compares the effect of elections in 2006 on the primary surplus and on primary expenditure. Confounding the political cynic, primary surpluses tended to grow rather than shrink in countries for which 2006 was an election year. No doubt part of this fiscal discipline can be ascribed to the more forgiving background of high real GDP growth. Certainly, as the second panel of Figure 3.18 shows, spending restraint was not driving low deficits. Many of those same countries witnessed sizeable increases in primary expenditure as a share of GDP. This is the case for Venezuela, Brazil and Mexico, in which primary spending booms stimulated growing fiscal deficits, and is in sharp contrast to Chile.

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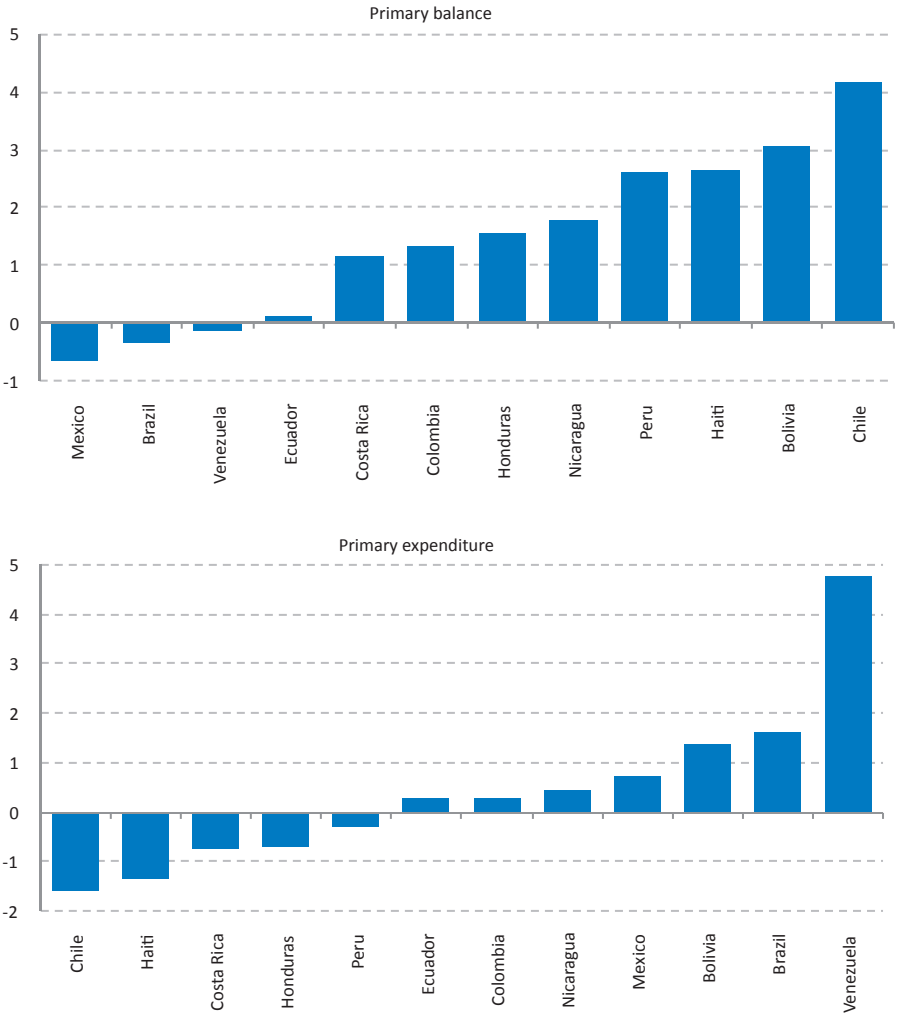
**Figure 3.18. Impact of Presidential Elections on Fiscal Variables**
(Percentage of GDP, 2005 and 2006 presidential elections against prior non-election years)




*Note:* The impact of 2005 and 2006 elections on fiscal policy is calculated as the difference between the fiscal variable (as a proportion of GDP) during the election year and prior non-election years.

*Source:* Nieto Parra and Santiso (2008*b*, forthcoming) based on Secretaria do Tesouro Nacional in the case of Brazil and ECLAC ILPES, *Public Finance database* for other Latin American countries.
StatLink http://dx.doi.org/10.1787/450175418864



...though there has been no decrease in non-credible policy pronouncements

A change in the pattern of non-credible policy pronouncements cannot however be advanced as a possible cause of the improved sentiment. The proportion of elections in which at least one of the main candidates announced non-credible economic policies remained high. In five of the eight elections studied (Argentina, Ecuador, Mexico, Peru and Venezuela) at least one of the main candidates was perceived as a risk to the continuity of credible policies. Only the presidential elections in Brazil, Chile and Colombia were completely free from this.

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# CONCLUSIONS

Latin America is still characterised by high levels of public debt and remains vulnerable to adverse shocks. However, considerable success has been made in managing the composition of this debt and reducing the region's foreign-currency exposure. Within the domestic public debt market these developments are not new; what are new, however, are issues completed abroad but denominated in local currency. The growth in such issues has undoubtedly been helped by the favourable economic climate in which the region has found itself in recent years. Challenges to the development of the domestic bond market remain.

One of the major – almost defining – characteristics of Latin American sovereign-bond markets is that they have been keenly sensitive to political events since the return of democratic regimes.

Two main factors explain the role of monetary policy and in particular fiscal policy in this sensitivity. First, shifts in fiscal policy and above all spending during elections can damage investors' interests and affect the credibility of economic regimes. Second, there is the uncertainty about the direction and credibility of candidates' future policies. High volatility in capital markets during electoral cycles may imply a lack of commitment on the part of governments and political parties to the credibility and stability of economic policies during and after electoral processes. Education of the market, good and careful communication, and prudent management of economic policies by all political actors can play a major role in modifying capital market behaviour for the better at these times. In that context information flowing from the rating agencies and the investment banks concerning sovereign bonds is crucial.



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# STATISTICAL ANNEX

## Methodological Note

Investment-bank recommendations in respect of sovereign external debt in emerging economies

The countries covered are the main Latin American economies in terms of GDP and in terms of bond market issues: Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Peru, Uruguay and Venezuela.

The database comprises the recommendations of a group of 13 investment banks, all major underwriters in emerging bond markets. They are all developed-country brokers, given these are the dominant market makers: ABN AMRO (ABN), Barclays Capital (BARCLY), Bear Stearns (BS), Citigroup - formerly Salomon Smith Barney (CITI), Credit Suisse - formerly Credit Suisse First Boston (CSFB), Deutsche Bank (DB), Dresdner Kleinwort Wasserstein (DK), Goldman Sachs (GS), JPMorgan (JPM), Lehman Brothers (LB), Merrill Lynch (ML), Morgan Stanley (MS) and UBS (UBS). This group managed as underwriters more than 85 per cent of the Latin American sovereign IPOs over the period considered.

Drawn from 699 individual published reports on emerging bond markets, this database contains over 5 000 recommendations to institutional investors made between July 1997 and March 2008 (Table 3.A1)[35].

**Table 3.A1. Database of Investment-Bank Recommendations:**
(Number of observations, July 1997-March 2008)

| | ABN | BAR-CLY | BS | CITI | CSFB | DB | DK | GS | JPM | LB | ML | MS | UBS | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Argentina | 15 | 3 | 56 | 107 | 82 | 50 | 57 | 25 | 83 | 19 | 40 | 57 | 14 | 608 |
| Brazil | 12 | 17 | 65 | 105 | 81 | 50 | 54 | 25 | 85 | 19 | 51 | 53 | 18 | 635 |
| Chile | 11 | 15 | 41 | 110 | 82 | 0 | 0 | 25 | 83 | 19 | 0 | 30 | 10 | 426 |
| Colombia | 12 | 15 | 65 | 107 | 82 | 51 | 57 | 25 | 85 | 19 | 44 | 54 | 12 | 628 |
| Ecuador | 1 | 16 | 58 | 106 | 67 | 51 | 53 | 25 | 81 | 18 | 46 | 41 | 15 | 578 |
| Mexico | 15 | 15 | 63 | 107 | 78 | 50 | 55 | 25 | 85 | 19 | 49 | 50 | 16 | 627 |
| Peru | 1 | 16 | 65 | 104 | 80 | 51 | 54 | 25 | 83 | 19 | 47 | 53 | 14 | 612 |
| Uruguay | 0 | 0 | 51 | 26 | 61 | 0 | 0 | 16 | 80 | 19 | 21 | 12 | 0 | 286 |
| Venezuela | 12 | 14 | 60 | 111 | 77 | 51 | 54 | 25 | 82 | 19 | 48 | 52 | 14 | 619 |
| Total | 79 | 111 | 524 | 883 | 690 | 354 | 384 | 216 | 747 | 170 | 346 | 402 | 113 | 5 019 |
| Underwriting participation in Latin America (%) | 2.6 | 2.3 | 0.6 | 9.3 | 6.0 | 10.6 | 2.4 | 9.7 | 21.8 | 0.1 | 7.5 | 7.8 | 6.9 | 87.5 |

*Note:* The name of the publications used are Emerging Markets Fortnightly (ABN AMRO), LatAm Drivers Fortnightly (Barclays Capital), Global Emerging Markets Monthly (Bear Stearns), Economics/Strategy (Citigroup), Debt Trading Monthly (Credit Suisse), Emerging Markets Monthly (Deutsche Bank), EM Strategist (Dresdner Kleinwort Wasserstein), Global Interest Rate Strategy (Goldman Sachs), Emerging Markets Outlook and Strategy (JPMorgan), Emerging Markets Compass (Lehman Brothers), Emerging Markets Debt Monthly (Merrill Lynch), EMD Perspectives Quarterly (Morgan Stanley) and Emerging Markets Debt Strategy Perspectives (UBS).

*Source:* Nieto Parra and Santiso (2008*a*) based on investment banks' publications (for recommendations) and *Dealogic* database (for underwriting).

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Recommendations are classified as: Overweight (given the value of 1), Neutral (0) and Underweight (-1), in each case describing the recommended holding relative to the weighting of the bond in a relevant bond index. An overweight recommendation, for example, is a recommendation to build a holding which makes a greater proportion of the investor's own portfolio than does the bond in the index. The comparison index is typically an index from the EMBI family calculated by JPMorgan.

Given overall portfolio constraints, one would expect an overweight recommendation to be accompanied by at least one underweight one – mathematically a portfolio which is overweight in one bond must be underweight in something, possibly everything, else. Note that there is no one-to-one correspondence, since a single overweight recommendation could be compensated by more than one underweight recommendation or vice versa. However, this advice is often implicit and it is certainly not the case that recommendations are symmetrically distributed.



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## Table 3.A2. Public External Bonds Outstanding (Percentage of exports of goods and services)

| | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Argentina | 69.1 | 72.3 | 65.4 | 148.6 | 132.8 | 111.1 | 125.8 | 130.1 | 148.7 | 174.5 | 164.7 | 175.8 | 211.3 | 197.6 | 178.9 | 77.4 | 73.9 |
| Bolivia | 3.5 | 3.7 | 4.4 | 1.9 | 1.4 | 1.4 | 1.3 | 0.6 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Brazil | 6.3 | 8.5 | 25.2 | 25.2 | 101.0 | 92.6 | 96.1 | 78.8 | 80.0 | 87.0 | 78.0 | 67.6 | 70.3 | 65.7 | 48.2 | 40.7 | 28.7 |
| Chile | 0.4 | 1.7 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.7 | 10.1 | 15.0 | 13.2 | 10.6 | 8.6 |
| Colombia | 2.9 | 3.5 | 4.1 | 8.0 | 10.8 | 12.6 | 23.3 | 27.5 | 38.2 | 42.8 | 44.6 | 56.9 | 55.4 | 49.9 | 46.1 | 37.7 | 38.0 |
| Costa Rica | 29.1 | 26.1 | 21.6 | 19.1 | 16.6 | 12.1 | 11.1 | 10.7 | 11.0 | 12.5 | 15.9 | 20.8 | 19.3 | 19.2 | 21.1 | 18.1 | 15.6 |
| Dominican Republic | 0.0 | 0.0 | 0.0 | 0.0 | 8.5 | 7.8 | 7.2 | 6.2 | 5.7 | 5.2 | 4.6 | 9.4 | 9.2 | 13.6 | 12.7 | 11.2 | 12.6 |
| Ecuador | 0.0 | 0.0 | 0.0 | 0.0 | 3.9 | 105.7 | 97.3 | 92.9 | 106.9 | 96.9 | 54.2 | 55.3 | 51.9 | 44.0 | 36.4 | 32.9 | 22.4 |
| El Salvador | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.2 | 1.5 | 3.2 | 22.6 | 24.5 | 24.1 | 21.4 | 27.2 |
| Guatemala | 11.2 | 9.3 | 7.3 | 6.3 | 8.5 | 8.2 | 7.2 | 9.2 | 7.6 | 6.9 | 5.3 | 11.2 | 8.9 | 12.1 | 15.2 | 11.2 | 9.7 |
| Honduras | 0.0 | 0.0 | 0.0 | 11.7 | 10.5 | 7.8 | 6.0 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Mexico | 73.5 | 70.7 | 57.1 | 55.8 | 53.5 | 46.8 | 47.2 | 39.5 | 38.1 | 35.6 | 27.1 | 26.9 | 25.7 | 25.1 | 22.8 | 18.2 | 13.0 |
| Nicaragua | 0.0 | 150.6 | 160.3 | 131.8 | 96.1 | 70.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Panama | 4.6 | 3.8 | 3.3 | 3.1 | 0.0 | 0.0 | 37.6 | 33.8 | 36.3 | 45.4 | 43.9 | 51.7 | 57.0 | 58.5 | 58.7 | 50.9 | 45.5 |
| Paraguay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Peru | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 57.3 | 42.4 | 46.1 | 41.2 | 37.4 | 37.7 | 43.2 | 46.9 | 42.7 | 38.6 | 28.8 |
| Uruguay | 23.4 | 60.4 | 57.6 | 58.4 | 55.7 | 50.2 | 49.0 | 51.0 | 57.2 | 57.5 | 61.6 | 71.4 | 96.8 | 117.4 | 88.6 | 76.6 | 69.4 |
| Venezuela | 91.5 | 106.6 | 117.4 | 118.5 | 109.1 | 91.7 | 76.4 | 69.2 | 84.5 | 69.1 | 42.9 | 50.8 | 51.1 | 53.5 | 42.9 | 38.4 | 26.0 |
| | | | | | | | | | | | | | | | | | |
| Latin America average | 17.5 | 28.7 | 29.2 | 32.7 | 33.8 | 34.4 | 35.7 | 33.0 | 36.7 | 37.7 | 32.3 | 35.6 | 40.7 | 41.3 | 36.2 | 26.9 | 23.3 |
| Latin America (8) average[a] | 33.4 | 40.5 | 41.2 | 51.8 | 57.9 | 50.6 | 59.4 | 54.8 | 61.6 | 63.5 | 57.1 | 61.2 | 70.5 | 71.4 | 60.4 | 42.3 | 35.8 |
| | | | | | | | | | | | | | | | | | |
| Lower middle-income countries[b] | 3.7 | 3.7 | 4.2 | 4.7 | 5.1 | 5.8 | 6.7 | 6.7 | 8.0 | 7.7 | 6.3 | 6.9 | 6.3 | 5.6 | 5.0 | 4.4 | 3.9 |
| Middle-income countries[b] | 15.7 | 16.0 | 15.5 | 18.4 | 23.6 | 21.0 | 21.6 | 20.3 | 23.3 | 23.6 | 21.3 | 21.5 | 21.4 | 19.6 | 16.6 | 12.6 | 10.5 |
| Upper middle-income countries[b] | 24.0 | 25.4 | 24.5 | 29.4 | 38.9 | 33.2 | 33.8 | 31.6 | 35.5 | 36.9 | 33.8 | 34.0 | 35.4 | 33.0 | 28.0 | 21.0 | 17.4 |

*Notes:*

*a)* Latin America (8) average includes Argentina, Brazil, Chile, Colombia, Mexico, Peru, Uruguay and Venezuela.

*b)* Upper Middle-Income, Middle-Income and Lower Middle-Income countries include all regions and are defined following the World Bank list of economies which takes into account the gross national income (GNI) per capita.

*Source:* OECD Development Centre calculations based on World Bank, *Global Development Finance* database.

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## Table 3.A3. Investment Bank Recommendations
(Country averages)

| | Argentina | Brazil | Chile | Colombia | Ecuador | Mexico | Peru | Uruguay | Venezuela |
|---|---|---|---|---|---|---|---|---|---|
| Q3 1997 | 1.0 | 0.0 | 1.0 | 0.0 | -1.0 | 0.5 | 0.0 | | -1.0 |
| Q4 1997 | | | | | | | | | |
| Q1 1998 | 0.7 | -0.3 | 0.7 | 0.0 | -0.7 | 1.0 | -0.3 | | -1.0 |
| Q2 1998 | -0.3 | 0.5 | -0.5 | 0.0 | -1.0 | 1.0 | -1.0 | | -1.0 |
| Q3 1998 | 0.3 | -0.7 | -0.7 | -0.3 | -1.0 | 1.0 | -1.0 | | -0.3 |
| Q4 1998 | -1.0 | 1.0 | 0.0 | 1.0 | 0.0 | 1.0 | 1.0 | | -1.0 |
| Q1 1999 | -1.0 | -0.5 | 0.0 | 1.0 | -1.0 | 1.0 | 1.0 | | -1.0 |
| Q2 1999 | -1.0 | 0.0 | 0.0 | 1.0 | -0.7 | 0.7 | 1.0 | | -0.3 |
| Q3 1999 | -1.0 | 0.0 | 1.0 | 0.0 | -0.7 | 1.0 | 1.0 | | 0.3 |
| Q4 1999 | -0.3 | 0.5 | 1.0 | 1.0 | -1.0 | -0.5 | 0.5 | | -0.5 |
| Q1 2000 | 0.0 | 0.8 | 1.0 | 0.5 | -1.0 | 1.0 | 0.2 | | -0.8 |
| Q2 2000 | -0.5 | 0.5 | 0.3 | 0.0 | -0.7 | 0.2 | 0.2 | | -0.5 |
| Q3 2000 | -1.0 | 1.0 | 1.0 | 0.0 | -0.5 | 0.2 | -0.2 | | -0.2 |
| Q4 2000 | -1.0 | 1.0 | 0.0 | 0.0 | 0.3 | 0.0 | -0.2 | | 0.3 |
| Q1 2001 | -0.1 | 1.0 | -0.5 | 0.1 | 0.4 | -0.3 | 0.1 | | 0.7 |
| Q2 2001 | -0.5 | 0.1 | 0.0 | 0.0 | 0.1 | 0.4 | 0.0 | 0.0 | 1.0 |
| Q3 2001 | -0.9 | -0.4 | -0.3 | 0.0 | 0.8 | 0.8 | 0.6 | -0.5 | 0.5 |
| Q4 2001 | -0.8 | 0.0 | 0.3 | -0.2 | 0.5 | 0.4 | 0.8 | -0.5 | 0.0 |
| Q1 2002 | -1.0 | 1.0 | 0.3 | -0.5 | 0.6 | 0.3 | 0.7 | 0.0 | -0.4 |
| Q2 2002 | -1.0 | 0.4 | -0.4 | -0.4 | 0.5 | 0.6 | 0.1 | -0.2 | 0.4 |
| Q3 2002 | -0.9 | -0.2 | -0.4 | 0.1 | 0.2 | 0.8 | 0.3 | -0.3 | -0.1 |
| Q4 2002 | -0.7 | -0.4 | 0.1 | 0.7 | -0.4 | 0.3 | -0.2 | -0.5 | -0.1 |
| Q1 2003 | -0.6 | 0.2 | 0.3 | 0.7 | 0.3 | -0.1 | 0.1 | -0.3 | 0.1 |
| Q2 2003 | -0.6 | 0.7 | 0.2 | 0.7 | 0.5 | 0.0 | 0.1 | -0.2 | 0.3 |
| Q3 2003 | -0.7 | 0.9 | 0.0 | 0.7 | 0.0 | 0.1 | -0.3 | -0.1 | 0.3 |
| Q4 2003 | -0.5 | 0.9 | 0.2 | 0.3 | 0.4 | 0.0 | -0.4 | -0.3 | 0.4 |
| Q1 2004 | -0.2 | 0.8 | -0.1 | 0.3 | 0.8 | 0.0 | -0.4 | -0.1 | 0.4 |
| Q2 2004 | 0.2 | 0.2 | 0.2 | 0.3 | 0.1 | 0.3 | -0.3 | -0.2 | 0.7 |
| Q3 2004 | 0.1 | 0.4 | -0.1 | 0.2 | 0.0 | 0.3 | -0.2 | -0.4 | 0.4 |
| Q4 2004 | 0.2 | 0.6 | -0.4 | 0.3 | 0.2 | -0.4 | 0.2 | -0.6 | 0.6 |
| Q1 2005 | 0.5 | 0.1 | -0.6 | 0.1 | 0.4 | -0.1 | 0.2 | -0.2 | 0.8 |
| Q2 2005 | 0.6 | -0.2 | -0.4 | 0.2 | -0.4 | 0.1 | 0.3 | -0.1 | 0.5 |
| Q3 2005 | 0.9 | 0.1 | -0.1 | -0.1 | -0.4 | 0.2 | 0.3 | 0.0 | 0.5 |
| Q4 2005 | 0.7 | 0.3 | -0.4 | -0.1 | -0.3 | 0.0 | 0.0 | -0.3 | 0.5 |
| Q1 2006 | 0.7 | 0.7 | -0.5 | 0.0 | -0.1 | -0.1 | -0.2 | 0.3 | 0.9 |
| Q2 2006 | 0.8 | 0.4 | -0.8 | 0.5 | 0.2 | -0.7 | 0.2 | 0.3 | 0.9 |
| Q3 2006 | 0.9 | 0.3 | -0.9 | 0.6 | 0.3 | -0.2 | 0.4 | 0.2 | 0.6 |
| Q4 2006 | 1.0 | 0.4 | -1.0 | 0.4 | -0.1 | -0.1 | 0.1 | 0.3 | 0.0 |
| Q1 2007 | 0.9 | 0.6 | -0.6 | 0.1 | -0.7 | -0.2 | 0.0 | 0.3 | 0.1 |
| Q2 2007 | 0.7 | 0.5 | -0.5 | 0.1 | 0.5 | -0.4 | -0.2 | 0.4 | 0.0 |
| Q3 2007 | 0.5 | 0.6 | -0.7 | 0.2 | 0.3 | -0.4 | -0.3 | 0.3 | 0.4 |
| Q4 2007 | 0.4 | 0.2 | -0.6 | 0.2 | 0.4 | -0.2 | -0.1 | 0.2 | 0.4 |
| Q1 2008 | 0.6 | 0.3 | -0.4 | 0.3 | -0.4 | -0.1 | -0.3 | 0.0 | 0.1 |

*Notes:*

*a)* The recommendations are classified in three types: "Overweight" (1), "Neutral" (0) and "Underweight" (- 1), corresponding respectively to the cases of buying, maintaining and selling with respect to a bond index.

*b)* The name of the publications used are *Emerging Markets Fortnightly* (ABN AMRO), *LatAm Drivers Fortnightly* (Barclays Capital), *Global Emerging Markets Monthly* (Bear Stearns), *Economics/Strategy* (Citigroup), *Debt Trading Monthly* (Credit Suisse), *Emerging Markets Monthly* (Deutsche Bank), *EM Strategist* (Dresdner Kleinwort Wasserstein), *Global Interest Rate Strategy* (Goldman Sachs), *Emerging Markets Outlook and Strategy* (JPMorgan), *Emerging Markets Compass* (Lehman Brothers), *Emerging Markets Debt Monthly* (Merrill Lynch), *EMD Perspectives Quarterly* (Morgan Stanley) and *Emerging Markets Debt Strategy Perspectives* (UBS).

*Source:* Nieto-Parra and Santiso (2008*a*) based on investment-bank publications (for recommendations) and *Dealogic* database (for underwriting).

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# NOTES

1. An aspect not addressed by this chapter is the relationship between public debt management and the development of local private bond markets. See Borensztein *et al.* (2008) for an extensive discussion of the development of the domestic bond market in Latin America.

2. Governments have a menu of options. One of the most important is a domestic bond linked to increases in some measure of prices. This both protects investors against unexpected inflation and is a signal of government commitment to price stability. Where capacity in the domestic sovereign-bond market is limited as a result of scepticism about economic policies, this inflation-indexed alternative becomes particularly attractive. Compared with short-term bonds they reduce roll-over risk and compared with foreign currency debt are not exposed to depreciation of the real exchange rate. As a result they may come to squeeze out both. Inflation-indexed bonds represent a high percentage of the total sovereign domestic bond market in a number of Latin American countries: 92 per cent in Chile, 71 per cent in Argentina, 27 per cent in Uruguay, 20 per cent in Colombia and 15 per cent in Brazil in 2005 (see Borensztein *et al.*, 2008). Of course, a sustainable inflation-indexed bond market requires transparent and trusted official inflation statistics. Among Latin American countries that issue indexed-inflation bonds, Argentina stands out as an example for which there is heated debate about the accuracy of the inflation data provided by the statistical office in recent years (see for instance Credit Suisse, 2008; Merrill Lynch, 2007).

3. Empirically there is little evidence of a negative correlation between local-currency denominated debt and changes in maturity structure in a cross-sectional analysis of emerging countries. However, in principle this trade-off is observable in terms of cost. Governments can issue long-term debt denominated in local currency by paying the currency (or inflation) premium that the market demands. The difficulty is in identifying the implied relative costs. If the difference between the yield of long-term local-currency denominated debt and that of foreign-currency denominated debt of similar term corresponds to the market's expectation of depreciation, the costs of both are the same *ex-ante* (see chapter 13 of IADB [2006], for a discussion of the relative cost of local-currency and foreign currency denominated debt).



4. The results of Reinhart *et al.* (2003) must be interpreted with caution. The evidence for the existence of such a tolerance threshold and the robustness of the results have been criticised (Sims, 2003; Eichengreen *et al.*, 2003).

5. Caballero and Cowan (2008) suggest that domestic currency borrowing is now prevalent because an expected appreciation allows prudent policy makers to hide the implicit insurance premium embedded in domestic currency borrowing.

6. For a description of the definitions of external and domestic debt see Panizza (2008). In this chapter we differentiate between domestic and external debt according to the regulation of the security issued.

7. For an analysis of the trade-offs between domestic and external debt see Panizza (2008).

8. For details of this trade-off between maturity and currency risks see Blommestein (2005) and Alfaro and Kanczuk (2006).

9. In parallel to this trend other countries tried to reduce their currency mismatches through de-dollarisation of their liabilities (Fernández-Arias, 2006).

10. A crucial part of the development of the domestic sovereign-bond market has been the implementation of pension reforms, moving from pay-as-you-go to individual systems. The corresponding expansion of private pension funds has, since the 2000s, increased the demand for public assets in many Latin American countries. In Chile, Colombia, Mexico and Uruguay, more than 20 per cent of domestic public debt is held by private pension funds. By contrast, prior to 2000, only in Chile did such funds hold more than 20 per cent of the domestic public debt (see Borensztein *et al.*, 2008).

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11. The exception was Argentina in 1997. Two public issues (maturity ten and five years) were denominated in local currency in the euro-market. For this year the original sin value was 0.94. (Source: Dealogic database)

12. In Uruguay principal and interest are paid in US dollars by converting the Uruguayan peso amounts into US dollars.

13. For the case of Russia during the first era of globalisation, see Flandreau and Sussman (2004).

14. In fact, Brazil was for most of the 19th century the only Latin American country not to default on its external debts.

15. Latin American domestic bonds without exchange-rate clauses did occasionally circulate in London. Argentina's mortgage bonds, for example, were largely purchased by British investors for speculative purposes; they were denominated in paper pesos and the exchange rate was volatile.

16. It can be argued that CDS (credit-default swap) spreads lead sovereign-bond spreads in identifying financial distress (see Chan-Lau (2003) in particular). However, in this chapter sovereign-bond spreads are used because CDS market spreads of sovereign emerging bonds are available only from the beginning of the 2000s and do not provide an adequate time series. There is comfort for this approach in that the arbitrage between CDS and sovereign-bond markets means the two are highly correlated (Chan-Lau, 2003).

17. US Treasury bonds of similar maturity are used as the benchmark for emerging sovereign bonds denominated in US dollars.

18. For instance, in the aftermath of the Argentinean crisis, investors did not react negatively to other emerging countries (see Boschi, 2005). This absence of contagion supports the view that capital market actors are able to discriminate among emerging economies based on economic policies and that contagion today follows real similarities in countries' circumstances.



19. See the methodological annex for more information about this variable.

20. Nieto Parra and Santiso (2007). These results confirm previous research on high-income countries which shows recommendations do influence equity capital markets (Mikhail *et al.*, 2005). This influence is most pronounced when banks downgrade assets (see Asquith *et al.*, 2005; Hirst *et al.*, 1995; Jegadeesh *et al.*, 2004; Womack, 1996).

21. Notwithstanding the possible conflict of interest between the investment banks' roles for governments (as issuers) and investors, their recommendations do have an impact on institutional investors' behaviour (Nieto Parra and Santiso, 2007).

22. See Alesina *et al.* (1997) for a more detailed analysis of political ideologies and economic policies.

23. However, investors may be willing to invest in left-leaning governments over centre/right governments if those leftist governments provide policy certainty (Cho, 2008). Contrary to the conventional wisdom, Gourevitch, Pinto, and Weymouth (2008) show that left-leaning governments are more likely to be associated with higher stock-market capitalization than their counterparts from the right of the political spectrum.

24. Moser (2007).

25. They downgrade developing country ratings more often in election years, and do so by approximately one rating level (Block and Vaaler, 2004). Agency downgrades during election years are greatest in developing countries with left-wing incumbent candidates (Vaaler and McNamara, 2008). However, Archer *et al.* (2006) cast doubt on this electoral effect. Using a sample of fifty developing countries from 1987 to 2003 and studying sovereign-bond ratings issued by Moody's Investors Service, Standard & Poor's and Fitch Ratings, they found that political factors, such as election cycles, had little effect on ratings.

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26. Nieto Parra and Santiso (2008*a*). In order to check the robustness of the described pattern, the authors used panel data analysis (Ordinary Least Squares with country Fixed Effects regressions). The most important finding is that dummy variables representing three, two and one month before elections are negatively and highly statistically significant at the 1 per cent level.

27. Block and Vaaler (2004). Empirical research concludes that incumbent parties facing re-election, particularly incumbents from left-wing parties, face incentives to engage in unsustainable expansionary economic policies (Leblang, 2002). Voters and incumbent parties, of course, are playing a dynamic game and rational voters should not be expected to make systematic mistakes. However, there are information asymmetries between the two groups regarding the conduct of fiscal policy and the competence of politicians, and rational voters may well prefer incumbent candidates that run fiscal deficits (Rogoff, 1990). This view has been challenged more recently by other authors (Brender and Drazen, 2005). By using a sample of 74 countries over the period 1960-2003, they find that there is no evidence that deficits promote re-election in either developed or developing countries.

28. Legislative elections are used for countries with parliamentary political systems and executive elections for countries with presidential systems. OECD countries, other than Mexico, Poland and the United States, have been treated as parliamentary systems (see Keefer, 2007).

29. Looking at Mexico over the period 1957-97, González (2002) found that governments made ample use of public spending on infrastructure and current transfers in order to attract voters. Drazen and Eslava (2005), in an examination of municipal elections in Colombia, noted that incumbents tend to increase expenditures in ways which maximise the impact on voters without affecting the fiscal deficit. For Latin America more generally, Rodríguez (2006) found that over the period 1990-2004 governments tended to increase public investment one year prior to elections and current transfers during the election year.

30. Nieto Parra and Santiso (2008*b*) confirm the results in Figure 3.13 using a method similar to that employed by Shi and Svensson (2006) where they analysed elections in 58 developing and 27 developed countries during the period 1975-91, finding that fiscal deficits did not increase during elections for developed countries. Similar results were found by Brender and Drazen (2005) over the period 1960-2001 when differentiating among old and new democracies and using as fiscal variables government balance, total expenditure and total revenue. In order to avoid the bias caused by the inclusion of lagged dependent variables, Nieto Parra and Santiso (2008*b*) adopt the GMM (Generalised Method of Moments) estimator. Results obtained in the GMM estimation do not change significantly with respect to the FE (Fixed-Effects) model.



31. An important aspect in the credibility of policies is their time consistency. More precisely, time inconsistency of economic policies has been used in the research literature as an important factor in the lack of policy credibility (see Persson and Tabellini, 2002).

32. For instance, at the end of 1999 and the beginning of 2000 media attention was focused on Pinochet's arrest in London. From September 1999 until March 2000 nine articles on the Pinochet case appeared in *The Economist* compared with three related to the presidential elections.

33. Countries less troubled by perceptions of non-credible policies in Figure 3.15 are precisely those characterised by Santiso (2006) as exemplifying the "political economy of the possible", combining political continua and an incremental approach to policy reforms.

34. The method used follows Stein and Streb (2004) and Stein *et al.* (2005).

35. For the period July 1997 to December 1999 the database contains only information from Citigroup.

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CHAPTER FOUR

# Tax Revenues in Latin America

The influential 19th century Venezuelan thinker Andrés Bello[1] wrote of the incipient Latin American nations in 1848: "Their civilisation is an exotic plant that has yet to draw from the ground the juices it needs to sustain itself." Bello's concern was the new countries' troubled dependence on European cultural models, and the need for Latin America to declare its cultural autonomy. Perhaps something similar could be said about tax systems in Latin America today.

Latin American tax systems do not draw from the economic ground the juices that their states need to sustain their activities. They are exotic plants, it seems, perpetually in danger of withering. Latin American countries collect about 25 per cent of GDP, on average, as government revenues, more than a third of which is from non-tax sources. The ratio for OECD countries is around 40 per cent. But as Bello cautions, comparison with Europe or other countries outside the region is not straightforward.

This chapter looks closely at the differences between Latin America and the OECD in terms of tax revenues. It argues that revenue ratios at the levels seen in OECD countries are not necessarily meaningful targets for Latin American countries. As the preceding chapters have shown, and Chapter 6 will examine in depth, the challenges facing the region are as much about effective use of resources as their level. Nevertheless, in many settings, greater revenue could also enhance the development potential of fiscal systems.

Two features of Latin American tax systems seem to limit their capacity: low levels of tax revenues and a dependence upon indirect taxes. These constraints are examined using a variety of data sources, including statements of government operations, national accounts statistics, labour-force survey data and tax returns themselves. The aim is to quantify the structural impediments that prevent Latin American governments from extracting from their economies the sustaining juices they want.



## TAXATION AND FISCAL REDISTRIBUTION IN LATIN AMERICA

The redistributive impact of fiscal policy has always been of particular interest to policy makers in Latin America. Indeed, the weakly redistributive effect of fiscal systems in the region is one of the dimensions of low fiscal legitimacy highlighted in Chapter 1 of this *Outlook*. Latin America continues to rank at the top of world regions in terms of income inequality. Gini coefficients of inequality of market income (that is, income before taxes and transfers) are often higher than 50 in Latin American countries, and fiscal systems in the region seem ineffective in redistributing this.

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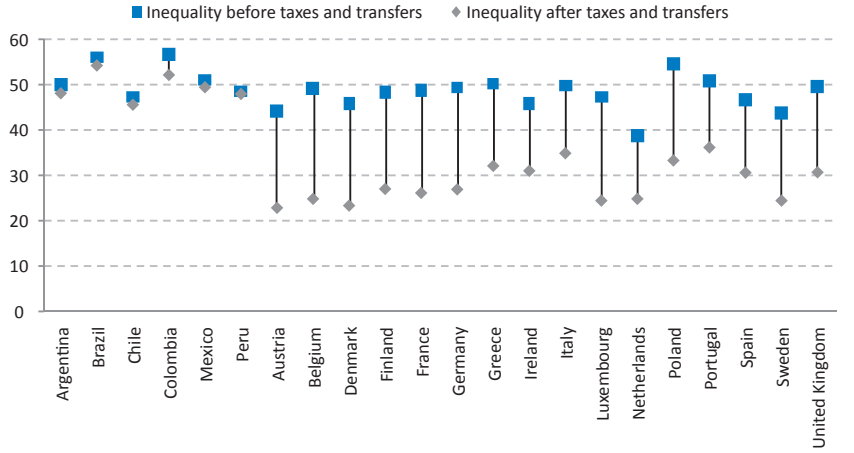
Income inequalities start at similar levels in the OECD and Latin America, but taxes and transfers are effective in reducing the gap only in the OECD

Figure 4.1 summarises information on inequality and fiscal redistribution in selected Latin American and European OECD economies. A comparison of the Gini index both before and after taxes and transfers demonstrates that fiscal systems in Latin America do much less to reduce inequality. For instance, the Gini coefficient of inequality in the European OECD countries is on average 47.6 before taxes and transfers, falling to 28.2 after. In the Latin American countries examined, on the other hand, taxes and transfer affect the Gini index almost imperceptibly, taking it from 51.6 to 49.6.

The same figure demonstrates that much of the high inequality of Latin American countries relative to European countries stems from the relative efficiency of fiscal systems. Inequality before taxes and transfers is similar. Germany, Greece, Italy, Poland, Portugal and the United Kingdom, in particular, all have levels of market income inequality that would not seem out of place in Latin America. However their income distributions are much more egalitarian net of taxes and transfers.

**Figure 4.1. Income Inequality and Fiscal Redistribution**
(Gini coefficients of market and disposable income)




*Source:* Euromod (2008) for OECD countries and Goñi *et al.* (2008) for Latin America.
StatLink http://dx.doi.org/10.1787/450207366168



Both the structure and level of taxation are factors in this: overall tax is not sufficiently progressive and does not raise enough to allow for effective spending

A World Bank study attributes the limited redistributive capacity of Latin American fiscal systems to two structural factors (Goñi *et al.*, 2008). The first, and more significant, is the limited amount available for redistribution through transfers given the low tax revenues. The second has to do with the relative shares of direct and indirect taxation. Indirect taxes, such as value-added taxes, play a larger role in tax revenues in Latin America than in the OECD, and are more regressive.

Before surveying these structural factors, however, it is worth asking whether citizens in Latin American countries want more equal distribution of incomes. If income inequality is high and if fiscal redistribution is of little help in reducing it, one hypothesis is that this reflects social preferences. If there is an indifferent attitude toward inequality and distribution then there is no need to study fiscal reforms to increase the system's redistributive potential.

This is a question asked by the World Values Survey (WVS), which tracks social, political, religious and moral views. The survey has frequently included questions about perceptions of income inequality and the fairness of the socioeconomic

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system[2]. Two questions from the WVS provide an international context for Latin American attitudes toward inequality. The first asks respondents to place themselves on a scale from one to ten, with one being "Incomes should be made more equal", and ten "We need larger income differences as incentives." The second compares "People should take more responsibility to provide for themselves" and "The government should take more responsibility to ensure that everyone is provided for."

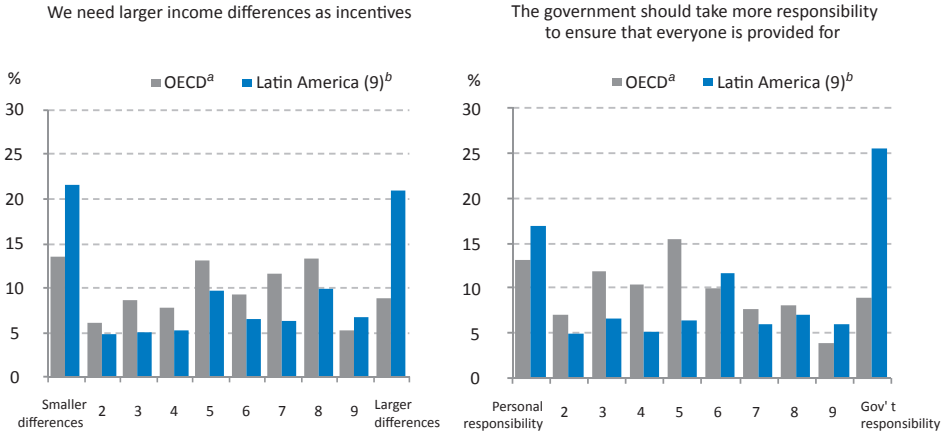
Figure 4.2 presents the distribution of responses for Latin America and OECD countries, preferences for equalising incomes in the left-hand panel and attitudes toward individual versus government responsibility on the right. From these distributions the average response in both regions is also calculated.

In the two regions the perception of income inequality and the role of government are similar, both positioned in the middle ranges. The average attitude towards income inequality is 5.7 in Latin America and 5.4 in the OECD – that is, midway between support for redistribution and support for the incentives provided by inequality. The "typical citizen" in Latin America and OECD countries has a similarly moderate position regarding the responsibility of government: the average responses are 5.9 in Latin America and 5.0 in OECD countries.

Although opinion is more polarised in Latin America, the typical citizen here and in the OECD have similar views on redistribution and the role of the state

**Figure 4.2. International Attitudes Towards Social Justice, 1999-2004**

(Percentage of total respondents, regional averages)




*Notes:*

*a)* The OECD sample comprises Australia, Austria, Belgium, Canada, Czech Republic, Finland, France, Iceland, Ireland, Italy, Japan, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Spain, Switzerland, Turkey, United Kingdom and United States.

*b)* The Latin American countries covered are Argentina, Brazil, Chile, Colombia, El Salvador, Mexico, Peru, Uruguay and Venezuela.

*Source:* OECD Development Centre calculations based on World Values Survey (2006), 1999-2004 wave.

StatLink http://dx.doi.org/10.1787/450207366168

But Figure 4.2 also indicates that opinions about redistribution in Latin American countries are more polarised than in OECD countries. The distribution of responses in Latin America is more skewed to the upper and lower tails. In particular, 22 per cent of Latin Americans strongly favour income equality, while another almost equally large group, 21 per cent of respondents, support larger income differences. A similar polarisation is observed in responses to the second question: 26 per cent of Latin American respondents are in the tail supporting government's



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responsibility. By contrast, only 9 per cent of respondents in OECD countries feel so strongly about government's role[3]. Overall, Figure 4.2 suggests that attitudes in OECD countries are closer to a consensus, while in Latin America they are evidence of a divergence of views. Of course, such a generalisation needs to be assessed more carefully in the context of an individual country's pattern of social preferences.

Recent studies in Latin America of social preferences regarding redistribution (Gaviria, 2007) have suggested that these are driven by perceptions about social mobility. Negative perceptions of distributive justice – distribution of opportunities and social justice in general – are linked with a preference for government to do more to redistribute income. Such attitudes may erode support for market-oriented policies and privatisation. Gaviria (2007) argues that the increase in social expenditure in Latin America and the democratisation process of recent decades are the result of exactly these demands for more equitable distribution. Certainly, Latin America's social expenditure increased from 10.2 per cent of GDP in 1990 to 12.5 per cent in 2004. Although these still remain far from OECD levels (where social expenditure approached 21 per cent of GDP in 2003), levels as a proportion of total public expenditure are much closer: 49 per cent in Latin America in 2004, versus 47 per cent in OECD countries in 2003[4]. (This apparent contradiction is explained by the lower levels of overall public expenditure in Latin America, documented in Chapter 2.)

A consideration of the WVS evidence makes the poor redistributive performance of Latin American fiscal systems all the more puzzling. There is after all a sizeable political constituency that would support more redistribution. This is surely explained in part by the polarisation of that political support, and partly by the weak revenue-generating capacity of Latin American states (about which this chapter will have more to say). But the social preferences in Figure 4.2 certainly do not provide evidence that post-tax and transfer inequality is high in Latin America because Latin Americans are not bothered by inequality and do not want the state to lend a hand.

## LATIN AMERICAN TAX SYSTEMS IN A COMPARATIVE PERSPECTIVE



Given the link between the redistributive capacity of a government and its fiscal revenues, the question that follows is whether tax collection is in some sense too low in Latin America. As Chapter 2 has shown, proportionate to GDP tax revenues are certainly not as bountiful in Latin America as in OECD economies, but are they at the wrong level?

Taxation's share of GDP is rising in Latin America...

Figure 4.3, using data from the Latin American Revenue Statistics and OECD Revenue Statistics databases, provides information on the evolution of tax revenues in the two groups of countries[5]. The solid line demonstrates that tax revenues have increased in Latin America over the last decade and a half. Between 1990 and 2006 tax revenues grew on average by close to 1.8 per cent annually; and between 2003 and 2006 this rate accelerated to 3.4 per cent. Growth in the mean tax burden over the region has outpaced that of the median because of unusually high levels of tax collection in recent years, notably in Venezuela and Argentina. This improvement reflects widespread strengthening of public revenues, especially for those taxes levied on income, profits and capital gains, on the one hand, and general goods and services (mainly in the form of value-added taxes), on the other. Other factors include a reduction in the number of exemptions, improvements in tax administration, and, of course, greater macroeconomic stability.

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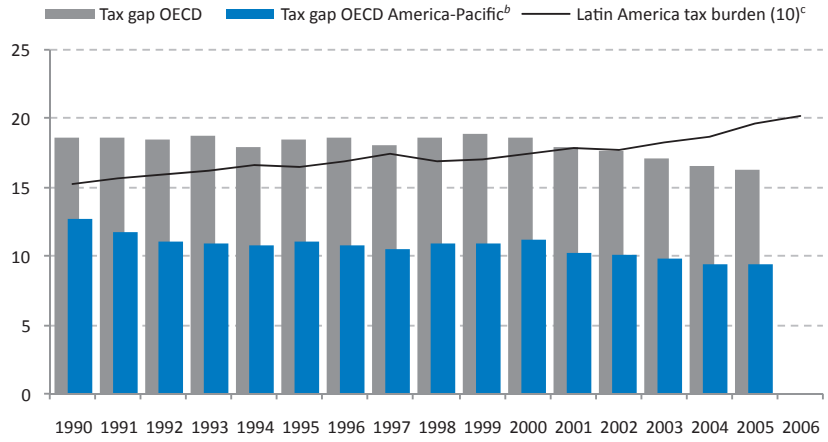
**Figure 4.3. Total Tax Revenues in Latin America and OECD Countries**[a]
(Percentage of GDP)




*Notes:*

*a)* Where possible, coverage corresponds to general government, otherwise the statistics are restricted to central government.

*b)* OECD America-Pacific comprises Australia, Canada, Japan, Korea, Mexico, New Zealand and United States.

*c)* The Latin American countries covered are Argentina, Brazil, Chile, Colombia, Costa Rica, El Salvador, Guatemala, Mexico, Peru and Venezuela.

*Source:* OECD (2007a), OECD Revenue Statistics database for OECD countries and OECD Development Centre calculations for Latin America.
StatLink http://dx.doi.org/10.1787/450207366168

...but remains well below OECD levels

Even so, the difference between OECD and Latin American tax revenues remains high. Figure 4.3 reports this "tax gap" between the two groups in greater detail. For the period 1990-2005, the difference was 18 percentage points of GDP on average, though this masks a decline over the course of the period from 18.5 to 16.3 percentage points, particularly after 2000 when Latin America experienced significant growth in revenues. The inter-regional gap shrinks further if the comparison is restricted to non-European OECD economies. Figure 4.3 shows (in dark blue bars) the tax gap between Latin America and Asia-Pacific and North American OECD economies. This gap, while large (10.7 percentage points), is nevertheless lower than the difference with Europe (20.3 percentage points)[6].

In order to provide better data for cross-regional comparisons, the OECD Centre for Tax Policy and Administration and the OECD Development Centre, with the co-operation of the UN Economic Commission for Latin America and the Caribbean (ECLAC), have created the Latin American Revenue Statistics project. The aim of this initiative is to provide directly comparable analyses of the structure of tax systems using established OECD methodological guidelines. Box 4.1 provides further detail on this initiative and its outputs.



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### Box 4.1. The Latin American Revenue Statistics Project

The Latin American Revenue Statistics project, jointly undertaken by the OECD Centre for Tax Policy and Administration and the OECD Development Centre, with the co-operation of the United Nations Economic Commission for Latin America and the Caribbean, seeks to compile comparable tax revenue statistics for a number of Latin American economies that are not members of the OECD. The model is the OECD Revenue Statistics database which has become a fundamental reference, backed by a consistent methodology, for OECD member countries. Extending the OECD methodology on a consistent basis to Latin American countries will permit better comparisons in the fiscal policy field both among Latin American economies, and between OECD and Latin American economies. Data on public revenues in this chapter of the *Outlook* are drawn from this new database.

The Latin American Revenue Statistics database extends at present to Argentina, Brazil, Chile, Colombia, Costa Rica, El Salvador, Guatemala, Mexico[7], Peru and Venezuela.

The data were collected using the methodology designed by the OECD Centre for Tax Policy and Administration and in close collaboration with local authorities in each of the countries covered.

1. *Sources and coverage:* Throughout Latin America tax revenue statistics for a country are typically published by several sources including the finance ministry, the national tax agency and the central bank. For the purpose of this project, an official source was defined in each case in accordance with the responsibilities conferred by the relevant national legislation.

The raw information is taken from statements of government operations, using the most disaggregated data available. Nevertheless, two important caveats bear mention. First, these records are prepared on a cash basis, as opposed to the accrual basis used in OECD Revenue Statistics. Although a matter of timing, the two approaches can produce material differences for any given year. Second, OECD Revenue Statistics are usually constructed on the basis of data provided by the national authorities through official channels. The Latin American Revenue Statistics, in contrast, are based on published official data for each country. These published data have been edited and reorganised according to the OECD guidelines.

In some countries, the compiled tax burden is subject to coverage limitations. Notably, detailed statistics on tax revenues are not always available for some institutional units such as local governments or social security funds. Where possible, coverage corresponds to general government, and where this is not possible is restricted to central government.

2. *Compilation methods and classification criteria*: The publication *OECD Revenue Statistics 1965-2006* provides the conceptual and analytical framework used to identify which government receipts should be regarded as taxes and to classify taxes according to type.

A main task in compiling the new database was mapping this framework on to each stream of government revenue, determining the nature of each tax and classifying them accordingly. Special emphasis was given to the analysis of legislation and regulatory frameworks governing taxation in determining if a given category of revenue should be regarded as tax or not and, if it is so, classifying it according to its corresponding tax base.



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In some cases, the application of the criteria set out in OECD guidelines can be particularly difficult. The solution adopted, in the interest of international uniformity, was to follow the predominant practice among tax administrations in OECD countries. One such case is that of fees levied on hydrocarbon production in Mexico, which account for nearly half of Mexican government revenues. The Mexican government does not consider these taxes; the OECD Revenue Statistics, however, classifies these with "other taxes on goods and services". Other material cases are briefly described below.

First, the earmarking of a tax for specific purposes does not automatically determine its classification. Some categories of contributions to the social security system in Brazil, for example, are classified according to the basis on which they are levied and not as social security contributions. This is because, unlike social security contributions as strictly defined in the OECD framework, these payments do not confer an entitlement on the payer. They have accordingly been classified mainly as taxes on goods and services.

Second, some Latin American countries (such as Argentina and Guatemala) have implemented special taxes designed to improve tax collection. These may appear to be framed as taxes on property or assets, but are in substance levied on income, assets or both and can be credited against income tax payments. In these cases OECD guiding principles require that taxes on property which are levied on a presumed or estimated income as part of an income tax, should be classified as taxes on income.

Finally, in several countries in the region, social security schemes are operated by more than one government unit. When social security funds subject to dual control cannot be separated they are attributed to the level of government that predominates in the financing or control of their operations.

For the interested reader, more information on the Latin American Revenue Statistics database can be found in Castelletti *et al.* (2008). Country data and additional information are available via Statlink.

StatLink http://dx.doi.org/10.1787/45020736616

Nevertheless, the comparison with global practices can be misleading and there is certainly little or no theoretical justification for suggesting that one proportion or another of GDP is the "right" level for taxation. Economic research on optimal tax theory, despite its tremendous productivity over the decades, focuses on the structure rather than the level of taxes (Tanzi and Zee, 2000). In this context, comparing tax burdens across countries is interesting but it is not obvious how such comparisons should be interpreted. More to the point, it is not clear whether OECD countries overall are a useful benchmark for Latin America in this respect.



First, the level of the tax burden in any given country depends in part upon the goods and services provided by the state, and the extent of this provision varies systematically across countries. Beginning in the early 1990s, many Latin American countries wholly or partly privatised health care, education, social security and infrastructure investment. Given the relatively high degree of privatisation in the region, comparing European tax burdens to those observed in most Latin American countries would be a matter of comparing apples and oranges. Most of these items are now provided through the private sector in Latin America and the public sector in European OECD countries; in a sense, therefore, tax revenues do not "need" to be as high in Latin America.

Current OECD tax levels do not form a target: the role of state differs, especially in Europe, and OECD marginal rates have themselves been falling

Second, levels of tax revenue tend to be higher in European countries than elsewhere, and these push up OECD tax-to-GDP averages. Political scientists have carefully documented international differences in the size of the welfare state, in a literature that often underscores the phenomenon of "American exceptionalism" – a reflection of important differences in the structure and

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role of government spending between Europe and the United States. Europe's more aggressively redistributive welfare systems are rooted in its history and institutions. The overall gap in social spending is as high as 10 percentage points of GDP between European countries and the United States (Alesina and Glaeser, 2004). The main differences are to be found in transfers to households (including social security) and subsidies, and are particularly large in family allowances, unemployment compensation and other labour-market programmes.

Third, tax rates have been falling in most OECD countries. This can be seen in the lowering of the marginal rates of "all in" taxes – that is, including employees' social security contributions – on personal incomes and dividends, and the even more pronounced reduction in corporate income tax rates. This trend has been combined with a broadening of the tax base and an increased reliance on value-added taxation. Any comparison of Latin American and OECD tax burdens must acknowledge that in the latter tax rates are falling in many instances[8]. Indeed, within Latin America, similar debates are under way. In some countries, efforts are focused on improving tax collection, while in other economies with higher tax revenues the efforts are aimed at making collection fairer and more efficient. Box 4.2 contains more detailed information on current tax reforms.

Finally, the average tax burden – in the OECD or in Latin America – masks a tremendous variation among countries. Recommending uniformly higher tax-to-GDP ratios in Latin America is not sensible advice in a setting where revenue ratios range from 14 per cent of GDP in El Salvador to 33 per cent in Brazil and where in the OECD Turkey has fiscal revenues of 24 per cent of GDP but Denmark over 50 per cent[9].

**Box 4.2. Fiscal Reform on the Move: Mexico and Brazil**

The governments of the two largest economies of Latin America – Mexico and Brazil –, have placed fiscal reform at the centre of their efforts to foster economic growth and strengthen social cohesion. In September 2007, the Mexican congress approved (with some minor amendments) President Calderón's fiscal reform proposal, aimed at increasing non-oil fiscal revenue by 2.1 per cent of GDP over the next four years. In Brazil the government of President Lula da Silva sent a proposed constitutional amendment to congress in February 2008, targeting fiscal complexities and distortions, and in particular the damaging "tax wars" among different Brazilian states.



These reforms differ of course in their details, but they share the common goal of maximising the potential of fiscal policy to promote economic growth and to reduce poverty and inequality.

In Mexico, where fiscal revenue in 2005 accounted for only 19.9 per cent of GDP[10] against that year's OECD average of 35.9 per cent, the main objective of the reform was to increase the tax take by expanding the fiscal base, reducing exemptions and combating tax evasion. The most important reform was the introduction of a minimum flat-tax of 16.5 per cent of firms' business income (sales less input costs, with deductions for capital expenditure). This will be gradually increased to 17.5 per cent in 2010. Other measures included a new 5.5 per cent tax on fuel, a 2 per cent tax on cash deposits exceeding a cumulative monthly amount of MXN 25 000, special taxes on betting and lottery operators, and tax cuts of as much as USD 5.4 billion over the next four years for Pemex, the national oil company. The government estimated that these measures would raise additional revenue of around USD 11 billion in 2008, the bulk of which was to be spent on social programmes and infrastructure. Also on the expenditure side, the new reform will reinforce the oversight functions of the lower house of congress, the implementation of austerity programmes, and the establishment of uniform accounting principles for the three branches of government.

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The Mexican reform might not have been as ambitious as originally hoped, but was certainly a positive step securing an increase in national non-oil revenues. The approval of the reform shows how, through dialogue and readiness to negotiate, the executive and legislative branches can reach the required consensus. Compromises made during the course of lengthy negotiations with various stakeholders represent the political price of reform. The other side of the coin can be seen in Brazil, where the government suffered a material set-back in December 2007 with the rejection by just four votes in the senate of the renewal of the *Contribuição Provisoria sobre Movimentação Financeira*. The loss of this tax on financial and capital transactions deprived the federal government of some USD 14 billion in annual revenue.

In contrast to Mexico, however, Brazil starts with relatively high tax revenues. At 33.1 per cent of GDP in 2006, it is much closer to OECD levels and well above the Latin American average of 20.2 per cent[11]. As a result, the main objective of the new fiscal reform programme sent to congress in February 2008 is not so much to increase revenue as it is to make collection fairer, simpler and more efficient, with an eye towards reducing complexities and correcting distortions as a way of attracting private investment and boosting sustained economic growth.

The bill submitted by the Lula government has provisions that range from unifying and simplifying existing taxes to reducing the fiscal pressure on investments and exports. It aims to lower employers' social security contributions to encourage employment in the formal economy, and supports a gradual reduction in the number of indirect taxes on basic products through the introduction of a new federal VAT (*IVA-F*). A new state-level VAT (*IVA-E*) should also help bring to an end the "tax wars" resulting from the current decentralised authority over VAT rates, which has been exploited by the states as an industrial policy tool to attract economic activity. The new *IVA-E* will replace the 27 existing merchandise circulation taxes (ICMS), the different value-added tax each state levies on every transfer of goods. Specific complementary provisions in the reform package fostering regional development policies and mechanisms should also encourage better inter-state relations and fiscal solidarity.

By simplifying tax regimes and making them more progressive, Brazil can also improve tax morale. As noted in last year's *Outlook*, in 2005 only 12 per cent of Brazilians believed that their taxes were being well spent, putting them ahead of only the Peruvians (10 per cent) in a region where the average was 21 per cent. Improving fiscal efficiency and fairness will be a start in improving these perceptions.

Inflationary pressures on the horizon and limits on the ability of monetary policy to respond – a strong real, soaring foreign investment inflows and interest rates already among the world's highest – mean that approval of the taxation package is important for Brazil's short-term economic future, particularly if the government is to achieve its objective of successive primary fiscal surpluses leading to a zero deficit by 2010. As the case of Mexico illustrates, flexibility may be needed on both sides. A shared understanding of the need to reform, adequate transition mechanisms and consultation with all stakeholders are the best way to achieve fairer and more inclusive fiscal regimes – and the economic benefits they can bring.



How does the structure of taxation differ between Latin American and OECD countries? Figure 4.4 analyses tax revenues (relative to GDP) into taxes on goods and services, direct taxes on income, profits and capital gains, contributions to social security, property taxes, and payroll taxes. Several differences in the structure of taxation between the groups of countries are immediately apparent.

First, relative to the OECD, Latin America exhibits a higher relative share of indirect taxation, with a low direct-tax take counterbalanced by high indirect-tax receipts. In particular, Latin American countries rely heavily on taxes on goods

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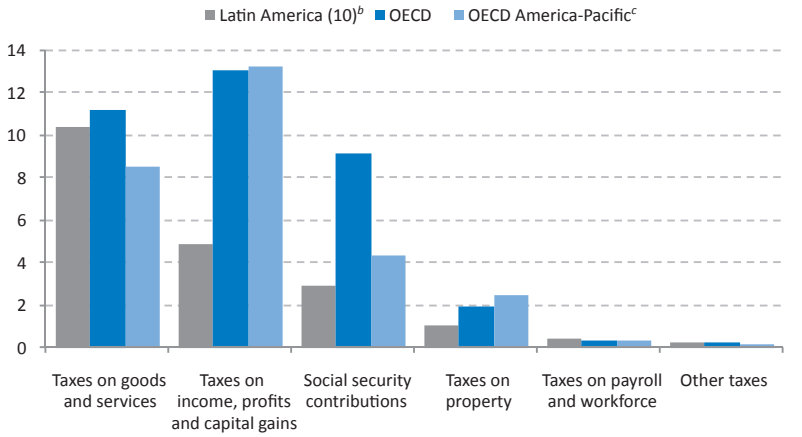
and services, which make up nearly half of overall tax revenue. As a share of GDP, Latin American taxes on goods and services approach levels observed in OECD countries, and are 2 percentage points higher than in Asia-Pacific and North American OECD countries. The economic consequences of this greater reliance on indirect taxes include a more regressive impact of the tax system, and perhaps increased incentive for some economic agents to transact in the informal economy.

A second difference between the two groups of countries is that personal income taxes and contributions to social security play a secondary role as a source of revenue in Latin America. In 2005, the tax burden of these categories is a full 14.4 percentage points lower in Latin America than in the OECD. This difference alone explains 88 per cent of the revenue gap between the two groups of countries.

Apparently low social security contributions in Latin America, for example, reflect a move to private provision in the region

The privately oriented provision of social security systems in the region explains one part of the OECD-Latin America revenue gap – payments for these services are not reflected in Latin America's tax-to-GDP ratios. This stands in stark contrast to the overwhelmingly public provision of these services and corresponding public receipt of social security contributions in many OECD countries, particularly in Europe.

**Figure 4.4. Tax Revenues in Latin America and OECD Countries**[a]
(Percentage of GDP, 2005)




*Notes:*

*a)* Where possible, coverage corresponds to general government, otherwise the statistics are restricted to central government.

*b)* The Latin American countries covered are Argentina, Brazil, Chile, Colombia, Costa Rica, El Salvador, Guatemala, Mexico, Peru and Venezuela.

*c)* OECD America-Pacific comprises Australia, Canada, Japan, Korea, Mexico, New Zealand and United States.

*Source:* OECD (2007a), OECD Revenue Statistics database for OECD countries and OECD Development Centre calculations for Latin America.
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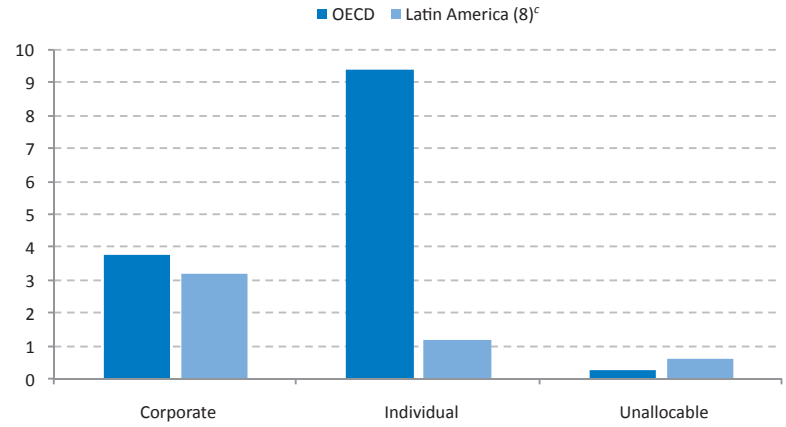
# WHY ARE INCOME TAX REVENUES LOWER IN LATIN AMERICA?

Figure 4.5 shows that personal income taxes constitute, on average, about 1.2 per cent of GDP among Latin American countries, against an average of 9.4 per cent in the OECD. The figure shows, meanwhile, that corporate tax revenues are similar in both groups of countries, reaching just under 4 per cent of GDP. Thus, the direct tax gap comes mainly from differences in the taxes imposed on individuals[12].

The direct-tax gap is almost entirely attributable to taxes on personal income

**Figure 4.5. Income Taxes in OECD and Latin America**[a]
(Percentage of GDP, 2005[b])




*Notes:*

*a)* Where possible, coverage corresponds to general government, otherwise the statistics are restricted to central government.

*b)* Data for El Salvador correspond to 2006.

*c)* The Latin American countries covered are Argentina, Brazil, Chile, Costa Rica, El Salvador, Guatemala, Peru and Venezuela.

*Source:* OECD (2007a) OECD Revenue Statistics database for OECD countries and OECD Development Centre calculations for Latin America.

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The small base for direct taxation of individuals is another underlying factor in Latin America. This has two drivers: the share of labour income in the generation of GDP is substantially lower in Latin America than in OECD countries; and its distribution means that there are relatively few taxpayers, given the concentration of income earners at low income levels. How important to tax policy are these structural features?

## Individual Income: Comparisons Using National Accounts

The smaller share of labour income in Latin American economies can be analysed with reference to the income generation account within national accounts. Although the personal income category of these accounts does not correspond exactly to the earnings reported on income tax returns, national income accounts provide the most internationally consistent picture of the potential income tax base.

Figure 4.6 illustrates the main components that give rise to primary incomes: compensation of employees, operating surplus, mixed income and net taxes

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on production. Compensation of employees consists of the total remuneration payable by an enterprise to an employee. In contrast, operating surplus and mixed income are measures of the surplus accruing from processes of production. The term "mixed" is reserved for household-owned firms.

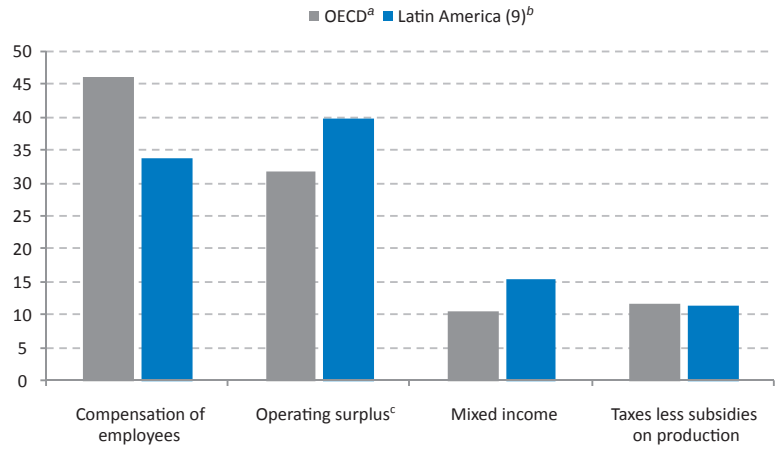
Personal income tax revenues are linked to a tax base consisting of total compensation of employees (including gross wages and salaries) plus social contributions payable by employers. Nevertheless, this simplified method has some limitations and the resulting measures of the tax base are crude. For example, in some countries social security contributions are not subject to tax, income tax revenues are affected by changes in net pension payments or there are tax-preferred types of employee compensation. These and other complications will distort comparisons of the income tax base from one country to the next.

Figure 4.6 highlights some differences between the two groups of countries using the national accounts approach. Notably, employee compensation accounts for a systematically smaller part of GDP in Latin American countries. Compensation of employees averages around 35 per cent of GDP in the region, while the average is close to 45 per cent in OECD countries.

Factor shares are important: employee compensation is a systematically smaller component of GDP in Latin America

This straightforward inspection of the national accounts suggests that factor shares have significant consequences for the size of the tax base and therefore for performance of the tax system. In particular, labour's smaller proportion of total income in Latin America explains, at least in part, the region's dependence upon indirect taxes. Latin America's reliance on consumption taxes is driven then by the small size of the base for direct taxation, as well as by the relative ease of collecting revenue: the consumption base is broader than that for other taxes.

**Figure 4.6. Generation of Income by Components in OECD and Latin America**
(Percentage of GDP, 2005)




*Notes:*

*a)* The OECD countries in the sample are: Austria, Belgium, Czech Republic, Finland, France, Italy, Japan, Luxembourg, Mexico, Netherlands, Poland, Portugal, Slovakia, Spain, Hungary and United Kingdom.

*b)* The Latin American average includes nine countries: Argentina, Brazil, Chile, Colombia, Costa Rica, Guatemala, Mexico, Peru and Venezuela.

*c)* For those economies reporting net measures, "operating surplus" includes also the total consumption of fixed capital.

*Source:* OECD Development Centre calculations based on official national accounts statistics.
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## The Impact of Tax-System Design on Tax Collection

An obvious difference between Latin American and OECD economies is that, in general, a greater proportion of Latin American working people earn low incomes. This has corollaries for the base for income taxes, since only a smaller proportion of individuals with labour incomes will be subject to personal income tax and even where low-income individuals pay income taxes, they will do so at low marginal rates. These assertions are likely to hold regardless of whether the basis for income taxation is progressive or strictly proportional (as with a "flat tax").

To assess the importance of this phenomenon, Table 4.1 uses labour force survey data by income bracket to estimate the number of individuals with incomes below the tax-paying threshold in seven Latin American countries (the choice of which was driven by questions of data availability)[13].

The distribution of incomes in Latin America pinches the potential tax base further: less than 40% of employees earn above the tax threshold

It shows that on average only 37.8 per cent of employed individuals earn incomes higher than the threshold above which income taxes must be paid. In other words, 62.2 per cent of the labour force is not subject to personal income taxes because their incomes are too low. Of course, the situation differs from one country to another. For example, the threshold income in Colombia is purchasing power parity (PPP) USD 20 005. As such, we estimate that only 6.1 per cent of the Colombian labour force pay income taxes, and only 3.6 per cent are required to file a tax return. In contrast, there is no minimum income for income taxation in the tax legislation of Argentina and Mexico.

The structure of income distribution in Latin America also limits direct income taxation because many of those who do pay income taxes will not be liable to pay much. Accordingly Table 4.1 also reports the share of the labour force in the lowest taxable income bracket. This provides an idea of how many workers pay income taxes – at least in principle – but in small amounts. In Brazil, Chile, Colombia and Costa Rica, these proportions are in the neighbourhood of 90 per cent of working people. In contrast Mexico, which has no minimum taxable income, sees only 14.5 per cent of the labour force in the lowest bracket.

Moreover, the effective number of potential taxpayers can be even smaller than the number of people with incomes above this minimum level. The number of potential taxpayers, and their taxable income, is further reduced by deductions allowable under the tax law, exempted activities, simplified regimes and so on.



While lowering the threshold for income tax would broaden the tax base, it would not necessarily increase tax revenues. Argentina and Mexico, for example, have no minimum income levels before tax is payable but they compensate by mechanisms such as deductions and tax credits. In Mexico the tax burden of low-income taxpayers is reduced by a non-refundable credit of up to 50 per cent of the tax due. Similarly, in Argentina individuals are entitled to deduct personal, family and expense allowances when computing their taxable income. In practice, Argentina and Mexico do not exhibit higher personal income tax revenues than the rest of their Latin American peers.

It is not the recommendation of this *Outlook* that exemption levels be reduced in Latin America. Indeed, determining the appropriate levels of exemptions is difficult precisely because it must balance competing objectives, among which are preserving an adequate standard of living for citizens, sustaining economic efficiency and ensuring the sufficiency of tax collection. Exemptions bolster the progressivity of effective tax rates and safeguard, in however small a way, the living standards of low-income taxpayers.

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**Table 4.1. Exemption Level and Employment**
(Selected countries in Latin America, 2005)

| | Employed individuals (thousands) | Employed individuals below the exemption level (%) | Employed individuals below the lowest taxable income bracket (%) | Exemption level (USD PPP, annual) |
|---|---|---|---|---|
| Argentina | 9 675 | 5.0 | 63.9 | - |
| Brazil | 87 189 | 87.4 | 87.4 | 10 295 |
| Chile | 6 155 | 87.7 | 87.7 | 15 327 |
| Colombia | 18 217 | 93.9 | 96.5 | 20 005 |
| Costa Rica | 1 634 | 91.1 | 91.1 | 19 863 |
| El Salvador | 2 591 | 60.3 | 60.3 | 3 800 |
| Mexico | 41 881 | 9.9 | 14.5 | - |

*Source:* OECD Development Centre calculations based on statistics from national statistical agencies.
StatLink http://dx.doi.org/10.1787/450207366168

## What Do Tax Return Data Tell Us about the Tax Base?

This *Outlook* uses specially commissioned data to examine Latin America's tax base using actual taxpayer statistics

Statistics drawn from personal income-tax returns provide another valuable source of information about the tax base. This *Outlook* uses data specially provided by national tax agencies to paint a picture of how countries in the region compare with high-income countries. Analysed by income band, these statistics cover the number of taxpayers, their assessed income, its composition and the taxes paid. The data cover Argentina, Brazil, Chile and Colombia. Finland has been chosen as the comparator precisely because it offers a striking contrast with Latin American taxation patterns – as will be seen below.

Tax return data should be interpreted with caution, particularly in Latin America, but they remain a unique resource with which to assess the real tax performance of a country, and are complementary to sources such as household or labour-force surveys[14]. Income levels in the four Latin American countries and Finland have been converted to US dollars using PPP exchange rates. This means that a Finn and a Brazilian, say, each with an income between USD 20 000 and USD 34 999 in Figure 4.7, have similar purchasing power in their home countries, though their incomes will be very different at market rates. Further details on data construction are provided in the methodological notes to this chapter.



The analysis of income tax returns in Figure 4.7 highlights that "tax collection gaps" in terms of GDP are large between the two groups of countries at every income level. In particular, the differences are most acute for the low and median incomes – below USD 35 000 – where the Finnish tax agency collects around 30 times what its Latin American counterparts do.

Finland is used as the comparator since it offers a striking contrast

Interestingly, it is also apparent from the graph that the differential between the groups shrinks as income increases. In fact, the gap for taxpayers who can realistically be called "well-off" – those with incomes above USD 75 000 – is relatively small. In Finland, these individuals pay income taxes that sum up to 2 per cent of GDP whereas in Latin America the average is around 1 per cent of GDP. For the last two income brackets in the graph, the ratio between Finnish tax collection and that in Latin America falls from 30 times to only 3 times higher.

The disparity between Finland and Latin American countries lies mainly, it seems, in the income-tax yield of the lowest income brackets. What, then, are the characteristics of these groups?

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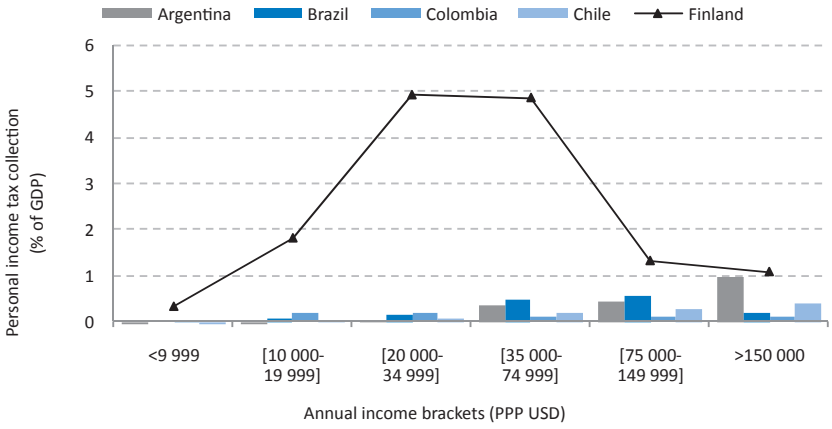
**Figure 4.7. Personal Income Tax Collection by Income Brackets**
(Selected countries in Latin America and OECD, 2005)



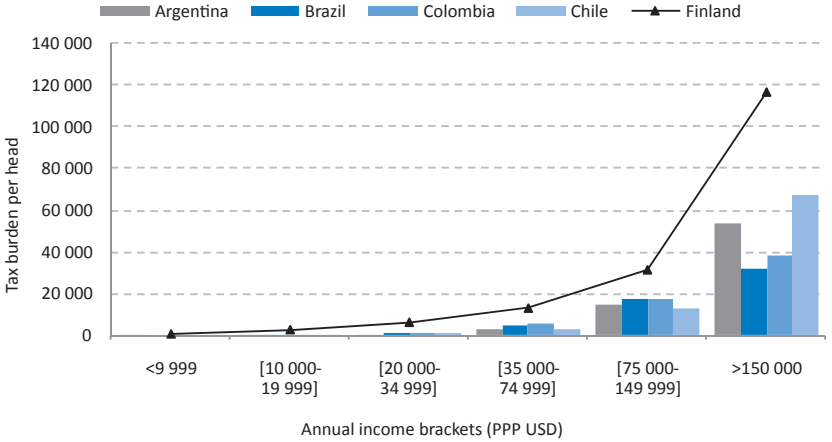

*Source:* OECD Development Centre calculations based on statistics provided by national tax agencies.
StatLink http://dx.doi.org/10.1787/450207366168

Though all have progressive structures, Finland collects more tax at every income level than any Latin American country in the sample; the gap in revenue terms is greatest for incomes in the middle range

Figure 4.8 compares the average income tax paid by income bracket for the same five countries, calculated for each income bracket as total income taxes paid by the bracket divided by the total number of taxpayers in it. Relatively little tax is paid by tax filers with annual incomes below USD 35 000 in any of the five countries, and the average tax paid rises steadily for higher incomes. Though not apparent from the graph, the data confirm a progressive structure to income taxes in all the countries in the sample.

Obviously, the scale factor is not negligible. The source of the overwhelming gap between Finland and the Latin American countries is the low taxes paid by people in the region with incomes in the middle range between USD 20 000 and USD 75 000, relative to what Finns with those income levels pay. Note that incomes in this range are quite high in the Latin American context. While GDP per head in 2005 was USD 30 462 in Finland, it was USD 10 815 in Argentina, USD 8 120 in Brazil, USD 12 248 in Chile, and USD 5 867 in Colombia[15].

**Figure 4.8. Income Tax Paid Per Head by Income Brackets**
(Selected countries in Latin America and OECD, 2005)




*Source:* OECD Development Centre calculations based on statistics provided by national tax agencies.
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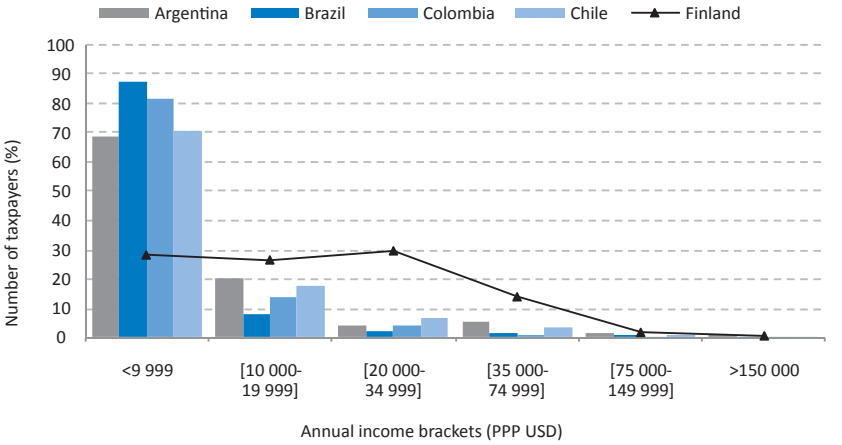
Much of the difference in collection is due to incomes in Latin America being less equally distributed as well as lower

Less equally distributed income (a distribution effect), and a lower average income (an income effect) between them explain much of the differences in income tax collection. As Figure 4.9 demonstrates, there are proportionally far fewer taxpayers in the middle income brackets in the Latin American countries than in Finland. This is exacerbated by the fact that for those countries in the sample with an exemption threshold this averages USD 15 209, leaving more than 60 per cent of income earners in the Latin American countries with no taxes to pay (see Table 4.1).

By contrast, only 30 per cent of Finnish taxpayers fall in the lowest income bracket and in the Finnish system, as in many other OECD countries, these individuals are subject to income taxes. In addition to the national tax, local governments collect municipal income taxes, typically levied at flat rates which vary according to the municipality. In OECD countries, these taxes constitute much of the total tax income take – approaching 3.4 per cent of GDP. Thus, on average, 57 per cent of total income taxes in the OECD are collected through local governments.

**Figure 4.9. Taxpayer Distribution by Income Bracket**
(Selected countries in Latin America and OECD, 2005)






*Source:* OECD Development Centre calculations based on statistics provided by national tax agencies.
StatLink http://dx.doi.org/10.1787/450207366168

## Different Scenarios for the Tax Systems in Latin America

Given then that unequal income distribution and low levels of average income hobble tax collection in Latin America, questions of the importance and relative importance of these factors naturally arise. What if these economies could raise more revenue from the vast bulk of potential taxpayers in the lowest income brackets? And what would Latin American fiscal systems yield if they were imposed on an economy with income more equitably distributed? This section uses the tax-return data analysed in the previous section to simulate answers to these two questions. The answers will illuminate the penalty paid by fiscal systems in the region for the distribution and income effects we have identified in this chapter.

Table 4.2 presents the results of the exercise. The first column (TC 0) shows, for each of the five economies we have been considering (Argentina, Brazil, Chile, Colombia, Finland) actual income tax collection as a share of total taxable income. Note that this is not tax revenue as a share of GDP (the typical statistic,

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reported elsewhere in this *Outlook*), but instead income tax revenue as a share of the effective taxable base declared in tax returns. The Latin American average is 3.8 per cent, against 23.6 per cent in Finland.

Mathematical models confirm the importance of income distribution to tax take...

The first modelled scenario (TC 1) estimates the effects of imposing an effective tax rate of 3 per cent on the first and second income brackets. This is one-third of the effective tax rate on these brackets in Finland. Given that a large number of workers are in these lowest income brackets, a considerable proportion of incomes are not currently subject to taxes. The results of the simulation are given in the second column of Table 4.2. In this scenario tax collection improves, but remains on average four times below the level of Finland. Colombia's tax revenues would climb by 3 percentage points of taxable income. The smallest effect is in Argentina, where tax revenues would nevertheless rise by more than 1 percentage point of taxable income.

Of course, these estimations are mathematical and do not attempt to capture the induced effects of the scenarios. For instance, the introduction of a positive marginal rate for low-income taxpayers modelled in (TC 1) may in reality encourage under-reporting, depressing tax revenues from the levels estimated here. The application of higher marginal rates (as in TC 2) can go on to distort the incentives to stay in the labour force and thus decrease the total taxable income.

**Table 4.2. Impact on Tax Collection of Three Modelled Scenarios**
(Percentage of total taxable income, 2005)

| | TC 0 | TC 1 | TC 2 | TC 3 |
|---|---|---|---|---|
| Argentina | 5.6 | 7.3 | 9.5 | 6.9 |
| Brazil | 3.3 | 5.9 | 5.0 | 4.0 |
| Colombia | 1.9 | 4.9 | 4.8 | 2.3 |
| Chile | 4.4 | 6.3 | 6.8 | 5.4 |
| Finland | 23.6 | - | 20.5 | - |

Tax Collection (TC) scenarios:
TC 0: Current tax collection
TC 1: Tax collection with an effective tax rate of 3 per cent on the first and second income bracket
TC 2: Tax collection with Finland's tax legislation
TC 3: Tax collection assuming evasion reduced by half

*Source:* OECD Development Centre calculations based on statistics provided by national tax agencies.
StatLink http://dx.doi.org/10.1787/450207366168



...nevertheless, success in taxing median incomes and reducing evasion would both raise material revenue

In the second simulation we ask what would happen to tax revenues if the Finnish tax system were applied to Latin American taxpayers. In practical terms, this scenario isolates the effects of average-income differences on tax collection, as well as demonstrating that tax legislation in Latin America is not necessarily more "benevolent" than it is in Finland. In fact, a calculation of the median taxable income for all countries in the exercise shows that on average a Finn earns 2.7 times what a Latin American does and, of course, a higher marginal rate will be applied in the Finnish case. For this purpose, we use the "Taxing Wages" model developed by the OECD (2007*c*). This allows the computation of tax payments for individuals with different levels of income, according to a given national tax system.

The simulation shows that Latin American tax revenues would increase were the Finnish tax system adopted. For all countries, tax collection is increased on average 1.7 times with respect to the baseline scenario (TC 0). Nevertheless,

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a Finn earning a Finnish median income pays a far higher share of his taxable income in taxes. This comparator is shown at the bottom of column (TC 2). It is not only the tax system that explains the gap in tax collection between the two groups; differences in median income among economies explain a far larger proportion of the tax collection gap between Finland and these Latin American countries.

The final simulation (TC 3) asks what would happen if tax evasion were reduced. There are no comprehensive estimations of the extent or cost of tax evasion in Latin America by income bracket. To enable a first approximation of the magnitude of the problem, the estimates in Engel *et al.* (1999) for Chile (one of the few such studies in the region) have been used for all four Latin American countries. In this scenario tax collection certainly improves but does not radically change the picture. Levels in the region remain three to ten times below the level of Finland.

This simple analysis casts doubt on diagnoses that point to tax evasion as a major constraint on public finances. This is not to deny the significance of tax evasion in the region. The available whole-economy studies estimate that taxes "lost" to evasion approach 30 per cent or more of potential revenues in Latin American countries (Cetrángolo and Gómez Sabaini, 2007). But even if all these losses to evasion were eliminated the impact on the absolute amounts collected would remain limited by the small size of the tax base itself. Of course, reductions in tax evasion also have political and social benefits that go beyond their fiscal yield. This "tax morale" angle is discussed further in the following chapter.

The modeled scenarios suggest that the low levels of tax collection seen in Latin America arise principally from low average income and unequal income distribution. Improvements in combating tax evasion or the introduction of income tax, even at very low marginal rates on the incomes of workers at the lower end of the income scale, could each add the equivalent of one or two points of GDP to tax revenues. These numbers sound small but to put them into perspective, increases in tax revenues of this magnitude have taken decades to achieve in many Latin American countries.

Of course, fiscal reform on the revenue side can never be divorced from the overall political package. Reforms on the spending side and, in particular, the efficiency of budget expenditures and the perception by the population that they serve the nation's objectives will play an important part in securing social acceptance of tax collection reforms. The following chapters look at fiscal policy in this broader environment, examining tax in the context of informality and taking education as an example of how the spending side arguments might be won.



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# STATISTICAL ANNEX

## Methodological Note

The data for computing income tax collection were supplied by national tax agencies based on income tax returns. Data for all countries is for 2005 with the exception of Brazil which are for 2002. To ensure comparability these data have been subject to processing and interpolation. The basic methodology is based on Atkinson and Piketty (2007) and Dikhanov (2005).

In Colombia the original data cover only those individuals who had been required to file a tax return. Individuals paying taxes through "pay as you earn" deduction at source are not necessarily required to file. In Argentina the statistics cover the tax filers and individuals with incomes deducted at source. However, they do not provide information about the individuals with income levels before tax is payable. In these cases, estimates of taxable income and tax payments are related to the average income of filers and complemented with national accounts information.

Second, gross incomes were used to display the results rather than income fractiles, in order to gauge the wealth effect on tax performance across countries. For the purpose of this exercise, income brackets in local currencies have been converted using 2005 Purchasing Power Parity (PPP) rates from the World Bank (WDI, 2008).

Finally, in order to permit cross-country comparisons it has been necessary to construct equivalent income brackets for all the countries. Since the basic data are in the form of frequency tables, an interpolation method has been employed. Using a spline cubic distribution function we convert the national interval data into a continuous function, and then use this to construct the income-bracket distributions.

The tabulated data vary from one country to another. While Chile reports very detailed figures with 43 income brackets, Brazil publishes only 10 income ranges. It should also be noted that no extrapolation was done for the upper tail.



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## Table 4.A1. Total Tax Revenues, Latin American and OECD Countries
(Percentage of GDP)

| | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Latin America** | **15.22** | **15.65** | **15.97** | **16.22** | **16.57** | **16.39** | **16.80** | **17.44** | **16.93** | **17.08** | **17.49** | **17.77** | **17.68** | **18.19** | **18.71** | **19.59** | **20.17** |
| Argentina | 16.15 | 18.40 | 21.46 | 21.63 | 21.46 | 20.27 | 19.74 | 20.63 | 21.03 | 21.17 | 21.48 | 20.94 | 19.90 | 23.43 | 26.35 | 26.84 | 27.43 |
| Brazil | 28.51 | 23.57 | 24.64 | 25.31 | 29.16 | 26.83 | 26.28 | 26.47 | 27.28 | 28.76 | 29.95 | 30.99 | 31.56 | 31.15 | 31.93 | 33.10 | 33.77 |
| Chile | 16.49 | 18.30 | 18.88 | 19.49 | 18.63 | 17.98 | 19.29 | 19.01 | 19.11 | 18.57 | 19.21 | 19.63 | 19.60 | 18.83 | 18.41 | 19.70 | 19.65 |
| Colombia | 9.51 | 11.26 | 11.89 | 12.32 | 13.38 | 13.98 | 14.85 | 15.76 | 15.11 | 15.15 | 14.98 | 16.49 | 16.40 | 16.61 | 17.33 | 17.73 | 18.60 |
| Costa Rica | 16.07 | 16.28 | 16.97 | 17.11 | 17.68 | 16.35 | 17.82 | 17.97 | 18.37 | 17.68 | 18.22 | 19.31 | 19.52 | 19.42 | 19.30 | 19.85 | 20.34 |
| El Salvador | 10.53 | 10.92 | 11.03 | 11.86 | 12.25 | 13.02 | 12.34 | 12.08 | 12.10 | 12.13 | 12.38 | 12.32 | 12.96 | 13.31 | 13.25 | 14.14 | 14.98 |
| Guatemala | 8.05 | 9.41 | 9.72 | 9.38 | 8.03 | 10.57 | 11.50 | 11.67 | 11.58 | 12.37 | 12.62 | 12.93 | 13.86 | 13.75 | 13.65 | 13.37 | 14.05 |
| Mexico | 16.37 | 16.13 | 16.40 | 16.67 | 16.34 | 16.05 | 16.14 | 16.90 | 16.01 | 16.74 | 18.48 | 18.76 | 18.06 | 19.04 | 18.98 | 19.93 | 19.91 |
| Peru | 11.85 | 13.18 | 14.21 | 14.25 | 14.97 | 15.42 | 15.79 | 16.06 | 15.71 | 14.37 | 13.94 | 14.16 | 13.71 | 14.48 | 14.66 | 15.39 | 16.64 |
| Venezuela | 18.70 | 19.03 | 14.48 | 14.15 | 13.79 | 13.43 | 14.29 | 17.85 | 12.95 | 13.81 | 13.62 | 12.15 | 11.22 | 11.87 | 13.28 | 15.88 | 16.31 |
| | | | | | | | | | | | | | | | | | |
| **OECD America-Pacific** | **27.89** | **27.37** | **27.08** | **27.18** | **27.32** | **27.52** | **27.59** | **27.94** | **27.79** | **28.03** | **28.67** | **28.07** | **27.82** | **27.97** | **28.16** | **28.99** | **25.36** |
| Australia | 28.49 | 27.01 | 26.45 | 26.93 | 27.96 | 28.80 | 29.43 | 29.20 | 30.01 | 30.53 | 31.13 | 29.61 | 30.51 | 30.62 | 31.09 | 30.84 | |
| Canada | 35.91 | 36.57 | 36.25 | 35.81 | 35.83 | 35.77 | 36.39 | 37.14 | 37.12 | 37.27 | 36.25 | 34.88 | 34.39 | 34.04 | 34.16 | 33.98 | 33.75 |
| Japan | 29.94 | 29.14 | 27.39 | 27.13 | 26.28 | 27.00 | 27.05 | 27.07 | 26.72 | 26.41 | 27.06 | 27.03 | 26.09 | 25.88 | 26.29 | 27.47 | 18.03 |
| Korea | 18.91 | 18.52 | 18.50 | 18.99 | 19.35 | 19.44 | 20.05 | 20.97 | 21.05 | 21.50 | 23.56 | 24.08 | 24.40 | 25.34 | 24.61 | 25.52 | 26.77 |
| Mexico | 17.32 | 17.26 | 17.65 | 17.68 | 17.24 | 16.66 | 16.73 | 17.47 | 16.57 | 17.34 | 18.48 | 18.76 | 18.06 | 19.04 | 18.98 | 19.94 | 19.91 |
| New Zealand | 37.32 | 35.99 | 36.38 | 36.58 | 37.03 | 37.14 | 35.19 | 35.00 | 33.79 | 33.81 | 34.31 | 33.32 | 34.81 | 35.02 | 35.96 | 37.84 | |
| United States | 27.32 | 27.06 | 26.91 | 27.14 | 27.53 | 27.85 | 28.29 | 28.72 | 29.25 | 29.39 | 29.89 | 28.84 | 26.45 | 25.88 | 26.04 | 27.36 | 28.34 |

| | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | |
| **OECD Europe** | **35.93** | **36.54** | **36.91** | **37.37** | **36.68** | **37.09** | **37.79** | **37.80** | **37.92** | **38.26** | **38.33** | **37.92** | **37.60** | **37.56** | **37.41** | **38.07** | **38.03** |
| Austria | 39.64 | 39.98 | 41.37 | 41.86 | 41.70 | 40.98 | 42.24 | 43.73 | 43.76 | 43.43 | 42.51 | 44.45 | 43.53 | 42.99 | 42.66 | 41.96 | 41.62 |
| Belgium | 42.02 | 42.25 | 41.81 | 43.27 | 43.55 | 43.57 | 44.00 | 44.53 | 44.70 | 44.73 | 44.45 | 44.45 | 44.58 | 44.13 | 44.30 | 44.36 | |
| Czech Republic | | | | 40.39 | 25.39 | 37.52 | 35.96 | 36.34 | 34.89 | 35.84 | 35.33 | 35.65 | 36.30 | 37.32 | 37.67 | 37.35 | 36.25 |
| Denmark | 46.83 | 46.16 | 46.57 | 47.95 | 48.97 | 49.06 | 49.39 | 49.15 | 49.28 | 50.07 | 49.32 | 48.42 | 47.83 | 47.99 | 48.98 | 50.35 | 48.75 |
| Finland | 43.51 | 45.10 | 44.92 | 44.42 | 46.88 | 45.55 | 46.84 | 46.11 | 45.94 | 45.64 | 47.09 | 44.48 | 44.51 | 43.91 | 43.37 | 43.84 | 43.36 |
| France | 41.99 | 42.39 | 42.44 | 42.61 | 43.05 | 43.12 | 44.30 | 44.49 | 44.43 | 45.28 | 44.52 | 44.28 | 43.49 | 43.20 | 43.56 | 43.92 | 44.23 |
| Germany | 32.11 | 36.04 | 36.96 | 36.97 | 37.18 | 37.22 | 36.52 | 36.19 | 36.28 | 36.97 | 37.04 | 35.98 | 35.35 | 35.41 | 34.68 | 34.65 | 35.41 |
| Greece | 26.18 | 26.28 | 27.15 | 27.61 | 27.89 | 28.88 | 35.85 | 30.34 | 31.90 | 32.79 | 33.92 | 32.82 | 33.23 | 32.11 | 31.01 | 31.19 | |
| Hungary | | 45.15 | 44.89 | 45.74 | 43.26 | 41.27 | 39.64 | 38.01 | 37.79 | 38.06 | 37.99 | 37.96 | 37.84 | 37.50 | 37.49 | 37.14 | 36.91 |
| Iceland | 30.94 | 31.30 | 32.14 | 31.06 | 30.60 | 31.19 | 32.30 | 32.21 | 35.43 | 37.99 | 38.04 | 36.19 | 35.63 | 37.15 | 38.23 | 41.18 | |
| Ireland | 33.10 | 33.68 | 34.02 | 34.01 | 34.61 | 31.98 | 32.08 | 31.39 | 31.01 | 31.24 | 31.53 | 29.35 | 28.08 | 28.65 | 29.96 | 30.43 | 31.90 |
| Italy | 37.80 | 38.23 | 40.59 | 42.25 | 40.24 | 40.12 | 41.83 | 43.21 | 41.64 | 42.43 | 42.16 | 41.86 | 41.26 | 41.69 | 40.93 | 40.75 | 42.43 |
| Luxembourg | 35.55 | 33.21 | 33.94 | 36.40 | 36.63 | 36.95 | 37.45 | 39.17 | 39.24 | 38.17 | 39.01 | 39.66 | 39.23 | 38.22 | 37.25 | 37.69 | 35.37 |
| Netherlands | 42.89 | 45.14 | 44.79 | 44.98 | 42.98 | 41.53 | 40.94 | 40.87 | 38.66 | 39.71 | 39.26 | 37.83 | 37.21 | 36.63 | 36.99 | 38.51 | 39.00 |
| Norway | 40.99 | 41.12 | 40.31 | 39.45 | 40.79 | 40.87 | 40.85 | 41.50 | 42.41 | 42.71 | 42.64 | 42.85 | 43.09 | 42.28 | 43.29 | 43.63 | 43.34 |
| Poland | | 34.00 | 34.93 | 38.78 | 36.93 | 36.19 | 36.13 | 35.20 | 34.63 | 32.37 | 31.57 | 33.54 | 34.52 | 34.06 | 33.22 | 34.13 | |
| Portugal | 27.70 | 28.79 | 30.80 | 29.31 | 30.12 | 31.41 | 32.40 | 32.53 | 32.72 | 33.69 | 33.92 | 33.62 | 34.40 | 34.57 | 33.69 | | |
| Slovak Republic | | | | | | | | | | 35.60 | 34.04 | 32.53 | 32.66 | 33.22 | 31.52 | 31.50 | 29.45 |
| Spain | 32.48 | 32.76 | 33.79 | 32.82 | 32.85 | 32.14 | 31.90 | 32.89 | 33.09 | 34.00 | 34.64 | 34.21 | 34.66 | 34.64 | 34.93 | 36.07 | 36.85 |
| Sweden | 52.19 | 49.76 | 47.18 | 46.07 | 46.33 | 47.30 | 49.24 | 50.47 | 50.88 | 51.27 | 51.64 | 49.71 | 47.78 | 48.21 | 48.58 | 49.35 | 48.72 |
| Switzerland | 25.76 | 25.56 | 26.01 | 26.52 | 27.03 | 27.72 | 28.15 | 27.63 | 28.53 | 28.69 | 30.02 | 29.51 | 29.85 | 29.21 | 28.82 | 29.18 | 29.38 |
| Turkey | 14.90 | 15.61 | 16.69 | 16.86 | 16.55 | 16.78 | 18.91 | 20.73 | 21.11 | 23.14 | 24.16 | 26.10 | 24.62 | 25.93 | 24.07 | 24.26 | 24.68 |
| United Kingdom | 36.12 | 34.85 | 33.82 | 32.80 | 33.39 | 34.52 | 34.40 | 34.88 | 35.81 | 36.22 | 36.85 | 36.62 | 35.07 | 34.83 | 35.21 | 36.12 | 36.87 |
| | | | | | | | | | | | | | | | | | |
| **OECD** | **33.77** | **34.25** | **34.45** | **34.91** | **34.42** | **34.78** | **35.33** | **35.42** | **35.47** | **35.88** | **36.08** | **35.62** | **35.31** | **35.32** | **35.25** | **35.88** | |

*Note:* Where possible, coverage corresponds to general government, otherwise the statistics are restricted to central government.

*Source:* OECD (2007a), OECD Revenue Statistics database for OECD countries and OECD Development Centre calculations for Latin America.

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# NOTES

1. Bello, A., (1848), "Modo de estudiar la historia", El Araucano, No. 913, Santiago, 4 February 1848, Collected Works, XIX, Caracas: Ministry of Education, 1957

2. The Latinobarómetro surveys provide comparable data on similar questions for most Spanish-speaking Latin American countries, and these responses could in principle be compared with Eurobarometer questions for European Union member states, though the questions are not always identical. There is no equivalent however for other high-income OECD economies in North America and Asia.

3. Within European and North American OECD countries, Osberg and Smeeding (2006) find a similar contrast between the United States and other OECD countries, across a number of WVS survey questions: mean responses are similar in the United States, Europe and Canada, but the distribution is more polarised in the United States.

4. Social expenditure data come from OECD (2007*b*) for OECD countries, and ECLAC (2007) for Latin America.

5. Tax-to-GDP ratios for the OECD are derived by dividing local currency data by the latest available estimate of GDP. Differences from figures in OECD Revenue Statistics publications may arise as a result of these new estimates. Notably, Turkey implemented the European System of Accounts (ESA95) in a far-reaching revision of its national accounts in March 2008. This prompted an upward revision of around 30 per cent in estimates of GDP at current prices.

6. An interesting question is whether citizens' attitudes toward public versus private provision of these goods and services differ across Latin American and OECD countries – or indeed, within OECD countries. The OECD averages will be dominated by European attitudes, since this is where the largest number of OECD countries are located, but as this chapter will show, Asia-Pacific and North American OECD countries have a public-private mix of service provision much closer to that of Latin America. An analysis comparing attitudes to inequality and redistributive policy similar to that in the previous section of this chapter would shed light on this question. For the time being, we merely note that the framework for the provision of goods and services such as health care and social security is different between Latin America and Europe; we do not claim that this is due to social preferences.

7. Mexico, an OECD member country, is systematically included in both groups of countries. Statistics are taken from OECD (2007*a*).



8. OECD countries' tax-rate reductions are driven in part by policies that seek to ensure that individuals face incentives that encourage them to enter and stay in the labour force. The trend to cut corporate tax rates is motivated by a desire for international competitiveness while at the same time seeing that a "fair" share of tax is collected from the corporate sector (OECD, 2001).

9. These statistics are for 2005. Mexico, the country with the lowest tax burden in the OECD, is a member of both groups.

10. Fees levied by the Mexican state on hydrocarbon production are considered tax revenues in the OECD Revenue Statistics, but are not counted as taxes by Mexico's own statistics. As these fees constitute more than 40 per cent of public revenues in Mexico, tax-to-GDP ratios reported in other sources may be substantially lower than the figure given here if they do not reflect OECD accounting guidelines.

11. The Latin American average covers Argentina, Brazil, Chile, Colombia, Costa Rica, El Salvador, Guatemala, Mexico, Peru and Venezuela. The sources of all fiscal revenue figures in this box are OECD (2007*a*) for OECD countries, and the Latin American Revenue Statistics database for Latin America.

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12. "Unallocable" tax revenues are those that are not easily attributed to corporate or individual taxpayers. In Latin America, a large share of income taxes is deducted at source in the form of provisional payments. Official statistics typically report such provisional payments as totals without a breakdown between corporate and individual payers. Even so, the unallocable category is relatively small, accounting for only 1.5 per cent of GDP. Even if all unallocable income taxes were in fact individual incomes taxes, the gap between OECD and Latin American individual income taxes would remain wide.

13. Since the data are available only in the form of frequency tables, an interpolation has to be made. In order to align the income intervals provided with the survey data with the values that concern us, a spline interpolation method was employed. Further details can be found in the methodological notes to this chapter.

14. Income tax returns are subject to both deliberate under-reporting and actions allowable within the law to reduce tax liability. Moreover, the income to be declared is dependent on the tax legislation of the specific country and is likely to vary from one to the next. Alternative sources of information such as household surveys, however, are subject to similar problems. Notably, limitations such as under-reporting, non-responses and the lack of representativeness at the top of the income distribution cannot be ignored in survey data sets and some of these shortcomings are arguably more acute in surveys (Atkinson and Piketty, 2007).

15. GDP per head data come from WDI (2008).



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CHAPTER FIVE

# Fiscal Policy and Informality in Latin America

Informality is difficult to quantify but by any measure it is high in Latin America[1]. Outside the field of vision of policy makers and out of reach of the taxman's hand, informal economic activity is a challenge. For the tax authorities it means lost revenue. Perceived as a subsistence sector, these informal workers and micro-entrepreneurs are also a challenge to the effectiveness of public expenditure. Informal work is associated with imperfect labour and social protection for workers, and informal firms are less productive than formal firms. Pervasive informality is therefore potentially a drag on both growth and social cohesion. Moreover, although for some informality represents an active choice, it can become a trap, limiting economic horizons and disconnecting people from the state. Informality is thus much more than merely lost revenue; the existence of a large informal sector points to a high level of social exclusion.

Can the challenges that pervasive informality poses be addressed with standard fiscal systems? This chapter draws from the theoretical and empirical literature the lessons important to this difficult question.

Countries with higher levels of development as measured by GDP per head tend to have both lower informality and a larger fiscal imprint in the economy. It is however far from clear that growth in a single country leads to a reduction in informality (see Perry *et al.* (2007) for a recent discussion of this in the context of Latin America). On the other hand, the degree and composition of informality in a country are important constraints on the problem of designing fiscal policy[2]. Informality is therefore a key element to be taken into account when attempting to draw lessons from the fiscal policy experience of OECD countries for Latin America and *vice versa*.

This chapter argues that the productive activities and economic relationships that are usually understood to fall in the informal realm are diverse, both within and across countries and regions. A vision of the informal sector as a set of illegal activities that need to be reined in or "formalised" fails to recognise the heterogeneity of the informal sector and of its causes. As such, it is not only unrealistic, but can generate mistaken policy implications that will have adverse effects on growth, poverty reduction or both.



Informality in both production and employment relationships is likely to arise when the costs of belonging to the regulated economy outweigh the benefits, for the producer, the employer or the employee. Informality also arises when the costs of entry into the regulated economy are unaffordable, regardless of whether they would be compensated by larger, future benefits[3]. Recent evidence suggests that a sizeable proportion of the informal sector in the region is informal by choice, because the costs of formality, whether direct or indirect, outweigh the benefits of formality to individuals.

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Recognising the potential of informal workers and entrepreneurs means stopping the "fight" against the informal sector. Recognising them as economic agents also means aiming to increase the productivity of the economy as a whole, including of those currently informal. It means facilitating compliance by aligning compliance costs with the benefits of formality for firms and workers, among other means by adopting simplified regimes that provide a gateway to formality. It means offering formal and informal workers social services on an equal footing.

Informality is an important feature of Latin American economies and a very diverse one

This chapter describes the informal sector in Latin America and, contrasting it with available data from OECD countries, finds that not only is it generally larger (as income differences would lead one to expect) but also it corresponds to markedly different realities and practices across countries. It goes on to analyse the links between fiscal policy and the causes of informality, underlining that tax rates are one of several important components of the cost of formality and moreover that the relationship between taxation and informality depends crucially on the quality of governance. An examination of the impact of informality on fiscal policy highlights that the composition of both the informal sector and the portfolio of tax instruments is important for understanding the role of informality in tax collection and service provision. A wider angle shows that informality is not only a tax-collection challenge but a symptom of a failing social contract. This provides another perspective on the policy treatment of informality; it also raises the question of the coherence between different domains of public policy, whether in terms of the incentives they create for individuals to opt in or out of formality or in terms of the provision of basic social cover that can underpin social cohesion.

## THE INFORMAL SECTOR AND INFORMAL EMPLOYMENT

The term informality means different things to different people, a fact which is not helped by the inconsistent use of vocabulary and measures within the literature. Substantial effort on the part of the international community has produced concepts that narrow down and help disentangle the various components of informal production and employment relationships in the economy. Consensus on the importance of each phenomenon – and especially of the importance of informality itself – does not yet exist, however[4].

Box 5.1 gives an overview of the various concepts related to informality and explains the definitions that are used in this chapter. A narrow focus on taxation would include in informality only underground or "black" activity (activity that would be taxed if it were declared to the relevant authority). This chapter, however, extends the discussion to informal employment. Indeed, the prevalence of jobs that do not entitle their holders to social protection (such as health and pension benefits) is typical of the link to major social policy – and even political – questions.



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**Box 5.1 Definitions**

Over the years, the terms "informality" and "informal sector" have been used to mean many things, broadly related to "economic activities which are carried on outside the institutionalised economic structures".

Informal sector: The first international definition of informality for statistical purposes was agreed at the XV International Conference of Labour Statisticians in 1993. This looked at the characteristics of productive units (enterprises) and in particular their legal status (household enterprises or unincorporated enterprises belonging to households). The definition included *i)* informal own-account enterprises that occasionally employ family workers or employees; and *ii)* enterprises of informal employers which are small in size and/or unregistered themselves and/or do not register their workers (ILO, 2002). Typically, agricultural household production units are excluded for practical reasons.

Informal employment: The informal economy was defined by ILO (2002, 2003) not by the characteristics of productive units but rather by employment relations. They included all remunerative work that is not recognised, regulated or protected by the existing legal or regulatory framework, and non-remunerative work undertaken in an income-producing enterprise. The unit of observation is jobs. The definition therefore comprised: *i)* informal employment in informal enterprises, defined as above, including employers, employees, own account operators and unpaid family workers in informal enterprises; and also *ii)* informal employment outside informal enterprises including domestic workers, casual or day labourers, temporary or part-time workers, industrial outworkers (including home workers) and unregistered or undeclared workers.

Operationally, informal employment can be measured according to productive characteristics, whereby workers are deemed informal if they are *i)* unskilled self-employed; *ii)* salaried in a small private firm; or *iii)* a zero-income worker. This is the "productive" definition. An alternative looks at entitlement and contributions to mandated social security benefits; this is the "legalistic" definition – both in the terminology of Perry *et al.* (2007). This chapter will use these definitions.

Shadow (or underground) economy: A possible definition is "those economic activities and the income derived from them that circumvent or otherwise avoid government regulation, taxation or observation". Schneider (2007) – whose data are widely used in the literature – favours a narrower definition: "all market-based legal production of goods and services that are deliberately concealed from public authorities for the following reasons: *i)* to avoid payment of income, value added or other taxes; *ii)* to avoid payment of social security contributions; *iii)* to avoid having to meet certain legal labour market standards…; and *iv)* to avoid complying with certain administrative procedures…". This definition of the shadow economy corresponds to the definition of the "underground economy" given in OECD (2002), related to the 1993 System of National Accounts.

The definition of the shadow economy above excludes illegal activities and household services and production. However, in practice, model measurement methods used to estimate the shadow economy are likely to capture both illegal production (if it is productive from an economic sense) and (informal) household production. This chapter therefore considers this broader definition – including illegal production and household production – and so avoids the need further to classify unregistered units or jobs according to whether the aim of non-registration is to evade taxes or regulation.



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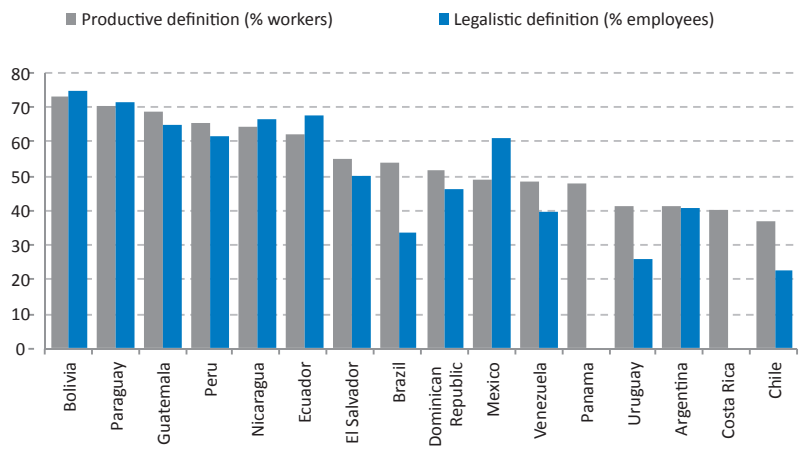
Correspondingly, the size of the informal sector in an economy can be assessed by its contribution (measured or unmeasured) to GDP, or by the proportion of informal employment. The use of one or the other of these measures is often associated with the somewhat ambiguous policy objective of formalising the informal sector. In terms of GDP contribution, this is taken to mean having all economic activity realised by registered and tax-compliant businesses. In terms of employment, it is taken to mean having all employment relations follow the relevant legislation and social-protection mechanisms.

There is wide variation between countries, but a Latin American average for informality in employment lies between 30 and 50 per cent

Figure 5.1 and Table 5.A1 in the annex present measures of the sizes of the informal economy and of informal employment in Latin America. There is wide variation across countries on all measures. The legalistic definition can be interpreted as a proxy for the shortfall in social protection coverage and the figure is sobering: in Latin America the average proportion of employees who do not have pension rights through their job is 52 per cent. It is particularly striking that the proportion of workers without pension rights in several cases exceeds the proportion of workers classified as informal using the productive definition. Indeed, the latter includes workers in small firms regardless of their productivity or legal status. This in turn means that there are a substantial number of workers in otherwise formal enterprises who have no pension entitlement. ECLAC (2006) found that for the region the proportion of workers in the urban formal sector (defined according to firm size) covered by contributory social security systems was only 70 per cent.

**Figure 5.1. Labour Informality[a] in Latin America[b]**




*Notes:*

*a)* Informal employment, as defined in Gasparini and Tornarolli (2007) and Perry *et al.* (2007), includes unskilled self-employed workers, workers in firms with fewer than five workers and unpaid workers.

*b)* Additional information is available in the Statistical Annex, Tables 5.A1 and 5.A2.

*Source:* Gasparini and Tornarolli (2007), Perry *et al.* (2007) and CEDLAS, Socio-Economic Database for Latin America and the Caribbean.

StatLink http://dx.doi.org/10.1787/450311573635

This large proportion of apparently formal workers without social protection entitlement is, partly at least, symptomatic of the difficulty of identifying informal enterprises in statistical work and in particular the arbitrariness of the size criterion. This point is not only statistical in nature. While the absolute numbers of informal workers (using the productive definition) and of workers without social protection entitlement are close, in reality



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the two groups overlap far less than perfectly. Indeed, informal workers and even more so participants in the shadow economy constitute a very heterogeneous group.

A commonly used estimate of the shadow economy as a share of GDP is that obtained using a "MIMIC" (multiple-indicator multiple-cause) model that relates the unobserved size of the shadow economy to observable factors that are hypothesised to encourage or discourage shadow economy activities and to observable indicators that are assumed to reflect the size of the shadow economy[5].

Comparing MIMIC estimates of the shadow economy with the size of informal employment is hazardous because the latter is often an input variable in the MIMIC procedure. The most recent estimates with wide geographical coverage (Schneider, 2007) do use labour market outcome variables (employment and unemployment) as both cause and indicators in the model but do not use measures of informal employment.

While positively correlated, shadow economy and informal employment clearly differ as measures of informality. The correlation coefficients between the two measures presented in Gasparini and Tornarolli (2007) for Latin America are 0.46 (productive definition of informal employment) and 0.28 (legalistic definition) in the pooled sample, and 0.60 and 0.40 respectively across country-level means.

Different measures of informality diverge, but in part at least this reflects real differences in the nature of the phenomenon

This divergence in measures of informality is partly the result of the difficulty in measuring activity in the informal sector. Measures of the shadow economy, and particularly those based on MIMIC or similar models, have been criticised on several accounts (Breusch, 2005), including their lack of robustness and weak theoretical underpinnings. Such measures have also been prone to misuse (as discussed by Tanzi, 1999). Given their construction, these estimates are best considered in index form, rather than as absolute estimates seemingly comparable to official GDP calculations, let alone an indication of errors in official GDP statistics.

But in part the variance reflects the fact that the two methods are looking at different though related phenomena. On the one hand, there are workers without contracts or social protection in businesses whose output is accounted for in national accounts (whether or not they are on the tax register). On the other, a firm may declare its workers and pay their social security contributions though its own output is not properly accounted for. Countries with large agricultural sectors, for example, are likely to have larger proportions of output in this latter category.

The lack of coincidence across measures is therefore not just the result of statistical or methodological differences, but also reflective of the great heterogeneity that exists within the phenomenon of informality, both within and across countries. This casts doubt on the degree to which generalisations of best practice can be made or even whether the logical leap from cross-sectional regularities to policy implications is warranted.



## The Heterogeneous Reality of Informality

Recent evidence has called into question the traditional view of the informal sector as the result of a segmented labour market (the "exclusion" view). The finding that mobility between formal and informal employment is relatively high suggests that a different model may be at play, one where at least part of the population in the informal sector is voluntarily informal and chooses to "exit" the regulated economy.

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There are a number of benefits to individuals from informal work, not only avoiding tax or regulation, but also greater flexibility or autonomy, access to alternative means of social protection, access to valuable informal networks and work experience (Jütting *et al.*, 2008). Based on recent evidence, including the observed degree of mobility in several countries in the region and the effect on earnings of transitions between formality and informality documented in Maloney (1999), Maloney (2004) argues that most informal self-employment is voluntary and is the analogue of the small-enterprise sector found in more developed countries.

Much debate on informality in the region and elsewhere has focused on determining the degree to which informal employment results from this voluntary "exit" and how much from "exclusion" – informal employment as disguised under-employment resulting mainly from rigidities in labour market institutions[6]. These two mechanisms would have substantially different policy implications as well as different implications with respect to the well-being of informal workers themselves.

Whether informality is voluntary or involuntary has important policy consequences. But in practice there may not be a clear distinction

The two views are in fact complementary. Moreover, it is not difficult to think of cases where they coexist. This applies in particular to cases where the poor availability or low perceived quality of public service leads to an "exit" decision, whether these are the result of rigidities in the provision system, bias in financing or outright political failure. For example, rural areas can be radically under-served in terms of health care provision – by one measure, there are ten times more hospital beds per social security beneficiary in urban than in rural Mexico (Levy, 2008). This chasm in service availability does not statutorily exclude rural dwellers from social security or from formal work, but severely slants incentives against their choosing to pay into a social security system that offers them markedly fewer benefits.

In the face of the difficulties in estimating the share of voluntary and involuntary informal work, a useful distinction can be made between the self-employed and salaried informal workers. Indeed, the self-employed are more likely to be voluntarily in the informal sector. However, this remains a rough measure: a sizeable number of informal self-employed individuals would prefer formal jobs – as many as 59 per cent in Colombia, roughly one-third in Brazil and one-quarter in Bolivia and Dominican Republic (Perry *et al.* 2007). On the other hand, many informal employees or unpaid workers may be working in a family firm, so that it would be incorrect or at least incomplete to characterise this sub-sector as an excluded pool of precarious workers (Maloney, 2004).

Despite these caveats, and keeping in mind that comparability might be less than perfect, Figure 5.2 shows how the composition of employment, even within the self-employed, differs markedly across the countries in Latin America with highest informality, those with lower informality and the benchmark OECD countries. The most remarkable pattern is not only the reducing proportion of self-employed in the labour force, but also the fall in the proportion of those who are unpaid family workers. On the other hand, there is no clear break between Latin American countries and OECD countries in terms of the share of the self-employed. The very high figure for Turkey results from the prevalence of unpaid family labour, which constitutes over 14 per cent of employment, while own-account workers in Turkey and Greece represent comparable shares of employment.



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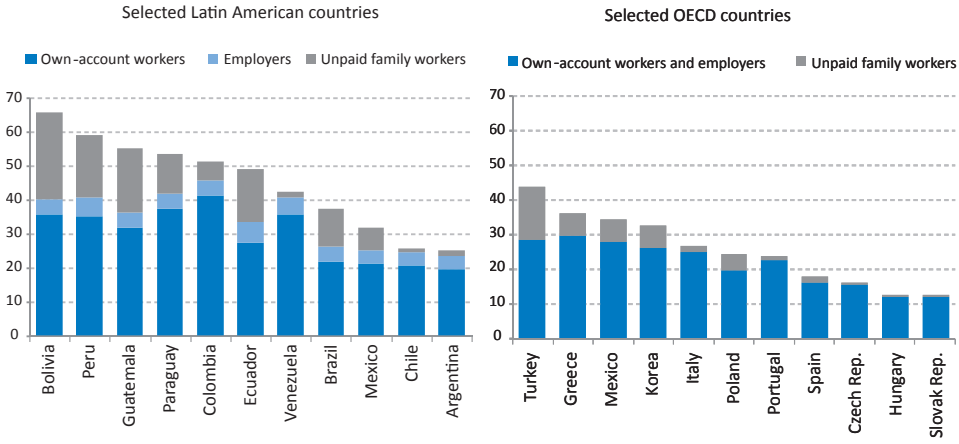
**Figure 5.2. Self-employment in Selected OECD and Latin American Countries**
(Percentage of total employment, 2006 or latest data available)




*Note:* Data for Mexico in the left-hand panel ("Latin America") are for 2005.

*Source:* Gasparini and Tornarolli (2007) and OECD (2007), Annual Labour Force Statistics database.
StatLink http://dx.doi.org/10.1787/450311573635

False self-employment is a good example of a situation where the balance between choice and exclusion is difficult to determine

A specific case of interest is false self-employment. Some "self-employed" actually subcontract every day to the same employer, but operate as self-employed to bypass the tax and regulatory requirements associated with the employment relationship. Such activities are very difficult to measure with usual labour force surveys but are thought to be common both in some Central European OECD countries and in Latin America, especially in the *maquiladora* or other manufacturing sectors – indeed, large assembly plants with no salaried workers at all are not unheard of. The relative weights of choice and exclusion in such cases are far from obvious.

**Table 5.1. Self-employment and Informal Wage Employment in Selected OECD Countries**

| | **Self-employment**[a] (% of total civil employment) 2006 | **Employees in informal jobs** (% of non-farm employment) latest data available |
|---|---|---|
| Czech Republic | 16.2 | 1.8 |
| Greece | 36.3 | |
| Hungary | 12.8 | 2.6 |
| Italy | 26.7 | |
| Korea | 32.8 | 25.8 |
| Mexico | 34.5 | 31.5 |
| Poland | 24.4 | 4.9 |
| Portugal | 24.0 | |
| Slovak Republic | 12.6 | 2.2 |
| Spain | 17.9 | |
| Turkey | 43.5 | 21.7 |
| **OECD**[b] | **16.9** | |

*Notes:*
*a)* Self-employment includes own-account workers, employers and unpaid family workers.
*b)* OECD is the average for all 30 OECD member countries.

*Source:* OECD (2007), Annual Labour Force Statistics and OECD (2008), Employment Outlook data.
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The panorama is different when informal wage employment is considered. There is a much clearer distinction here between Latin America and a handful of OECD countries (including Korea, Mexico and Turkey) on one side and the Central and Eastern European OECD countries for which data are available[7]. It is however clear that with the exception of Korea, Mexico and Turkey, the number of unregistered workers is relatively low. On the other hand, the amount of undeclared income can be substantial – 11 per cent of employees receive cash-in-hand payments in Poland, 8 per cent in Hungary and 7 per cent in the Slovak Republic (OECD, 2008). Labour markets in some of the European countries featured in Table 5.1 exhibit quite striking characteristics. The levels of self-employment in the Czech Republic, Hungary and the Slovak Republic are remarkably low given their level of development. Whether this is related to their reform experience is an open question. However, it certainly underlines how different the experiences of informality are across countries.

It is useful to think of the informal labour market as two tier: an upper tier of choice, and a lower one of last resort

Despite the complementary natures of the "exit" and "exclusion" views, it is useful to think of the informal labour market as consisting of two tiers: an upper tier of informal activities which are desirable either because of the income they provide or because of other characteristics (including working hours, the choice of social service providers, access to markets, the value of being one's own boss), and a lower tier or "easy entry" informal sector that is used as a last-resort source of revenue (Fields, 2005). The relative size of the two tiers is again difficult to measure, but the number of unskilled self-employed can provide a (very) crude proxy for the lower tier, suggesting that it is much larger in Bolivia than in Mexico or Argentina.

One remarkable feature of informal work in Latin America is the sheer number of workers classified as informal because they either have no occupation in the formal sector or they have no social protection entitlement whatsoever. In other words, informal employment in Latin America is characterised by informal or undeclared jobs. This is in marked contrast to the majority of OECD countries, where informality is characterised by informal or undeclared work, that is supplementary work, or earnings, which are not declared by workers who are themselves otherwise registered. A recent pan-European survey (Eurobarometer, 2007) found that only about 2 per cent of respondents there had undertaken undeclared work in similar amounts to a full-time employee over the course of a year.

Informal employment in most OECD countries makes up only a small fraction of jobs. Comparable data on informal employment and especially estimates from direct sources (usually household or labour force surveys) are sparse. A notable exception is the set of Rockwool Foundation surveys based on a common questionnaire in Denmark and other economies in north-western Europe (Pedersen, 2003). These and follow-up surveys have given rise to an estimate of the Danish black economy at 3 per cent of GDP for 2005 if valued at formal market wages (and 1.2 per cent at actual prices paid). A comparable estimate for Germany was 3.6 per cent for 2005 (and 1.2 per cent at actual prices paid). Eurobarometer (2007) found figures for Nordic countries that are consistent with these estimates. On the other hand, it found surprisingly low figures for southern and eastern European countries: 3 per cent for Portugal, Spain and Italy, 4 per cent for Greece, 5 per cent for Poland, 6 per cent for the Slovak Republic, and 7 per cent for the Czech Republic and Hungary.



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**Table 5.2. Direct Estimates of Undeclared Work in Selected OECD Countries**

| | Reference year | Respondents who carried out undeclared work within the last year (%) | Undeclared hours (% of declared working hours) | Estimated value of undeclared working hours (% of GDP, valued at actual prices paid) |
|---|---|---|---|---|
| Denmark | 2001 | 20.3 | 3.8 | 1.8 |
| Denmark | 2005 | | | 1.2 |
| Norway | 1998, 2002 | 17.3 | 2.6 | 1.1 |
| Sweden | 1997-98 | 11.1 | 2.3 | 1.0 |
| Germany | 2001 | 10.4 | 4.1 | 1.3 |
| Germany | 2005 | 11.1 | 3.6 | 1.2 |
| Great Britain | 2000 | 7.8 | 1.2 | 0.6 |

*Source:* Pedersen (2003), Rockwool Foundation (2008) and OECD (2004), Employment Outlook data.
StatLink http://dx.doi.org/10.1787/450311573635

Informal employment in Latin America tends to be in the form of undeclared jobs, whereas in the OECD undeclared work by otherwise formal workers dominates

Within this group of European countries, further distinctions can be highlighted, with under-declared work being a more substantial activity for individuals in eastern and central European countries and southern European[8] countries than in other parts of the continent.

This distinction matters for policy. It certainly lends support to the view that informality in the majority of European countries is predominantly of the "upper-tier" type. On the other hand, it suggests that informality is to a large degree a tax-evasion issue. In Latin America, however, informality compounds the lost tax revenue with the social exclusion issues stemming from the large proportion of the working population not covered by social protection or basic labour safety regulations, at least explicitly.

Despite its limitations, the distinction between self-employment and informal wage employment does highlight the differences between Latin American and OECD countries in terms of the relative prevalence of different forms of informal economic activity. This comparison also brings to light the great heterogeneity that exists within each of these groups.

## TAXATION AND THE CAUSES OF INFORMALITY

Most studies of the causes of informality point to the burden of tax and social security contributions as one of its main causes[9]. To the extent that participation in informal economic activity results from a choice of entrepreneurs or workers, the wedge introduced by taxes (and tax-like social security contributions) between the cost of labour and after-tax earnings is seen as distorting this choice.

Such an argument would lead us to expect positive relationships between the combined rates of payroll taxes and social security contributions and the scale of informal employment. Similarly in the case of entrepreneurs one would expect a positive relationship between the rate of taxes on profits and the size of the informal sector.



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Tax levels alone are not the driver of informality...

However, Friedman *et al.* (2000) found that higher tax rates are associated with smaller informal economies across countries. This apparently paradoxical result is driven in part by the fact that the richer economies tend to have smaller informal sectors and more efficient governments. Indeed, when the level of development is controlled for the relationship becomes less robust. Friedman argued that this result is driven by the quality of government: firms stay informal to hide not from the taxman but from corruption's "grabbing hand".

**Table 5.3. The Costs of Compliance in Latin America and OECD Countries**

| | Starting a business | Paying taxes | |
|---|---|---|---|
| | **Cost** (% of income per head) | **Payments** (number) | **Time spent** (hours) |
| Argentina | 9.7 | 19 | 615 |
| Bolivia | 134.1 | 41 | 1 080 |
| Brazil | 10.4 | 11 | 2 600 |
| Chile | 8.6 | 10 | 316 |
| Colombia | 19.3 | 69 | 268 |
| Costa Rica | 21.3 | 43 | 402 |
| Dominican Republic | 31.1 | 74 | 286 |
| Ecuador | 29.2 | 8 | 600 |
| El Salvador | 73.1 | 66 | 224 |
| Guatemala | 47.3 | 39 | 344 |
| Honduras | 59.9 | 47 | 424 |
| Mexico | 13.3 | 27 | 552 |
| Nicaragua | 119.1 | 64 | 240 |
| Panama | 22.0 | 59 | 482 |
| Paraguay | 77.6 | 35 | 328 |
| Peru | 29.9 | 9 | 424 |
| Uruguay | 46.0 | 53 | 304 |
| Venezuela | 28.2 | 70 | 864 |
| **Latin America** | **43.3** | **41.3** | **575** |
| Czech Republic | 10.6 | 12 | 930 |
| Greece | 23.3 | 21 | 264 |
| Hungary | 17.7 | 24 | 340 |
| Italy | 18.7 | 15 | 360 |
| Korea | 16.9 | 48 | 290 |
| Poland | 21.2 | 41 | 418 |
| Portugal | 3.4 | 8 | 328 |
| Slovak Republic | 4.2 | 31 | 344 |
| Spain | 15.1 | 8 | 298 |
| Turkey | 20.7 | 15 | 223 |
| **OECD** | **7.2** | **17.5** | **267** |

*Note:* OECD average includes all 30 OECD member countries.

*Source:* World Bank (2007), Doing Business 2008 database.
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The cross-country literature therefore underlines how informality is multi-faceted and complex. First, it has a number of determinants other than taxation policy. Indeed, the levels of product market and labour regulation are positively associated with the prevalence of informality across countries, while levels of taxation are not (Loayza *et al.*, 2005). Second, the various causes of informality mutually reinforce each other. In particular, the links between more stringent product and labour market regulation, higher taxation and informality are stronger when governance is poor (see Friedman *et al.* (2000), Loayza *et al.* (2005) and Lackó (2006) for further discussion of these links).

Tax represents only one of the costs of formality. Compliance costs too can be high, especially when they impose accounting requirements. Table 5.3 presents measures of compliance costs for Latin American and selected OECD countries drawn from the World Bank's Doing Business database. While noting that the figures presented are based on a medium-sized model firm, and that there is wide variation across Latin American countries, it is still striking that tax compliance requires twice as many hours in the region than in OECD countries[10]. Out of the variables presented in Table 5.3, it is the cost of starting a business, however, that is most closely correlated with indicators of informality.

The correlation between this measure of entry costs and the extent of labour informality is remarkably high. Indeed, it is much higher than that between labour informality and the proxies of complexity and compliance costs of tax payments presented in Table 5.3[11]. Such a simple correlation does not account for the level of development (indeed, the cost of starting a business is highly correlated with GDP per head) and therefore can only be taken as an indication of the links between entry costs and labour informality. However, it does underline that tax rates are but one of the elements that determine the cost of formality.

Tax and social security contribution rates are therefore only part of the cost of engaging with the regulated economy, albeit the one that probably most preoccupies those within the regulated economy. Administrative compliance, including registering with tax authorities, also generates a significant part of the costs of entry into the regulated economy – see World Bank (2006) for the Mexican case. The success in encouraging business registration of reforms which reduce the cost and time to establish businesses – often the first step towards integration in the regulated economy – suggest that these are acting as real constraints for at least some entrepreneurs. In Mexico in 2006, for example, when the time to set up a business was reduced from 58 to 27 days business registration increased by nearly 6 per cent (World Bank, 2007).

While it is right, therefore, for any policy response to informality to consider the incentives created by the recurrent costs of formality, including tax payments, it must also look at the costs of entry. These are likely to be disproportionally important, and all the more so in countries or sectors where it is necessary to accumulate the necessary funds up-front because credit markets are imperfect and the future benefits of formality cannot be used to finance the cost of entry.



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# LIVING WITH DUALITY: FISCAL POLICY IN THE FACE OF INFORMALITY

How should a government pursue its fiscal policy when as much as half of the economy is informal? There are three issues behind this key question: capacity, incentives and segmentation. They arise both on the taxation and the expenditure side.

Fiscal policy and informality are deeply intertwined in the incentives they create (Perry *et al.*, 2007). Much of the literature has focused on the importance of taxation, sometimes to the point of identifying informality simply with tax evasion. More recently, and perhaps belatedly, the importance of the expenditure side of fiscal policy is moving to the fore. Indeed, in order to reduce vulnerability, particularly to catastrophic health risks but also old-age poverty, social assistance programmes financed from general taxation provide free or subsidised health and other social services to the uninsured, including informal workers and entrepreneurs. On the other hand, similar services are available to formal workers via contributory social security mechanisms. This duality generates incentives for workers to remain informal, potentially distorting the labour market and harming public finances (Levy, 2007; Galiani and Weinschelbaum, 2007).

## Fiscal Policy and Informality

Contrary to the usual emphasis on "fighting" informality, there is no evidence that the self-employed are behind the bulk of tax evasion

Emphasis on "fighting" the informal sector is often justified on tax-base grounds. Programmes or reforms whose aim is to move economic units and individuals from the informal to the formal sector will, the argument goes, ultimately pay for themselves in the form of increased tax and social security contributions from the newly formal firms.

Certainly, formalising employment relationships leads – almost by definition – to increased collection of social security contributions. Against these must be set the increased liabilities of the social security funds as employees become eligible for the benefits such as health care and pensions associated with their contributions.

The link between formality and tax revenue (excluding social security receipts) is less automatic. Indeed, as shown in the previous section, informal employment is also common in formal firms, especially in the form of under-reported employment or income.

While there is evidence (Levy, [2007] for Mexico; and Perry *et al.*, [2007] for a regional view) that informal employment is concentrated in small firms, there is no comparable body of evidence to support the view that small firms and the self-employed are the source of the bulk of tax evasion.

The example of Mexico is well-documented in this respect; moreover, it is the one country in Latin America where regular analysis of tax evasion is carried out – since it is mandated by law (Pita, 2008). Levy (2007) compares data from the Economic Census with social security registrations (compulsory for firms with employees). While the 2004 Economic Census counted 2.8 million small and micro-enterprises (employing 33 per cent of the labour force), only 652 000 firms employing fewer than 10 people were registered in 2005 with the social security institute (accounting for 15 per cent of registered salaried workers). There are differences in the definition of firm size between the two sources and the treatment of the self-employed also differs, so caution is advised in any direct comparison. Nonetheless,



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the gap – equivalent to 4.9 million workers – is striking. These figures are consistent with the 49 per cent level of informal employment estimated by Gasparini and Tornarolli (2007) – of which 23 per cent corresponded to informal employees and 20 per cent to unskilled self-employed[12].

At the same time, tax evasion in Mexico was estimated to be around 27 per cent of potential revenue for 2004 (Samaniego Breach *et al.*, 2006), following a steady decline from 35 per cent in 1998. It is the self-employed who are less likely to comply with their fiscal obligations. The same study found personal income tax evasion rates of 80 per cent of potential collection for entrepreneurial and professional activities – a regime designed for unincorporated self-employed entrepreneurs and professionals – compared with 15 per cent for employees. In an earlier effort to broaden tax compliance Mexico introduced a simplified regime, REPECOS, for small contributors[13]. However, the difference in evasion rates between the general and intermediate regimes (80 per cent) and REPECOS (82.7 per cent) is small. While the tax base in the REPECOS regime is of the same order of magnitude as those of the general and intermediate regimes combined, low average rates for REPECOS means that potential tax receipts from this regime are less than a tenth of the general and intermediate regimes. Therefore, despite these high evasion rates, tax evasion by the small firms that represent the bulk of informal employment represented only an estimated 0.07 per cent of GDP in 2004, compared to total estimated tax evasion of 3 per cent[14].

An alternative measure of potential tax receipts from the informal sector can be generated by simulating tax returns based on household survey data. Flores and Valero (n.d.) carried out such an exercise based on the national labour force survey (Encuesta Nacional de Empleo) for the year 2000. Taking all workers in the sample in firms with fewer than 15 employees and excluding agriculturalists and those registered for social security, they found that net income tax receipts for that group would be negative owing to the salary tax credit (crédito al salario), and amount to 0.1 per cent of GDP.

Increasing the take of income and corporate taxes is therefore not a sufficient argument to justify formalisation policies. A sizeable proportion of informal workers are simply too poor to make a material contribution in even taxation systems which are only mildly progressive. Coming back to the two-tier view of the informal sector, only the upper tier will earn enough to make a positive contribution through income taxes. Even in that upper tier, the fact that individuals would choose informality – rather than be pushed into it –does not mean that they are not poor or in risk of poverty. The upper tier is for the most part relatively small enterprises and the self-employed, whose income is likely to be more volatile than that of wage workers. Offering quality public services and social protection to those individuals who choose to shift from the informal to the formal sector is not only a matter of providing incentives for them to do so, but also of protecting their livelihoods.

Increasing the tax take is not reason enough to pursue formalisation: many informal workers are too poor to pay any meaningful tax

This is not to say that a transition to formality would not have an effect on revenue. In particular receipts from value-added (or sales) taxes and social security – which by their nature are less progressive – would be sizeable if these were collected for currently informal firms.



## The Case of Value-Added Taxes

The difficulty of bringing small businesses into the system, especially in certain sectors, hinders VAT collection. There is a clear inverse correlation between VAT productivity and the prevalence of informal employment (Perry *et al.*, 2007). However, in contrast to previously presented measures of

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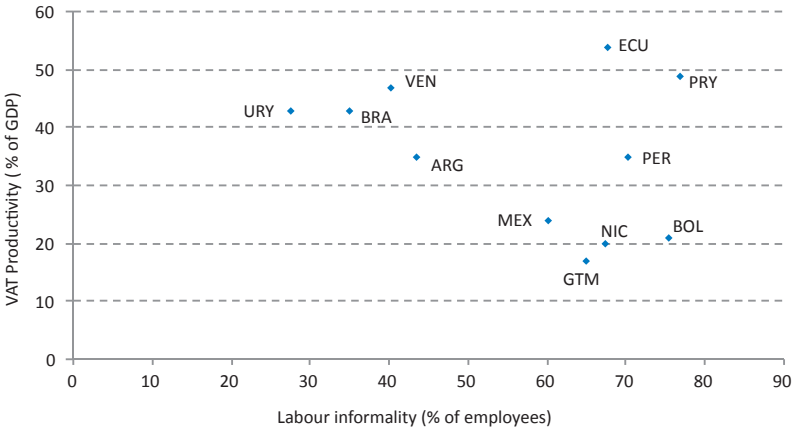
tax evasion, "VAT productivity" – which compares potential revenue from VAT (constructed as total value-added multiplied by the going rate) with actual collections – does not take into account concessions and exceptions to the standard rate which can be extensive. It therefore bundles together tax evasion and the tax expenditures associated with reduced rates and exemptions for some goods or services.

There is more to low VAT productivity than informality, and its relation with the latter is heavily sector specific

Low VAT productivity, therefore, is not necessarily the result of low compliance. For example, in Mexico until fiscal year 2003 (corresponding to the entry in Figure 5.3) firms in the small contributors' regime were exempted from VAT payments. Add to that the goods and services exempt from VAT or subject to a zero rate and it is estimated that until 2003 tax expenditures halved Mexico's VAT tax base (Samaniego Breach *et al.*, 2006)[15].

**Figure 5.3. VAT Productivity and Labour Informality**




*Note:* Data for 2004 or latest data available, legalistic definition.

*Source:* OECD Development Centre calculations based on Alm and Martínez-Vázquez (2007) and Gasparini and Tornarolli (2007).

StatLink http://dx.doi.org/10.1787/450311573635

The extent to which informality becomes an important issue for VAT collection depends on how sector-specific VAT deductions or exemptions overlap the sectoral composition of informality. It also depends on the degree of vertical integration within the informal sector and especially whether exchanges out of the sector are of intermediate or final goods. When intermediate goods are traded between a formal and an informal enterprise, only the allocation of value added is affected. Small informal distributors evade VAT contributions but must absorb the VAT included in their suppliers' price.

The size of the informal sector is also one possible element behind the reliance of developing countries in general, and Latin American countries in particular, on indirect taxes. The weight of indirect taxes can indeed be explained not only as the result of trying to avoid disincentives to work, but also as a pragmatic response to the presence of a large "hard-to-tax" segment of the economy covering most agricultural activity as well as the informal sector.



VAT is to some extent self-enforcing, but this can work both ways – discouraging any part of the value chain from becoming formal

A key element is the capacity of the tax administration. Indeed, given the difficulties they face in reaching the informal sector, it has been suggested that developing countries should concentrate on just VAT (or VAT-like consumption taxes). This could be accompanied by a land tax, to overcome the problem of taxing agriculture (Burgess and Stern, 1993). However, while

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there is certainly scope for technical improvement in tax administration in Latin American countries, the real challenge is in the political arena (Perry *et al.*, 2007). Independent of their economic desirability, indirect taxes can be easier to impose politically because their indirect character generates less resistance. However, given the limited success of tax and transfer systems in Latin America in lowering inequality (see Chapter 4), the equity case for such uniform taxation is quite weak[16].

Consumption taxes, tariffs and export duties have been used to tax both agriculture and the informal sector, with at least partial success. Trade liberalisation is tending to shift the tax burden from international trade to consumption taxes, especially VAT. Recent analysis has questioned the wisdom of this. A very large informal sector means much of the VAT take will be collected at the border anyway, making the change more apparent than real. Second, a large informal sector implies that the necessary offsetting increase in the rate of VAT will be large – as the base is small – which will lead to large substitution towards informal production and self-production (Emran and Stiglitz, 2005; Piggot and Whalley, 2001). These arguments relate to the tax base but there are elements in the tax collection mechanism that are also relevant.

This "contagion" can be addressed by measures such as forward tax substitution

The VAT collection mechanism is particularly interesting. By encouraging third-party reporting it can substitute partially for capacity in the tax authority, provided an adequate inspection regime is maintained. However, in the presence of a sizeable informal sector the strategic complementarity that results works in the opposite direction. Individual firms gain more from being formal when their trading partners are formal. Indeed, since informal firms cannot reclaim VAT they have an incentive either to integrate vertically or to source their inputs from the informal sector. De Paula and Scheinkman (2007) examine this theoretical "contagion" mechanism using Brazilian data. They find that firms are indeed more likely to be formal when their suppliers or their clients are formal firms. They also find evidence that "forward tax substitution" (substituição tributária para frente) is effective in breaking the contagion. Under such a regime the total tax due, including that which would be payable by downstream firms, is assessed at the first stage of production based on an assumed profit margin. Forward tax substitution can only work, however, in sectors where at some level in the value chain is a large firm that does not have the option to become informal, can be easily monitored, and has the financial capacity to comply.

On the other hand, the book-keeping and accounting requirements that VAT imposes are expensive, especially for smaller firms. Standardised procedures for VAT liability calculation and collection should therefore aim to reduce the cost of compliance especially (though not exclusively) for small firms.

## Social Security Contributions



Data for measures of informality based on social protection are sparse. However, what evidence is available does not suggest decreasing labour informality in Latin America. Available data show that in the decade 1995 to 2005, the proportion of salaried workers without pension rights increased in Argentina, Paraguay and Venezuela, remained roughly constant in Chile and decreased slightly only in Brazil, El Salvador and Peru (see Table 5.4). In the same period, the ratio of retirement-age individuals to the labour force remained stable in most countries. There were sizeable increases in Chile, Honduras and El Salvador and small falls in Argentina and Paraguay.

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**Table 5.4. Informality and Ageing Population**

| | Population 65 and over (% of labour force) | | Labour informality[a] (% of salaried workers) | | |
|---|---|---|---|---|---|
| | 1995 | 2005 | 1995 | 2000 | 2005 |
| Argentina | 23 | 22 | 33 | 38 | 43 |
| Bolivia | 11 | 11 | | 66 | 75 |
| Brazil | 11 | 13 | 38 | 36[b] | 34 |
| Chile | 17 | 21 | 22 | 24 | 22[c] |
| Ecuador | 12 | 13 | | | 68[c] |
| El Salvador | 12 | 14 | 54 | 47 | 50 |
| Guatemala | 9 | 9 | | 66 | 64 |
| Mexico | 9 | 9 | | 55 | 61 |
| Nicaragua | 13 | 14 | | 68[b] | 67 |
| Paraguay | 9 | 8 | 69 | 73[b] | 72 |
| Peru | 12 | 14 | | 77 | 65 |
| Uruguay | 27 | 28 | | 23[b] | 26 |
| Venezuela | | | 35 | 33 | 40 |

*Notes:*

*a)* Salaried workers without pension rights.

*b)* Data correspond to 2001.

*c)* Data correspond to 2003.

*Source:* WDI (2008), World Development Indicators database (World Bank) and Gasparini and Tornarolli (2007).

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Though the additional revenue raised may not be great, other factors such as mutualisation and social participation are relevant to formalisation too

For taxes with some degree of progressivity potential revenues forgone owing to the existence of an informal sector are not large – since many informal workers would contribute little or nothing even if formal. This is well illustrated by the example of Mexico in the case of income tax. However, for indirect taxes (VAT and sales taxes) – which are less progressive by their nature – the loss is potentially much larger.

The case of social protection levies, including social security health and pension contributions, is slightly different because non-registration not only reduces resources but also liabilities. Mutualisation and increased coverage are therefore stronger arguments for the formalisation of social protection than revenue collection alone.

Finally it can be argued that tax registration and payment have value to society beyond their monetary contribution to the public coffers. Tax registration serves to establish a link with the state not only as a collector but also a provider of services, providing incentives for economic and political participation. Tax registration is also associated with other forms of compliance, including workers' protection legislation.

The question arises then of whether and how to integrate informally generated income and value into the tax base. The common use of tax exemptions for small firms is on the grounds that it is more cost-effective to maintain them out of the tax base from a static perspective. But this is to ignore the other benefits identified above that may flow from the inclusion of these firms



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in the tax base, even if they do not pay significant amounts of tax. These are both private (such as the benefits of adequate accounting, access to productivity-enhancing services and expanded customer base) and social (economic and political participation).

## Special and Simplified Tax Regimes

The key challenge is maintaining in the tax base the many small and micro-enterprises that form the bulk of the informal sector while eliciting effective contributions from them. The great majority of Latin American countries implement some form of special regime for small contributors[17]. El Salvador, Panama and Venezuela are the exceptions, and even there small contributors are not subject to VAT. In seven countries in the region, the special regime substitutes not only for income tax but also for VAT. Further, in Brazil, Argentina and Uruguay some social security contributions are also subject to simplification. In Brazil's SIMPLES (Sistema Integrado de Pagamento de Impostos e Contribuições), employers' social security contributions are also bundled with income tax and VAT – in contrast to the majority of other regimes which are primarily designed for the self-employed.

The importance of special regimes for small and micro-enterprises in terms of revenue is for the most part marginal (1 per cent of the total), with the exception of SIMPLES, which – covering firms with revenues up to USD 1 million and used by 75 per cent of firms – generates 7 per cent of revenue (González, 2006).

Informality is not a uniform phenomenon: enterprises pick and mix according to the costs, benefits and risks associated with different aspects of formality

While special or simplified regimes aim to reduce the cost of compliance as well as the cost of collection, there is less evidence on what the benefits of compliance are or how they are determined. In most instances, compliance across the domains of business licensing, tax and social security constitute separate decisions on the part of individuals or firms. For this reason the level of informality in employment is likely to overstate the degree of tax non-registration. A similar pattern is found in employment relations, where a sizeable number of small firms or the self-employed are only partially informal, being registered with some but not all of the formal systems. Using data from a 1998 national micro-enterprise survey in Mexico, Flores and Valero (n.d.) showed that while half of interviewees were fully informal (registered with neither the tax authorities nor the social security institute), another 40 per cent (including 52 per cent of employers) were partially informal and registered with the tax authorities only[18]. In a smaller sample of firms in Bolivian cities, McKenzie and Sakho (2007) found that 57 per cent of their sample had the necessary municipal operating licence while only 29 per cent were registered for VAT[19].

This variety of experience makes it difficult to assess the benefits from formality. The compendium of registration and compliance procedures which constitute compliance will benefit different firms differently, especially firms which differ in size. Limited liability will have some benefits even for very small firms, though these increase with increasing scale. Similarly, an expansion in the customer base is unlikely to benefit very small firms without the productive or financial capacity to grow[20].

The benefits also depend on the quality of the productivity-enhancing public and private goods that formality grants access to. When the quality of these is perceived to be low, the incentive to register is diluted. This is consistent with the finding that while there is a negative relationship between tax rates and the size of the underground economy, that relationship is much



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weaker when the level of income is controlled for (Friedman *et al.*, 2000) and changes sign when the tax rate is augmented by the degree of corruption in the economy (Lackó, 2006).

Simplified regimes are an important tool in bringing small and micro-enterprises into formality. Where they allow for the establishment of a relationship between the tax authorities and the entrepreneur, they appear superior to outright tax exemption. As just one example, increased tax registration and tax return filing will improve the data available to the tax and economic authorities (Jaramillo, 2004).

As a further benefit, a tax regime that requires the maintenance of at least some book-keeping and accounting records can act as a force for productivity enhancement in the longer run, since a side-effect will be better management information – and perhaps therefore the more efficient running of the enterprise (Tokman, 2007).

In the particular case of social insurance, the argument for inclusion is, if anything, even stronger. The comparatively low level of coverage of social insurance systems in the region at the lower end of the social scale means that coverage, rather than revenue, may be the major issue. From a purely financial perspective, the gains from mutualisation can be significant. Moreover, as a number of risks insured through social protection also generate significant externalities (particularly in the case of health), the gains from extended coverage benefit not only the new beneficiaries, but the system at large.

Given the collection and administrative costs involved, presumptive taxation is common in simplified regimes. Presumptive taxation involves substituting the detailed calculations of one or more mainstream taxes by a calculation based on an estimated or alternative tax base. Typical examples for income and value-added taxes include estimating income from input use or indirectly through external indicators of profit or turnover such as the size of the establishment or number of employees, or substituting the tax(es) with taxes on assets or revenue.

The pitfall of special regimes is that they become a gilded cage: the benefit needed to draw people in initially becomes a barrier to exit, reinforcing duality in the economy

Special regimes however, create a potential pitfall, especially in the incentives for enterprise growth. First, when informality is prevalent and the risks attached to non-registration perceived to be low, a special regime will have to offer relatively low rates to draw in to the lower end of the income distribution of firms. In turn, this creates an incentive for firms to stay in the simplified regime although they could pay in the general regime. Second, the step change in fixed costs involved in the more sophisticated accounting necessary for general tax regimes acts as a barrier to upward transition. By reinforcing the "missing middle", special regimes can in fact act to reinforce the duality of the economy. This is of course a key concern in the design of simplified regimes (International Tax Dialogue, 2007). Different solutions have been applied around the world, including progressivity in the rate applied (reducing the implicit subsidy for larger firms) and the creation of intermediate regimes between the special and the general.



Simplified regimes allow the integration of small firms into the taxation side of formality while avoiding the regressive effect that (relatively fixed) compliance costs can introduce even in taxes with flat rates. Somewhat counter-intuitively, by adapting the requirements of tax compliance for small firms with limited book-keeping capacity into a simplified regime, the gap between formality and informality can be narrowed.

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# FISCAL POLICY, INFORMALITY AND THE SOCIAL CONTRACT

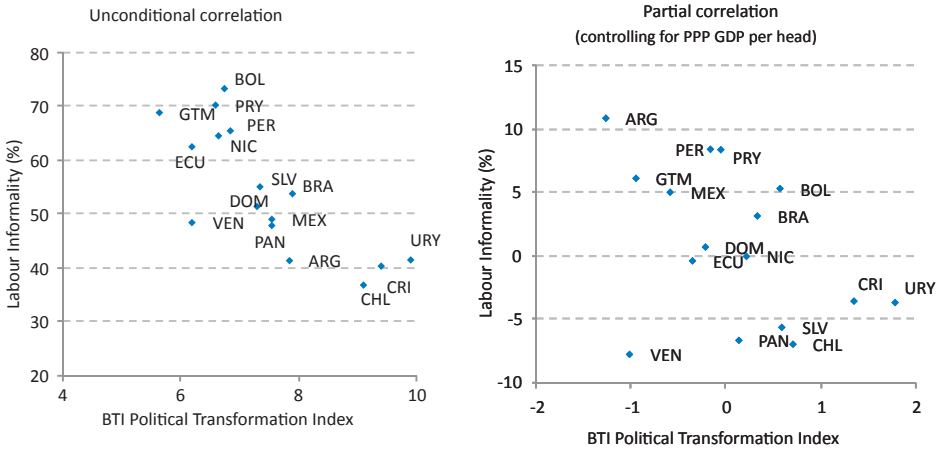
Technical elements of taxation and tax administration are certainly important, but tax reforms and public spending choices are ultimately political decisions. This element was already recognised in Burgess and Stern's (1993) seminal paper on taxation in developing countries. Indeed, it was put forward as a positive explanation of the failure of land taxes and the relative success of developing countries in increasing revenue from indirect rather than direct taxes.

## Informality and Political Institutions

Informality undermines tax morale, creating a vicious circle with low revenues and poor services

In a wider context, informality can be seen as a symptom of a broken social contract (Perry *et al.*, 2007). There is evidence that tax morale – the social unacceptability of not paying taxes – is negatively related to the size of the informal economy. Individuals are more likely to engage with the state (complying with tax regulations and demanding public service) if they see the state as holding its side of the bargain and their neighbours complying. Such social norms can be self-reinforcing. Lower tax morale leads to higher prevalence of evasion, which lowers revenue. Reduced resources mean mediocre public services and – ironically – reduced tax enforcement, feeding yet lower tax morale.

**Figure 5.4. Labour Informality and Political Institutions**
(2006 or latest data available, productive definition)




*Source:* OECD Development Centre calculations based on Gasparini and Tornarolli (2007); World Bank, World Development Indicators database and Bertelsmann Transformation Index (2006).
StatLink http://dx.doi.org/10.1787/450311573635

Indeed, not only is informality correlated with measures of tax morale, it is also correlated with the strength of democratic institutions. The first panel of Figure 5.4 plots labour informality (using the productive measure, for which there is denser data) against the political component of the Bertelsmann Transformation Index (for 2006)[21]. This index measures the status of democracy based on five criteria (consolidation of the state or "stateness", political participation, rule of law, stability of democratic institutions, political



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and social integration) according to experts' answers to a standardised questionnaire. Even as indicative evidence, cross-country correlations between informality and institutional quality are likely to be spurious because of the relationships of both variables with the level of GDP. The second panel presents the partial correlation controlling for GDP per head.

Informality is therefore a symptom of problems with the social contract that go beyond the failure of the state to integrate workers and entrepreneurs into the regulated economy. However, this is not a simple matter of all or nothing: individuals do not necessarily choose to play by all the rules or to eschew any relation with the state, as we have seen. Although Latin American countries may have fewer tax "levers" with which to incorporate informal firms and workers into the formal economy than have their OECD counterparts, the existence of this relationship with political institutions also points to other means of creating positive links between the excluded (or the exiting) and the state.

## Opting In, Opting Out: The Case of Social Protection

Social protection schemes typify two problems with which policy makers must grapple...

The link between social protection and informality is a good example of the choice between universal and segmented regimes and of the implications of exclusion and exit. High levels of poverty and inequality have prompted the creation of social assistance programmes that often cater only to informal workers, either as part of their statutory framework or by self-selection – since formal workers have access to formal social security.

...universal provision subsidises and reinforces informality...

Where exit – the choice to remain informal, given the costs and benefits of formality for a given entrepreneur or worker – is relatively important, social assistance programmes providing "free" services to informal workers at the expense of either payroll taxes in the formal sector or general taxation, subsidise and encourage informality. They act to reinforce the difference between the formal and informal sector that is created through formal social insurance (see Levy, 2007; Galiani and Weinschelbaum 2007). In turn, this can create segmented labour markets and the "missing middle" in an economy composed of many small and some large enterprises.

The debate was sparked in the Mexican case by the implementation of a large-scale health insurance scheme for those without access to social security. The Seguro Popular (Sistema de Protección Social de Salud) offers a basic health package with a subsidy that decreases as declared household income rises. In practice, about 90 per cent of the 5 million families that were beneficiaries of Seguro Popular at the end of 2006 received a full subsidy.

A similar issue exists in Brazil, where minimum-wage earners can apply for an old-age benefit from age 65 (means tested and equivalent to a minimum wage), therefore providing incentives for the aged to retire and work informally (OECD, 2006).



The relevance of these arguments depends, of course, of the degree to which informality is indeed voluntary and the effect that non-pecuniary benefits are likely to have on their choice. Again, the benefits of formality for workers will be discounted if the availability or the quality of the corresponding services is low.

The possibility of exit puts the design of social protection mechanisms under the spotlight. However, exclusion – the fact that part of the informal sector is involuntary, for example because of rigidities in the labour market – needs also to be recognised. Many of the most vulnerable are likely to have low educational attainment and would have very low productivity in the formal

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sector. Attention to the potentially perverse incentives of social assistance programmes should not prevent addressing the needs of those who are indeed excluded. Providing basic social services to them and especially their families remain imperatives for poverty alleviation. Fostering the employability of the low-skilled also remains relevant. Initiatives in this direction can include setting social security contributions for low-paid workers at levels that do not make them unemployable, and encouraging human capital accumulation not only before but also after entry in the labour market.

...yet targeted services funded largely out of (regressive) direct taxation act to increase inequality

Factors inherent in their design and lack of coverage mean that social security systems in most Latin American countries tend to increase rather than decrease inequality. This is particularly marked in the case of pensions. In Mexico, using 2002 data, Scott (2005) found that the ratio between the average income from pensions of members of the richest and the poorest deciles is ten times the ratio between their total incomes[22]. Given the importance of (regressive) indirect taxes as a source of revenue in the region, the net effect is a transfer of value from the uninsured to the insured.

Social assistance schemes that insure the poor against catastrophic risk can play a major role in reducing not only the level but also the severity of poverty. Moreover, they constitute important elements in increasing the productivity of informal workers. Lack of coverage of social security is therefore particularly important, because it leaves redistributive social security largely irrelevant to the uninsured. When any part of social security is financed through general taxation, it also implies a transfer from the uninsured to the insured, through for example the payment of VAT by consumers who are informally employed.

## Fiscal Policy and the Social Contract

The two preceding examples underline the importance of fiscal policy as a link between citizens and state, which extends beyond their roles as taxpayers and tax collector and takes in service user and provider, as well as political delegate. This calls for a different policy approach to informality, one which emphasises not the obligations but the rights associated with formality (Tokman, 2007) and for which formality is not the mark of an obligation to the state but the guarantee of full economic citizenship.

This provides an argument for including all citizens in the tax or benefits base despite the possibly negative financial returns of doing so. However, in reality seeking to increase voluntary compliance maybe a more reasonable and practical mechanism.

Voluntary compliance is of course, partly driven by the perceived likelihood of being audited, but perceptions of fairness, legitimacy and trust in the system also play a role. These non-economic drivers have been posited in the literature as underpinnings of a social norm that determines tax morale, the unacceptability of tax evasion. Tax morale is in turn associated with the climate in which the decision to pay taxes or not is taken, as well as the quality of institutions and governance[23].



But informality is also a symptom of a social contract broken on the spending side. As noted above, the benefits of formality are mainly associated with market opportunities and productivity-enhancing public goods, including law and order, contract enforcement, and services such as health, education or housing provision. Improving the quality of these services and aligning the services provided with their perceived cost can also help establish new links.

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If informality is a symptom of a broken social contract, then it simply reinforces the problem to treat informal workers as outside the law

The recognition that informality is symptomatic of a broken link between economic actors – producers and workers – and the state also calls for strategies in which formalisation is less a legal imperative than a tool of economic transformation to be used in pursuit of better outcomes for all, including those currently in the informal sector. Mechanisms that recognise the rights of informal workers and entrepreneurs as economic actors and encourage them to embrace labour protection and modern business methods are means to this end. Providing informal entrepreneurs with tools which enable them to separate out business assets and judge business opportunities on the basis of returns will not only increase the profitability of their businesses but also potentially the productivity of the economy at large. The more that actors in the informal sector are dismissed as being outside the law, the more their basic economic rights to property, law and security are eroded. Legal and procedural innovations can bridge the gap; they include for example recognising property rights derived from custom or long-term use, recognising oral labour contracts and making it easier to separate the assets of the business from those of the individual.

Special regimes can help reduce the cost of compliance on the taxation side and the cost of provision on the expenditure side, and thereby be important tools in bridging the gaps between formal and informal workers and enterprises. However, special regimes can also reinforce the wedge that exists between formal and informal employment.

## CONCLUSIONS

The links between informality and fiscal policy are many and go in both directions. This chapter has presented mechanisms that link informality to the prevailing tax-and-spend structure. It has also analysed the importance of fiscal mechanisms in creating incentives for and against formality. Informality in all its forms is not just the consequence of tax policy, but also a major constraint on the design of fiscal systems and mechanisms. Informality is linked also to expenditure and social service provision. It has ramifications in many areas of state action and, as such, needs to be considered in a framework much broader than tax and compliance alone.

The diverse nature of informality both between and within countries calls for careful consideration of country-specific realities in formulating any policy implications. The segmentation of informal workers between those who exit and those who are excluded can help identify not only possible effects of reforms but also distributional consequences. It is therefore crucial to understand the drivers of informality in each particular country.

Recent evidence on the dynamics of informal labour markets and informal enterprises shows that there is no clear–cut boundary between formality and informality, but rather a spectrum along which actors may partake in more or less of the attributes of formality. Furthermore there is substantial mobility along this spectrum. This has two key implications. First, it runs against a view of the informal sector as solely the result of segmentation in labour markets or exclusion due to entry costs. Second, it is a reminder that changes in the costs and benefits of formality will create incentives for movement on the spectrum, and these dynamics are relevant to any consideration of reform. Again, the relative weight of informality through exit and exclusion will be a key driver.



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New knowledge about the diversity and dynamics of the informal sector calls for a new approach to policy

Within taxation and social security policy, incentives to stay informal – for those who are informal through exit – increase with the costs of formality. High tax wedges and especially high compliance and entry costs limit the attractiveness of formality, as do strict regulations in the absence of good governance. Reducing compliance costs can enhance the appeal of tax registration, often an early step towards formality. Simplifying tax and tax-reporting systems generally or a simplified regime for smaller contributors are two ways of reducing compliance costs. Internet-based or electronic reporting, service delivery and registration is another. Despite relatively low Internet penetration in the region, there are promising experiences such as electronic tax-filing or Chile's implementation of electronic VAT invoicing. Another lever is the reduction of entry costs, in particular the cost and delay of registering a business. There are already good examples of how this can be done both in the OECD and Latin America. Turkey, for example, reduced registration delays for a new firm from 38 to nine days.

Within the voluntary "upper-tier" of the informal sector, the relative taxation of income from labour and capital matters in the decision to remain self-employed or to seek work as an employee. While not a crucial element from the point of view of static economic efficiency, incentives for independent employment can also create barriers to enterprise growth and social protection coverage.

Social benefits of low perceived value also reduce the incentives to become or remain formal. Unbundling of social protection can enhance the perceived benefits and encourage formality. This unbundling however would need to achieve a careful balance between risk pooling, on the one hand, and the need for the contributor to see a link between contributions and benefits, on the other. Several countries (such as Hungary) or tax regimes (such as SIMPLES in Brazil) have moved towards integrating tax and social contribution collection either within the same agency or even on the basis of a single payment. Tackling the phenomenon of, say, firms who register for tax but do not register their workers for social security, would require links between registries and agencies. These might be controversial but would improve compliance and hence social protection coverage for informal workers.

On both the taxation and expenditure sides, getting the incentives right is the complement to enforcement capability in achieving coverage and compliance. To the extent that there is a sizeable "upper tier" of informal workers and entrepreneurs, enforcement needs to be credible, effective and appropriate, with the objective of encouraging voluntary compliance. Recent examples of information campaigns (such as that for social security registration of domestic workers in Argentina) or tax administration agencies providing assistance in completing tax forms have had promising results.

Finally, much of the informal sector in many Latin American countries is indeed made up of low-productivity, low-earning workers and self-employed. Measures that will increase productivity across the board will support the move towards a more modern economy. These include making legal protection and contract enforcement more widely available. Education also will play a vital role and in this has a two-fold benefit in fiscal policy terms. Quality education is seen in the short term as a valuable service from the state, improving tax morale; in the longer term it enhances the skill base of the whole economy. The final chapter of this *Outlook* is devoted to the question of how to achieve – and be seen to achieve – quality educational outcomes within a framework of controlled public expenditure.



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In the immediate future, there is a case for extending basic social protection coverage to the most vulnerable sectors of the population. But this needs to be integrated with the general contributory regime to avoid the creation of a poverty trap – a "graduation" price for leaving informality that would only perpetuate the divide.

Sizeable informal sectors and widespread informal employment will accompany the development of Latin American countries for years to come. Recent years have seen a dramatic expansion in our knowledge of the characteristics of the informal economy, its diversity and dynamics. This knowledge calls for a different fiscal policy approach to the informal sector and informal workers. An approach that recognises workers and entrepreneurs in the informal economy as citizens and economic agents and that sees the many dimensions of formality as means for the state and citizens to engage with each other. An approach that emphasises the rights as well as the obligations that come with formality and sees it as a marker of full economic citizenship.



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# STATISTICAL ANNEX

## Table 5.A1. Labour Informality in Latin America

| | (1) **Labour informality (productive definition)** % of workers | **Year** | (2) **Labour informality (legalistic definition)** % of employees without pension rights | **Year** |
|---|---|---|---|---|
| Argentina | 41.5 | 2006 | 40.9 | 2006 |
| Bolivia | 73.4 | 2004 | 75.3 | 2004 |
| Brazil | 53.9 | 2005 | 33.7 | 2005 |
| Chile | 37.0 | 2003 | 22.4 | 2003 |
| Colombia | | | | |
| Costa Rica | 40.5 | 2006 | | |
| Dominican Republic | 51.6 | 2006 | 46.5 | 2006 |
| Ecuador | 62.6 | 2006 | 67.6 | 2003 |
| El Salvador | 55.2 | 2004 | 50.3 | 2004 |
| Guatemala | 69.0 | 2004 | 64.9 | 2004 |
| Honduras | | | | |
| Mexico | 49.2 | 2005 | 61.1 | 2005 |
| Nicaragua | 64.7 | 2005 | 66.6 | 2005 |
| Panama | 48.0 | 2004 | | |
| Paraguay | 70.4 | 2005 | 71.7 | 2005 |
| Peru | 65.6 | 2006 | 61.7 | 2006 |
| Uruguay | 41.6 | 2005 | 26.2 | 2005 |
| Venezuela | 48.6 | 2005 | 40.0 | 2005 |

*Note:* Informal employment, as defined in Gasparini and Tornarolli (2007) and Perry *et al.* (2007), includes unskilled self-employed workers, workers in firms with fewer than five workers and unpaid workers.

*Source:* Gasparini and Tornarolli (2007), Perry *et al.* (2007) and CEDLAS, Socio-Economic Database for Latin America and the Caribbean.

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**Table 5.A2. Self-Employment and the Composition of Labour Informality in Latin America**
(Percentage of total employment, 2006 or latest data available)

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| | **Self-employed Professio-nals** | **Self-employed Unskilled** | **Self-employed Total** | **Workers with zero income** | **Salaried workers in small firms** | **Informal workers Total** |
| Argentina | 3.2 | 16.7 | 19.9 | 1.2 | 23.3 | 41.2 |
| Bolivia | 0.9 | 35.6 | 36.5 | 26.2 | 11.7 | 73.5 |
| Brazil | 1.1 | 20.5 | 21.6 | 11.4 | 22.0 | 53.9 |
| Chile | 1.8 | 19.7 | 21.5 | 1.6 | 15.7 | 37.0 |
| Colombia | | | 41.0 | | | |
| Costa Rica | 0.2 | 19.3 | 19.5 | 2.3 | 18.9 | 40.5 |
| Dominican Republic | 1.6 | 40.3 | 41.9 | 3.6 | 7.7 | 51.6 |
| Ecuador | 1.2 | 26.2 | 27.4 | 15.7 | 20.7 | 62.6 |
| El Salvador | 0.7 | 27.5 | 28.1 | 7.9 | 19.9 | 55.3 |
| Guatemala | 0.4 | 32.1 | 32.5 | 18.9 | 17.9 | 68.9 |
| Honduras | | | 24.0 | | | |
| Mexico | 1.5 | 19.6 | 21.1 | 6.6 | 23.0 | 49.2 |
| Nicaragua | 0.7 | 29.6 | 30.3 | 16.8 | 18.3 | 64.7 |
| Panama | 0.9 | 29.0 | 29.9 | 4.7 | 14.3 | 48.0 |
| Paraguay | 1.2 | 36.1 | 37.2 | 11.8 | 22.5 | 70.4 |
| Peru | 2.8 | 32.5 | 35.3 | 18.3 | 14.9 | 65.7 |
| Uruguay | 2.2 | 21.3 | 23.5 | 1.3 | 19.0 | 41.6 |
| Venezuela | 2.1 | 33.5 | 35.6 | 2.0 | 13.1 | 48.6 |

*Note:* Column (6) is calculated as the sum of columns (2), (4) and (5).

*Source:* Gasparini and Tornarolli (2007), Perry *et al.* (2007) and CEDLAS, Socio-Economic Database for Latin America and the Caribbean.



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## NOTES

1. This chapter is based on research undertaken with the generous support, gratefully acknowledged, of the Fundación Internacional y para Iberoamérica de Administración y Políticas Públicas (FIIAPP).
2. Informality is nevertheless not the only constraint on fiscal policy that is particular to developing countries; see Burgess and Stern (1993) for a detailed enumeration of other issues affecting social policy.
3. See de Soto (2000) for an exposition of this argument and the links to credit market behaviour in Latin America.
4. See Henley *et al.* (2006) for a comparison of different measures. They find measures based on occupation and employer size to be the most arbitrary.
5. For various estimates using MIMIC models or their dynamic counterparts (DYMIMIC – dynamic multiple-indicator multiple-cause models), see Schneider (2007) and Schneider and Enste (2000).
6. See Perry *et al.* (2007) for an enlightening summary of the debate.
7. Comparable data on salaried informal employment for all OECD countries are not readily available. The estimates presented in Table 5.1 are not directly comparable to those in Table 5.A1 for Latin America because the reference categories differ (salaried workers in the former, non-farm employment in the latter). Country selection for Table 5.1 is based on the availability of data.
8. Within this group, the Czech Republic, Estonia and Slovenia stand out as exceptions with much lower average hours of undeclared work (Eurobarometer, 2007).
9. See Schneider and Enste (2000) for an account of the literature.
10. Brazil is an outlier in this indicator not only within Latin America but also the whole sample. The average time needed to pay taxes in Latin America excluding Brazil is 456 hours.
11. The respective correlation coefficients between labour informality and the variables presented in Table 5.3 are: cost of starting a business (0.68), number of tax payments (-0.03), time spent towards tax payments (0.05).
12. The remainder is workers with zero income, usually unpaid family workers.
13. REPECOS (Régimen de Pequeños Contribuyentes) is open to contributors with revenue below MXN 2 million and is one of several simplified regimes, which include one for small firms in the primary and transport sectors as well as an intermediate regime available to those with revenues between MXN 2 million and 4 million.
14. The REPECOS regime has subsequently been reformed to include not only personal income tax but also VAT. This would deepen the discussion above because VAT evasion could then be attributed to each type of contributor, something that the usual methodology to estimate VAT compliance based on national accounts data does not allow. The evasion rate for VAT in Mexico is estimated to be around 20 per cent by Samaniego Breach *et al.* (2006).
15. From fiscal year 2004 onwards, small contributors in Mexico have been liable to account for VAT.
16. A case could be made for uniform taxation based on progressive spending; however available evidence suggests that social spending – typically very pro-poor in OECD countries – is neutral in Latin America or even regressive if pensions are included (Breceda *et al.*, 2008).
17. See González (2006) for a descriptive analysis of the different regimes.



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18. Registration with the social security institute is not compulsory for the self-employed in Mexico. This definition includes entrepreneurs with partners or using unpaid family labour.

19. Incidentally, McKenzie and Sakho (2007) also found that tax registration increased firms' profitability through the expansion of the customer base. Being able to produce VAT invoices increased the spectrum of potential customers.

20. McKenzie and Sakho (2007) correspondingly find heterogeneous effects of tax registration across firm sizes, with very small and large firms not benefiting (even seeing a decrease in profitability) while small firms see their profitability increase.

21. The BTI Political Status Indicator is based only on assessments of political institutions, without regard to their possible economic impact, which is why this indicator has been used rather than the more comprehensive "Voice and Accountability" component of the World Bank Institute's Worldwide Governance Indicators (Kaufman *et al.*, 2005).

22. The ratio between average income per head in the richest and the poorest income deciles is 8:1 while the same ratio for pension income is 287:1 (Scott, 2005).

23. See Perry *et al.* (2007) for a summary of these and related arguments.



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CHAPTER SIX

# Best Practice in Public Expenditure: The Example of Education

## EDUCATION SPENDING AND DEVELOPMENT

This *Outlook* focuses on the links between fiscal policy and development and this chapter looks at the spending side of the fiscal ledger. For public spending to contribute to development, policy makers must of course be concerned about quantity – making sure that sufficient resources are available to the programmes that people care about. But they must also grapple with quality – making sure that those resources are wisely spent. Getting both these dimensions of spending right is important to the legitimacy of a country's fiscal system.

The opening chapters of this *Outlook* have shown how public spending has a role to play in underpinning the social contract and reducing inequalities. Taxes and transfers certainly have a significant impact on reducing income inequality in Europe. The most recent data available show that taxes and public spending reduce the Gini coefficient of income inequality by nearly 20 points in a group of 19 European countries (EUROMOD, 2008). Much of this reduction comes from the effect of public goods such as education and educational grants. A recent OECD study extended this beyond Europe to a sample of 17 OECD countries. It showed a similar impact on Gini coefficients after accounting for public cash transfers, income and payroll taxes, and in-kind public services. In-kind transfers, including education, accounted for more than half of the reduction in income inequality (Warren, 2008).

As highlighted in the last edition of the *Outlook* (OECD, 2007*a*) and summarised in Chapter 1 of this, similar studies in Latin America have found that fiscal policy does much less to reduce income inequality in Latin America, for two principal reasons. First, the tax-benefit policy systems in Latin America are proportionally smaller than in Europe and thus do not have the same redistributive potential. Second, the pattern of public spending is much less progressive in Latin America than in European countries (see Chapters 2 and 4).

In discussing how public spending might be better linked with development, this chapter will focus on public spending in education. Education is one of the most important public transfers because of its long-term impact on economic growth and growth potential as well as on other aspects of development. The chapter examines the distinction between quantity and quality of public spending and draws upon lessons from public spending on education to outline development messages for all fiscal policy makers. Any discussion of the quality of public spending – whether on infrastructure, health care, social security or education – will lead to policy recommendations outside the realm of narrowly defined fiscal policy; achieving quality requires appropriate sectoral policies. The policy messages of this chapter are therefore broader than those in the remainder of this *Outlook*.



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# EDUCATION AND LATIN AMERICA'S DEVELOPMENT

Education is not only vital for economic growth, it is crucial for development broadly understood. As the OECD's Secretary General, Angel Gurría, noted in a 2007 speech at UNESCO: "Education empowers individuals to be fully active citizens" (19 October). Today education is more important than ever because in a globalised economy, a better-educated citizenry can better confront the challenges and opportunities created by greater economic integration (Green *et al.*, 2007). A recent comprehensive review of the literature shows how the current debate on education in Latin America stresses its transformational role (Vegas and Petrow, 2008).

Education is one of the most important drivers of economic growth...

The OECD experience certainly suggests that education is one of the most important drivers of economic growth. One study showed that on average an extra year of education increases a country's GDP per head by between 4 and 7 per cent (Bassanini and Scarpetta, 2001), and this significant positive effect was borne out by a more recent study using a larger sample and improved dataset (Cohen and Soto, 2007). The evidence for the mechanism behind this link is that education fosters growth by enhancing productivity and increasing an economy's potential for innovation[1].

Generally, however, macroeconomic studies of the links between education and economic growth have focused on inputs, such as the average number of years of schooling or enrolment rates in a country. Such measures are open to criticism because a year of education, say, may mean different things in different countries and they clearly capture only the quantity of education but not the quality (Pritchett, 2004). More recent studies have, however, looked at the impact of quality, measured by student performance on standardised tests, and demonstrated its positive effects on economic growth (Hanushek and Woessman, 2007; Altinok, 2007; and Altinok and Bennaghmouch, 2008).

...but poverty and low levels of educational attainment can become self-reinforcing

Individuals with more education earn higher wages, find jobs more easily, are less often unemployed – and are more likely to continue their education in the future. Research in non-OECD countries shows that returns to education of these types may be even greater there. But the mirror image of this virtuous cycle of positive feedback from education is a vicious one of mutually reinforcing poverty and low levels of educational attainment. The evidence for Latin America suggests that much of the region may currently be trapped in this less desirable cycle (Perry *et al.*, 2006). A number of innovative programmes in the region support efforts by poor families to keep their children in school and these have proved to be quite successful. Many are constructed around conditional cash transfer schemes (CCTs). Box 6.1 looks at the successes and failures of a number of CCTs with a view to identifying the features that support such a scheme and best leverage its effects on poverty and inequality reduction.

Investment in education is not only pro-growth, it is also offers developing countries a route out of poverty. Microeconomic evidence from Latin America suggests that low levels of education are among the most important barriers to escaping poverty in the region (Perry *et al.*, 2006). The relationship between education and inequality is more complex, however. Increasing access to education may not by itself lead to a reduction in income inequality and the recent Latin American experience is a good example. The literature has explored factors that explain this pattern such as unequal access to good jobs or other opportunities, labour-market rigidities or weak institutions. Educational inequality – whether inequality in access to schooling or inequality in educational attainment within



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the population – in the region is certainly high and particularly persistent (Hertz *et al.*, 2007). The debate on education and inequality has also focused greater attention on student learning; that is the quality of education received (PREAL, 2005).

### Box 6.1. Conditional Cash Transfer Programmes in Latin America

Conditional cash transfer (CCT) programmes have spread throughout Latin America since the mid-1990s. The best known are *PROGRESA/Oportunidades* (Mexico), *Chile Solidario* and *Bolsa Família* (Brazil). Despite differences in their design and scope, CCT programmes are characterised by their twin objectives of providing for the immediate needs of the poor and of breaking the intergenerational transmission of poverty by investing in the human capital of the children of the beneficiary families. To achieve these they combine a cash transfer mechanism, a targeting system and a set of conditions, normally related to school attendance and compliance with health-care programmes.

The results of early impact evaluations bolstered the reputation of CCT programmes from the outset. These demonstrated definite improvements in education and health outcomes, some evidence of improvement in nutrition (mainly where the CCT was accompanied by the distribution of food supplements) and no negative impact on labour supply (Soares *et al.*, 2007*a*). Compared with traditional in-kind social assistance interventions, CCT programmes were shown to be highly targeted and relatively low cost. These features, together with the support of international financial organisations and bilateral agencies, led to a consensus in favour of these programmes.

In addition to these positive impacts on development outcomes, recent research in Brazil and Mexico – the two largest programmes in the region, with respectively 11 million and 5 million families enrolled – has shown that the programmes have also made an effective contribution to reducing inequality (Soares *et al.*, 2007*b*).

Nevertheless, these results also reveal that good targeting is by itself not enough to maximise the impact on poverty and inequality. The programmes must also cover a large proportion of the poor population. This presents a challenge for smaller countries whose programmes are generally aimed at only a fraction of the overall extremely poor population – normally those in the poorest rural districts.

Not every scheme has been successful, however, and the cases of Honduras and Nicaragua offer a sobering picture of how, in the context of low financial and administrative capacity, there is a need for external support and assistance with impact evaluation. In Nicaragua, although the *Red de Protección Social* had excellent impact results the programme was never truly scaled up, the loans that financed it were not renewed and the programme was allowed to wither. In Honduras, *PRAF II*, a CCT that promised to combine transfers with supply-side interventions, faced critical problems during its implementation. The transfer was relatively low in value, corresponding to only 3.6 per cent of a rural family's total consumption – compared with, for example, 18 per cent under Nicaragua's *Red de Protección Social* or 20 per cent under Mexico's *PROGRESA/Oportunidades*. And the supply-side component was never put in as the result of legal challenges to the government over hiring NGOs to be responsible. The programme was heavily criticised when a new government came to power, despite a positive mid-term impact evaluation. Some design changes were made, but the programme came to a halt with the end of the loan supporting it (Moore, 2008).



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Among other things these experiences demonstrate the importance of broad internal support. Ideally, a CCT should be seen as more than an initiative of a single administration and instead as a fundamental part of the state's policy to strengthen social protection and reduce poverty. The dilemma is that identification of the programme with the head of state can be a crucial element in securing the necessary co-ordination of all the ministries that will be involved – particularly education and health given the embedded conditionalities. However, the fact of such identification can politicise the issue and jeopardise the continuity of the programme across elections. The answer is to stimulate public debate on the motivations for and form of the CCT and provide transparency in both the implementation of the programme and in its financing – which preferably should draw upon domestic resources rather than external loans.

This combination of public debate and transparency can help institutionalise the CCT programme, thereby increasing its sustainability. Programmes with long-term objectives such as promoting human capital accumulation among (extremely) poor families can have only moderate effects if they are limited to the term of the current administration or by the duration of loans. Neither is likely to be long enough to see even one cohort of children from birth to the end of their primary education. Where short-term horizons have been imposed on CCTs they have been at the expense of human capital accumulation. Exit rules, for example, are established with little regard to the ability of the "graduated" families to survive shocks that could drag them into poverty again – and this further undermines their own ability to make human capital investment decisions with a long-term view (Soares and Britto, 2007).

Properly structured, a CCT can be a catalyst for change within government. Programmes and services complementary to the CCT can encourage integration among social-assistance programmes and often require the adaptation – and modernisation – of other programmes operated by relevant line ministries (such as the agriculture ministry in the case of the rural poor). The challenge for those ministries is to adapt the content of their technical assistance modules and training practices to the needs of typical beneficiary families of a CCT programme.

Making integration among complementary programmes part of the introduction of the CCT is key to breaking down the dual system of social protection endemic in so many Latin American countries – a social-insurance system that covers only formal sector workers and residual social-assistance initiatives that protect the extremely poor, but only during crises (Bastagli, 2007). Such integration may be the most important achievement of CCTs in the institutional arena.

The social benefits of education go beyond the academic: it has a causal link with better health for example

Research drawing on the experience of OECD countries emphasises the importance of accounting for the non-market effects of schooling in order to capture all the social benefits of expenditure on education (Bassanini and Scarpetta, 2001; Wolfe and Haveman, 2001; Green *et al.*, 2007). These non-market effects range from health benefits to social cohesion and civic and political participation. Studies of OECD countries for example show a strong link between education and behaviours associated with health and general well-being and that a substantial part of this link is causal: that is, more years of education lead to better health (OECD, 2006). This pattern is not confined to OECD countries, and elsewhere too there is substantial evidence of the social benefits of education and in particular of increased education for girls.

Economists have highlighted the links between education and democracy and research goes as far as to argue that democracy requires high levels of education to emerge and prosper (Barro, 1999; and Glaeser *et al.*, 2007). Although these studies are not without controversy, they suggest a further potential benefit of enhancing the quantity and quality of education in a context of democratic consolidation.



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The links between education and civic participation are not well understood and only a few studies have managed to establish a causal link between the two. Within an OECD economy people with higher levels of education tend to participate more in civic affairs, but this link is not repeated at the macro level – that is, economies with higher average levels of schooling do not necessarily exhibit higher-than-average levels of civic participation. The main factor affecting the link between education and civic participation appears to be the classroom climate – that is the degree to which students are encouraged openly to address social or political issues in class (OECD, 2006).

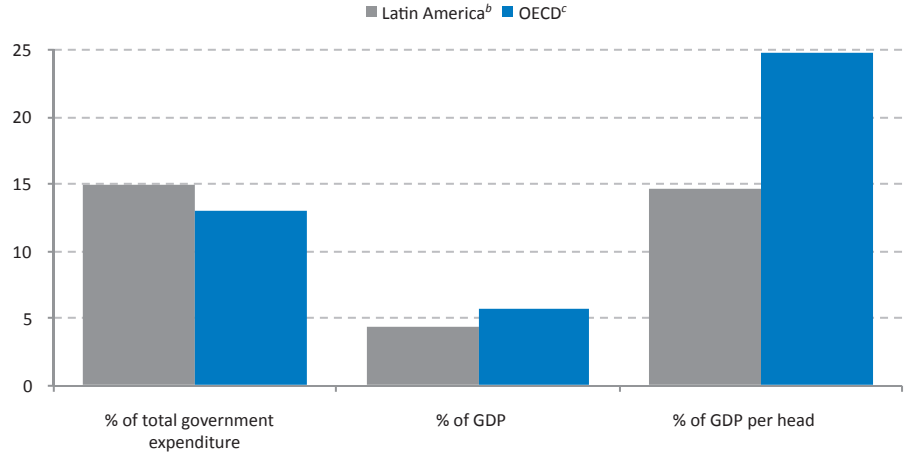
Whatever the precise nature of the link between schooling and civic participation, it is likely that more and better education will enhance the process of democratic consolidation in Latin America. Education is among those publicly provided goods that benefit a large share of the population. Positive experiences with education, both in terms of performance quality and equity, can therefore enhance the perception and legitimacy of the state and of democratic governance. Surveys in Latin America show that strong supporters of democracy as a form of government are also those most satisfied with the quality of the education to which they have access (Latinobarómetro, 2006).

## PUBLIC EXPENDITURE ON EDUCATION

Public expenditure on education in Latin America is substantial and rising

Relative to total public expenditure or to gross domestic product, public spending on education in Latin America is high by international standards. However, spending per pupil is still far from OECD benchmarks. Figure 6.1 summarises how Latin America's education spending compares.

**Figure 6.1. Public Expenditure on Education**[a]
(All levels of education, 2003-05)




*Notes:*

*a)* The graph shows unweighted averages for each region and takes into account only those countries for which 2003-05 data are available.

*b)* The Latin American average includes Argentina, Bolivia, Chile, Colombia, Costa Rica, Mexico, Panama, Paraguay, Peru and Uruguay.

*c)* Because of data unavailability the OECD average excludes Australia, Canada, Germany, Luxembourg and Turkey.

*Source*: OECD Development Centre calculations based on the OECD and UNESCO World Educational Indicators database.

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Public spending on education comprises a significant share of government expenditures in Latin America – between 13 and 15 per cent of total public spending in a typical country in 2003-05[2]. That compares favourably with the OECD average of 13 per cent for the same period. In some cases, Mexico being an example, the share of education spending in the total was as high as 25 per cent in 2004, up from 15 per cent in 1991.

Public expenditure on education in the typical Latin American country stood at about 4 per cent of GDP between 2003 and 2005, compared with an average of 5.6 per cent for the OECD. Since the early 1990s this share has grown particularly rapidly in, for example, Colombia where it rose from 2.4 per cent in 1991 to 4.8 per cent in 2005, or Mexico where it grew from 3.8 to 5.5 per cent over the same period. Private spending plays a larger proportional role in Latin America (particularly in Chile and Colombia where it reaches 1.4 and 1.2 per cent of GDP respectively). The addition of this private spending on education is almost enough to close the gap between the Latin American and OECD averages.

It is in spending per pupil as a proportion of GDP per head that the shortfall in Latin America is most clearly seen. The typical Latin American government spent about 15 per cent of GDP per head on each pupil (2003-05 average), which compares with over 24 per cent in the OECD during the same period. Even in countries with higher and growing public spending as a share of GDP, such as Colombia or Mexico, spending per pupil remains below the OECD average. This disparity is illustrated in the final set of bars in Figure 6.1.

Latin American countries spend proportionately more on primary education than OECD countries, and less on tertiary and secondary...

In general, Latin American countries spend more on primary education and less on tertiary and secondary (especially upper-secondary) education than OECD countries. Figure 6.2 shows that the typical Latin American country devoted more than 50 per cent of its education budget to primary education (including close to 8 per cent on pre-primary education), while the typical OECD country spent 33 per cent in primary education (including 7 per cent in pre-primary). Tertiary education, conversely, received only about 16 per cent of expenditures in Latin America and more than 23 per cent in the OECD. Secondary education (all levels combined) attracted close to 33 per cent in Latin America versus 43 per cent in the OECD. This emphasis on lower levels is evident within secondary education itself. In Latin America, the bulk of expenditure on secondary education went to lower-secondary education, which received 19 per cent of all expenditure on education. In contrast, in the OECD most of the expenditure on secondary education went to upper-secondary education, which received close to 22 per cent of all public expenditure on education.



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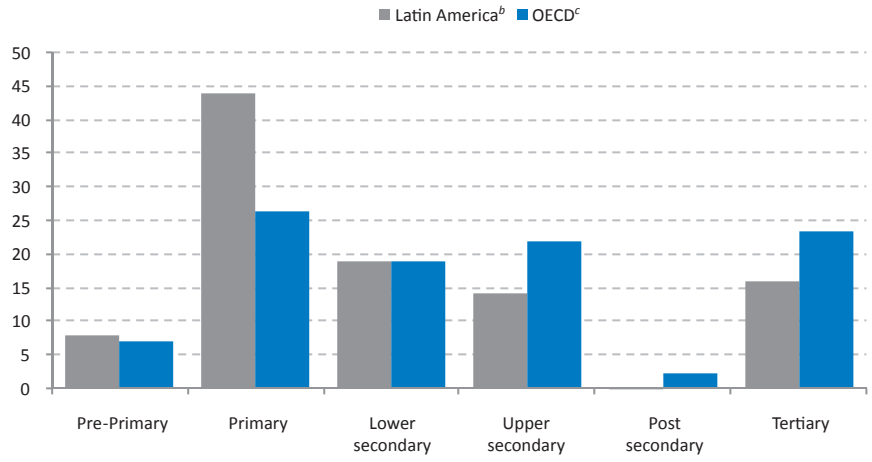
**Figure 6.2. Distribution of Public Current Expenditure on Education**[a]
(Percentage by educational level, average 2003-05)




*Notes:*

*a)* The graph shows unweighted averages for each region and takes into account only those countries for which 2003-05 data are available.

*b)* The Latin American average includes Argentina, Bolivia, Chile, Colombia, Costa Rica, Mexico, Panama, Paraguay, Peru and Uruguay.

*c)* Because of data unavailability the OECD average excludes Australia, Canada, Germany, Luxembourg and Turkey.

*Source*: OECD Development Centre calculations based on the OECD and UNESCO World Educational Indicators database.

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...this is particularly evident in secondary education where Latin American spending per pupil as proportion of GDP per head is little over half the OECD figure

Tertiary education and to a lesser extent secondary education are more expensive per pupil than primary education. For most Latin American countries public spending per pupil in secondary and especially in tertiary education is still much higher than in primary education. For the typical OECD country in 2003-05, spending per pupil on primary education was equal to 19.6 per cent of GDP per head; for secondary education 25.6 per cent and for tertiary education 33 per cent. During the same period, the Latin American averages were 11.5 per cent of GDP per head per pupil for primary education, 13.3 per cent for secondary education and 24.7 per cent for tertiary education. While these averages hide wide regional variations, they nevertheless again highlight the gaps in spending between OECD and Latin American countries.

Where public spending on education in Latin America is growing, this appears to be driven by increases in spending per pupil in primary education. Two particularly good examples of this trend are Colombia and Mexico. From 1999 to 2005, spending per pupil on primary education as a percentage of GDP per head rose from 16 to 19 per cent in Colombia and from 12 to 15 per cent in Mexico. Yet in the same period, spending per pupil on tertiary education fell from 40 to 24 per cent of GDP per head in Colombia and from 48 to 42 per cent in Mexico and spending per pupil on secondary education fell slightly, from 15 to 13 per cent in Colombia and from 24 to 22 per cent in Mexico.

Figure 6.3 analyses education spending by type, into capital expenditure, salaries and other expenditure, for a sample of Latin American countries and sets these against the OECD average.



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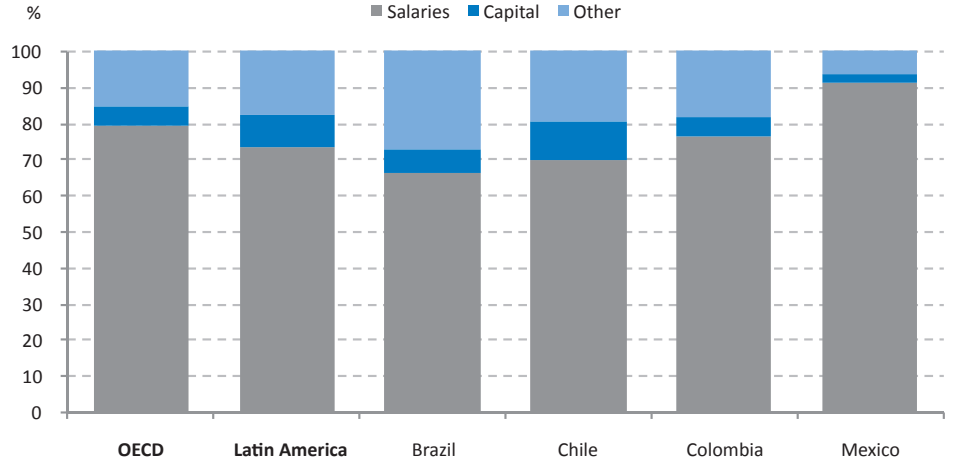
**Figure 6.3. Educational Expenditure by Nature of Spending in a Selection of Latin American Countries**[a b]

(Percentage of total educational expenditure in public institutions, current expenditure)




*Notes:*

*a)* Average across years for available data 2003-05.

*b)* Includes educational levels from 1 to 4 according to the International Standard Classification of Education (ISCED).

*Source:* OECD Development Centre calculations based on OECD and UNESCO World Educational Indicators, UNESCO's Institute of Statistics database.

StatLink http://dx.doi.org/10.1787/450330876783

At the average level, distribution of spending is not a major divider between the OECD and Latin America. Between 2003 and 2005, the typical country in both regions allocated around 75 per cent of spending to salaries, almost 10 per cent to capital expenditures and the remainder to other items. Those regional averages, however, hide important national differences. Salaries take more than 90 per cent of spending in Nicaragua, Mexico and Peru, but less than 70 per cent in Brazil, Chile, El Salvador and Uruguay. Capital expenditure was around 10 per cent of spending in Chile, El Salvador, Nicaragua and Uruguay but less than 3 per cent in Mexico and less than 1 per cent in Argentina and Dominican Republic.

**Demography presents a challenge to Latin America: demand for education is declining in OECD countries but rising here**

Despite growing investment in education, Latin American countries still spend less per pupil than OECD benchmarks and the modest increases seen in per pupil expenditure are not bridging the gap. Part of the explanation is demography. The demand for education, as measured by the proportion of the total population who are of school age, is very different in size and dynamic between Latin America and OECD countries. While over the last decade the demand for education has declined in OECD countries, it has been growing in Latin America. Potential students in the typical OECD country account for less than a fifth of the total population, in Latin America the proportion is between a quarter and a third. This segment of the population has increased by more than 50 per cent since the 1960s in Argentina, Colombia, Mexico and Brazil – today more than 50 million Brazilians and more than 30 million Mexicans are less than 14 years old. In contrast, the student-age population of the OECD's members over the same period actually decreased by more than 8 per cent. Latin America's booming demands may recede in coming decades, but the way the growth of student-age populations has outstripped education spending in Latin America helps explain some of the gap in spending per pupil between Latin America and the OECD in the 2000s.



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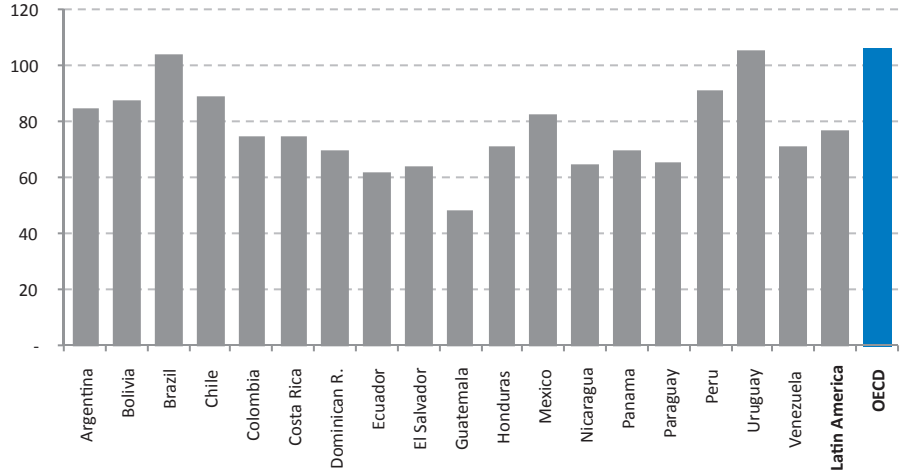
# QUANTITY MEASURES OF EDUCATION

Advances have been made in ensuring that all citizens have at least some education...

Latin America has made significant strides in providing the increased resources necessary for education. Even in the face of increased demographic demands the proportion of the population over 15 years old without any schooling in Latin America is today close to 6 per cent, down from over 35 per cent in the 1960s. The gap between OECD countries and Latin American countries for this indicator is projected to drop from more than 25 percentage points in the 1960s to less than 4 in 2010. Some countries have been more successful than others, however. The same 2010 projections estimate that the proportion of the population over 15 years old without any schooling will range from less than 2 per cent in Argentina, Chile or Colombia, to more than 8 per cent in Bolivia and Mexico and more than 12 per cent in Guatemala[3].

Enrolment in primary and secondary education is nearly universal in OECD countries. Enrolment rates both in primary and secondary education have been growing in Latin America. Today primary education is nearly universal in most Latin American countries. But many citizens are still left behind when it comes to secondary education. Figure 6.4 illustrates gross enrolment ratios for all (upper- and lower-) secondary school students for selected Latin American countries and sets them against the OECD average.

**Figure 6.4. Gross Enrolment Ratio in Secondary Education**
(All programmes, total)




*Note:* The graph shows unweighted averages for each region for 2003-05.

*Source:* OECD Development Centre calculations based on OECD and UNESCO World Educational Indicators, UNESCO's Institute of Statistics database.

StatLink http://dx.doi.org/10.1787/450330876783

In 2003-05 the typical Latin American country had gross enrolment rates in primary education in excess of 113 per cent. (The figure is above 100 per cent because the numerator includes students over the age limit but still attending primary school; not counting these students yields a net enrolment rate of 93.4 per cent). This represents a considerable achievement for Latin America when set against net enrolment rates of less than 85 per cent in the early 1990s. In comparison, the equivalent average gross enrolment rate for OECD countries was 102 per cent, with a net enrolment rate of 96.7 per cent – a difference of little more than 3 percentage points.



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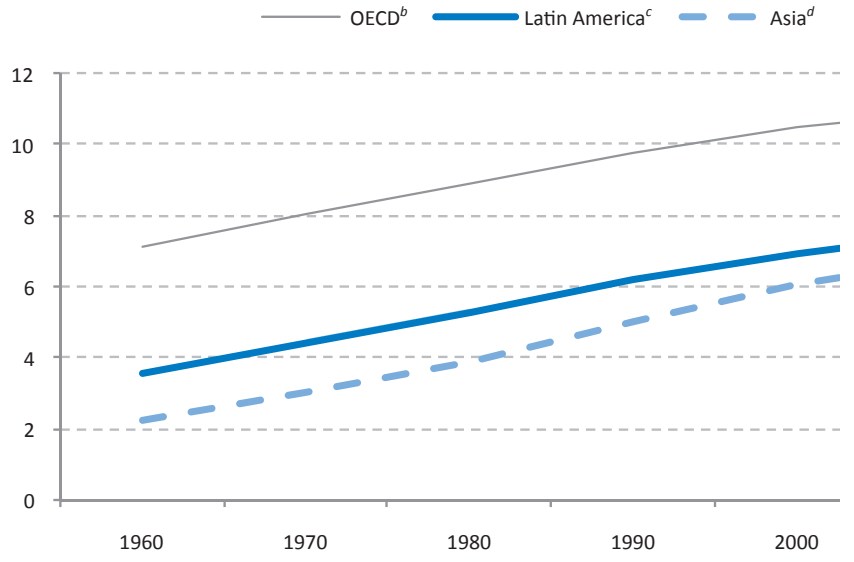
... but while overall participation rates are increasing significant gaps remain beyond primary education

Unfortunately, this performance is not universal and outside primary education the gaps in gross enrolment between the two regions are substantial. For pre-primary education, the gross enrolment rates are 53 per cent in Latin America versus 85 per cent in the OECD; for lower-secondary education 88 per cent versus 106 per cent and for secondary education 77 per cent versus 106 per cent. Of course, these averages mask significant regional variation. Gross enrolment in secondary schools in 2003-05 was as low as 62 per cent in Ecuador but more than 105 per cent in Uruguay. In lower-secondary education gross enrolment was just 53 per cent in Guatemala and over 114 per cent in Brazil. No Latin American country achieves the OECD benchmark for net enrolment rates (88.6 per cent); even the best performers in the region such as Mexico (66.5 per cent) or Colombia (58.2 per cent) are far still far from OECD levels and Guatemala (33.7 per cent) is again furthest. .

There is wide variation between countries in attendance rates at secondary level but the rates for poor children are low and much lower than for their peers from richer homes

Inequalities in access to education within Latin American countries are well illustrated by differences across income quintiles in net attendance ratios for secondary school. For a range of Latin American countries, Table 6.A1 in the statistical annex to this chapter reports net attendance rates in secondary school on average and for the lowest and highest income quintiles (that is the 20 per cent of the population with the lowest income and the 20 per cent with the highest income). The differences in the secondary-school attendance ratio between income quintiles are stark. The average attendance ratio for the highest income quintile is 35 percentage points above the same ratio for the poorest quintile. There is wide regional variance in this measure of inequality. While in Chile the gap is only 8 percentage points, in Nicaragua and Panama the differences exceed 50 percentage points.

**Figure 6.5. Years of Schooling of Population 15 and over**[a]




*Notes:*
*a)* The figure shows the simple average for each region.
*b)* Because of data unavailability the OECD average excludes Czech Republic, Iceland, Luxembourg, Poland and Slovak Republic.
*c)* Latin America includes the 18 countries listed in Table 6.A1 in the statistical annex.
*d)* Asia includes Bangladesh, China, Fiji, India, Indonesia, Malaysia, Myanmar, Nepal, Philippines and Thailand.

*Source:* OECD Development Centre calculations based on the Cohen and Soto (2007) database.
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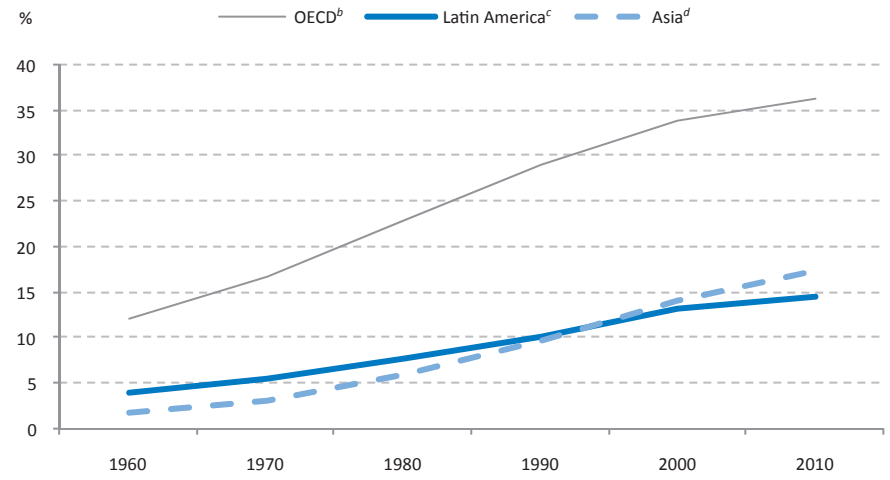
Attendance ratios for the poorest households in most Latin American countries are generally low. On average, every other child of secondary-school age from the poorest quintile does not attend secondary school, though again this hides wide variations within the region: in Nicaragua only 14 per cent of secondary-school age children from the lowest income quintile attend secondary education; in Chile at the other end of the scale the proportion is 83 per cent.

Progress and challenges are apparent as well in other measures of what is usually referred to as educational quantity. Figure 6.5 shows that Latin America's average number of years of schooling for the population 15 years old and over, which was a mere 3.7 years in the 1960s, is projected to reach 7.5 years in 2010. Some countries in the region are moving faster than others. In Chile, for example, experts estimate that the average period of schooling will cross the ten-year mark in 2010, while in El Salvador and Guatemala it will remain below 5.5 years.

Providing near-universal enrolment in secondary (or lower-secondary) education remains a challenge for some countries in Latin America. The proportion of the Latin American population of over 25 years old with completed secondary education will increase from less than 4 per cent in the 1960s to more than 14 per cent in 2010. Again there are wide national variations. While in Chile and Uruguay over 30 per cent of the population over 25 years old has completed secondary education, less than 3 per cent have done so in El Salvador and less than 4 per cent in Costa Rica and Dominican Republic. Despite this general progress the gap with the OECD is widening and has increased from under 9 percentage points to more than 23 percentage points over the same period. Asian countries, which started with a deficit of 2 percentage points, will enjoy a 3 percentage points lead against Latin America by 2010.

**Figure 6.6. Proportion of Population aged 25 or over with Complete Secondary Education**[a]
(In percentage points)




*Notes:*
*a)* The figure shows the simple average for each region.
*b)* Because of data unavailability the OECD average excludes Czech Republic, Iceland, Luxembourg, Poland and Slovak Republic.
*c)* Latin America includes the 18 countries listed in Table 6.A1 in the statistical annex.
*d)* Asia includes Bangladesh, China, Fiji, India, Indonesia, Malaysia, Myanmar, Nepal, Philippines and Thailand.

*Source:* OECD Development Centre calculations based on the Cohen and Soto (2007) database.
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Part of the problem is that many students who start secondary school drop out. While in the OECD currently only a third of pupils who enter secondary school do not successfully complete it, in Latin America the proportion is almost half.

## THE QUALITY OF EDUCATION

Improving quality while increasing quantity remains a challenge

Latin America has made significant progress in terms of the quantity of education provided. Has this been matched in quality of provision? To answer this question two measures of quality are examined, one personal and one social. The first is the performance of students on standardised tests; the second is the equity of educational systems in facilitating learning among all socio-economic strata. Against these two measures the Latin American picture is mixed and getting quality right remains a clear challenge for the region.

A number of international programmes measure learning outcomes by implementing comparable tests across countries and a number have Latin American participation including IEA's TIMSS and PIRLS, the OECD's PISA and OREALC's LLECE[4].

The OECD's PISA programme provides good qualitative assessments for some Latin American countries (this section draws its data from OECD, 2007*b*). A PISA assessment round has taken place every three years since 2000. The latest was in 2006 and six Latin American countries participated. The survey population are 15-year-old students, typically in their last year of compulsory education. In contrast to other international assessment tools, PISA does not focus on a specific curriculum. Rather, it measures competencies and cognitive abilities; that is, students' understanding of fundamental concepts and – crucially – their ability to extrapolate and apply what they have learned in school to novel real-life situations. The PISA measure of the quality of educational systems (at least at the primary and secondary levels) can be summarised as students' ability to analyse, reason and communicate their ideas effectively.

Latin American results in PISA must be interpreted with caution because – as noted above – enrolment rates among 15-year-olds are lower than in other parts of the world. Those who are not measured by PISA because they are not in school will tend to be from less fortunate family backgrounds, biasing the sample towards students from more favoured family backgrounds. This over-representation of better-off students will be higher in Latin America than in OECD countries and as a result the PISA results probably overestimate Latin America's performance. Results are furthermore limited to only the six countries in the region who participated in 2006: Argentina, Brazil, Chile, Colombia, Mexico and Uruguay. (Only Brazil and Mexico participated in each of 2000, 2003 and 2006; Uruguay participated in 2003; Argentina, Chile and Peru participated in 2000.) Trends and comparisons across time are therefore limited by the availability of data.

PISA tests student competencies in three core areas: reading, maths and science. For each of these areas an index of performance is calculated. These indices are referred to as the PISA scales on reading, maths or science. The correlation between the three PISA scales (even for the Latin American countries alone) is quite high and the same applies to correlations at the individual student level. For this reason, although the discussion that follows tends to focus on a single PISA scale, the results can be taken to apply to all three areas more generally.

PISA 2006 identifies 38 points on the PISA science scale as the average difference within the OECD between two students in successive grades. Therefore, 38 points



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on the science scale can be taken as good approximation to the average value of an additional year of science education in an OECD country.

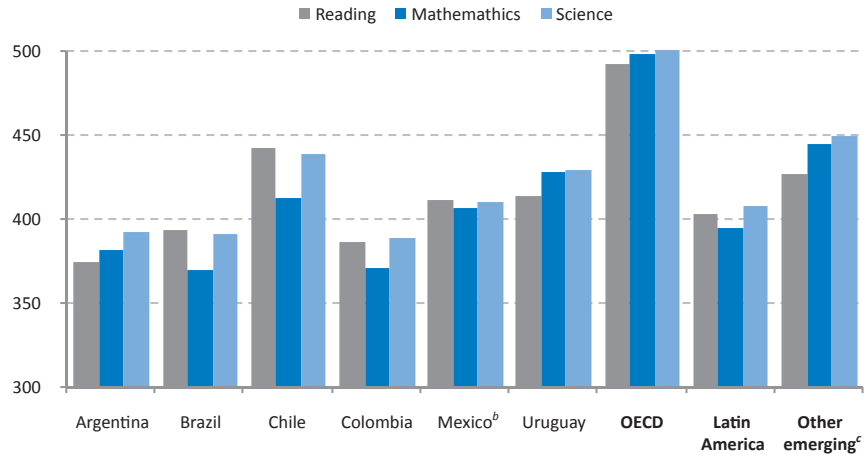
Latin American countries score well below the OECD mean of around 500 points on each PISA scale. The average gap, illustrated in Figure 6.7, is 100 points or more. In other words, Latin American 15-year-olds are around three years behind their OECD counterparts, given that 38 PISA points correspond to the value of an additional year of schooling. Other emerging countries also score significantly below the OECD, but the gap for these countries is only about half as large as it is for the six Latin American countries in the PISA study.

Performance in Latin America is poor: on average those 15-year-olds still in school are the equivalent of three years behind their OECD counterparts

Among the six Latin American countries in the study, two groups emerge. In one – Chile, Mexico and Uruguay – student averages are within PISA level 2, whereas in the other – Argentina, Brazil and Colombia – students are stuck at level 1. As explained above, the difference between these two levels on the PISA scales is a meaningful one – level 1 on the PISA reading scale means being barely able to identify simple pieces of information within a familiar text; level 2 means being able to connect information available in different places of a text, follow logical arguments and deal with competing information. Students who score at level 1 do not achieve a minimum standard of competency.

**Figure 6.7. The Quality of Education: Performance or Student Learning**[a]

(Country average of PISA scales: Reading, Mathematics and Science 2006)




*Notes:*

*a)* Regional averages are simple averages of the countries in the PISA sample.

*b)* Mexico is included in both the OECD and Latin American averages.

*c)* Liechtenstein is the only non-OECD participating country not included in "Other emerging".

*Source*: OECD Development Centre calculations based on OECD (2007*b*), PISA 2006 Science Competencies for Tomorrow's World.

StatLink http://dx.doi.org/10.1787/450330876783

Students in Chile, Mexico and Uruguay – the first group – score in general above 400 points on average two to three years behind their counterparts in the OECD (that is between 76 and 114 points away from the OECD mean). Students in Argentina, Brazil and Colombia – the second group – score consistently below 390 (below level 2) and are the equivalent of between three and four years of education (that is between 114 and 152 points) below the OECD mean.



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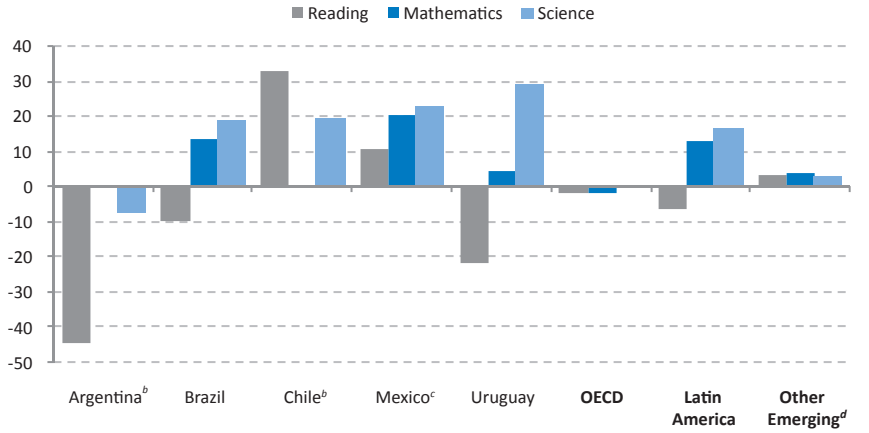
Performance in Latin America is generally improving...

Latin America's performance appears to have been improving. The country-specific data in Figure 6.8 shows most countries are scoring better in almost all areas. Chile between 2000 and 2006 or Mexico between 2003 and 2006 have scored improvements in reading and science (Mexico also improved in mathematics, though no data are available for Chile in this respect). Taken as a whole the region has improved in all areas except reading and is progressing significantly faster than other emerging regions. Argentina is a stark exception to this positive trend. It participated in PISA 2000 and 2006 and its performance has clearly and significantly deteriorated over that span of time.

**Figure 6.8. Trends in Performance**[a]
(Difference between PISA scales 2006 and 2003)




*Notes*:

*a)* Regional averages are simple averages of the countries in the PISA sample.

*b)* Year 2000 for Argentina and Chile.

*c)* Mexico is included in both the OECD and Latin American averages.

*d)* Liechtenstein is the only non-OECD participating country not included in "Other emerging".

*Source:* OECD Development Centre calculations based on OECD (2007*b*), PISA 2006 Science Competencies for Tomorrow's World.
StatLink http://dx.doi.org/10.1787/450330876783

A more nuanced way of looking at the performance of an educational system is to look at the proportion of students achieving each level in a graduated scale of competencies. For each of the three subject areas, PISA 2006 classifies students into six levels (five for reading). Students scoring at the top level are high-competency individuals and the proportion of such students is a measure of the system's ability to produce the sort of students who will later contribute to innovation and the creation of new technologies[5]. Conversely, students who score at the first level or below are able to solve only very straightforward and familiar problems. The proportion of students at this level can be interpreted as the failure rate of the system, since they do not achieve even a minimum level of competency (Field *et al.*, 2007).

...but failure rates are high and the region lags both the OECD and other emerging regions in developing high-competency students

PISA then goes on to analyse the contribution made by students' backgrounds to their performance. Background in this sense covers socio-economic and cultural status, based on parents' education levels and the availability of educational and cultural resources at home. The degree to which student performance is independent of socio-economic background is a measure of equity within an education system: where students from different backgrounds perform at similar levels, it can be argued that the educational system is more equitable than one where the performance of more socially favoured students is systematically better.



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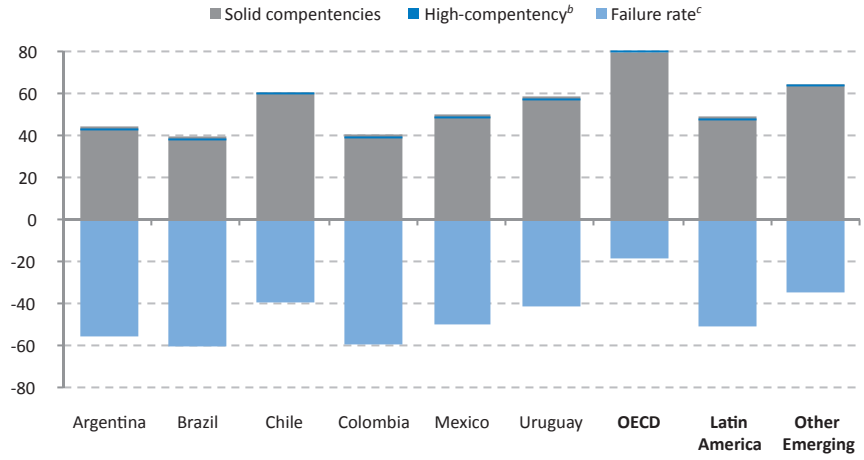
Turning to the distribution of competencies that lies behind these averages, the performance of Latin American education systems at the top of the scale, producing high-competency students, is particularly disappointing (Figure 6.9). Latin America clearly lags behind not just the OECD benchmarks but also most other emerging regions. On average about 1.3 per cent of OECD students score at the top level in science, something which less than 0.05 per cent of Latin American students manage. These proportions are the difference between one student in 77 and less than one student in 2 000.

**Figure 6.9. Distribution of Performance in Science**[a]
(Percentage of students at selected proficiency levels on the PISA science scale 2006)




*Notes:*

*a)* Each PISA scale is divided in six steps (five for reading).

*b)* Proportion of students who score at or above level 5, at which level students excel even when faced with the most complex problems.

*c)* Proportion of students who score at or below the first step, at which students struggle with basic and familiar problems.

*Source:* OECD Development Centre calculations based on OECD (2007*b*), PISA 2006 Science Competencies for Tomorrow's World.
StatLink http://dx.doi.org/10.1787/450330876783

Students at the bottom of the scales are not being served

Students in the six Latin American PISA countries tend to be concentrated at the lowest levels of the three scales. While in the OECD about 20 per cent of students score at level 1 or below on the PISA reading scale, in Argentina, Brazil and Colombia more than 55 per cent of students score at this level. Even in Chile, which is the best performing country in the region in this respect, more than 35 per cent of students still score at level 1 or below. This means that the region's top performer scores worse than Turkey (32 per cent), the weakest in the OECD other than Mexico.

Looking at the second measure of quality – equity – the Latin American picture is more complex (Zoido, 2008). PISA measures equity by looking at the contribution that a student's background makes to his or her performance in the PISA tests. Certainly, Latin American countries on average are not far from OECD standards in equity, but they fall behind other emerging regions. Chile faces the greatest challenge in this respect, both within the region and for the whole PISA sample.



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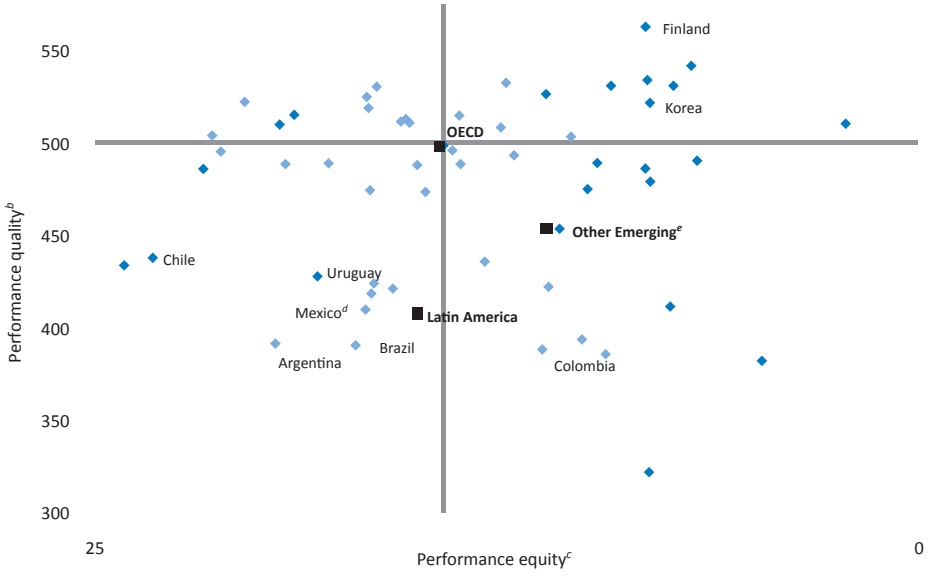
Figure 6.10 plots countries by both dimensions of educational quality – performance and equity. Average performance at the country level (taken as the average score on the science scale) is plotted on the vertical axis. Equity (how well student background predicts student performance) is plotted on the horizontal axis. The axes are drawn at the OECD average along each dimension. Countries can be classified in four groups according to the segment into which they fall.

**Figure 6.10. The Quality of Education in a Comparative Perspective: Performance Quality and Equity**[a]




*Notes:*
*a)* Marked in bold are those significantly within the bounds of their quadrant. Regional averages (highlighted as squares as opposed to diamonds) are simple averages of countries in the PISA sample.
*b)* Performance quality is the country's average score on the PISA scale for science.
*c)* Performance equity is the proportion of variance in student performance explained by economic, social and cultural status.
*d)* Mexico is included in both the OECD and Latin America averages.
*e)* Liechtenstein is the only non-OECD participating country not included in "Other emerging".

*Source:* OECD Development Centre calculations based on OECD (2007b), PISA 2006 Science Competencies for Tomorrow's World.
StatLink http://dx.doi.org/10.1787/450330876783

In the top-right quadrant are found those countries with high average performance and strong equal opportunity. Finland and Korea, two of the best OECD performers are here. Australia, Canada and Japan are also in this group with statistical significance, together with some non-OECD economies such as Estonia, Hong Kong-China and Macao-China. With the exception of Colombia, Latin American countries are located in the opposite lower-left quadrant, the one characterised by low average performance and weak equal opportunity.

**There is no automatic trade-off between performance and equality of opportunity**

The figure emphasises one of the main messages emerging from PISA. Many of those top-ranked in terms of performance are also among the top-ranked in terms of equal opportunity. There is no automatic trade-off between the two objectives. A number of countries have been able to achieve both and Latin American countries have much room for improvement in each. In seeking to improve the performance and equity of their educational systems, the experiences of those OECD countries and emerging economies in the top-right quadrant may contain the most valuable lessons.



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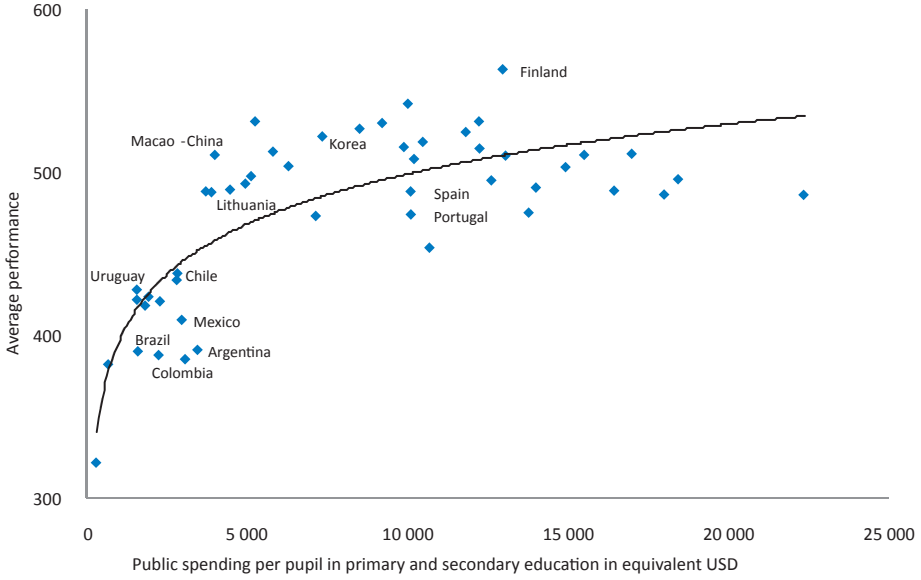
Latin American countries need to devote resources to understanding better what drives quality in Latin American contexts. As highlighted in Box 6.2, PISA results for OECD countries suggest spending is only one factor among many; other dimensions of educational policy are associated with better performance. Latin American countries would benefit from further analysis of specific sectoral issues to understand better how their educational systems perform.

The OECD experience shows that the relationship between educational quality and educational spending is difficult to discern. Spending more does not guarantee better qualitative outcomes (Hanushek and Woessman, 2007; or OECD, 2005). As Figure 6.11 depicts for PISA 2006 data, beyond a certain level little additional performance is purchased with additional spending – but countries with low levels of spending also tend to get lower levels of quality.

While spending more does not guarantee better qualitative outcomes, Latin America does not appear to be securing full value from what it does spend

**Figure 6.11. Public Spending[a] on Education and Performance in PISA[b]**




*Notes:*

*a)* Public spending is the average of available data since 2000.

*b)* Countries performance average on the PISA science scale.

*Source:* OECD Development Centre calculations based on the OECD (2007*b*) and OECD and UNESCO World Educational Indicators, UNESCO's Institute of Statistics database.

StatLink http://dx.doi.org/10.1787/450330876783

Latin American countries appear to underperform in this respect. As noted earlier in this chapter, their spending per pupil is comparatively low but even for their low spending they seem to get less performance. There are a number of economies at similar levels of development and educational spending that do significantly better in terms of performance.

Latin American countries can use PISA and similar assessments to understand better why performance and equity vary within their educational systems and how these objectives could be more effectively pursued. An evidence-based approach to policy reform can prove particularly helpful given the political economy considerations that all educational reforms entail. Box 6.2 highlights the main findings in PISA 2006 for educational policies at the school level.

Studies like PISA can provide evidence which is valuable both technically and to the political-economy of educational reform



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**Box 6.2. School Policies for Better Learning: Lessons from PISA for OECD Member Countries**

The OECD experience highlights a number of educational policies that promote performance and equity. Money of course matters, as does the way in which it is spent. But other factors play an important role. PISA 2006 surveyed school principals to identify those school policies (as reported by the school principals) which mattered most for student performance. From the point of view of policy makers interested in promoting performance, PISA 2006 highlights the following school policy options:

*i)* Higher academic selectivity in school admittance.

*ii)* Frequent school activities promoting student learning of science.

*iii)* Making school achievement data publicly available.

*iv)* Increasing the amount of time students spend in regular lessons at school and doing homework by themselves.

In contrast, ability grouping for all subjects within a school had a significant negative impact on student performance.

## CONCLUSIONS

Latin America's challenges are to continue raising the quantity of education – assuring that all children have the opportunity to attend school – while seeking the highest possible level of quality, measured in terms of student performance and equity. The experiences of OECD countries can provide useful evidence and insights that policy makers in Latin America can use to foster reform at home. In an increasingly globalised economy, however, PISA reveals a wake-up call for the region: other emerging regions with which Latin America must compete are bridging the educational gaps with the OECD more rapidly.

More public spending on education is probably necessary in most countries in the region but spending more does not by itself guarantee either quantity or better quality of education. The OECD's continuing work on efficiency in public spending (Sutherland *et al.*, 2007) will yield useful measures for judging the success of reforms in education (as well as in other areas, including health, infrastructure and social security). Given that public spending in education has increased in recent decades and in all likelihood will continue to increase, the time is right for Latin American countries to pay more attention to efficiency and efficacy issues.

Primary education has been the focus of spending for some time now in Latin America and significant progress has been achieved. More attention to secondary education is now needed. Too many students leave secondary school before completing it and the proportion of students with low skills – students who struggle with reading and basic concepts – is very high. In many countries in the region, a significant proportion of students never make the transition from "learning to read" to "reading to learn".

Educational reform is never easy. It is hard to imagine any other issue where political constraints and political-economy considerations generally are so present. Education is a publicly provided good in which virtually every part of a modern society has a stake. It affects individuals as students and as parents. Learning from the experiences of other countries in educational reforms can help not only with the technical issues, but also with the political aspects of reform. Box 6.3 reviews these political economy considerations in the context of current education reforms in both Mexico and Chile.



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The OECD measures and analyses the quality of education in its member countries. Such international efforts are useful for better understanding educational challenges in a comparative perspective. Latin America would benefit from better research and analysis at a regional level. Although it is outside the scope of this *Outlook* to recommend specific education policies, such research could direct attention where it is most needed.

### Box 6.3. The Long and Winding Road of Education Reform: Chile and Mexico

While there is overwhelming consensus that improving education is key to socioeconomic development, education reforms are usually among the hardest public-policy reforms to approve and implement, be they in Latin America or in OECD countries. Given education's primary role in reaffirming societal norms and shaping behavioural patterns, education reform goes beyond education itself, becoming an arena for negotiating the long-term modernisation of society as a whole (Popkewitz, 1991). This central role played by education in the future of any country explains why reform initiatives in this field are always met with special vigilance and high emotions.

The political economy of reform is therefore a key element to consider when trying to improve education: moving from public-policy design to practical implementation usually involves overcoming very strong opposition from all the immediate stakeholders – teachers, students, parents and their respective unions and associations – who are unlikely even to be in agreement among themselves. To them can be added opposition political parties and government agencies who may not be supportive of a specific proposal while still sharing the view that reform is needed. And finally, society as a whole, with its various interest groups and civil-society organisations, tends to take a very vocal role in education reform.

In Chile, the *Acuerdo por la Calidad de la Educación* (Agreement for the Quality of Education) was only reached after lengthy negotiations between the government and the opposition that took place throughout 2007. These followed the disruption in May and June 2006 caused by striking secondary students during the so-called *Revolución Pingüina* (Penguin Revolution – a reference to the black and white of their school uniforms). The congressional debate on the reform proposal in June 2008 took place against a background of striking teachers and nationwide student protests, with up to 300 detained in Santiago in late May.

In Mexico, President Calderón's *Vivir Mejor: Alianza por la Calidad Educativa* (The "Live Better" Alliance for Quality of Education), launched in May 2008, has stirred less discontent though already contained concessions made in order to secure the support of the powerful teachers' union (*Sindicato Nacional de Trabajadores de la Educación*, *SNTE*).

As shown by their names, both reform initiatives focus on quality – partly as a response to the disappointing performance identified in the PISA surveys. Management transparency and independent assessment play a central role in both, but each nevertheless responds to the relevant national context. Upgrading of weak infrastructure – sometimes as basic as providing water, sanitation and electricity – is a priority in Mexico, together with tackling teachers' poor qualifications and modernising the mechanisms for their recruitment. Chile, for its part, has made extensive investments in infrastructure over the past two decades and hence the focus of its reform is on reducing the high levels of inequality between private and public schools, amending the model of school funding and introducing independent oversight mechanisms.



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These two cases exemplify the complexities inherent in education reform and the need to build consensus in order to succeed. The government of President Bachelet, for instance, created an advisory commission of experts and negotiated over several months to bridge the differences between its initial reform proposal and the one put forward by the opposition, before producing the *Ley General de Educación* currently being debated in congress. During the negotiations the government had to scale back its plans to reform education funding, particularly on limiting the right to profits in government-subsidised schools – which is one of the main complaints of the continuing student and teacher demonstrations. In Mexico, the strength of the unions makes it almost impossible to enact any reform without their support, hence President Calderon's strategy to negotiate with the *SNTE* prior to launching his proposal. His education secretary, Josefina Vázquez Mota, was specifically charged with gaining the support of another important political constituency, the state governors. These are valuable steps, but further consensus building will be needed as the *Alianza por la Calidad Educativa* translates into concrete policy actions.

The governments of Chile and Mexico have a challenging ride ahead, but their efforts are well-directed: the former providing performance incentives to schools and independent quality monitoring and the latter by investing in its teachers, improving physical infrastructure and raising curricula standards for its 32 million students. Reforming education is not an easy task, but no other field of public policy is likely to yield more for a society in the long term: better education is the best recipe to achieve sustained growth, combat poverty, reduce inequality and advance rights, liberties and democratic institutions.



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# STATISTICAL ANNEX

## Table 6.A1. Net Attendance Ratio in Secondary Education by Income Quintiles[a b]

| | Year | Average[d] | Lowest quintile | Highest quintile | Difference |
|---|---|---|---|---|---|
| Argentina[c] | 2001 | 82 | 67 | 94 | 27 |
| Bolivia | 2001 | 59 | 41 | 77 | 36 |
| Brazil | 2004 | 75 | 61 | 92 | 31 |
| Chile | 2003 | 88 | 83 | 91 | 8 |
| Colombia | 2003 | 65 | 53 | 76 | 23 |
| Costa Rica | 2004 | 67 | 53 | 85 | 32 |
| Dominican Rep. | 2004 | 67 | 57 | 81 | 25 |
| Ecuador | 2004 | 62 | 42 | 84 | 42 |
| El Salvador | 2004 | 53 | 36 | 73 | 37 |
| Guatemala | 2004 | 34 | 20 | 58 | 38 |
| Honduras | 2004 | 40 | 18 | 66 | 48 |
| Mexico | 2004 | 67 | 52 | 87 | 35 |
| Nicaragua | 2001 | 43 | 14 | 71 | 57 |
| Panama | 2001 | 67 | 38 | 89 | 51 |
| Paraguay | 2001 | 54 | 35 | 82 | 47 |
| Peru | 2003 | 74 | 55 | 87 | 32 |
| Uruguay[c] | 2003 | 72 | 57 | 91 | 34 |
| Venezuela | 2003 | 72 | 59 | 84 | 25 |
| | | | | | |
| **Latin America** | | **63** | **47** | **81** | **35** |

*Notes:*

*a)* Net attendance ratio in secondary education is the ratio of the number of students of official school age who are enrolled in secondary school, expressed as a percentage of the total population in the official secondary school age.

b) The quintiles are calculated using the income per capita variable which is created by dividing the value of the monthly family income.

*c)* Data for Argentina and Uruguay are for urban areas only.

*d)* The average is unweighted.

*Source:* IDB. EQxIS. Information System on Social Indicators and Equity. SDS/POV, MECOVI. Accessed on July 2008. Estimations based on data from: Sistema de Información, Monitoreo y Evaluación de Programas (SIEMPRO) - Instituto Nacional de Estadística y Censos (INDEC), Encuesta de Condiciones de Vida, 2001.

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# NOTES

1. See de Ferranti *et al.* (2003) for a review of the education-productivity-innovation nexus in Latin America.
2. Except where stated otherwise all data reported here are from the joint OECD UNESCO database, accessed July 2008. This is available on the UNESCO Institute of Statistics website, http://stats.uis.unesco.org/
3. Except where otherwise stated the data in the sub-section are from database described in Cohen and Soto, 2007.
4. IEA is the International Association for the Evaluation of Educational Achievement; TIMSS the Trends in International Mathematics and Science Study; PIRLS the Progress in International Reading Literacy Study; OREALC is UNESCO's *Oficina Regional de Educación para América Latina y el Caribe;* UNESCO the United Nations Educational, Scientific and Cultural Organisation; and LLECE is the *Laboratorio Lationamericano de Evaluación de la Calidad de la Educación*.
5. As an example, at level 6 on the PISA science scale students can consistently identify, explain and apply scientific knowledge and knowledge about science in a variety of complex life situations. They can link different information sources and explanations and use evidence from those sources to justify decisions. They clearly and consistently demonstrate advanced scientific thinking and reasoning and they demonstrate willingness to use their scientific understanding in support of solutions to unfamiliar scientific and technological situations. Students at this level can use scientific knowledge and develop arguments in support of recommendations and decisions that centre on personal, socio-economic, or global situations.



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