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COLOMBIA
ECONOMIC ASSESSMENT

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OECD Economic Surveys: Colombia 2013

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BETTER POLICIES FOR BETTER LIVES

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This Survey is published under the responsibility of the Economic and Development Review Committee of the OECD, which is charged with the examination of the economic situation of member countries.

The economic situation and policies of Colombia were reviewed by the Committee on 3 December 2012. The draft report was then revised in the light of the discussions.

The Secretariat's draft report was prepared for the Committee by the Economics Department (ECO) and the Development Centre (DEV). The main authors are Isabelle Joumard (ECO) and Sebastián Nieto-Parra (DEV) with contributions from Juliana Londoño and Juan Sebastián Robledo, under the supervision of Piritta Sorsa. The Development Centre's main contribution is on the Chapter on productivity and economic growth. Research assistance was provided by Chantal Nicq and Valery Dugain.

The previous Assessment of Colombia was issued in September 2010.

BASIC STATISTICS OF COLOMBIA, 2011

(The numbers in parenthesis refer to the OECD average)

THE LAND, PEOPLE AND ELECTORAL CYCLE

Population (1 000 000)	46.9		Population density per km^2 [a]	41.7	(34.3)
Under 15 (%)	28.2	(18.4)	Life expectancy (years)	75.2	(79.7)
Over 65 (%)	6.9	(14.9)	Males	72.1	(76.9)
Latest 5-year average growth	1.2	(0.5)	Females	78.5	(82.5)
			Last general election	May 2010	

THE ECONOMY

GDP, current prices (billion USD)	332		GDP shares (%)		
Latest 5-year average real growth	4.4	(0.8)	Agriculture	6.3	
GDP per capita, PPP (thousand USD)	10.1	(35.4)	Oil and mining	7.7	
Inflation rate (CPI) (%)	3.7	(2.9)	Manufacturing	12.6	
			Construction	6.1	
			Services	57.4	

THE GENERAL GOVERNMENT (NON-FINANCIAL PUBLIC SECTOR)

Expenditure (% of GDP)	28.7	(44.9)	Gross debt (% of GDP)	43.4	(98.9)
Revenue (% of GDP)	26.9	(36.8)	Fiscal balance (% of GDP)	-1.8	(-6.5)

THE EXTERNAL ACCOUNTS

Exchange rate (thousand pesos per USD)	1.85		Main exports (% of total merchandise exports)		
PPP rate (USA = 1)	0.70		Machinery and equipment	3.0	
Exports of goods and services (% of GDP)	19.0	(52.4)	Mineral fuels, lubricants and related material	64.0	
Imports of goods and services (% of GDP)	20.1	(49.3)	Manufactured goods	17.4	
Current account balance (% of GDP)	-3.0	(-0.6)	Main imports (% of total merchandise imports)		
Net international investment position (% of GDP)	-23.6		Machinery and equipment	11.7	
Gross international reserves (% of GDP)	9.7		Mineral fuels, lubricants and related material	7.0	
			Manufactured goods	95.0	

THE LABOUR MARKET, SKILLS AND INNOVATION

Gross domestic expenditure on R&D (% of GDP)	0.2	(2.4)	Unemployment rate (%)	10.8	(7.9)
Daily minimum wage (COP 1 000)	17.9		Youth (14-26 year olds)	20.0	(16.2)
PPP USD	13.8		Informality rate (%), measured by:		
			Size of firm	51.1	
			Pension affiliation	69.9	

THE ENVIRONMENT

Total primary energy supply per capita (toe)[a]	0.7	(4.4)	CO_2 emissions from fuel combustion per capita (tons)[a]	1.3	(10.1)

THE SOCIETY

Income inequality (Gini coefficient, %)	54.8	(31.4)	Education outcomes (2009 PISA score)		
Poverty headcount ratio at USD 1.25 a day (PPP) (% of population)[a]	8.2		Reading	413	(493)
			Mathematics	381	(496)
Absolute monetary poverty rate (%)	34.1		Science	402	(501)
Relative poverty rate (50% of median) (%)[b]	22.5	(11.1)	Share of women in parliament (%)	12.7	(24.4)
Public and private spending (% of GDP)			Net official development assistance (% of GNI)[a]	-0.3	(0.4)
Health care[a]	7.6	(8.8)			
Pensions (public spending)	3.3	(8.6)			
Education[c]	7.7	(6.2)			

a) Refers to 2010 for Colombia.

b) Refers to latest year for the OECD.

c) Refers to 2009 for the OECD.

Note: An unweighted average of latest available data is used for the OECD average, calculated when data for at least 29 countries are available.

Source: OECD and Colombia's national statistics.

Executive summary

Colombia is Latin America's fourth largest economy and its short-term growth prospects remain strong by OECD and Latin American standards. Enhanced macroeconomic policy settings, the benefits of a commodity boom and better security conditions have yielded strong economic growth since the early 2000s. To ensure sustainable and inclusive growth over the medium-term, the Colombian authorities are faced with three key challenges: adjusting to the commodity boom, boosting productivity growth and reducing income inequality.

The macroeconomic policy framework has been improved to get the most out of the commodity boom. *The resource boom is a blessing but poses economic, social and environmental challenges. Mining tends to be highly capital intensive, does not create many jobs and is regionally concentrated. It may thus widen income distribution. Pollution is also an issue, especially with illegal mines. Volatile commodity revenues may destabilise the economy. The new fiscal framework – in particular the structural balance rule, the stabilisation fund and the Royalty law – will help shield the economy from swings in commodity revenues. The recent royalty reform, which aims to achieve a fairer distribution of revenues across regions and a better use of these funds, should promote productivity. It should, however, be flanked by measures to ensure that money is spent on projects with high social rates of return. Measures to protect the environment and reduce income inequality are also needed.*

Structural policies are key to boosting productivity and helping the economy adjust to the rising terms of trade. *The sharp appreciation of the exchange rate linked to the commodity boom has undermined the competitiveness of other tradable sectors. Boosting productivity, rather than new protectionist measures, should be based on a three-pronged strategy: enhancing access to financial markets, through better regulation and greater competition, promoting private investment and fostering high quality infrastructure through a better institutional framework. The business environment should also be improved, notably by reforming product market regulations that act as barriers to entrepreneurship and by strengthening the rule of law to ensure better contract enforcement and less corruption. Recent free trade agreements are welcome, but Colombia should continue to gradually reduce tariffs.*

Improving the performance of the labour market will help reduce income inequality. *The unemployment rate has declined. However, it remains high by both OECD and Latin American standards and the majority of those working are employed in informal, and often low-productivity, jobs. Unemployed and informal workers have little chance to find a formal job, while labour market segmentation exacerbates income inequality. Raising educational outcomes for all and enhancing training programmes would help improve labour supply and productivity. Formal job creation remains heavily constrained by restrictive labour market regulations, in particular very substantial non-wage labour costs and a minimum wage which is high compared to average incomes. The 2010 Formalisation Law has been a step in the right direction. The planned tax reform will reduce non-wage labour costs. Reinforcing active labour market policies and introducing a Public Employment Service, as planned by the government, would also help to improve the performance of* *the labour market. Nevertheless, more decisive steps will be needed to create the right conditions and incentives for boosting formal job creation.*

Increasing the effectiveness of the tax and transfer system will support inclusive growth. *The tax system raises little revenue. It hampers growth and creates numerous distortions, due to relatively high marginal rates, excessive tax relief and special regimes. Furthermore, it redistributes little, if at all. The planned tax reform should raise more revenue in the medium term, so as to meet important social spending needs. It should also ensure that taxes are less distortive and collected more effectively. In particular, there is scope to raise environmental and property taxes. Extra revenues could then finance key social and economic programmes that would help increase well-being, including better infrastructure and education, building up the social safety net and greater income redistribution.*

Box 1. **Key policy recommendations**

Macroeconomic policies

- The government's plan to gradually tighten the fiscal stance, consistent with the fiscal rule, is welcome.
- Keep the exchange rate market-determined and intervene only to smooth erratic exchange rate movements or to raise international reserves.

Structural policies to improve income distribution and boost economic growth

Improve the performance of the labour market

- Reduce the very high non-wage labour costs by implementing the planned tax reform and making further cuts in social security contributions and other mandatory payments on labour.
- Avoid increasing the minimum wage by more than price inflation. Consider differentiating the minimum wage by region and age to align labour costs with productivity and to account for differences in living costs.
- Raise further human capital by making the education and training system more responsive to the economy's needs and by increasing the quantity and quality of teaching.

Improve productivity and promote the ability of the economy to respond to changing relative prices

- Ensure that the revised distribution of royalties across regions results in viable projects that boost productivity by: providing assistance to sub-national authorities to identify the most effective investment projects; and strengthening the monitoring and ex-post evaluation of investment projects.
- Improve the institutional and regulatory framework for transport infrastructure to ensure an unbiased and thorough assessment of PPPs and a better specification of projects before tendering.
- Better enforce bureaucratic procedures, such as licensing, and enhance the monitoring of institutions vulnerable to corruption.
- Promote trade openness by continuing to gradually reduce tariffs.
- Review barriers to competition in some product markets, including telecommunications, food production and the financial sector. Give the competition authority greater independence and more qualified staff to increase its effectiveness.
- Enhance firms' access to finance by phasing out interest rate caps, banks' compulsory financing of the public agricultural fund (Finagro) and the financial transactions tax.
- Reinforce environmental policies to ensure that mining projects cover environmental costs and do not threaten biodiversity.

Create fiscal space to finance higher quality social and physical infrastructure

- Initiate a tax reform that shifts the tax mix towards more growth-friendly taxes and expands revenues in the medium run. The reform should also improve equity and enforceability.
- Make the pension system less regressive and expand its coverage. Study options for increasing the minimum income support for the elderly poor.
- Improve the organisation of the health care system to raise value for money by reducing the fragmentation of the insurance system and the vertical integration between insurers and providers.
- Better target support to those in need with conditional cash transfers and expand that support to compensate for the phasing out of reduced VAT rates and exemptions as well as the price subsidies for water and electricity.

Assessment and recommendations

Key challenges

Colombia is Latin America's fourth largest economy, as measured by 2011 GDP, and is endowed with abundant natural resources. Significant policy reforms since the early 1990s have led to a modernisation of the economy. Prudent macroeconomic management has helped Colombia weather the financial crisis remarkably well. Several ambitious structural reforms are now under preparation, including on taxes, labour, pensions and the health care sector. These reforms, together with the improved security situation, the ongoing peace process, rising mining activity and strong commodity prices, are underpinning strong growth.

Still, the Colombian economy faces three main medium-term challenges: reaping the benefits of the commodity boom while avoiding past pitfalls (in particular the sharp deterioration of the balance of payments and fiscal balance); boosting productivity growth; and reducing income inequality. Addressing these challenges calls for structural reforms, although political economy and legal considerations may make it difficult to implement some of them. This *Economic Assessment* presents these key challenges and, after an overview of recent macroeconomic developments, discusses policy reforms required to tackle them.

The resource boom, which is likely to last for some years, is a blessing but also poses social, economic and environmental policy challenges. The boom has boosted foreign investment, economic growth and government revenues. However, the rising terms of trade and related capital inflows have contributed to a sharp appreciation of the exchange rate, undermining the competitiveness of other sectors. In addition, mining activities put pressure on the environment. They are also often highly capital intensive and do not create many jobs, and thus may harm income distribution. To ensure balanced growth, it will be crucial to increase the ability of the economy to adjust to the higher terms of trade and to increase the savings rate. Policies should focus on boosting competitiveness and productivity, while facilitating the adaptability of the economy in both product and labour markets.

Colombia is an upper middle income country, but its income per capita is 70% below the OECD average and below many other emerging markets (Table 1). Low labour productivity explains most of the gap (Figure 1), although labour productivity has grown rapidly during the mid-2000s (Figure 2), largely reflecting factors such as improved security. The large informal sector has particularly low productivity, and bringing this activity into the formal sector is therefore key to raising aggregate productivity. Raising productivity will require: reducing informality *via* labour and product market as well as tax reforms, increasing the quantity and quality of education, developing transport infrastructure and improving access to finance. Progress towards an enhanced security situation and less corruption are also important in this respect.

Table 1. **The Colombian economy in perspective**

Or latest available data

Category/Indicator	Measurement units	Colombia	LAC average	OECD countries				Colombian ranking		
				Minimum	Mean	Median	Maximum	World	OECD	LAC
Country size										
Surface area	1 000 km^2	1 142	601	3	1 063	188	9 985	26	5	5
Population	1 000	46 927	17 493	319	36 623	10 823	311 592	28	10	3
Labour force	1 000	22 136	9 353	188	17 748	5 280	157 493	30	11	3
GDP										
At current FX-rate	Billion USD	332	172	14	1 356	499	15 094	32	21	4
At PPP, current USD	Billion USD	474	225	11	1 281	366	15 094	26	15	4
External trade	Billion USD	124	74	15	790	449	4 770	51	31	6
Indicators of development										
GDP per capita										
At current FX-rate	USD	7 067	8 601	10 064	40 387	40 598	115 039	88	35	18
At PPP, current USD	USD	10 103	11 196	15 340	34 973	34 736	88 787	85	35	17
Human development index		0.710	0.731	0.699	0.871	0.885	0.943	87	34	22

Note: External trade is the sum of exports and imports, US dollar.
Human Development Index is an index measured on a scale from 0 = lowest to 1 = highest possible value.
LAC (Latin America and Caribbean) as per the World Bank, except for seven countries for which there are no recent data (Aruba, Cayman Islands, Curacao, St. Martin, Turcks and Caicos, Virgin Islands).
Source: *World Development Indicators* (World Bank), UNDP-UN.

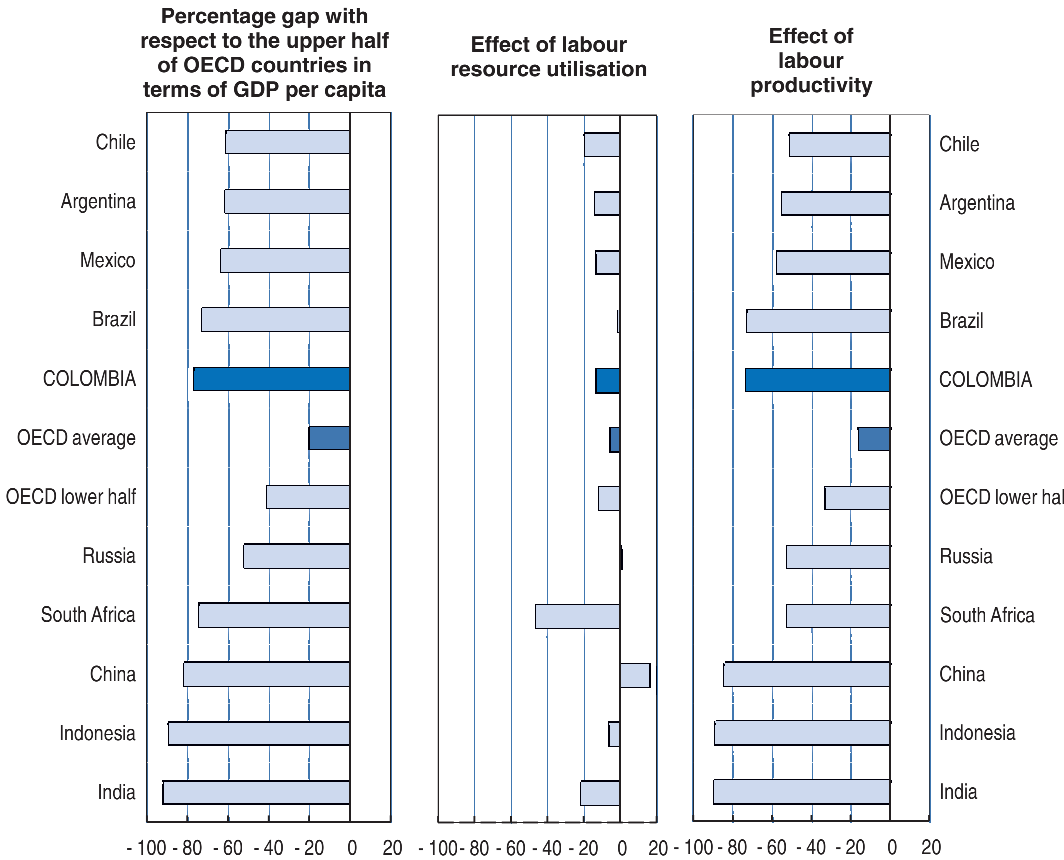
Improving the country's well-being also requires reducing income inequality. Economic growth has contributed to a decline in absolute poverty and, to a lesser extent, in income inequality since the mid-2000s. However, Colombia remains one of the most unequal countries in the world (Figure 3). Poverty also remains very high, partly reflecting long-standing internal conflicts and a massive displacement of people (3.7 million people over the period 1997-2011).

In Colombia, as in OECD countries, labour income is the main driver of total market income inequality. Although capital income is generally more skewed than labour income, it is not a strong determinant as its share in total market income is modest – around 7% in the OECD on average (Hoeller *et al.,* 2012). In Colombia, income inequality arising from the labour market is large. The relatively high unemployment rate plays a role. In addition, among those working, many are employed in the informal sector, often occupying low productivity jobs and benefitting little from social protection. They are thus at a high risk of poverty when losing their job or when ageing. In addition, the wage dispersion for those working in the formal sector is wide, with a large education premium reflecting the still low level of educational attainment and the difficulty for children with a disadvantaged socio-economic background to attend tertiary education.

Redistribution *via* the tax and transfer system is very small. Income inequality would be reduced by: raising formal employment by reducing labour taxes and by containing increases and differentiating the minimum wage; promoting fair access to high quality

Figure 1. **The sources of real income differences**

2010



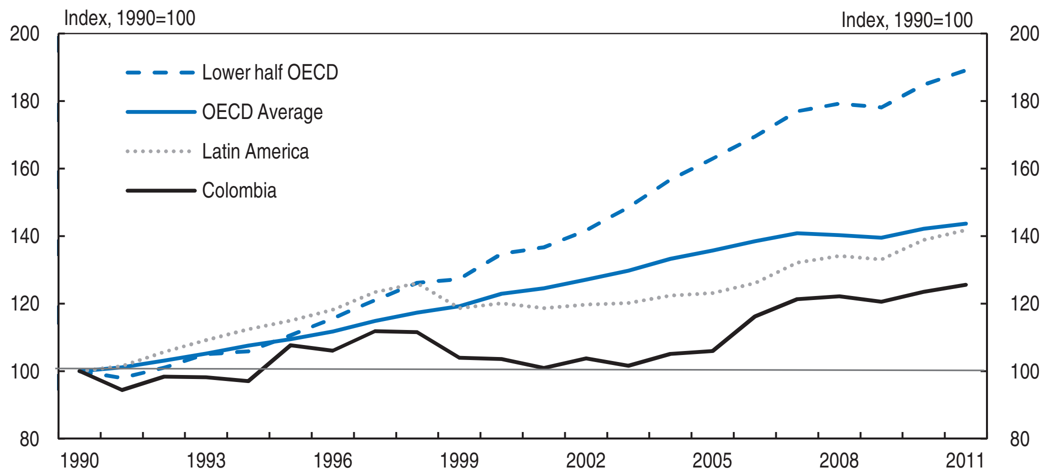
Source: OECD, *Going for Growth* and DANE (Colombia's National Statistics Bureau) for Colombia.

StatLink http://dx.doi.org/10.1787/888932764268

education for all; reducing tax expenditures that benefit mostly the rich; and reforming household transfers, which mainly consist of generous pensions to a few relatively well-off citizens.

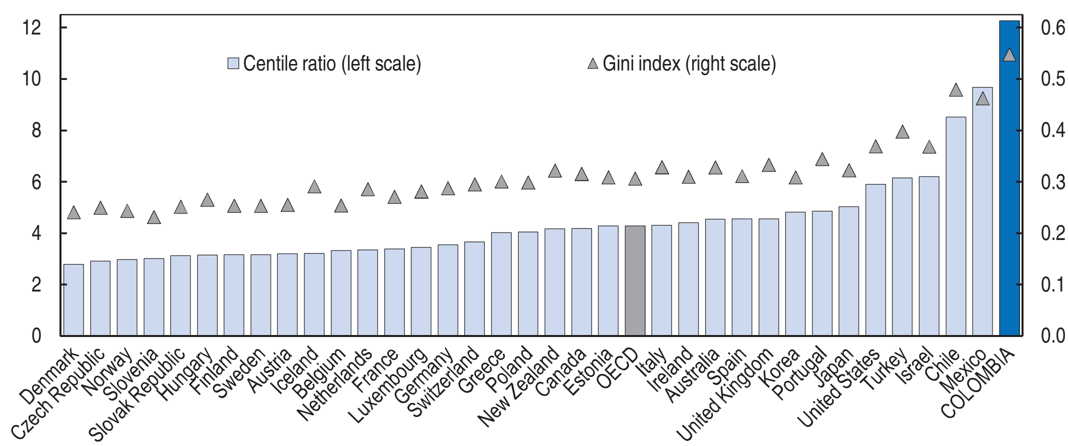
Addressing many of these challenges – more and better infrastructure, improving education, building up the social safety net and more income redistribution – will, in the medium term, put pressure on government spending. The peace process could also require additional public spending, although it may also lead to a peace dividend, with lower defense and security spending. The low level of public debt and rising fiscal revenues associated with the commodity boom create some degrees of freedom in the short- to medium-term. This may not be enough, however, to cover the spending needs, putting a premium on ensuring that public money is spent as effectively (in terms of achieving its policy goals) and efficiently (in terms of avoiding losses and waste) as possible. Reforming the tax system to ensure it is fair, generates as little distortion of economic activity as possible and raises more revenues in the medium- to long-term, remains important.

Figure 2. **Progress in labour productivity has been slow**
GDP per hour worked



Note: Lower half OECD represents the ten OECD member countries with the lowest GDP per capita in 1990. These are Chile, Czech Republic, Estonia, Hungary, Korea, Mexico, Poland, Slovak Republic, Slovenia and Turkey. Chile and Mexico are also part of the Latin America group, along with Argentina, Brazil and Colombia. Data for 2011 are estimates for all countries except Colombia.
Source: *The Conference Board Total Economy Database*, DANE.
StatLink http://dx.doi.org/10.1787/888932764287

Figure 3. **The divide between the rich and the poor is quite pronounced**
Household equivalised disposable income: gap between the 10th and the 90th centile and Gini index in the late 2000s



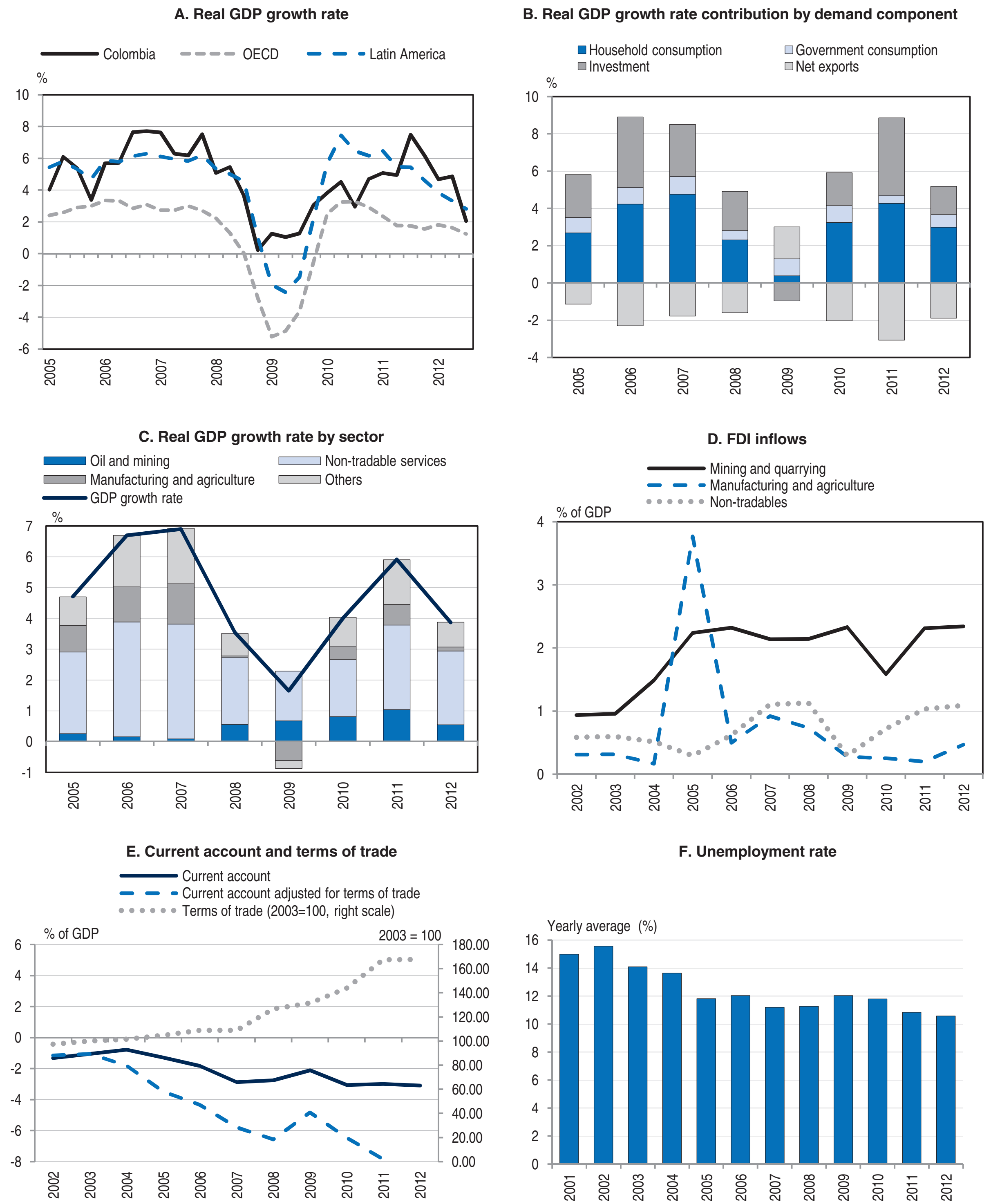
Note: Data for France and Ireland refer to the mid-2000s instead of the late 2000s. Data for Colombia are for 2011.
Source: *OECD Income Distribution and Poverty, OECD Social Expenditure Statistics* (database), DANE for Colombia.
StatLink http://dx.doi.org/10.1787/888932764306

Recent macroeconomic developments and short-term prospects

The mining boom helped Colombia weather the global economic slowdown

The Colombian economy weathered the global economic crisis well. After a sharp deceleration in 2009, output growth recovered rapidly to reach 5.9% in 2011 (Figure 4), despite the severe flooding in late 2010 and the loss of the Venezuelan export market as a result of a series of disputes between the two countries. Growth was underpinned by the booming mining sector, with commodity exports and investment boosted by the sharp rise in commodity prices. The mining sector grew by more than 14% in real terms in 2011. The

Figure 4. **Recent macroeconomic developments**



Note: 2012 data correspond to the first three quarters of the year except for unemployment rate in Panel F, which covers the period January-November. Panel A: Data refer to year on year growth rates. Panels B and C: GDP growth rates for the first three quarters of 2012 are measured with respect to the real GDP in the first three quarters of 2011. Panel C: Others include transport, storage, communications, and taxes. Panel E: The current account adjusted for terms of trade deflates trade flows by 2003 constant export and import prices. Panel F: Yearly averages of monthly unemployment data.

Source: OECD, Banco de la República, DANE and ECLAC.

StatLink http://dx.doi.org/10.1787/888932764325

non-tradable sectors have also been buoyant, particularly transport, financial services and construction. In contrast, manufacturing and agriculture have lagged behind, pointing to a three-speed economy, with mining pulling ahead, non-tradables faring well and non-mining tradable sectors suffering.

Driven by solid economic growth, total employment has increased by almost 15% over the past 3 years. More than 2.5 million jobs have been created, in particular in non-tradable service sectors (retail trade, hotels and restaurants as well as finance, insurance and real estate).

On the demand side, private consumption and investment have made a solid contribution to growth between 2010 and the first half of 2012. The reduction in the unemployment rate has boosted household confidence which, combined with historically low real interest rates and strong credit growth, has supported private consumption.

Despite the surge in commodity prices, the current account deficit has remained virtually unchanged as a share of GDP since 2007. While the value of commodity exports has soared, imports have boomed driven by buoyant private consumption and investment. Profit remittances by foreign companies have grown and remittances from Colombian workers abroad have declined. Exports of goods and services have also slowed significantly in volume terms during the first part of 2012. The deterioration in the current account balance is worse if adjusted for the change in the terms of trade, *i.e.* by deflating trade flows by trade prices, pointing to competitiveness challenges in the non-mining sectors.

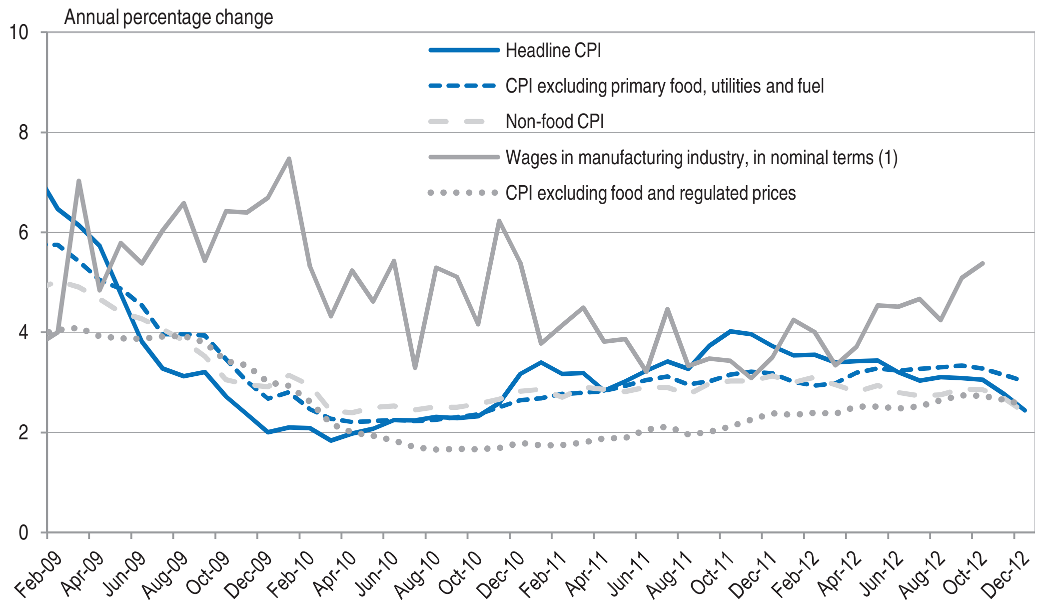
The sustainability of the current account deficit is difficult to assess because of the volatility of commodity prices and uncertainties on extraction volumes. However, in Colombia, some factors enhance the sustainability. Mining-related FDI has accounted for a large share of capital inflows. Borrowing by the private sector has been related largely to trade finance and the acquisition of foreign assets by Colombian corporations. In addition, currency and maturity mismatches in the corporate and financial sectors are limited by prudential regulations and the credibility of the flexible exchange rate.

Inflation has been brought down within the official target range of 3 ± 1% since mid-2009 and, at 2.4% in December 2012, is slightly below the 3% long-term central bank target. Timely monetary policy response, the decline in inflation expectations, lower oil prices, favourable weather conditions in 2012 and the strong exchange rate have all played an important role. Core inflation measures stand close to the headline inflation rate and have converged to the 3% long-term target (Figure 5). The output gap is estimated to have been positive since 2011 (González *et al.*, 2012) which could account for the increase in the core rate in that year and suggest that there may be upward pressures on inflation. Inflationary demand pressures were building up in the second half of 2011, and were accompanied with strong credit growth. They prompted an increase in interest rates by the Central Bank. Lately, demand pressures have eased, partly reflecting the global economic slowdown and monetary tightening in 2011.

The positive short-term prospects are clouded by downside risks

While economic growth eased somewhat in early 2012, domestic demand should remain buoyant and continue to support activity (Table 2). Althought growth has slowed down substantially in the third quarter of 2012 as construction dropped, it was above the average of the past decade in the first half of 2012 and slightly above its potential rate estimated at 4.3% for 2012 by the government (Ministerio de Hacienda y Crédito Público,

Figure 5. **Recent developments in consumer prices and real wages**



1. Excluding coffee threshing.
Source: Banco de la República.

StatLink http://dx.doi.org/10.1787/888932764344

2012). Though mining investment has recently weakened in the wake of tumbling commodity prices, large public construction projects should maintain momentum in the medium term. In particular, the government plans to invest in road, railway and port infrastructure, to continue reconstruction caused by the damage of the 2010 floods, and to build houses for vulnerable households. Consumption will continue to benefit from low real interest rates, job creation and household confidence. Activity will also get a boost from the recently agreed free-trade agreement with Colombia's largest trading partner, the United States, which came into effect in May 2012, and the improvement in trade relations with Venezuela – Colombia's second largest trading partner up to the late 2000s.

The outlook is subject to some risks. On the external side, slowing world growth and, especially, the worsening crisis in Europe will damp exports, FDI and migrant remittances. An added concern is the possibility of a further slowdown of the Chinese economy. The

Table 2. **Projections for Colombia**

Main indicators

	2010	2011	2012	2013
	Percentage changes, volume			
GDP	*4.0*	*5.9*	4.4	4.4
Final consumption	*5.1*	*5.8*	4.2	4.2
Gross fixed capital formation	*4.6*	*16.7*	9.9	7.4
Consumer price index (December on December)	*3.2*	*3.7*	*2.4*	3.1
Current account balance (% of GDP)	*-3.1*	*-3.1*	-3.0	-3.1
Unemployment rate (average, %)[1]	*11.8*	*10.8*	11	10.5

1. IMF projections for the unemployment rate. Other projections are provided by the *Latin American Consensus Forecasts* (December 2012). Data in italics are historical data.
Source: Latin American Consensus Forecasts (December 2012) and *IMF World Economic Outlook* (October 2012).

associated decline in commodity prices would dent mining investment and government revenues, although the combined dividend and corporate tax revenues from the public oil company (Ecopetrol) are expected by the government to rise further from 1.4% of GDP in 2011 to 2.3% in 2012.

Domestic risks are more on the upside. Asset prices have risen rapidly, especially house prices (40% increase since 2006). Some indicators suggest that the increase also reflects structural factors: permanently lower real interest rates (due to a lower risk premium, increased security and fiscal consolidation), stronger potential growth, as well as land constraints in some Colombian cities. To avoid an asset price boom and bust cycle, these indicators should continue to be monitored by the authorities. Households' indebtedness has also risen rapidly but, as a share of household disposable income, it remains below the pre-1999 crisis level. Consumer credit growth has decelerated to 16% in the Fall 2012 while mortgage credit, at 3.8% of GDP, remains low. The peace negotiations between the government and the FARC guerrillas (Box 2), if successful, should increase security and boost both consumer and investor confidence.

Slow adjustment to a stronger peso, and associated employment losses, could however put a drag on activity in non-resource tradable sectors. The central bank monthly leading indicator of economic activity points to a slowdown in growth over the coming months.

Macroeconomic policies have been prudent and overall supportive

The evidence at hand suggests that fiscal policy has been at best neutral or even slightly expansionary. According to IMF calculations, the structural fiscal balance deteriorated by about 0.5% of GDP in 2011. However, a proper assessment of the fiscal stance is difficult because consistent time series on cyclically-adjusted spending and revenues have been lacking. Existing data for the central government and the non-financial public sector suggest that the commodity boom and the business cycle have boosted tax revenues. Central government revenues rose to 15.3% of GDP in 2011, up from 13.8% in 2010. About half of this increase reflects the rise in tax revenues and dividends paid by the public oil company (Ecopetrol). The 2010 tax reform, which aimed at improving tax compliance and closed some tax loopholes, and the temporary increase in the wealth tax to finance the consequences of the flood damage have also reduced the deficit. Overall, the deficit of the non-financial public sector declined from 3.1% of GDP in 2010 to 1.8% of GDP in 2011, despite emergency spending amounting to about 0.5% of GDP in the wake of the late 2010 flood damages.

Prudent debt management practices have reduced exchange and interest rate risks born by the government, which has boosted market confidence. The central government debt to GDP ratio declined to 36.7%, back to its early 2000s level (Figure 6). The share of public debt with fixed interest rates is high. Most of the public debt (75%) is denominated in local currency reflecting the issuance of external debt in peso and buy-back operations over the last years. In addition, reliance on foreign markets has declined while debt maturity on the external debt has increased (Table 3), reducing refinancing risks. As a result, the rating of Colombia's foreign-currency bonds was upgraded to investment grade by all three rating agencies in 2011, and the spread on credit default swaps (CDS) remains well below some emerging and OECD economies (Figure 7).

Box 2. **The peace process**

A peace process between the government and the Fuerzas Armadas Revolucionarias de Colombia (FARC) guerrillas was launched in 2012. While the 2002 peace negotiations failed, an overwhelming majority of Colombians supported the government's decision and reported feeling rather optimistic about the current peace negotiations.

The peace negotiations have been held in several rounds, first in Oslo (Norway) and then in Havana (Cuba) in the second half of 2012. The government's negotiating team is led by former high-level government officials, as well as representatives from civil society. The FARC's representatives are political and ideological rather than military leaders, most of whom have experience of negotiations. The parties have agreed to keep talks private.

Five key issues on the agenda are the following:

1. Rural development: access and use of land resources, land development programmes, infrastructure and land adaptation, social development, incentives for agricultural development and food policy.
2. Political participation: rights and guarantees to exercise political opposition, democratic mechanisms for citizen participation, and effective ways to promote greater political participation at the national, regional and local level.
3. The end of the armed conflict: ceasefire, the re-incorporation of the FARC into civil, socio-economic and political life, and security guarantees.
4. Drug-trafficking: substitution programmes, consumption prevention and public health programmes, and solutions to drug production and traffic.
5. Victims: recognition of past abuses and victim's human rights.

The positive economic effects of the end of the armed conflict should be significant in terms of enhanced human, physical and social capital. For instance, the end of the conflict would increase human capital by reducing poverty and inequality, increasing the size of the labour force and raising the number of children attending school as fewer families are displaced by violence. Enhanced rural development and the rule of law in rural areas would boost agricultural production. Moreover, the reduction in terrorist acts against physical infrastructure would shrink physical capital destruction and this safer climate would attract more foreign direct investment (FDI) and tourism. In addition, the end of the conflict would improve social cohesion while reducing corruption and court congestion. However, there are also significant economic costs of reaching a peace agreement, and the government should be ready to raise social spending to meet the challenges ahead. A recent government study estimated that the end of the conflict would boost GDP by 0.9%.

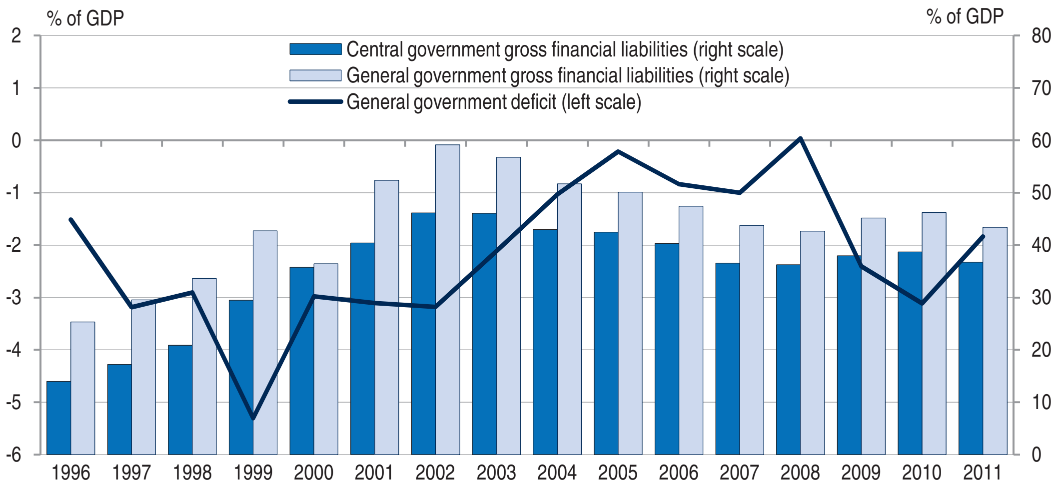
The inflation targeting regime introduced in 1999 has successfully anchored inflation expectations. After the 1998-99 banking and monetary crisis that forced the abandonment of the crawling band exchange rate regime, the peso was floated and the central bank's monetary policy moved towards a fully-fledged inflation-targeting framework. The bank's commitment to that framework enhanced its credibility and allowed it to implement a counter-cyclical monetary policy following the 2009 economic slowdown.

The policy rate was cut in successive steps from a peak of 10% in July 2008 to 3% in May 2010. As the recovery proceeded, the central bank raised its intervention rate gradually to 5.25% in February 2012 to keep inflation at its long term target and restrain credit growth.

The recent slowdown in the world economy, which has affected Colombia, prompted the central bank to lower the rate four times by a cumulative 100 basis points since July 2012

Figure 6. **Fiscal outcomes**

Per cent of GDP



Source: Ministry of Finance and Public Credit.

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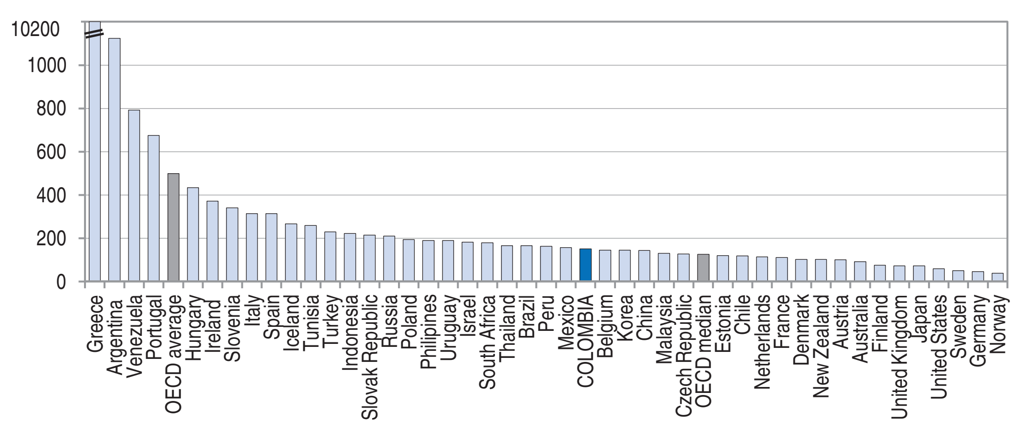
Table 3. **The composition of central government debt has improved significantly**

Debt portfolio for central government		1996	2008	2010	2011
Debt composition	Domestic	46%	67%	71%	70%
	External	54%	33%	29%	30%
	Peso denominated	50%	74%	74%	75%
	Foreign currency denominated	50%	26%	26%	25%
Nature of the interest rate on external debt	Fixed	n.a.	81%	80%	79%
	Variable	n.a.	19%	20%	21%
Maturity (in years)	External debt	n.a.	4.3	4.7	5.0
	Domestic debt	n.a.	10.1	10.6	9.7

Source: Ministry of Finance and Public Credit.

Figure 7. **Spreads on credit default swaps (10 years)**

Basis points, December 2011-December 2012



Note: Canada, Luxembourg and Switzerland are not included in the calculations for the OECD median and average.
Source: Datastream.

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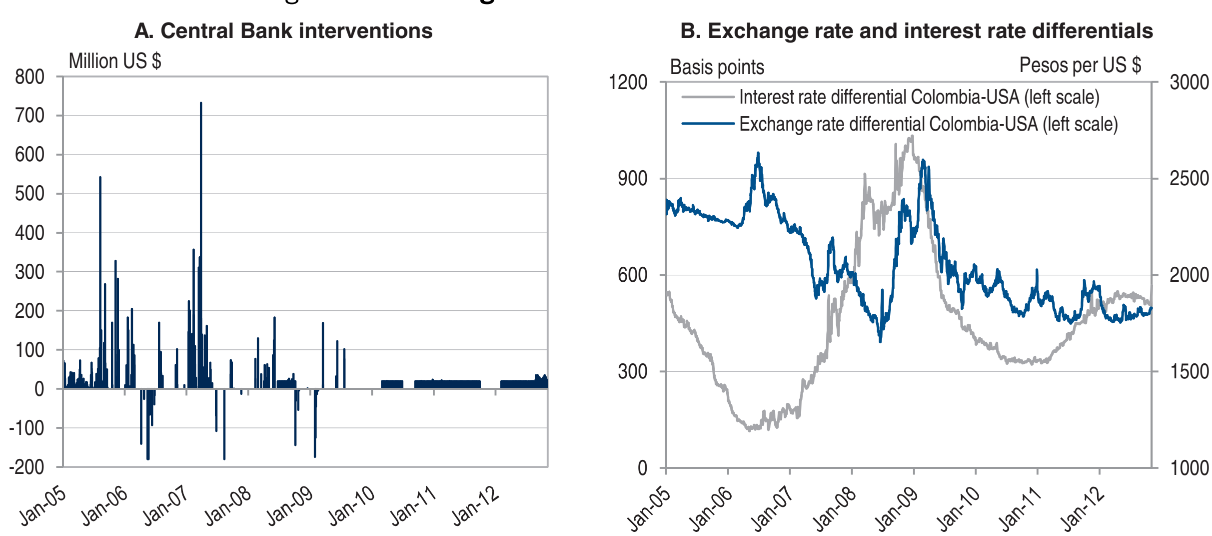
to 4.25% in December 2012. Inflation expectations are still subdued. However, the central bank intervention rate is now slightly below the level suggested by a Taylor rule, although estimates are highly sensitive to the choice of variables included. Thus, unless downside risks to activity materialise, demand pressures may build up again, which, in tandem with rapid credit growth, would require interest rates to be raised again.

Prudential regulation was tightened in mid-2012 to enhance financial stability. Provisioning requirements on consumer loans have been increased and a more restrictive definition of capital has been introduced. In addition to the capital adequacy ratio, regulators have included a stricter measure of capital requirements in line with the recommendations by the Bank for International Settlements (BIS). A decree now requires that capital be above 4.5% of risk-weighted assets after excluding some illiquid capital items, such as real estate. The prudential measures are welcome and their impact on mortgage and consumer credit should be monitored closely.

Exchange rate policy has become more market based. Since mid-2007, it has shifted away from large interventions in the foreign exchange market to smooth the appreciation of the peso, as this often conflicted with the inflation target (Banco de la República, 2011). Instead, the Central Bank began to use direct daily auctions of small fixed amounts over pre-announced periods of time, sterilising excess liquidity through reductions in the net creditor position and, more recently, through deposits of the General Treasury at the Central Bank (Figure 8). The IMF estimated that the exchange rate was broadly in line with fundamentals in 2011. The change in policy may have reduced speculative trades as it avoids giving signals to market participants on an exchange rate level or volatility target (Rincón and Toro, 2010; Vargas, 2011). Reserve purchases have mostly aimed at accumulating international reserves or avoiding excessive volatility.

Figure 8. **Exchange rate and interest rate differentials**



Note: Central Bank interventions refer to foreign currency bought. Negative values refer to foreign currency sold. The interest rate differential is measured as the difference between the Colombian 3 months Certificate of Deposit rate and the 3 months US Treasury Bill rate.

Source: Banco de la República, Datastream.

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Although it is difficult to estimate the optimal level of international reserves, some indicators indicated that they should increase further in Colombia (IMF 2011, Calvo *et al*., 2012; Gerencia Técnica, 2012; Mejia, 2012). Experience in emerging economies facing external shocks and the volatility of exports and international capital flows also suggest that a somewhat higher level would help to cope with potential "sudden stops". Recently, the Central Bank has accumulated reserves to strengthen its position. Foreign exchange rate operations have allowed the *Banco de la República* to raise reserves to about 10% of GDP (equivalent to 6 months of imports or 150% of short-term debt). The Central Bank is increasing reserves based on key economic indicators and features of the economy (*e.g.* low currency mismatches, low pass-through and high credibility of the inflation target). The country also has access to an unconditional IMF Flexible Credit Line.

A tighter fiscal policy would facilitate the conduct of monetary policy. The government's plan to tighten slightly on the fiscal side, as foreseen by the fiscal rule, is in this respect welcome. By keeping a lid on demand pressures, it will reduce inflationary pressures somewhat and relieve pressures on the exchange rate. While currently broadly appropriate, monetary policy should remain vigilant to overheating risks, especially if recently adopted macroprudential measures do not help contain the boom in consumer and housing loans.

Box 3. **Recommendations on macroeconomic policy**

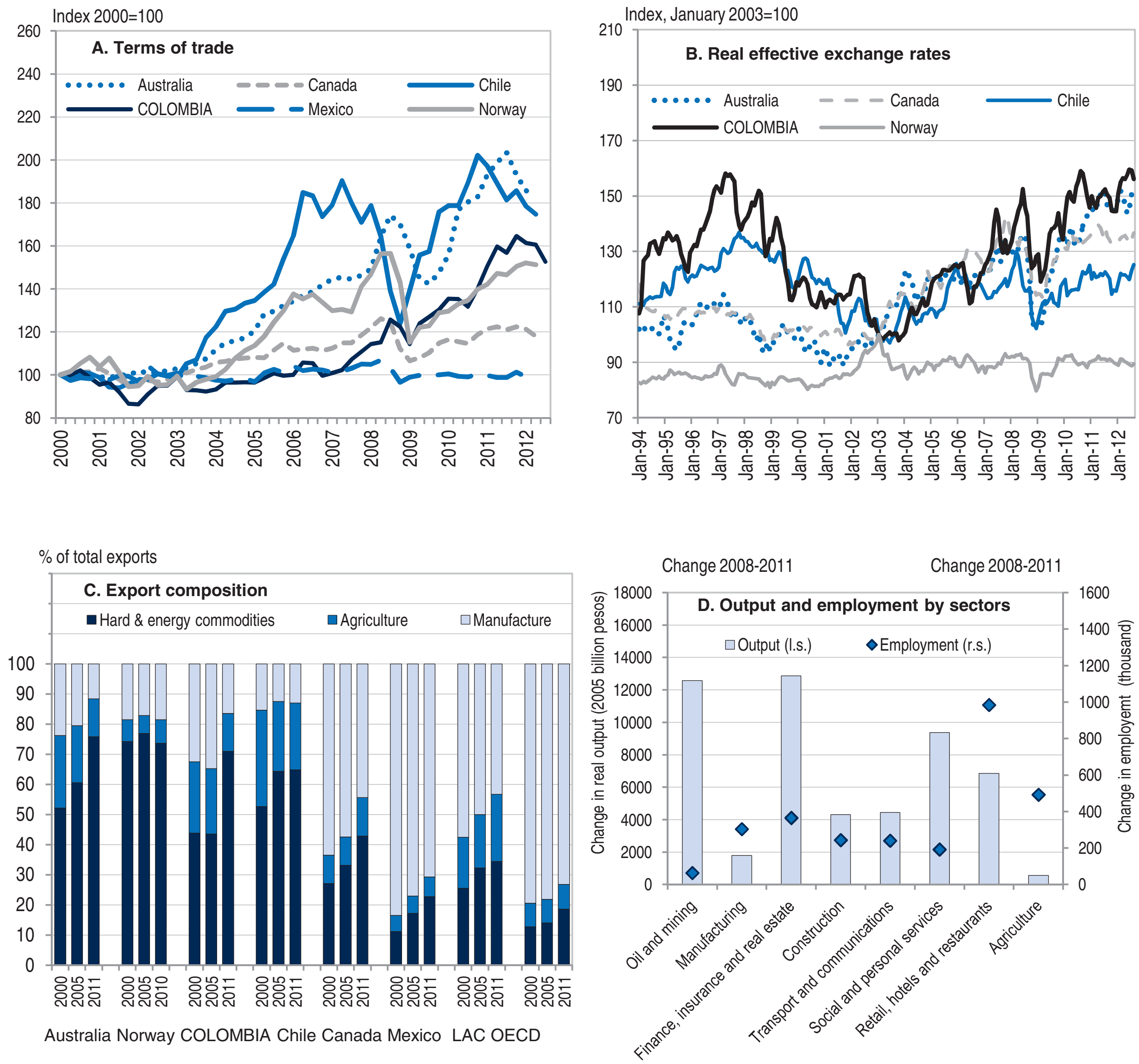
- The government's plan to gradually tighten the fiscal stance, consistent with the fiscal rule, is welcome.
- Fiscal data should be improved to enable a proper assessment of the fiscal stance and compliance with the fiscal rule.
- The Central Bank should continue to monitor consumer credit growth and housing prices, and to use prudential measures to contain overheating risks.
- Keep the exchange rate market-determined and intervene only to smooth erratic exchange rate movements or to raise international reserves.
- Further raise international reserves, while sterilising them, to provide a buffer against external shocks.

Adjusting to the commodity boom and a stronger real exchange rate

The expansion of the mining sector and the rising terms of trade have affected the level and composition of economic activity

The rapid expansion of the mining sector and surging terms of trade are driving important structural changes. The rising terms of trade (Figure 9) attract resources into the mining sector, and the change in relative prices squeezes the competitiveness of the non-mining tradable sector (Corden and Neary, 1982; Ismail, 2010). In addition, the rise in income associated with the commodity boom fuels domestic demand, putting pressure on prices, in particular those of the non-tradable sector. Previous commodity booms in Colombia destabilised the economy. They resulted in a decline in economy-wide saving, large current account deficits and were followed by pronounced downturns (Echeverry *et al*., 2011b).

Figure 9. **Developments in prices, exports and activity in resource-rich countries**



Note: Panel C: Hard and energy commodities include aluminium, coal, copper, cotton, electricity, gas, gold, lead, metal ores, nickel, platinium, petroleum, rubber, silver, tin, wood and zinc. Calculations are based on values. LAC stands for Latin American and Caribbean countries. LAC grouping as per *UN Comtrade Database*, includes Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Guatemala, Guyana, Mexico, Nicaragua, Panama, Peru, Paraguay and Venezuela.
Source: OECD, Banco de la República, Bank for International Settlements (BIS), DANE, UN Comtrade.

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Such effects depend on the size of the mining sector and how the associated revenues are managed. In Colombia, the share of commodities in exports and in the economy has risen rapidly. The share in exports is now high, even in comparison with resource-rich OECD countries. In 2011, oil and mining represented 8% of GDP, but they accounted for 70% of exports. As in other resource-rich OECD countries that do not save the revenues (*e.g.* Australia and Canada), the real effective exchange rate has appreciated substantially in recent years. In contrast, Norway and, to some extent, Chile invests some or most of the revenues abroad to reduce upward pressure on the exchange rate. Non-tradable output has also risen fast and most of the jobs created since 2008 are in non-tradable services. The world market share of Colombian non-commodity exports has remained stable since 2005 and the manufacturing sector's contribution to GDP growth has decreased more than, for example, in Australia and Canada.

Although the commodity boom is likely to continue, there is considerable uncertainty about its length and intensity. Proven reserves for oil and gas are estimated to last 7 to 8 years. The expected life of commodity resources in Colombia is, however, difficult to estimate, as exploration in much of the country has barely started. For example, oil production is expected to peak in 2015 at 1.2 million barrels per day and then decrease slowly to less than 0.8 million barrels per day in 2035, but uncertainty about future discoveries is large. Likewise, commodity price and terms of trade forecasts have wide error margins. While commodity prices may decline as new sources of supply emerge, their level may well remain relatively high in view of growing demand from Asia.

Further policy reforms can help the adjustment process

Monetary intervention cannot contain the trend appreciation of the peso

The real exchange rate is likely to continue to appreciate in view of the expected strength in exports, FDI and domestic demand (IMF, 2011). The appreciation has created pressures from various sectors for central bank intervention. As the commodity boom is likely to last, the central bank should make it clear that it cannot halt the peso's long-term real appreciation, that the peso will be permanently stronger, and that the private sector has to adjust to it. Attempts to use monetary tools to halt the rise in the foreign exchange rate would ultimately result in higher inflation with little change in the real exchange rate. The Central Bank has indicated that, given the fundamentals driving the real exchange rate, a lasting real depreciation could only be effectively achieved by significant increases in domestic savings.

A more open trade regime would enhance competition

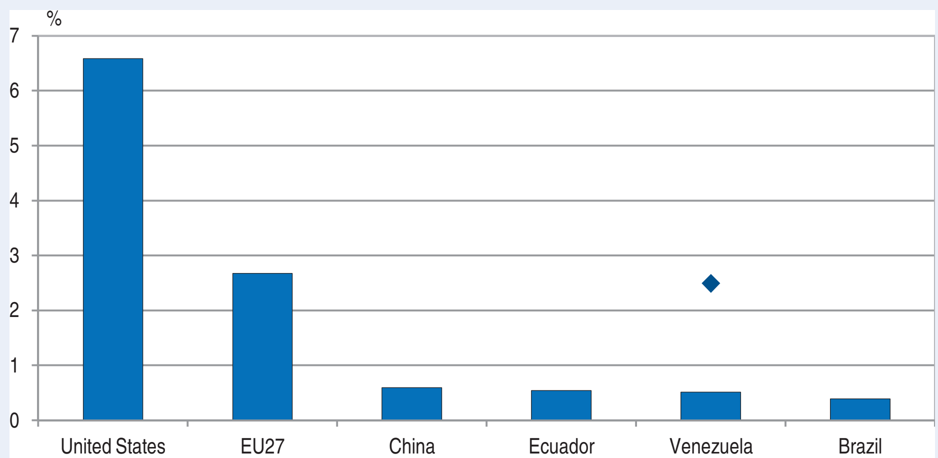
Colombia has liberalised trade over the past decade and this could boost the productivity and competitiveness of non-commodity exports, aiding adjustment to a higher exchange rate. In particular, tariffs on industrial inputs and capital goods have been cut (USTR, 2011) and the average weighted tariff fell from 12% in 2006 to 8% in 2010, in line with the recommendations in the 2010 *OECD Economic Assessment*. In addition, a temporary reduction for some items brought the average tariff to 6% in August 2011. Nevertheless, average tariffs remain well above the OECD average of about 3%. In addition, the large difference between tariffs on inputs and those on final goods creates a bias against high-value-added sectors and negative protection to food-producing industries. Average tariffs should be reduced further, but gradually, to allow Colombian industries to adjust to a more open trade regime and to avoid excessive losses in employment in the tradable sector. Colombia has concluded several free-trade agreements (FTAs), which reduce effective tariffs (Box 4). It could take further advantage of the opportunities of trade by actively seeking tariff reductions and by making temporary cuts permanent. Lowering the tariffs on agricultural products, which are high by regional standards, could also reduce the price of basic consumption goods and thus contribute to alleviating absolute poverty.

Box 4. **Free trade agreements concluded by Colombia**

To promote trade, about 20 Free Trade Agreements (FTAs) have been concluded, mainly with other American countries. An FTA with the European Union is close to ratification and negotiations are in progress with Costa Rica, Israel, Korea, Panama and Turkey. Preliminary discussions with Japan and China are also underway. The recent agreement with the United States – the main trading partner (Figure 10), accounting for 38% of total Colombia's exports – could be particularly important in boosting GDP and some studies estimate a one-off effect on economic activity at between 0.17% and 0.75% (Cárdenas and García, 2004; Umaña, 2011).

Figure 10. **Colombia's main trading partners**

Export value as a share of GDP, 2011



Note: The late 2009 dispute between Colombia and Venezuela resulted in a drop in Colombia's exports to Venezuela. For information, 2008 data for Colombia's exports to Venezuela are shown as a diamond.
Source: UN Comtrade and Banco de la República.

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A new fiscal framework and stabilisation fund will help shield the economy from swings in revenues

A new fiscal rule was approved in June 2011 (Box 5). The structural budget balance rule for the central government will help guard against the unsound use of volatile commodity resources and enhance fiscal discipline by setting clear targets up to 2022. It will also shield the economy from swings in commodity prices and the business cycle, thus mitigating the pro-cyclical bias of fiscal policy observed in the past. A Savings and Stabilisation Fund (SSF) has been established. It will accumulate revenue windfalls to finance counter-cyclical fiscal policies during downturns and the costs associated with natural disasters (Echeverry *et al.*, 2011a). The Chilean experience (OECD, 2012a) suggests that such a SSF may play an important role when, as it is the case in Colombia, the automatic stabilisers are limited by the small size of the government and by the spending and revenue mix – in particular unemployment benefits are low and consumption taxes account for the bulk of the tax take.

The fiscal rule is a clear improvement. However, it could be strengthened further. *First*, corrective actions to be taken in case of slippage are not clearly defined. To improve the

Box 5. **Colombia's structural fiscal balance rule**

The main objectives of the Colombian fiscal rule are as follows (Echeverry *et al.*, 2011a):

- Buttressing fiscal sustainability by reducing debt.
- Improving the management of revenue windfalls: revenues in excess of structural commodity and non-commodity public revenues will be saved temporarily in the Savings and Stabilisation Fund.
- Enabling counter-cyclical policy, through the Savings and Stabilisation Fund.
- Facilitating the coordination of monetary and fiscal policy.

Key principles of the rule:

- The rule applies to the *central government* which has contributed most to the overall deficit and debt accumulation (87%) of the non-financial public sector in the past.
- The *target*: the central government's structural deficit should decline to 1% of GDP by 2022 (down from 2.7% in 2011), with intermediate targets aligned with presidential elections: 2.3% of GDP by 2014 and 1.9% in 2018.
- The *structural deficit* is defined as the difference between structural revenues and structural spending. The former are adjusted for the economic cycle and unexpected or transitory swings in commodity-related revenues (*i.e.* deviations from long-term prices and quantities). Structural spending is defined as total spending excluding specific counter-cyclical (discretionary) spending programmes.
- The new framework creates a *Savings and Stabilisation Fund*, to be managed by the Central Bank, where revenue windfalls (*i.e.* those resulting from a growth rate of the economy or from commodity prices above their long-term level) are to be saved. Up to 10% of the Fund's resources can be spent on counter-cyclical spending programmes.
- The rule includes an *escape clause*. When the output gap is negative and the expected real output growth rate is at least 2 percentage points lower than the long-term rate (estimated at between 4.3 and 4.8% by the government), a counter-cyclical spending programme can be launched. This counter-cyclical spending should be phased out two years after economic growth has returned to, or is above, its long-term rate.
- Two *committees consisting of independent experts* are set up to provide estimates for the long-run growth rate of the economy and for commodity revenues. Another committee of independent experts – university teachers, economists and presidents of the Congress Economic Commission – will assess the parameters embodied in the fiscal rule and possible changes proposed by the government. It will also monitor the implementation of the rule and provide an independent report to the Congress.
- Each year, the government has to present its own *report on the implementation of the rule* to Congress.

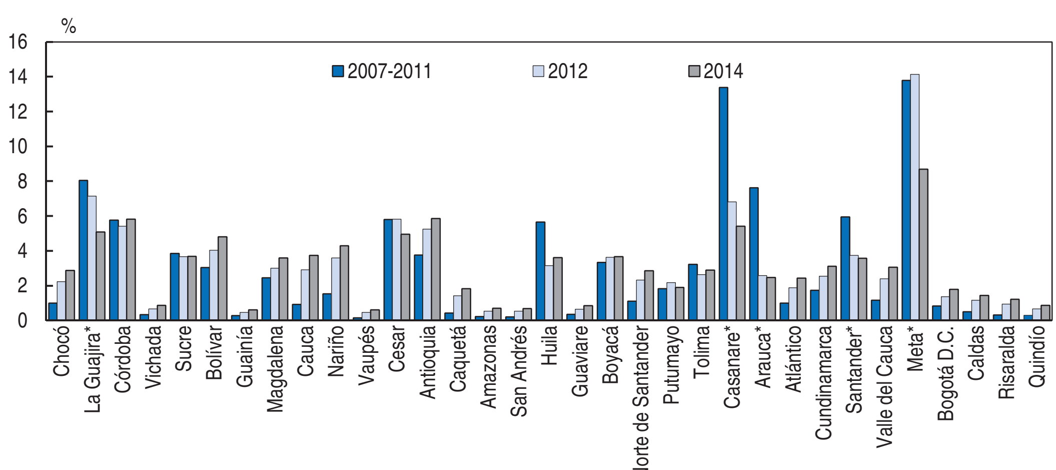
government's credibility further, a notional "compensation account", similar to the Swiss debt brake framework (where deviations from the rule are accumulated, with a requirement to adjust in a given time frame), could be created. *Second*, the profits or losses of public enterprises and entities (*e.g.* in the financial and health sector) should be explicitly recognised when assessing the rule, since they may cause fiscal slippage. *Third*, if implementing the structural fiscal balance rule is made difficult because setting reference prices and quantities for the commodity sector is not an easy task (as revealed by the Chilean and Mexican experiences), or because uncertainty surrounding potential output estimates is large, a spending rule should be added to the framework.

Reforming the regional allocation of royalties and improving their use to spur productivity growth

The recent reform of royalties aims at better distributing the resource revenues and promoting productivity growth in the non-commodity economy. This is another way to aid positive adjustment to the higher exchange rate and ensure that gains from the resource boom are more fairly shared. In the past, commodity producing regions have received most of the royalties (almost 1.4% of GDP in 2011) but these revenues have neither boosted growth significantly, nor have they reduced poverty, and corruption has been wide-spread (Echeverry *et al.*, 2011b). To improve the allocation and effective use of royalties across regions, the government passed an ambitious reform in 2011. As a result, the share allocated directly to commodity-producing regions will be reduced from 80% over the period 1994-2010 to 25% in 2012 and 10% after 2014 (Figure 11).

The royalties not allocated to producing regions will largely be spent on infrastructure and innovation, conditional on there being an approved project. Spending on R&D stands at 0.15% of GDP, compared with 0.6% on average for Latin America and 2.3% for the OECD. Greater investment in innovation should help foster Colombia's innovation capabilities which, according to OECD experience, play a key role in boosting growth. Royalties' funds will be allocated across sub-national governments (departments and municipalities) according to objective criteria, which include population size, poverty and unmet basic needs (Box 6). Projects are selected by councils called OCADs (*Órganos Colegiados de Administración y Decisión*), which consist of both sub-national (*i.e,* mayors, governors) and national authorities (*e.g,* Minister of Finance, Minister of Mining, National Planning Department Director). Congress has granted the central government veto power in approving projects.

Figure 11. **Share of total royalties allocated to individual regions before and after the reform**



Notes: Departments are ordered by an indicator combining Unmet Basic Needs (UBN) and population, Chocó having the highest value of this indicator. *denotes the departments receiving the largest amount of direct royalties from commodity production in 2011 (*i.e.* Meta, Casanare, La Guajira, Santander and Arauca).
Source: Ministry of Finance.

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Although the reform has the potential to raise productivity, spur regional growth and reduce income inequality, there are risks to the efficient use of the funds. The earmarking of a share of the royalties to the science, innovation and technology fund may hinder an

Box 6. **The new royalty system**

The new General Royalty System implemented in 2012 allocates royalties across six main funds:

- 10% finance the territorial pension saving fund (*Fonpef*), managed by the Ministry of Finance, which covers pensions for sub-national public employees.
- 10% are allocated to the science, innovation and technology fund managed by *Colciencias* (the Department of Science, Technology and Innovation). Projects are presented by local public or private bodies and should be validated by the relevant OCAD. Regional universities are included in the selection process.
- Up to 30% are allocated to the sub-national Savings and Stabilisation Fund (managed by the central bank). In the first year, 25% is allocated to this Fund and in the subsequent years the amount saved grows at a half of the increase in expected royalty revenues.

The remaining resources are divided into direct allocations to producing regions, the Regional Compensation Fund and the Regional Development Fund:

- Direct allocations to producing regions will decline from 25% in 2012 to 10% after 2014. The released funds will benefit the regional compensation and development funds.
- The Regional Compensation Fund, which will last for 30 years, will get 24% of the royalties after 2014, and will invest in local projects in the poorest regions and municipalities (more than two departments should be involved). At the end of the 30th year, the resources will migrate to the Regional Development Fund.
- The Regional Development Fund will receive 16% of the resources after 2014 and the money is not earmarked for specific spending items. The fund will operate indefinitely.

The main purpose of the two last funds is to improve regional productivity, with most of the resources to be spent on infrastructure projects.

effective allocation of resources since other spending areas may have higher social rates of return. The allocation of public funds to specific investment projects may also hinder effective spending in the absence of close co-ordination among projects approved for each department or municipality. In addition, the economic impact of spending royalty revenues largely depends on the quality of regional institutions (Olivera and Perry, 2009).

A number of policy actions could promote the effective use of royalties. *First*, the central government should provide assistance, in the form of training as well as information and communication technology, to municipalities and departments to identify worthwhile projects and to advise on their implementation. Pre-feasibility studies should include provisions for project maintenance. *Second*, the monitoring and ex-post evaluation of projects should be strengthened. Although resources in the National Planning Department devoted to monitoring projects have been increased, more may be needed given the mounting number of projects and the high level of specialisation required. Care should be taken, however, that administrative costs do not become excessive. *Finally*, the share of royalties transferred to each region should include an incentive mechanism in which regions would receive more funds the faster they progress in achieving key indicators such as unmet basic needs, student performance or transport connectivity. Care should be taken that such a mechanism does not discriminate against the least developed regions.

Containing environmental risks

Colombia faces many environmental challenges, which are compounded by the mining boom. While CO_2 emissions are relatively low due to heavy reliance on hydro-energy, the preservation of the vast biodiversity is threatened by the expansion of the mining industry. Some mining activities, in particular illegal ones, also carry risks for pollution of water or soil. The surface area used for oil extraction and mining quadrupled between 2005 and 2010 and now represents 5% of the country's total land area. Most of the nearly 9 000 mining permits have been given in mountainous regions with rich biodiversity and high sensitivity to environmental damage (Palmer *et al.*, 2010). However, in line with the National Development Plan 2010-14, natural resources can no longer be exploited in areas characterised by high biodiversity, such as national parks or Andean moorlands. Biodiversity should also be better protected and valued since it is a key resource for some activities (*e.g.* pharmaceutical industry and tourism).

The government has recently implemented compensation schemes, requiring polluters to restore damaged areas or create new protected areas. To strengthen environmental policymaking, the ministry of environment and sustainable development has recently been provided with increased power and resources. The National Agency for Environmental Licences was created and progress has recently been made on reducing the time of application processing. Coordination with the Ministry of Mines and with regional environmental authorities is important to ensure that projects receive environmental licences before starting mining. Despite the closing of more than 100 illegal mines, illegal extraction continues to affect the environment. Recent efforts to put illegal mining activities on a legal footing should be pursued to mitigate environmental damages. Monitoring of the licences is also important to ensure that environmental requirements are met.

Box 7. **Main policy recommendations to facilitate the economy's adjustment to the commodity boom**

- Focus on structural policies to improve productivity, promote diversification and the ability of the economy to respond to changing relative prices.
- Promote trade openness by cutting tariffs further, making temporary cuts permanent, and reducing the dispersion of tariffs. Lowering the regionally high tariffs on agricultural products could also reduce the price of basic consumption goods and thus contribute to alleviating absolute poverty.
- Strengthen the fiscal rule by clarifying corrective actions and the path in case of fiscal slippages.
- Ensure that the revised distribution of royalties across regions results in viable projects that boost productivity by:
  - ❖ Providing further assistance to sub-national authorities to identify the most effective investment projects and provide advice on how to implement them efficiently.
  - ❖ Ensure good governance by strengthening the monitoring and *ex-post* evaluation of investment projects.
  - ❖ Implementing an incentive mechanism, so that sub-national authorities receive more funds the faster they progress towards achieving critical economic and social objectives.
  - ❖ Ensuring that sub-national governments fully account for the maintenance costs of investment projects.

Box 7. **Main policy recommendations to facilitate the economy's adjustment to the commodity boom** *(cont.)*

- If the return on investment projects turns out to be low or if royalties increase substantially, reconsider the allocation of royalties or channel a larger share to the sub-national Savings and Stabilisation Fund. Reducing the earmarked component should also be envisaged.
- Reinforce environmental policies to ensure that mining projects cover environmental costs and do not threaten biodiversity. Strictly enforce environmental permits. Biodiversity should also be better protected and valued.
- Put the illegal mines on a legal footing so as to control and mitigate environmental damage, *e.g.* by providing small miners with incentives to become formal such as financial support to buy equipment and contractual arrangements with larger, legal, mining companies.

Further structural reforms to boost sustainable economic growth and reduce income inequality

Raising GDP per capita and promoting a fairer distribution of income are two key challenges for the Colombian society and recent OECD work has revealed that many structural reforms entail a double dividend for growth and equity (OECD, 2012b). Getting more people into more productive jobs should be an important objective. A large section of the labour force remains underutilised and the informal sector is large. The education system performs poorly in raising human capital and promoting social mobility. In addition, infrastructure should be improved to enhance the quality of life, reduce business costs and expand markets. Ensuring fiscal sustainability is also key for intergenerational equity and to keep borrowing costs low. Still, contingent liabilities and pressures on social spending are large while the Colombian tax system raises little revenue, creates large distortions in resource allocation and does little to improve income distribution. International comparisons indicate that, despite improvements, the perceived quality of public sector governance is low (WEF, 2012).

Improving the performance of the labour market

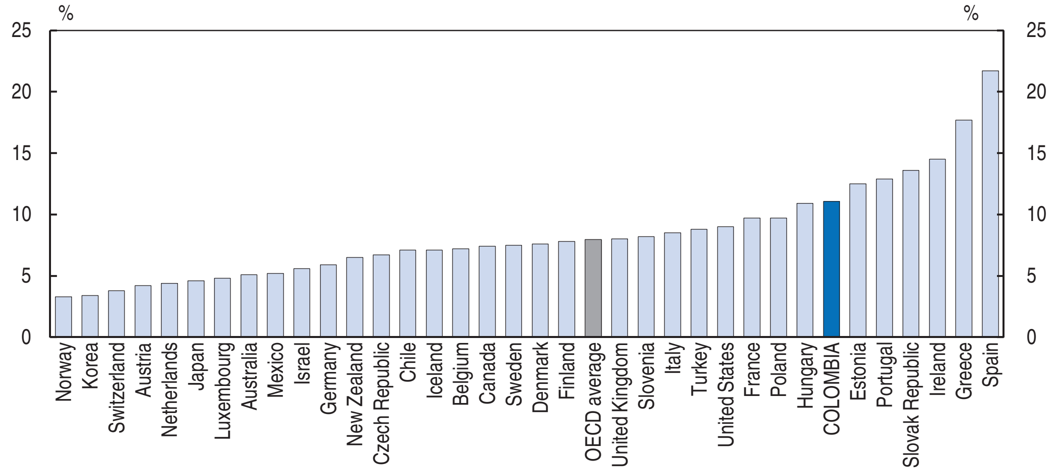
The unemployment rate has declined steadily since the early 2000s and employment creation has been vigorous since 2010. However, at 10.8% in 2011, the unemployment rate was well above the OECD average (Figure 12). In addition, the majority of those working are employed in informal and low-productivity activities, and a third of the employed declare being under-employed. Women and the young are particularly exposed to the risk of unemployment, and the less qualified account for most of the informal workers.

Containing formal wage and non-wage labour costs to reduce informality and enhance productivity

Labour costs are high in the formal sector, pushing people with low productivity into the informal sector or into unemployment. Colombia has one of the highest minimum wages in relation to the average wage in the world (Figure 13). As regional differences in incomes are high, the uniform national minimum wage is at or above median incomes outside the capital. This is likely to have contributed to the high informality in the poorer regions (Figure 14). Yearly adjustments of the minimum wage are set by the Constitution to match at least the past year's inflation, plus productivity gains. Adjustments in the minimum wage have sometimes been used as a political instrument, with very large

Figure 12. **The unemployment rate is high**[1, 2]

2011 or the latest year available



1. The OECD harmonised unemployment rates are compiled for 34 OECD member countries and conform to the guidelines of the 13th Conference of Labour Statisticians of the International Labour Office (referred to as the ILO guidelines). In so far as possible, the data have been adjusted to ensure comparability over time. All series are benchmarked to labour-force-survey-based estimates. The unemployment rates for the European Union (EU) member countries, Norway and Turkey are produced by the Statistical Office of the European Communities (Eurostat). For the remaining OECD countries, the OECD is responsible for collecting data and calculating unemployment rates. Please refer to the following URL for methodological notes: *www.oecd.org/dataoecd/21/0/44743407.pdf*.
2. Weighted average.

Source: OECD, *Economic Outlook Database*; DANE.

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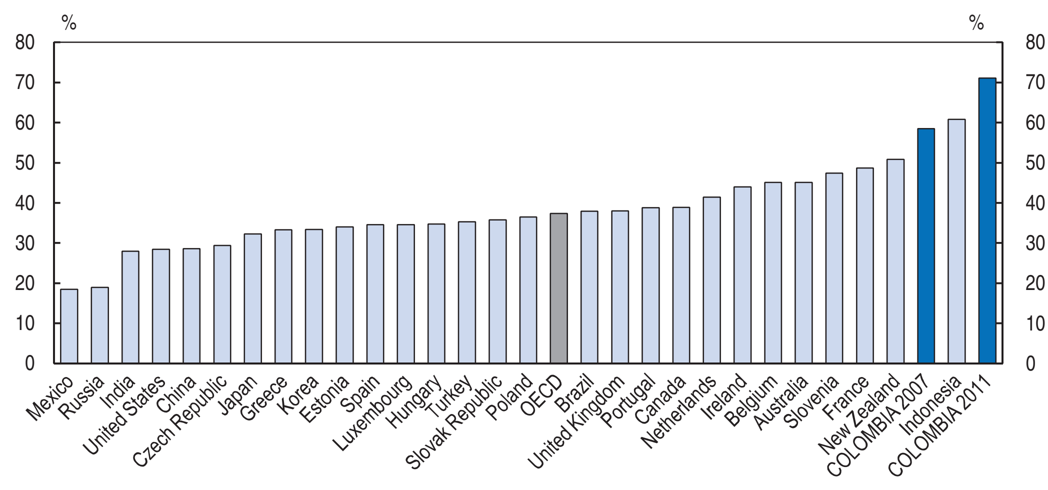
Figure 13. **The minimum wage is relatively high**

Ratio of minimum wage to average wage, 2011 or latest available year



Note: Missing countries do not have a statutory minimum wage except for Chile and Israel for which data are not available. Data are for 2011 except for Brazil, China, India, and Russia for which they are for 2010. The average wage for Colombia covers both formal and informal sectors.

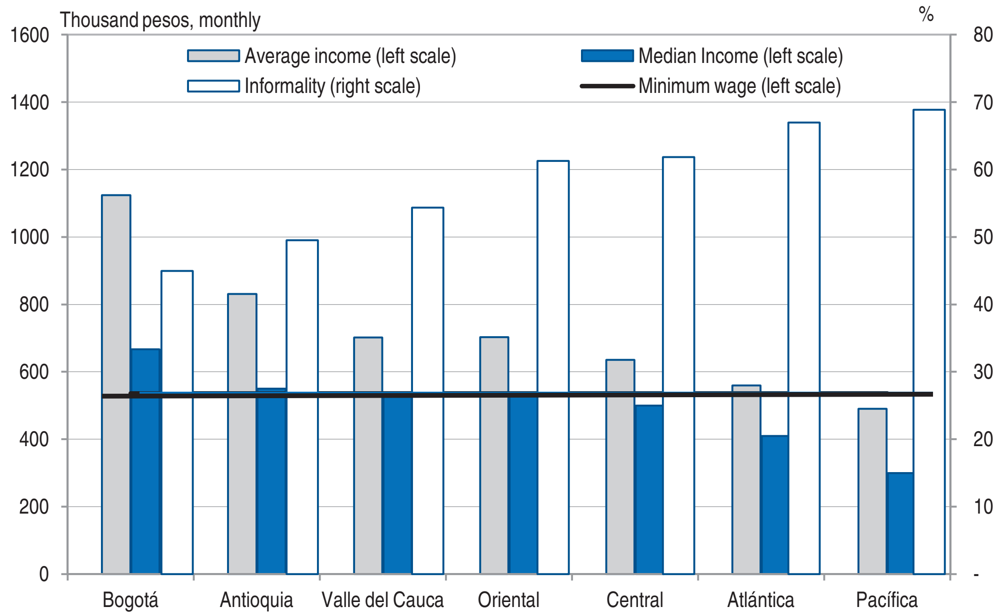
Source: Employment Outlook Database and Going for Growth, OECD 2012; OECD estimates; DANE.

StatLink *http://dx.doi.org/10.1787/888932764496*

increases in real terms in some pre-election years. As a result, the minimum wage has increased in real terms by about 20% since the late 1990s.

The deleterious effects on formal employment are reinforced by non-wage labour costs. These, at 82% of wages (formal and informal), are high even by OECD standards. Furthermore, incentives to pay social security contributions are reduced by the universal

Figure 14. **Informality, minimum wage and incomes by regions**



Source: DANE – GEIH (*Gran Encuesta Integrada de Hogares*), 2011.

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coverage of core public services, such as health care. Those working in the informal sector now have access to a subsidised system which is as generous as for those in the formal sector, although the latter pay a 12.5% health contribution on their wages.

Non-wage labour costs should be reduced. The reliance on social security contributions to finance redistributive policies (*e.g.* health care for the poor, family allowances and social assistance for the elderly) or commercial activities (*e.g.* theatres and commercial centres owned by the *Cajas de compensación – non-profit private entities*) should be reconsidered because of the unintended consequence on formal job creation. In addition, adverse incentives to remain in the informal sector, such as the risk of losing access to free health care and to conditional cash transfers, should also be reconsidered. It should be noted, however, that means-tested social benefits remain relatively low by OECD standards. Workers' incentives to remain informal are thus rather limited and social benefits may not be the main factor behind the high level of labour informality and unemployment.

The government has introduced measures to reduce labour costs in the formal sector. A 2010 reform aims at promoting formalisation and boosting employment. It reduces income taxes, payroll and social security contributions for newly registered companies and for firms creating employment for population groups often excluded from the formal labour market; those are youth below 28, unemployed women above 40, disabled or displaced persons and low-income workers. Experience in OECD countries, in particular Turkey (OECD 2012c), suggests that a significant cut in employment costs for certain categories of workers can stimulate formal employment. The 2010 reform is a step in the right direction but care should be taken that it does not spur tax avoidance and an evaluation of its effects should be carried out. The tax reform proposal presented to Congress in October 2012 embodies cuts in non-wage labour costs (see below).

More should be done to lower labour costs and promote formal employment. Future increases in the minimum wage should be limited to the rise in consumer prices. A separate (lower) minimum wage for the young, who are at high risk of unemployment, and in those regions with a lower cost of living should be envisaged. Constitutional and political economy considerations however limit the government's room for manoeuvre, at least in the short run. The proposed Apprenticeship Law (see below) is, however, a welcome initiative.

Improving labour market policies

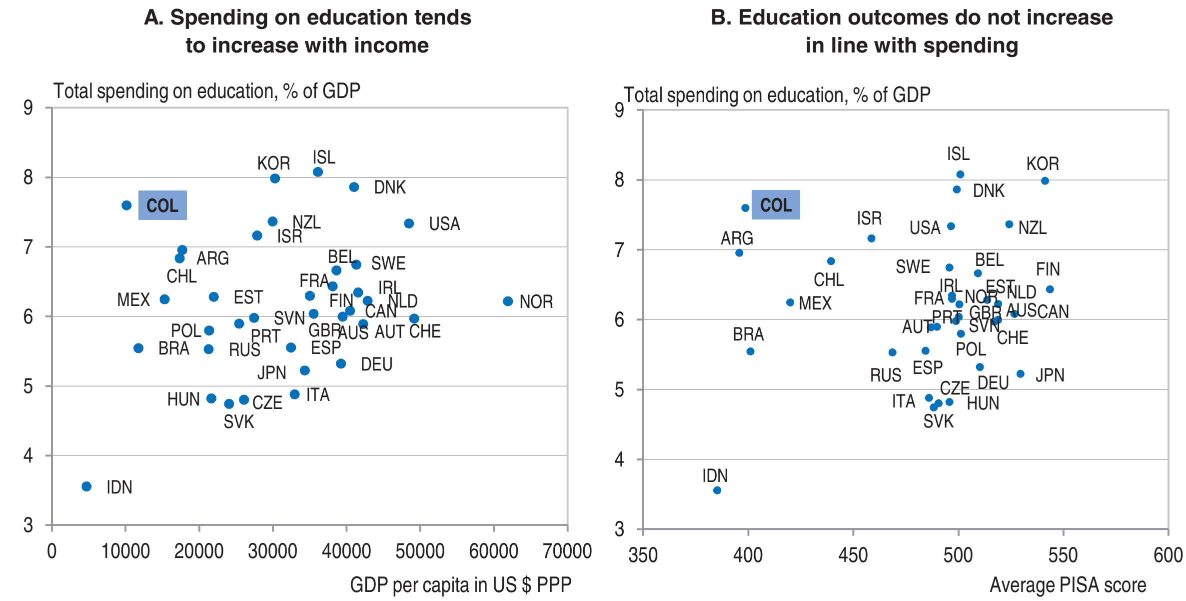
Strengthening active and passive labour market policies would also contribute to improve labour market outcomes and thus help reduce income inequality. The government has launched various welcome initiatives. *First*, an Apprenticeship Law has been presented to Congress in the November 2012 with the objective of increasing the number of persons with a trainee contract (and thus covered by labour laws and social protection) and facilitating their incorporation into the labour market. Trainees with no university degree would be paid at 75% of the minimum wage. The proposed law would also enable companies to develop training programmes supervised by the National Training Service (SENA). *Second*, a Public Employment Service is being designed and implemented in order to improve the matching between the supply and demand for labour. *Third*, while there is no fully-fledge unemployment insurance system, the government is considering introducing a system of individual Unemployment Saving Accounts complemented with a solidarity fund.

Raising efficiency of spending on education and training

Improving skills to better respond to job opportunities is needed. Total spending on education as a share of GDP, at 7.6% in 2011, is higher than the OECD average (6.2%) and than in most emerging economies (Figure 15). The private share, at over 3% of GDP, is much higher than the OECD average of less than 1%, while about one fifth of the Colombian students, mostly from advantaged families, attend privately managed schools (*i.e.* about the OECD average). Overall educational outcomes, however, remain poor. PISA scores are well below the OECD average; the unemployment rate of those with secondary education is higher than for those without (14.2% and 5.8% in 2011, respectively); and those with no or little education are predominantly employed in the informal sector. Educational failure imposes high costs on society: it limits the economy's capacity to grow and innovate, damages social mobility, and reinforces income inequality. Getting better value for the money spent on education would require increasing teaching times, in particular for those pupils from a disadvantaged socio-economic background, by reducing teacher absenteeism and the prevalence of two- or even three- shift schools. The quality of teaching should also be improved by making the selection and training of teachers more demanding.

The coverage, quality and relevance of tertiary education should also be increased. The gross enrolment rate is low (39% in 2011), the dropout rate is above 40% and the overall quality is poor, particularly for technical programmes. Colombia ranks below other Latin American countries, such as Argentina, Brazil, Chile and Mexico, in top world university rankings. Furthermore, tertiary institutions collaborate little with businesses in designing curricula and establishing core competencies, limiting the relevance of the skills developed by their programmes to the needs of the labour market.

Figure 15. **Colombia spends more on education but gets less in return than many other countries**



Source: *Education at a Glance 2012*; OECD (2011a); *World Bank Database.*

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Box 8. **Main policy recommendations to boost employment in the formal sector**

- Reduce the very high non-wage labour costs by implementing the planned tax reform and cutting further social security contributions and other mandatory payments on labour.
- Avoid increasing the minimum wage by more than price inflation. Consider differentiating the minimum wage by region and age to align labour costs with productivity and to account for differences in living costs.
- Raise human capital by making the education and training system more responsive to the economy's needs and by increasing the quantity and quality of teaching. This would require reducing teacher absenteeism and the prevalence of two- or even three- shift schools. The quality of teaching should also be improved by making the selection and training of teachers more demanding.
- Improve the accreditation of tertiary education institutions. Introduce outcome indicators, and publish them, for the national training service (SENA). A better matching between employers' needs and institutions' outputs could be reached by giving more weight to the regional employment offices and to the existing sectoral round tables organised by the government with the private sector.

Colombia has a world-class framework to assess tertiary education's value added through performance tests, which are taken by all students before and after their bachelor degree. These and other databases should be linked together and used more often as a tool for policy making. There is also a need to increase the accountability of tertiary institutions for their results and to link their financing to outcomes (*e.g.* students' employment and earnings prospects). Institutions should also be given more incentives to seek high-quality accreditation, as only 7% of them currently hold one. In addition, the national training service (SENA), which enrols 55% of students in technological programmes, needs to be fully integrated into the tertiary system and databases, to raise transparency. Strong links should be built between institutions and businesses to achieve a better matching of student skills and job opportunities. Finally, universal qualifications and credit accumulation systems should be established for students to progress up to the tertiary level or be able to change institution without having to re-start their education from the beginning.

Improving public sector governance and product market regulation

Colombia ranks pretty well in terms of its business environment (World Bank, 2012b). However, according to company executives, better contract enforcement is a pressing need. It takes, for instance, more than three years to solve a simple commercial dispute. As a short-term measure, alternative dispute settlement mechanisms such as arbitration should be promoted to reduce the pressure on the overstretched national courts (OECD, 2012d). Excessive concentration in certain sectors also hinders productivity. For instance, concentration in the mobile phone sector is one of the highest in the world, with an adverse impact on service prices (Jullien *et al.,* 2010). In addition, in the past, politicians extended favourable tariff and tax treatment and export incentives to sectors identified as a priority in the domestic development agenda as well as to regions with large voter bases, powerful business groups or strong political connections (Eslava and Meléndez, 2009). The industrial sectors that benefitted most from these privileges include food products, wearing apparel and textiles, and the flower industry.

Competition cases investigated by the Superintendent of Industry and Commerce (SIC, the competition authority) have concentrated on horizontal agreements. The investigations involved firms in the food and beverage sector, cement companies, health insurance companies, TV broadcasters and air transport services (Cárdenas *et al.*, 2007; OECD, 2009; OECD, 2012e).

The new competition law of 2009 has reshaped competition policy but it is too recent to have established public awareness and to have accumulated experience in addressing issues. However, giving the competition authority more teeth in several respects could allow for a more effective prosecution of cartels and other unlawful conduct (OECD, 2009). Such powers include, for instance, more protection for whistleblowers in the leniency programme. More specifically, the law now permits the exemption of the whistleblower from antitrust penalties, but not from liability for damages in a civil suit. Protection should be extended to liabilities in a civil suit to encourage firms to come forward under the protection of the leniency programme. In addition, while the experience of OECD countries shows that independence of the competition authority from politics is crucial, in Colombia the Superintendent and the Deputy are both appointed and removable from office by the President. Pro-active investigation by the agency can also lead to an increased number of identification and prosecution of unlawful conduct. This may require a larger staff for the competition authority (SIC), which has important additional tasks other than competition policy enforcement, such as the granting of patents and the industrial quality control regime.

Colombia has made efforts to fight corruption and has ratified the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions. Still, corruption remains an issue and perceptions of corruption affect the ease of doing business (WEF, 2012). Corruption affects in particular sub-national governments. In 2011, more than 100 mayors (out of 1123 municipalities) were punished by the Inspector General and more than 90% of them have been suspended. Furthermore, indicators show that the risk of corruption is high in some of the key institutions dealing with infrastructure, calling for better information systems, as well as more transparency and accountability. These institutions include: regional authorities in charge of granting environmental permits (Corporaciones Autónomas Regionales, CAR), and port managers (ITN, 2010). The CARs lack technical and administrative capacity, are allegedly influenced by political pressure and use procedures which fail to comply with legal and oversight requirements (Blackman *et al.*, 2006). Furthermore, the institutional set-up granting environmental permits for mining activities creates backlogs and delays, as more than five entities are involved. Increasing the monitoring of CARs and making the appointment of CAR managers less dependent on the political cycle should be considered.

Box 9. **Main policy recommendations to improve the institutional and regulatory business environment**

- Review barriers to competition in some product markets, including telecommunications, food production and the financial sector, to ensure that product market regulations do not act as barriers to entrepreneurship.
- Give the competition authority greater independence and more qualified staff to increase its effectiveness.
- Upgrade the business environment by faster contract enforcement. Arbitration and other alternative dispute mechanisms should be promoted to reduce the pressure on the overstretched national courts.
- Better enforce bureaucratic procedures, such as licensing, and enhance the monitoring of institutions vulnerable to corruption.

Better access to credit to boost private investment and productivity

Bank regulation and supervision have been strengthened

Bank regulation and supervision have been strengthened substantially since the 1998-99 financial crisis and key indicators of banks' financial strength now compare favourably with other emerging economies and well performing OECD countries. The ratio of non-performing loans (NPLs) stood below 3% in 2011, and provisions have reached 180% of NPLs. The capital adequacy ratio was close to 15% – well above the 9% required by the supervisor. The Financial Superintendency's roadmap for 2011-14 should further strengthen supervision (IMF, 2011) by, for example, improving coordination and information exchange among the various entities in charge of supervision (the Central Bank, the Financial Superintendency, Ministry of Finance, and the Deposit Insurance agency), and the design of macro-prudential policies.

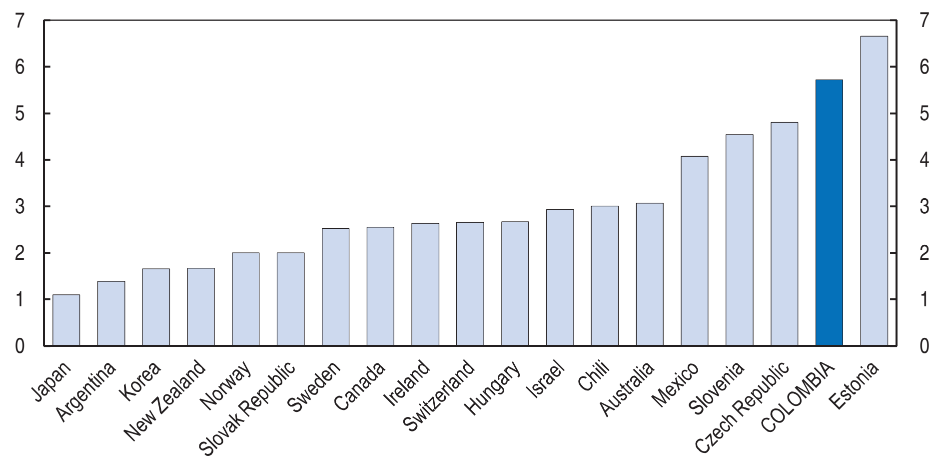
Access to finance and costs remain important issues, in particular for small firms

Despite rapid credit growth, financial depth as measured by the ratio of loans to GDP is only 36%, a relatively low level compared with OECD countries and emerging markets. While micro, small and medium-sized enterprises (MSMEs) represent 99% of firms, 80% of private employment and 35% of GDP, they receive only 14% of business loans. Remote areas of the country often have no commercial bank branches, constraining firms' access to credit. Lack of access to finance has been identified as the fourth most important concern for businesses in Colombia, after corruption, lack of infrastructure and an inefficient government bureaucracy (WEF, 2012). The relationship between access to credit and poor productivity is stronger for smaller firms (Eslava *et al*, 2009).

The cost of credit is also high. The tax on financial transactions, caps on interest rates and poor loan contract enforcement raise banks' risk aversion and reduce credit supply (Meléndez and Harker, 2009). The total cost of credit seems to be also inflated by interest margins of over 6% (Figure 16) – cross-country comparisons should, however, be interpreted with care since they partly reflect the composition of loans and deposits. These wide margins are partly due to regulations, such as banks' compulsory low return investments in the public agricultural fund, but may also be due to a low level of competition in the banking sector, although this is difficult to assess.

Figure 16. **Interest rate spread in selected OECD and Latin American economies**

Percentage points, 2010



Note: The interest rate spread is the interest rate charged by banks on loans to prime customers minus the interest rate paid by commercial or similar banks for demand, time, or savings deposits.
Source: World Bank, *World Development Indicators Database*.

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Some measures have been taken to improve firms' access to credit but further changes are needed. The gradual removal of the tax on financial transactions and the increase in the interest rate cap are welcome. However, the cap should be completely eliminated. Measures have also been taken to expand financial intermediation. Long and medium-term credit lines for capital investments by micro, small and medium-sized enterprises (MSMEs) are offered by *Bancoldex*, a second-tier public bank. Its loan portfolio amounts to about 1% of total commercial loans. Bancoldex has a better solvency ratio (20%) than the financial sector on average (15%) and is rated AAA by Fitch ratings.

The *Banca de Oportunidades* programme, which operates under the Bancoldex umbrella, provides financial services in municipalities which have no commercial bank branches. It has contributed to an increase in microcredit, which now amounts to 1% of GDP. Evidence suggests that loans are no longer provided for political reasons, and borrowing firms have significantly increased their output, productivity and employment (Eslava *et al.*, 2012). The potential benefits of extending the role of Bancoldex should be studied.

The *Banco Agrario*, a public bank that provides credit to the agricultural sector, should take greater advantage of its large branch network in remote regions and develop partnerships with commercial banks to provide additional non-agricultural financial services. In addition, its funding should be diversified and, if the government wants to subsidise loans to smaller companies, it should use transparent means instead of financial repression (*e.g.* forced low interest funding).

The government is also promoting electronic banking to increase financial inclusion and reduce transaction costs. In close collaboration with the private sector, it has promoted the electronic payment of cash transfers to households and is preparing a law to facilitate the secure use of mobile banking. This would expand financial services to regions with few bank branches and promote household access to financial services. The government should pursue such initiatives further to promote access to finance.

Box 10. **Main policy recommendations to promote private investment by improving access to credit**

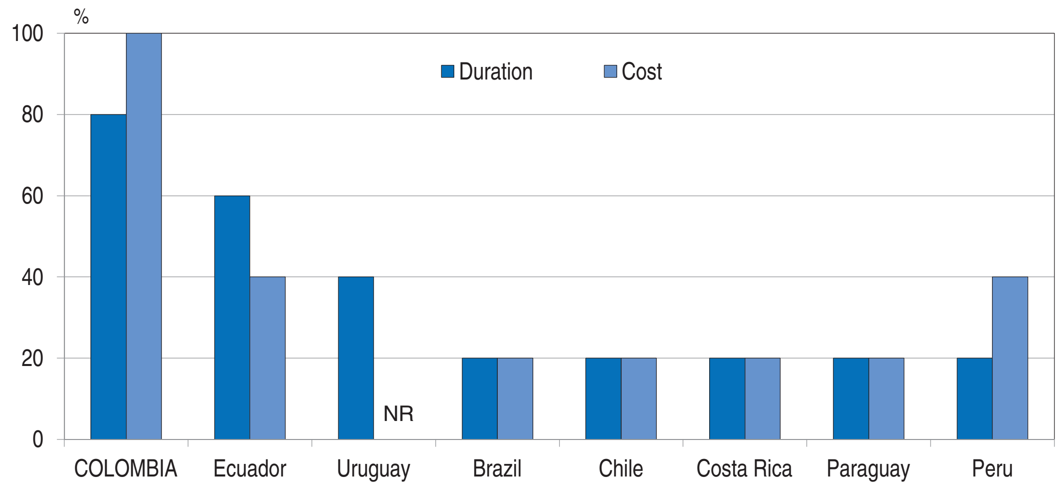
- Enhance firms' access to finance by phasing out interest rate caps, banks' compulsory financing of the public agricultural fund (Finagro) and the financial transactions tax.
- Investigate the benefits of expanding loan programmes by the Development Bank Bancoldex for MSMEs.
- Increase access to bank accounts and financial services by developing partnerships between Banco Agrario and commercial banks to better exploit Banco Agrario's large branch network in remote regions.

Investment in infrastructure to boost productivity and reduce regional disparities

Better transport infrastructure would increase productivity by increasing companies' market access and by allowing enterprises to exploit economies of scale and scope. It could also play an important role in reducing the large regional income disparities and in promoting rural development – one of the five key points for the peace negotiations between the government and the guerrillas. Colombia lags in transport infrastructure (roads, railroads and ports) in comparison with both developing and developed countries. Road length scaled by land area is less than a tenth of the OECD average and the length of the rail network is also limited.

The government plans to spend more on transport infrastructure. Close to 40% of royalty revenues (currently about 1½ per cent of GDP) will be channelled through regional development and compensation funds and be used mainly to finance infrastructure projects. However, the planning and supervision of the infrastructure projects should be enhanced to get the most out of them. Until recently, most projects were prioritised and planned without *ex ante* feasibility studies or value-for-money evaluations (Bitran *et al.*, 2013). Weak design and supervision of road concession contracts have also resulted in frequent renegotiations with large extra costs and delays that are well beyond those resulting from contract incompleteness which are inherent in PPPs (Figure 17). Moreover, a lack of long-term and multimodal planning has led to inadequate primary arteries between the main production centres and ports, undermining competitiveness and diminishing gains from international trade (Benavides, 2010). Along with lower transport costs, a greater use of rail and water transport can reduce environmental damages, which should also be an important component of multimodal green transport planning strategies.

Figure 17. **Renegociation incidence of concession contracts in 8 Latin American countries**



Note: The percentage refers to the proportion of contracts renegotiated, either for the duration or the cost of the project, out of the total number of concession contracts. Survey to policy makers, NR stands for no response.
Source: Nieto-Parra *et al.* (2013).

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The creation of the National Infrastructure Agency (ANI) and the approval of a PPP law are steps in the right direction. However, more time and resources need to be devoted to planning and prioritisation, in particular for the elaboration and revision of value-for-money analyses. Enhancing the institutional framework to ensure an unbiased assessment of PPP projects and improving the environmental and social assessment of infrastructure projects carried out before granting concessions would also help to raise the effectiveness of PPPs. Moreover, the strategy to exploit Colombia's potential for river and rail transport contained in the National Development Plan 2010-2014 should be effectively implemented. This will entail improving co-ordination between the institutions in charge of infrastructure projects and those for river-management, while also providing effective multimodal transport planning.

Increasing private participation could enhance spending efficiency if accompanied by appropriate institutional arrangements. Although some mining companies have invested in railroads and ports to facilitate access to markets, private sector participation in infrastructure projects is low. It covered about 23% of all projects between 1993 and 2006 and PPPs are around 0.5% of GDP, compared with 2% on average in the OECD. PPPs can have large benefits in terms of enhancing project efficiency, leveraging financing and reducing fiscal pressures when adequately regulated, including on the transfer of risk between the private and public sector. The recent law on PPPs is addressing some of these issues. It is also crucial to ensure that the authorities do not heavily discount future payments of PPPs or favour PPPs over public procurement with the main objective of meeting short and medium-term fiscal targets. Great care needs to be taken in setting up PPPs given that the evidence on the success of PPPs in OECD countries is mixed (CAF, 2009; OECD, 2008; Égert *et al.,* 2009).

Box 11. **Main policy recommendations to improve infrastructure**

- Strengthen the prioritising and planning phase of infrastructure projects, which must be governed by value-for-money, affordability and environmental impact assessments. These should include cost-benefit analyses and comparative evaluations among contract frameworks.
- Better evaluate the relevance of PPPs for infrastructure projects and their long-term impact on public finances.
- Improve the institutional and regulatory framework for transport infrastructure to ensure an unbiased and thorough assessment of PPPs and a better specification of projects before tendering.
- Improve co-ordination between transport institutions and better exploit multimodal transport opportunities.

Addressing fiscal challenges: Raise spending and tax efficiency to respond to social and economic needs

The consolidation of the public finances has been underpinned by a better fiscal framework and debt management. The 2003 Fiscal Responsibility Law made the public finances more transparent and sustainable by requiring the government to set a target for the consolidated primary balance of the non-financial public sector for the subsequent year, to set indicative targets for the next 10 years, and to present a medium-term fiscal framework to Congress. The fiscal rule approved in 2011 complements the Law by setting clear targets up to 2022, aligned with the political cycle (see Box 5). The government also regularly publishes estimates of contingent liabilities and information on tax expenditures. To ensure fiscal discipline at the sub-national government level, a law enacted in 2000 sets limits on the growth of recurrent spending, complementing the 1997 law (the so-called traffic light law) which introduced debt limits for sub-national entities.

Coping with future spending pressures from aging, meeting the government's poverty reduction target, improving infrastructure and public services, as well as adjusting to potentially volatile and declining commodity resources over the medium term, will require more ambitious fiscal reforms. The medium-term fiscal framework projects a decline in the already low public spending ratio – structural spending by the central government would go down from 18.4% of GDP in 2012 to 16.1% in 2023. This seems extremely challenging and would call for ambitious reforms to boost public spending efficiency and to meet public service and equity objectives. However, achieving the government's objectives of raising the quality of public services, developing the country's social and physical infrastructure and addressing poverty will require raising the public expenditure to GDP ratio gradually over time. Apart from increasing spending efficiency, this would call for raising more revenues, reducing distortions and increasing fairness. The current tax reform proposal addresses some of these concerns and the government expects it will raise more revenue in the medium-term. However, more efforts may be needed.

Alleviating poverty and providing better public services create strong spending pressures

Though the coverage of key public services (education and health) has increased, remote areas are still lacking basic infrastructure and there is a wide consensus on the need to improve the quality of public services throughout the country. Large infrastructure projects will entail an immediate cost and an increase in maintenance and operating costs in the longer run.

The government is committed to reducing poverty and income inequality and some of its envisaged policy actions will require higher public spending. To compensate and support the large number of people displaced by political violence – 3.9 million people (8.4% of the total population) between 1999 and 2011 – a Land Restitution Law was passed in 2011. It requires the government to provide assistance through targeted cash and in-kind transfers and to help these people return to work. The overall fiscal costs will be high – 8.9% of 2011 GDP between 2012 and 2021. In 2012, the government has also committed to provide 100 000 houses for vulnerable households, with an estimated cost of 0.6% of GDP.

Transfers to households should be reformed to raise their effectiveness in addressing poverty and raising long-term productivity. *Familias en Acción,* the cash subsidy programme for poor families conditional on school and health service attendance, has been successful in raising school enrolment rates. And the experience of Chile and Mexico confirms that such conditional cash transfers can help improve beneficiaries' wellbeing and their productivity. The programme could be extended to cover upper secondary education and be made conditional on pupils' achievements.

The system of cross-subsidised prices for utilities (electricity and gas, water and telecommunication) which aims at keeping prices low for those in need should be reconsidered. Those households considered to be well-off pay a surcharge on their utility bill to subsidise low-income households' consumption. The redistributive impact of such cross-subsidies is, however, low because of the flaws in the targeting system and since the poorest households may not all be connected to public utilities (*e.g.* in remote areas). For those connected to the system, the reduction in utility prices tends to be reflected in higher housing rents and values (Medina and Morales, 2007). In addition, the system is increasingly unbalanced, as the share of households paying the surcharge is low and has declined steadily (3.5% in 2008, down from 5.7% in 1997 according to Parra, 2011), thus requiring the central government and municipalities to step in and subsidise the consumption of energy, water and telecommunication. The central government's contribution for the electricity sector amounted to close to 0.1% of GDP in 2011. By reducing the price of energy and water use, these subsidies may be detrimental to the environment.

Reforming the pension system to reduce regressivity and broaden coverage

The pension system raises serious equity issues. The coverage of the contributory system is low and the absence of a first pillar minimum pension leaves many elderly in poverty. Only 30% of the retirement age population received a pension in 2012, compared with 80 to 90% in countries such as Argentina, Brazil, Chile and Uruguay. Workers must have contributed long enough in the formal sector with earnings at least at the minimum wage, and thus be among the more affluent, to be entitled to a pension. Less than 30% of those working were contributing to the pension system in 2012. As the present value of benefits is well above contributions (Santamaría *et al.,* 2010), the public pension system is extremely generous for the happy few. By using the last 10 years of earnings to calculate pension rights, the system also tends to benefit those with steep earnings profiles, which are often the best educated and high-income individuals. In contrast, some 20 OECD countries use lifetime earnings and in Canada, the Czech Republic and the United States, the pension is based on 30-35 years of earnings (OECD, 2011b). Furthermore, the tax regime for pensions is extraordinarily generous by OECD standards. Pension contributions are deductible from the income tax base and benefits are largely tax exempt, further exacerbating income inequality. More than 80% of the pensions go to the highest income quintile while the 2 poorest quintiles receive less than 2% (Santamaría *et al.*, 2010). Overall, the pension system is estimated to raise the Gini coefficient (Moller, 2012).

To protect the elderly poor, the government is considering implementing the so-called *beneficios económicos periódicos* (BEPS) to cover 6 million elderly poor over the next 20 years. The BEPS are individual retirement accounts that target those working in the informal sector, who have irregular wages or wages below the minimum wage, and those who have not contributed enough to the contributory regime to be entitled to a pension (that, by law, must be at least equal to the minimum wage). The government's top-up rate on individuals' voluntary contributions to the BEPS would be 20%. The BEPS system specifically targets low-income households: only those from the three lower socio-economic strata (the so-called Sisbén 1 to 3) can be covered by the BEPS, the maximum level of subsidised savings is set at COP 885 000 per year (*i.e.* less than USD 490) and the benefit at retirement cannot be more than 85% of the minimum wage. The BEPS system will help broaden pension coverage and should be implemented swiftly. In addition, social assistance programmes to protect the elderly poor (PPSAM) should be made more generous. Their take-up rate should also be increased as currently planned by the government for the coming years.

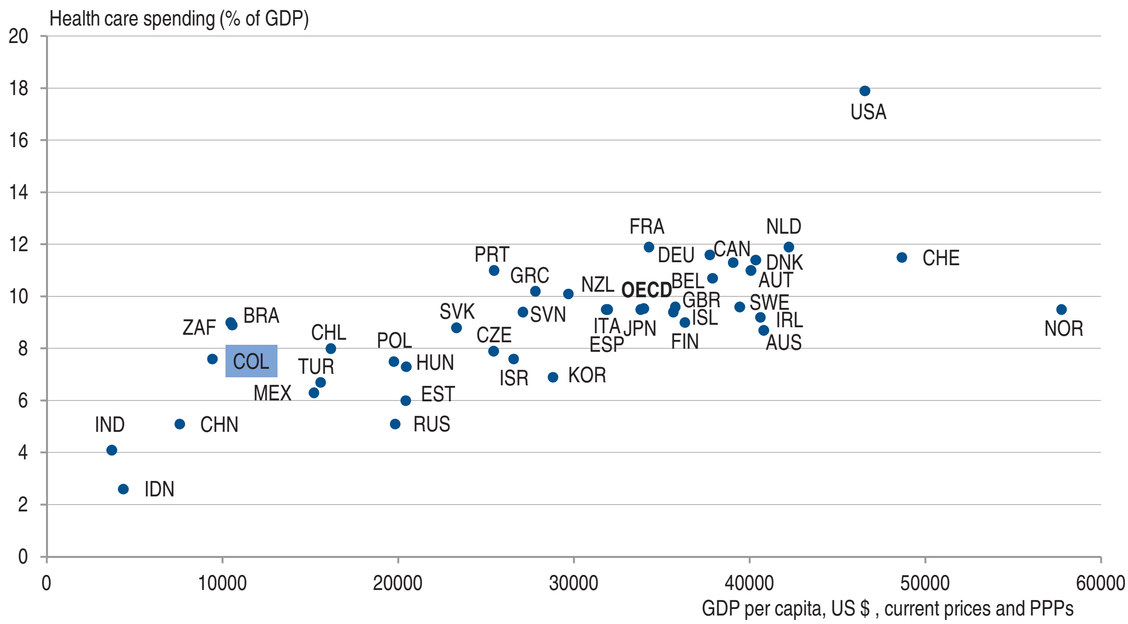
Increasing pension coverage would also require gradually extending the contributory regime. To ensure future sustainability, the existing system should be reformed as a prerequisite. Indeed, transfers to the pay-as-you-go (PAYG) pension system, at 3.3% of GDP in 2011 (excluding the costs of tax expenditures associated with the pension system), are not very high by OECD standards. Still, they amounted to more than 18% of central government spending in 2011. Expanding the pension system will involve significant budgetary outlays and should be undertaken in connection with parametric reforms. The legal retirement age is very low by international standards, at 55 years for women and 60 years for men. The 1993 pension reform will raise them by 2 years from 2014, which will still leave them low. The pension age should thus be raised further, and adjusted in the future to reflect changes in life expectancy. However, care should be taken to avoid exclusion of the most vulnerable groups, especially those who have worked in the informal sector. The replacement rate – between 65 and 85% of the average wage over the previous 10 year period, compared with 57% of lifetime earnings for the OECD average (OECD, 2011b) – is also high. It may need to be reduced as the coverage of pensions is extended. In addition, the indexation of pensions to the minimum wage is generous and, judging by OECD experience, will probably have to be changed to a system based at least in part on price inflation. Finally, the requirement for pensions to be at least equal to the minimum wage will need to be reconsidered.

Improving health care spending efficiency

Colombia has reached almost universal health coverage and the benefit basket has gradually been made more generous for the poor – a commendable move in a country with large income inequality. Still, health care spending is high compared with countries with a similar income level (Figure 18). It is mostly publicly financed, with public spending on health care absorbing a very high share of the general government budget compared with most OECD countries (Figure 19). While social security contributions broadly cover health care costs for affiliated workers (*i.e.* the contributory regime), the financing gap is large and growing, reflecting the expansion of the subsidised (as opposed to contributory) health coverage for the poor and the convergence in the benefits basket. In 2012, only 47% of the population was covered by the contributory regime.

Figure 18. **Health care spending is relatively high for the income level**

2010 (or nearest year)



Source: *OECD National Accounts Database; World Bank Database; OECD Health Data; World Health Organisation Database.*

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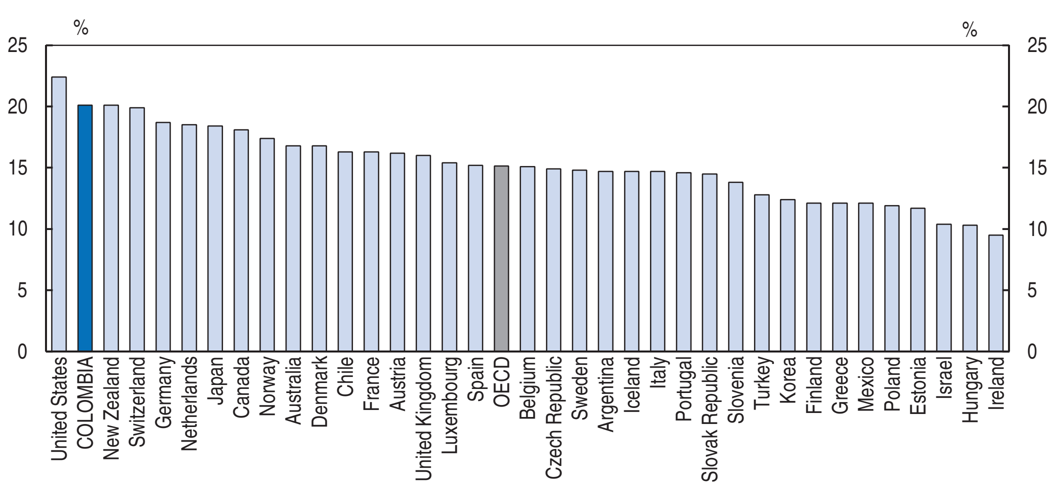
Figure 19. **Health care absorbs a large share of general government spending**

General government expenditure on health as a share of total government expenditure, 2010 (or nearest year)



Source: World Health Organisation.

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Defining priorities better, and in particular the health benefits covered, would help in containing spending. Individuals have increasingly petitioned the constitutional court to grant them access to specific health care services or because waiting times have increased – a process known as *tutela* (Bernal *et al.*, 2012; Yepes *et al.*, 2010). The number of successful *tutelas* reached more than 141 000 in 2008, an increasingly recurrent practice dubbed *tutelitis* by Colombians. To improve prioritisation and the visibility of health care rights and costs, the government should revise and better define the basic package of care. The government's plan to move in this direction is welcome.

Improving the organisation of the health care system would also raise spending efficiency. Colombia's health care system relies on more than 99 private and public insurers, financed out of a pool of social security contributions. These insurance companies buy services from providers, but vertical integration between insurers and providers is frequent – it was estimated at 50% by Clavijo (2009) but may have declined since then as a 2007 Law introduced a tighter limit. This fragmented silo approach reduces competitive pressures at the provider level. It also makes it difficult to use spare resources efficiently and exploit economies of scale.

In OECD countries, insurance fragmentation is often accompanied by large administrative costs and it reduces payers' monopsonist power, thus resulting in higher health care prices (Joumard *et al.*, 2010). This may also be the case in Colombia although data are lacking. In Colombia, insurance fragmentation has been accompanied by corruption (Bernal *et al.*, 2012; Clavijo, 2011). Raising value for money in the health care system would require reducing the fragmentation of the insurance system and the degree of vertical integration between insurers and providers. Consolidating the health insurance funds would further bolster their bargaining power in setting provider prices and would cut administrative costs.

Fiscal costs associated with natural disasters and legal disputes may be large

Natural disasters have often given rise to large fiscal costs and particularly affect poor households. Although projections for the frequency and consequences of natural disasters are by nature difficult, contingent liabilities associated with natural hazards may be high. The severe 2010 floods associated with the meteorological phenomenon *la Niña* provide a case in point. They affected almost 3 million persons who lost their home or were seriously deprived of public services. About 570 000 homes, 813 schools and 15 health centres were destroyed and many small farmers suffered large land damages. Extraordinary public spending on humanitarian aid and reconstruction investment over the period 2011-14 is estimated at 3% of 2011 GDP.

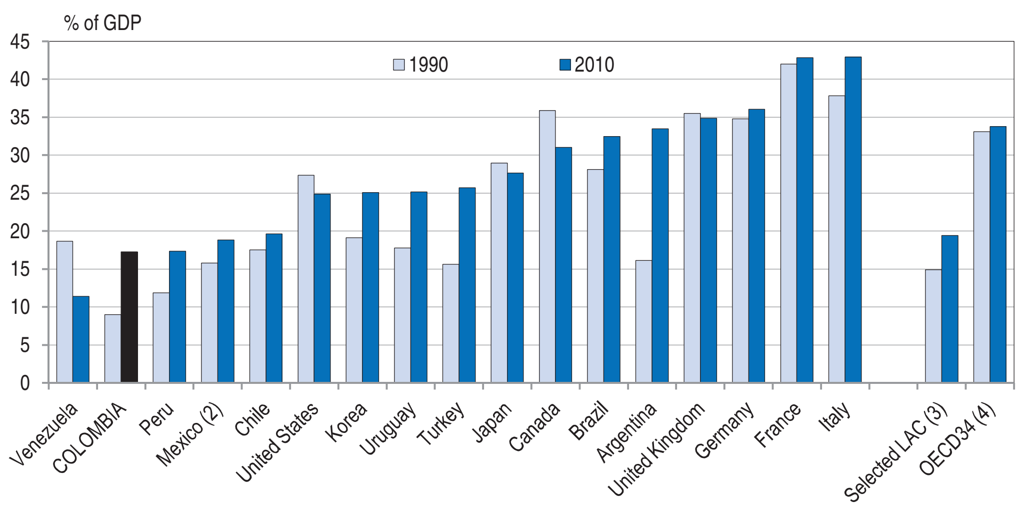
Legal disputes have also come at a high fiscal cost in the past. As an illustration, the Constitutional Court has on various occasions ruled against some elements of pension reforms approved by Congress, with large implications for contingent pension liabilities. The 2011 constitutional amendment, which enshrines fiscal sustainability in the constitution, will also help to mitigate such pressures, although its effect remains to be seen. The creation of a state legal defence agency to coordinate the state defence is welcome. It has already helped reduce the estimated loss from 69% to 15% of 2012 GDP between 2012 and 2021 in net present value terms.

Reforming the tax system to raise more revenues, reduce distortions and income inequality

The Colombian tax system raises little revenue (Figure 20), creates many distortions through the various reliefs and special regimes and relatively high marginal rates, and redistributes little, if at all. It is also complex and generates high administrative and compliance costs, as well as widespread tax avoidance and evasion. The 2010 tax reform closed some loopholes and reduced distortions. The elimination of the tax credit for investment in fixed assets which benefitted capital-intensive activities and the mining industry most, the increase in the base and rate of the wealth tax and the reduction of the energy surcharge levied on firms from 2013 are welcome and should increase revenues by about ½ per cent of GDP by 2014.

Figure 20. **Tax revenues have increased but remain low**

Tax revenues as a share of GDP[1]



1. Data exclude local government revenues for Argentina, Peru (in 1990), Uruguay and Venezuela.
2. Fees levied on hydrocarbon production are treated as non-tax revenues.
3. Represents a selected group of 15 Latin American and Caribbean countries. Chile and Mexico are also part of the OECD (34) group.
4. Represents the unweighted average for OECD countries.

Source: *Revenue Statistics in Latin America,* OECD 2012; OECD Revenue Statistics.

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A more fundamental tax reform is needed to raise additional revenues, promote economic growth and reduce income inequality. A recent OECD study on income distribution and growth reveals a number of win-win tax reform options (OECD, 2012b; Joumard *et al.*, 2012). One of them is to reduce tax rates and widen the base while fighting against tax avoidance and evasion. The use of tax expenditures has increased steadily since the early 2000s in Colombia as their number rose from 127 to 201 between 2000 and 2011. The revenue foregone was estimated at between 3 and 4.5% of GDP in 2010 (World Bank, 2012a). Large tax expenditures are accompanied by high tax rates, which distort economic incentives. The large number of tax expenditures – *e.g.* those associated with free trade zones, legal statutory regimes, preferential rates for small firms (the so-called SAS) and reduced VAT rates and exemptions – not only undermine revenues but make the tax system extremely complex, and thus costly to administer and comply with, and easier to avoid and evade.

At 33%, the corporate income tax rate is above the OECD average (about 25%). A more transparent corporate tax regime, with fewer exemptions and a lower rate, could further enhance companies' ability to adjust to the stronger exchange rate. For example, Australia is planning to reduce its high statutory corporate tax rate to favour investment in the non-mining sector which would help reduce the risk of a two speed economy in the context of large terms of trade changes (OECD, 2010).

The tax mix should be reconsidered. Personal income tax revenues are very low by OECD standards (Table 4). At the same time, very high social security contribution rates deter employment creation in the formal sector and do not raise much revenue. The reliance on social contributions to finance health care services and some *parafiscales* should be reconsidered. In contrast, more revenue could be raised from environmentally related taxes which are extremely low by OECD standards (Figure 21). More revenue could also be raised from mining, inheritance and real estate taxes which are less distortive and more growth-friendly than many other taxes (Johansson *et al.*, 2008).

Table 4. **The personal income tax raises little revenue while consumption taxes play a dominant role**

(2010)

	% of total tax revenues			% of GDP		
	Colombia[2]	LAC	OECD	Colombia[2]	LAC	OECD
Taxes on income and profits	**27.9**	**24.5**	**33.3**	**4.8**	**4.8**	**11.3**
Personal income tax	6.1	6.0	24.9	1.1	1.2	8.4
Corporate income tax	21.7	12.2	8.6	3.8	2.4	2.9
Social security contributions	**12.2**	**18.8**	**27.0**	**2.1**	**3.6**	**9.1**
Payroll taxes[1]	**0.0**	**0.7**	**1.1**	**0.0**	**0.1**	**0.4**
Property taxes	**8.9**	**4.3**	**5.3**	**1.5**	**0.8**	**1.8**
Recurrent taxes on immovable property	3.4	1.7	3.1	0.6	0.3	1.0
Recurrent taxes on net wealth	2.1	1.2	0.5	0.4	0.2	0.2
Taxes on financial and capital transactions	3.4	1.9	1.3	0.6	0.4	0.4
Taxes on goods and services	**44.8**	**50.8**	**32.5**	**7.7**	**9.9**	**11.0**
General consumption taxes	35.2	34.3	20.3	6.1	6.7	6.9
Specific consumption taxes	9.5	15.6	10.3	1.6	3.0	3.5
Other taxes	**6.3**	**1.2**	**0.6**	**1.1**	**0.2**	**0.2**
Total	**100.0**	**100.0**	**100.0**	**17.3**	**19.4**	**33.8**

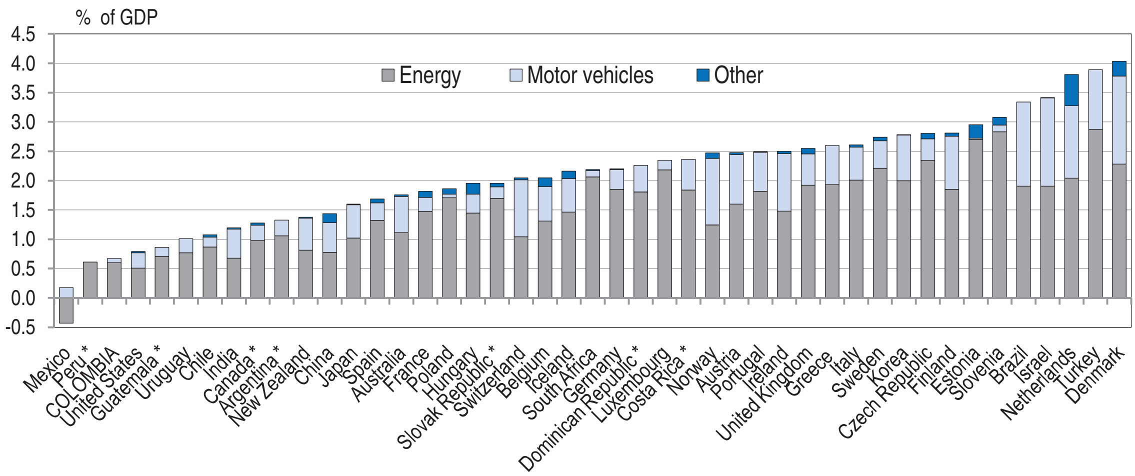
1. The so-called "parafiscales" (SENA, ICBF, and CCF) are under social security contributions in the OECD Database.
2. The breakdown of income taxes between corporate and personal income taxes is based on Joratt (2010).
Source: OECD *Revenue Statistics; Revenue Statistics in Latin America*, OECD 2012; Jorratt (2010).

Although royalties on natural resource extraction have increased from less than ½ per cent of GDP in the mid-1990s to over 1.3% in 2011 (Figure 22), revenues could be increased further, at least in the medium run. Resource taxation could be shifted more towards profits, either by setting the current profit tax higher for the mining sector, or by moving towards a resource rent tax similar to that implemented in Australia (OECD, 2010). Royalties based on the volume or value of production discourage investment in exploration and in developing less profitable projects because they do not take into account the costs of exploration, development and operation. Income and rent-based taxes, by contrast, more accurately measure the surplus available for payment of taxes. Rent taxes also imply that the government accepts a larger share of the investment risk. This regime is more attractive to investment and provides for a potentially larger government take on more profitable projects. A full shift from royalties to rent taxes may not be desirable, however, at least in the short term. Income- and rent-based taxes are more complicated to administer and require more advanced administrative capacity.

There may be reasons to maintain a government share of gross revenues while administrative experience with rent taxes grows and in order to provide some upfront government revenues and promote political acceptability.

Figure 21. **Revenues from environmentally related taxes are low**

In per cent of GDP, selected countries, 2010



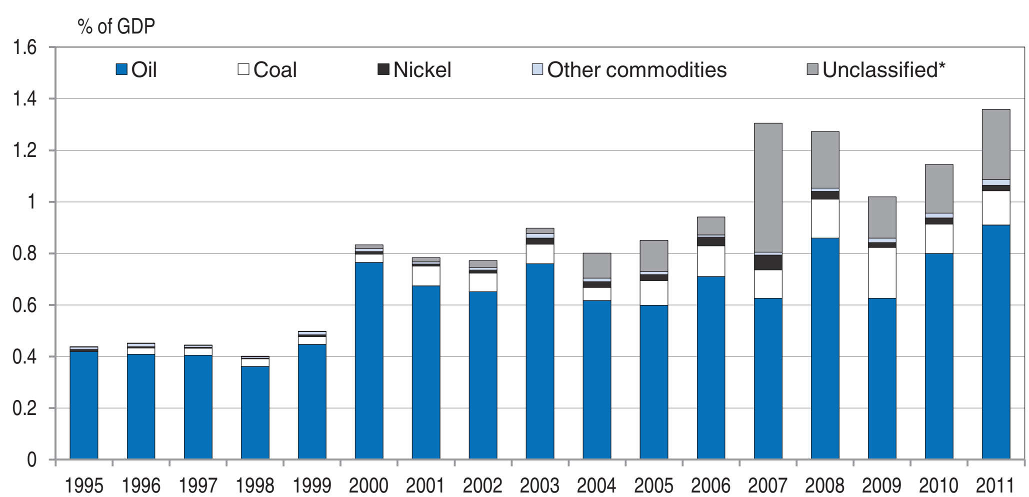
* 2009 data. In Mexico, the system used to stabilise end-user prices of motor fuels causes tax revenues to turn negative in years with high world-market prices for such fuels.

Source: OECD/EEA database on instruments used for environmental policy and natural resources management.

StatLink http://dx.doi.org/10.1787/888932764648

Figure 22. **Revenues from royalties have increased since the mid-1990s**

Per cent of GDP



* Unclassified includes the amount of revenues assigned to the territorial pension saving fund (Fonpet).

Source: Ecopetrol, Agencia Nacional de Hidrocarburos, Carbocol y Minercol, Ingeominas (today Agencia Nacional de Mineria), National Planning Department and Ministry of Finance.

StatLink http://dx.doi.org/10.1787/888932764667

The redistributive impact of the tax system should be strengthened. The personal income tax currently plays a very limited role. Tax receipts are low because of the large number of workers operating in the informal sector who do not pay the income tax. In addition, because the initial exempted bracket is large and other tax relief are extremely generous, only half of those filing a return pay the income tax, *i.e.* less than 3% of the adult population. In addition, the progressivity of the statutory rate schedule is low. There are also generous tax reliefs which benefit the rich most – including those related to pensions, housing investment and the 25% wage income allowance. These tax reliefs will *de facto* be capped by the proposed alternative minimum income tax (IMAN) included in the 2012 tax reform plan. A refundable in-work tax credit targeted on the poor could also be envisaged, as in Mexico and many other OECD countries. Such an in-work tax credit would make the tax system more progressive, support the income of the working poor and promote formalisation.

To increase the redistributive impact of both real estate and inheritance taxes, the existing generous tax allowances should be reconsidered. VAT exemptions and reduced rates for basic consumption goods aim at raising the purchasing power of poor families. However, the rich are benefitting most from the implicit subsidies – half of the value of excluded and exempted goods is consumed by the richest quintile of the population while the poorest consume approximately 5% (Moller, 2012). And the cost of this implicit subsidy is high – revenue foregone is estimated at 1.5% of GDP by the World Bank (2012a). VAT expenditures and reduced rates should be replaced by means-tested cash benefits, although there are significant political economy constraints that have thwarted past reform efforts.

The government's tax reform plan (Box 12) addresses some of the drawbacks of the tax system. It reduces the number of VAT rates to three. This simplification should help promote formalisation and compliance. It introduces progressivity, with the alternative minimum income tax (IMAN), at the very top of the income distribution, *i.e.* the richest 4%. The envisioned cut in non-wage labour costs should help create formal employment, thus contributing to reduce disparities in labour income. However, more should be done to cut non-wage labour costs, which will remain well above the OECD average and the level in similar countries such as Chile and Mexico (Figure 23). Further streamlining tax reliefs and special regimes, in particular for the corporate income tax, would also be desirable. In addition, future tax reforms should aim at raising more revenue and moving to less distortive taxes (*e.g.* through higher environmental and property taxes).

Box 12. **Key features of the 2012 tax reform proposal**

The tax reform presented by the government in October 2012 has three main objectives: raising the redistributive impact of taxes, promoting formal employment and reducing tax avoidance and evasion. It is supposed to be revenue-neutral in the short-term but may result in an increase in revenue over the medium and long run by reducing tax-related distortions and promoting formalisation and economic growth.

The personal income tax will be simplified and made progressive. An alternative minimum income tax, "IMAN", will be implemented. It allows for simplified filing procedures and ensures effective progressivity. The poor and middle classes – *i.e.* those earning less than 3.35 million pesos per month – will face an effective tax rate of 0%, down from over 6%. This exempts 96% of the population from contributing to the personal income tax. For the remaining 4% of the population, the effective rate will be progressive, with a maximum rate of 25% for the richest. The extremely generous tax allowance for pensions will be slightly reduced (pensions above COP 10 million, *i.e.* more 15 times the minimum wage in 2012, will become taxable).

Box 12. **Key features of the 2012 tax reform proposal** *(cont.)*

Non-wage labour costs will be reduced. Some *parafiscales* – those financing ICBF (2%) and SENA (3%) – and the employers' health care contributions (8.5%) will be abolished for firms employing workers with monthly wages under 10 times the monthly minimum wage. SENA, ICBF, and the healthcare system will be funded through the corporate income "contribution to equity" levied at a rate of 8%.

The corporate income tax base will be broadened. The reform proposal reduces the standard corporate income tax rate from 33% to 25%, while creating an additional 8% tax called "contribution to equity" applied on a broader tax base – taxable income *plus* some exemptions and deductions (*e.g.* investment spending on fixed assets). This new tax would fall mainly on mining and construction companies, as well as banks, with proceeds earmarked to finance ICBF, SENA and healthcare. To secure resources to finance SENA, ICBF and health care, the government has committed to maintain the 2013 budget, with a 2 percentage points increase in real terms per year.

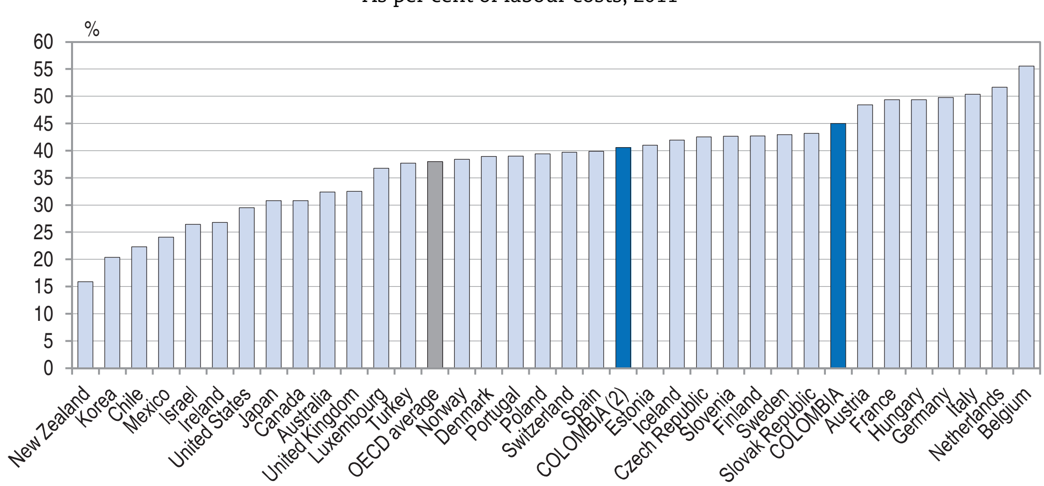
The VAT will be simplified. The number of tax rates will be cut from seven to three to encourage compliance and reduce tax evasion.

A series of laws to reduce tax evasion and avoidance will be put in place. In particular, the tax agency will be able to initiate a tax audit before the judiciary system has proved that there was a tax fraud. Moreover, capital gains, inheritances and bets will be taxed at a flat rate (10%, 10% and 20%, respectively), instead of a higher and progressive rate.

Expected results of the reform: With income tax progressivity due to IMAN, the reform could reduce the Gini coefficient from 0.573 to 0.554 according to government estimates. By reducing social contribution rates by 13.5 percentage points, the reform aims at creating between 400 000 and 1 million formal jobs.

Figure 23. **Non-wage labour costs are high by international standards**

As per cent of labour costs, 2011[1]



1. Non-wage labour costs for a single individual without children at the income level of the average worker. Non-wage labour costs include tax and non-tax compulsory payments, that is, both requited and unrequited compulsory payments to privately-managed funds, welfare agencies or social insurance schemes outside general government and to public enterprises. The 2011 average earnings data for Greece were not available at the final compilation stage.
2. Colombia after the tax reform proposal, as presented in Table 1.1.

Source: *OECD Tax Database*; OECD estimates.

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Box 13. **Main policy recommendations to address fiscal challenges and better respond to social and economic needs**

Gradually create fiscal space to finance transfers to those in need and higher quality social and physical infrastructure by:

- Ensuring that the proposed tax reform raises enough revenue in the medium-term to meet needs. Shifting the tax mix towards more growth-friendly taxes should be considered.
- Improving equity and enforceability through further reforms. This would require: broadening the VAT by narrowing exceptions and limiting the use of low rates; cutting tax expenditures for free-trade zones and the personal income tax (in particular pensions); and increasing revenues from environmental and property taxes; and considering moving from royalties to less distorting profit taxation. On the other hand, payroll taxes should be reduced further (in particular *Cajas*) to enhance labour market incentives.
- Making the pension system less regressive and expand its coverage. This would require: reducing the implicit pension subsidy benefitting the rich by increasing the legal retirement age and lengthening the reference earnings period; reconsidering the requirement for pensions to be at least equal to the minimum wage; abolishing special regimes; indexing pensions on prices instead of the minimum wage; eliminating tax relief for pensions; and implementing swiftly the BEPS. Options for increasing the minimum income support for the elderly poor (PPSAM) should be studied.
- Improving the organisation of the health care system to raise value for money by reducing the fragmentation of the insurance system and vertical integration between insurers and providers.
- Better targeting support to those in need with conditional cash transfers and expanding it while phasing out reduced VAT rates and exemptions as well as price subsidies for water and electricity.

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Chapter 1

Tackling income inequality

Income inequality has declined since the early 2000s but remains extremely high by international standards. Income dispersion largely originates from the labour market, which is characterised by a still high unemployment rate, a pervasive informal sector and a wide wage dispersion reflecting a large education premium for those with higher education. Wealth, and thus capital income, is also highly concentrated. The tax and system does little to reduce income inequality. It is small and dominated by non-redistributive transfer schemes, in particular contributory pensions, and consumption taxes which tend to be regressive. Moreover, the progressivity of income taxes has been undermined by generous tax reliefs, which benefit the well-off most and increase tax avoidance opportunities. Reducing income inequality is a key government objective. To achieve this, labour costs should be reduced and education quality should be raised so as to boost employment creation in the formal sector. The tax system should be reformed to enhance progressivity and raise more revenue which could be used to expand social policies.

Setting the scene: Income inequality and poverty are very high by international standards

Economic growth has helped secure a considerable drop in absolute poverty, measured in monetary or broader terms (Box 1.1). However, declines in disposable income inequality and relative poverty have been more modest. Income inequality and poverty, measured both in relative and absolute terms, remain extremely high by OECD standards (Figure 1.1). Reducing them is one of the government's priorities. After discussing basic poverty and inequality trends, this chapter shows that income inequality largely originates from the labour market and highlights the factors driving it: these include a still high unemployment rate, a very large informal sector and a wide wage dispersion in the formal sector. It then reviews tax and transfer policies and explains why they have, overall, a very limited, if any, redistributive impact.

Box 1.1. **Poverty: measures, incidence and recent developments**

Poverty reduction is one of the three pillars of the current government's National Development Plan 2010-14 "Prosperity for All". To monitor poverty, evaluate public policies and assess progress in reaching the Millennium Development Goals, the government has developed improved measures of poverty. Indicators of monetary poverty and multidimensional poverty are the most important.

Alternative poverty measures across OECD countries and in Colombia

The relative merits of alternative poverty measures have been debated over the past fifty years. Poverty can be measured in absolute terms – a cut-off income line below which individuals are not able to afford a bundle of pre-defined basic goods – or in relative terms – with the relative poverty line defined as a percentage (usually 50 or 60%) of median income. In addition, Sen (1983) argues that the right approach for assessing the standard of living is to focus not on basic commodities or utility but on capabilities or functionings. In OECD countries, a consensus has slowly emerged favouring the use of relative poverty measures, the United States being a notable exception (Pisu, 2012). In Colombia, the government has developed various poverty measures which help in understanding and addressing poverty, with a focus on absolute poverty and on multidimensional deprivation, which is close to Sen's approach.

Recent efforts to better measure poverty in Colombia

In 2011, Colombia adopted a new methodology to measure *monetary poverty*. Recently, new statistics establishing poverty and extreme poverty lines have been published. An individual is considered "poor", if he/she lacks the income required to cover a basic family food basket and other basic needs (*e.g.* health care expenses, education and clothing), and as "extremely poor" if he/she lacks the income to consume a minimum number of calories.

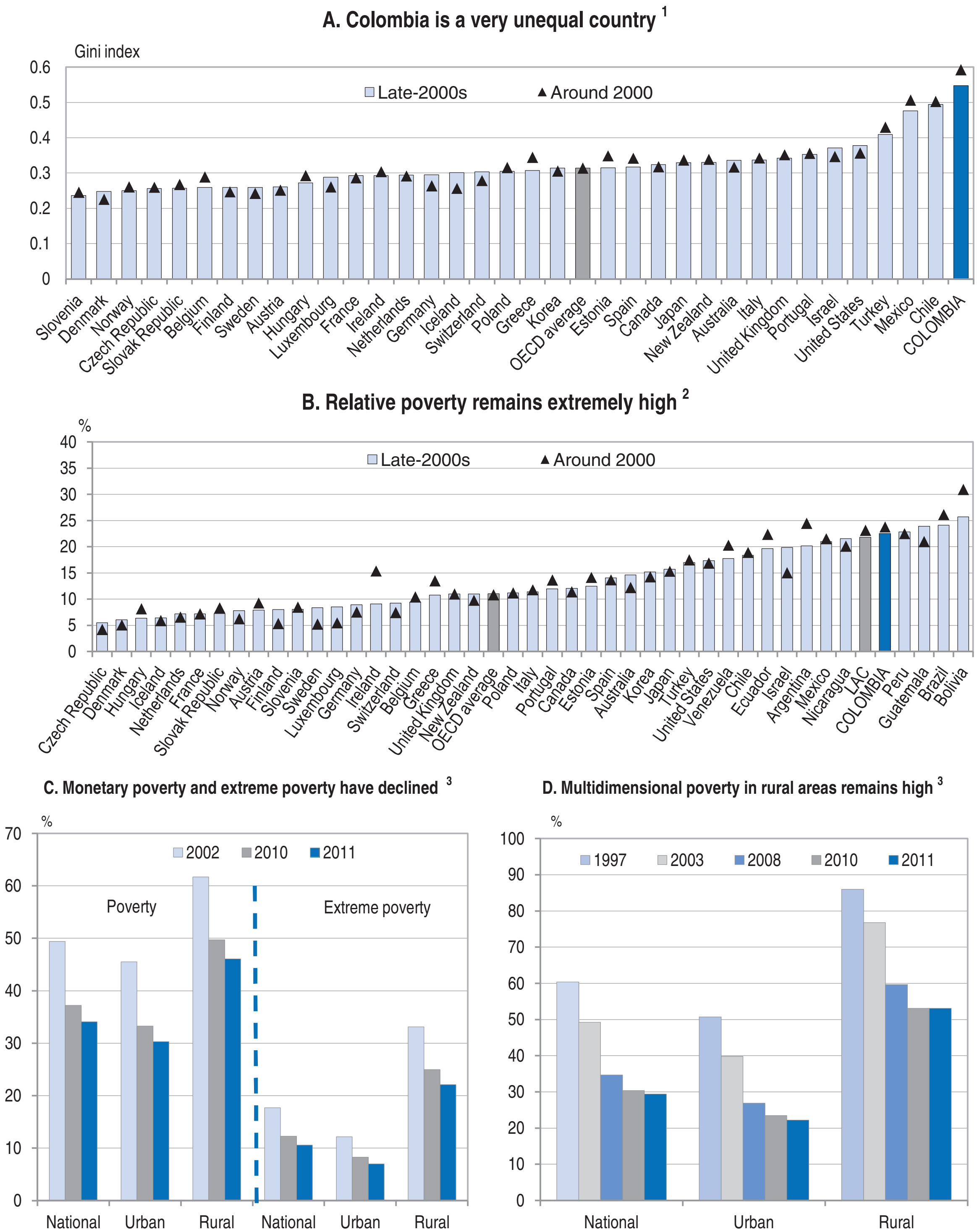
Box 1.1. **Poverty: measures, incidence and recent developments** *(cont.)*

The method is as follows. First, current per capita expenditure is computed, adjusted by a spatial price deflator to account for regional differences in the cost of the family basket. Households are then ordered by this measure and an iterative method is applied to select the reference population (percentiles 30 to 59). This defines the basic family consumption basket. The extreme poverty line is obtained following a normative adjustment to the minimum calorific needs. The poverty incidence is computed using a methodology developed by ECLAC for all Latin American countries to enhance the comparability of poverty measures across the region. This new methodology offers an up-to-date and more precise measure that allows for better comparability with the measures of other Latin American countries. Its advantages include updating continually consumption habits and using a better measure of income.

In Colombia, official statistics show that absolute poverty fell sharply from 49% in 2002 to 34% in 2011 (see Figure 1.1, Panel C). Extreme poverty also decreased, dropping from 18% to 11% over the same period. In spite of these remarkable improvements, rural poverty remains more than twice the urban rate. The government aims to reduce the poverty rate to 32% and the extreme poverty rate to 9.5% by 2014.

However, income provides only a partial measure of poverty and individual wellbeing (Stiglitz *et al.*, 2009). In an effort to go beyond income, the Colombian government adopted the *Oxford multidimensional indicator of poverty* in 2011. The following 5 dimensions and 15 variables are covered by the National Planning Department (DNP): *i)* household educational background (*e.g.* educational attainment, illiteracy); *ii)* childhood and youth characteristics (*e.g.* school attendance, repetition, access to early childhood services, child labour); *iii)* employment (*e.g.* long-term unemployment, formal labour); *iv)* health (*e.g.* health insurance, access to health care services conditional on need); and *v)* access to public services and dwelling conditions (*e.g.* access to treated water, sewage disposal, quality of floor and exterior walls, and overcrowding). An individual is considered poor if deprived of at least 33% of these 15 variables, taking into account their relative weights. The indicator portrays the incidence, intensity, severity, and nature of deprivation. This poverty rate shrank by half, from 60% in 1997 to 29% in 2011 (Figure 1.1, Panel D), mainly thanks to wider health care coverage, increased school attendance among 6-16 year-olds, better access to early childhood services and reduced long-term unemployment. The rural/urban gap is higher for the multidimensional than the income approach, partly reflecting the critical lack of infrastructure (in particular water provision and sewage), low education achievement and the prevalence of informal employment in rural areas. In 2011, 300 000 people moved out of multi-dimensional poverty and the government aims at reducing the incidence of poverty further from 29% to 22.5% by 2014.

Figure 1.1. **Poverty and income inequality: recent trends and international perspective**



1. Gini index of household disposable income (market income after taxes and transfers), total population.
2. Relative poverty rates after taxes and transfers (threshold of 50% of the median income).
3. Monetary and multidimensional poverty are measured in absolute terms. The data show poverty incidence, as a share of total population. For multidimensional poverty, the dimensions covered are described in Box 1.1.

Source: OECD; SEDLAC; DANE, calculations based on GEIH; DNP.

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Political violence has contributed to poverty

Political violence, both from the guerillas (especially FARC, the Revolutionary Armed Forces of Colombia) and former paramilitary groups, has predominantly affected rural areas and contributed to poverty. The persistent risk of expropriation has reduced investment incentives and thus trapped rural households into low productivity activities and poverty. Political violence has also led to a massive displacement of people – 3.7 millions (8% of the total population) over the period 1997-2011 (Acción Social, 2012). These people, mostly peasants, have lost their land and income – asset losses represented 3% of GDP (Ibáñez and Velásquez, 2009).

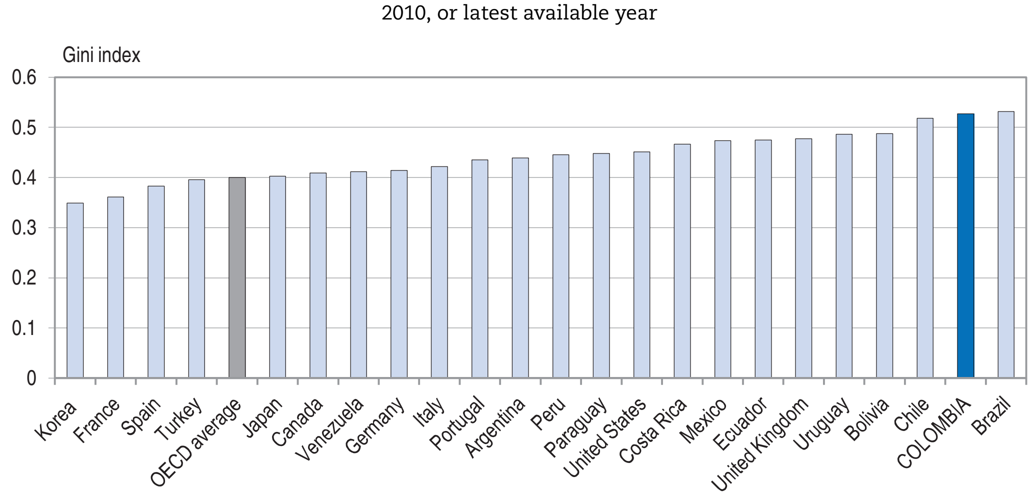
Forced to move to large cities, displaced people face tremendous difficulties to find a job since their qualifications and education level do not match demand for labour in urban areas (Ibañez and Moya, 2009a and 2009b). The vast majority of displaced people thus suffer from poverty (Fernández *et al.*, 2011). In 2008, 98% of them lived below the poverty line and 74% below the extreme poverty line (Garay, 2008). While policies targeting the displaced population have long been scant, the government is providing increasing support through targeted cash and in-kind transfers (in particular education and health). The 2011 Land Restitution Law is a cornerstone in this regard, but will have a high fiscal cost (COP 54 billion over the period 2012-2021; or 8.9% of 2011 GDP).

Inequality in labour earnings is extremely high by international standards

Income inequality in Colombia, as in OECD and Latin American countries, largely originates from the labour market (Hoeller *et al.*, 2012; López-Calva and Lustig, 2010). Although capital income is generally more skewed than labour income, it is not a strong determinant as its share in total market income is modest – around 7% in the OECD on average. In Colombia, inequality in labour earnings is high by OECD standards, and above most LACs (Figure 1.2). Household survey data compiled by SEDLAC suggest that in 2010 the top 10% richest households captured more than 40% of total labour earnings. Inequality in labour earnings reflects three main factors. *First*, the unemployment rate, at 11% in 2011, remains high by OECD and Latin American standards. *Second*, a large share of people is employed in the informal

Figure 1.2. **Inequality in household labour income is very high**

2010, or latest available year



Note: Gini index of household labour income (including informal employment) for the total population.
Source: Socio-Economic Database for Latin America and the Caribbean, SEDLAC (CEDLAS and The World Bank), *OECD Income Distribution Database.*
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sector, and the income of a majority of them is well below the minimum wage. *Third*, the wage dispersion is very wide among those working, reflecting a high education and skill premium. And many of those employed (about one third in 2012) also reported being under-employed.

High labour costs contribute to a high unemployment rate and a large informal sector

The combination of a relatively high and uniform minimum wage and high non-wage costs hurts employment prospects in the formal sector for those with low productivity, in particular the young, the low-qualified and people living in remote areas. As corroborated by many empirical studies (see for instance Mondragón-Vélez *et al*., 2010; Sánchez Torres and Alvarez Vos, 2011; and Santamaría *et al*., 2010), high labour costs in the formal sector are reflected in a large number of people working in informal employment and a rather high unemployment rate, which both exacerbate income inequality. In particular, Mondragón-Vélez *et al.* (2010) argue that the increases in non-wage labour costs and in the minimum wage between the 1990s and 2006 have both excluded low skilled workers from the formal labour market and triggered a move from the formal to the informal labour market, increasing the relative size of the latter.

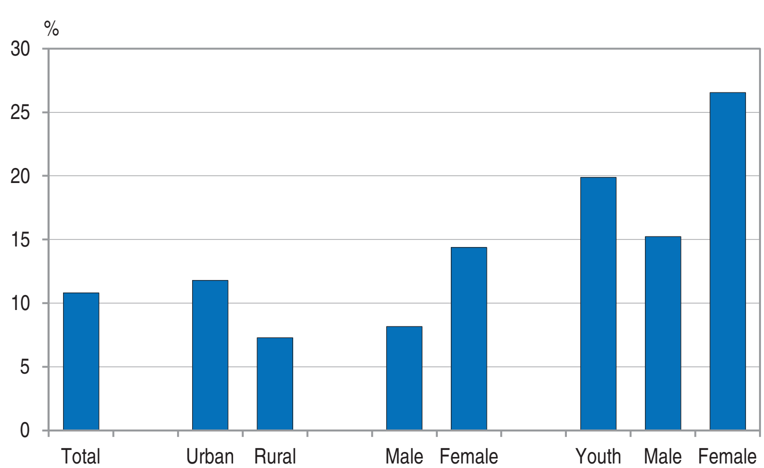
Unemployment and informal employment dominate, though their incidence differs across groups

Despite a gradual decline since the early 2000s, the unemployment rate remains high, particularly for the young, females (27% for 14-26 year old women in 2011), and those living in urban areas (Figure 1.3).

While the informal sector can be measured in various ways (Box 1.2), all measures suggest that it is very large (Bernal, 2009), even compared to other Latin American countries (ILO, 2011). Informality has increased rapidly over the 1990s and affects the less educated the most, in particular the young with little work experience and older workers (Figure 1.4). Still, more than a fourth of those with a university degree are informal workers – they do not contribute to the mandatory pension system. This suggests that informality may not systematically be forced by employers nor related to exclusion from the formal sector, but rather that it may be a worker's decision, *e.g.* to minimise tax payments. The

Figure 1.3. **Unemployment rate by age, gender and region**

2011



Note: The youth are defined as those aged between 14 and 26.

Source: DANE.

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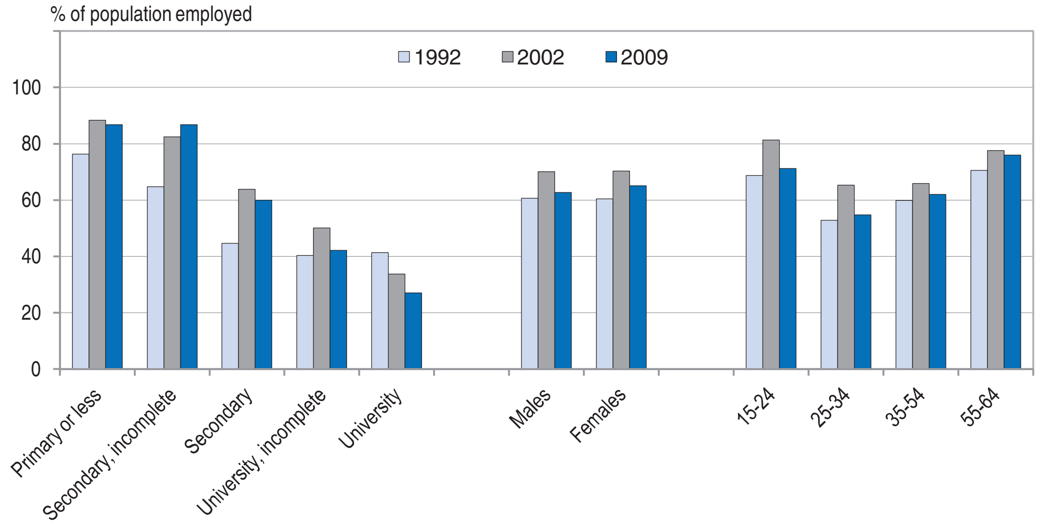
Figure 1.4. **The degree of informality varies over time and across population groups**



Note: Informality is defined as the percentage of employees not contributing to the pension scheme.
Source: Sanchez Torres and Alvarez Vos (2011); DANE.

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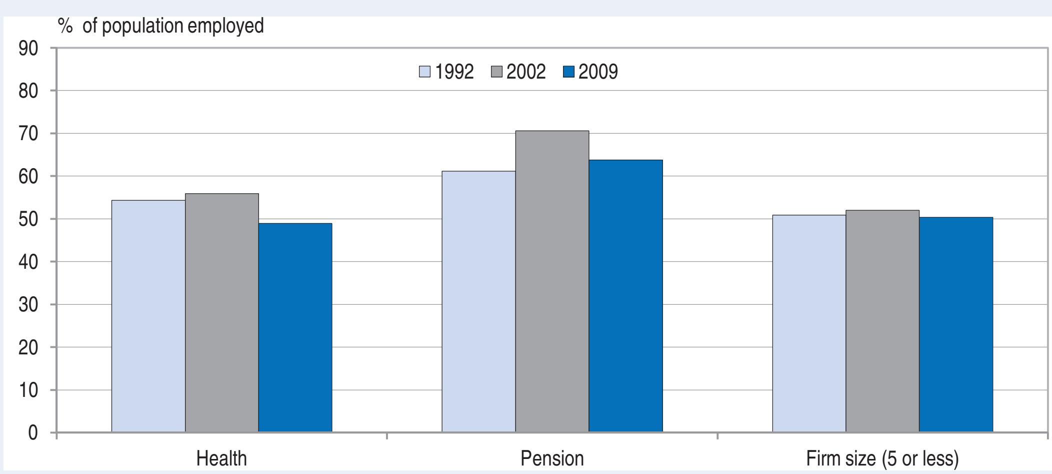
Box 1.2. **Definitions and size of the informal sector**

The Statistics Office (DANE) uses a definition of the informal sector based on firm size and occupation – the informal sector comprises the workers and owners of firms employing less than 5 persons, as well as unpaid family members and housekeepers. According to this definition, about 50% of the employed population was in the informal sector in early 2012, a level which has been broadly stable since the late 1990s (Figure 1.5).

Defining informal workers as those who contribute to neither the health nor the pension systems suggests a 70% informality rate, although informality levels are lower when considering the health and pension systems separately.

Figure 1.5. **The degree of informality varies across definitions**



Note: The health/pension columns relate to the share of those employed, but not contributing to the health/pension insurance schemes. The firm size column corresponds to the share of the population employed in firms of five or less persons. For this column data are for 2007, 2009 and 2012 (not 1992, 2002 and 2009).
Source: Sanchez Torres and Alvarez Vos (2011); DANE.

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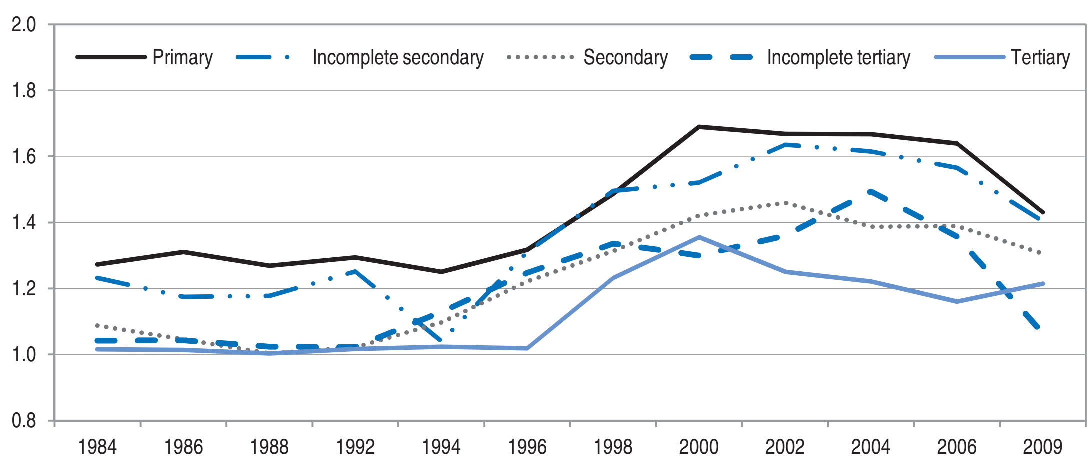
informality rate, as measured by firm size, is also much higher in rural than in urban areas. This coincides with a low productivity level in rural areas.

Those in the informal sector earn less, exacerbating income inequality

The high rate of informal work is a key driver of income inequality since informal workers often suffer from poor working conditions and lack social safety nets, which puts them at a high risk of poverty when they lose their job or retire. More than two-thirds of informal workers earn less than the minimum wage. The ratio of the compensation in the formal to the informal sector increased steadily during the 1990s, from 1.4 in 1992 to almost 2.2 in 2002. It has decreased slightly since then, but remains high (Sánchez Torres and Alvarez Vos, 2011). While this gap partly reflects a composition effect – the formal sector employs more qualified persons – those working in the informal sector are also paid less for the same level of qualification, and the gap is the highest for the less educated (Figure 1.6).

Figure 1.6. **Income gap between formal and informal workers with the same education level**

Ratio of compensation in the formal to the informal sector



Note: The term “tertiary education” encompasses all the post-secondary education, which Colombians call “educación superior”.

Source: Sanchez and Alvarez (2011) based on DANE’s national household surveys.

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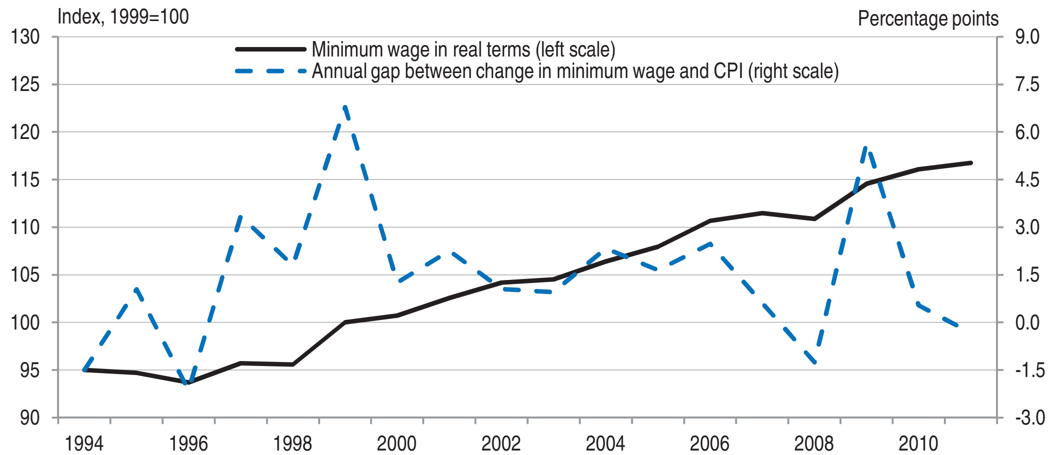
A high minimum wage contributes to informality

The impact of the minimum wage on employment has been much debated in the empirical literature, but the balance of evidence suggests that, if too high, minimum wages exclude those who are the least productive or experienced from the formal labour market (Bassanini and Duval, 2006; Koske *et al.*, 2012). In Colombia, the yearly minimum wage is adjusted by a centralised bargaining process between representatives of trade unions, businesses and the government. By law, the minimum wage should be raised to reflect the central bank inflation target for the year plus productivity changes. Since 1999, the Constitution further stipulates that yearly adjustments in the minimum wage should at least match past year’s inflation. This institutional set-up has generated upward pressures, with the minimum wage increasing by 21% in real terms between 1998 and 2010 (Figure 1.7), *i.e.* well above productivity developments (Hofstetter, 2006). In 2011, the

Figure 1.7. **The minimum wage has increased steadily in real terms since the late 1990s**



Note: Monthly minimum wage in the urban sector, excluding transport subsidy. Since 1999, the Constitution stipulates that yearly adjustments in the minimum wage should at least match past year's inflation.
Source: OECD Secretariat calculations based on Colombia's National Statistics Department (DANE) and World Bank data.

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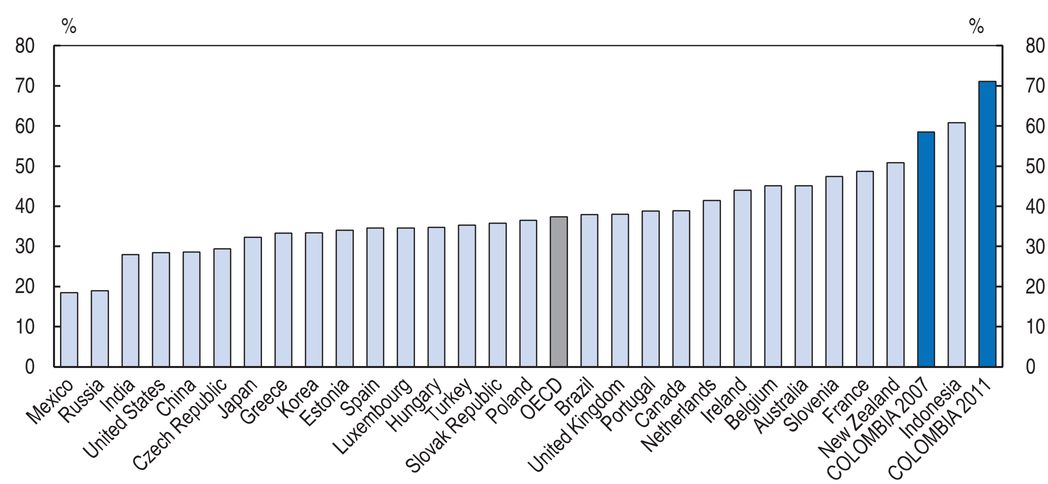
minimum wage stood at 71% of the average wage, one of the highest in the world, up from 58% in 2007 (Figure 1.8). The minimum wage is particularly binding in the poorest, low-productivity regions, where its level is above median and average income and where informality is also most prevalent (Figure 1.9).

Figure 1.8. **The minimum wage is relatively high**

Ratio of minimum wage to average wage, 2011 or latest available year



Note: Missing countries do not have a statutory minimum wage except for Chile and Israel for which data are not available. Data are for 2011 except for Brazil, China, India and Russia for which they are for 2010. The average wage for Colombia covers both formal and informal sectors.
Source: Employment Outlook Database and *Going for Growth*, OECD 2012; OECD estimates.

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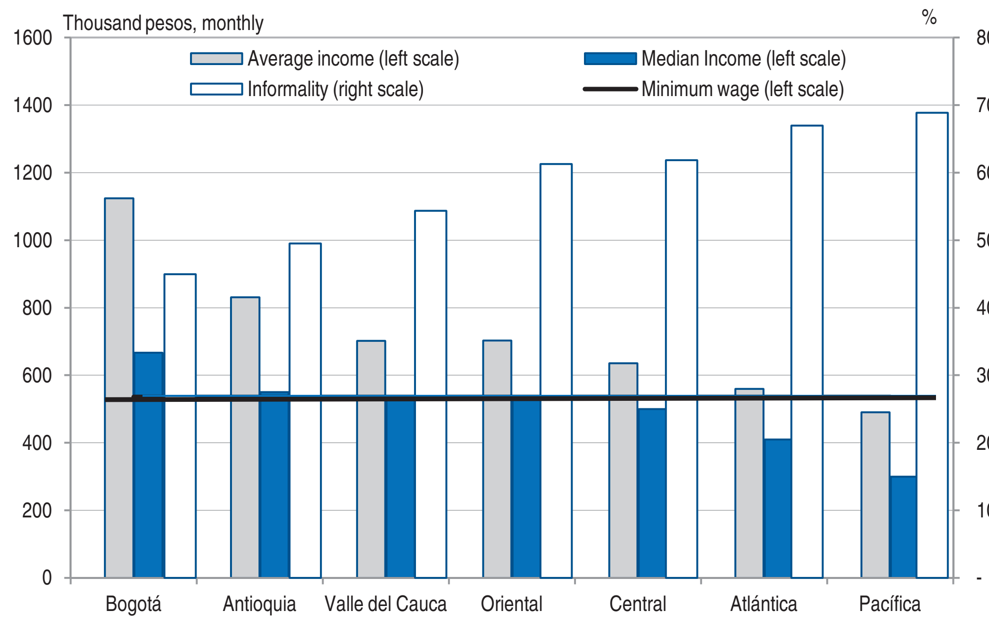
Figure 1.9. **Minimum, average and median incomes and informality rate by region**



Source: DANE – GEIH (*Gran Encuesta Integrada de Hogares*), 2011.

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High non-wage labour costs also deter the creation of formal jobs

Very high non-wage labour costs compound the effects of the high minimum wage on formal employment. Demands for more social spending have been building up since the early 1990s and social protection is financed mostly through social security contributions (as opposed to general taxation). As a result, non-wage labour costs have risen substantially. Social security contribution rates for health and pensions have increased by 15 percentage points, from 14% to 29%, since the early 1990s (Table 1.1). Overall, non-wage labour costs (NWLCs), at 45% of total labour costs for the average worker in 2011, are much higher than in most OECD countries, and compare even less favourably with other LACs and emerging economies (Figure 1.10). In addition, since the minimum contribution is set with reference to the full-time minimum wage, NWLCs are significantly higher for part-time work. The October 2012 government tax reform proposal embodies the abolition of employers' health care contributions, as well as contributions for child care and vocational training, reducing non-wage labour costs to 41% of total labour costs. While an improvement, non-wage labour costs would nevertheless remain well above the OECD average and the level in similar Latin American countries such as Chile and Mexico.

The benefits of paying social security contributions are low

Some social contributions are earmarked for benefits associated with the labour market status, in particular pension and unemployment benefits, which can be seen as part of labour compensation. Others, however, finance benefits available to all citizens, whether they contribute or not (*e.g.* training services and child care), or have a redistributive objective. Payments and benefits are thus disconnected, which reduces incentives to pay into the system.

Table 1.1. **Social security contribution rates in 1992, 2011 and as foreseen by the 2012 tax reform proposal**

For the worker with average wage

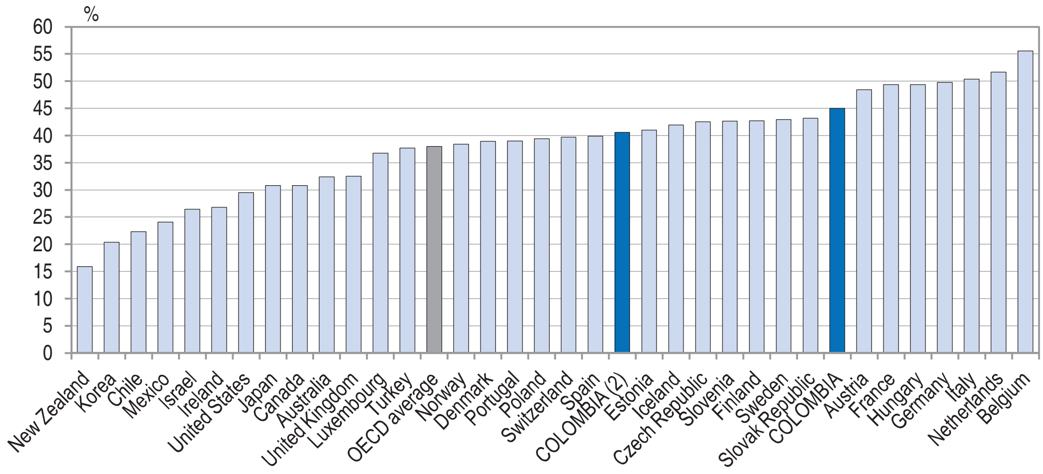
			1992	2011	Post-reform
				%	
Employee	Social security contributions	Health care	2.3	4.0	4.0
		Pension	2.2	4.0	4.0
	Subtotal employee		**4.5**	**8.0**	**8.0**
Employer	Social security contributions	Health care	4.7	8.5	0.0
		Pension	4.3	12.0	12.0
		Professional risks	0.0	0.5	0.5
	Parafiscales	Family allowance and in-kind support (*Cajas*)	4.0	4.0	4.0
		Childcare (ICBF)	3.0	3.0	0.0
		Vocational training (SENA)	2.0	2.0	0.0
	Other non-tax compulsory payments	Service bonus	8.3	8.3	8.3
		Christmas bonus	8.3	8.3	8.3
		Vacations	4.2	4.2	4.2
		Severance-related payments	9.3	9.3	9.3
		Compensation for unfair dismissal	4.2	4.2	4.2
		Transport subsidy	4.6	7.5	7.5
	Subtotal employer		**57.0**	**71.8**	**58.3**
Average compulsory payment wedge (% of average monthly labour income)			62.7	81.8	68.3
Memorandum					
Average compulsory payment wedge (% of total labour costs)			38.5	45.0	40.6

Note: The work uniform subsidy mandated by law is not included. Given that the average wage is less than 4 times the minimum wage for the years studied, the employee pension contribution rate does not include the surcharge. The contribution for professional risk depends on job characteristics, but 0.52% is the most common rate (IMF, 2011). The Christmas bonus is mandatory for all public-sector workers, but voluntary for those in the private sector. The amount given to the employee for unjustified dismissals depends on the type of contract (indefinite or definite) and the time employed. The rate used here corresponds to the minimum compensation, equal to 15 work days. The transport subsidy is a fixed amount that is only given to employees earning less than twice the minimum wage, and to workers that live more than 1 kilometer away from their workplace. The table expresses this amount as a percentage of average monthly labour income. For bonuses and severance-related payments, contribution rates apply to both the take-home pay and the transport subsidy. This explains why the average compulsory payment wedge is not the sum of the shares paid by employers and employees.
Source: OECD Secretariat.

The reliance on social security contributions to finance universal health care creates strong incentives to remain in the informal sector. Universal health care coverage has been achieved gradually since the 1993 health reform. Since then, two health systems have co-existed. Formal sector employees pay social contributions, and are thus part of the "contributory regime", which give them and their direct dependents (spouse, children or one parent) access to a range of health services and drugs known as the *Plan Obligatorio de Salud* (POS). The "subsidised regime", financed by a 1% transfer from the contributory regime and local and central government funds, gives poor households (*i.e.* Sisbén 1 and 2) free access to a package of services and drugs known as the *Plan Obligatorio de Salud Subsidiado* (POSS).

Figure 1.10. **Non-wage labour costs are high by international standards**

As per cent of labour costs, 2011[1]



1. Non-wage labour costs for a single individual without children at the income level of the average worker. Non-wage labour costs include tax and non-tax compulsory payments, that is, both requited and unrequited compulsory payments to privately-managed funds, welfare agencies or social insurance schemes outside general government and public enterprises. The 2011 average earnings data for Greece were not available.
2. Colombia after the tax reform proposal, as presented in Table 1.1.

Source: *OECD Tax Database*; OECD estimates.

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While the POSS has long been less generous than the POS, the two packages have gradually converged, following a 2008 Constitutional Court ruling. Since June 2012, the two health packages have become similar, thus reducing incentives to pay health care contributions even further. In fact, the subsidised regime is more generous in terms of people covered – every member in an eligible household, regardless of the relationship with the household head, gets access to the POSS. Members of large families thus face stronger incentives to remain in the informal sector. Also, one may lose health coverage by losing a formal job, without being able to quickly regain access to the subsidised health system. Moreover, given that workers eligible for the subsidised regime (*i.e.* the poor) are also eligible for an array of social programmes (*e.g. Familias en Acción*), the potential loss in other benefits further dissuades workers from accepting formal jobs. Overall, Camacho *et al.* (2009) estimated that the 1993 law resulted in an unintended increase in informal employment – defined as the share of employees between 12 and 65 who do not contribute to health insurance through employment – by 4 percentage points. In 2012, more than half of the population was covered by the subsidised regime, up from about one third in the mid-1990s. It should be noted, however, that means-tested social benefits remain low by OECD standards. Workers' incentives to remain informal are thus limited. Social benefits may thus not be the main factor behind the high level of labour informality and unemployment.

Three so-called *parafiscales* (special earmarked taxes on wages) finance social assistance benefits and training programmes. The contribution rate is 9% on wages, with revenues amounting to 1.3% of GDP in 2009 (Jorratt, 2010). In addition to having a detrimental impact on job creation in the formal sector, their usefulness, effectiveness and redistributive impact are questionable. The largest *parafiscal* is a 4% contribution, which is collected and managed by several private entities, the *Cajas de Compensación Familiar* (CCF). It finances family allowances for formal sector workers who earn no more than 4 times the minimum wage. Since informal workers and the unemployed are not entitled to receive their services, they benefit the well-off most: the richest quintile receives 32% of the total, while the poorest receives only 2% (Moller, 2012). The CCFs also finance culture, tourism and commercial activities and own supermarkets, theatres, hotels and other facilities. Yet there is little evaluation of the cost-effectiveness of the services the CCFs provide (Alm and López-Castaño, 2005).

The two other *parafiscales* finance programmes that target those in need, but suffer from low cost-effectiveness. A 2% contribution finances traineeship programmes, in particular for young workers and displaced persons, through the *Servicio Nacional de Aprendizaje* (SENA). The SENA also finances assistance to firms for technological development and information systems. SENA's administrative costs are high (20% of the total budget in 2002 according to Alm and López-Castaño, 2005). More importantly, there are few data on SENA's outcomes and available studies on the impact of SENA's services on jobs and wages question their cost-effectiveness (Saavedra and Medina, 2012). Other training programmes available may be preferable (Barrera and Corchuelo, 2003). An additional 3% contribution finances day-care for children, school food programmes, aid to children at risk and food supplements for the elderly through the *Instituto Colombiano de Bienestar Familiar* (ICBF) – more than 10 million people were covered by the ICBF in 2011.

Labour market reforms can promote employment in the formal sector

Recent reforms to reduce labour costs are welcome, but are unlikely to be enough to dent informality and the associated income inequality. The 2010 Formalisation Law reduced non-wage labour costs for some categories of employees and some firms (Box 1.3). However, the impact of the law on job creation is difficult to assess since some firms and jobs would have been created even in the absence of the law. The law provides incentives for firms to split up and encourages a process of firm destruction/creation to take advantage of the lower labour costs, which is probably inefficient. The reduction in labour costs is estimated by Sánchez Torres and Alvarez Vos (2011) to be about 12% for an employee paid at the minimum wage. This is much less than the gap in labour costs between the formal and informal sector – about 50% for those who have not completed secondary education. The Ministry of Labour is preparing an evaluation of the Formalisation Law.

The tax reform plan presented in October 2012 cuts non-wage labour costs. These cuts cover most jobs, as opposed to those just recently created or formalised, and they have thus less distortive effects. Under the plan, some *parafiscales* – those financing ICBF (2%) and SENA (3%) – and the employers' health care contributions (8.5%) will be abolished for firms employing workers with monthly wages under 10 times the monthly minimum wage. By reducing contribution rates on wages by 13.5 percentage points, the reform aims at creating between 400 000 and 1 million formal jobs. Non-wage labour costs will, however, remain above the OECD average and most other LACs. Promoting formal employment may thus require a more ambitious reform to reduce labour costs, in particular for low productivity workers. Moving further from social security contributions to other taxes for the financing of some public programmes (in particular health care contributions paid by employees) should be considered. In addition, there is a case for moving from mandatory to voluntary contributions for the commercial activities run by the *Cajas de Compensación Familiar*. Introducing a lower minimum wage for young people and/or in rural areas, which are characterised by lower living costs, should also be considered.

Box 1.3. **The 2010 Formalisation and Job Creation Law**

The 2010 Law (*Ley de Formalización y Generación de Empleo*) aims at:

- Increasing formality among small firms (defined as those employing less than 50 workers and with assets less than 5 000 times the minimum wage) with a target of 2.5 million jobs formalised over a 4-year period.
- Creating formal employment, with a target of 500 000 jobs over a 4-year period, in particular for the young, displaced persons, people previously enrolled in illegal armed groups (*i.e.* guerrillas and paramilitaries), disabled persons, women over 40, and the poor.

Formalisation of small enterprises

The main benefits offered to newly created small firms registered at a Chamber of Commerce, including those that had operated in the informal sector, are as follows:

- *Access to government support programmes*, which include microcredit programmes targeted at individuals under 28 years, as well as technical training and financial support programmes.
- *Reduced tax and social security contributions* for some years. *First*, firms will pay only a fraction of the corporate income tax liability, which will increase gradually over time: No income tax is paid in the first two fiscal years; 25% in the third fiscal year; 50% in the fourth fiscal year; 75% in the fifth fiscal year; and 100% from the sixth fiscal year onwards. (A more generous treatment is granted to firms in the scarcely populated regions of Amazonas, Guainía and Vaupés). Firms will also be allowed to carry forward their losses, up to an additional five fiscal years. *Second*, firms will pay only a fraction of the *parafiscales* (a category of social security contributions, see above), following the same schedule as for the corporate income tax. (Again, a more generous treatment is granted to firms in the scarcely populated regions). *Third*, firms will be granted some relief from industry and commerce tax payments levied by sub-national governments. *Fourth*, the commercial registration and renovation fee will be reduced: No payment in the first year; 50% of the fee in the second year; 75% in the third year; and 100% from the fourth year onwards.
- *Simplified administrative and legal procedures:* work, commercial and other procedures will be simplified to facilitate formalisation for all firms.

Employment and income tax burden of vulnerable population groups

- *Tax relief on income and payroll taxes* will be granted to employers hiring new employees that are *i)* under 28 years of age; *ii)* part of the displaced population; *iii)* persons in the process of reintegration; *iv)* handicapped; *v)* women over 40 years that have not had a job contract in the past 12 months; or *vi)* earning less than 1.5 times the minimum wage. These tax reliefs correspond to parafiscales liabilities, plus contributions to the solidarity health care fund (FOSYGA) and to the minimum pension fund. They are limited to 2 or 3 years, depending on the type of employee that is being hired.
- A *fairer withholding income tax* for independent workers: Independent workers with service contracts under a given threshold (equal to almost 14 times the minimum wage in 2012) will face the same marginal income tax rates as employees.

Improving labour market policies

Strengthening active and passive labour market policies would also contribute to a better performance of the labour market and help reduce income inequality. The government has launched various welcome initiatives. *First*, an Apprenticeship Law has been presented to Congress in the Fall 2012 with the objective of increasing the number of persons with a trainee contract (and thus covered by labour laws and social protection) and facilitating their incorporation onto the labour market. Trainees with no university degree would be paid at 75% of the minimum wage. The proposed law would also enable companies to develop training programmes supervised by the National Training Service (SENA). *Second*, a Public Employment Service is being designed and implemented in order to match supply and demand for labour, with a regional view. *Third*, while there is no fully-fledged unemployment insurance system, the government is considering introducing a system of individual Unemployment Saving Accounts complemented with a solidarity fund.

Education: Low quality and unequal access boost inequality in labour earnings

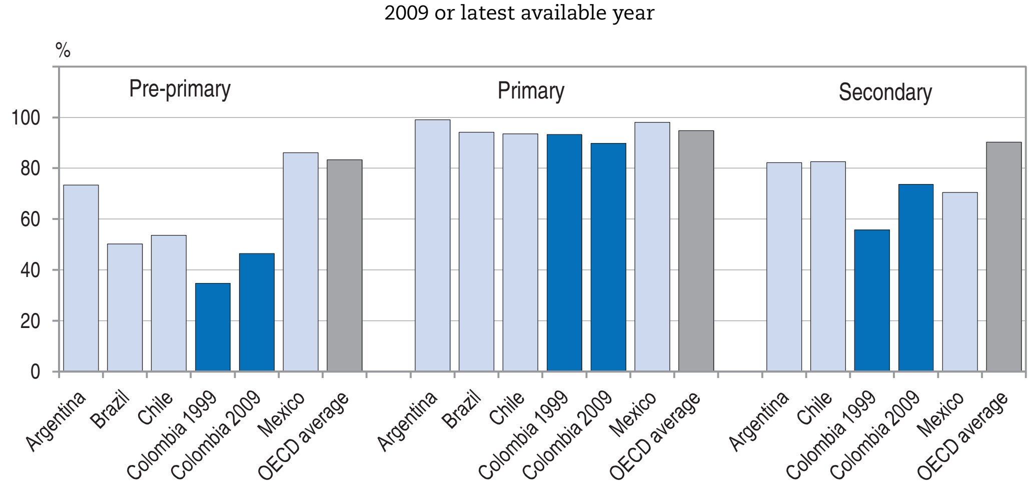
Education policies matter for reducing inequality in labour income, by raising employment and earnings prospects of those at the margin of the labour market. Empirical evidence for OECD countries suggests that raising graduation rates from upper secondary and tertiary education and increasing early childhood care and education coverage reduces income inequality (OECD, 2012a; Koske *et al.*, 2012). Unequal access to educational services, large gaps in the quality of education between private and public schools, or persistent financial access constraints perpetuate income inequality. Experience in OECD countries suggests that education is also a key driver of social mobility (OECD, 2010). In Colombia however, the link may be weaker (Angulo *et al.*, 2012): while education coverage has expanded, in particular at the secondary level, the sluggish progress in upgrading education quality has hindered social mobility.

Education coverage has increased but is still below the OECD and Latin American average

Efforts have been made to increase education coverage, with a significant rise in net enrolment rates in pre-primary and secondary education (Figure 1.11), but more is needed. The conditional cash transfer programme *Familias en Acción* launched in 2001 and targeted

Figure 1.11. **Education enrolment rates in Colombia, selected Latin American countries and the OECD**

2009 or latest available year



Note: The net enrolment rate is the ratio of children of official school age (based on the International Standard Classification of Education 1997) who are enrolled in school, to the population of the corresponding official school age. Data on secondary enrolment rates are not available for Brazil.

Source: *UNESCO Institute for Statistics Database.*

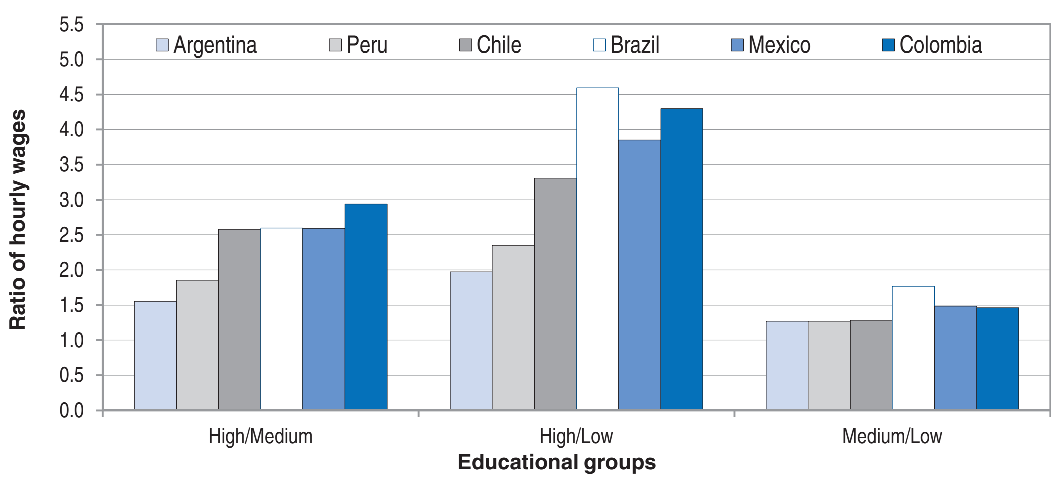
StatLink http://dx.doi.org/10.1787/888932764895

at the poorest has contributed to spur school attendance, in particular for children between 12 and 17 and in rural areas (Attanasio *et al.*, 2005). The drop-out rate of pupils from families with an income below the minimum wage has also decreased from 32% in 1999 to 14% in 2011. Still, few children before age 6 and after age 15 attend school. The net enrolment rate of children aged 15-17 was only 40% in 2009. And pupils from a disadvantaged socio-economic background – *i.e.* Sisbén 1 – on average attend school only 5.2 years, compared with 12.7 years for pupils from richer families – *i.e.* Sisbén 6 (Barrera *et al.*, 2012).

The most educated enjoy a very large wage premium. This could potentially encourage educational attainment, but it also exacerbates income inequality. The net enrolment rate in tertiary education increased substantially from 17% in 2002 to 24% in 2010, but is still low by OECD standards (OECD, 2012b). The limited supply of workers with tertiary education is reflected in the high wage differential at the top of the income distribution (Figure 1.12). As an illustration, those graduating in 2011 from university earned on average 6 times more than those with a high-school degree. In addition, while the expansion of tertiary education coverage has reached the poorest, income-related participation gaps have, if anything, widened: enrolment rates are much higher for students from high income families and for those living in urban areas (Figure 1.13).

Figure 1.12. **Wage gaps by education level in selected Latin American countries**

2010 or latest available year



Note: Skill group categories defined as Low have 0 to 8 years of formal education; Medium, 9 to 13 years; and High, more than 13 years.
Source: SEDLAC (CEDLAS and The World Bank).

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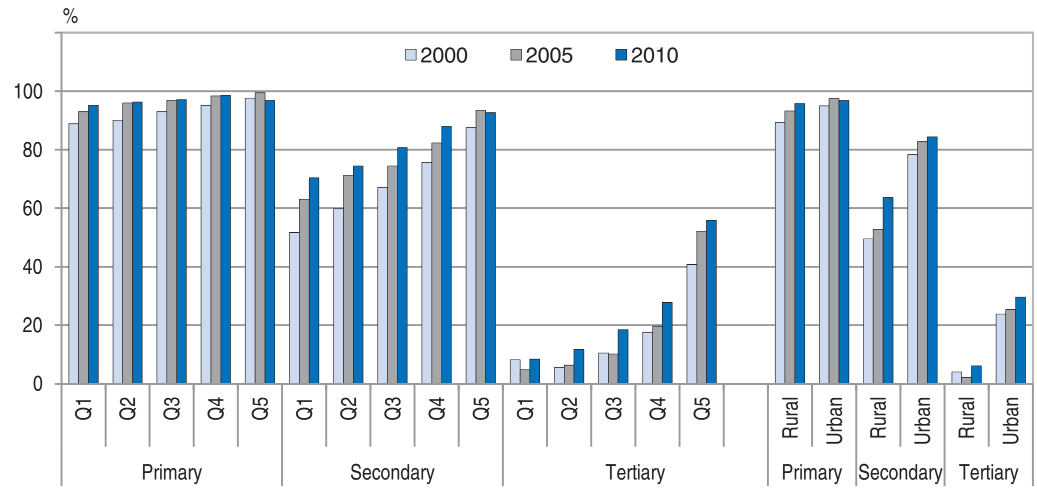
Improving education quality and outcomes should become a priority

Despite improvements, educational outcomes remain below the OECD average and that of many other emerging economies (Figure 1.14). The PISA survey further reveals that outcomes of children from a disadvantaged socio-economic background are particular poor. In addition, the PISA results probably overestimate Colombia's performance compared with OECD countries due to the underrepresentation of pupils from underprivileged backgrounds, who are less likely to attend school in Colombia than in

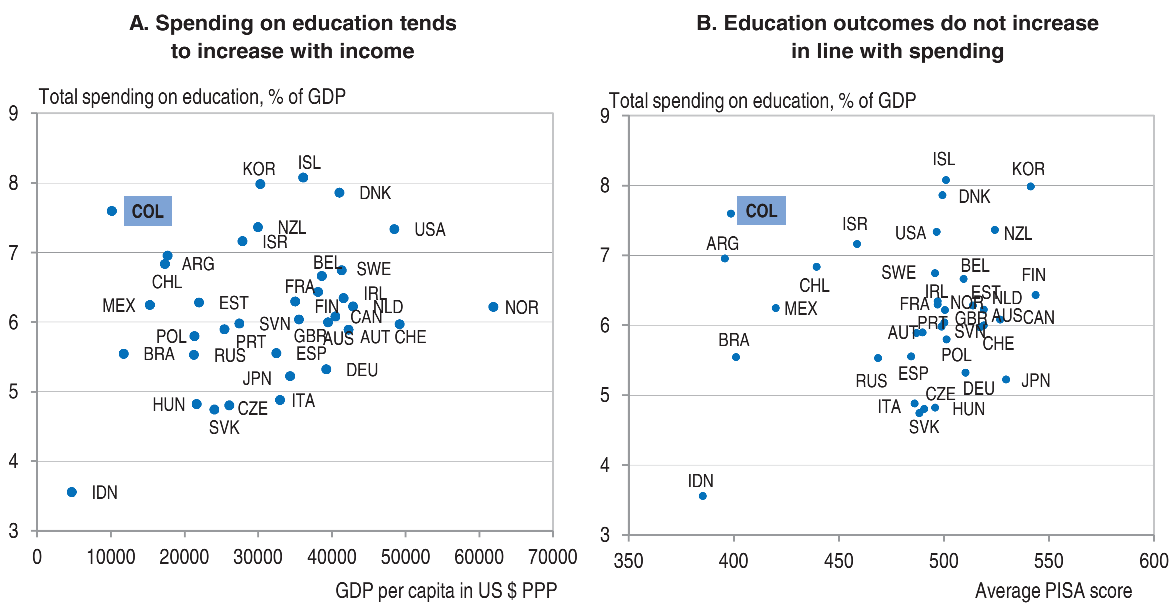
Figure 1.13. **Net enrolment rates by income quintile and area**



Source: SEDLAC (CEDLAS and The World Bank).

StatLink http://dx.doi.org/10.1787/888932764933

Figure 1.14. **Colombia spends more on education but gets less in return than many other countries**



Source: Education at a Glance 2012; OECD (2011a); *World Bank Database*.

StatLink http://dx.doi.org/10.1787/888932764952

OECD countries (Ferreira and Gignoux, 2011). These relatively poor educational outcomes cannot be attributed to a lack of resources: total spending on education in Colombia, at 7.6% of GDP in 2011, is above the OECD average and many other countries with a similar income per capita. The private share, at over 3% of GDP, is much higher than the OECD average of less than 1% while about one fifth of the Colombian students, mostly from advantaged families, attend privately managed schools (*i.e.* about the OECD average). Raising spending efficiency should thus be a priority.

Various factors are affecting education outcomes. *First*, teaching time is low for some children since many schools operate two to three shifts per day. Less than 11% of pupils attending public schools are entitled to a full teaching day, compared with 46% for those attending private schools (Barrera *et al.*, 2012). Since private schools cover predominantly pupils from well-off families (and more so in Colombia than in many other countries, OECD, 2012c), many pupils face a double liability of coming from a disadvantaged background and attending a lower-quality school. *Second*, the poor selection and training of teachers affect education quality. Students trained to become teachers often obtain very low scores, compared with other students, on cognitive tests such as *Saber PRO* (Barón and Bonilla, 2011). *Third*, despite recent reforms introducing some elements of performance-based compensation and promotion, and the possibility to fire low-performing teachers, there is still a high degree of teacher absenteeism (estimated at 10% on average, and reaching 40% in rural areas). Experience in India suggests that monitoring coupled with financial incentives based on teacher attendance can reduce teacher absence and raise educational outcomes (Duflo *et al.,* 2012). *Fourth*, while schools have a large autonomy in setting school curricula and in choosing textbooks, they have virtually no autonomy in managing resources (*e.g.* selecting teachers).

While the responsibility for education has largely been devolved to sub-national governments, the central government has recently taken ambitious measures to improve the quality of primary education, in particular in the most deprived areas. The government is introducing a mentoring programme for teachers working in 3 000 low-performing schools (about one fifth of schools). This initiative is promising and the outcomes should be evaluated in due time. Many countries – including China, Japan, New Zealand and Switzerland – offer programmes with mentoring schemes, and research shows that both new and experienced teachers profit from them (OECD, 2012c). The government is also working closely with sub-national authorities, which are responsible for designing the education curricula, by providing high quality textbooks.

The government has made significant efforts to increase the coverage and improve the quality of programmes targeting children under age 5. Well-targeted and well-designed interventions can have long-lasting effects by raising cognitive and socio-emotional abilities and the health of disadvantaged children (Carneiro and Heckman, 2003; Heckman, 2008). Between 2007 and 2011, about 590 000 children received health care, nutrition, care, and early education services. To reinforce these efforts, in 2011 the government brought forward *Estrategia de Cero a Siempre*, a plan that aims to benefit 1.2 million children under age 5 in 2014 at a cost of COP 5.6 trillion (USD 3 billion). As part of this strategy, interventions targeting poor households with children between 1 and 2 years of age have been recently launched. Households, benefitting from *Familias en Acción*, have received a micronutrient supplement and support to develop cognitive and language skills of children. Preliminary results suggest that the intervention improved both cognitive development and the quality of the home environment (Attanasio *et al.*, 2012).

Equity in access should be promoted further

OECD evidence suggests that the best performing education systems are those that combine equity with quality (OECD, 2012c). In Colombia, some reforms have recently been implemented to improve equity in access to education. Public primary and secondary schools are free of charge as of 2012, which should increase attendance of children from disadvantaged socio-economic background. In addition, the formula used to allocate resources across municipalities was adjusted in 2011 to better reflect the socio-economic background of pupils (Barrera *et al.*, 2012). Still, enrolment rates vary significantly with family income and drop-out rates in tertiary education are very high for students from low-income families (CEDE, 2009). The student support system (ICETEX) provides students with loans, which include a grant element whose amount depends on the beneficiaries' income level. The number of loans has almost tripled between 2003 and 2011. However, because of the increase in the enrolment rate, a lower proportion of students receive loans (OECD, 2012b). In addition, ICETEX is not targeting all its resources on those most in need, because of serious flaws in the way income is assessed through the *Estratos* system (Box 1.4).

Box 1.4. **Targeting social programmes via household and housing characteristics – Sisbén and Estratos**

Two registers are used in Colombia to identify social benefit recipients: *i)* the *Sisbén* focuses on characteristics of people and is used to assess eligibility for cash transfers and in-kind services (health in particular); *ii)* the *Estratos* focuses on housing characteristics and is used mainly to determine eligibility to subsidised utility prices.

Sisbén *(Sistema de Selección de Beneficiarios para Programas Sociales* – system to identify eligibility for social programmes)

Sisbén is a system to identify eligibility for social transfers. It was created in 1994 to assess households' eligibility for the subsidised health care system. In 2010, 8 institutions and 31 social programmes were using the Sisbén score as eligibility criteria (including *Familias en Acción* and SENA). Sisbén aims at assessing households' quality of life, based on interviews (29 million people are covered) with questions along 5 main dimensions (health status; education; housing and access to public services; individual vulnerability (mainly age and disability); and social vulnerability (environmental and public health risks, security conditions). On the basis of their answers, households are grouped into one of the six Sisbén levels – level 1 is the most deprived group; levels 1 and 2 are entitled to the subsidised health system.

The *Estratos*

Estratos (strata) are socio-economic categories created to price utility services (in particular water, electricity, gas and telephone), but they have since been used to target other programmes (*e.g.* student loans, ICETEX). This system classifies each individual's housing into six strata according to physical characteristics (*e.g.* type of garage, facade conditions, type of roof, etc.), urban environment (*e.g.* road conditions, presence of pavement, etc.), and town-planning (*e.g.* location), strata 1 comprising the poorest group.

Limitations of these instruments

These two systems suffer from a number of drawbacks, including that they are not integrated since having two systems may duplicate costs and create inconsistencies. In addition:

- Both systems suffer from high inclusion and exclusion errors. Camacho *et al.* (2010) reported that almost one fifth of the poor failed to be included in Sisbén 1 and 2 and one fourth of those in Sisbén 1 and 2 were not poor. The latter may partly reflect the fact that Sisbén is managed by the mayors and has given rise to clientelism. Indeed, Camacho and Conover (2011) report an increase in the number of people covered just before elections and/or manipulation of answers to ensure that voters qualify for social programmes with

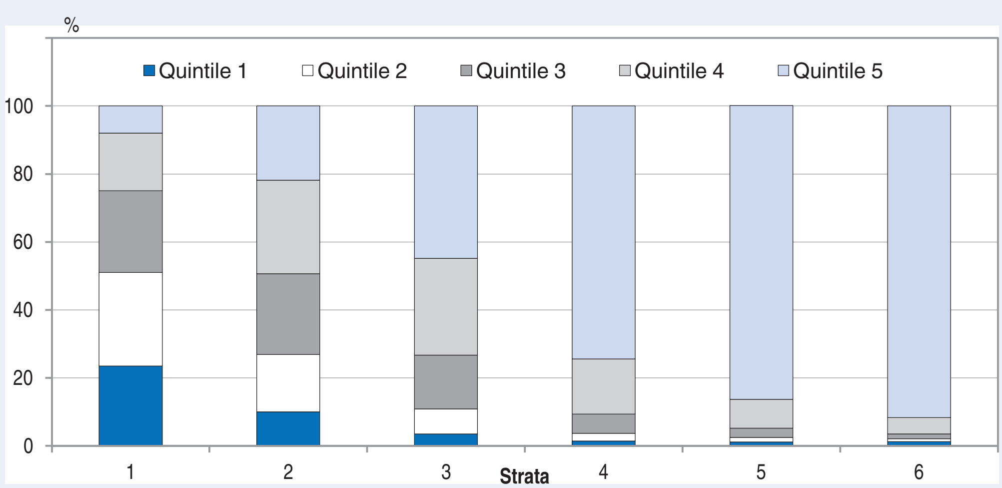
Box 1.4. **Targeting social programmes via household and housing characteristics – Sisbén and Estratos** *(cont.)*

a concentration of scores just below the eligibility criteria thresholds. The new statistical method used from 2012 (3rd Sisbén version) is expected to reduce this problem. For *Estratos*, studies by both the World Bank and the government suggest that this classification system no longer aligns well with the distribution of income (Figure 1.15). Some 90% of Colombians are in strata 1, 2 and 3. Moreover, because any house in a given area can be classified according to the mean for that neighbourhood, inaccuracies are inherent as many households living in these poor average strata belong to the upper income quintiles. As an illustration, nearly 50% of those in the second-poorest strata are in the two richest income quintiles, up from 31% in 2003. Anecdotal evidence suggests that measurement has been altered to widen access to subsidies for political purposes. This calls for a more systematic cross-checking of information, *e.g.* by using a unique identification number such as the *cédula* for all social and tax purposes.

- They are slow to reflect changes in a household's material conditions. The Sisbén is updated every 3 years, which may not be often enough to reflect changes in the personal situation (*e.g.* loss of job). To avoid losing access to some social programmes (*e.g.* subsidised health care), people may prefer staying in the informal sector. The 2010 Formalisation and Job Creation Law partly addresses this: individuals can now keep receiving Sisbén benefits (*e.g.* subsidised health care) for two years after they have reported being employed in the formal sector.
- They often create abrupt changes in benefit payments for households with slightly different scores – *e.g.* one household is covered fully, or not covered at all, by the subsidised health system, if its Sisbén score changes only slightly.

Figure 1.15. **Relationship between strata and income deciles**

2010



Note: This figure shows how the strata relate to income quintiles. For instance, of those living in stratum 2, 28% are in the fourth income quintile, and 22% are in upper income.

Source: DANE, 2010 Household Survey.

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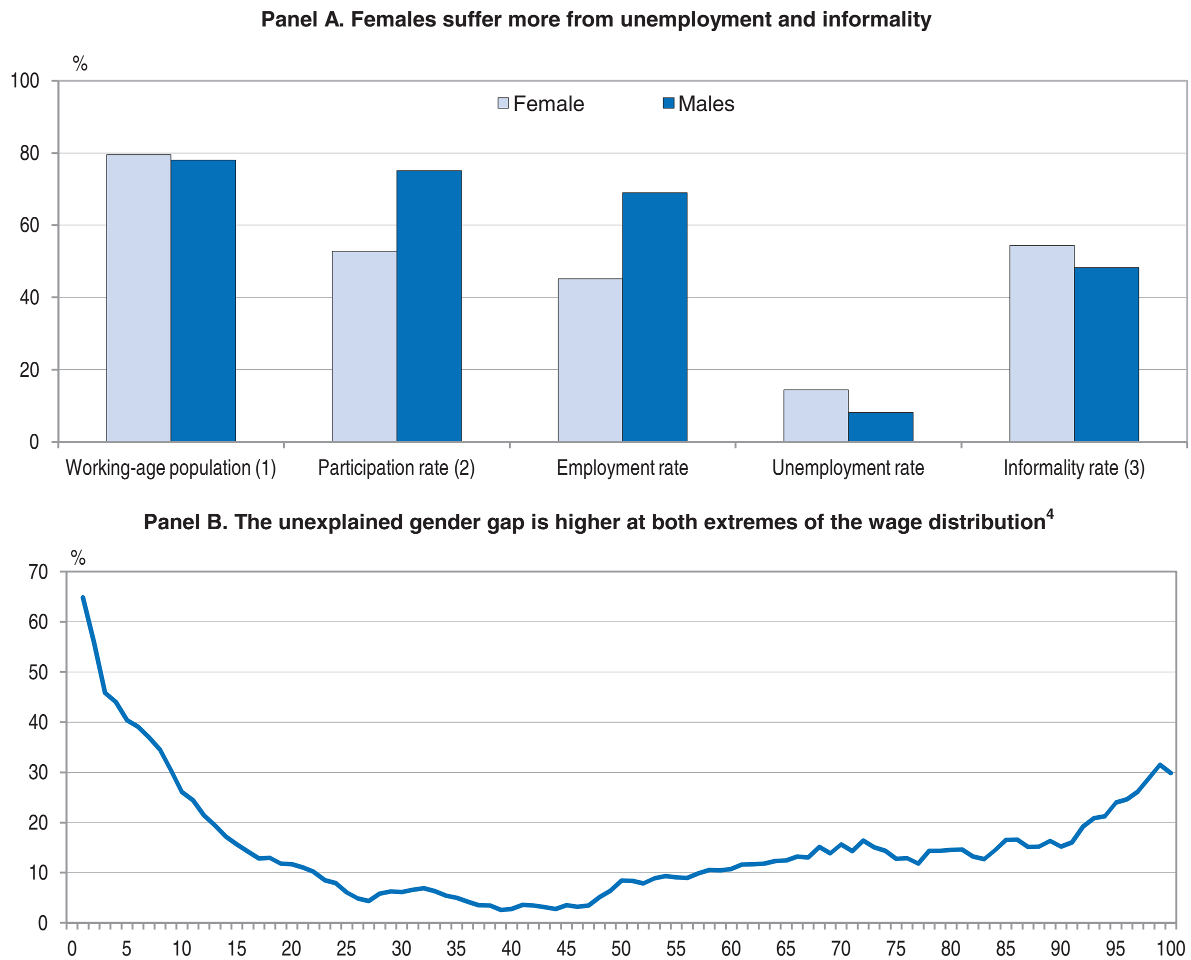
A gender perspective on inequality in labour earnings

Female participation in the labour market has increased substantially over the past decades to 53% in 2011. However, and despite the existence of a legal framework to promote gender equality and the higher average educational level of females, gender gaps in labour market outcomes are sizeable. In particular, female participation and employment rates are lower than for males. They suffer more from unemployment and those employed receive lower wages (Figure 1.16).

Figure 1.16. **Gender gaps in the labour market**

2011



1. The working age population is defined as those aged above 12 in urban areas and above 10 in rural areas and is expressed as a share of total population.
2. The participation rate is defined as the share of the labour force to the working age population.
3. The informality rate is defined by the size of firms.
4. The figure depicts the unexplained gender wage gap by percentile of the wage distribution of males and females in 2002-2006. It uses non-parametric matching comparisons and controls for the full set of socio-demographic (*e.g.* age, education, marital status) and job-related characteristics (*e.g.* type of employer, formality, time worked, size of firm).

Source: DANE based on GEIH 2011; Hoyos *et al.* (2010) using household surveys 2002-2006.

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Females earn on average 13% to 23% less than males, after controlling for labour market characteristics (Hoyos *et al.*, 2010; Badel and Peña, 2010). The size of this gap is similar to averages in Latin America (Atal *et al.*, 2010) and elsewhere (World Bank, 2011).

Box 1.5. **Policy recommendations to reduce labour income inequality**

Increasing the demand for labour in the formal sector by reducing labour costs

- Reduce the very high non-wage labour costs by implementing the planned tax reform and cutting further social security contributions and other mandatory payments on labour. Such cut should be financed by a move to less distortive taxes.
- Avoid increasing the minimum wage by more than price inflation. Consider differentiating the minimum wage by region and age to align labour costs with productivity and to account for differences in living costs.
- Remove the legal constraint on the minimum social security contribution base (currently a full-time minimum wage) to promote formal work, in particular for those with irregular income or part-time work.
- Redefine the mission and assess outcomes of SENA, ICBF and the *Cajas* and improve their cost-effectiveness. Consider moving from mandatory to voluntary contributions to finance the commercial activities run by the *Cajas*.
- Ensure that the health coverage system does not create an incentive to remain in the informal sector, either by making the contributory and subsidised systems equally generous and guaranteeing those losing their formal job an immediate access to the subsidised system, or by unifying the contributory and subsidised systems.

Improving education and employment prospects for all

- Reinforce active labour market policies and introduce a Public Employment Service, as planned by the government.

Improving education outcomes

- Raise human capital by making the education and training system more responsive to the economy's needs and by increasing the quantity and quality of teaching. This would require reducing the prevalence of two- or even three-shift schools by investing in school infrastructure. This would also require reducing teacher absenteeism by introducing a monitoring system coupled with financial incentives. In the case of poor results, apply the recently introduced performance incentive system for teachers' remuneration, placement and firing more consistently. The quality of teaching should be improved by making the selection and training of teachers more demanding.
- Develop policies to recruit, train and retain quality teachers, especially in low-performing, disadvantaged schools. This could be supported by a scholarship programme to reduce costs for best performing, low-income, future teachers.
- Pursue policies to improve the quality of teaching in the most deprived areas through mentoring programmes and by ensuring that teaching material is of high quality.

Improve equity in access to tertiary education

- The resources of the fund for student loans (ICETEX) should be increased and better targeted to those in need.

Closing the gender gap

- Implement policies to reduce informality and promote formal labour contracts so as to compress gender wage disparities.
- Increase flexibility in working arrangements to better reconcile work with family life, help break the glass ceiling effect, and reduce gender disparities at the top of the wage distribution.

The most penalised females are those at both extremes of the wage distribution (Fernández, 2006; Hoyos *et al.*, 2010; Badel and Peña, 2010). The largest gaps are found among low-productivity individuals, *i.e.* those with less education, working part-time or in the informal sector (*e.g.* domestic servants). Given the over-representation of women in the informal sector, policies that tackle informality in the labour market will also reduce gender disparities. Wide gaps at the top of the distribution may partly reflect the lack of flexibility in working arrangements, which affect female participation in the labour market, but are also a clear sign of gender discrimination.

Inequality in wealth, land and capital income

In Colombia, as in most OECD countries, wealth is even more unequally distributed than income (Fredriksen, 2011). Official data on national wealth concentration are lacking, but recent and conservative estimates suggest that the top 1% holds almost 40% of total wealth (Londoño, 2012). The concentration of wealth in Colombia is thus higher than in countries like France, Spain, Switzerland and the United States, where similar estimations have been made using tax data (Alvaredo and Saez, 2009; Piketty *et al.*, 2006; Kopczuk and Saez, 2004; and Dell *et al.,* 2005).

Information on land distribution – an important component of wealth – further suggests that wealth inequality has increased in Colombia. Colonial history, failed land reforms and internal armed conflict are at the root of the historically high land concentration. In addition, some policies have favoured rich landowners, exacerbating land inequality, such as subsidies and tax incentives for agriculture. Land holding concentration, as measured by the Gini coefficient, is estimated at 0.86, one of the highest in the world (Ibáñez and Muñoz, 2010). Moreover, the unequal distribution of rural property increased during the past decade, as the size of the land owned increased and new pieces of land were purchased by only a few landowners. Forced displacement has accentuated the unequal distribution of land. However, the Victims Law, which gives the displaced population the right to regain access to seized land, may play an essential role in reducing some of the disparities in the distribution of land ownership (Saffon and Uprimny, 2010).

The tax system has little redistributive impact

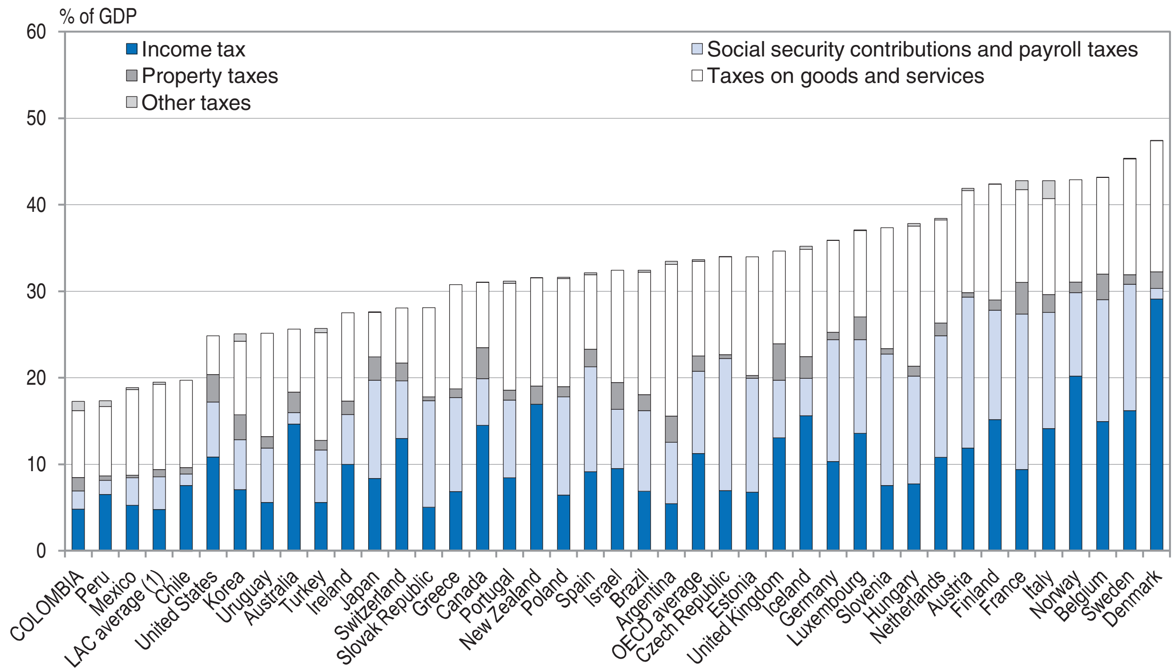
The tax system has only a very small redistributive impact. This reflects a low tax-to-GDP ratio, a high share of consumption taxes in total tax revenues, and a personal income tax riddled by tax expenditures which benefit mostly the rich.

Tax revenues have increased but remain low, and consumption taxes account for the bulk of taxation

Tax revenues have almost doubled since 1990 but, at 17.3% of GDP in 2010, they remain well below the OECD average and the average of other Latin American countries. Taxes on goods and services account for the bulk of tax revenues – 45% in 2010, compared with 33% in the OECD area (Figure 1.17). Income and wealth taxes are paid mostly by firms. Dividends received by individuals are not taxed, which avoids the double taxation of distributed profits but reduces the progressivity of the tax system.

Figure 1.17. **Tax revenues are low and consumption taxes account for the bulk**

2010 or latest available data



1. LAC = Latin American and Caribbean Countries.

Source: OECD, *Revenue Statistics Database*; *Revenue Statistics in Latin America*, OECD 2012.

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The VAT is regressive despite large tax expenditures for basic consumption goods

The VAT standard rate stands at 16%, only somewhat below the OECD average (18.7% in 2012). However, there are many reduced rates and exemptions. To alleviate the tax burden for low-income households, goods belonging to the family shopping basket are excluded from the VAT or taxed at 0%. Because the richest household quintile consumes over half of the exempted goods, the rich end up capturing a large share of this implicit subsidy (Figure 1.18). This is thus an inefficient way to protect the purchasing power of poor households. It is also expensive as the revenue foregone is estimated at 1.5% of GDP (Moller, 2012).

Such a complex VAT system further fosters tax evasion and informality, and compromises efficiency. Indeed, recent studies estimate VAT evasion in Colombia to be 23.5%, compared with 11% in Chile and 20% in Mexico (Gómez-Sabaini and Jiménez, 2011). Direct transfers to low-income households, depending solely on their socio-economic characteristics, would be better for both equity and efficiency purposes. However, designing an effective targeting scheme is not easy in practice, as discussed above (see Box 1.4). In addition, past reform proposals going in this direction have faced strong political opposition. The tax reform proposal presented in the Autumn 2012 aims to simplify the VAT regime and encourage compliance by reducing the number of tax rates to three: 0%, 5%, and 16%.

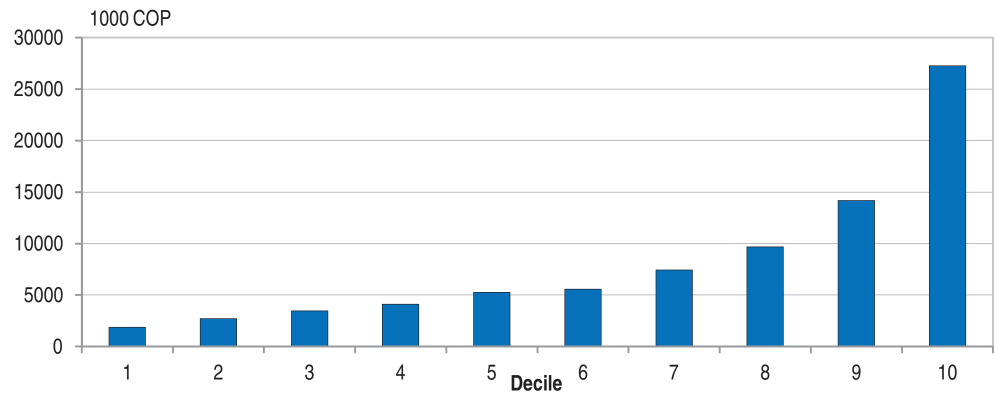
The personal income tax embodies only weak progressivity

The redistributive impact of the personal income tax (PIT) is small. The PIT contributes to an extremely small share of total revenues (7% compared with 25% in the OECD area). Tax receipts are low because of the number of workers operating in the informal sector,

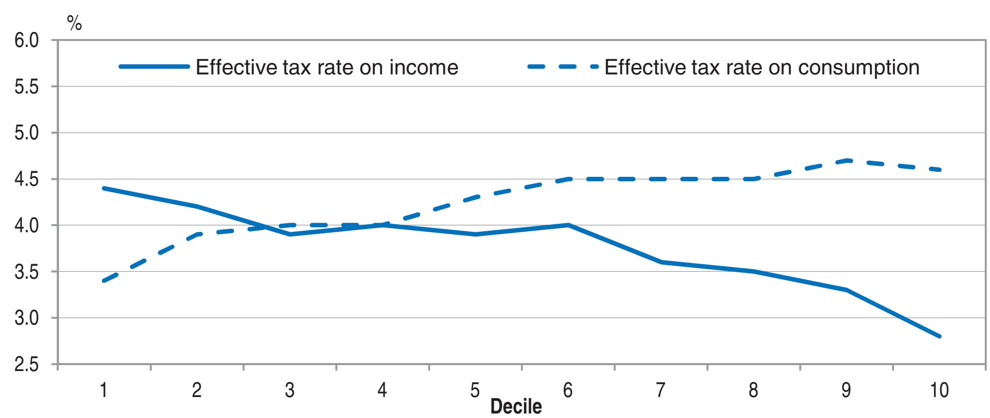
Figure 1.18. **The rich benefit disproportionately from VAT relief**

2006-07

Panel A. Implicit subsidy associated with reduced rates and exemptions by income decile[1]



Panel B. VAT payment related to income and consumption by income decile



1. The implicit subsidy refers to products that are excluded and/or exempted from the VAT.

Source: Steiner and Cañas (2012); World Bank (2012).

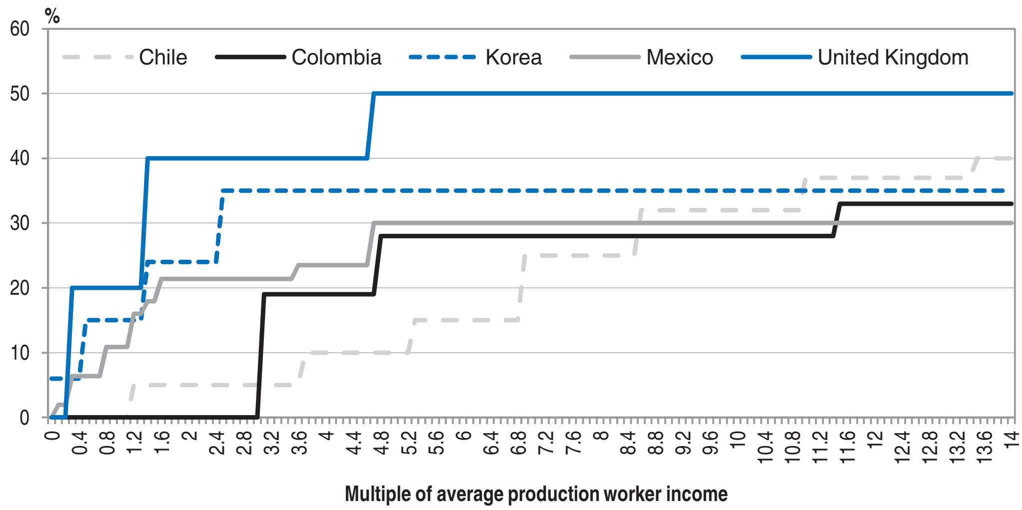
StatLink http://dx.doi.org/10.1787/888932765028

who do not pay the income tax, is large. In addition, because the initial exempted bracket is large (Figure 1.19) and other tax reliefs are extremely generous, only half of those filing a return pay the income tax, *i.e.* less than 3% of the adult population. The progressivity of the tax is low because a wide range of tax expenditures benefit mainly high-income earners (Box 1.6). Tax allowances (*e.g.* voluntary pension contributions, long-term savings to finance construction, dividends that have been taxed at the company level), deductions (*e.g.* mandatory and some voluntary health care contributions, mortgage interest payments for residential housing) and exemptions (*e.g.* 25% of wages under a threshold, most pension payouts) are so generous that less than 40% of the income of the top 1% is deemed taxable (Alvaredo and Londoño, forthcoming). This percentage decreases further with income – for the top 0.01%, only 11% of their income is taxable.

The personal income tax has also penalised the self-employed, many of whom are poor. The law has hitherto stated that if an individual is not required to file a PIT return because gross income is lower than the filing threshold, then the withholding tax operates as a definitive tax. The majority of the 3.5 million self-employed are not allowed to file a

Figure 1.19. **Statutory marginal personal income tax rates by income level**

For a single tax payer without children, 2010[1]



Note: Only standard allowances in the form of a fixed amount are taken into account. Tax credits are not deducted.

1. 2011 for Colombia.

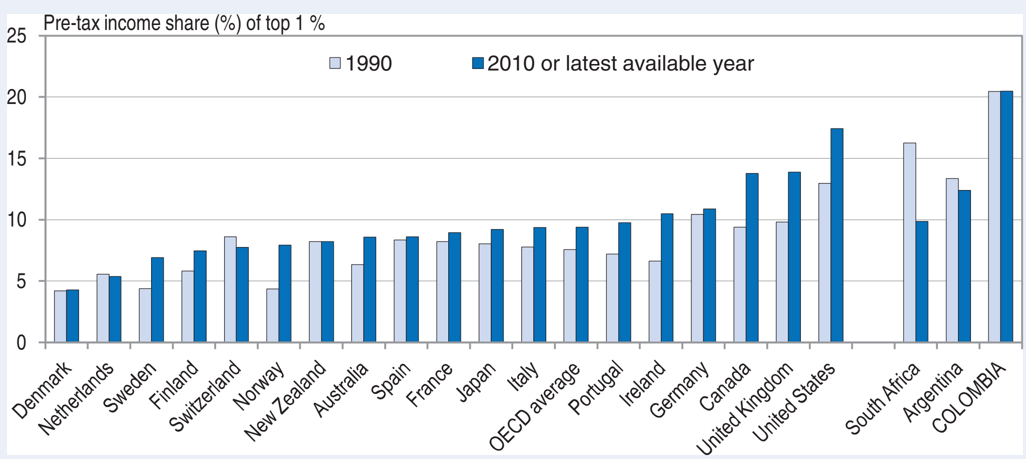
Source: *OECD Taxing Wages Database*; DANE.

StatLink http://dx.doi.org/10.1787/888932765047

Box 1.6. **The taxation of top incomes in Colombia and the OECD**

The pre-tax income share of the top 1% in Colombia has remained stable in the last two decades while it was increasing in many OECD countries (Figure 1.20 and Hoeller, 2011, for a review). It is, however, extremely high by OECD standards.

Figure 1.20. **The top 1% captures a very large share of income in Colombia compared with OECD countries**



Note: The OECD average is an unweighted average for the 18 OECD countries shown here. 1990 estimates for all countries except Colombia (1993), Switzerland (1991), and Germany (1992). Estimates exclude capital gains for Canada, Germany, Japan, Spain, Sweden, Switzerland, and the United States. For Portugal, estimates exclude most capital gains. For Italy, estimates exclude most capital gains and several components of capital income (such as interest income).

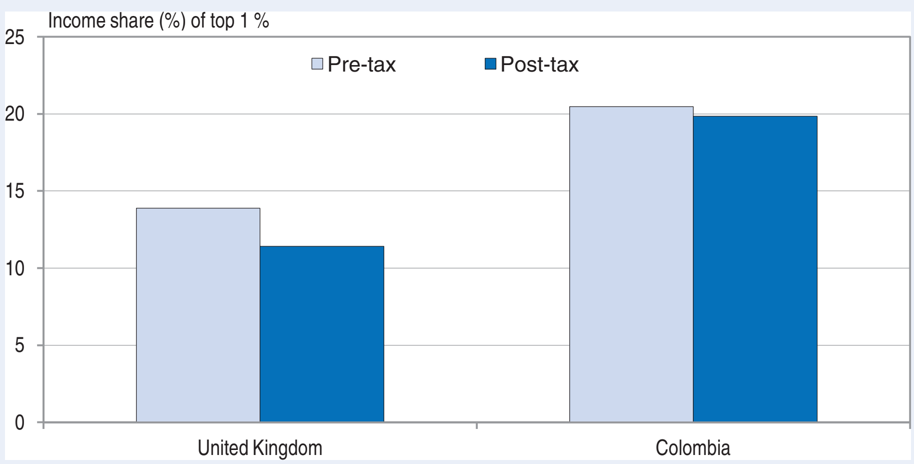
Source: Alvaredo and Londoño (forthcoming) for Colombia; and *The World Top Incomes Database*.

StatLink http://dx.doi.org/10.1787/888932765066

Box 1.6. **The taxation of top incomes in Colombia and the OECD** *(cont.)*

Income taxation reduces income disparities in Colombia much less than in most OECD countries. Income taxes reduce the top 1% share by almost 18% in the United Kingdom, but by less than 5% in Colombia (Figure 1.21). The relatively small share of income taxes paid by top incomes can partly be attributed to the low taxation of capital income, which is concentrated at the top of the income distribution. Capital gains on the sale of residential properties and shares are subject to progressive taxation in Colombia – in contrast, capital gains on principal residences are exempt, sometimes subject to holding period restrictions or reinvestment in most OECD countries; capital gains on equities held for several years are not taxed in about a third of OECD countries; and in many countries, short-term gains are subject to flat taxes (Price and Dang, 2011). In Colombia, however, capital gains benefit from generous tax allowances. In addition, to avoid double taxation, dividends are untaxed for shareholders if distributed profits have been taxed at the company level. Inheritances and gifts are subject to progressive tax rates but tax allowances are so large that revenue from these two taxes is negligible (less than 0.02% of GDP).

Figure 1.21. **The redistributive impact of income taxation for top incomes is low in Colombia**



Note: Latest year available is 2009 for the United Kingdom and 2010 for Colombia.
Source: Londoño (2012) for Colombia; and Atkinson (2007) for United Kingdom, available in the *World Top Incomes Database*.

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The very generous tax reliefs combined with pervasive tax avoidance and evasion (estimated at 30% by Clavijo and Vera, 2010) likely play an important role in explaining the low taxation of top incomes. Factors spurring tax avoidance and evasion include: *i)* a high jump in statutory tax rates as income increases above the exempted level (the first marginal rate, at 19%, is higher than the 13.7% OECD average); *ii)* large tax expenditures that generate perverse incentives (one illustration is the preferential tax regime for small companies, which has been exploited by high-income individuals); and *iii)* the high complexity of the tax code that creates tax avoidance opportunities which are likely to be exploited most by well-advised, richer individuals. In spite of this, regular estimates of personal income tax evasion are lacking in Colombia.

tax return and get a tax refund. Until recently, the self-employed were penalised because tax was withheld at higher rates than for employees, reinforcing income inequality. Moller (2012) estimated that this system raised the Gini coefficient by 1.9 points. The tax code has been adjusted in 2010 and 2011 to reduce this problem. However, horizontal inequality remains an issue given the volatility of self-employed income. The October 2012 reform proposal aims at correcting this by abolishing the income tax for incomes below COP 3.35 million. This exempts 96% of the population from contributing to the personal income tax.

The October 2012 tax reform proposal will increase the redistributive impact of the tax system through two main channels. *First*, the creation of a progressive alternative minimum income tax (IMAN) will *de facto* cap tax expenditures which have benefited the rich most (*e.g.* tax relief for housing investment or pensions). *Second*, efforts to raise tax compliance would increase the amount of taxes effectively paid by the well-off. However, the proposal is a second-best approach since it will increase administrative costs by requiring multiple tax liability calculations (*i.e.* the traditional calculation, IMAN, and a simplified IMAS for employers with low income). Indeed, the first-best approach would be to reconsider the underlying tax expenditures. Moreover, the potential redistributive impact remains limited as the tax is expected to be levied only on the richest 4% of the population. Thus, the overall tax take, as a share of GDP, will remain extremely small (the reform is designed to be revenue-neutral in the short term). Consumption taxes will continue to account for a large share of total taxes this limiting the redistributive impact of the tax system.

Property taxes account for a relatively large share of revenue but are not highly redistributive

Property taxes have increased and currently account for a large share of total revenue (8.7% in 2009, compared with 5.5% in the OECD area). The main components are: a tax on financial transactions, a wealth tax paid mostly by companies, an inheritance tax that does not raise much revenue, and a real estate tax (*predial*) which is the main source of local government revenue.

Various factors limit the progressivity and efficiency of the real estate tax. While the tax rates are set by municipal councils and the tax is collected by local authorities, the cadastre and appraisals generally fall under the responsibility of a national office (IGAC), although self-assessment is used in some large municipalities (*e.g.* Bogotá and Barranquilla). The cadastre is unreliable and out of date. This significantly compromises progressivity and efficiency. Indeed, past experience in Colombia, as in OECD countries, suggests that the most expensive properties are also the ones assessed at the most outdated property values. Outdated assessments of properties reduce tax revenues significantly; it is estimated that updating generated an additional tax revenue of USD 123 million in 2010. Colombia has recently made efforts to update the cadastre. A 2011 Law requires each municipality to update the cadastre every five years. In 2012, 74% of municipalities did so. To redress horizontal and vertical inequity in real estate taxes, the government should ensure that the updating of the cadastre proceeds swiftly.

Because real estate taxes tend to be regressive, even with up-to-date registers, some countries have granted relief to low-income households so as to introduce some progressivity (Joumard *et al.*, 2012). This, however, may come at a very high cost for municipalities in deprived areas, which would need to be compensated, *e.g.* through central government transfers. A priority should thus be to ensure more progressivity from other taxes, in particular inheritance taxes.

The progressivity of the wealth tax has been increased in 2010, with the reduction in the filing thresholds for both companies and individuals from COP 3 to 1 billion. Individuals with a taxable net wealth from COP 1 to 2 billion are subject to a 1% rate and those between COP 2 and 3 billion face a tax rate of 1.4%. Moreover, marginal tax rates have been temporarily increased by 25% for taxpayers with wealth above COP 3 billion to finance humanitarian aid after the extreme 2010 winter conditions. Those with COP 3 to 5 billion now face a marginal tax rate of 3% and those above COP 5 billion a top marginal tax rate of 6%. As a result, revenues increased from 0.4% of GDP in 2010 to 0.7% in 2011. However, the revenue collected by the wealth tax could be further increased by reducing the tax allowance for primary houses (COP 319.2 million; or USD 178 800 in 2011).

The inheritance tax is progressive but does not raise a large amount of revenue. Inheritance taxes have the advantage of generating less distortions than annual wealth taxes and of being very difficult to avoid. In Colombia, progressivity is achieved through a tax-free allowance and increasing marginal rates. However, the generous tax allowance, coupled with the large initial bracket taxed at 0%, limits its capacity to collect revenue (USD 17 415 and 15 820 for spouses and descendants, respectively, in 2012, *i.e.* 8.8 times the annual minimum wage). As a result, the tax on "occasional gains" (*i.e.* on some capital gains, inheritances, gifts and bets) raised less than 0.02% of GDP in 2010 while these "occasional gains" amounted to more than 2% of GDP. This suggests that there is scope to increase inheritance tax revenue. The reform proposal, however, envisages introducing a flat tax rate of 10% on inheritances to dissuade individuals from evading this tax.

Cash transfers: Some are redistributive but pensions account for the bulk and are regressive

Pension coverage is low, leaving many elderly in poverty

The pension system raises serious equity issues. The contributory pension system accounts for the bulk of total transfers to households and absorbs a large share of central government spending (more than 18% of central government spending in 2011). Yet, its coverage is low and the absence of a first tier minimum pension leaves many elderly in poverty. Only 30% of the retirement age population received a pension in 2012, compared with 80 to 90% in countries such as Argentina, Brazil, Chile and Uruguay. To qualify, workers have to contribute long enough in the formal sector and have earnings at least at the minimum wage. Thus, only the most affluent are entitled to a pension.

As the present value of benefits is well above contributions (Santamaría *et al.,* 2010), the public pension system is extremely generous for the happy few. By using the last 10 years of earnings to calculate pension rights, the system also tends to benefit those with steep earnings profiles, who are often the best educated and high-income individuals – some 20 OECD countries use lifetime earnings and in Canada, the Czech Republic and the United States, the pension is based on 30-35 years of earnings (OECD, 2011b). Furthermore, the tax regime for pensions is extraordinarily generous by OECD standards. Pension contributions are deductible from the income tax base and benefits are largely tax exempt. More than 80% of the pensions go to the highest income quintile while the 2 poorest quintiles receive less than 2% (Santamaría *et al.*, 2010). Overall, the pension system is estimated to raise the Gini coefficient by 1.6 percentage points (Moller, 2012). The October 2012 tax reform proposal, however, embodies a reduction in the tax allowance for pension payouts.

Social assistance programmes to protect the elderly poor are not very generous and the take-up is low. Overall, their budget amounted to only 0.1% of GDP in 2011. The Social Protection Programme for the elderly (PPSAM) targets the poor (Sisbén 1 and 2) above 65 years old who are entitled to a monthly transfer of COP 62 500 (about USD 35). However, only 38% out of the 2.2 million elderly poor actually receive the benefit, reflecting budget constraints. Access is prioritised by age and there is a waiting list: when a recipient dies, the next person on the list moves onto the programme. The government aims at increasing coverage gradually over the coming year. In addition, 388 000 elderly poor received food assistance in 2011. Social assistance programmes to protect the elderly poor should be made more generous. Their take-up rate should also be increased, as currently planned by the government for the coming years.

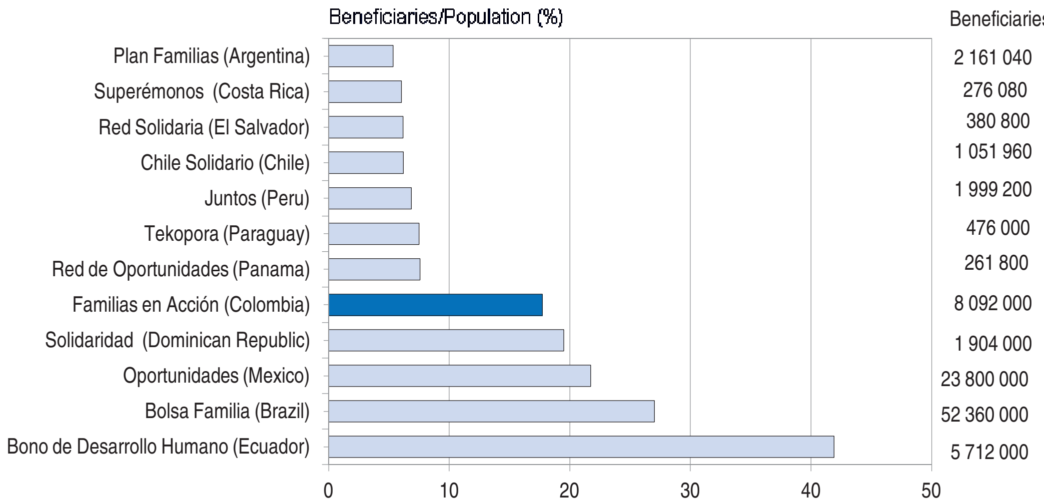
To better protect the elderly poor, the government is considering implementing the so-called *beneficios económicos periódicos* (BEPS) which are expected to benefit 6 million elderly poor over the next 20 years. The BEPS are individual retirement accounts that target those working in the informal sector, with irregular wages or with wages below the minimum wage, and those who have not contributed enough to the contributory regime to be entitled to a pension (that, by law, must be at least equal to the minimum wage). The government's top up rate on individuals' voluntary contributions to the BEPS would be 20%. The BEPS specifically targets low-income households: only those in the three lower socio-economic strata (the so-called Sisbén 1 to 3) can be covered by the BEPS. The maximum level of subsidised savings is set at COP 885 000 per year (*i.e.* USD 485) and the benefit at retirement cannot exceed 85% of the minimum wage. The BEPS will help broaden pension coverage and should be implemented swiftly.

Conditional cash transfers have helped to reduce extreme poverty and promote education and health

Conditional cash transfers have been instrumental in supporting families living in extreme poverty, but they remain limited in size. *Familias en Acción* is the main conditional cash transfer programme. Created in 2001 to protect the rural poor during the severe crisis of the late 1990s, it has since been expanded to urban areas and now benefits poor, displaced and indigenous households. It covers 98% of the municipalities and benefits roughly a fifth of the population – a higher proportion than many similar conditional cash transfer programmes in Latin America (Figure 1.22) – for a fiscal cost amounting to 0.2% of GDP in 2011. The average benefit amounted to about COP 110 000 per household every two months, which annually represents about 5% of GDP per capita. It is paid to mothers with children aged below 18, conditional on school attendance and regular medical check-ups. However, only 62% of the poorest households identified as Sisbén 1 were in the programme in 2012, and some poor households are not eligible, reflecting flaws in the targeting systems (see Box 1.4).

Familias en Acción has had positive effects on school enrolment and attendance, especially in rural areas and among 12 to 17-year-olds (Attanasio *et al.*, 2005). Its impact on cognitive achievement and graduation rates, however, is less clear (García and Hill, 2010; Báez and Camacho, 2011). To improve incentives, the government launched pilot programmes making transfers conditional on graduation and tertiary enrolment, with positive impacts on attendance and enrolment at secondary and tertiary levels (Barrera *et al.*, 2011). However, the sluggish response in the quantity and quality of educational resources (see above) may also partly explain the mixed educational results. Indeed, the

Figure 1.22. **Coverage of selected conditional cash transfers in Latin American countries**



Source: *Latin American Economic Outlook 2012: Transforming the State for Development*, OECD.

StatLink http://dx.doi.org/10.1787/888932765104

implementation of the programme has resulted in a higher student to teacher ratio and school infrastructure has also lagged behind (Benson, 2012).

Familias en Acción has also had positive effects on health and nutritional status, especially among younger children (Attanasio *et al.*, 2005). More preventive health care visits, but also the increase in household income leading to greater spending on food, child wardrobe and schooling (Attanasio and Mesnard, 2006) may have played a role. However, Forde *et al.* (2011) find that obesity risk increases among mothers receiving the cash transfer, calling for interventions to help households adopt a healthier diet and more physical activity. Other indirect benefits of conditional cash transfers are: financial inclusion with electronic cash transfers paid through a saving account (Maldonado and Tejerina, 2010), reduced teenage pregnancy (Cortés *et al.*, 2010), and lower criminality (Camacho *et al.*, 2012).

The system of cross-subsidised prices for utilities suffers from serious flaws

The system of cross-subsidised prices for utilities (electricity and gas, water and telecommunication), which aims at keeping prices low for those in need, should be reconsidered. Households in *estratos* 1, 2 and 3 receive subsidies on their utility bills (up to 50, 40, and 15%, respectively). Those in *estrato* 4 pay the standard rate, and those in *estratos* 5 and 6 pay a premium of up to 20% which partly finances the subsidies to the lower *estratos*. The redistributive impact of such cross-subsidies is, however, low because of the flaws in the targeting system (see Box 1.4). In addition, although the coverage for water, electricity and other public utilities has improved dramatically over the past decades, remote areas remain under-serviced. Households with no access to public services, *i.e.* in most cases the poorest, are *de facto* excluded from the subsidy. As an illustration, the lack of access to water and sewage disposal is an important factor contributing to multi-dimensional poverty in rural areas. For those connected to the system, the reduction in utility prices tends to be reflected in higher housing prices (Medina and Morales 2007), thus reducing the benefit of the subsidy on poor households.

Box 1.7. **Policy recommendations to improve the redistributive impact of the tax and transfer system**

The government has recently announced a series of reforms to improve the redistributive impact of the tax and transfer system. The planned introduction of a progressive alternative income tax (IMAN) and subsidised retirement savings plans (BEPS) for those who are not covered by the pension system are welcome initiatives. More ambitious reforms should be considered, however, to increase the redistributive impact of the tax and transfer system. This would require in particular better targeting social support programmes, revisiting the regressive nature of contributory pensions and enlarging social programmes for those not employed and/or suffering from poverty.

Towards higher and more progressive taxes

- Initiate a tax reform that expands revenues in the medium run so as to fund social programmes. The reform should also improve equity and enforceability. This would require: broadening the VAT by narrowing exceptions and limiting the use of low rates; cutting tax expenditures for the personal income tax (in particular the large 25% income tax allowance and tax relief for housing investment and pensions). Inheritance and real estate taxes should also be raised, and the land and real estate register be updated regularly. If the planned cuts in the inheritance tax rate do not result in better compliance, measures should be taken to raise inheritance tax payments, including reducing the generous tax allowances and introducing new rates to enhance progressivity of the tax schedule. On the other hand, social security contributions (in particular health contributions and the so-called *parafiscales*) should be reduced to enhance labour market incentives.
- The proposed progressive alternative income tax (IMAN) should be implemented.
- Simplify the tax code by reducing loopholes (including by better controlling the simplified SAS system for individual entrepreneurs) and encourage both filing and tax compliance. Pursue efforts to fight against tax avoidance and evasion.
- VAT expenditures (reduced rates and exemptions) on goods and services included in the basic household consumption basket should be replaced by a means-tested refund, or transfers targeted to those most in need to improve the cost-effectiveness of redistributive policies.

Towards more redistributive cash transfers

- Make the pension system less regressive and expand its coverage. The regressive nature of the contributory pension system should be tackled by reconsidering the restrictive eligibility criteria (*i.e.* a long enough contribution period at, or above, the minimum wage) and by lengthening the reference earnings period to calculate pension rights.
- Study options for increasing the minimum income support for the elderly poor. The individual retirement accounts targeted on the poor (BEPS) should be implemented swiftly. In addition, social assistance programmes should be made more generous and measures should be taken to increase their take-up rate.
- Better target support to those in need with conditional cash transfers. Ensure that targeting systems (the so-called *sisbén* and *estrato* systems) for social policy are up-to-date and reflect actual needs. The cross-checking of information on needs, social transfers and taxes could be improved by using a unique identification number (*e.g.* the cedula). If targeting systems cannot be updated swiftly, alternative insurance mechanisms that allow individuals to cope with temporary shocks and that smooth withdrawal rates for social benefits may be needed.
- Make the cash transfer *Familias en Acción* conditional on educational achievement and not only school attendance while aligning the quantity and quality of educational resources with increases in educational demand.
- Expand support to those in need to compensate for the phasing out of reduced VAT rates and exemptions as well as the price subsidies for water and electricity.

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Chapter 2

Boosting productivity and economic growth

Economic growth in Colombia has been resilient, yet sluggish. The country has a large productivity gap with OECD countries, reflecting low levels of human capital, physical capital and total factor productivity (TFP). Furthermore, the country has experienced low and broad-based labour productivity growth, mostly due to an overall decrease in TFP since the 1980s. The commodity boom has recently boosted activity and affected other tradable sectors. Improved security conditions and prudent macroeconomic management in the last decade have spurred investment and growth, which should also benefit from recent reforms. However, reducing the productivity gap further and generating higher sustainable growth requires reforms to address key bottlenecks. The education system should be enhanced through bold reforms that promote accountability and a focus on skills and training. The large upcoming investment in transport infrastructure should involve improved prioritisation and planning, and a better involvement of the private sector. Access to finance needs to be increased through more efficient regulation, greater competition and a more active involvement of development banks. Moreover, regional disparities should be addressed by strengthening sub-national governments to reduce the incidence of corruption in regional development. It is also important to improve the business environment by promoting competition and facilitating firm creation. These policies should also help reduce informality, as they raise the benefits of formal activity.

Despite economic growth, productivity has been weak

Significant policy reforms and prudent macroeconomic management have contributed to boosting the economy. The implementation of the inflation-targeting regime, prudent fiscal policy and strong financial regulation after the 1999 crisis helped Colombia achieve stable economic growth over the last decade and weather the financial crisis remarkably well. Several ambitious reforms are being implemented to get the most out of the commodity boom and raise the effectiveness of infrastructure investment. Further reforms on labour and taxes are under discussion. These reforms, together with the improved security situation, should lead to further growth.

However, Colombia's income level remains roughly a third of the OECD average, mainly due to differences in labour productivity. Despite growing at twice the OECD rate over the past decade, GDP per capita remains 80% below that of the upper half of OECD countries. This represents the largest gap among the five largest economies in Latin America (the others being Argentina, Brazil, Chile and Mexico; Figure 2.1). All economic sectors exhibit low labour productivity in comparison to OECD countries, and the least productive sectors, such as agriculture and retail, are the ones that generate the most employment (DNP, 2011). There is also a 14% gap in labour utilisation, largely because of a high unemployment rate.

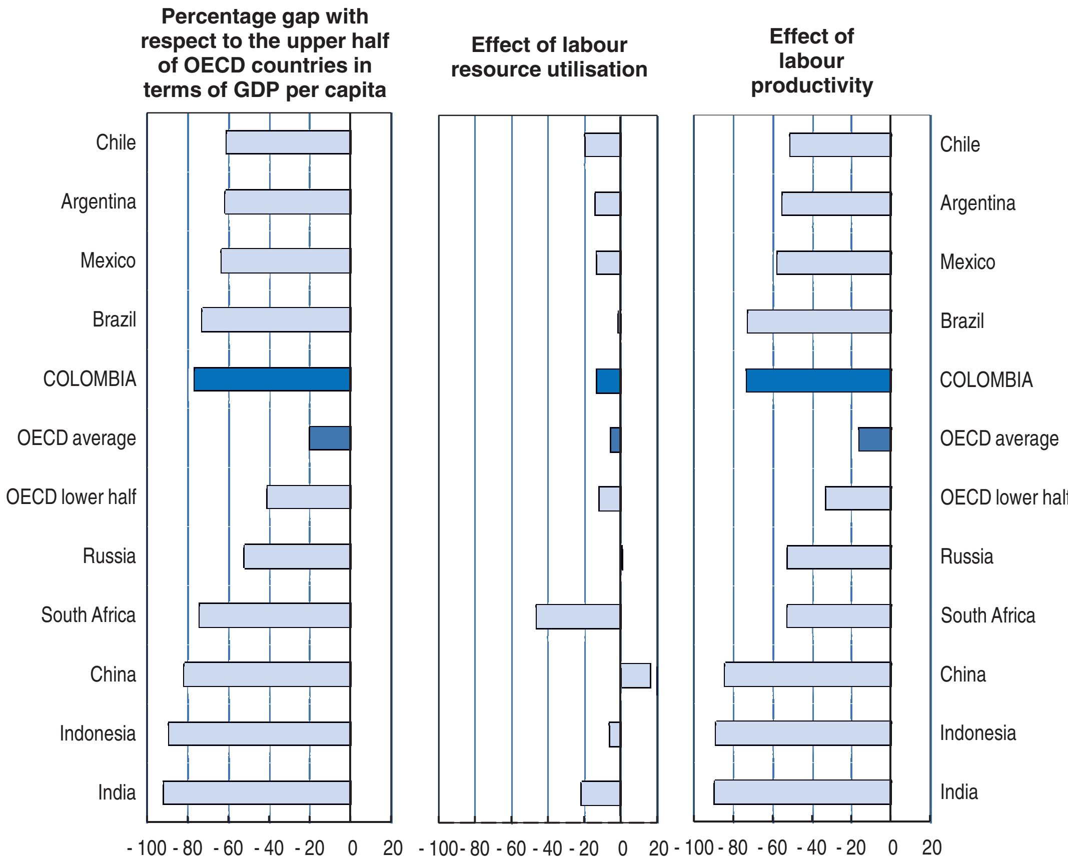
The low level of productivity in Colombia is explained by a variety of structural factors. A breakdown of the output per worker gap with respect to the United States shows that it can be accounted for in similar proportion by human capital, physical capital and TFP (Daude, 2012). With respect to human capital, despite large improvements in education coverage, years of schooling and student performance account for 22% and 15% respectively of the labour productivity gap. Furthermore, 45% of companies refer to the inadequately educated workforce as a major obstacle to their growth (OECD, 2012a). As to physical capital, investment has historically been low compared to developed countries, to the point where the inadequate supply of infrastructure is currently considered the third most problematic factor for doing business and investing in Colombia (WEF, 2012). The biggest gap is in transport infrastructure, both in terms of quantity and quality. Moreover, a number of factors have contributed to low overall investment rates over the past decades, translating into low productivity. The most important include low and costly access to financing, insecurity and substantial worker and business informality (Meléndez and Harker, 2009; DNP, 2011; World Bank, 2010). Finally, investment in research and development has been particularly low.

The productivity growth has been among the slowest across Latin American and OECD countries over the past two decades (Agosin *et al.*, 2009; Figure 2.2). Moreover, this slow productivity growth has been broad based: in seven of nine sectors average yearly labour productivity growth was lower than in both Latin American and OECD countries.

Decreasing TFP has been at the heart of slow productivity growth (Figure 2.3, Panel A). A long-term breakdown of the growth in GDP per worker in Colombia shows that slow

Figure 2.1. **Sources of real GDP per capita differences**

2010



Source: OECD, *Going for Growth* and DANE.

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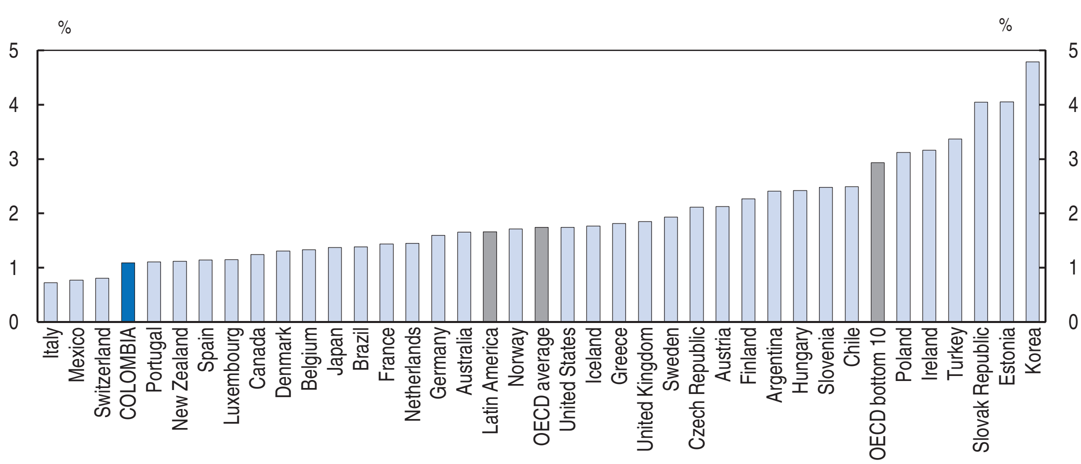
Figure 2.2. **Annualised labour productivity growth rate**

1990-2011



Note: OECD bottom 10 represents the ten OECD member countries with the lowest GDP per capita in 1990. These are Chile, Czech Republic, Estonia, Hungary, Korea, Mexico, Poland, Slovak Republic, Slovenia and Turkey. Chile and Mexico are also part of the Latin America group, along with Argentina, Brazil and Colombia. Data for 2011 are estimates for all countries except Colombia.

Source: The Conference Board *Total Economy Database*, DANE.

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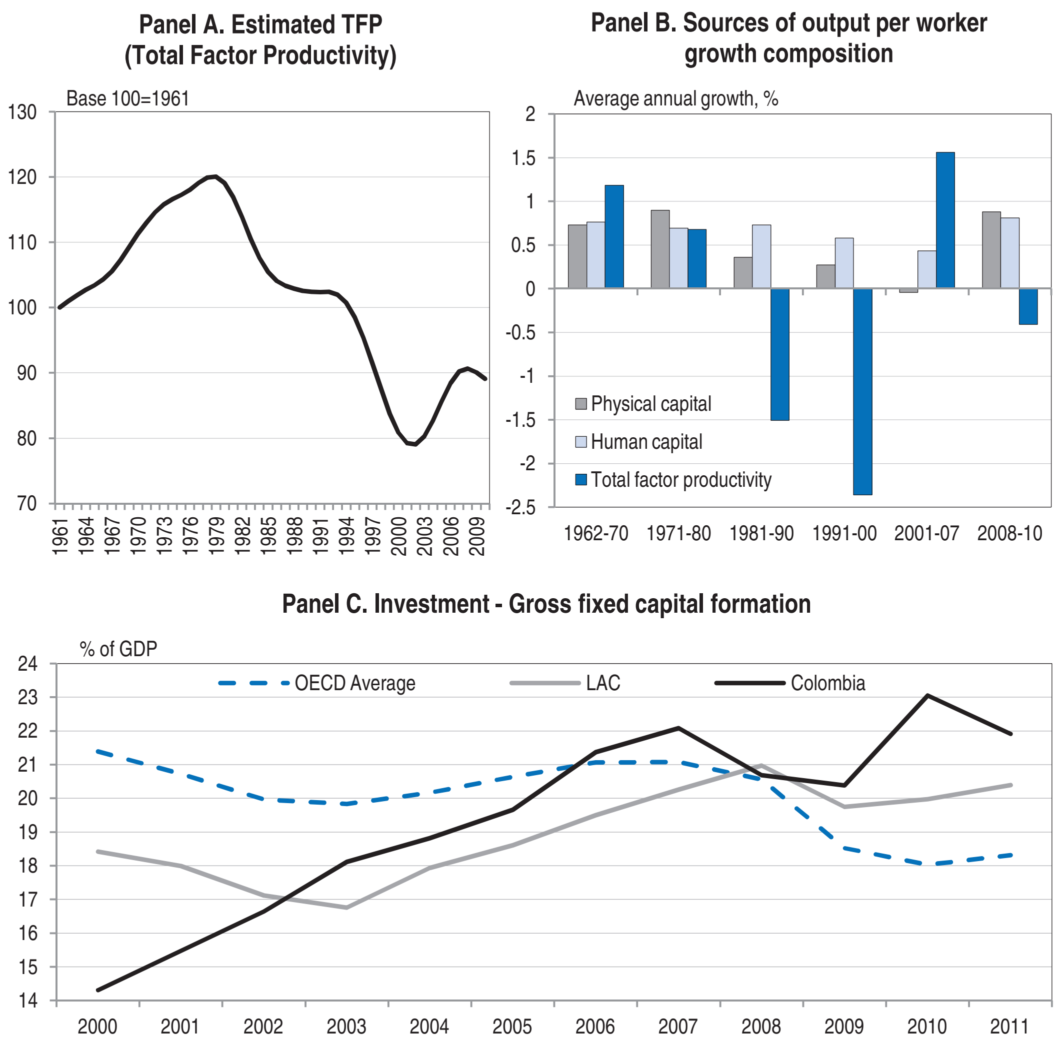
growth since the 1980s is largely because of a reduction in TFP rather than a deceleration in the accumulation of physical and human capital (Figure 2.3, Panel B). TFP's disappointing performance can be attributed to increases in crime and insecurity rates (Cárdenas, 2007). Despite this, the low potential GDP growth is also related to low innovation, failures in the provision of essential public goods (*e.g.* infrastructure) and other factors, including corruption and insufficient access to finance (DNP, 2011). These factors more than offset major reforms in the early 1990s that had a positive effect on productivity, mostly through the reallocation effect of lower barriers to trade (Steiner *et al.*, 2009). Improvement in the security situation in the 2000s contributed to a recovery of TFP and provided the impetus for investment to increase (Figure 2.3, Panel C). This investment increase is greater if measured in constant prices, reflecting high capital imports, and is mostly explained by rising private investment, which now accounts for close to 80% of total investment.

Figure 2.3. **Decomposition of labour productivity growth in Colombia**



Note: Total factor productivity and the sources of GDP per worker growth are estimated by using a Cobb-Douglas function. Human capital is adjusted for the years of schooling. The capital-share production function parameter is set equal to 1/3. LAC stands for Latin American and Caribbean countries.

Source: Panel A and B: Penn World Tables and Barro and Lee database on education. Panel C: OECD, World Bank's *World Development Indicators* (WDI).

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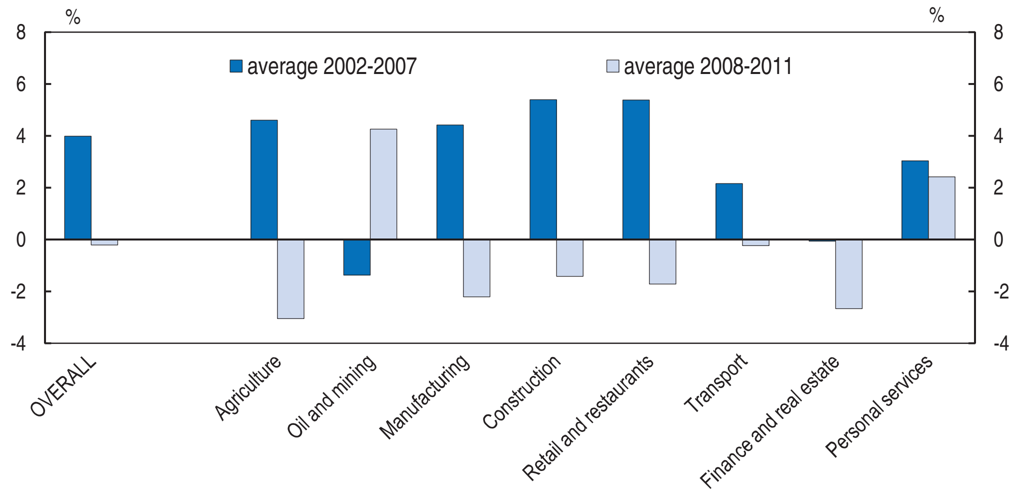
Recent productivity gains have levelled off in all sectors except hydrocarbons (Figure 2.4). This reflects not only the continued presence of structural factors that hinder sustainable TFP growth but also new economic challenges. The latter relate to the oil and coal boom and a slow growth in trading partners, which have affected non-commodity exporting sectors (one-fifth of GDP). Rising exports of natural resources can affect the competitiveness of non-commodity tradable sectors by causing exchange rate appreciation and raising local (input) prices (Ismail, 2010).

Figure 2.4. **Annual labour productivity growth by sector**



Source: DANE.

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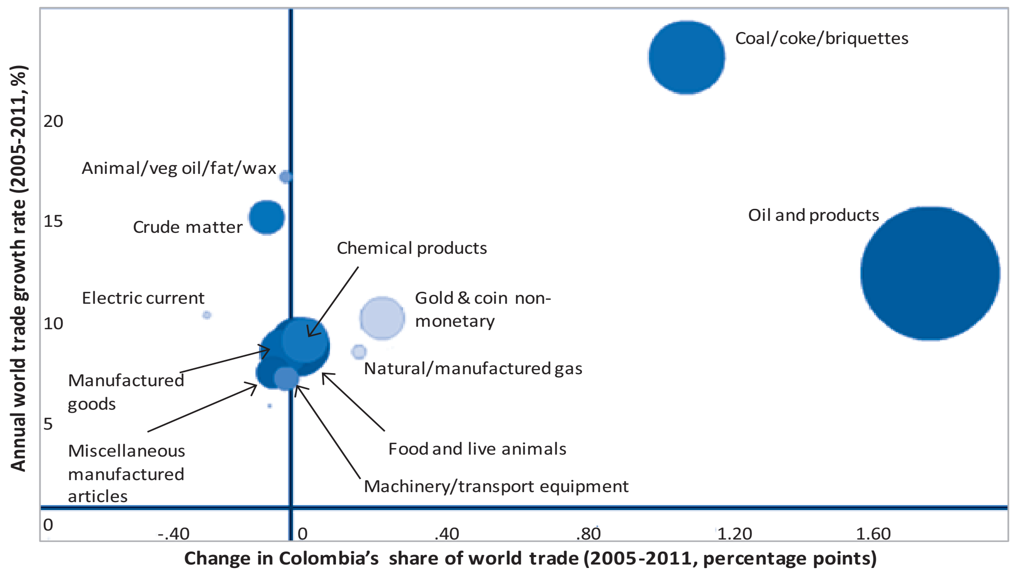
Despite comparatively slow growth in the global trade of both manufactured and agricultural products since 2005, Colombia has not gained any market share in these products (Figure 2.5, Panel A). This contrasts with a considerable gain in market share for oil and coal products. The rising dependency on oil and coal exports could affect the long-run growth potential of industrial and agricultural exports and undermine the economy's ability to diversify. This is particularly important given the considerable uncertainty regarding how long the commodity boom will last. The share of high-technology exports has already decreased by half over the past two years and remains remarkably low compared to Latin America, other developing regions and OECD economies (Figure 2.5, Panel B).

The development agenda needs to further promote diversification and incorporate technological progress. The current government has recognised the challenges associated with the commodity boom and is implementing structural policies to better manage it. However, complementary efforts are needed to enhance the capacities and specialisation of existing sectors and create or consolidate new productive and environmentally efficient sectors (ECLAC, 2012). It is also important to promote higher efficiency among small and medium-sized enterprises (SMEs), given their potential to generate employment, disseminate knowledge and appropriate technology. Finally, the central government should play a more active co-ordination role among regional authorities, academics and businesses to enhance productivity. For instance, policies could further support intermediate sectors to establish more dynamic links with larger companies or sectors at the leading edge of productivity.

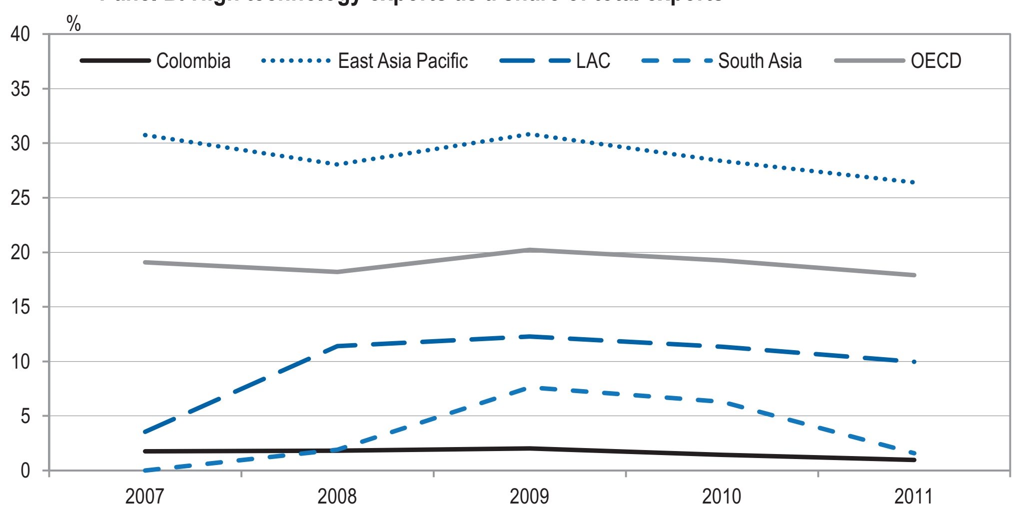
Colombia must invest in human and physical capital through broad-based policies focused on raising long-term TFP growth. These policies should also aim to reduce the

Figure 2.5. **Market share in the world trade**

Panel A. World trade and Colombia's market share by sector



Panel B. High technology exports as a share of total exports



Note: Panel A: Size of circles represents the sectors' share of total Colombian exports in 2011. Panel B: Calculations are based on values. LAC stands for Latin American and Caribbean countries.

Source: UN Comtrade.

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large disparities in GDP per capita and productivity across regions by strengthening public institutions at the sub-national level and increasing central government support to reduce the incidence of corruption, the most common cited obstacle to doing business (WEF, 2012).

The significant progress made in education coverage should be followed by a higher quality education at all levels. Multidisciplinary policies for early childhood development and the enhancement of the tertiary education system are key to producing a workforce that allocates resources more efficiently, takes advantage of new technologies and innovates (OECD, 2012a). Strengthening human capital will also reduce worker informality, which is about 20 percentage points higher than what Colombia's GDP per capita would suggest (World Bank, 2010).

In addition, more efficient investment in transport infrastructure, which lags well behind even regional peers, is crucial to closing the country's physical capital gap (Acevedo *et al.*, 2009). The recent reforms to enhance the regulatory and institutional frameworks for public-private partnerships (PPPs) are an important step, but more should be done. Better transport infrastructure significantly enhances efficiency and boosts TFP by providing economies of scale and economies of networks and agglomerations (Calderón and Servén, 2010). It also increases the competitiveness of the export sector.

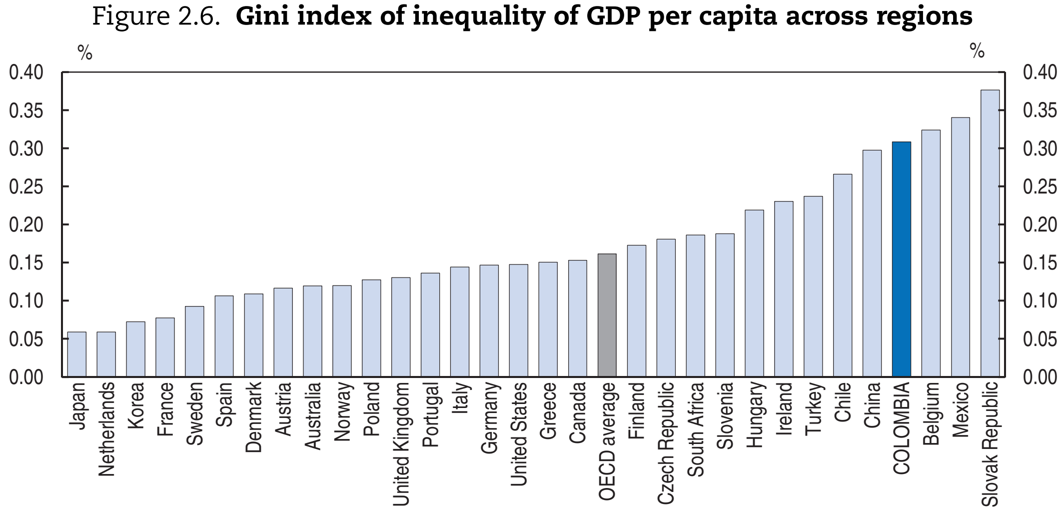
Furthermore, the high costs of financing need to be reduced, particularly for the many small businesses looking to exploit productivity gains through long-term investments (Meléndez and Harker, 2009). This should represent added productivity benefits in the current context of decreasing trade barriers and high business informality (Caro *et al.*, 2012; Cárdenas and Rozo, 2009).

These policies need to be complemented with an improvement in the business environment. Strengthening efforts to promote greater competition should further improve the economy's business environment and dynamism. More efficient and transparent use of public resources and a friendlier environment for formal business will encourage formalisation, with positive impacts on business performance (World Bank, 2010; Caro *et al.*, 2012). Efforts in reducing insecurity must continue, as homicide rates remain twice the regional average and Colombia ranks as the worst country in the world in terms of the cost of terrorism to business (WEF, 2012).

Addressing regional disparities for sustainable economic growth

The policies to boost productivity and economic growth also need to address the large income disparities across regions. There are large differences in per capita income levels among regions when compared with the regional differences in OECD economies (Figure 2.6). Moreover, inequality can be even higher across municipalities. For example, the Gini index for the average GDP per capita across municipalities in Cundinamarca, one of the richest departments in Colombia, is close to 0.5. A reduction in the lag of the poorest regions can help increase the rule of law and address some of the underlying factors that

Figure 2.6. **Gini index of inequality of GDP per capita across regions**



Note: 2010 for Colombia and 2009 for the rest of the countries. The chart refers to each country's main political divisions (TL2 regions), *e.g.*, states in the US and departments in Colombia (of which there are 32; Bogotá is included as a "special district").

Source: *OECD Regional Database 2012*, DANE.

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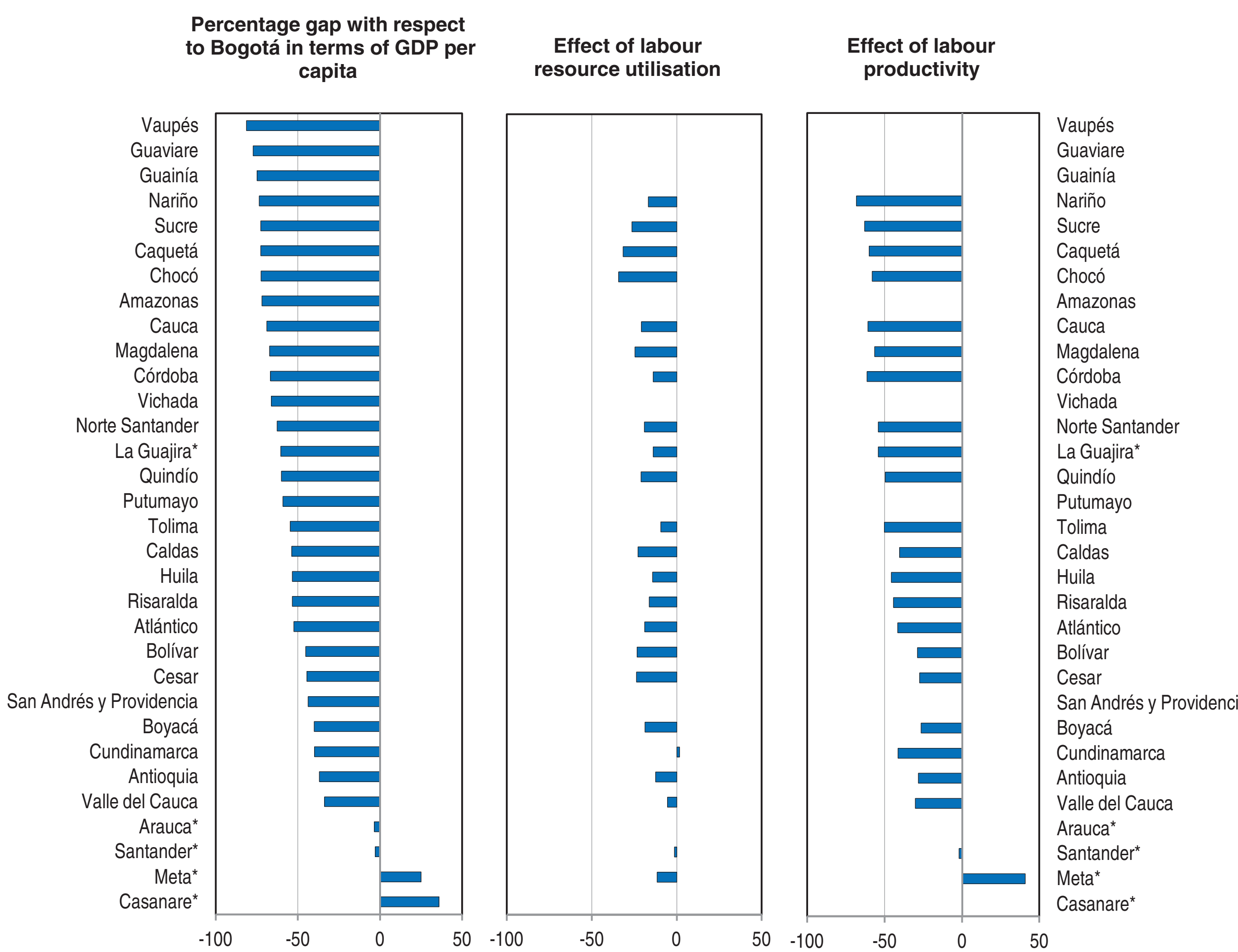
have kept those regions under civil conflict and violence, allowing the country to grow sustainably. The recent victims' law, which looks to return people displaced by violence to rural areas, contributes to reduce the pressure on large cities with insufficient employment opportunities and high congestion, and to exploit opportunities for development in other areas.

Most of the regions' GDP per capita gap with respect to Bogotá is due to low labour productivity (Figure 2.7). This dispersion across departments has remained almost constant over the past decade, with the main exception of commodity-producing departments, where highly productive commodity sectors have emerged but have created little employment.

Figure 2.7. **The sources of real income differences across regions**

2010



Note: The * denotes departments that received the largest amount of direct royalties from commodity production in the period 2007-2011 (*i.e.* Arauca, Casanare, La Guajira, Meta and Santander). No data are available for the effects of labour utilisation and productivity in Amazonas, Arauca, Casanare, Guainía, Guaviare, Putumayo, San Andrés y Providencia, Vaupés and Vichada.

Source: DANE.

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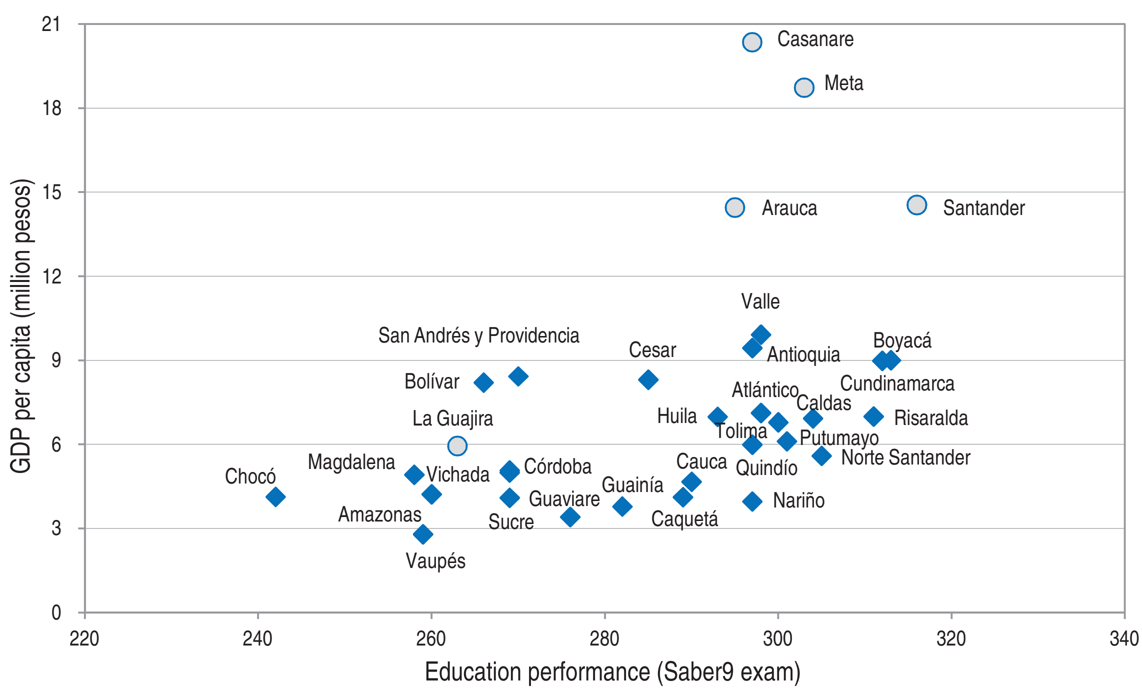
Furthermore, regions with low productivity levels suffer from the same bottlenecks that determine Colombia's lag with respect to OECD countries. In addition to violence, which has been specially intense in these regions, low access to and performance of education have been identified as one of the main bottlenecks hindering GDP per capita growth and productivity (CEER, 2007). Policies should focus on increasing the quality of teachers and the number of schooling hours in the poorest departments to improve their performance in secondary education (Galvis and Bonilla-Mejía, 2012; Figure 2.8). In addition, stimulating entrepreneurial training during secondary, tertiary and continuing education is also critical to boost regional productivity, particularly in less developed regions (OECD, 2012b).

Figure 2.8. **Education and development across regions**

2010



Note: Grey circles represent the departments receiving the largest amount of direct royalties from commodity production (*i.e.* Meta, Casanare, La Guajira, Santander and Arauca). Saber9 exam refers to the national exam for students two years before the end of secondary school.
Source: DANE and Ministry of Education.

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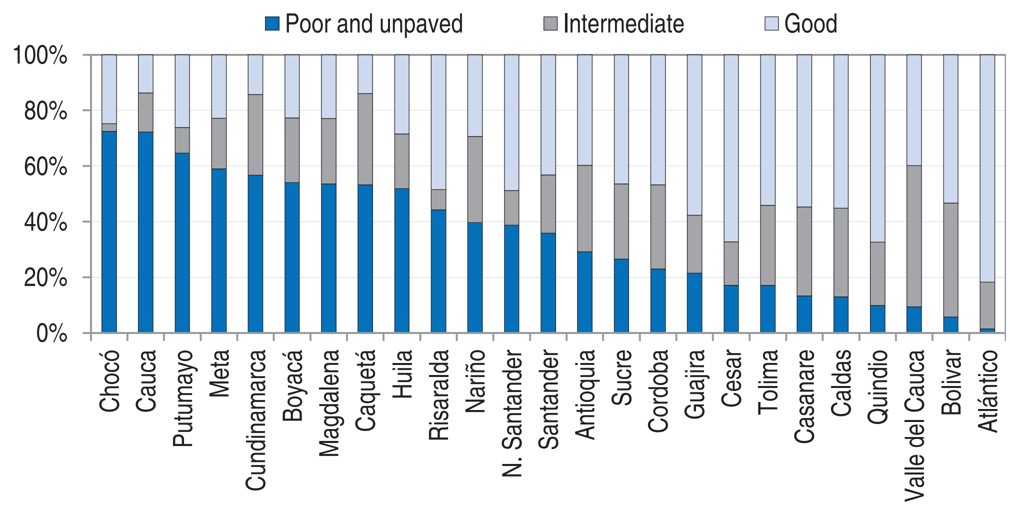
Likewise, the quality of transport infrastructure differs greatly across regions. High regional discrepancies in the quality of roads mean there are large opportunities to raise competitiveness through mere rehabilitation and maintenance of existing roads in low-performing regions (Figure 2.9). Better access to transport infrastructure in poorly connected areas can promote trade and tourism (CEER, 2007; Ramírez and Parra-Peña, 2010).

Politics and weak institutions have affected regional development

Investment has been mostly determined by political power rather than productivity and growth potential. Historically, economic policies have promoted capital formation in Bogotá, Antioquia and Valle del Cauca, leading to a high concentration of industries,

Figure 2.9. **Quality of primary roads**

2009



Note: INVIAS refers to the National Roads Agency, which is in charge of construction, extension and maintenance of the non-concessional transport infrastructure.

Source: Instituto Nacional de Vias (INVIAS).

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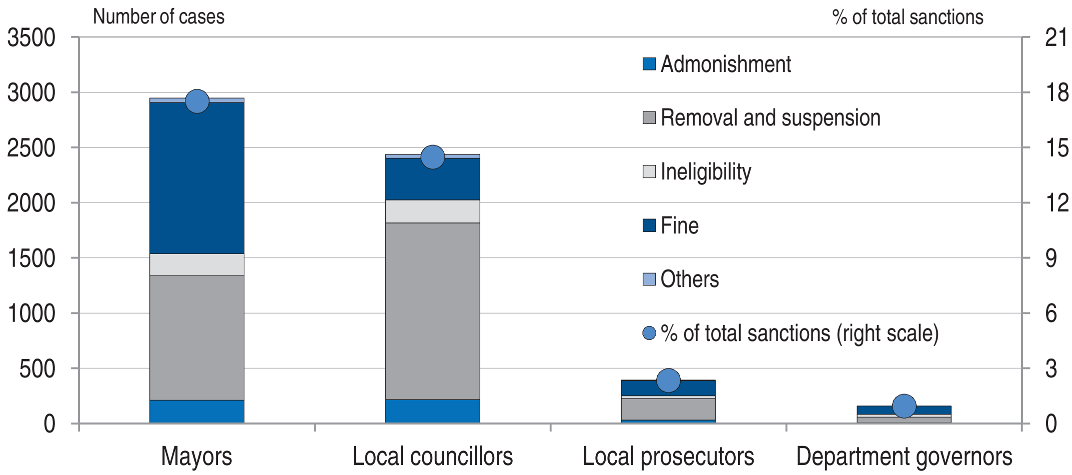
services and income in these areas while failing to exploit economic development opportunities in other areas (Bonet and Meisel, 2007; Eslava and Meléndez, 2009; Cortés and Vargas, 2012). Furthermore, central government benefits, such as tax exemptions and preferential tariffs, have favoured regions with electoral importance and political power rather than those with high productivity potential or investment performance (Lora and Scartascini, 2010).

In addition, weak institutions that allow for high levels of corruption threaten growth, especially in sub-national governments. The 1991 constitution sought to promote regional expenditure yet failed to reduce inequalities: sub-national authorities began to receive much larger public resources but their capacity to effectively manage and invest them was not raised accordingly. Currently, most of the oil-producing and mining regions have weak institutions. As a result, the investment of vast royalties from the extraction of natural resources has been historically ineffective (Olivera and Perry, 2009). Furthermore, sub-national authorities have been particularly vulnerable to corruption. In 2011 more than 100 mayors were punished by the Inspector General and over 90% of them have been suspended. Close to a third of the total sanctions in the public administration (national and sub-national) levied between January 2000 and September 2012 were applied to mayors and local councillors (Figure 2.10). Finally, transparency studies show that among 137 national institutions, the Senate and the House of Representatives are ranked first and twelfth in terms of risk of corruption, respectively. Critical institutions dealing with infrastructure, such as port authorities, are also highly ranked, calling for more accountability. There is also a need for better collection and transparent dissemination of information by institutions such as Colciencias, which is in charge of financing research and development (ITN, 2010).

Figure 2.10. **Sanctions on sub-national authorities**

January 2000 – September 2012



Note: Ineligibility cases could include suspension and removal cases. Total sanctions refer to the sanctions to the total employees (national and sub-national) in the public administration.

Source: The Office of the Inspector General of Colombia.

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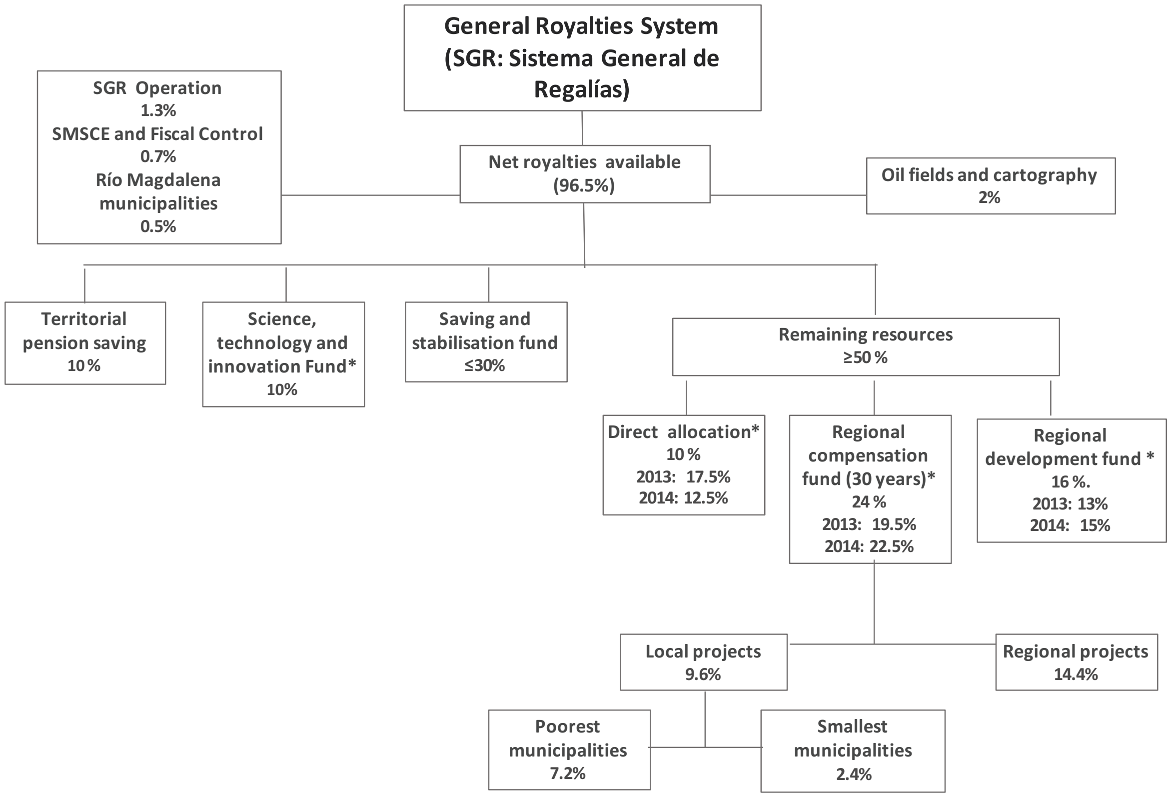
Towards better investment of regional resources: the reform of royalties and beyond

The government passed an ambitious reform in 2011 to improve the allocation of royalties from the exploitation of natural resources, worth 1.4% of GDP in 2011. It aims to distribute revenues more equitably across regions, as the share allocated directly to commodity-producing regions will be reduced from 80% before 2011 to 25% in 2012 and 10% after 2014. Three new funds (*i.e.* regional compensation, regional development, and science, technology and innovation funds) will receive at least 50% of the total royalties as of 2015. Furthermore, depending on the increase in expected royalty revenues, up to 30% of royalties will be directed towards a fund for saving and stabilisation (Figure 2.11). Resources from these funds will be distributed to regions according to objective criteria such as population size, poverty and unmet basic needs.

The reform also aims to spur regional growth by improving the effectiveness of investment funded by royalties. Most of the resources invested in the two regional funds (40% of royalties from 2015) will be spent on infrastructure projects. In addition, 10% of the royalties will be invested in the science, innovation and technology fund. To select projects to be financed by these funds, the government set up councils across regions called OCADs (*Órganos Colegiados de Administración y Decisión*) consisting of both sub-national (*i.e.* mayors, governors) and national authorities (*e.g.* Minister of Finance, Minister of Mining, National Planning Department Director). In the case of the science, innovation and technology fund, OCADs also include academic faculty. A veto power for the central government has been introduced in these councils. As of November 2012, 30% and 15% of royalty resources approved to be spent were directed towards projects on transport infrastructure and research and development, respectively. These and future investments will help reduce Colombia's lag in infrastructure and innovation. The latter is partly due to low investment in research and development compared to OECD and Latin American economies and is evidenced by low patent application (Figure 2.12).

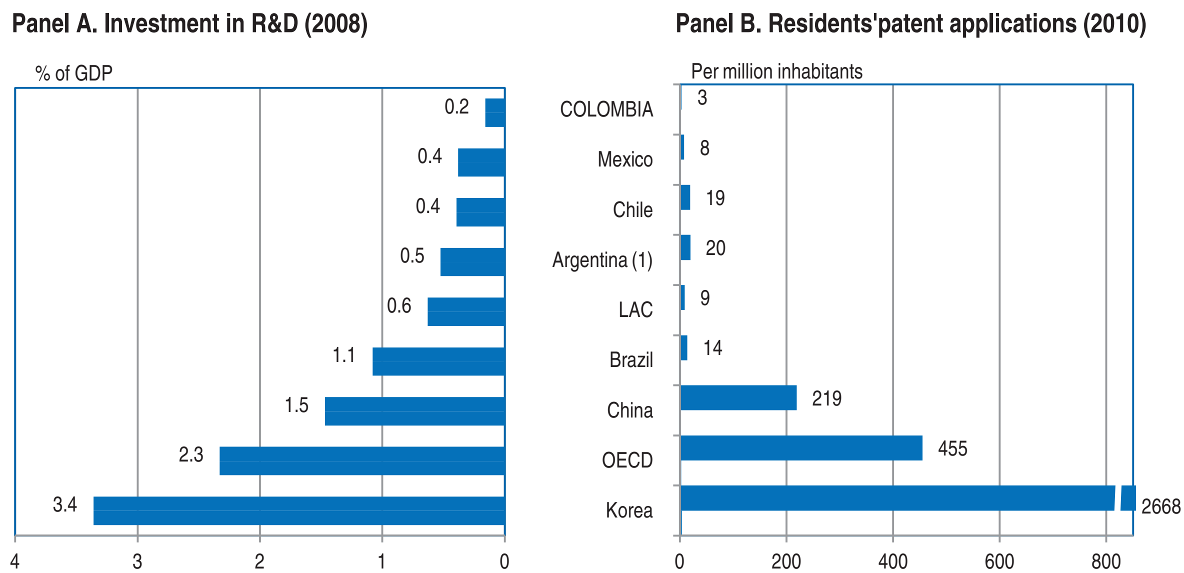
Figure 2.11. **The new general royalty system**



Note: Projects are selected by councils called OCADs *(Órganos Colegiados de Administración y Decisión*) consisting of national and sub-national governments, and the academia in the case of the science, technology and innovation fund. SMSCE (*Sistema de Monitoreo, Seguimiento, Control y Evaluación*) refers to the monitoring, control and evaluation system of royalties.
Source: OECD based on Acto Legislativo 05 (2011), Decree 0750 (2012) and Decree 4923 (2011).

While the reform of royalties is welcome, increased resources for regional authorities need to be matched with greater institutional capacity and a more active technical support from the central government. Sub-national planning, execution and monitoring capacities should be reinforced to allocate resources appropriately and invest effectively. Central government support is particularly important to identify and screen projects that will be presented to the OCADs (*Órganos Colegiados de Administración y Decisión*), including technical assistance to perform value for money and social cost-benefit analyses. In this context, the regional public bank, Banco Agrario, can work with private banks to help screen projects to be financed in part through royalties. In addition, central authorities should develop strong links between regional authorities and the country's leading research centres to invest royalties for innovation effectively towards the development of scientific and technological knowledge that addresses the needs and exploits the potential of the economy. Finally, continuously allocating resources based on needs reduces regions incentives to improve lest they receive less funds. A share of royalties transferred to regions should be based on regions' improvement over time according to relevant, objective and easily measured indicators. Key indicators such as unmet basic needs, student performance or transport

Figure 2.12. **Investment in R&D and patent applications**



Note: OECD patent value corresponds to a simple average across member countries. LAC stands for Latin American and Caribbean countries.

1. Latest patent data corresponds to the year 2008.

Source: United Nations Educational, Scientific and Cultural Organization (UNESCO), Ibero-American/Inter-American Network of Science and Technology Indicators (RICYT), the *Main Science and Technology Indicators (MSTI) Database* of the OECD and the World Intellectual Property Organization (WIPO).

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connectivity could be included. Care should be taken that such a mechanism does not discriminate against the least developed regions.

Further improvements in resource allocation and management are needed. Regions need to better coordinate the investment of royalties with that of resources received through other channels, such as regional transfers (*Sistema General de Participaciones*), which represents nearly 4% of GDP. A coordinated investment strategy should be laid out, for instance, through the Department Development Plans (*Planes de Desarrollo Departamentales*), establishing specific objectives at the sub-national level. OECD experience also demonstrates the need for co-ordination across levels of governments and local jurisdictions, robust budget procedures and investments that consider each region's potential and impediments (OECD, 2011a). Finally, allocation criteria should be improved to generate greater accountability and provide further incentives for a better use of resources (Nieto-Parra and Olivera, 2012; Cortés and Vargas, 2012).

Further measures to improve the institutional framework are crucial

Public policies improving co-ordination between central and sub-national governments and control agencies need to be implemented in order to adopt a comprehensive anti-corruption policy. The government recently created the Transparency Secretariat (*Secretaría de Transparencia*) in charge of leading the government's anti-corruption strategies. An independent expert committee in this Secretariat could be created to help define anti-corruption tools and policies that can foster co-ordination among different levels of government.

The *Corporaciones Autónomas Regionales* (CARs) are especially weak. These regional authorities are in charge of granting environmental permits, among other things. They lack technical and administrative capacity, and their procedures fail to comply with legal and oversight requirements (Blackman *et al.*, 2006). For instance, the national Audit Office reported that deficiencies in the management of the Cundinamarca region's CAR resulted in costs of almost USD 4 million in 2011. Moreover, the granting of environmental licenses to build roads and to extract natural resources has been disorganised and inefficient. More than five entities are involved in the institutional set-up granting environmental permits for mining activities, creating backlogs and delays. Environmental permits to launch the exploration phase of projects take on average 55 weeks longer than required by legal deadlines. Recently, the government has made efforts to improve the process to obtain environmental licenses. These include the creation of a national agency specifically in charge of processing environmental permits (ANLA, *Agencia Nacional de Licencias Ambientales*), which has been reducing the time of application processing. The creation of this agency could be complemented with increased monitoring of CARs and an appointment process of CAR managers less dependent on the political cycle.

Finally, efforts have been made to improve the weak public procurement practices. A total of 181 000 procurement contracts worth 9% of GDP were signed in 2011, around 60% of them by over 2000 different sub-national authorities. Fewer than 30% of these procurement operations included a public tendering process. The National Public Procurement Agency (ANCP, *Agencia Nacional de Contratación Pública*) was created in 2011 to centralise public procurement and improve its efficiency and transparency. The Ministry of Finance also implemented an integrated financial information system to register budget documents for procurement. In addition, the ANCP plans to create a central goods and services catalogue and to establish an adequate public procurement validation process.

However, the ANCP should tackle three key bottlenecks in public procurement. First, the complex regulatory framework needs to be unified by standardising procedures and manuals. Second, it is crucial to have an information system able to estimate procurement efficiency. Third, more information regarding the workforce involved in public procurement operations is needed. Currently, the background and job profile of the workforce is not necessarily linked to the knowledge and skills required in public procurement operations. Better education is required to remedy this. In short, the ANCP needs greater capacity and resources to meet these challenges effectively. Although there is no one-size-fits-all solution, the OECD Principles for Integrity in Public Procurement (OECD, 2009a) can be useful for Colombia. These highlight the importance of transparency throughout the procurement cycle, high professional standards of public officials, specific monitoring mechanisms and clear chains of responsibility.

Box 2.1. Recommendations for more effective regional investment

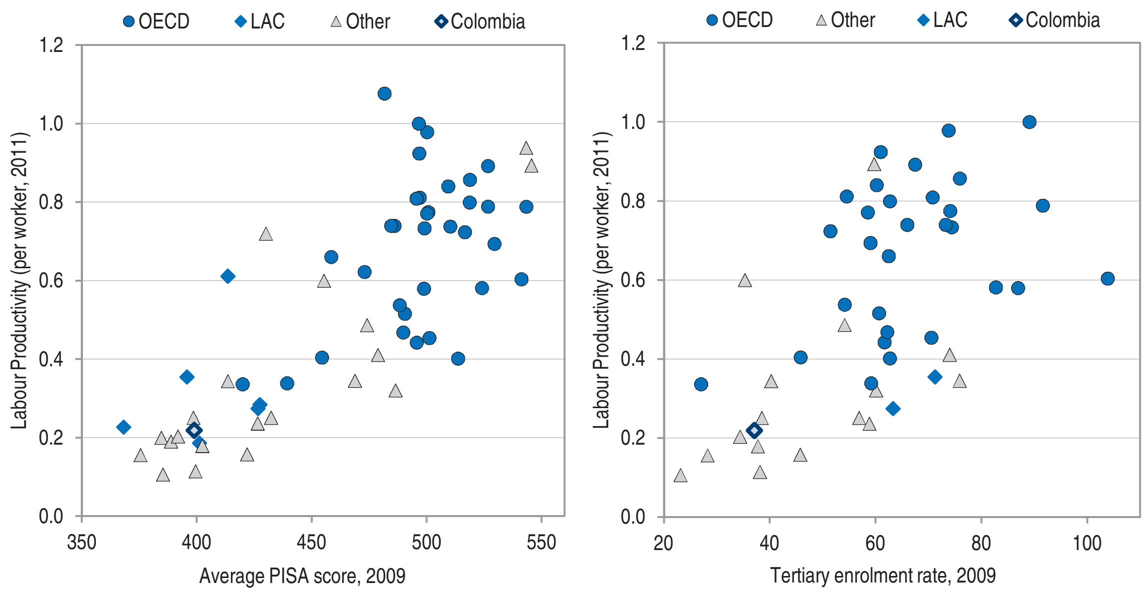
- Ensure that the revised distribution of royalties across regions results in viable projects that boost productivity by:
  - Providing further assistance to sub-national authorities to identify the most effective investment projects and provide advice on how to implement them efficiently. These policies include training, information and communication technology, and value for money analyses.
  - Ensure good governance by strengthening the monitoring and ex-post evaluation of investment projects.
  - Implementing an incentive mechanism, so that sub-national authorities receive more funds the faster they progress towards achieving critical economic and social objectives, such as unmet basic needs, student performance or transport connectivity. An incentive mechanism based on relative progress may be more appropriate to avoid favouring the richer, better performing regions.
  - Ensuring that sub-national governments fully account for the maintenance costs of investment projects.
- Focus on structural policies to improve productivity, promote diversification and the ability of the economy to respond to changing relative prices. Promote more inclusive growth through better integrated regional policies from the resources allocated to municipalities and departments (*e.g.* royalties, regional transfers).
- Implement better co-ordination between central and sub-national governments, and control entities in order to adopt an effective and comprehensive anti-corruption policy.
- Better enforce bureaucratic procedures, such as licensing, by increasing accountability. Enhance the monitoring of institutions vulnerable to corruption, *e.g.* by improving reporting requirements.
- Improve public procurement operations efficiency by implementing an information system that creates a central goods and services catalogue.
- Consider creating an independent expert committee in the Transparency Secretariat in charge of defining adequate anti-corruption tools and policy co-ordination.

Raising the coverage, quality and relevance of education is paramount for sustained productivity growth

The quality of education in Colombia requires major improvements. Education plays a key role in developing human capital. Technical and academic skills transform inputs with increased efficiency and raise the economy's productivity. Quality and relevant education that develops advanced skills and promotes research is also crucial for an economy to assimilate new technologies and innovate consistently. Finally, education substantially increases the likelihood of workers entering the formal sector, where they enjoy greater welfare and productivity (World Bank, 2010). There is a positive relationship between labour productivity and coverage and quality of education (Figure 2.13). PISA exams show that the performance of high school students in Colombia is lower than OECD economies (Figure 2.13, Panel A). Moreover, the tertiary enrolment rate remains significantly below that in OECD countries (Figure 2.13, Panel B).

Figure 2.13. **Education and productivity**

Panel A. Pisa scores and labour productivity | **Panel B. Gross tertiary enrolment rate and labour productivity**



Note: Labour productivity is measured as a fraction of the labour productivity of the United States. Selected LAC countries are Argentina, Brazil, Costa Rica, Peru, Trinidad and Tobago and Uruguay. Chile and Mexico appear both as OECD and LAC countries.

Source: PISA 2009 Results: What Students Know and Can Do – Volume I, OECD Publishing; The Conference Board Total Economy Database™ and World Bank's WDI indicators.

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Broadening coverage: increasing enrolment in pre-primary and tertiary education

Despite progress, coverage in pre-primary education remains well below OECD levels and should be further increased. In particular, Colombia lacks the institutional capacity to provide comprehensive care and education to its children under the age of 5 (CPC, 2010). Public programmes recently introduced are welcome but cover only around 25% of the targeted population. As the rate of return on human capital development decreases with student age, investing in early childhood to develop cognitive and non-cognitive skills is especially efficient and cost-effective for both growth and equality of opportunity (Heckman, 2006).

The enrolment rate of tertiary education in Colombia, at 37%, also remains well below the OECD average and even some regional peers such as Argentina and Chile. In particular, only half of students aged 17 to 21 who have completed high school pursue tertiary education (OECD, 2012a). This is partly related to insufficient access to financing for many low-income students. Student loans from the Colombian Institute of Student Credit (ICETEX, *Instituto Colombiano de Crédito Educativo y Estudios*), despite being useful, are insufficient and not efficiently targeted towards the poorest students (OECD, 2012a). The National Training Service (SENA, *Servicio Nacional de Aprendizaje*), the only completely free public technical institution, has the resources to admit only 1 in 7 applicants. In addition, low enrolment is associated with a 45% drop-out rate, which takes place mostly during the first semester because many high school graduates are not well prepared academically.

Thanks to the government's push to raise coverage and reduce drop-outs, the overall number of students in tertiary education has grown at a yearly rate of 8% since 2004. A third of this growth is explained by the continued expansion of SENA, which now accounts for 55% of enrolment in technical programmes (referred in Colombia as *formación técnica profesional* and *formación tecnólogica*), as well as 18% of tertiary enrolment overall. In addition, a total of 153 Regional Centres of Higher Education (CERES, *Centros Regionales de Educación Superior*) have been created through partnerships between local governments, universities and businesses. Furthermore, ICETEX loans were recently made interest-free for low-income students to decrease repayment burdens. The government also set up the SPANDIES database specifically to monitor the factors associated with student drop-outs and has encouraged institutions to address the issue. In the near future, the Ministry of Education plans to create 120 new technical programmes together with the private sector. At the same time, it will offer monthly allowances of USD 100 to 120 000 low-income students for enrolment in such programmes.

Efforts to raise the coverage of pre-primary and tertiary education must continue. The investment in early childhood education should be considerably increased, with a multidisciplinary approach that includes education, nutrition, health and friendly environments for the development of non-cognitive skills, such as perseverance and creativity. A first step in this direction could be integrating a health care provision into early childhood programmes. In tertiary education, the CERES have the potential to be a decisive tool to raise coverage, but they should be considerably expanded as they currently represent less than 2% of enrolled students. Furthermore, encouraging the supply of online distance learning can help raise access in remote regions. The recent efforts to expand the coverage of student loans to the poorest populations are a step in the right direction but more should be done. In line with experience in OECD economies, better preparing students for tertiary education is key to reducing drop-out rates.

Raising quality: Greater accountability based on outcomes

Pre-primary, primary and secondary education need to be enhanced. High school students at age 15 perform below the OECD PISA average. The quantity of schooling suffers from low teaching time and teacher quality, as well as limited school autonomy to manage resources and choose teachers. Students do not acquire the skills needed to be successful at the post-secondary level, partly due to the fact that most of them finish high school at the age of 16 or 17, around 2 years earlier than their OECD counterparts (OECD, 2012a). The government should consider increasing the years of schooling before university, for instance by establishing an optional bridge year between high school and tertiary education. To increase the quality of pre-primary schooling, OECD experience suggests various tools that involve setting quality goals, regulations and standards, improving qualifications and training of teachers and engaging families and communities (OECD, 2011b; Chapter 1 of this assessment).

Minimum quality requirements for higher education institutions are low and few have high-quality accreditation. Even though any institution wishing to offer tertiary education programmes needs to register with the Ministry of Education, the minimum quality requirements to do so are low and weakly enforced (OECD, 2012a). There is a voluntary high-quality accreditation system with clear, demanding and well-enforced standards that insures accredited institutions and programmes meet a comprehensive list of quantitative and qualitative indicators and develop a strong capacity for self-evaluation and continuous improvement. However, only 7% of institutions are currently accredited under this system.

Quality issues concern especially technical institutions, many of which have low academic standards and no internal quality assurance provisions. These institutions concentrate on becoming (low-quality) universities rather than improving as technical centres, in part because non-university institutions receive only 2% of the per-student public subsidies that universities receive. As a result, only 4% of high-quality accredited programmes are technical. Furthermore, little is known about SENA's teaching quality and graduates' performance in the labour market, as they are missing from most national education databases (OECD, 2012a). Despite improvements over the last two years, only 14% of the teaching staff hold or are pursuing a PhD and only 57% have a post-graduate diploma. Lastly, according to the Academic Ranking of World Universities no Colombian university is ranked in the world's top 500.

The government has sought to promote high quality accreditation and improve the teaching staff's qualifications. After raising the number of institutions with high-quality accreditation from 16 to 23 in the past two years, 34 additional institutions are committed to achieving high quality status by 2013. The Ministry of Education has also approved 80 doctoral programmes (1 600 students) and has undertaken regional initiatives to upgrade specialisation and master programmes into master degrees and doctorates. Top Colombian universities must continue increasing their focus on research, drawing lessons from Asian universities, which have soared in world rankings. Finally, the country has signed up for the OECD's Feasibility Study for the international Assessment of Higher Education Learning Outcomes (AHELO). Through AHELO the government and higher education institutions will be able to evaluate and compare their students' outcomes with those in OECD countries as well as to identify bottlenecks.

A key aspect of raising quality and efficiency is to increase educational institutions' accountability in terms of outcomes (OECD 2012a). This can be achieved by linking a share of education centres' financing to their performance regarding quality, efficiency and relevance to the expected needs of the economy. Such performance-based mechanisms should focus on progress from year to year rather than levels to avoid favouring higher performing schools. In addition, the transfer system from central to regional governments should be based on improvement of not only coverage indicators but of quality ones as well. Moreover, additional quality checks should be included in the registration of institutions and programmes, increasing the focus on outcomes using student performance data from the Colombian Institute for the Promotion of Higher Education (ICFES, *Instituto Colombiano para el Fomento de la Educación Superior*) and applying criteria more rigorously by refusing weak applications. This entails greater collaboration between the agencies in charge of quality assurance and ICFES (OECD, 2012a). Finally, ICFES's standardised test should also be made applicable to technical programmes, including SENA's.

Similarly, education institutions should be encouraged to introduce financial and other incentives to teachers based on students' test performance. Rigidities in teacher payment schemes and management should be considerably reduced, although significant political economy constraints have thwarted past reform efforts. Improving teaching quality in an environment with scarce resources starts with making school leaders and teachers more accountable, while supporting them by improving teaching and learning environments. Increasing the qualifications of the teaching staff should also continue to be a priority, but it could be complemented by greater emphasis on modernising teacher's skills and including teaching quality indicators in the measurement of school performance.

Colombia has a world-class framework for testing student performance at different education levels; it should be used more as a policy tool to measure institutional performance. All students take national tests at the end of their primary, secondary and university education. They are administered by ICFES and measure the added value of each institution. These and other national databases, such as the National System of Higher Education Information (SNIES, *Sistema Nacional de Información de la Educación Superior*) and the Educational Labour Observatory (OLE, *Observatorio Laboral para la Educación*), could be better linked and made more accessible and user-friendly so they can be fully exploited as tools to implement accountability. In addition, greater transparency is needed in many important processes and decisions, including loan allocation by ICETEX and admittance criteria of some public institutions such as SENA. To raise its accountability, SENA should be fully integrated into the post-secondary system in terms of funding, data collection and evaluation, academic planning and quality assurance mechanisms (Saavedra and Medina, 2012). Lastly, the authorities need to promote high quality technical schools by increasing the share of public subsidies they receive.

Enhancing relevance: raise focus on skills and training

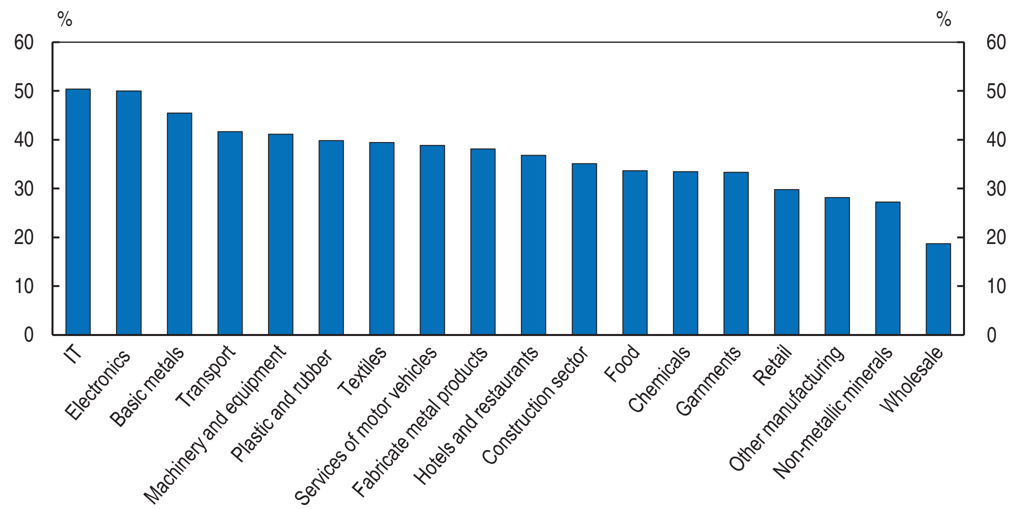
Education needs to focus more on skills that are demanded in the labour market. This is particularly true for public institutions and technical programmes, as private institutions, influenced by local business people, respond more effectively to labour market demand. There is a large imbalance between the needs of the productive sector and the available workforce, with a large shortage of skilled workers and technical specialists and a surplus of unskilled workers and middle management professionals (CPC, 2010). According to the World Bank's Enterprise Surveys, around 45% of firms identify an inadequately educated workforce as a major constraint, up from 30% in 2006 and compared to 20% in OECD economies.

Furthermore, tertiary programmes covering key professions do not teach students what the market needs. While shortages of a skilled workforce are particularly acute in sectors that require a large share of technical graduates (Figure 2.14), only 67% of technicians and 74% of technologists find a formal job upon graduation. Also, only around 19% of Information and Technology students graduate with the basic skills required by the industry (CPC, 2010). Likewise, material taught at the CERES has been reported to include outdated technologies and sub-par academic quality (OECD, 2012a). Second-language proficiency is also inadequate, partly due to extra fees charged for language courses in public institutions. For their part, students do not take full advantage of OLE – which tracks graduates' jobs – to choose which programmes to study.

Despite this, recent efforts are steps in the right direction. Largely through SENA, technical graduates constituted 43% of total graduates in 2009, up from 25% in 2003. The

Figure 2.14. **Firms reporting an inadequately educated workforce as a severe or major obstacle**

By sector



Source: World Bank Enterprise Survey, 2012.

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government is currently working on a partnership with the South Korean Economic Development Co-operation Fund to invest in five new regional centres for innovation in information technology education. Moreover, the Ministry of Education, in partnership the Ministry of Labour, plans to introduce a quality register for work-related training courses. The Ministry of Labour is creating a Public Employment Service, the first step being the implementation of an information system on the labour market across the country, and is planning to evaluate the performance of 72 sectoral roundtables used by the SENA to identify labour needs. Finally, the apprenticeship law presented in Autumn 2012 to Congress should facilitate the insertion of trainees with no university degree into the labour market and to enhance dual programmes that combine training in education institutions and at the workplace.

Stronger links should be built between businesses and education institutions at all tertiary levels. They should look to develop curricula that are both more relevant and more flexible in responding to evolving demands and technologies (OECD, 2012a). It would make graduates' skills more attractive in the labour market and the economy more productive. A plausible approach is to incorporate private sector stakeholders in the governing boards of public institutions. Greater importance should be given to regional employment offices and the existing sectoral roundtables organised by the government with the private sector. Institutions at all educational levels should also include and strengthen modules of general skills that all employers seek and all students need, such as analytical thinking, effective communication, language skills and teamwork ability (Saavedra and Medina, 2012). These are often scarcer and are more highly valued in the workplace than academic or technical knowledge (MIF, 2012). Furthermore, ICFES's exams should introduce large components that test skills rather than content. For its part, an external evaluation of the CERES is planned, looking to improve the value they offer students. The OLE database should also be promoted more as a tool to help potential students decide what degrees to pursue.

A greater overall focus on skills should raise relevance and smooth the progression through post-secondary levels and into lifelong learning. The acquisition of cognitive and non-cognitive skills – and not merely enrolment – is the channel through which education generates economic growth (Hanushek and Woessmann, 2010). It is paramount to shift the measurement of education attainment from inputs, such as semesters or courses taken, to outcomes, such as skills and knowledge acquired and ultimately establish a national skills certification framework. The economic sectors could define and update the skill set a worker must have to work in certain areas and education institutions could better target what they teach. Such a national skills certification framework could be complemented with a universal credit accumulation and transfer system. By establishing clear learning standards and progression routes throughout levels of learning, students would be able to progress through higher education or change institutions without having to restart their education from the beginning. Students could respond to labour market changes by shifting paths or seeking further academic training, and discouraged students would have more options within the post-secondary system instead of dropping out. A first step is to implement a better co-ordination among different institutions to reduce the gaps between academic and skill levels for technology degrees and university entry level standards.

The improvement of skills should not stop at the end of schooling. Improving the education system must involve more and better training for graduates, who constitute the majority of the labour force. Training programmes need to be promoted for current workers to enhance their skills throughout their entire working life. This is especially critical for those with low levels of education. It would allow the workforce to continually adjust to technological advances and respond to changing labour market skills requirements. Moreover, active training policies are a critical complement if implementing differentiated minimum wages (as suggested in the previous chapter) in order to achieve a favourable trade-off between assuring acceptable living standards and promoting formal employment (OECD, 2011c).

Colombian and OECD experiences provide key lessons on how to develop an excellent vocational and training system. Although small and currently discontinued, past programmes in Colombia providing training for low-skilled and unemployed young workers were successful in raising the probability of formal employment and wages (DNP, 2008; Attanasio *et al.*, 2011). They used competitive bidding based on teaching quality to choose the training providers, set economic incentives to insure high retention and applied rigorous monitoring and evaluation. These features provide a good basis to develop more ambitious efforts to enhance the vocational education and training system, including an adjustment of SENA's current structure. In addition, developing and implementing an index of functional literacy, as was recently done in Brazil, would be useful to diagnose the current skills deficiencies in the Colombian workforce. Colombia can also draw from extensive OECD experience, which emphasises the importance of effective teachers, trainers and career guidance, a balance between student preferences and employer needs, workplace learning and the engagement of employers' unions (OECD, 2010a).

Box 2.2. **Recommendations on education**

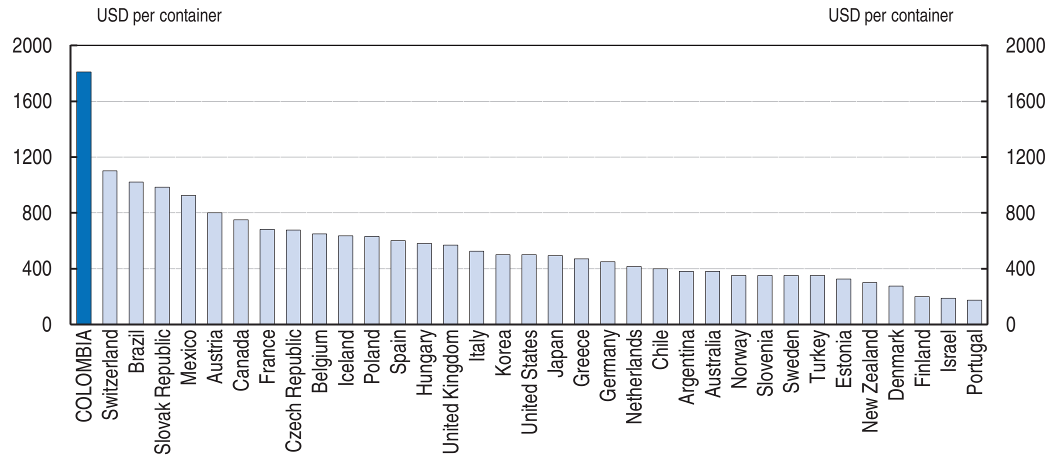
- Broaden access to pre-primary education and increase its quality, based on tools derived from OECD experiences.
- Significantly raise investment in early childhood education to develop students' cognitive and non-cognitive skills through a multidisciplinary approach that includes the provision of education, health and friendly environments to play and interact.
- Increase the accountability of educational institutions by linking a share of their financing to student performance, teaching staff indicators and labour market relevance. Introduce economic incentives for teachers based on their students' performance and reduce rigidities regarding teacher payment and management.
- Improve the accreditation of tertiary education institutions. Raise the minimum quality requirements for education centres to register and operate, while improving enforcement by refusing poor applications. Use ICFES's student performance data as a tool to enforce accountability.
- Introduce outcome indicators, and publish them, for the national training service (SENA). Fully integrate SENA into the tertiary education system in terms of funding, data collection and evaluation, academic planning and quality assurance mechanisms. Perform an external evaluation of the CERES and SENA to raise their added value.
- Increase the focus on skills development, as opposed to mere enrolment, as a central measure of educational attainment and invest efforts in developing a national framework of skills certification.
- A better matching between employers' needs and institutions' outputs could be reached by giving more weights to the regional employment offices and to the existent sectoral roundtables organised by the government with the private sector. Include private actors in the governing boards of education centres. Drawing lessons from vast OECD experience, develop a comprehensive training system for a continuing improvement of skills in the active workforce.

Promoting transport infrastructure policies

Like most countries in the region, Colombia exhibits an infrastructure gap with respect to other emerging and developed economies. This gap is largest in the transport sector, where, in contrast to other types of infrastructure, Colombia is ranked well below Latin American peers and other emerging economies (Perrotti and Sánchez, 2011; WEF, 2012). In particular, both the quality (*i.e.* paved roads out of total roads) and quantity (*i.e.* length of roads per km^2) of roads are low (Calderón and Servén, 2010) and rail and river transport represent only 15% and 4% of the freight market. As a result, the country's costs of internal freight transport are one of the highest in the world (Figure 2.15) and are now considered the country's major barrier for trade (Eslava *et al.*, 2009). Similarly, urban transport infrastructure faces large challenges, particularly in Bogotá (Box 2.3).

Beyond increasing investment in transport infrastructure, the challenge in Colombia is to invest more effectively. Colombia's transport infrastructure gap has increased with respect to the other main countries in the region despite investing, on average, slightly more on roads and railways as a share of GDP (0.75% of GDP versus 0.7% of GDP; Calderón and Servén, 2010). This suggests that policy efforts should focus on ensuring that investment translates more effectively into better infrastructure, which is particularly relevant now that planned private and public investment in road infrastructure over the next two years will represent 5% of GDP.

Figure 2.15. **Inland transportation costs for international trade**



Source: World Bank, *Doing Business 2012.0*

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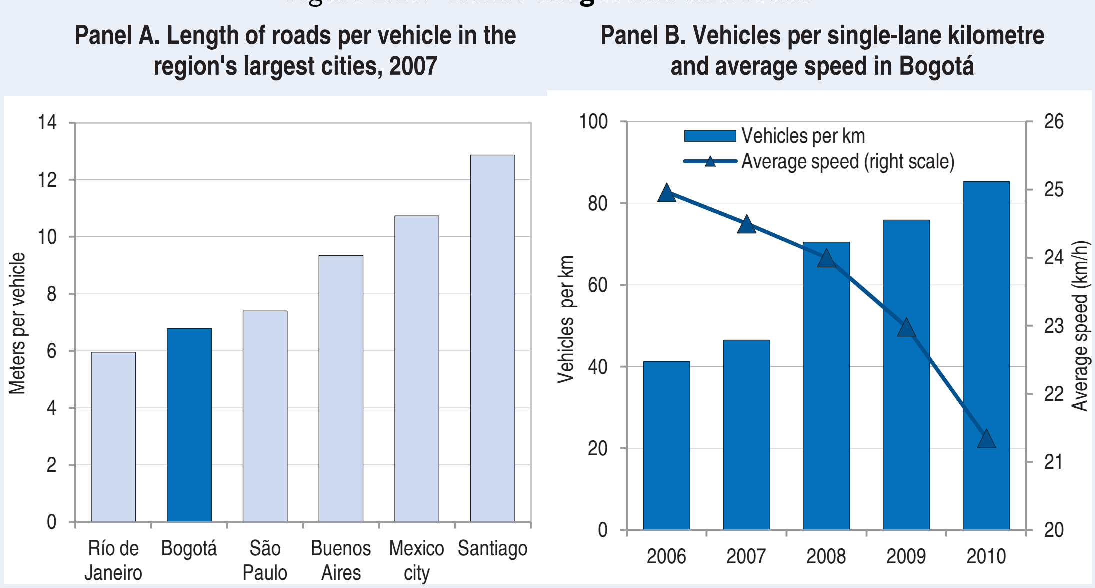
Box 2.3. **Urban transport infrastructure: The case of Bogotá**

The current problems of transport infrastructure in Bogotá, where a quarter of the country's GDP is produced, are detrimental for the overall economy, as traffic congestion limits the productivity gains from scale and agglomeration. They illustrate some of the main challenges facing infrastructure development in the country and provide lessons for other major cities. Bogotá has one of the lowest roads per vehicle ratios among the largest cities in the region (CAF, 2009). As a result of rising purchasing power and inadequate public transport alternatives, private vehicles nearly doubled from 2005 to 2010, while the total length of roads remained practically constant, reducing vehicle speed (Figure 2.16). Furthermore, around 50% of the road network needs reconstruction, entailing investments worth 6.8 billion dollars.

Figure 2.16. **Traffic congestion and roads**



Note: In Panel B the average speed refers to the simple average of mean private car speed and mean public transport speed, excluding *Transmilenio* (a bus transit system that covers Bogotá).

Source: CAF (*Corporación Andina de Fomento* – Development Bank of Latin America) and *Cámara de Comercio de Bogotá*.

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Box 2.3. **Urban transport infrastructure: the case of Bogotá** *(cont.)*

An inefficient public transport system and weak governance in key institutions are two of the main bottlenecks. Primary and secondary streets have an excess supply of aging buses from over 60 private companies. They have no schedules or determined stops and cause extra congestion and pollution. In the main arteries the exclusive-lane bus network is overstretched due to large construction delays related to poor planning and corruption in the contracting processes, which in some cases selected under-financed and unprepared contractors. In addition, institutions in charge of designing and contracting infrastructure projects lack the required technical and financial capacity (Acevedo *et al.*, 2009; DNP-World Bank, 2012).

In the short term, the Integrated Public Transport System (SITP) needs to be effectively implemented, with well-conceived routes, predetermined stops and a renovated bus fleet. In addition, policy proposals promoting rail services that cover suburban areas should be implemented to reduce traffic congestion and pollution. The government's pilot programmes and policies for green growth, such as green construction guidelines and decreased import tariffs for green vehicles, are welcome. However, better planning and project structuring is required, along with greater ex-ante monitoring of bidding processes and projects. This entails strengthening the institutions in charge of these tasks. In line with OECD experience, congestion charges and road taxes can reduce car travel and fund green infrastructure. Moreover, the capacity and quality of mass public transport infrastructure needs to be significantly enhanced to give users efficient transport alternatives. Greater interconnection between all transport modes, including bicycle lanes, is also important to achieve a condensed and dynamic city, with large benefits for productivity and the environment. These measures could reduce fuel consumption and CO_2 emissions up to 20% in the near term and 40% by 2040, compared to what they would be if infrastructure development remains on the current path (Acevedo *et al.* 2009).

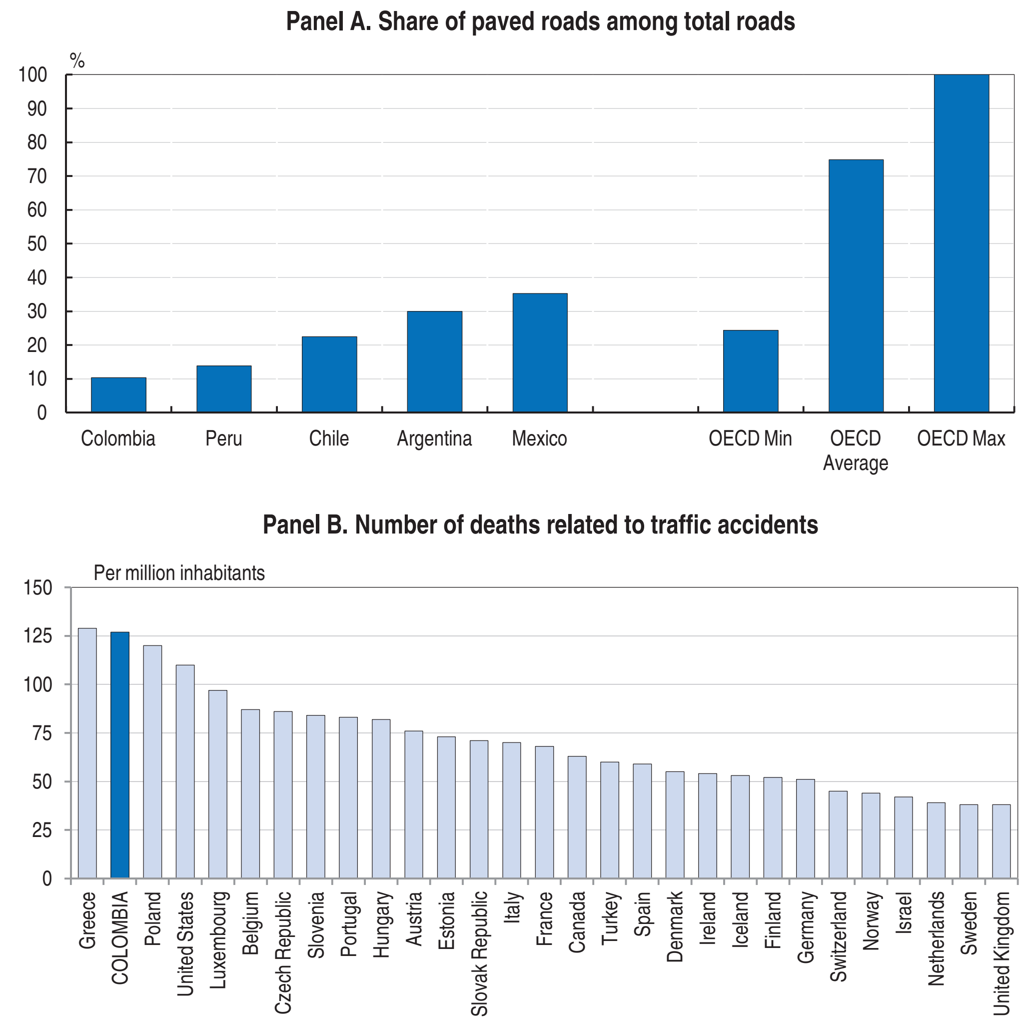
Improving the prioritisation and planning of transport infrastructure

Although the transport sector in Colombia faces obstacles throughout the entire project cycle, the biggest are in the prioritisation and planning stage. Policy makers' ability to design projects is hampered by a lack of a frame of reference and the low quality of standardised information (Nieto-Parra *et al.*, 2013). Although Colombia's transport infrastructure cycle has multi-year investment plans in the form of a National Development Plan (NDP), NDPs during the period 2002-2010 lacked good pre-feasibility analysis and designs. The central government based its infrastructure policy on meetings with communities and local authorities as a planning and prioritisation mechanism, at least for part of the public budget. Around 811 transport tasks were discussed in these community councils (*consejos comunales*), with the majority of such tasks being executed or in progress. Although this allowed for insights into communities' needs and speedy implementation, most projects were prioritised and planned without *ex-ante* feasibility studies and were not complemented with a long-term comprehensive infrastructure policy that considered the projects' impact on the overall productivity of the economy.

The lack of effective prioritisation and planning hampered transport infrastructure and its contribution to competitiveness in various ways. First, there has been a bias towards investment in secondary and tertiary roads, leaving Colombia without adequate primary arteries between the main production centres and ports (Benavides, 2010). The central government allocated more than 30% of the budget of the National Roads Agency's (INVIAS, *Instituto Nacional de Vías*) to investment in tertiary roads even though municipalities are supposedly responsible for investing in them. Second, investment in new projects has been consistently preferred over the maintenance of existing infrastructure, resulting in a low quality of existing transport networks. This has raised overall transport costs and, coupled with low safety standards, has affected security in the transport sector (Figure 2.17). Current road conditions require that around 50% of future road investments be spent on maintenance and rehabilitation needs (Acevedo *et al.*, 2009). Third, considerable changes in the NDP proposals presented by the executive during the approval process in Congress have occurred. Congress added 59 projects, including paving 5 000 kilometres of tertiary roads, without prior feasibility or the value-for-money analyses required by the approval processes of the 2002-2006 and 2006-2010 NDPs (Nieto-Parra *et al.*, 2013).

Figure 2.17. **Quality of roads and road safety**

2009



Note: In Panel A paved roads are surfaced with macadam or cobblestones. The OECD average includes 20 countries: Australia, Austria, Belgium, Chile, Denmark, France, Hungary, Iceland, Israel, Japan, Korea, New Zealand, Norway, Poland, the Slovak Republic, Slovenia, Sweden, Switzerland, Turkey and the United Kingdom. Panel B contains selected OECD countries and Colombia.

Source: Panel A – World Bank, *World Development Indicators* Database and Ministry of Transport of Colombia. Panel B – Grupo de Seguridad Vial de la Dirección de Transporte, Tránsito del Ministerio de Transporte (Ministry of Transport) and United Nations Economic Commission for Europe, statistical database, road traffic accidents for selected OECD economies.

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Despite recent improvements in the planning and prioritisation of public infrastructure investment, challenges remain. To evaluate and select regional infrastructure projects to be financed by royalty revenues, the government has strengthened the selection stage of infrastructure policy by creating the OCADs. However, greater human and technical resources must be devoted to INVIAS to identify and measure project demand and perform pre-feasibility studies.

Moreover, political bias towards new infrastructure projects instead of rehabilitation and maintenance should be reduced. This includes establishing appropriate incentives towards maintenance and requiring independent assessments of levels of service. In particular, the costs of maintenance should be negotiated up front when projects are designed and approved. Greater maintenance of existing roads should raise quality and limit accidents. Safety standards can be enhanced further by improving the quantity and quality of complementary works, such as footbridges, reflectors and road signals.

OECD experience is useful to determine a robust decision making process to improve the selection of investment projects (Égert *et al*., 2009). For instance, Australia established a separate fund to support infrastructure investment, *Building Australia*, which can help prioritise investment. This kind of initiative can help identify the infrastructure policy framework that promotes productivity and economic growth.

Multimodal transport policies to boost green growth

A multimodal approach to infrastructure development offers potential for green growth and large productivity gains through lower carbon emissions and transport costs. Although trucks' greater flexibility makes road transport more efficient for short distances, their environmental and transport costs climb faster with distance. Traditionally, railway and water transport can provide greater cost-efficiency for distances over 500 km and 800km (Echeverría, 2002). However, factors other than distance affect the successful use of these transport modes, including the concentration of cargo volumes and the suitability of services offered in terms of frequency, cost and time (OECD-ECLAC, 2011). Nevertheless, rail and water freight transport usually have lower external costs, especially in the case of river transport, where carbon emission intensity is much lower than road transport (GAO, 2011).

Colombia's large potential to develop multimodal transport infrastructure has not been tapped. Colombia has more than 18 000km of navigable waterways and access to two oceans. Large rivers (Magdalena and Cauca) conveniently connect the centre with ports on the Atlantic coast. However, transport policies have strongly focused on roads, which represent 80% of the domestic freight transport market. Maritime transport, actively used for international trade, is practically absent in the domestic transport market. This contrasts with countries like Canada, Germany or the United States, where there is high diversification across freight transport modes. Transport on the Magdalena River, the country's main waterway, is planned, regulated and managed by *Cormagdalena*, which is independent from the Ministry of Transport and highly politicised. This institutional design gives no incentives for a comprehensive multimodal policy that develops the complementary transport modes around the river required to adequately integrate it with the rest of the transport network.

Despite progress, major challenges remain in the planning and evaluation studies for railways and waterways. The need to develop a multimodal transport strategy has been included in the NDP 2010-2014. Authorities have sought to recover old railways and a section of the *Ferrocarril del Pacífico*, connecting Colombia's biggest port with Cali, has already began to operate. Multimodal strategies should be a central part of the logistics and mobility policies, implying better co-ordination among different entities in charge of each mode of transport. Public project proposals must include detailed environmental and social impact assessments as well as an institutional plan that ensures operational sustainability of the infrastructure. The planning stage of all relevant projects should involve comparative analyses across transport modes that consider their respective private and social costs. Finally, regulations should promote the use of a single bill of landing, improve the access to ports and connections to the other transport modes and facilitate the development and supply of associated service such as transport, testing, cooling and logistic services.

More effective private participation can boost productivity

The involvement of the private sector in infrastructure development through PPP programmes has historically suffered from weaknesses in regulatory, institutional and contract designs. A single entity was responsible for planning, preparing and supervising contracts while lacking the technical capacity to perform such tasks (Cárdenas *et al.*, 2006; Benavides, 2010). Moreover, although the contract design improved over time, it remained deficient in terms of the assignment of risks and dispute-settlement mechanisms (Acosta *et al.*, 2008; Benavides, 2010). In addition, while most OECD economies use a cost-benefit analysis and a public-sector comparator to identify the best way of contracting projects (Burger and Hawkesworth, 2011). Colombia limited the analysis to a comparison of concessions' tendering results. This has created uncertainty regarding whether the private sector can generate "value for money" (OECD, 2008).

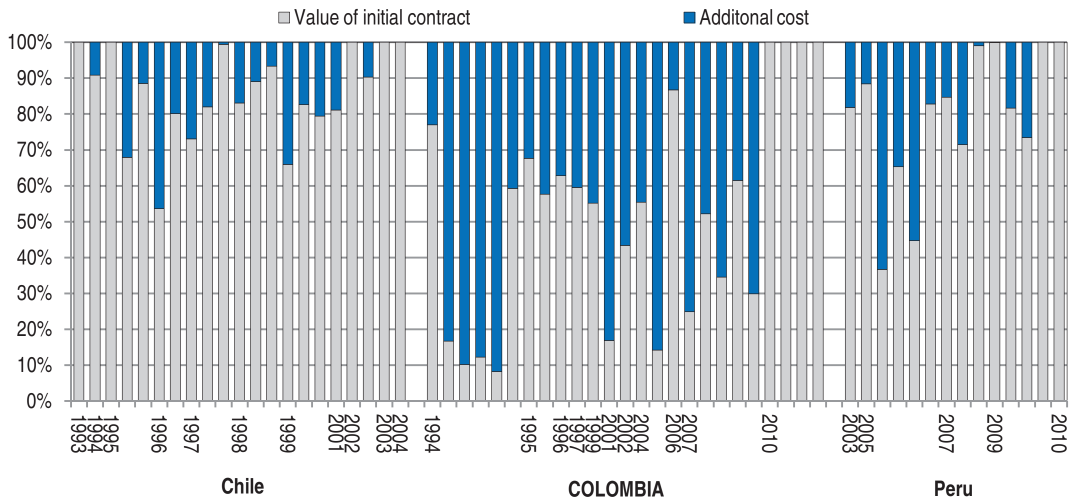
The regulatory and institutional weakness of concessions has caused continuous renegotiations, which in turn raised costs significantly. In the 1990s, contract concession renegotiations were common in Latin America (Guasch *et al.*, 2008; Engel *et al.*, 2009). However, when comparing Colombia with regional peers, frequency and costs of renegotiations have been higher (Figure 2.18, Panel A). There were 430 contract renegotiations in the 21 out of 25 road concession contracts signed by 2010, generating fiscal costs of USD 5.5 billion to be paid until 2027 (Figure 2.18, Panel B). On average, there have been 2 changes per year in each concession and the first renegotiation was carried out within the first two years of the contract initiation (Bitran *et al.*, 2013).

In contrast, concession contracts have improved the efficiency of port infrastructure. Colombia granted concessions for its main ports as part of its trade liberalisation policy of the early 1990s, leading to higher productivity and lower costs. Port and terminal handling costs now compare favourably with many OECD countries (World Bank, 2012). Nonetheless, the weak service quality, security and environmental requirements, as well as flat compensation schemes, have resulted in sub-par service quality and inadequate capacity.

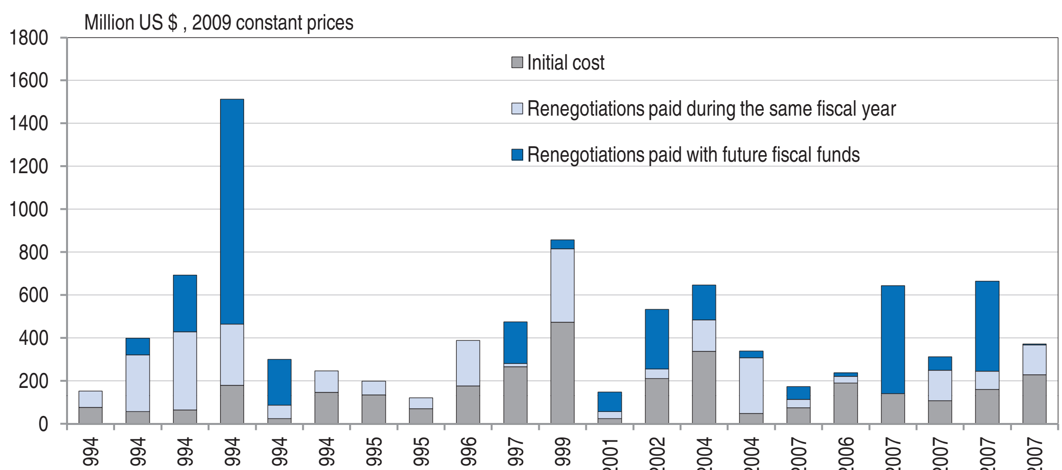
The overall regulatory and institutional framework of PPPs has improved recently. A unified regulatory framework exclusively dealing with PPPs was approved in December 2011, and clear limitations in both value and term of renegotiations have been adopted. Furthermore, the new regulatory framework requires value-for-money analysis to justify executing projects through a PPP instead of regular public procurement. The National Infrastructure Agency (ANI, *Agencia Nacional de Infraestructura*) was created, with

Figure 2.18. **Additional cost versus initial value of the contract**

Panel A. Initial costs versus renegotiations in Chile, Colombia and Peru



Panel B. Renegotiations in Colombia



Note: The x-axis indicates the year in which the concession contract was initially signed.
Source: Bitran *et al.* (2013).

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greater administrative capacity and technical expertise in the design and monitoring of contracts. In addition, two independent councils have been created to advise the ANI regarding project structuring and the management of concession contracts. Finally, a new port expansion plan will solve some of the current shortcomings, prioritising harbour deepening projects to allow for bigger vessels and mitigating impacts on the environment. The plan also promotes a more specialised logistics infrastructure and establishes a new compensation scheme with a variable component that depends on cargo volumes.

Nevertheless, additional measures related to the framework for use of PPPs can improve the provision of transport infrastructure and foster competitiveness (OECD, 2012c). These involve further improving the institutional and regulatory framework for a more unbiased assessment of PPPs, increasing the focus on value for money and using the regular budget process to minimise fiscal risks and ensure affordability. These remaining challenges are even more important at the regional level, as sub-national governments have less capacity and resources to prepare and tender concession contracts.

First, key institutional improvements are needed. The ANI is currently subordinated to the Ministry of Transport, in contrast to OECD best practices. Most PPP units in OECD countries answer to the Ministry of Finance, which helps ensure that value for money assessments are based on financial and economic criteria and are part of a broad government prioritisation process (OECD, 2010b). A first step in this direction could be to increase ANI's independence from the Ministry of Transport, among others, by establishing a fixed term for its director. In addition, the National Planning Department should be given greater technical and human resources to evaluate the value-for-money analysis justifying the use of PPPs.

Second, it is critical to avoid choosing PPPs because they keep expenditures off government's balance sheet and allow for more fiscal space in the short to medium term than traditional public works. To this end, investment in concessions should be accounted for within a comprehensive framework for public infrastructure expenditure, as it has been done in some OECD countries (Irwin, 2007; Engel *et al.*, 2009). Furthermore, it is important to ensure PPPs are affordable over the long term, which requires a clearer link between the PPP procurement process and the central budget authority's ordinary budget process.

Finally, environmental and social assessments, including consultation processes with indigenous groups, need to be performed more rigorously and efficiently. These should be done before granting contracts, as the acquisition of environmental and land expropriation permits after signing contracts has caused long delays and cost overruns for road concessions.

Colombia can draw useful lessons from OECD practices related to PPPs. Even though OECD experiences with PPPs have been mixed, the adaptation of favourable policy settings in countries that have accumulated considerable experience in using PPPs, such as Austria, Belgium and the Czech Republic, can be useful for the Colombian context. These experiences suggest that PPP contracts are best suited for projects with stable demand, limited need for flexibility in the usage of the assets and very little expected change in the relevant technology (OECD 2012c; Araújo *et al.*, 2010). In addition, the funding, scope and assessment of dedicated PPP units should not create incentives that are biased towards the creation of PPPs (OECD, 2010b).

Capital markets should be tapped to finance PPP infrastructure projects. The long-term investment of infrastructure assets and the increase in diversification suggest institutional investors may be interested in co-financing infrastructure projects. Domestic pension funds have so far financed a limited amount of infrastructure projects, estimated at only 3% of the total issues in the market. Other sources of finance can be Private Equity Funds, some of which have started to be active in the Colombian market, and Sovereign Wealth Funds, whose participation in Latin American infrastructure investment has been extensively discussed. Recent improvements in the PPP legislation look to make infrastructure projects more appealing to investors. These include specific procedures before opening the bidding process of public initiatives and limiting the renegotiations of concession contracts to reduce investor uncertainty regarding future cash flows. Also, different forms of participation by the government and public institutional investors have been studied. These efforts should continue, drawing from the experience of OECD countries in mobilising public resources.

Box 2.4. **Recommendations on transport infrastructure**

- Strengthen the prioritising and planning phase of infrastructure projects, which must be governed by value-for-money, affordability and environmental impact assessments. These should include cost-benefit analyses and comparative evaluations among contract frameworks (*e.g.* public works, PPPs) and transport modes (*e.g.* road, rail, river). Reinforce the technical and human capacity of institutions in charge of performing these studies.
- Improve the institutional and regulatory framework for transport infrastructure to ensure an unbiased and thorough assessment of PPPs and a better specification of projects before tendering. Increase ANI's independence, for instance, by establishing a fixed term for its director and top management. Ultimately, the ANI should answer to a central agency, such as the Ministry of Finance, not the Ministry of Transport.
- Reinforce the institutional capacity to prioritise and plan PPPs to ensure proper risk transfer and avoid concession contract renegotiations, and possibly increase human resources in these institutions. Give greater technical and human resources to the infrastructure office at the National Planning Department to assure PPPs provide value for money with respect to other financing methods.
- Perform more rigorous environmental and social assessments before granting concession contracts, while ensuring that the whole process is completed more efficiently.
- Improve the co-ordination between transport institutions and better exploit multimodal transport opportunities. Develop a more ambitious multimodal agenda to enhance the connectivity of different transport modes. This requires reducing the vulnerability of some institutions to the political cycle, such as *Cormagdalena*, which should be attached to the Ministry of Transport.
- The central government should provide technical support to sub-national authorities which develop PPP projects.

Access to finance, especially for small firms, remains a binding constraint for economic growth

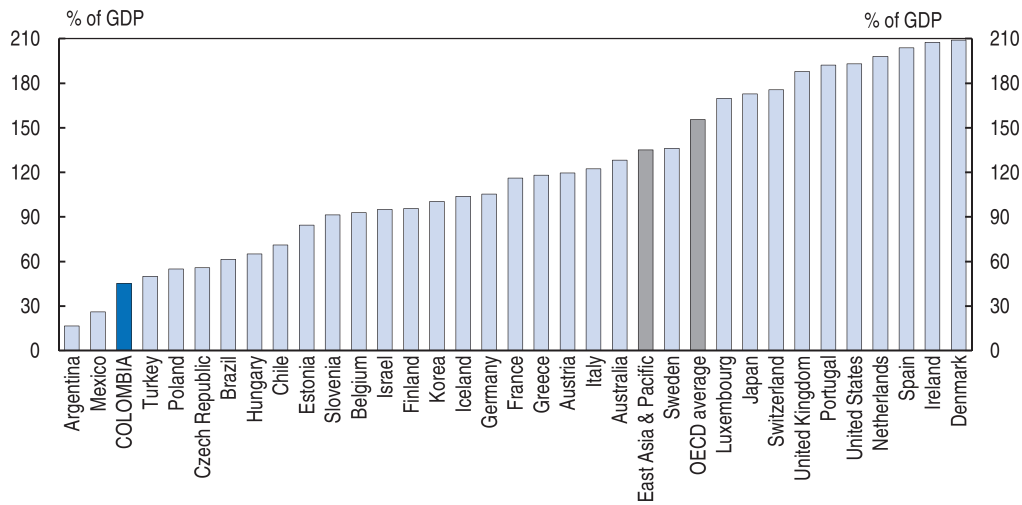
Improving the financial system is crucial for fostering economic growth. Financial depth is particularly important for emerging economies since it contributes to reducing poverty, promoting the emergence of new industries and production technologies and increasing the permanence of small entrepreneurs (Perry *et al.*, 2006). Although the link between financial development and economic growth is not linear and there are limits to the positive effects (Arcand *et al.*, 2011), the pervasively low banking penetration rates in Colombia suggests that positive externalities for economic growth through credit channels can be expected.

Despite financial stability, other key factors keep financial access low and costly

Bank regulation and supervision have been strengthened over the past decade, which has improved financial stability, but has not so far had much impact on financial access. Domestic credit to the private sector more than doubled in the last decade but remains well below OECD and other emerging economies (Figure 2.19). In addition, intermediation rates are high. The high financing costs currently represent a major bottleneck to growth in Colombia and are cited by firms as the most important constraint when making their investment decisions (Mélendez and Harker, 2009). High intermediation margins can also constrain access to companies, affect the entry of new businesses in the real sector and undermine productivity (Eslava *et al.*, 2009; IDB, 2010).

Figure 2.19. **Domestic credit to the private sector**

2011



Source: World Bank, WDI.

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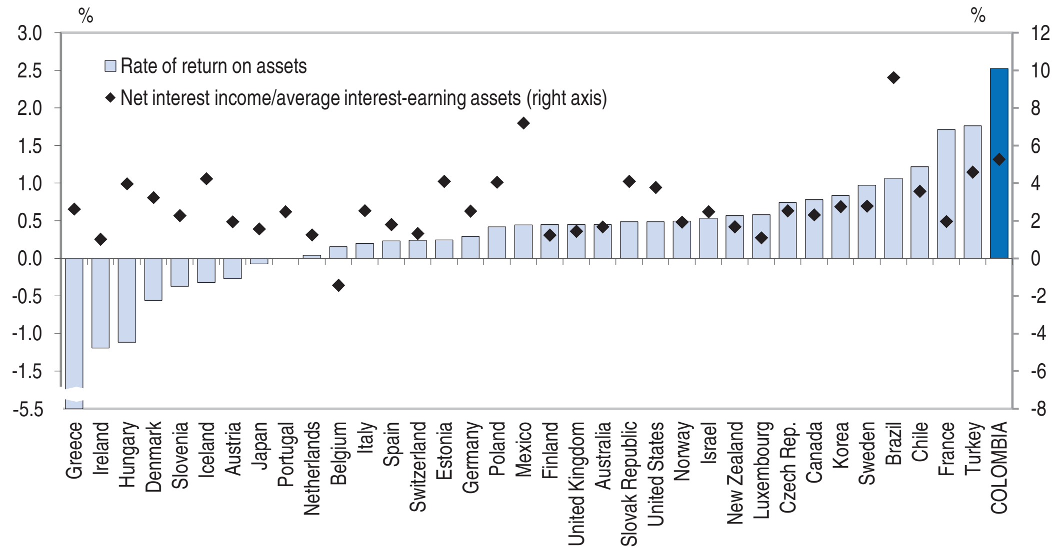
A number of factors have contributed to keeping financial access low and costly. Various analyses have found inefficiency among financial institutions to be a key determinant of high interest margins (Estrada *et al.*, 2006). In addition, although this is difficult to assess, some indicators show that there is weak competition in the banking sector partly due to a high degree of concentration, which has increased over the past decade in almost all deposit and loan segments. Other indicators suggest that competition is particularly weak in the commercial and consumption loan segments and confirm a strong relationship between concentration and banks' ability to control prices. Low competition is evidenced in the high cost for consumers of switching banks and the banks' impressive profitability (Figure 2.20).

Furthermore, there are still distortionary taxes and regulations in the financial system. Interest rate ceilings, as in other countries in the region, have negatively affected financial depth (Capera *et al.*, 2011). A financial transaction tax introduced in November 1998 at 0.2% of the withdrawal operation (and gradually increased to 0.4%) favoured cash in circulation and affected financial penetration (OECD, 2010c). Lastly, financial intermediaries are required to invest in securities issued by Finagro, a development bank that plays a key role in lending to the agricultural sector. The compulsory nature of these agricultural development securities (TDAs, *Títulos de Desarrollo Agropecuario*) is unattractive for investors in the secondary market and affects the banking business (Galindo and Majnoni, 2006). Recent measures, such as the progressive elimination of the financial transaction tax and the prohibition on charging high costs for early repayment of loans, are welcome. The recent increase in direct financing towards the agricultural sector by some commercial banks is also encouraging, although it has been mostly directed towards medium and large producers (Fernández *et al.*, 2011).

Figure 2.20. **Selected average profitability ratios**

2012 or latest available data



Note: The return on assets (ROA) measures banks' profitability relative to their total assets. The net interest income/average interest-earning assets measures banks' profitability of their interest-earning assets, such as investments and loans.

Source: Bankscope (December 2011).

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Cumbersome and costly contract enforcement raises bank's risk aversion and limits credit supply. The efficiency of contract enforcement of a sale of goods is low in terms of timing, as well as in cost and *number* of procedures involved, from the moment the plaintiff files the lawsuit until actual payment (World Bank, 2012). Moreover, differences across cities are striking, with enforcement taking almost three years less in the best performing cities compared to the worst performers.

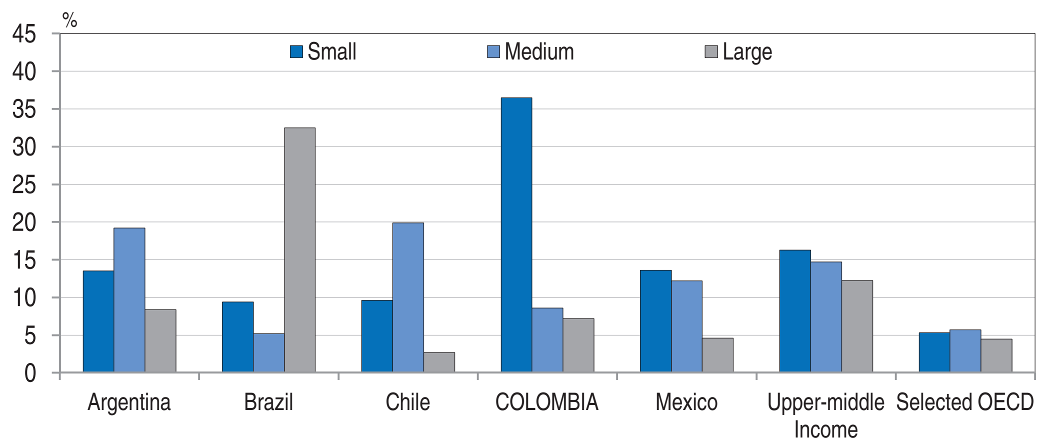
Access and costs of financing are particularly problematic for remote regions and small firms

The financing access of SMEs and firms in remote regions is particularly affected by the factors mentioned above. High profits in traditional business lines and poor contract enforcement reduce banks' incentives to explore new markets, such as lending to SMEs, where profit margins are thinner partly due to incomplete information and higher transaction costs of lending in small amounts (Meléndez and Perry, 2009). Additionally, higher financing costs limits the number of firms who have the capacity to take on debt. These issues also keep market concentration in microcredit one of the highest among loan segments. Moreover, ceilings on interest rates limit lending to new and small businesses. In the case of remote, less developed regions of the country, these factors reinforce financial access disparities created by insecurity and precarious rule of law that historically discouraged commercial banks from expanding there. As a result, loans are almost exclusively provided by Banco Agrario, a public bank operating only in the agricultural sector.

The many SMEs and microenterprises in Colombia have limited access to finance. They constitute 99% of firms in the country, account for almost 80% of private employment and 35% of GDP, but receive only 14% of total loans (Ferraro, 2011). Despite the recent entry of numerous commercial banks into the SME lending market, small firms in Colombia report that access to finance is their biggest obstacle, more often than in any of the main countries in the region (Figure 2.21). In addition, small firms find it particularly hard to access long-term credit for fixed capital investments. Less than 20% of small firms' fixed assets are financed by banks, compared to 44% and 36% for medium and large firms, respectively. Moreover, microcredit supply in Colombia is estimated to cover only 20% of demand despite experiencing considerable growth (Banco de la República, 2010). Colombia is also behind countries like Argentina and Chile in the development of risk capital and angel investors. Finally, in the last ten years, while the quality of loans to SMEs has improved, interest rates charged have remained high at close to 15% (vs. 8% for large firms in 2011).

Figure 2.21. **Firms for which access to finance is the biggest obstacle, by firm size**

2010



Note: Selected OECD countries are Chile, Czech Republic, Germany, Greece, Hungary, Ireland, Korea, Mexico, Portugal, Slovak Republic and Spain. Data for Brazil refers to 2009.
Source: World Bank, Enterprise Survey.

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Greater access to finance would boost SME productivity. Empirical evidence in Colombia suggests that greater access to credit is associated with firm productivity at the company and sector level. This positive relationship is stronger the smaller the business size (Eslava *et al.*, 2009). Small firms are more credit-constrained and most of the credit they access is short-term, which is less conducive to investments that enhance productivity. In addition, some small businesses have access to credit in the informal sector at higher costs (IDB, 2010). International evidence also shows that the adverse effect of financing constraints is twice as important in small firms as in large ones and that small businesses grow faster than large ones when financing is provided, as their fixed capital investments generally have higher returns (Dalberg, 2011). Moreover, SMEs' potential for productivity gains is especially large in the current context of decreasing trade barriers because most of these gains come from small, previously non-exporting firms that start to invest and export when trade barriers decrease (Melitz, 2003). For this purpose, having access to long-term finance to make those investment decisions is crucial.

Improved regulation and public development banks have led to greater access to finance

Bancoldex, Colombia's biggest public development bank, has strongly prioritised its SMEs financing and micro-lending business lines. Over the past decade, the bank has shifted its activities from lending exclusively to firms involved in international trade towards SME financing and micro lending, focusing on medium and long-term debt for fixed capital investments (Figure 2.22). In the process, the bank has increased the average maturity of loans to SMEs from 7 years in 2006 to 12 years in 2010. Bancoldex has been successful in lending to SMEs by channelling loans through private banks and providing public guarantees. Private intermediaries screen potential clients for loans and assume most of the risk, drawing on their superior ability at solving information asymmetries. Loans are given at market rates but automatically include a partial guarantee of up to 50% from the National Guarantee Fund (FNG, *Fondo Nacional de Garantías*) and usually have more favourable repayment terms. These loans are primarily intended to fund investment and modernisation efforts. Empirical evaluation of Bancoldex's services has found that four years after receiving their first Bancoldex loan, businesses' investment and productivity increases by 70% and 10%, respectively (Eslava *et al.*, 2012). Moreover, recipients of FNG's guarantees between 1997 and 2007 experienced faster growth in both output and employment than comparable non-recipient firms (Meléndez and Perry, 2009). Bancoldex maintains a better solvency ratio (20%) than the financial sector average (15%).

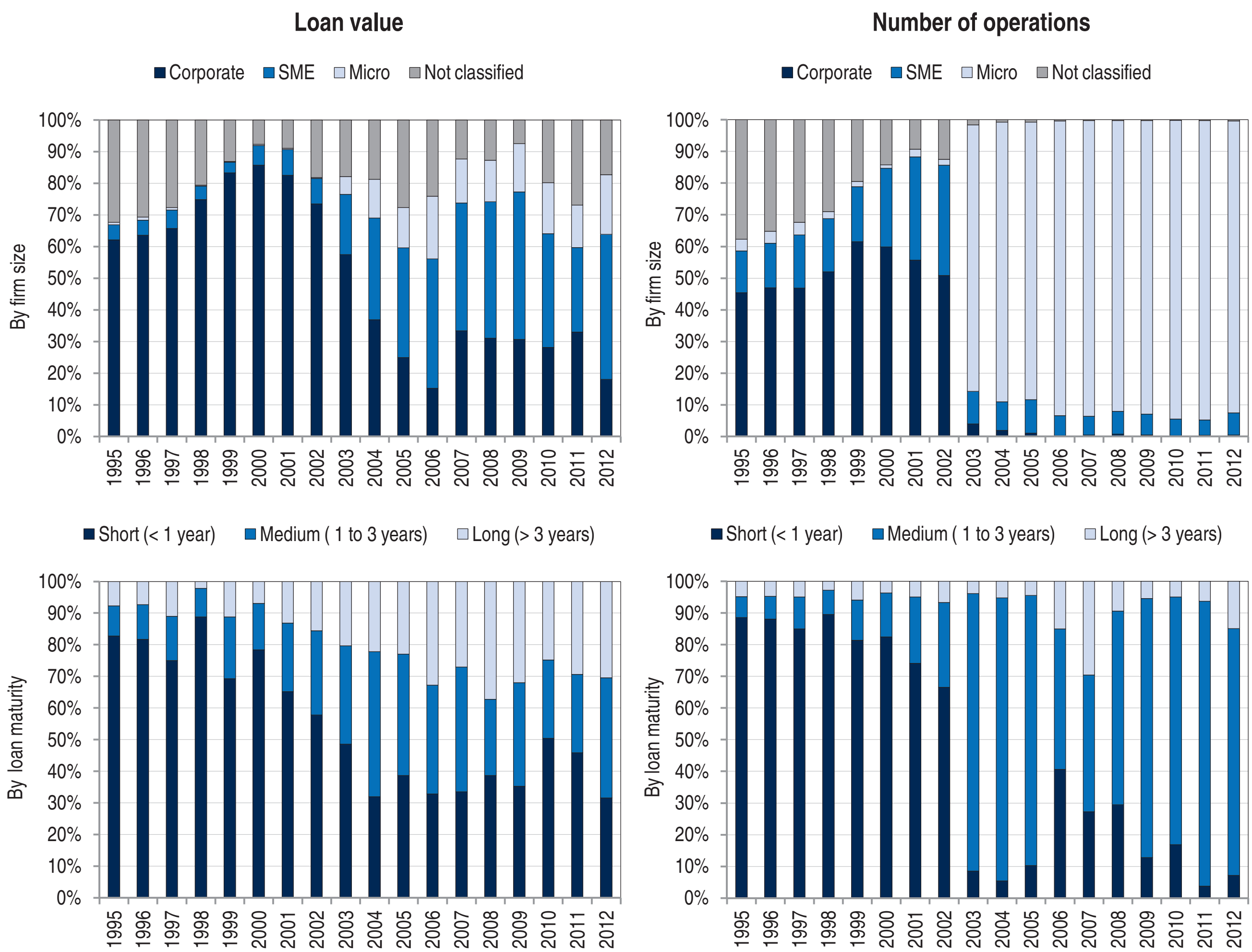
Bancoldex has also successfully fostered the diversification of financial instruments offered to SMEs, such as leasing and private equity funds. These financial products are particularly important for SMEs because they reduce opacity, focus on firms' ability to generate cash flows rather than their often non-existent credit history, and allow for greater fixed-asset investment. The bank has also begun to channel its earnings towards counselling and seed capital for innovative start-ups. Similarly, the *Banca de Oportunidades* fund, also under the Bancoldex umbrella, has expanded access to finance for small firms in remote areas, encouraging both savings and credit. The programme has promoted partnerships between commercial banks and regional authorities to provide loans and savings accounts for micro and small firms operating in areas with no commercial banks. This has mostly been done by setting up non-bank correspondents, such as stores and supermarkets. By 2010, the geographical coverage of the financial system had reached 99% of the country's municipalities, contributing to the rise of the share of population with at least one financial service from 47% in 2006 to 60% in 2010 (DNP, 2011).

The government is also promoting electronic banking to increase financial inclusion and reduce transaction costs. In close collaboration with the private sector, it has promoted the electronic payment of cash transfers to households and is preparing a law to facilitate the secure use of mobile banking. This would include regions with few bank branches and promote access to financial services for households.

Finally, Finagro has played a key role in providing access to financing to the agricultural sector, despite its dependency on funds from compulsory investments. It offers rediscount loans, mostly through the (also public) Banco Agrario, complemented by guarantees of up to 77% from the Agricultural Guarantee Fund (FAG, *Fondo Agropecuario de Garantías*). Thanks to Banco Agrario's impressive branch network, these loans have reached producers in regions with no other credit supply. Moreover, as a greater priority is given to small producers, Banco Agrario's microcredit portfolio has been increasing 30% per year and more than 90% of FAG's guarantees go to small producers (Fernández *et al.*, 2011).

Figure 2.22. **Bancoldex portfolio by firm size and maturity**

1995-2012



Note: 2012 covers the period January-April.

Source: Bancoldex.

StatLink http://dx.doi.org/10.1787/888932765503

Policies enhancing the access to finance need to be promoted

Better contract enforcement is critical. There is a need to improve the role and practices of the legal institutions that support the effective implementation of contract law. The creation of new municipal courts and increasing the number of staff are needed in order to reduce the backlog of unsolved cases (OECD, 2012b).

Further partnerships with commercial banks can increase the impact of public banks. Banco Agrario's impressive branch network in remote areas should be leveraged by developing partnerships with commercial banks to increase the coverage of non-agricultural credit in those areas. This should be complemented by public policies aimed at reducing costs of transferring cash to remote regions.

The agricultural sector's dependency on TDAs for financing needs to be reduced. More incentives to invest directly in the agricultural sector – such as requiring smaller amounts to be invested directly in the agricultural sector rather than in TDAs to fulfil requirements – can help reduce the outstanding TDAs on the banks' balance sheets.

Given Bancoldex's success in improving sub-national and SME's access to finance, the potential benefits of extending its role should be studied. At 1% of total assets in the financial system and 12% of credit to SMEs, Bancoldex remains relatively small. The bank's solvency and positive track record suggest there is room to expand its activities. Also, Bancoldex and Banco Agrario should be more proactive to create market conditions that will eventually attract commercial banks in remote areas where rule of law has been weak in the past. This could include promoting financial education and giving consulting services to entrepreneurs.

Policies promoting competition and avoiding high regulation costs should continue. Further measures to enhance competition should be implemented, such as the reduction of costs related to switching banks and cuts in other non-financial operation fees. Similarly, with the future elimination of the financial transaction tax, the government should consider gradually abolishing the ceiling loan rates.

Box 2.5. **Recommendations on access to finance**

- Enhance firms' access to finance by phasing out interest rate caps, banks' compulsory financing of the public agricultural fund (Finagro) and the financial transactions tax.
- Improve contract enforcement through faster and cheaper dispute resolution procedures.
- Investigate the benefits of expanding loan programmes by the Development Bank Bancoldex for SMEs and microenterprises.
- Increase access to bank accounts and financial services by developing partnerships between Banco Agrario and commercial banks to better exploit Banco Agrario's large branch network in remote regions. More effort should be put into developing and promoting mobile and Internet banking.
- Implement regulations that reduce the costs of switching banks and other non-financial operation fees.

Promoting competition and reducing tax distortions to enhance the business environment

The business environment affects economic growth through different channels. Greater competition increases private investment and boosts sales at cheaper prices. Reducing corruption enhances government effectiveness and the incentives for higher education and skills acquisition. Finally, policies facilitating business can boost entrepreneurship and new productive investment. Colombia has made significant efforts to improve the business environment and has moved from 79th in 2007 to 42nd in 2012 in the World Bank's "Ease of Doing Business" ranking. Despite these efforts, challenges remain.

Competition in product markets should be improved

Productivity growth is hindered by weak competitive pressure in product markets. These may be related to rules of conduct imposed by regulators, entry barriers and targeted preferential treatment. In the past, politicians have extended favourable tariff and tax treatment and export incentives to sectors and regions with large voter bases, powerful business groups or strong political connections (Eslava and Meléndez, 2009). The industrial sectors that benefitted most from these privileges over the period 1998-2006 include food products, apparel and textiles and the flower industry. Because of this, overall productivity is hindered by excessive concentration in certain sectors. For instance, concentration in the mobile phone sector is one of the highest in the world, with an adverse impact on service prices, calling for measures to increase the competition among mobile operators (Jullien *et al.*, 2010; Benavides *et al.*, 2012).

The Superintendency of Industry and Commerce (SIC) investigates broad-based cases, most of them related to horizontal agreements. Investigators have prosecuted different companies in the food and beverage sector for price collusion, cartels and predatory pricing (OECD, 2009b). Cement companies practiced distribution in exclusive territories, which led to strategic price fixing (Cárdenas *et al.*, 2007). In 2011, 14 health insurance companies were fined for collusion to limit coverage and misinform regulators, and two TV broadcasters for abuse of dominance in the advertising market (OECD, 2012d). Between 2008 and 2010 SIC also restricted the integration of companies in various sectors, including food distribution, tobacco and aluminium. Although SIC investigations have increased in recent years, fines remain low. Fines collected in 2011 were 0.005% of GDP, around double those collected in the previous year but below a fifth of those collected in many OECD countries.

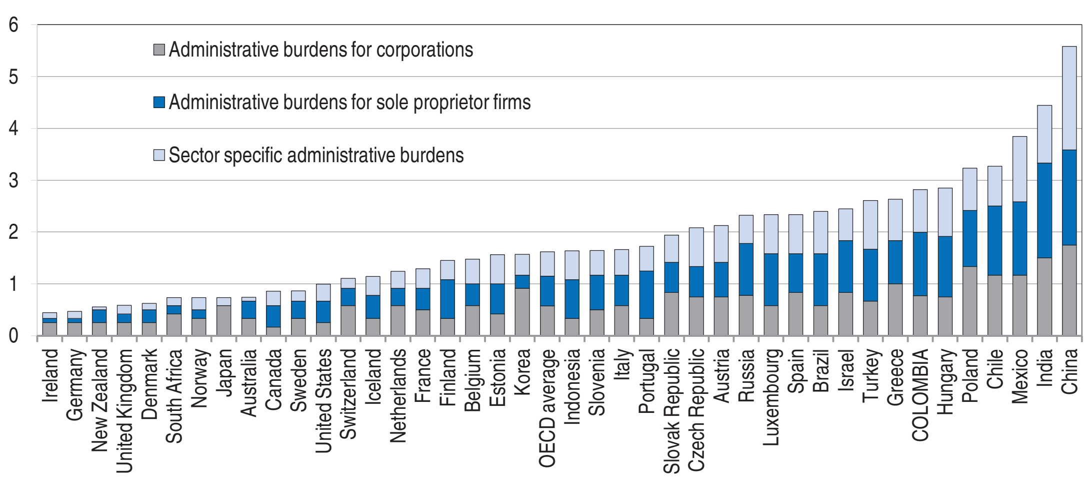
The new competition law of 2009 (1340/09) has improved competition policy settings but lacks teeth in several respects (OECD, 2009b; CPC, 2012). Whistle-blower protection from antitrust penalties should be extended to liabilities in civil suits to encourage firms to come forward under protection of the leniency programme. Following OECD and Latin American experiences, it is crucial to guarantee the independence of SIC from politics to perform its function effectively. To this end, the Superintendent and the Deputy, currently selected by the President and removable from office at pleasure, should have fixed terms and their appointment should follow a more structured procedure that includes other branches of power and academia. In addition, the expert group on competition should be given powers to investigate anti-competitive conduct and authorise mergers and acquisitions. Proactive investigation by the agency can also lead to the identification and prosecution of more unlawful conduct. This may require a larger staff for the SIC, which has important additional tasks other than competition policy enforcement, including the concession of patents and the industrial quality control regime. Finally, the competition authority needs better instruments for advocacy. In particular, it should have the faculty to evaluate current or future legislation that could potentially affect competition.

The tax system and regulatory framework for entrepreneurship can be enhanced

The tax system is complex and plagued by distortions. At 33% the corporate tax rate is higher than in OECD economies (about 25% on average). The tax reform proposal is a step in the right direction as it reduces the standard corporate income tax rate from 33% to 25%, while creating an additional 8% tax called "contribution to equity" applied on a broader tax base – taxable income *plus* some exemptions and deductions (*e.g.* investment spending on fixed assets). These changes and the reduction of payroll taxes would promote formalisation and entrepreneurship. However, further reductions can enhance formal employment and boost private investment. The wealth tax on firms (0.4% of GDP in 2010) discourages investment and reduces competitiveness (OECD, 2010c). This tax on capital will last until 2014 but its earlier elimination should be considered. Finally, the productivity of the tax system (*i.e.* fiscal revenues over the tax rate) is low in comparison to other emerging economies due to high tax evasion and ineffective exemptions and deductions (CPC, 2010). Empirical evidence shows that tax expenditures to firms have not promoted further investment (Galindo and Mélendez, 2010). Measures reducing the distortions in the corporate tax system, such as the elimination of the deduction of fixed investment in the corporate tax (introduced in the Law 1430 of 2010), should be expanded. These measures should be consistent with fiscal sustainability and, as presented in the inequality chapter, should be part of a more ambitious reform aimed at increasing fiscal revenues.

More efforts to decrease administrative burdens on start-ups can facilitate business formalisation. Analysis of the OECD Product Market Regulation (PMR) indicator shows that barriers to entrepreneurship remain relatively low in comparison to other emerging economies and some OECD economies, and the regulatory and administrative opacity and the legal barriers to competition do not seem to affect entrepreneurship. In contrast, administrative burdens for sole proprietor firms and, to a lesser extent for some sectors, on start-ups are relatively high in comparison to OECD economies (Figure 2.23). Despite recent improvements in international rankings, such as business start-ups (World Bank, 2012), some constraints to entrepreneurship remain. There are many institutions involved in the process to start a business, including the Tax Office, the Registry of Commerce, the Family Compensation Fund (*Caja de Compensación Familiar*), the SENA and notaries. Similarly, the number of procedures and the cost as a proportion of per capita income are close to twice those in the OECD average. Efforts to improve the efficiency and reduce red tape for start-ups could be more ambitious.

Figure 2.23. **Administrative burdens on start-ups**



Note: The scale of the indicator is from least to most restrictive (from 0 to 6). The chart includes OECD countries and selected emerging economies. 2012 data for Colombia and 2008 data for other countries.
Source: Product Market Regulation Database, www.oecd/economy/pmr.

StatLink http://dx.doi.org/10.1787/888932765522

Box 2.6. **Recommendations on the business environment**

- Give the competition authority greater independence and more qualified staff to increase its effectiveness, *e.g.* by appointing its managers in a more structured procedure that includes other branches of power and academia.
- Review barriers to competition in some product markets, including telecommunications, food production and the financial sector, to ensure that product market regulations do not act as barriers to entrepreneurship.
- Upgrade the business environment by faster contract enforcement. Arbitration and other alternative dispute mechanisms should be promoted to reduce the pressure on the overstretched national courts.
- Improve the business tax system by reducing corporate taxes, and eliminating the wealth tax on businesses as well as tax exemptions and deductions.
- Reduce the number of procedures of starting a business.

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Glossary

AHELO	OECD's Assessment of Higher Education Learning Outcomes
ANI	National Infrastructure Agency (*Agencia Nacional de Infraestructura*)
BEPS	Individual retirement accounts targeted at low-income workers (*beneficios económicos periódicos*)
BIS	Bank for International Settlements
CAF	Development Bank of Latin America (*Corporación Andina de Fomento*)
CAR	Institution in charge of granting regional permits (*Corporacion Autónoma Regional*)
CCF	Family Support Fund (*Cajas de Compensación Familiar*)
CDS	Credit Default Swap
CEER	Regional Center of Economic Studies, Central Bank *(Centro de Estudios Económicos Regionales*, *Banco de la República*)
CERES	Regional Centres of Higher Education (*Centros Educativos Regionales de Educación Superior*)
COP	Colombian peso
CPC	Competitiveness Private Council (*Consejo privado de competitividad*)
CPI	Consumer Price Index
DANE	National Statistics Bureau (*Departamento Administrativo Nacional de Estadística*)
DIAN	National Tax and Customs Agency (*Dirección de Impuestos y Aduanas Nacionales*)
DNP	National Planning Department (*Departamento Nacional de Planeación*)
ECLAC	Economic Commission for Latin America and the Caribbean
FAG	Agricultural Guarantee Fund (*Fondo Agropecuario de Garantías*)
FARC	Revolutionary Armed Forces of Colombia (Fuerzas Armadas Revolucionarias de Colombia)
FDI	Foreign Direct Investment
FNG	National Guarantee Fund (*Fondo Nacional de Garantías*)
FONPET	Territorial entities' Pension Saving Fund (*Fondo Nacional de Pensiones de Entidades Territoriales*)
FOSYGA	Solidarity and Guarantee Fund (*Fondo de Solidaridad y Garantía*)
FTA	Free Trade Agreement
GDP	Gross Domestic Product
ICBF	Child care institute (*Instituto Colombiano de Bienestar Familiar*)
ICETEX	Fund for student loans for tertiary education (*Instituto Colombiano de Crédito Educativo y Estudios Técnicos en el Exterior*)
ICFES	Colombian Institute for the Evaluation of Education (*Instituto Colombiano para la Evaluación de la Educación*)
IDB	Inter-American Development Bank
IGAC	Agustin Codazzi Geographic Institute (*Instituto Geográfico Agustín Codazzi*)

ILO	International Labour Organisation
IMAN	Alternative minimum income tax (*Impuesto Mínimo Alternativo Nacional)*
IMAS	Simplified alternative minimum income tax (*Impuesto Mínimo Alternativo Simplificado)*
IMF	International Monetary Fund
INVIAS	National Roads Institute (*Instituto Nacional de Vías*)
LAC	Latin American and Caribbean countries
MSME	Micro, small and medium enterprise
MSTI	Main Science and Technology Indicators
NDP	National Development Plan
NPL	Non-performing loan
NWLC	Non-wage labour cost
OCAD	Council deciding on the projects to be financed out of royalty revenues (*Órgano Colegiado de Administración y Decisión*)
OLE	Labour Observatory for Education (*Observatorio Laboral para la Educación*)
PAYG	Pay-as-you-go
PIT	Personal income tax
PMR	Product Market Regulation
POS	Contributory Health Plan *(Plan Obligatorio de Salud*)
POSS	Subsidised Obligatory Health Plan *(Plan Obligatorio de Salud Subsidiado*)
PPP	Public-Private Partnership
PPSAM	Social protection programme for the elderly (*Programa de Protección Social al Adulto Mayor*)
R&D	Research and Development
RICYT	Ibero-American/Inter-American Network of Science and Technology Indicators
SAS	Simplified joint-stock companies (*Sociedades por Acciones Simplificadas*)
SEDLAC	Socio-economic database for Latin America and the Caribbean
SENA	National Training Service (*Servicio Nacional de Aprendizaje*)
SIC	The competition authority (*Superintendencia de Industria y Comercio*)
SISBEN	System to identify elegibility to social programmes (*Sistema de Selección de Beneficiarios para Programas Sociales*)
SITP	Integrated Public Transport System (*Sistema Integrado de Transporte Público*)
SNIES	National System of Higher Education Information (*Sistema Nacional de Información de Educación Superior*)
SSF	Savings and Stabilisation Fund
TDAs	Agricultural Development Securities *(Títulos de Desarrollo Agropecuario)*
TFP	Total Factor Productivity
UBN	Unmet Basic Needs
UVT	Tax value unit (*Unidad de Valor Tributario)*
VAT	Value-added tax
WDI	World Development Indicator
WEF	World Economic Forum
WHO	World Health Organisation
WIPO	World Intellectual Property Organisation
WTO	World Trade Organisation

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