

COLOMBIA

Systematic Country Diagnostic

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Abbreviations and Acronyms

CAGR	Compounded Annual Growth Rate	MTFF	Medium Term Fiscal Framework
CERAC	Conflict Analysis Resource Center	NGO	Non-governmental Organization
CREG	Gas Regulation Commission	OCYT	<i>Observatorio de Ciencia y Tecnología</i> - Observatory for Science and Technology
CSA	Climate-smart Agriculture	OECD	Organization for Economic Cooperation and Development
DNP	<i>Departamento Nacional de Planeación</i> - National Planning Department	PISA	Programme for International Student Assessment
ELN	<i>Ejército de Liberación Nacional</i> – National Army for Liberation	POS	<i>Plan Obligatorio de Salud</i> - Mandatory Health Plan
EPS	<i>Entidad Promotora de Salud</i>	PPP	Purchasing Power Parity
FARC	<i>Fuerzas Armadas Revolucionarias de Colombia</i> - Revolutionary Armed Forces of Colombia	PPSAM	<i>Programa de Protección Social para el Adulto Mayor</i> -Social Protection Program for the Elderly
FDI	Foreign Direct Investment	R&D	Research and Development
GDP	Gross Domestic Product	RS	<i>Régimen Subsidiado en Salud</i> – Health Subsidized Regime
GHG	Greenhouse Gas	RUAF	<i>Registro Unido</i> –Unified Registry of Beneficiaries
GOC	Government of Colombia	SCD	Systematic Country Diagnostic
IDP	Internally Displaced Person	SENA	<i>Servicio Nacional de Aprendizaje</i> - National Service of Prentice
LAC	Latin America and the Caribbean	SIP	Shared Prosperity Indicator
MHCP	<i>Ministerio de Hacienda y Crédito Público</i> – Ministry of Finance and Public Credit	TFP	Total Factor productivity
MIC	Middle Income Country	VAT	Value Added Tax
MILA	<i>Mercado Integrado Latinoamericano</i> -Integrated Latin American Market	VLR	Victims and Land Restitution
MINSALUD	<i>Ministerio de Salud y Protección Social</i> -Ministry of Health and Social Protection	WDI	World Development Indicator

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Executive Summary

A decade of impressive successes

Colombia has made impressive strides in reducing poverty and promoting shared prosperity during the last decade. Extreme poverty fell from 17.7 percent in 2002 to 8.1 percent in 2014, while total poverty (including moderate poverty) fell from 49.7 percent in 2002 to 29.5 percent in 2014. The decline implies that 6.2 million people left poverty in the period. The multidimensional poverty rate, which takes into account education, health, labor, childcare, and housing, has also experienced a remarkable decline from 49 percent in 2003 to 21.9 percent in 2014. The number of multidimensional poor declined by 9.8 million. Shared prosperity indicators followed a similar trend, especially after the second half of the decade. Between 2008 and 2013, the income per capita of the bottom 40 percent of Colombians grew at an average rate of 6.6 percent, significantly higher than the national average rate of 4.1 percent for the same period..

Economic growth that led to job creation has been the main driver of poverty reduction and shared prosperity gains. The economy sustained an average GDP growth of 4.4 percent during the 2000s, almost 2 percentage points higher than the previous decade. For the period 2002-2013, economic growth explains 73 percent of the reduction in extreme poverty and 84 percent of the reduction in total poverty. Moreover, price stability, and in particular stable food prices contribute to poverty outcomes. As in the case of poverty reduction, labor income growth is the main determinant of shared prosperity in recent years in Colombia. Labor income represents at least fifty percent of income growth for the poorest 10 percent of the population, and up to 70 percent for those in the fourth decile, in the period 2008-2013. This evidence highlights the importance of high growth and low inflation for achieving the World Bank's twin goals in Colombia.

Colombia's relative high growth during the last decade was supported by sound macro policies and favorable external conditions. Favorable commodity prices boosted foreign investment, exports and government revenues. The country's growth rate helped Colombia close the country's per capita income gap with top LAC economies and high income (OECD) countries. In recognition of its important economic achievements, Colombia was invited to start its accession process to OECD membership (October 2013) and the country has seen its risk rating getting upgraded consistently above investment grade by all major rating agencies.

During the past decade, Colombia has made impressive strides on other fronts as well, most notably progress towards ending its 50-year conflict, one of the longest-running wars in the world. Long prior to the start of the formal Havana talks in November, 2012, the government has been on a drive to pacify the country and reduce the violence level. This was instrumental in increasing foreign direct investment in oil and mining. The incidence of violence dropped sharply by 2004 and even more by 2009, ushering in the beginnings of a broader peace dividend in the form of economic, social and political stability. Other areas of progress include greater recognition of minority rights and needs, including for internally displaced people (over 5.5 million) and large populations of Afro-descendants and indigenous peoples (estimated around 10.5 and 3.3 percent, respectively). Consistent with its upper middle income status, Colombia has signed and is implementing multiple trade agreements, signed the OECD Declaration on Green Growth, and taken on significant steps to strengthen environmental management. In the face of increasing damages from natural disasters, Colombia has been a pioneer in Latin America in developing a comprehensive approach to minimize the loss of

life, reduce the exposure of assets, and finance rehabilitation and reconstruction. Finally, the recently approved 2014-2018 National Development Plan has an emphasis on peace, education and equity. Regarding combating rural poverty, the Plan has a comprehensive approach that envisions multi-dimensional interventions to promote rural development.

However, important challenges remain and the country needs to step up its efforts to build on these successes. Its poverty rate is still higher than the Latin American average, and its inequality – as measured by the Gini coefficient (0.539 in 2013) – is the second highest in the region, one of the highest in the world. Colombia needs to expand its sources of economic growth, and to do so in a manner that is inclusive and sustainable, socially, fiscally and environmentally.

Colombia's defining characteristics

This SCD argues that Colombia possesses three defining characteristics that have deep historical roots and will condition the achievement of poverty eradication and shared prosperity in a sustainable manner: first, an uneven territorial development; second, the presence of a protracted armed conflict; and third, almost two decades of extractives-based economic growth. Then, building on these characteristics, the SCD analyzes current economic and social constraints to achieving inclusive and sustainable growth.

The country's lack of territorial integration is characterized by poor physical and social connectivity: persistent gaps in standards of living between urban and rural areas, across geographic regions (e.g., Pacific, Atlantic, Andes, Amazon) and even across departments and municipalities. Its “uneven territorial development” is made worse by conflict, but is also due to the country’s rugged terrain, weak local governance and service delivery, poor market access and rural-urban market linkages, high exposure to natural disasters, and inequitable land ownership and policies that discourage local investment. The Government recognizes the challenge of uneven territorial development as one of its priority constraints to inclusive and sustainable growth.

Colombia has been steeped in armed conflict for 50 years, and the impact of violence on the country is pervasive. Approximately 220,000 people have died in the conflict between 1958 and 2013, of which 81% have been civilians, and the more than five and a half million people forced from their homes since 1985 constitute the world’s second largest population of internally displaced persons (IDPs) after Syria. If the country had been at peace for the last 20 years, per capita income would be 50 percent higher today. Some economists estimate that, on average, countries in conflict could add 1.5 percentage points to its annual growth rate if the country were at peace.

While there will be a need to invest in a post conflict agenda, the impact of a lasting peace dividend can hardly be over-estimated. If the current talks between the Government of Colombia and the Armed Revolutionary Forces of Colombia - Fuerzas Armadas Revolucionarias de Colombia (FARC) - in Havana are successful, the resulting peace dividend has the potential to free up enormous public and private resources for more productive use, free up large territorial areas for settlement and investment, reduce uncertainties in future planning, ease crippling social hardship, and enable more geographically equitable provision of public and infrastructure services across large swathes of the country.

Of course, even though securing a peace agreement would be a huge achievement that has eluded the Colombians for years, its implementation will be fraught with challenges and uncertainty. The cost of adequate restitution could be large enough to pose fiscal sustainability issues; the difficulty of delivering on commitments would threaten the capacity of even the most efficient bureaucracies; and the risk of set-backs, whether driven by the resurgence of violence or criminality, or merely the tenacious opposition of vested interests, is extremely high. While the cessation of armed conflict would bring widespread hope to the country, it is presented here as a fundamental challenge that must be broken down into its various components.

The recent emergence of Colombia's extractives industries (mainly oil, but also coal and gold) have accelerated economic growth and provided record investment funding for development, but pose questions about the future sustainability of the country's growth model. The opening up of the energy sector in 2003, as well as the recovery of state control from the guerilla of large tracts of territory, contributed to a significant increase in oil production as the volume of oil extracted nearly doubled from 530 thousand barrels per day in 2007 to almost a million bpd over the past three years. Furthermore, rising oil and commodity prices have added windfall revenues. Oil and mining have nearly doubled their participation in the economy over the past decade to about 12 percent currently, tradable sectors such as agriculture and manufacturing industry have seen their share in economic activity reduced by three percentage points each to slightly over 6 and 12 percent respectively.

While prudent macroeconomic management has shown resilience in the face of the recent reversal of the commodity boom, the future growth path of the economy faces considerable uncertainty in the medium/long term. An inflation targeting framework and flexible exchange rate regime have helped manage the volatility of external inflows. Prudent fiscal policy contributed by creating buffers to manage a long-lasting and large revenue windfall. The adoption of a fiscal rule in 2011 as well as a program to increase infrastructure investments is part of the policy response to the economic stability and external competitiveness challenges posed by the commodity boom.

Main Obstacles to Inclusive and Sustainable Growth in Colombia

The diagnostic's methodology is designed to investigate the main challenges to achieving economic growth and social inclusion in a sustainable manner. Given this standard approach, this SCD maps the three distinguishing characteristics of Colombia (uneven territorial development, armed conflict, and extractives-driven growth) onto these three dimensions of analysis (growth, inclusion and sustainability), and presents what emerges as the key development constraints faced by Colombia today.

Growth

Colombia's strong economic performance over the past decade –described in Chapter 2– was not widespread across all of its territory, perpetuating historical inequalities. In fact, it had only a marginal impact on reducing regional disparities. On the positive side, 60 percent of Colombia's regions were able to reduce their per capita income gap with respect to Bogotá, and many of those regions are among the poorest ones. However, regional differences are still very large. The five largest regions in the country generate approximately 65 percent of national value added. Regional growth is partially linked to sectorial growth trends. Growth has been led by extractives and services activities. While

commodity-producing departments were the main contributors of the small regional convergence effects, the extractive sectors have limited spillover to local populations.

Regional differences in per capita income are primarily explained by differences in productivity/efficiency. Low quality and access to (and performance of) education has been identified as one of the main bottlenecks hindering growth and productivity. Likewise, the quality of transport infrastructure differs greatly across regions. In fact, low connectivity to markets is a critical obstacle for economic activity in low-income regions. Government capacity is also a critical determinant of local economic performance. The overall fiscal system (taxes and transfers) shows a limited redistributive capacity, even when compared with other countries in Latin America and the Caribbean. In addition to resources, local government capacity also varies significantly with important implications to service delivery and competitiveness.

Territorial development has been constrained by years of violence and armed conflict and its repercussions. The conflict is deeply entrenched in rural areas and coexists with multiple dimensions of criminality, including narco-traffic, extortions, and kidnappings. Decades of internal conflict destroyed physical, human, and social capital with important implications for regional growth. Violence and conflicts are concentrated in rural areas and in regions with abundant natural resources, and a limited state presence. Pervasive underdevelopment, lack of adequate infrastructure, and expropriation risks have prevented the local population in various ways (instability, informality, lack of legal rights, and violence) from engaging in productive activities, and has been particularly harmful for agricultural growth. An estimated two-thirds of lands in rural areas are held without title. Informality (lack of titles), and inefficient use of land combined to pose an important obstacle to economic activity, preventing access to finance, productive investment, tax revenues, and growth.

The increasing presence of the state in former conflict areas, combined with structural reforms and a favorable external environment set the conditions for the extractive boom experienced in the last decade. In the early 2000s, Colombia's oil industry was weakening, and Ecopetrol, a state company at the time, represented the entirety of the Colombian oil industry. The opening up of the energy sector in 2003, the incorporation of Ecopetrol as a publicly traded company, and the recovery of state control of large tracts of territory from the guerilla, contributed to a significant increase in oil production as the volume of oil extracted nearly doubled by 2012. Furthermore, rising oil and commodity prices added to the windfall revenue generated by the natural resource boom that helped support the strong growth previously described with spillovers to government, services and construction.

The performance of non-extractive tradable sectors has lagged behind, especially due to slow productivity growth. This dynamics is linked to low integration to international markets and lack of competition in domestic markets. Colombia trade openness is well below expected for its size and income. Despite the recent free trade agreements, the country still possess relatively high tariff and non-tariff barriers, which limit access to and competition from external markets. Barriers to internal competition include limited access to finance, information gaps that prevent innovation and a regulatory framework that is perceived not to do enough to enhance competition and anti-monopoly policies. Moreover, output and productivity convergence across Colombian regions is forestalled by lack of connectivity (insufficient infrastructure + costly services) to the main internal and external markets, thereby affecting Colombian competitiveness. Last but not least, there is a severe mismatch between the demand and supply of skills that hamper labor productivity.

Structurally lower international prices and uncertainties about future production impose challenges for maintaining high growth rates under an extractives driven model in the short and medium terms. Since mid-2014, oil prices have dropped significantly. This drop seems to be driven by structural changes in supply (new technologies significantly increased production in the U.S.) and in demand (slower growth in China). These changes are likely to be long lasting, affecting the profitability and investment prospects of oil activities. In addition, Colombia's current proven oil and gas reserves are estimated to last only seven to eight years. Oil production is expected to peak in 2018 and then decrease slowly to less than 0.8 million bpd in 2035. Reserves and future production in Colombia are difficult to estimate, however, because exploration in much of the country has barely started and there is great uncertainty about future discoveries.

Going forward, Colombia's economic performance will be closely linked with its ability to successfully transition to a lower oil-price equilibrium, and promote productivity and competitiveness in non-extractive activities. While Colombia possesses fiscal and monetary buffers that will ensure a smooth transition, the country will need to address the Government's relatively large reliance on commodity revenues and revise use of these (now) scarce resources. The second set of challenges relates to promoting productivity and competitiveness beyond extractives, by addressing critical horizontal barriers to economic development. This includes: i) addressing low trade integration by reducing transportation costs, tariffs, and non-tariff barriers to trade; ii) reducing barriers to domestic competition and information gaps that discourage innovation; iii) reducing barriers to competition in the financial sector, to expand access and reduce cost of credit; iv) improving access to and quality of tertiary education to align it to market needs; and v) integrating lagging regions through better connectivity and business climate, particularly security and property rights.

Inclusion

Obstacles to inclusion, particularly to extreme poverty eradication and reduction of inequality, are discussed in Chapter III. Territorial differences are the main shortcoming of the downward trends in poverty and inequality in Colombia. Some of the poorest departments (Choco, Cauca and Guajira) have had the smallest declines in poverty rates for the period 2002-2013. In terms of multidimensional poverty, the Pacific and Atlantic regions have not closed its gap with Valle del Cauca or Bogotá. The urban-rural divide is also persistent in monetary and multidimensional poverty measures. These contrasts stem from differential access to sanitation infrastructure, health services, quality education, road infrastructure and security particularly in departments distant from main city centers and/or affected by violence. This differential access is due to lack of economic convergence, explained by lack of investment in rural areas in the past and which is only partially compensated through oil royalties because of limited local institutional capacity to design and implement projects and policies.

The armed conflict has generated millions of internally displaced people (IDP) who are most vulnerable to poverty. The conflict disrupts the productive use of assets (be it land, machinery, animals) and workers, it hinders legal economic activity and propels families into limited employment, displacement, and poverty. It is estimated that one out of two people in extreme poverty is an IDP. The IDP have been assisted by a series of social programs, but still lack access to dignified housing, economic opportunities and compensation/reparation for losses in the conflict. The problem is therefore a matter of re-employment possibilities of IDP and victims due to losses of land, human capital and other productive assets.

Even in its aftermath, the armed conflict will have durable impacts upon inclusion. Global experiences show that the main challenge after a peace agreement is preventing the recurrence of cycles of violence, allowing society to implement the necessary and agreed-upon changes. The recurrence or persistence of violence is sometimes the result of rival criminal organizations competing to control illegal activities formerly organized by insurgency groups. In the case of Colombia, drug-trafficking, money laundering, extortion and kidnappings may become the trade of Bacrim (Spanish acronym for criminal bands) and other groups. Increasing citizen security to the whole population could become a prominent challenge in coming years.

Despite the favorable trends of the past decade, the Colombian labor market is still characterized by high rates of unemployment and informality. The high level of informality is attributed to complex and expensive employment protection legislation (EPL) and the high level of unemployment is attributed to high minimum wages. However, not all of informality and unemployment can be attributed to the institutional setting of the Colombian labor market. Human capital accumulation and the returns it conveys as well as differences in regional development also play a role in explaining informality and average wages and, hence, it is key to understanding wage differentials and inequality. On the other hand, wage gaps by gender and race also show differences that cannot be fully ascribed to differences in human capital accumulation, which hints to problems of inequality of opportunities for these groups in the labor market.

A final issue related to inclusion refers to the tax/transfer system of the Colombian fiscal stance. The tax and transfers system has little redistributive capacity when compared to OECD and LAC countries: inequality after taxes and social policy remains roughly the same as before them. The lack of redistribution of the tax system is both a problem of low taxation in the top of the distribution and weak targeting of the expenditure benefitting the bottom. Somehow related, pensions contribute very little to poverty or inequality reduction in Colombia. The Colombian Government is working to improve the coverage and progressivity of old-age protection, but this will involve expanding budgetary outlays as well as some parametric reforms to the contributory system.

Sustainability

Finally, as discussed in Chapter IV, there are several potential obstacles to achieving the twin goals in terms of fiscal, social, and environmental sustainability. Similar to the growth and inclusion dimensions of the diagnostic, these sustainability issues are closely linked to the three identified defining characteristics of Colombia.

Regarding *fiscal sustainability*, the demand for public spending will rise to address rural infrastructure and service needs required to reduce inequities associated with historically uneven territorial development; to finance the cost of conflict-related reparations and restitution; and to improve the rule of law, particularly as regards citizen security. Colombia has been able to meet the fiscal targets during the first three years of its new fiscal rule, but the longer-term fiscal consolidation effort as expressed in the annual government Medium Term Fiscal Framework (MTFF) is heavily skewed towards a reduction of public expenditure (as a share of GDP) in terms that look overly optimistic.. Removing the identified constraints to achieving the twin goals will require investment, so achieving greater efficiency in public spending will be as important as meeting fiscal targets and managing the potential volatility of natural resources-based revenues.

Key *environmental sustainability* issues are also closely tied to Colombia's distinguishing characteristics. First, one of Colombia's greatest opportunities – access to its under-utilized rural areas facilitated by potential peace – is simultaneously the source of its greatest risk to long-term natural resource sustainability. Inadequate forest, land, and natural resource management (including in unsustainable oil, mining, and agricultural sectors) would lead to deforestation and land degradation in economically and environmentally suboptimal ways. Second, by virtue of the country's geography, Colombia faces high risks associated with worsening natural disasters and climate change. Inadequate disaster risk management in urban, coastal and agricultural areas (including the need for agriculture to adapt to climate change) would allow the current trend of high and increasing costs of natural disasters to continue. Third, high pollution levels, particularly air pollution in Colombia's largest cities and low levels of waste-water treatment, threaten both public welfare and economic growth (through negative impacts on competitiveness). For all of these issues, early action will avoid potentially large downstream costs.

Lastly, regarding *social sustainability*, the main challenge is to implement a sustainable peace process that specifically helps the rural poor while providing greater safety and security to all citizens. Achieving this peace dividend will be enormously difficult, as the rural poor and ethnic minorities have precisely the least presence of the State in the country, the lowest levels of access to public services, and often the highest penetration of illegal and coercive economic activity. Furthermore, citizen security could likely to suffer – hopefully in the relatively short-term only – from criminal violence that may surge after the cessation of armed conflict, often associated with entrenched illegal economic interests.

Concluding remarks: a list of priorities

This Systemic Country Diagnostic concludes with a list of the main challenges Colombia faces to eradicate extreme poverty and promote share prosperity through inclusive and sustainable growth. A selection of the main obstacles to inclusive and sustainable growth by its impact upon growth, inclusion or sustainability -and its connection to Colombia's defining characteristics of uneven territorial development, armed conflict and extractives-based growth- is synthesized in the matrix presented in Table ES-1. Other problems identified in the diagnostic, however, do not seem amenable to be linked to the three factors, and a fourth column of "systemic issues" is added in the matrix. These *systemic* issues are more associated with fundamental and cross-cutting government policies that are not tied to specific country characteristics. They include, for example, government policy short-comings in the areas of trade, financial sector, taxation, pensions, and disaster risk management. These are sophisticated issues linked to Colombia's future aspirations and needs. They go beyond the historical forces and defining characteristic that have prevailed so far.

Finally, the key constraints identified in the previous chapters and summarized in the matrix, are then listed and ranked. Using the information derived from the literature review, bench-marking analyses, and local consultations, a group of World Bank experts was requested to categorize the challenges of the Colombian economy into two tiers. Experts were requested to consider three dimensions to gauge the overall importance of each challenge. First, its direct impact upon the twin goals of poverty eradication and shared prosperity. That is, whether the problem, if solved, would have a direct impact upon the indexes of poverty (monetary and multidimensional) and shared prosperity (i.e., income growth of the bottom 40 percent). Second, the forward/ backward linkages and complementarities that the challenges may have with other challenges or other development goals. Namely, the

resolution of the challenge would help solving another problem, or would aim towards other goals such as convergence to higher income countries, environmental preservation, etc. Third, existence of an enabling environment to address the challenge based on the expert's knowledge of the subject as well as the expert's view of current affairs, public opinion and existing pre-conditions in the country.

Table ES-1: Origin of Challenges to Inclusive and Sustainable Growth in Colombia

	Uneven Territorial Development	Armed Conflict	Extractives-based growth	Systemic
GROWTH	Investment gap in physical infrastructure, especially transport, partially due to institutional constraints	Land tenure and land market institutions hinder growth	Slow TFP growth in non-extractive activities, linked to limited exposure to domestic and external competition	Limited trade openness / Financial sector provides insufficient support to individuals and small firms / Inadequate provision of productive skills
INCLUSION	Gap in service delivery (education, health, housing) partly due to limited services delivery capabilities at the local level and fragmented social protection system	Affected municipalities and IDPs suffer losses of productive assets and means for coping with risks, as a consequence of the armed conflict		Tax and transfer system has limited impact on inequality / High costs imposed by labor regulations and unequal employment opportunities
SUSTAINABILITY		The fiscal cost of compensations and reparations in the post-conflict era	Volatile natural resource public revenues	Fiscal consolidation heavily skewed toward public expenditure reduction. Un-funded and regressive pensions
Fiscal				
Social	Regional social unrest, unrelated to armed conflict	Lack of citizen security as consequence of both armed conflict and its legacy of increased common violence		
Environmental	High pollution levels in large cities	Insufficient forest and land management in post-conflict areas	Insufficient environmental regulation of oil and illegal mining activities	Inadequate disaster risk management and adaptation in the face of worsening natural disasters and climate change.

The final outcome of this prioritization exercise is included in Table 2. Any challenge deemed to meet all three dimensions was deemed to be a top priority concern for Colombia, and was put into a basket of “Tier One” challenges. Those challenges deemed to meet only one or two of the dimensions were categorized as “Tier Two” challenges. Interestingly, all challenges are deemed to have forward and backward linkages. This is a sign of the inter-connections that we mentioned at the beginning of this summary as well as the perceived importance of them all in the Colombian quest for inclusive and sustainable growth. The separation between tiers responds to experts perceptions about the clear and direct impact upon the twin goals and the enabling environment.

Table ES-2: Prioritization of Main Challenges to Inclusive and Sustainable Growth in Colombia

	Problems/Challenges to Inclusive and Sustainable Growth	Twin goals	Linkages	Opportunities
Tier 1	Infrastructure gap (particularly transport infrastructure) across regions/departments hinders output and productivity growth, while gaps in the delivery of public services (particularly utilities such as water, sewage, health, citizen security, and urban transport) across regions/departments directly contributes to poverty/inequality outcomes. These issues are closely linked to institutional constraints, such a fragmented social protection system, lack of coordination across levels of government and limited local capacity to design and implement projects and policies.	✓	✓	✓
	Low quality of education at all levels, insufficient access at early childhood and post-secondary levels, and lack of access to training in job skills. Combined, these hinder output and productivity growth, and contribute to widening wage inequalities.	✓	✓	✓
	Financial sector does not provide adequate support for private firm development and access to financial services in general by individuals and small firms, affecting economic growth and inclusion.	✓	✓	✓
	Land tenure and land market institutions hinder growth and equity in rural areas. This compounds already limited re-employment possibilities for internally displaced people and victims due to losses of land, human capital, and other productive assets.	✓	✓	✓
	Poor citizen security as a consequence of the armed conflict and of expanding criminal activities whether related or not to the conflict itself, hinders economic growth and inclusion, as well as social sustainability.	✓	✓	✓
Tier 2	Insufficient/limited forest, land, and natural resource management (including in the oil and mining sectors) in post-conflict areas that are increasingly opening up.	✓	✓	✓
	Slow TFP growth on non-extractive activities, which is linked to limited exposure to domestic and external competition, limit economic growth.	✓	✓	
	Inadequate disaster risk management and adaptation in the face of worsening natural disasters and climate change.	✓	✓	
	High pollution levels, particularly air pollution in Colombia's largest cities, and low levels of wastewater treatment.		✓	✓
	Volatile natural resource public revenues pose additional challenges to the fiscal consolidation plan set under the fiscal rule. The current implementation strategy, based on public expenditure reduction, does not seem realistic or socially desirable. Moreover, the Tax/Transfer system is of limited progressivity and the pension system is regressive and will require increasing amounts of funding.		✓	✓
Tier 3	Labor market legislation leads to relatively high labor costs for the average labor productivity of the country. In parallel, unequal opportunities and outcomes in labor markets for women, displaced population, and ethnic minorities such as indigenous and afro-Colombians, affect economic growth and social inclusion.		✓	

While Colombia achievements have been impressive since the beginning of the 2000 in terms of reduction of poverty and increased shared prosperity, it is important to note that there are still a lot of challenges as described in this SCD. The listing of challenges and categorization in chapter ... does not suggest that some of them are less important than others, or that challenges not listed here should be forgotten. All the issues discussed in this note are important to ensuring sustainable, inclusive growth in Colombia. To some degree, government will need to put time and resources into all of them, as development is not a zero sum game where progress on one area implies that another must be ignored. The purpose of the SCD prioritization is to identify those challenges that are likely to have the greatest bearing on eliminating absolute poverty and improving prosperity in the short-medium term. Thus, they are necessary but may not be sufficient: they propose areas of emphasis and urgency rather than a sole focus.

I. FRAMING THE ISSUES

A decade of impressive successes

1. Colombia has made impressive strides in reducing poverty and promoting shared prosperity during the last decade. Extreme poverty fell from 17.7 percent in 2002 to 8.1 percent in 2014, while total poverty (including moderate poverty) fell from 49.7 percent in 2002 to 29.5 percent in 2014. The decline implies that 6.2 million people left poverty in the period. The multidimensional poverty rate, which takes into account education, health, labor, childcare, and housing, has also experienced a remarkable decline from 49 percent in 2003 to 21.9 percent in 2014. The number of multidimensional poor declined by 9.8 million. Shared prosperity indicators followed a similar trend, especially after the second half of the decade. Between 2008 and 2013, the income per capita of the bottom 40 percent of Colombians grew at an average rate of 6.6 percent, significantly higher than the national average rate of 4.1 percent for the same period..
2. Economic growth that led to job creation has been the main driver of poverty reduction and shared prosperity gains. The economy sustained an average GDP growth of 4.4 percent during the 2000s, almost 2 percentage points higher than the previous decade. For the period 2002-2013, economic growth explains 73 percent of the reduction in extreme poverty and 84 percent of the reduction in total poverty. Moreover, price stability, and in particular stable food prices contribute to poverty outcomes. As in the case of poverty reduction, labor income growth is the main determinant of shared prosperity in recent years in Colombia. Labor income represents at least fifty percent of income growth for the poorest 10 percent of the population, and up to 70 percent for those in the fourth decile, in the period 2008-2013. This evidence highlights the importance of high growth and low inflation for achieving the World Bank's twin goals in Colombia.
3. Colombia's relative high growth during the last decade was supported by sound macro policies and favorable external conditions. Favorable commodity prices boosted foreign investment, exports and government revenues. The country's growth rate helped Colombia close the country's per capita income gap with top LAC economies and high income (OECD) countries. In recognition of its important economic achievements, Colombia was invited to start its accession process to OECD membership (October 2013) and the country has seen its risk rating getting upgraded consistently above investment grade by all major rating agencies.
4. During the past decade, Colombia has made impressive strides on other fronts as well, most notably progress towards ending its 50-year conflict, one of the longest-running wars in the world. Long prior to the start of the formal Havana talks in November, 2012, the government has been on a drive to pacify the country and reduce the violence level. This was instrumental in increasing foreign direct investment in oil and mining. The incidence of violence dropped sharply by 2004 and even more by 2009, ushering in the beginnings of a broader peace dividend in the form of economic, social and political stability. Other areas of progress include greater recognition of minority rights and needs, including for internally displaced people (over 5.5 million) and large populations of Afro-descendants and indigenous peoples (estimated around 10.5 and 3.3 percent, respectively). Consistent with its upper middle income status, Colombia has signed and is implementing multiple trade agreements, signed the OECD Declaration on Green Growth, and

taken on significant steps to strengthen environmental management. In the face of increasing damages from natural disasters, Colombia has been a pioneer in Latin America in developing a comprehensive approach to minimize the loss of life, reduce the exposure of assets, and finance rehabilitation and reconstruction. Finally, the recently approved 2014-2018 National Development Plan has an emphasis on improving education and combating rural poverty.

5. However, important challenges remain and the country needs to step up its efforts to build on these successes. Its poverty rate is still higher than the Latin American average, and its inequality – as measured by the Gini coefficient (0.539 in 2013) – is the second highest in the region, one of the highest in the world. Colombia needs to expand its sources of economic growth, and to do so in a manner that is inclusive and sustainable, socially, fiscally and environmentally.

A historical perspective

6. This Colombia Systematic Country Diagnostic (SCD) aims to assess the main challenges that Colombia faces in eradicating extreme poverty and promoting shared prosperity in a sustainable manner. The SCD argues that Colombia possesses three defining characteristics that condition the achievement of the twin goals: first, an uneven territorial development; second, the presence of a protracted armed conflict; and third, almost two decades of extractives-based economic growth. Then, building on these characteristics, the SCD also analyzes current economic and social constraints on achieving inclusive and sustainable growth.

7. These three factors have historical roots and will condition Colombia's development in coming years. Colombia was long characterized by a mosaic of distinctly populated regions with little or no communication between them. At the start of the 1870s, three-quarters of the country was uninhabited, and the eastern mountains contained 42 percent of the total population. The colonization of national territories also led to the coffee-oriented migrations that would define the demographic and economic landscape of Colombia in the twentieth century. By the mid-1920s, Colombian coffee exports represented one-tenth of the world total.

8. The period from 1870 to 1938 was also a time of both socioeconomic and regional transformation. The population of Colombia's twenty largest cities increased 50 percent faster than the national average. In addition to coffee merchants and exporters, the cities' artisans also produced an entrepreneurial group that would establish medium-sized factories and large retail establishments, which would play an important role in the 1960s. A rural-urban divide, defined along regional lines, started to appear: while some groups increasingly looked outward to other regions and foreign markets, many towns fell under the leadership of traditionalist and sectarian figures, further exacerbating isolation of some areas.

9. Many credit the development of the coffee economy for the improvement of transportation in Colombia. Given that Colombia's geography would impede the progress of export agriculture, creation of a road networks started as early as the 1870s. However, the initial shortage of private capital put pressure on local governments to finance these projects that were then executed by private firms. This model quickly faced the challenges of difficult geography and increasing construction and maintenance costs. During the 1920s, foreign investors rushed to Colombia, which was booming from high coffee profits and indemnity payments from the United States for the loss of Panama. At the time, 80 percent of the rail lines built served the critical routes of the

coffee region. Between 1930 and 1959, the Government adopted a more systematic approach to its transportation system, with an increasing emphasis on highways. By 1950, 21,000 kilometers of highways had been built, and a network of trunk roads linked the metropolitan economies of Bogota, Cali, Medellin, and Barranquilla. However, the periphery grid was still uneven and underdeveloped, limiting the access of rural populations to the modern economy.

10. The industrial census of 1945 revealed the growing importance of manufacturing, concentrated in the cities of Medellín, Manizales, and Barranquilla and in the industries of petroleum, petroleum derivatives, beer, and textiles. However, rural areas fell prey to growing sectarian violence, and little political interest was given to improving the labor conditions of rural workers. It is against this background that the *Violencia* (1945-1965), a period of crime and impunity, emerged, leading to a massive rural exodus to the cities and displacement of tens of thousands of communities. The National Front, a bipartisan coalition, 1957-1978, was able to gradually reduce the level of violence endured by many parts of the country. However, unsolved social inequalities and the rise of global communist movements aided the establishment of several armed groups (FARC, ELN) in the 1960s. Armed conflict continued to extend throughout the country, reinforced by proceeds from the rising drug trade.

11. Despite armed conflict and social instability, Colombia's economic modernization was well underway in the late decades of the twentieth century. Manufacturing exports (excluding food industry and oil refining) grew to represent 36 percent of total exports in 1995, but fell to 22 percent in 2013. As the coffee economy receded in the 1980s, and the economy modernized and diversified, mining activities (both extraction and oil refining) emerged as the new motor for development: 28% of total exports in 1995 and more than 50 percent since 2010 (reaching a peak of 67% in 2013). There has been only one year of negative growth in four decades, and the country never defaulted on its national debt—a feat not seen in any other country of the region. Colombia has achieved remarkable goals in terms of social development, but high levels of income and assets inequality still characterize the country. The constitution of 1991 and the series of legislative and fiscal measures towards decentralization seek further respect of human rights, expansion of social benefits, and economic development. Furthermore, peace talks initiated in 2013 aim at concluding a more than 50-year long conflict. The country has signed several important free trade agreements and it has applied to accession to the OECD, even though its trade remains based on a few basic commodities.

12. This short historical background traces the origins of the three factors that condition the Colombian development process: an uneven territorial development, characterized by unfinished economic integration and persistent gaps in standards of living between urban and rural areas, across geographic regions (e.g., Pacific, Atlantic, Andes, Amazon) and even across departments and municipalities; an over-fifty-year armed conflict that has inflicted much suffering on the Colombian people but seems to be moving toward a definite resolution which, however, may engender new security challenges; and the recent emergence of extractives industries (mainly oil, but also coal and gold) that have accelerated economic growth and provided record investment funding for development, but pose questions about the future sustainability of the country's growth model.

Uneven territorial development

13. **Colombia has enormous unrealized potential in its rural areas due to a combination of factors that may be called, collectively, “uneven territorial development.”** These factors include poor physical and social connectivity, made worse by conflict, under-investment, weak local governance and service delivery, poor market access and rural-urban market linkages, high exposure to natural disaster, and inequitable land ownership and policies that discourage investment. These challenges are cross-cutting and complex, but achieve a greater coherence when considered in the context of aiming towards an improved “territorial development.”¹

14. **Colombia’s immense geographic diversity fragments the country into pockets, each with their own challenges and opportunities, and makes national planning and implementation particularly complex.** It is crisscrossed by three volcanically active mountain ranges (one with an impressively high point of 5,700 meters/18,700 ft.), has several major rivers flowing into the Caribbean, the Pacific, and into the Amazon and Orinoco basins, and is one of five "megadiverse countries" or biodiversity hotspots in the world (i.e., countries that possess an exceptional wealth of plant and animal species). The country’s heterogeneity is not just urban-rural. Arising from the pattern of development that is partly endogenous to Colombia’s geography, history of wars, and strong regional nodes, there are distinct regions of the country with different challenges and needs.

15. **The Government recognizes the challenge of uneven territorial development as one of its priority constraints on inclusive and sustainable growth.** At the end of May 2013, the Havana peace negotiations made public a preliminary agreement on rural development, hailed in the media and inspiring hope for the success of the negotiations. The agreement gives a broad approach to rural development; comprising diverse activities. The objective is to bring a variety of state services to rural areas, including justice and more equal access to land. The “Misión para la transformación del Campo,” an analysis and proposal of development for rural areas in Colombia commissioned by DNP also takes a territorial view of the problems. More recently, the territorial approach is the basis of the DNP’s “regional” strategy that makes up the last six chapters of the National Development Plan for the period 2014-2018.²

Armed conflict

16. **Colombia has been steeped in armed conflict for over 50 years, and the impact of violence on the country is pervasive.** Approximately 220,000 people have died in the conflict between 1958 and 2013, of which 81 percent have been civilians, and more than five million civilians have been forced from their homes since 1985, generating the world’s second largest population of internally displaced persons (IDPs).³ If the country had been at peace for the last 20 years, per capita income would be 50 percent higher today. Some economists estimate that, on

¹ Interesting studies about the historical origins of Colombia’s uneven territorial development are Acemoglu, Garía-Gimeno and Robinson (2012) and Meisel (2014).

² The National Development Plan was approved by the Colombian Congress in May 2015. For detailed documentation and general information about the plan, visit: <https://www.dnp.gov.co/Plan-Nacional-de-Desarrollo/Paginas/Que-es-el-Plan-Nacional-de-Desarrollo.aspx>

³ World Bank, 2014a; and Colombia National Centre for Historical Memory, 2013.

average, countries in conflict could add 1.5 percentage points to their annual growth rates if they were at peace.⁴

17. **The impact of a lasting peace dividend can hardly be overestimated.** Since November 2012, the Government of Colombia and the *Fuerzas Armadas Revolucionarias de Colombia* (FARC) have been meeting in Havana to negotiate an end to the armed conflict. If successful, the resulting peace dividend has the potential to free up public and private resources for more productive use, free up large territorial areas for settlement and investment, reduce uncertainties in future planning, ease crippling social hardship, and enable more geographically equitable provision of public and infrastructure services across large swaths of the country. For example, the recovery of large parts of the country from the FARC in 1999 was instrumental in increasing foreign direct investment in oil and mining exploration and exploitation.

18. **Of course, even though securing a peace agreement would be a huge achievement that has eluded Colombian governments for years, its implementation will be fraught with challenges and uncertainty.** The cost could be large enough to pose fiscal sustainability issues; the difficulty of delivering on commitments would threaten the capacity of even the most efficient bureaucracies; and the risk of setbacks, whether driven by the resurgence of violence or criminality, or merely the tenacious opposition of vested interests, is extremely high. The FARC, for example, is only one element of the conflict: other armed groups, gangs/mafia, and the drug economy are prominent issues in some areas. Therefore, while the cessation of armed conflict would bring widespread hope to the country, it is presented here as a fundamental challenge that must be broken down into its various components.

19. **Even more fundamentally, a peace agreement would only be one step in the process of achieving sustainable peace and citizen security.** For a country to build peace, there are three necessary social, economic, and political transitions that need to occur simultaneously at the local, subnational, and national levels. Each is fraught with difficulty. They are the transitions: (a) away from violence towards the rule of law; (b) away from a wartime to a peacetime economy that successfully enhances basic services and opportunities; and (c) away from turning to violence in the face of political differences to accepting participatory democracy.⁵ While only one of these transitions is explicitly economic, all three represent fundamental challenges to achieving the twin goals in a sustainable fashion.

Extractives-based growth

20. **The recent surge in oil and mining activity as well as rising commodity prices underpinned economic growth and created significant changes in the composition of economic activity in Colombia.** The opening up of the energy sector in 2003, as well as the recovery of state control of large tracts of territory from the guerilla, contributed to a significant increase in oil production as the volume of oil extracted nearly doubled from 530 thousand barrels per day (bpd) in 2007 to almost a million bpd over the past three years. Furthermore, rising oil and

⁴ World Bank Colombia Country Brief 2008. For other estimates of the cost of the conflict in different areas, see: López Montano and García Durán (2000), and Ibáñez and Moya 2007. For global estimates of the impact of armed conflicts, see Collier 2007.

⁵ Castañeda (2014) proposes a definition of peacebuilding as the crossroads of these three transitions based on the literature and practitioners' debates on peacebuilding. See also Castañeda et al. (2014).

commodity prices have added to the windfall revenue generated by the natural resource boom that supported the strong growth performance and led to significant changes in the structure of production. Whereas oil and mining have nearly doubled their participation in the economy over the past decade to about 12 percent currently, tradable sectors such as agriculture and manufacturing industry have seen their share in economic activity reduced by three percentage points each to slightly over 6 and 12 percent respectively.

21. Prudent macroeconomic management has increased resilience in the face of a reversal of the commodity cycle. An inflation targeting framework and flexible exchange rate regime help managing the volatility of external inflows. Prudent fiscal policy contributed by creating buffers to manage a long-lasting and large revenue windfall. The 2011 adoption of a fiscal rule (as well as a program) to increase infrastructure investments, to enhance anti-cyclical policy and to coordinate monetary and fiscal policy, is part of the policy response to the economic stability and external competitiveness challenges posed by the commodity boom.

22. In any case, the development of the oil sector and its impact on the economy is subject to considerable uncertainty in the medium/long term. Colombia's proven oil and gas reserves are estimated to last seven to eight years. Oil production is expected to peak in 2018 at 1.14 million bpd and then decrease slowly to less than 0.8 million bpd in 2035. Reserves and future production in Colombia is, however, difficult to estimate because exploration in much of the country has barely started and there is great uncertainty about future discoveries.

Structure of the document

23. This diagnostic aims to identify Colombia's main obstacles to inclusive and sustainable growth. The existing evidence—collected from World Bank studies and projects, as well as a wide array of academic articles and governmental or multilateral agency reports—points to a series of development problems of great relevance to the case of Colombia. Many of these problems are intricately related and have simultaneous impacts on, for instance, productivity, inequality, or natural resource management. The report makes these links explicit whenever possible but, for ease of exposition, presents these problems around three main objectives: growth, inclusion, and sustainability. The report discusses obstacles originating from the characteristics of the Colombian economy (uneven territorial development, armed conflict, and extractives-based growth) upon the three development objectives (growth, inclusion, and sustainability).

24. This Systematic Country Diagnostic includes five chapters and three annexes. Chapters II, III and IV diagnose the constraints on—or the forces that drive—growth, inclusion, and sustainability, respectively. These chapters make extensive use of the recently published set of World Bank Policy Notes for Colombia,⁶ as well as a thorough review of academic research papers and reports from government or multilateral agencies. Chapter V summarizes the main conclusions of the diagnostic and, after consultations with World Bank experts, prioritizes the main challenges the Colombian economy should face in coming years to undergo inclusive and sustainable growth. This diagnostic is complemented with references to views from a selection of representatives of the Colombian civil society collected during a series of stakeholder

⁶ This SCD concentrates on diagnosing the main obstacles to inclusive and sustainable growth. Policy recommendations to ease some of these constraints are discussed in the World Bank Policy Notes. See World Bank (2014b).

consultations undertaken in March 2015 and summarized in Annex 1: Stakeholder Consultations. Furthermore, the diagnostic makes use of (i) a quantitative database of development gap indicators benchmarking Colombia against the World and a subset of *peer* countries (see Box I-1) and (ii) a review of main economic sectors prepared by experts from IFC (Annex 3: Private Sector Notes).

Box I-1: A benchmarking exercise for Colombia

This SCD includes a benchmarking exercise that compares Colombia with all countries in the world using 86 measures taken from World Development Indicators and other global or international databases. This array of indexes range from indicators of human capital (e.g., math scores in PISA surveys, gross enrollment rates in tertiary education, life expectancy), and physical capital (e.g., access to electricity, road density, internet users), to natural resources (e.g., CO₂ emission per GDP, waste water treatment, arable land) and institutions (e.g., rule of law, regulatory quality, control of corruption). A precise definition of each indicator, its source and a hyperlink to access the original data source is included in Table A2-2: Glossary of Benchmarking Indicators.

The comparison is done with two groups of countries: the world and a set of *peer* countries. A first exercise is to rank Colombia in comparison to all countries in the world. This approach would define the position of Colombia with respect to the achievements possibility frontier, as defined by the best performing countries in the world. However, a number of countries could have a different performance because of pre-existing endowments or lack of constraints, achieving different levels of development with the same effort. Thus, in order to control the comparisons for some of these endowments/constraints, the analysis proposes a second exercise using just those countries with similar endowments/constraints – i.e. uneven territory, armed conflict and growth based on extractives- and a similar or higher level of income – i.e. upper middle income and high income countries.

A group of 19 *peer* countries is defined because they share any two of Colombia's three defining characteristics and they have middle or high income levels. Colombia is part of a subset of countries with high homicides rate -95th percentile in World distribution-, high geographical fragmentation -86th percentile- and high concentration of extractives within total exports -85th percentile-, indicators that are closely related with the armed conflict, uneven territory development and extractives based economic growth; respectively. The next figure shows that only six of all upper middle income and high income countries in the world have similar defining characteristics - above the 70th percentile-; two of them are from Africa and the rest are South American neighbors. Including countries with at least two characteristics, the spectrum of peer countries increases by 14countries, some of them have been widely successful in certain areas of development as Norway, Russia, Brazil and Chile.

The position of Colombia in the world is measured in terms of the difference between the indicator for Colombia and the indicator for the best performer. The SCD includes two types of measures. First, the difference in the index measured as a percentage of the global range in the indicator, formally:

$$g_{i(bp,co)}^s = 100 \frac{|\nu_{i,bp}^s - \nu_{i,co}|}{|\nu_{i,bp}^s - \nu_{i,wp}|} \quad (1)$$

Where $\nu_{i,bp}^s$ is the value of the best performer –defined around the 95th percentile- of the set s , including either the World (w) or the peer group (p), in indicator i ; $\nu_{i,co}$ is the value of Colombia in indicator i ; and $\nu_{i,wp}$ is the value of the worst performer –defined around the 5th percentile- in indicator i . Second, the difference measured as the distance, in quantiles in any given indicator

i between Colombia (col) and the best performer (bp) in the set $s = \{p, w\}$. It is defined as $q_{i(bp,col)}^s$ and computed as:

$$q_{i(bp,col)}^s = q_{i,bp}^s - q_{icol}^s + 1 \quad (2)$$

Where $q_{i,bp}^s$ is the quantile of the best performer in the groups, either the world w or the peers p , in the indicator i and q_{icol}^s is the quantile of Colombia in the indicator i .

Top 30% in terms of population geographic dispersion (more than 0.491)		Top 30% in terms of homicides (more than 9.58/100,000 inhab.)	
Argentina China Italy Jordan Korea Poland Slovak Republic Spain Sweden Tunisia Turkey United States		Brazil Mexico	Antigua and Barbuda Bahamas, The Botswana Costa Rica Dominica Dominican Republic Equatorial Guinea Namibia Panama Puerto Rico St. Kitts and Nevis St. Lucia St. Vincent and the Grenadines Turkmenistan
		Algeria Chile Iran, Islamic Rep. Kazakhstan Libya Norway	Angola Colombia Ecuador Peru South Africa Venezuela, RB
		Belize Gabon Jamaica Russian Federation Seychelles Trinidad and Tobago	
		Albania Australia Azerbaijan Bahrain Belarus Brunei Darussalam Bulgaria Canada Greece Iceland Iraq Kuwait Malta Montenegro Oman Qatar Saudi Arabia United Arab Emirates	

Hence, given two sets of comparison countries and two measures of distance, the benchmarking analysis is composed of four rankings. Full set of results for the four indicators is shown in Figures Figure A2-VI-4 and Figure A2-VI-5 (see pages 133 and 134) which show the ranking for the 86 indicators in terms of percentage gap and in terms of quantile distance, respectively. The four rankings need not match perfectly but, interestingly, there are more similarities than divergences (Figure A2-VI-6 in page 135 provides a summary of the four rankings). Most of the development indicators that are highlighted as urgent by one of the rankings are also highlighted as urgent or medium urgent by the others. There are no cases in which, for the same indicator, one ranking shows a distance/gap of more than 80% to the best performer (or best peer) and another ranking shows a distance/gap of less than 20%.

However, even this large set of indicators fails to give a full picture of Colombia’s challenges and opportunities. These indicators and the rankings need to be validated and contextualized with other sources of information. The SCD connects the evidence from the benchmarking with a thorough literature review and experts consultations. This will be done along the whole text through footnotes connecting results of the diagnostic to specific indicators in the benchmarking exercise.

Source: Annex 2: Benchmarking Colombia in the World

II. WHAT ARE THE CRITICAL FACTORS DRIVING OUTPUT AND PRODUCTIVITY GROWTH?

25. Supported by sound macro policies and favorable external conditions Colombia experienced high and stable growth during the last decade. Colombia's record of structural reforms and prudent macroeconomic management helped improve resilience and attract investment. As a result, the Colombian economy sustained an average GDP growth of 4.4 percent during the 2000s. Growth was accompanied by important structural changes, with increasing participation of extractive activities in the economy. While Colombia GDP remains relatively diversified, exports are among the most commodities-dependent in LAC. Moreover, while Colombia has been able to significantly improve its fiscal accounts and increase government savings, this was partially financed by extractives-related revenues, which represent almost one-fifth of total revenues.

26. Colombia's extractives boom has been a blessing in many dimensions, but it poses economic challenges going forward, especially in an environment of lower international prices. The boom has boosted foreign investment, economic growth, and government revenues. It has also helped foster economic growth in extractive-intensive regions that were among the traditional economic poles of the country. At the same time, it contributed to the appreciation of the exchange rate, undermining the competitiveness of other sectors and regions and increasing resource allocation towards services and commodities. The share of manufactures exports relative to total merchandise exports declined significantly. At the same time, the relatively large share of extractive activities trade and government revenues increases macroeconomic exposure to price fluctuations and volatility. A prolonged episode of lower international prices could lead to lower economic growth, in the absence of diversification efforts and structural reforms.

27. Therefore, sustained high growth will require exploring opportunities beyond extractives sectors and regions, and addressing horizontal structural constraints that prevent these opportunities from flourishing. Despite the recent boom, productivity growth has been slow, especially on non-extractive activities. Factors such as poor connectivity to market, low exposure to foreign and domestic competition (which hampers innovation and adoption of new technology), and the lack of managerial and professional skills have hindered firm productivity, while inadequate financing resources have hampered growth for potentially productive firms. These bottlenecks also manifest themselves from a territorial point of view; lagging regions are disproportionately affected by poor connectivity, lower levels of education and professional skills, and limited access to financing. But they have been aggravated by the economic and social costs associated with the armed conflict, such as disruptions of production, expropriations and land disputes, and loss of human capital through injuries, displacement, or death. Addressing these issues is critical to sustain the economic achievement of the last decade.

28. This chapter analyzes recent drivers of growth in Colombia and identify risks associated with the current growth model and explored opportunities for sustaining economic growth going forward. It starts by describing the macroeconomic achievements of the last decade that set the condition for investment and growth performs. Then, it characterizes the GDP expansion and structural changes experienced by the Colombian economy, and explores the main drivers behind these dynamics. The chapter also discusses the growth dynamics from a

territorial point of view, highlighting the uneven growth experiences and the costs associated with the armed conflict. Finally, the chapter discusses the risks associated with recent drivers of growth in Colombia and opportunities for sustaining growth going forward. The matrix below is a synopsis of the findings of this chapter

Growth-related constraints mapped onto Colombia's distinguishing characteristics.	
<i>Uneven Territorial Development</i>	Low connectivity and investment gap in physical infrastructure, especially transport, partially due to institutional constraints.
<i>Armed Conflict</i>	Low property rights and disruptions in production - Land tenure and land market institutions hinder growth
<i>Extractives-based growth</i>	Slow productivity growth in non-extractive activities, linked to limited exposure to domestic and external competition.
<i>Systemic</i>	Financial sector provides insufficient support to individuals and small firms Provision of productive skills is not aligned with firms' demand Low levels of international trade

Macroeconomic achievements in the last decade

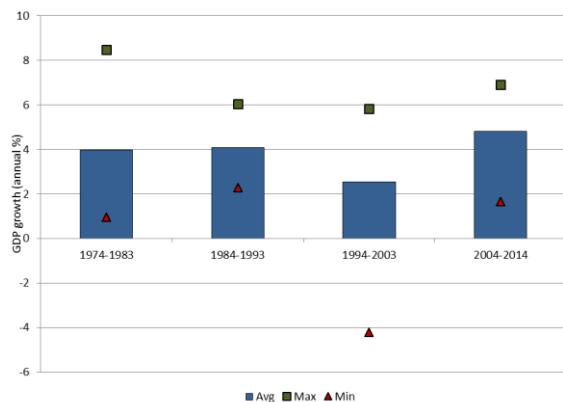
29. **During the last decade, Colombia has sustained historically high growth rates and low volatility.** Since the early 1990s significant structural reforms combined with recent trade agreements have led to a modernization of the economy. Prudent macroeconomic management has also helped improve resilience and attract investment. Finally, favorable terms of trade and international financing conditions further contributed to investment, accelerated economic activity, and trade. As a result, the Colombian economy sustained an average GDP growth of 4.4 percent during the 2000s, almost one percentage point above the average for the previous three decades (3.5 percent).⁷ In per capita terms, this difference is also large, around 3 percent in the last decade against 1.7 percent in the previous decades.

30. **Sustained growth has helped close the per capita income gap of Colombia with regional peers and high-income countries.** Income per capita, adjusted for differences in purchasing power, is rising faster in Colombia than on average in LAC thereby rapidly closing the income gap between the country and the region (Figure II-1 and Figure II-2). From less than 50 percent in the early seventies, income per capita in Colombia is currently more than 65 percent of the regional average and, at the current pace of growth, could be at par with the regional average in one decade. While progress has been made during the last decade, a larger income gap still remains to be bridged with high-income countries, as income per capita in Colombia is less than 15 percent of the level observed for this group. In comparison with some high performing Asian countries, such as Korea and Malaysia, Colombia's income growth was insufficient to keep up.

⁷ The benchmarking exercise described in Annex 2: Benchmarking Colombia in the World, shows that GDP growth in Colombia is priority level 2 (i.e., between 20 percent and 50 percent distance to the best performer) across all comparisons.

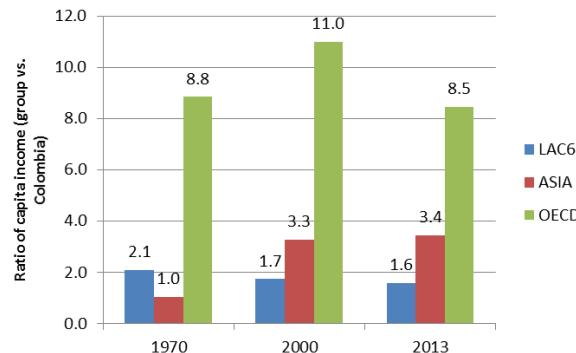
Whereas income per capita in these Asian economies was similar to Colombia's three decades ago, by now it has more than doubled creating a substantial income gap.

Figure II-1: Growth Performance



Source: DANE, WDI

Figure II-2: Per Capita Income Gap with International Peers



31. Reforms help Colombia achieve a relatively strong fiscal position, increasing resilience to economic cycles. In addition to the important structural reforms (including the Fiscal Responsibility Law, the Fiscal Rule, and Tax Reforms to address loopholes, reduce distortions and encourage formal job creation), prudent management helped Colombia significantly improve its fiscal accounts throughout the last decade (Figure II-3). Tax reforms and favorable economic conditions gradually increased tax revenues, which combined with stable expenditures led to a decrease in the government deficit from 2.5 percent of GDP in 2002-04 to 0.7 percent of GDP in 2012-14. Colombia's liability management has led to an increase in the average maturity of government debt (from five to more than seven years), while the majority of it remains peso-denominated (76 percent) and fixed rate (94 percent). Better debt management also helped lower interest payments. Combined these efforts helped reduced the government debt from 41.2 percent of GDP in 2002-04 to 35.2 in 2012-14.

32. Sound monetary policy management also contributed to stability and resilience. A combination of inflation targeting and a floating exchange regime have well served Colombia's stability goals. Timely policy responses to changes in economic activity have helped smooth cycles and maintain price stability. Inflation has gradually dropped from 6.5 percent in the beginning of the last decade to an average of 2.7 in 2012-14, while GDP volatility has been lower than in previous decades.⁸ Colombia has also lifted the amount of international reserves throughout the decade (from US\$11.7 billion in 2002-04 to US\$42.6 billion -7.5 months of G&S imports), which together with the floating exchange regime provided a buffer against external shocks, such as the global financial crisis or the recent drop in oil prices.

⁸ Inflation, measured by annual growth of consumer prices, shows the lowest priority level (i.e., less than 20 percent to the top performer) when compared in percentage terms to the World and to peer countries. See Annex 2: Benchmarking Colombia in the World, Figures A2-4, A2-5 and A2-6.

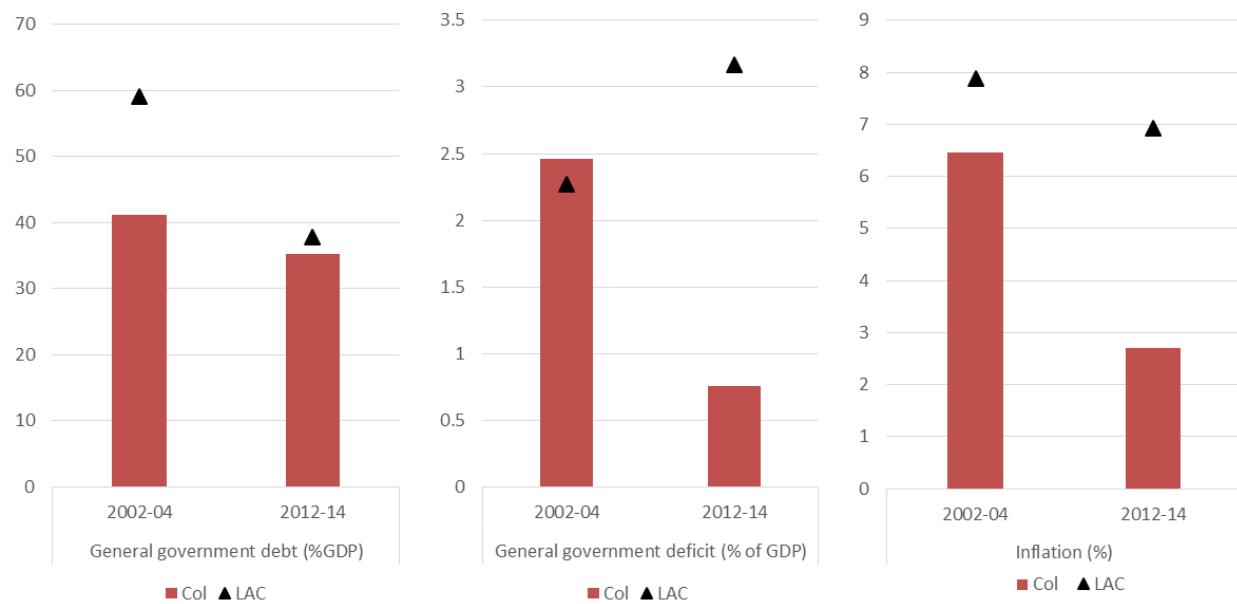
33. Income windfall received from the recent terms-of-trade boom has been quite large and also helped Colombia to strengthen its economic fundamentals. Similar to other commodity exporters in LAC, Colombia experienced a significant positive terms-of-trade shock as of 2003 and that lasted for about 9 years (from start to peak) (Figure II-4). The accumulated terms-of trade shock during this period amounted to almost 100 percent increase, with an accumulated income windfall of 47.7 percent of income at the pre-boom terms-of-trade.⁹ While the accumulated income windfall has not been as large as that experienced in several other Latin American commodity exporters, Colombia distinguishes itself as one of the countries with the largest marginal savings rate at 91.5 percent of windfall income. Colombia's national saving rate rose by almost 4 percentage points of GDP over the past decade to 21.4 percent of GDP, driven mainly by the public sector.¹⁰

34. Colombia's sound macroeconomic framework and favorable terms of trade helped attract investment and solidify the basis for economic growth. In recognition of economic achievements, Colombia's risk rating was upgraded to and above investment grade by all major rating agencies. The country was able to take advantage of favorable external conditions and to mobilize large amounts of foreign investment (Figure II-5). Net foreign direct investment doubled during the decade (from 1.5 percent of GDP in 2002-04 to 3.2 percent of GDP in 2012-14), complementing domestic investment. This result was mainly driven by FDI inflows. While an important share of these resources went to oil and mining activities, Colombia has aggressively pursued foreign investment in key sectors, such as infrastructure. Regulatory reforms from 1990s significantly reduced regulatory barriers; FDI flows are mainly determined by world financing conditions and market opportunities. Additional efforts have been made, through investment treaties, free trade agreements, and progress towards accession into the Organization for Economic Cooperation and Development (OECD). As a result of these efforts, gross fixed capital formation increased by more than 10 percentage points of GDP during the period.

⁹ See Adler and Magud (2013).

¹⁰ Data taken from Sosa, Tsounta, and Kim (2013).

Figure II-3: Selected Macroeconomic Indicators



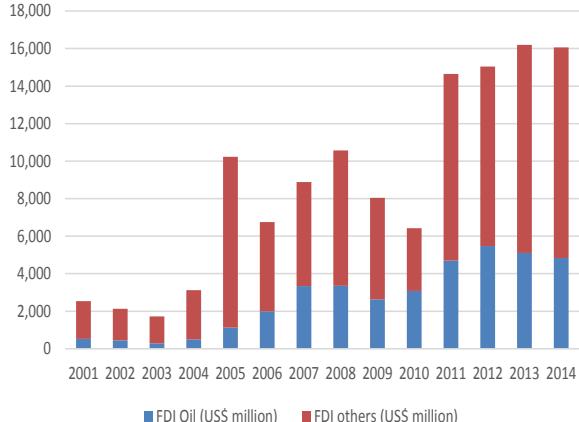
Source: IMF WEO

Figure II-4: Evolution of Terms of Trade*



Source: Banco de la República *3months moving average

Figure II-5: FDI Inflows



Growth Decomposition and Structural Changes

35. **From an expenditure point of view, GDP growth was primarily driven by domestic demand, which was in turn fueled by high foreign currency inflows.** Domestic demand accounted for 6.2 percentage points of the expansion, while net trade accounted for -1.4 percentage points (Figure II-8). Net trade was positive only during the global financial crisis. While export expanded steadily at an average rate of 5 percent, imports grew even faster (10.4), resulting in a negative external effect. Despite the recent growth international trade and the signing of a number

of bilateral trade agreements, Colombia is still a very closed economy (see Box II-1). Among domestic drivers, private consumption was the main contributor to GDP growth due its large participation; however investment recorded the fastest rate of expansion (9.9 percent), driven by investments in machinery, equipment, and to a lesser extent, infrastructure. While capital formation accounted for 18 percent of the GDP in 2004, it represented almost 30 percent in 2014, the second largest among the largest seven economies in LAC (behind Peru). Investment was undertaken primarily by the private sector, and directed mainly to oil and mining, electricity, telecommunications, and the financial sector. Public investment has lagged behind.

Box II-1: Colombia: A Closed Economy?

International trade as a share of GDP has increased steadily (from 22 percent of GDP in the early 1980s to more than 31.5 percent in 2014), but trade flows are still relatively small. Exports of goods increased from 8 percent to almost 14.5 percent of GDP, while imports of goods increased from 14 percent to 17 percent of GDP between 1981 and 2014. Colombia is a country that is still relatively closed to global flows of merchandise trade. The Trade-to-GDP ratio is one of the most basic indicators of openness to foreign trade and economic integration. Colombia's trade as a share of GDP is lower than the average for LAC (39 percent of GDP) and much lower than the average for fast growing Asian economies (75 percent of GDP). In fact, Colombia is the second most closed economy in LAC after Brazil (21 percent of GDP). Colombia's trade-to-GDP ratios suggest that the country trades substantially less than what is expected given its income level. In fact, income-wise peer countries—such as Peru, Ecuador, and Jordan—are considerably more open to trade.

Trade growth, and in particular export growth, during the last decade have significantly benefited from high prices. Colombia export value grew an average of 13.6 percent per year during the last decade. This growth was largely driven by increases in the international prices of Colombia main export commodities (Figure II-6). When measured in volumes, export growth falls to an average of 6 percent per year. This difference is smaller for imports (14 percent growth in values and 10.6 growth in volumes), which exposes Colombia's external balance to commodity prices fluctuations. However, favorable prices helped increase Colombia's exports as a share of the world's exports (from 0.2 percent in 2002-03 to almost 0.4 percent in 2012-13). This effect is almost entirely driven by extractive activities. Excluding extractive exports, Colombia's exports remain almost constant as a share of the world's exports.

Figure II-6: Export Dynamics, Values/Volumes

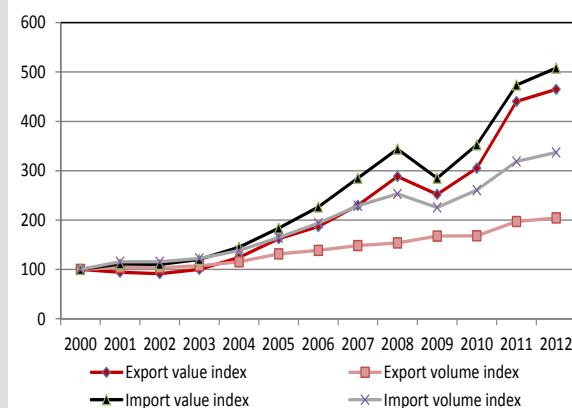
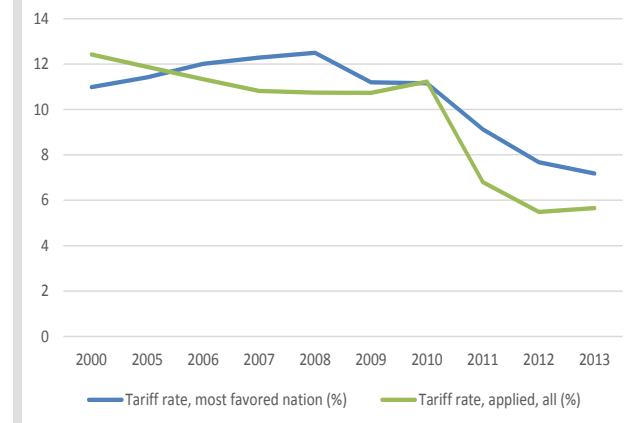


Figure II-7: Average Export Tariffs



Source: WDI

Colombia has made important efforts to promote trade integration in the recent years, however trade tariffs, and possibly non-tariffs barriers, are still high compared to LAC and the OECD. In the last years, Colombia has negotiated several trade agreements, including those with the U.S., EU, Costa Rica, Korea, Israel, and the Pacific Alliance. These agreements help reduce average tariffs from 12.4 percent in 2000 to 5.7 percent in 2013. However, Colombia still holds the fourth highest tariffs in Latin America, behind Venezuela, Argentina, and Brazil. Colombia average tariffs are more than two times higher than the highest tariffs among OECD countries (U.S. with 2.7 percent). (Figure II-7) In addition to high tariffs, non-tariff barriers and competitiveness bottlenecks are also high. Colombia ranks number 93 in the trading across borders indicator of Doing Business, well behind top performers in LAC such as Chile (40), Mexico (44), Costa Rica (47), and Peru (55). Border procedures are costly to importers and exporters. Phyto-sanitary procedures and excessive quality standards have also been raised during consultation. However, lack of detailed data prevents a complete assessment.¹¹

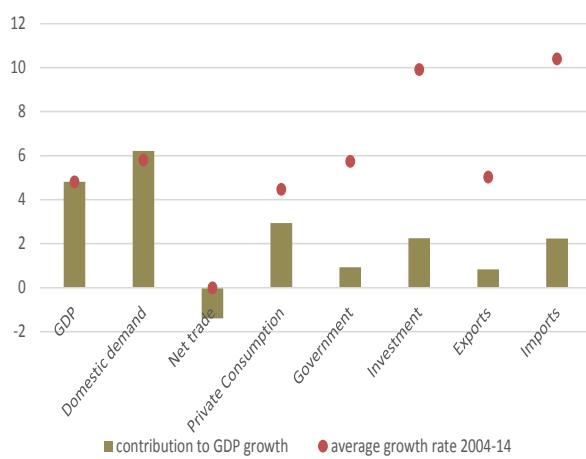
Limited access to and competition from international markets has implication for productivity and growth. A large body of literature suggests that more globalized economies tend to grow more rapidly than countries with less globalized economies.¹² Trade liberalization (or any reduction in fixed or variable trade costs) can reduce the marginal cost of investments in research and development (R&D) or knowledge capital by reducing the price of “knowledge capital.” Similarly, international integration can affect the incentives of the private sector and households to invest in human capital. Finally, trade liberalization increases competition, lowering inputs, capital, and final prices.

36. **From a sectorial point of view, growth was accompanied by important changes in the structure of production, with a growing participation of the extractive sector and weak performances from manufacturing and agriculture.** Services have provided the largest contribution to GDP growth as both the largest and faster growing sector (Figure II-9). Nevertheless, extractive activities have gradually increased its importance throughout the last decade. In fact, the expansion of extractive activities (5.9 percent/year) helped fuel commerce (9.6 percent/year), construction (7.9 percent/year), and financial intermediation (5 percent/year). Agriculture (2.2 percent/year) and manufacturing activities (2.9 percent/year) have lagged behind in this period. These patterns reflect small composition changes in the Colombian economy over time. Extractive activities increased from 2.2 percent of GDP in 1976 to almost 8 percent in 2013, while manufacturing fell from 18 percent to 11 percent and agriculture fell from almost 10 percent to 6 percent in the same period. The share and composition of services has remained fairly stable.

¹¹ Interestingly, participants to some stakeholder consultations mentioned that the Colombian economy, despite all its trade agreements, remains closed to foreign competition due to diverse non-tariff protection mechanisms (see Annex 1: Stakeholder Consultations, sessions with economic experts and private sector representatives). Additional evidence about this is available in Annex 2: Benchmarking Colombia in the World, Figures A2-4, A2-5 and A2-6: the export + imports ratio to GDP has a gap/distance of 80 percent or more to the best performer, under all comparisons. This is an important knowledge gap in which more thorough research is needed (see Chapter V).

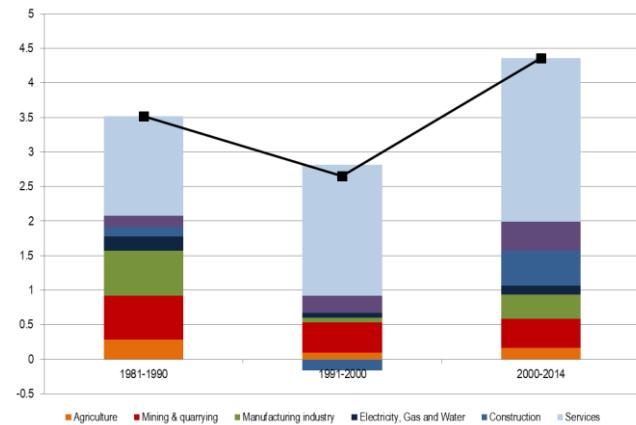
¹² See Sachs and Warner (1995), Frankel and Romer (1999), Alcalá and Ciccone (2004), Wacziarg and Welch (2008), Feyrer (2009), Arkolakis, Costinot, and Rodriguez-Clare (2012), and Brückner and Lederman (2012) among others.

Figure II-8: Growth Decomposition: Demand



Source: DANE

Figure II-9: Growth Decomposition: Sectors of Production



37. Even though Colombia's economic structure is well diversified, it depends on commodities in several dimensions such as trade and fiscal revenues. Considering the primary sector (agriculture and extractives) value added as a share of GDP (13.4 percent, 6.1 percent agriculture and 7.3 extractives), Colombia appears to be less commodity intensive than both LAC and Asian economies (25 percent and 18 percent, respectively). However, this figure changes when fiscal and export dependency are considered. Commodity related revenues represent 17.6 percent of Colombia's government revenues and is mostly derived from extractive activities. This figure is larger for the LAC region (approximately 30 percent), but lower for Asian economies (approximately 14 percent). Commodity exports as share of GDP (11 percent) is much lower and in line with the regional averages (11.7 percent for LAC and 12.3 percent for Asia). This is mainly due to the fact that Colombia is relatively closed when compared to its peers. Colombia's commodity exports as a share of total exports (63 percent - 58 percent of extractives) grew significantly in the last decade (Box II-2), and it is the third largest in LAC, behind Venezuela and Bolivia, well above the regional average (51 percent) and the average for Asian countries (19 percent). Finally, oil and mining related FDI accounts for one third of FDI received in the last 3 years.

Box II-2: Structural Changes in Exports

Export expansion has been associated with an increasing participation of extractive commodities and a high concentration of Colombia's export basket. Colombia experienced significant changes in export composition during the last decade. In the mid-1990s, manufacturing goods accounted for the majority of exports (62 percent), followed by extractives (28 percent) and agriculture. By 2012-13, the roles have been inverted, extractive exports accounted for almost 60 percent of the total, while manufacturing and agriculture shares fell significantly (to 38 percent and 4.5 percent respectively). High oil and mining prices account for a large portion of this change, but other factors were also at play. For example, the economic crisis in Venezuela, one of the main destinations of Colombia's manufactured products, contributed to a weak performance of this sector. Structural changes led to a much higher level of concentration in Colombia's export basket and potential exposure to price fluctuations (Figure II-10). In fact, most of the trade expansion was due to larger quantities of the same products and almost no introduction of new products.

Many of Colombia's traditional non-extractives sectors have decreased their participation in the world's trade. As previously discussed, Colombia's participation in global trade of non-extractive products has remained constant during the last decade, but its composition has changed. Colombia's exports of traditional products such as flowers, coffee, sugar, and semi-precious stones, have lost participation in global trade, while new products such as live bovine animals, motorcars and medicaments emerged. "Annex 3: Private Sector Notes" presents a detail analysis of the challenges and opportunities for expanding these sectors. Despite these shifts, the overall technological content of Colombia exports baskets remained fairly unchanged.

In terms of export destinations, Colombia is currently more diversified than in the beginning of the last decade. New countries arise as important destination partners. For example, China, which did not appear among the top 20 destinations in the beginning of the decade, is now the third larger consumer of Colombia products. Mexico also gained importance as an export destination. In contrast, Venezuela, which was the third largest destination in the beginning of the last decade, is now around the 10th position. Overall, these changes made Colombia's exports less concentrated with respect to destination markets (Figure II-11). Nevertheless, as previously discussed, changes in destination markets are associated with changes in export composition as new partners are net commodity importers and net manufacturing exporters, while old partners like Venezuela are net manufacturing importers.

Figure II-10: Export Concentration: Products

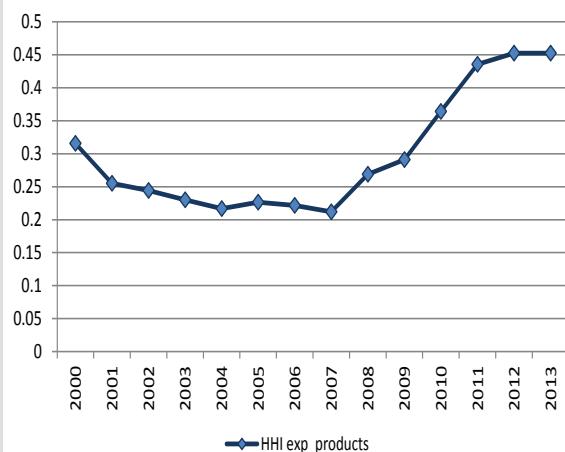
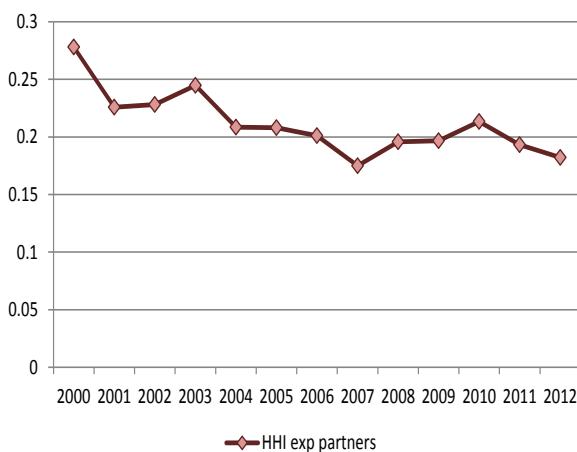


Figure II-11: Export Concentration: Markets



Source: Staff Calculations based on UN COMTRADE data

Note: HHI = Herfindahl-Hirschman Index

38. **The surge in extractive activity can be attributed to a combination of structural reforms and a favorable external setting.** In the early 2000s, Colombia's oil industry was weakening. There had been a decrease in new discoveries, followed by a decline in production. Exploration and production had moved to increasingly remote areas with higher security risks, requiring more capital and technology. Ecopetrol, a state company at the time, represented the entirety of the Colombian oil industry. The opening up of the energy sector in 2003, the incorporation of Ecopetrol as a publically traded company, and the recovery of state control of large tracts of territory from the guerilla, contributed to a significant increase in oil production as the volume of oil extracted nearly doubled from 530 thousand barrels per day (bpd) in 2007 to almost a million bpd over the past three years. Furthermore, rising oil and commodity prices added to the windfall revenue generated by the natural resource boom that supported the strong growth previously described with spillovers to government, services and construction as described above.

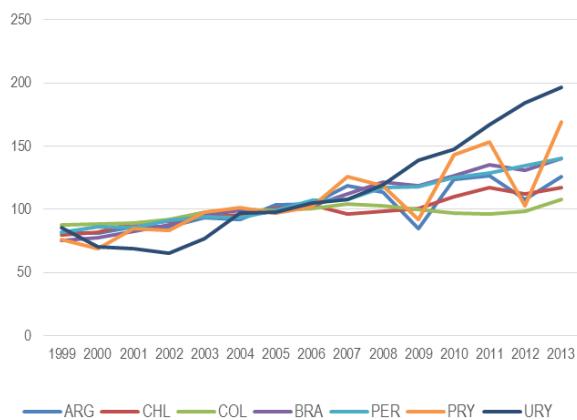
39. Manufacturing performance was affected by both external and internal factors. Manufacturing performance is frequently associated with symptoms of Dutch disease, i.e. real exchange appreciation generated by commodities windfall. Colombia's real exchange rate appreciated by almost 40 percent vis-à-vis trading partners between 2003 and 2012, with implications for competitiveness. However, studies that formally assess the recent dynamics of Colombia manufacturing find only a very small impact of the exchange rate appreciation. The diplomatic crisis with Venezuela, the main destination of Colombia manufacturing exports, and competition from China in export markets are identified a primary driver of manufacturing performance, followed by structural shifts in domestic demand away from domestically produced product.¹³ In both cases, stagnant productivity has limited expansion to new markets and products.

40. Although Colombia is naturally suited to be a large scale agricultural and forestry producer and exporter, agriculture performance has lagged considerably compared to neighboring countries (Figures II-12 and 13). Agribusiness holds great potential for Colombia, however the sectors declining share of the economy has been attributed to lack of reliable cadaster, weak land tenure, few financial instruments, relatively low foreign direct investment, weak infrastructure, limited policies supporting productivity, and social and environmental risks. Agriculture is the sector that attracted least FDI in the past decade. Although investments increased in the last 3 years, they account for only 1 percent of total inflows. Domestic financing for agriculture activities has also been limited (Box II-3). Returns to agriculture investment are undermined by a variety of factors. The high cost of transport due to poor internal basic infrastructure connecting producing regions to consumption centers and ports makes agricultural production highly inefficient. Agricultural policy has been heavily based on subsidies and price smoothing mechanisms, with less attention to productivity enhancing investments (such as infrastructure and R&D). Decades of violent conflict have led to evictions and displacements of peasants and indigenous communities and aggravated problems of land rights and land tenure, as it will be discussed in more details later in the chapter. Finally, as compensation for the unequal distribution of land, current legislation regarding land tenure and ownership does not favor the creation of new large-scale production plots.¹⁴ Combined, this factor led to the poor agriculture outcomes observed in the last decade.

¹³ Griffin (2014).

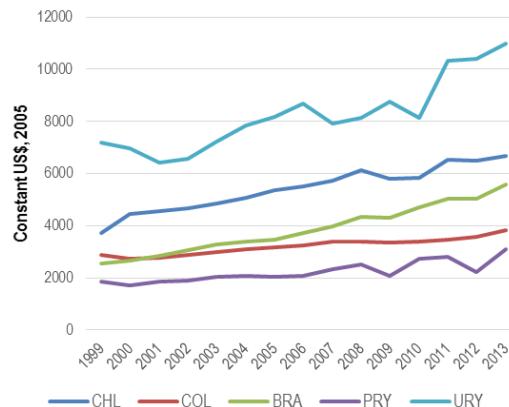
¹⁴ Several indicators of agriculture—land per worker, value added per worker and machinery—show priority level 4 (i.e., gap of 80 percent or more to the best performer in the World or among peers). See Annex 2: Benchmarking Colombia in the World, Figures A2-4, A2-5 and A2-6. This is despite Colombia having relative abundance of land: agricultural land is ranked priority 2 (i.e., between 20 and 50 percent distance to the best performer) in most comparisons. The potential of agriculture as an engine for development and exports was a subject of debate during consultations (see session with Academics and Experts on Agriculture, Services and Manufacturing). In chapter V, this SCD postulates that the potential of agriculture and agro-industry as drivers of future economic growth and exports expansion is a knowledge gap that merits further study.

Figure II-12: Crop Production Index



Source: WDI

Figure II-13: Agriculture Value Added per Worker



Box II-3: Agriculture Financing

Agricultural credit is a small fraction of commercial credit in Colombia. Primary agricultural as a share of GDP was 5.2 percent in 2012 (WDI), having steadily declined over the last two decades. Seventeen percent of the Colombian population is employed in the agricultural sector (WDI 2012), and credit to the agricultural sector in Colombia amounted to 7.3 percent of total credit by regulated financial institutions (DNP 2013).¹⁵ This is below the levels observed in other LAC countries such as Brazil (8.5 percent) and Uruguay (14.5 percent).¹⁶ Moreover most of the increase in agricultural credit has been directed to medium and large producers, with small producers still facing substantial problems to access credit. Some estimates suggest that over 75 percent of small agricultural producers lack access to formal credit.¹⁷ Colombian commercial banks have limited credit volume in rural areas, concentrating their lending activities on urban populations. A combination of factors including lower income level of the rural population, lack of expertise in lending to small agricultural producers as well as security concerns in some areas explain these location patterns.

General deposit warehouses and the Agricultural Commodity Exchange (Bolsa Mercantil de Colombia, BMC) also provide funding for agricultural activities, but they are underdeveloped compared to regional peers and serve medium- and large-size producers. Currently there are four deposit warehouses (*almacenes generales de depósito*) supervised by the Superintendence of the Financial System operating in Colombia. They issue certificates of deposit (CDs) and offer credit to producers that store products at the warehouse for more than six months. The BMC offers agricultural producers a platform for funding options through the sale of crops (spot or forward) and repurchase agreements of securities issued by the deposit warehouse against products stored there. However, its operations are relatively small (US\$2 billion in transaction volume in 2014, far below levels observed in Argentina and Brazil¹⁸), and is mostly used by producers and sellers of agricultural producers to register their sales

¹⁵DNP. (2014) “Misión Para La Transformación del Campo: Sistema Nacional De Crédito Agropecuario: Propuesta de Reforma.” Bogota.

¹⁶Trujillo and Navas (2014).

¹⁷ See “Reforma al Sistema de Financiamiento Agropecuario. Propuestas para mejorar el acceso a pequeños productores” Marulanda Consultores (2013).

¹⁸Arias and Ferreira Lamas (2012).

receipts to defer tax payments. Transaction costs, and lack of scale and information impede the use of BMC by small producers.

Finally, Colombia has a relatively developed insurance sector compared to other Latin American countries, but agricultural insurance has limited outreach and coverage. Just 1.4 percent of cultivated land was insured despite government subsidies and reduced VAT,¹⁹ well below the observed levels of 8 percent insured in Brazil and 27 percent in Mexico. Nevertheless, the supply of insurance products is expanding and in 2014 three insurance companies offered some agricultural insurance product compared to only 1 in 2011. Premium values for agricultural insurance nearly tripled between December 2011 and 2014, and subsidies covered to 67.4 percent of total cost in 2014.

Source: World Bank (2015a)

Colombia's drivers of and bottlenecks to growth

41. Colombia's economic growth has been traditionally based on factor accumulation, particularly labor. On the basis of a standard Solow-type growth accounting exercise, decomposing output growth into a weighted average of the rate of growth of labor and capital and the residual Total Factor Productivity (TFP), it can be affirmed that Colombia's economic growth is heavily based on factor accumulation, especially labor. Physical capital (K) accumulation contributed 1.4 percentage point and the combined effect of employment growth and human capital (L^*H) accumulation contributed another 2.63 percentage points of the 4.1 percent of the average annual growth between 1961 and 2011. Average TFP growth was almost nil. During the 1980s, average per capita GDP growth dropped to 1.6 percent, and was fully driven by factor accumulation, as TFP contribution to growth became negative due in part to Colombia's weak economic performance in the late 1980s and 1990s. Finally, for the period 2002-2012, average GDP growth increased to 4.5 percent, with a slight increase in physical capital accumulation (1.6 percent) and similar labor and human capital accumulation (2.5 percent), and larger TFP contribution (0.4 percentage points).

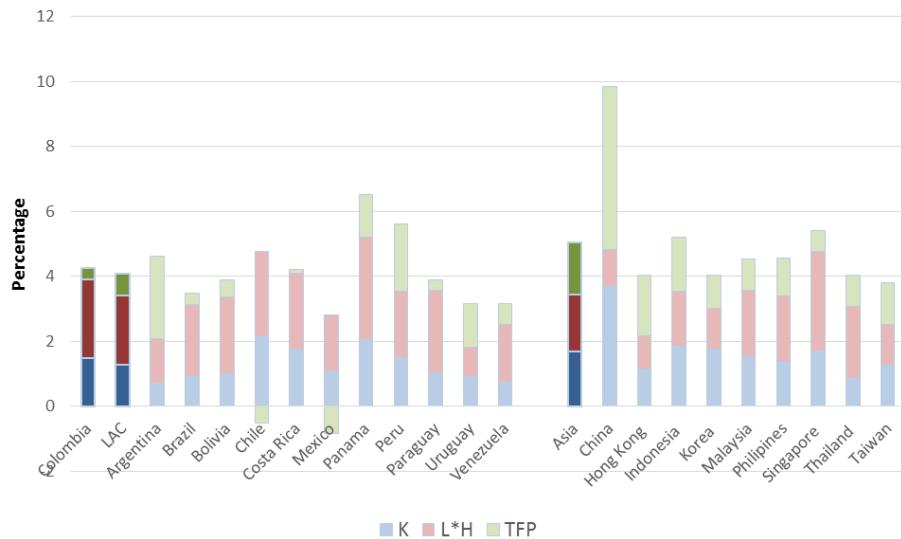
42. Despite the recent increase in capital accumulation Colombia still lags behind with respect to physical capital, particularly transport infrastructure. Colombia has a large infrastructure gap. The country places at 108 out of 144 countries in terms of infrastructure quality, more than one point below the world average.²⁰ This gap is the 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). Both the quality (i.e. paved roads out of total roads) and quantity (i.e. length of roads per km²) of roads are low (Calderón and Servén, 2010); road length scaled by land area is less than a tenth of the OECD average. The length of the rail network is also limited. As a result, the country's costs of internal freight transport are one of the highest in the world with important consequences for competitiveness. The country poor rank on the trading across borders indicator of World Bank's 2013 Doing Business predominantly highlights high inland transportation costs and time (Figures II-15 and 16). Despite sustaining average investment rates in roads and railways above the regional

¹⁹ Currently, government subsidies range from 60 to 80 percent depending on the producer's size.

²⁰ Road density and road sector energy per capita show priority levels 3 and 4 (i.e., distance/gap of more than 50 percent or even more than 80% to the best performer). See Annex 2: Benchmarking Colombia in the World, Figures A2-4, A2-5 and A2-6.

average, Colombia's transport infrastructure gap has increased over time (OECD, 2013), which suggests that a critical challenge for Colombia is to invest more effectively.

Figure II-14: Growth Decomposition 2002-2012



Source: WDI

Note: K refers to physical capital, L*H refers to a combination of employment and human capital (as measured by schooling) and TFP refers to Total Factor Productivity.

Figure II-15: Export Costs Decomposition

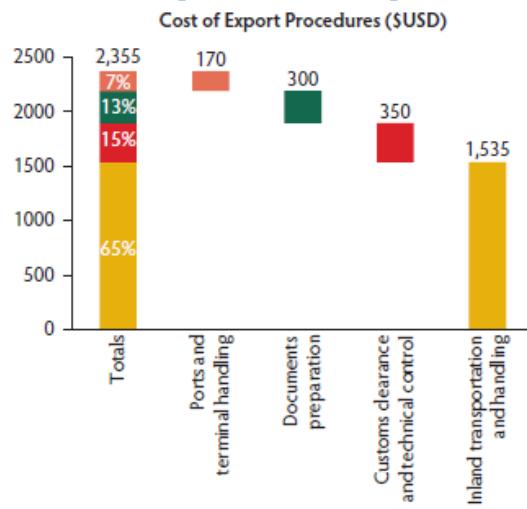
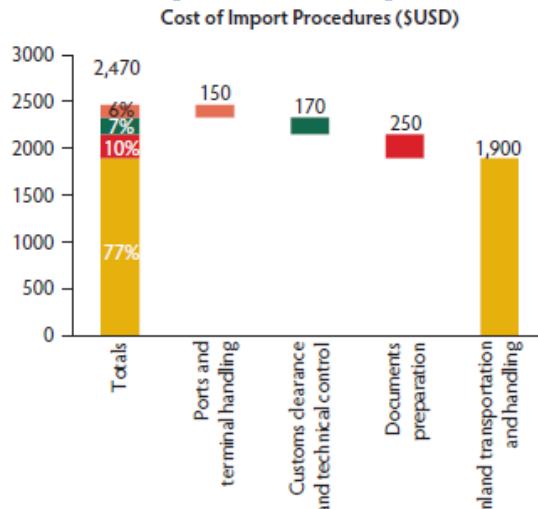


Figure II-16: Import Costs Decomposition



Source: Colombia Policy Notes (2014), based on World Bank Doing Business

43. Fragmented institutional and regulatory framework and volatile levels of investment are at the root of Colombia's transport infrastructure gap. The transport sector in Colombia underwent a series of regulatory reforms since the 1990s, but there has been significant variance in the degree to which the reforms have been internalized at the national, departmental, and municipal levels. In addition, the allocation of competencies and responsibilities at different levels of government was

never made clear and institutional capacity is weak at all levels. The road network, particularly those assets under public sector management, has been subject to disruptive “stop-and-go” implementation resulting from inflexible and volatile budget allocations, which has impeded a long-term maintenance strategy. In terms of private sector participation, concession agreements are subject to a high incidence of renegotiations, which has led to project delays, and high cost overruns mostly, borne by the Government. Projects have also suffered with burdensome and ineffective procedures related to environmental licensing and resettlement processes (which have been addressed by recent reforms). There is an important need to strengthen investment planning and management capacity, especially on the road sector, taking into account a wide variety of legal, financial, and technical obligations on the part of private operators that need to be considered ex-anti and monitored continuously during implementation.

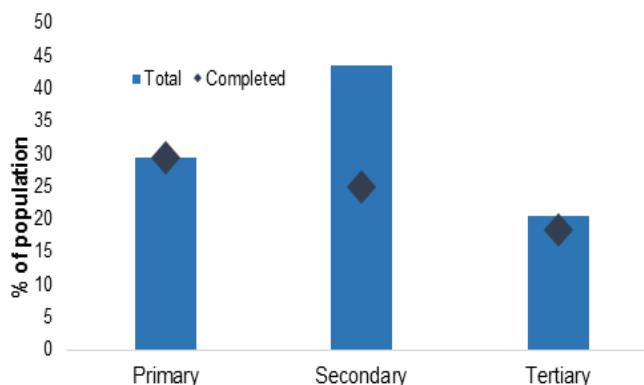
44. Despite the improvements in labor market outcomes, Colombia’s performance is still low and can limit future growth. Since 2000, the labor force has expanded almost twice as fast as population growth, which, combined with continuous employment generation helps to explain the large contribution of labor to economic growth. During the last decade, net job creation amounted to almost 40 percent and helped reduce unemployment from 15 percent in the early 2000s to 9.1 percent in 2014. Nevertheless, Colombia still compares poorly to its regional and middle-income peers. Average real wages have remained fairly constant between 1995 and 2013, and so did Colombia’s large informal sector. The majority of people working are still employed in low-productive informal sectors and approximately 33 percent declare themselves as being under-employed (OECD 2013). These outcomes reflect a combination of factors including restrictive labor regulations (discussed in more details in Chapter Three), lack of adequate skills, and inefficient matching mechanisms.

45. Colombia also lags behind with respect to human capital as its educational system is not effectively building productive skills. Education plays a key role in building productive skills and developing human capital. Total spending on education as a share of GDP, at 8 percent in 2013, is higher than the OECD average (6.2 percent) and the average in most emerging economies (OECD 2015). However, overall educational outcomes and quality remain poor. Enrollment rates have increased in the last decade, especially in secondary education (net enrollment rates rose from 57.1 percent to 70.5 percent in lower secondary education and from 29.5 percent to 39.8 percent in upper secondary), increasing the average education in the country by almost two years. Educational achievements are low, as reflected by PISA results (Colombia is among the lowest ranking countries despite its middle income status).²¹ Colombia’s students systematically underperform in math, science, and reading tests and are often not “college ready.” In fact, the enrollment rate of tertiary education in Colombia, at 37 percent, also remains well below the OECD average and even some regional peers such as Argentina and Chile. Moreover, only half of students aged 17 to 21 who have completed high school pursue tertiary education, and approximately 45 percent of those students are not academically prepared and will drop out (OECD 2013). While the post-secondary school National Training Service (SENA, *Servicio*

²¹ Benchmarking Colombia against the World and peer countries on indicators of education shows the high priority of this topic. PISA scores in math and reading are priority 4 (i.e., distance/gap of more than 80 percent to the best performer) in three out of four rankings. Gross enrollment rates in early childhood education are priority 3 and 4. Gross enrollment rates in tertiary and upper secondary are priority 2 (i.e., between 20 and 50 percent distance/gap to best performer) in all comparisons. See Figures A2-4, A2-5 and A2-6 in Annex 2: Benchmarking Colombia in the World.

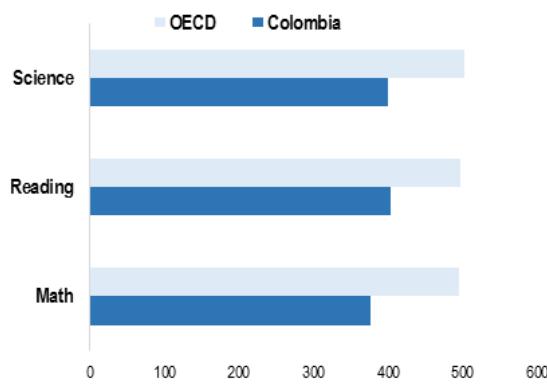
Nacional de Aprendizaje) attempts to fill the general education and technical training gaps, studies find that the SENA curriculum is not aligned with employer skill demands and the quality of training is mixed, at best.²²

Figure II-17: Educational Attainment Composition



Source: OECD 2013

Figure II-18: PISA 2012 Test Scores



46. **Firms perceive lack of adequate skills as a major constraint to business.** 45 percent of firms identified inadequately educated workforce as a major constraint for business, compared to 36 percent in Latin America and 15 percent of OECD countries (Enterprise Survey, 2010). In addition, an increasing share of employers (56 percent in 2014) declare having difficulties in filling vacancies for technicians, sales representatives, and administrative assistants and staff support.²³

47. **There are significant imbalances between Colombia's workforce education mix and a reference job structure in high/middle income economies.** Colombia's "pyramid" of skills reflects a large shortage of technical and highly qualified individuals, and small shortage of university level workers, and an excess of workers with low levels of education (Figure II-19). In fact, returns to education in Colombia are among the highest in the region. Against the world trends, returns to post-secondary education in Colombia are relatively higher than other levels and have been increasing, suggesting a shortage of educated professionals (Fedesarrollo 2015). Moreover, marginal returns to technical and technological education have been expanding at a faster pace than university (Bornacelly 2013), consistent with the gaps identified. Beyond educational attainment, the Colombian specialization pool does not encourage entrepreneurship. Human capital for entrepreneurship and innovation needs to be assessed with some nuance, as it only partially overlaps with general curricula. A usual proxy for this variable is the number of engineers per capita. Colombia, as other Latin American countries, has had a relatively low number of engineers per capita. In 2010, Colombia had fewer engineers than the median country in the world and fewer than expected given its level of development.

48. **Few academic programs and institutions are accredited as high quality by the national educational quality assurance system.** The mandatory Register of Qualified Programs

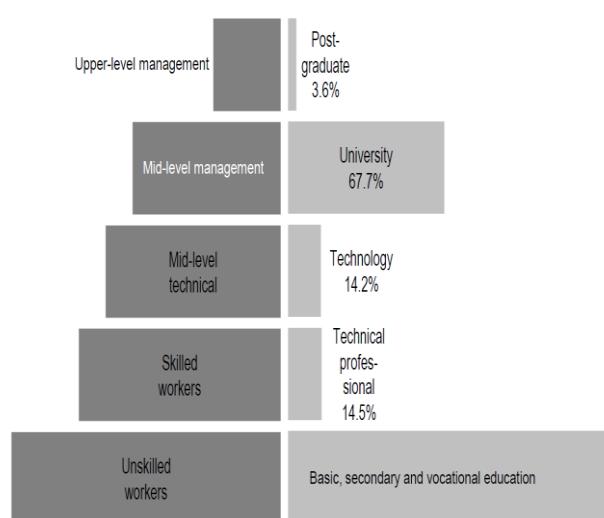
²² Existing studies suggest little or no impact of SENA technical education on earnings, and cost-benefit analysis suggest that SENA's training is the least profitable, trailing below both other public institutions and private ones. See Medina and Núñez (2005).

²³ Talent Shortage Survey, 2010. Manpower Group.

(*Registro de Calidad*) represents an enormous, positive step in quality assurance. However, high-quality accreditation covers only about 22 percent of the programs and 10 percent of the institutions. Moreover, only 14 percent of the faculty in Colombia has doctorates, compared to 40 percent in the region, suggesting a deeper issue of overall quality in the system. In addition, with the information from the Labor Observatory for Education on labor market insertion for higher education graduates and performance on the national test (SABER PRO), more emphasis could be placed in the accreditation process in results and outcomes.

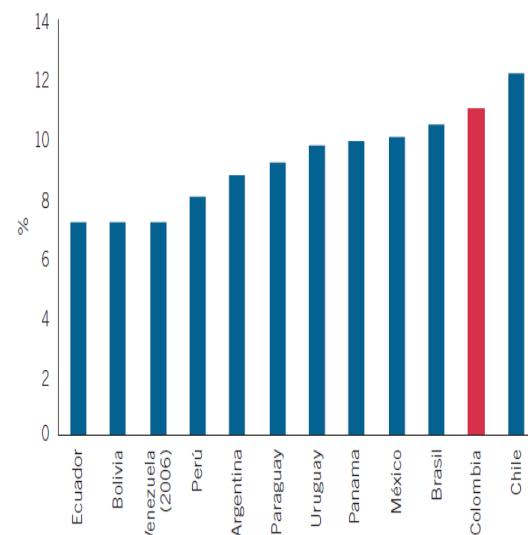
49. Universities and research centers are weakly connected to private-sector demand. Colombia's collaboration between higher education institutions and the private sector compares unfavorably to peers and OECD countries, probably reflecting a low opinion of the quality of scientific institutions. On the research side, Colombia has more than 300 Technological Centers, only 40 percent of which were evaluated as performing reasonably well. Colombia produces 9.3 scientific and technical journal articles per million inhabitants, compared with averages of 21 for Latin America and 590 for most developed countries. Moreover, the Colombian Observatory for Science and Technology (OCYT) reports that the research is highly concentrated in humanities and social sciences, which account for almost half of the indexed publications. More clarity on research outcomes is needed, along with alignment of financial incentives to ensure quality and relevance to the private sector.²⁴

Figure II-19: Distribution of Skills – Desirable vs. Actual



Source: OECD Reviews on Innovation Policy (2014), Montenegro and Patrinos (2014)

Figure II-20: Returns to Education



50. Despite the shortage of educated workers, one-third of employed youth is reported to be over-qualified for the position, reflecting a combination of poor educational quality and inefficient matching mechanisms. In Colombia, under-qualification co-exists with over-qualification, especially among youth as shown in several studies.²⁵ In 2013, 35 percent of the employed youth are reported to be over-qualified while only 54.2 percent were well matched. Unemployment figures are consistent with the qualification mismatch across job markets. While

²⁴ See Botero et al. (2014).

²⁵ Sparreboom and Staneva (ILO, 2014).

unemployment rate for low-skilled workers is 7.3 percent, joblessness is more marked for medium and high skilled workers (13.3 percent and 11.7 percent respectively). This result is partially driven by a misalignment between the education curriculum and employment skill demands, as previously discussed. This problem is aggravated by the lack of efficient matching mechanisms.²⁶ Nearly 70 percent of workers rely on informal job search mechanisms, finding their jobs through the help of family and friends. Only 3 percent used labor intermediation systems, which are mostly small and local private labor services. This mismatch, combined with the limited on-the-job training offered by Colombia's firms has important economic costs for both firms and individuals.

51. Slow productivity growth has been the main factor explaining growth differential between Colombia and fast growing middle income and advanced economies. Colombia's weak productivity growth performance is similar to the average of its regional peers and, as in these countries, productivity has historically dragged down GDP growth. In contrast, productivity growth was robust for Asia and advanced economies, such as Japan, and fast growing regional peers like Panama, Uruguay, and most recently Peru, accounting for most of the growth differential between these countries and Colombia. For example, Asian economies grew at an average annual rate of 6.4 percent between 1961 and 2011, of which 1.5 percentage points were due to TFP growth. This corresponds to a large share of the 2 percentage-point growth differential between Colombia and this group of countries (Figure II-14).

52. Productivity growth was uneven across economic sectors and it was largely influenced by labor reallocation across sectors. An alternative growth decomposition exercise can help illustrate labor productivity and labor reallocation dynamics across sectors (Table II-1). Labor productivity gains (measured by valued added per worker) accounted for 63 percent of the overall per capita output growth between 2001 and 2013. Labor productivity gains can be decomposed into changes in labor productivity within sector employment and labor reallocation across sectors. In the case of Colombia, the first component of labor productivity accounted for 60 percent of the gains (37 percent of the overall growth) and the second accounted for the remaining 40 percent (26 percent of the overall growth). This implies that a significant share of the productivity increase is due to the structural transformation of the economy with oil and mining activity gaining participation in the economy at the expense of the share of agriculture and manufacturing industry.

53. Within-sector productivity gains contribute to aggregate productivity gains in almost all sectors, while labor reallocation favors extractives, construction and financial services, in line with the commodity boom. Extractives and construction experienced larger productivity gains, while financial and real estate services were the only sectors where productivity decreased. Employment in the extractives and construction sectors expanded sharply, more than compensating for the expansion in value added. In fact, these sectors were the second largest contributor to employment creation in the decade, after retail. Overall, all sectors experienced positive employment growth, but at very different rates (Figure II-21). The resulting labor reallocation had positive implications to productivity. For example, labor shifted out of agriculture, a sector with relatively low labor productivity, and out of manufacturing, a sector with medium/high productivity. Labor moved into commerce, a medium/low productivity sector, and construction, transport, and financial services that are medium/high productivity sectors, with a large net positive impact on aggregate productivity (Figure II-22). As in other countries in LAC,

²⁶ It is worth highlighting that the government has been making progress on this front.

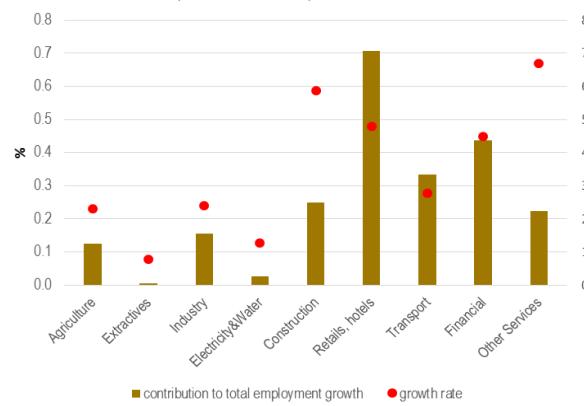
employment creation in the last decade has been balanced across educational levels, and did not help mitigate existing unbalances.

Table II-1: Percentage Contribution to Total Growth in Value Added per Capita (2001-2013)

	Contribution of changes in employment (%)	Contribution of within- sector changes in output per worker (%)	Contributions of inter- sectoral shifts (%)	Total (%)
<i>Sectoral contributions</i>				
Agriculture	-7.07	4.63	6.52	4.07
Mining and hydrocarbons	0.38	5.88	1.14	7.41
Manufacturing	-0.75	5.63	-0.27	4.61
Electricity, gas, and water	0.21	0.23	0.78	1.22
Construction	4.67	6.56	0.75	11.98
Commerce, hotels, restaurant	9.90	7.75	-2.15	15.49
Transport and communication	6.32	3.07	0.13	9.52
Financial services and real state	9.96	-10.51	18.44	17.89
Communal, social, and personal services	-2.39	13.52	1.00	12.13
Change in capital per worker			24.85	
TFP			11.91	
<i>Subtotals</i>	21.23	36.76	26.33	84.31
Demographic component				15.69
<i>Total</i>				100.00
Annual % change in value added per capita 2001-2013				3.08

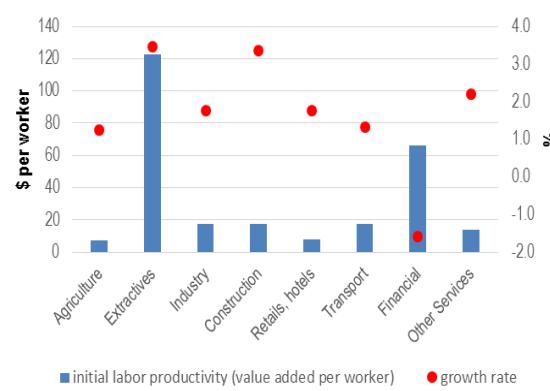
Source: Authors calculation using data from DANE²⁷

Figure II-21: Patterns of Employment Creation Across Sectors (2002-2014)



Source: DANE

Figure II-22: Labor Productivity by Sector



54. **Sectoral productivity growth in Colombia has been largely driven by productivity gains within firms, but convergence to the productivity frontier has been hampered by limited innovation efforts.** Recent literature has highlighted two distinct channels driving cross-country differences in productivity: the capacity of markets to allocate resources efficiently among firms (“between” component) and the evolution of firm productivity itself (“within” component). A decomposition using manufacturing firm level data for Colombia suggests that the “within”

²⁷ This is a decomposition of value added per head into employment and labor productivity by economic activity following a Shorrocks-Shapley method and developed at the World Bank. For methodological details, see:

<http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/EXTPROGRAMS/EXTTRADERESSEARCH/0..contentMDK:22042518~pagePK:148956~piPK:216618~theSitePK:544849.00.html>

component accounts for more than two-thirds of overall productivity growth in the manufacturing sector. Further analysis of the determinants of firm-level productivity shows convergence with the domestic frontier in Colombia is correlated to R&D expenditures and investment in capital equipment.²⁸ However, most firms do not innovate, explaining poor productivity performance. Only 11.8 percent of Colombian firms over ten workers innovate in product or process compared to 30 percent on average for countries at its level of development. Low levels of R&D (0.18 percent of GDP in 2011, half of what is expected given the level of income) have been linked to low competition and incentives, low management skills, and technology absorption capacity, as well as lack of adequate financing for these activities.

55. Substantial productivity gains could be achieved by reallocating resources towards more productive firms, but market imperfections hamper this reallocation. Reallocating labor and capital across firms in order to mimic the U.S.'s allocative efficiency, would lead to an 8 percent increase in Colombia's TFP.²⁹ Several factors contribute to allocative inefficiencies, such as information gaps, barriers to competition, limited or unequal access to financing, restrictive regulations, and/or limited enforcement. The relative importance of each of these factors to Colombia remains unexplored by the literature.³⁰

56. Colombian firms' productivity has been hindered by low management quality. Recent economic literature has drawn attention to the role of differences in management practices in explaining productivity differences.³¹ Colombian's scores on management practices are among the lowest for which data is available, just slightly below that of India, and slightly above that of Kenya, suggesting that Colombian manufacturing firms are, on average, poorly managed in global terms, and similar in standard to those in many low-income countries (Figure II-23). When self-assessed, however, Colombian firms described their managerial practices as high quality, suggesting lack of information about best practices around the world.³² This result is consistent with a combination of low skills and low levels of exposure to international competition.

57. Exposure to external competition through further trade liberalization is associated with better resource allocation and higher productivity. Several studies³³ explore Colombia's trade liberalization reform in the 1990s to analyze the links between international competitions on aggregate productivity. They find that lower trade protection makes firm survival depend more closely on productivity and that enhanced selection substantially increases aggregate productivity. Trade liberalization also increases productivity of existing plants. As a side effect, liberalization increases the demand for higher quality inputs, including labor, which has led to higher skill premiums and has worsened the skills mismatches previously mentioned.

²⁸ Brown, Crespi, Iacovone and Marcolins (2014).

²⁹ Camacho and Conover (2010).

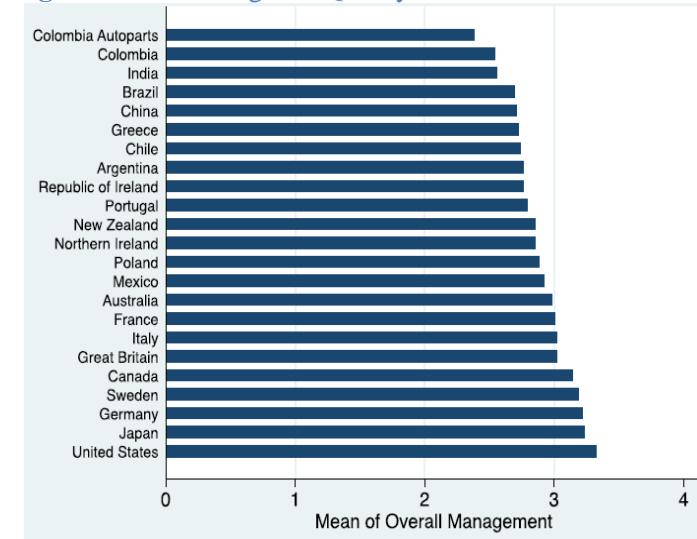
³⁰ The precisely measured impact in Colombia of loose/tight regulations, limited access to finance, information gaps and barriers to competition in different markets is a subject that the SCD proposes as a subject of further research in the future (see Chapter V).

³¹ Bloom and Van Reenen (2007).

³² An index of reliance on professional management ranks Colombia between 20 and 50 percent to the best performer in all comparisons. See Figures A2-4, A2-5 and A2-6 in Annex 2: Benchmarking Colombia in the World.

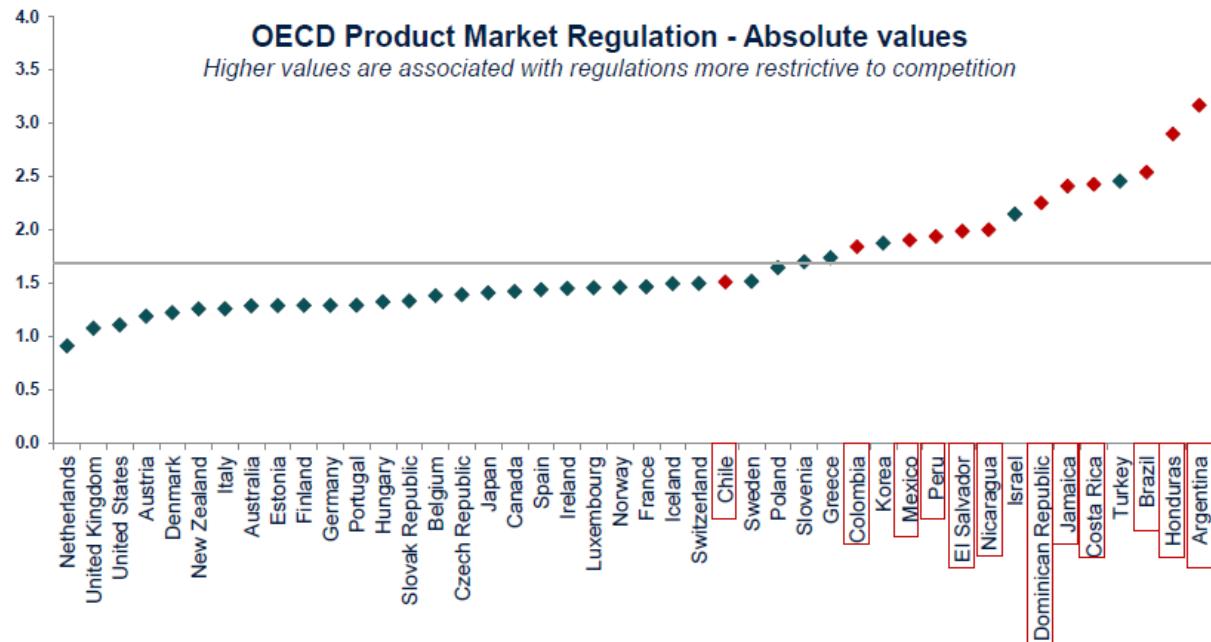
³³ Including Eslava, Haltiwanger, Kluger, and Kluger (2013), and Camacho and Conover (2010).

Figure II-23: Managerial Quality



Source: DNP/World Bank based on World Management Survey

Figure II-24: Product Market Regulation



Source: - Product Market Regulation Database (OECD-WB)

58. **There is less formal analysis of the impacts of domestic barriers to competition, but evidence so far suggests it can be significant.** Competition in domestic product markets is affected by rules of conduct imposed by regulators, entry barriers, and targeted preferential treatment. Colombia performance with respect to rules and regulations is high with respect to its Latin America peers. Based on OECD's product market regulation index, Colombia has the second less restrictive regulatory framework in Latin America, behind Chile, but it is more restrictive than

all European countries (Figure II-24). While Colombia's total score is good, it underperforms in a few areas such as scope of state of enterprises, barriers to services and network activities which helps explain the low quality and high costs of Colombia transportation services³⁴. Overall the de jure barriers to entry are not particularly high, but the administrative burden to start-ups and a complex tax system discourage formalization. There are many institutions involved in the process to start a business.³⁵ Similarly, the number of procedures and the cost as a proportion of per capita income are close to twice those in the OECD average. Finally, in the past, favorable tariff and tax treatment and export incentives have been granted to sectors and regions in ad hoc manner, creating distortions and narrowing the tax base, without successfully encouraging investment.³⁶ In fact, Colombian economy is perceived as been dominated by few large firms. The country ranks 101st out of 144 countries regarding extent of market dominance in the Global Competitiveness Report 2014-2015. The financial sector is frequently highlighted as a non-competitive sector, with implication for access and cost of financing for other firms.

59. Colombian firms identify access to finance as the main constraint on businesses, preventing a reallocation of resources towards more productive firms. Access to finance is the main obstacle to business identified by Colombian firms (Enterprise Surveys 2010); 42 percent of firms and 52 percent of SME considered it a key constraint.³⁷ This number is well above regional peers, and consistent with Colombia's relatively shallow and expensive financial sector. Domestic credit to the private sector more than doubled in the last decade but remains well below OECD and other emerging economies. In addition, intermediation rates are high and are cited by firms as the most important constraint when making investment decisions.³⁸ High intermediation margins affect the entry of new firms or expansion of productive ones. However, main effect of financial constraints on productivity comes through misallocation of resources, as capital does not flow to more efficient firms.³⁹ Interventions that improved firms' access and reduced cost of credit have led to firm growth in terms of both output and employment, but have not produced significant growth in within-firm productivity.⁴⁰

³⁴ In 2008 a cartel among freight entrepreneurs (*empresarios de la carga*, a figure defined in the regulation) was sanctioned in order to end a price fixing agreements. However, as a result of these anticompetitive practices, truck drivers themselves entered into horizontal agreements that still today seem to reduce competition and deter investment.

³⁵ Including the Tax Office, the Registry of Commerce, the Family Compensation Fund (Caja de Compensación Familiar), the SENA, and notaries.

³⁶ Mélendez et al. (2010).

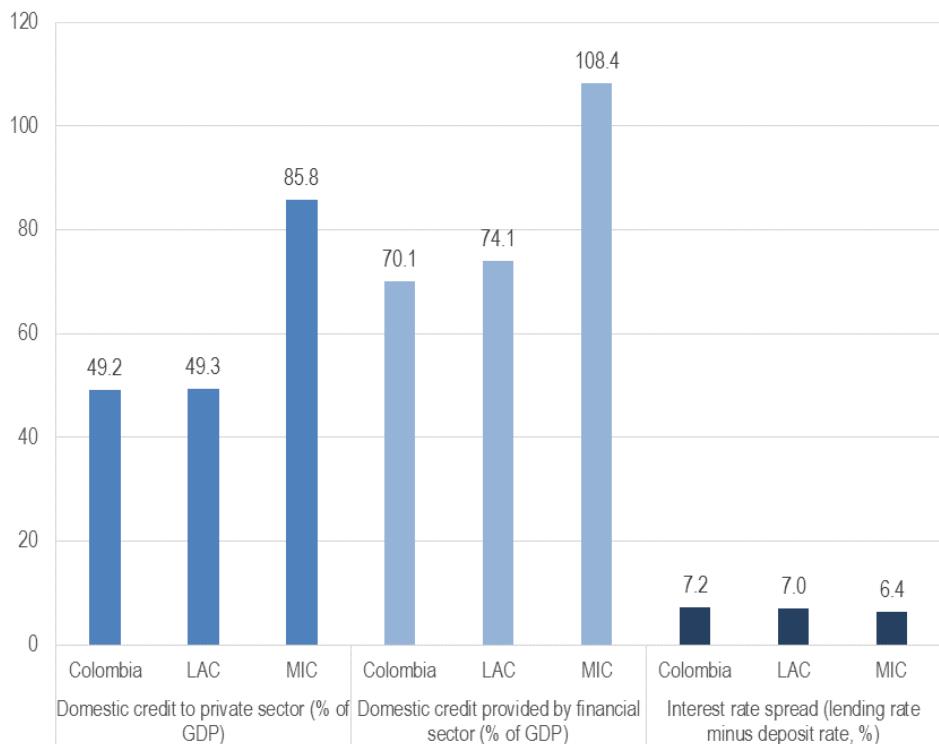
³⁷ Domestic credit to the private sector is ranked priority level 4 (i.e., 80 percent gap to the best performer) in two rankings. The other two rankings show levels 3 and 2. See Figures A2-4, A2-5 and A2-6 in Annex 2: Benchmarking Colombia in the World.

³⁸ Mélendez and Harker (2008).

³⁹ Eslava et al. (2010).

⁴⁰ Arraiz, Meléndez, and Stucchi (2014).

Figure II-25: Selected Indicators of Cost and Access to Credit



Source: WDI

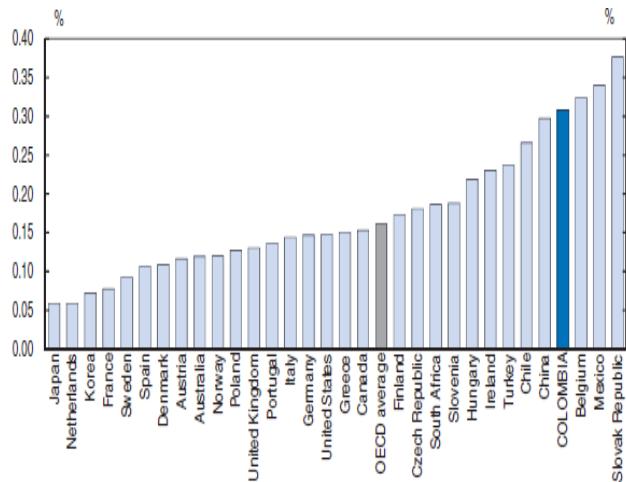
60. Improving access to finance, opening the economy to trade, and reducing the gaps in physical and human capital/skills could bring important growth dividends. In an attempt to measure their individual contribution to income convergence and growth, this SCD presents a counterfactual exercise based on growth regression models.⁴¹ The exercise suggests that closing Colombia's gap in financial development (proxied by credit to GDP) with the top 10 percentile performers in LAC, (i.e. double the level of credit/ GDP) would lead to an increase of 11.5 percent in Colombia per capita GDP in 5 years—on average 2.2 percent a year. Closing Colombia's gap in trade openness (equivalent to a level of trade to GDP of three times larger), would lead to an increase of 8.6 percent per capita GDP in 5 years—on average 1.6 percent a year. Closing Colombia's infrastructure gap with the top 10 percentile performers in LAC (i.e. significantly improve nine positions on a infrastructure index combining roads and telecommunications), would lead to an increase of 4.3 percent in Colombia per capita GDP in 5 years—on average 0.84 percent a year. Finally, Colombia's gap in education (increase secondary school enrolment rate from 78 percent to 100 percent), would lead to an increase of almost 2 percent Colombia per capita GDP in 5 years—on average 0.39 percent a year. Closing gaps in quality of education could deliver even larger dividends. Possible growth dividends from further improvements in macro stability are much smaller; nevertheless, significant losses in growth could occur if the recent achievements were to be reverted.

⁴¹ Brueckner et al. (2014).

Growth and Productivity in the context of Colombia's Territory and Armed Conflict

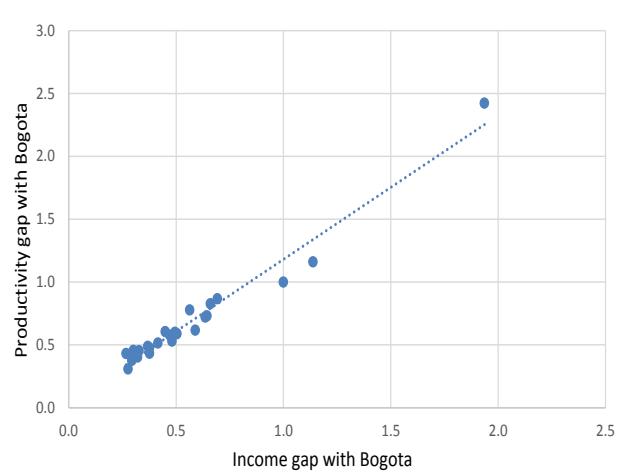
61. Colombia's strong economic performance over the past decade was not widespread across all of its territory. In fact, it had only a marginal impact on reducing regional disparities. On the positive side, 60 percent of Colombia's regions were able to reduce their per capita income gap with respect to Bogotá, and many of those regions are among the poorest ones. Empirical evidence⁴² suggests that Colombia experienced a small convergence (beta and sigma) in regional per capita income. On the negative side, regional differences are still very large. The five largest regions⁴³ in the country generate approximately 65 percent of national value added. Differences in per capita income levels among regions are also large, particularly when compared to the regional differences in OECD economies (OECD, 2013) (Figure II-26). Per capita income is below the national average for 27 of Colombia's 32 regions.

Figure II-26: Inequality Across Regions (Gini Coefficient)



Source: WDI

Figure II-27: Income Differences vs. Productivity Differences



62. Regional growth is partially linked to sectorial growth trends. As discussed, growth has been led by extractives and services activities. Contrarily, the manufacturing industry slowly lost ground. Commodity-producing departments have contributed to regional convergence effects. There, highly productive extractive sectors have emerged with limited spillover to local population. For example, oil producing regions, such as Casanare, Meta, Huila, Santander, and Putumayo, sustained average growth rates of almost 7 percent during the last decade. In the coal extractive sector, the major contributors are Cesar and La Guajira, followed by Boyacá and Norte de Santander. These regions grew on average 4.9 percent in the period. Lastly, Cordoba and Choco, the two major economies in metallic extraction, sustained an average rate of 4.4 percent. The remaining regions combined grew at a rate slightly below 4 percent.

⁴² Lopez-Calva, Castelã, and Enamorado (2013), Aguirre Tobón (2005), Branisa and Cardozo (2009), Royuela Mora and García (2010). 12 CEER (2007).

⁴³ Bogotá, D.C (24.7%), Antioquia (13.1%), Valle del Cauca (9.2%), Santander (7.2%), Meta (5.6%) and Cundinamarca (5.1%).

63. Regions with low productivity levels suffer from several of the bottlenecks identified at national level. Regional differences in per capita income are primarily explained by differences in low labor productivity (Figure II-27). Low access to (and performance of education) has been identified as one of the main bottlenecks hindering growth and productivity. In addition to traditional education, these regions lag behind in entrepreneurial training during secondary, tertiary, and continuing education (OECD 2012). Likewise, the quality of transport infrastructure differs greatly across regions. High regional discrepancies in the quality of roads mean that there are large opportunities to raise competitiveness through mere rehabilitation and maintenance of existing roads in low performing regions (Parra and Parra-Peña 2010). In fact, low connectivity to markets is a critical obstacle for economic activity in low-income regions. This obstacle is reflected in the Department Competitiveness Index (IDC), which measures infrastructure, basic services, efficiency of institutions and markets, sophistication and innovation. The ICD is closely correlated with per capita income, except for oil producing regions.

64. Government capacity is also a critical determinant of local economic performance. The current fiscal and governance framework has also contributed to disparities across regions. The overall fiscal system (taxes and transfers) shows a limited redistributive capacity, even when compared with other countries in Latin America and the Caribbean. In addition to resources, local government capacity also varies significantly with important implications to service delivery and competitiveness. By contrast, a recent reform on the distribution of royalties from extractives activities appears to be a step in the right direction, as it distributes resources more evenly across regions. However, the execution of these resources is still subject to efficiency and capacity challenges.

65. Historically, institutions and violence have also played a role in per capita income disparities across regions, but recent reforms might help alleviate this issue if well implemented. The 1991 constitution sought to promote regional expenditure yet failed to reduce inequalities: sub-national authorities began to receive much larger public resources (especially those linked with oil production) but their capacity to effectively manage and invest them was not raised accordingly. As a result, the investment of vast royalties from the extraction of natural resources has been historically ineffective (Olivera and Perry 2009) or misused. Close to a third of the total sanctions in the public administration (national and sub-national) between 2000 and 2012 were applied to mayors and local councilors (OECD 2013). The 2011 Royalties reform is expected to alleviate this problem. It aims to distribute revenues more equitably across regions, as the share allocated directly to commodity-producing regions will be reduced from 80 percent before 2011 to 10 percent after 2014. Most of the resources are spent on infrastructure projects (40 percent) and on a science, innovation, and technology fund (10 percent). Nevertheless, the ability to execute these resources is still subject to local efficiency and capacity challenges. Historically, non-tax revenues and transfers seem to be negatively associated with per capita income growth at the departmental level. Based on the model prior to the reform, royalties are also negatively associated with growth, but when the reform implementation is considered, royalties become positively associated (Lopez-Calva et al. 2013). It is worth keeping in mind that potential implementation challenges such as the capacity to design, select, and execute infrastructure and innovation projects is not considered in these estimates.

66. Territorial development has been constrained by years of violence and armed conflict. Civil conflict is deeply entrenched in rural areas and coexists with multiple dimensions of

criminality, including narco-traffic, extortions, and kidnappings. Decades of internal conflict destroyed physical, human, and social capital with important implication for regional growth. However, regional differences are marked. Violence and conflicts are concentrated in rural areas and in regions with abundant natural resources, where there is plentiful space for accumulation/expropriation of rents and a limited state presence. Regions with the highest incidence of violence include Arauca, Meta, and Valle del Cauca. Pervasive underdevelopment, lack of adequate infrastructure, and expropriation risks have prevented the local population in various ways (instability, informality, lack of legal rights, and violence) from engaging in productive activities, and has been particularly harmful for agricultural growth. Paradoxically, larger landholders, including those who participated in illegal land expropriation over the past decades, have also benefited from informality, and have had little incentive to invest at levels more appropriate to the long-term productivity of their land (see Box II-4).

Box II-4: Land-related Constraints on Rural Economic Development

Unequal distribution, informality (lack of titles), and inefficient use of land combine to pose an important obstacle to growth, social and political stability, and durable peace in Colombia (World Bank 2014b: 81). These three concepts—unequal land distribution, informality, and inefficient use—are separate but linked. They are also highly correlated.

For large landholders, inefficient use leads to extensive cattle ranching with extremely low stocking rates per hectare (Ocampo 2014: 6). Many large landholders also encourage informality, as they may resist paying taxes on the value of their holdings (Balcázar and Rodríguez 2013). An estimated two-thirds of lands in rural areas are held without title. The combined impacts of informality and lack of access to finance are lower levels of investment, lower tax revenues, and lower growth, all at a low-level equilibrium.

For smaller landholders, informality constrains growth in an opposite way. Rather than informality keeping producer costs down, it restricts their ability to invest by cutting off access to credit, insurance, and other forms of capital. Small producers without secure land holdings are thus put at a disadvantage and tend to suffer from disproportionately high rates of poverty (Perry et al. 2013). On average, farmers without title to their land earn about 45 percent less per capita than those with formal titling (Leibovich et al. 2013).

With the right enabling conditions, smallholder farms in Colombia can be just as economically efficient and profitable as large producers (Forero et al. 2013; Leibovich et al. 2013). Secure access to land and formal property rights are important parts of the equation. Investment in basic services and infrastructure so that farmers and ranchers can bring their products to markets are also essential. Throughout the 1990s and early 2000s, decentralization led to underinvestment in roads, technical assistance, and housing programs (Ocampo 2014), though budgets have recovered and are trending upward. Post-conflict zones face special challenges and will need additional support. The Producer Alliance approach being supported by the World Bank and other donors, is rebuilding productive capacity in these areas by organizing farmers groups combined with access to finance, markets, and technologies (World Bank 2014b).

67. **Several studies argue that Colombia's protracted armed conflict and violence in general has had a large impact on economic growth.** Empirical evidence also highlights that without continuous violence GDP growth would have been significantly higher than today. Violence has shown to be linked with growth and development through several lines, but as previously mentioned, it has disproportionately affected rural areas of the country (Box II-5). The

perpetuation of conflict prevented capital and labor to accumulate in the more productive segments of the economy. Violence and political instability also had a negative impact on investment rates. Protracted violence limited capital inflows towards productive investment opportunities across regions. The conflict and violence have also hampered labor productivity, which suggests a large contribution to territorial disparities. However, there are few empirical estimates of the economic cost and growth impacts of the conflict at subnational level, which prevents more precise conclusions.

Box II-5: Economic Impacts of the Armed Conflict and Violence: A Literature Review

While there is general consensus that violence has had a dampening effect on Colombian economic growth, there is a lack of consensus on the size of that impact and channels through which it operates. Research on the relationship between growth and violence in Colombia has grown in the last two decades. Despite the difficulties in identifying causal effects of violence on growth, most studies suggest that high violence levels in Colombia are detrimental to growth (Rubio 1995 and Montenegro and Posada 1995), with estimated effects ranging between 0.37 and 2.5 percentage points per year. While most studies focus on the effect of violence broadly defined, (e.g. Rubio 1995 and Montenegro and Posada 1995), Vargas (2003) distinguishes criminality from conflict-specific events, and concludes that increases in conflict activity are responsible for about a 1 percentage point loss in the per capita growth rate. Similarly, Querubin (2003) estimates the effect of regular criminal activities and finds smaller effects on growth (ranging from 0.07 to 0.13 percentage points per year).

Violence could affect economic growth by constraints on factor accumulation or reducing total factor productivity. Using the framework of a simple production function, Vargas (2003) argues that violence intensity can affect the growth rate of output by pulling down the productivity of the current factors of production or by hampering factors' accumulation (e.g. human capital, labor and physical capital). TFP effects can arise, from example, from frequent disruptions in production. The effect on labor and human capital can arise from displacements, injuries, and deaths, which reduces the labor force in affected areas. Lower life expectancy might also discourage investment in health and education. Finally the effect of physical capital is linked to the actual destruction of property and expropriation risks that discourage investment.

Summary of economic impacts estimates in the literature:

Time period	Violence concept	Effect	Effect	Channel
Violence and growth				
Rubio (1995)	80's and early	Homicide rate	GDP growth rate per year (pp)	-2.5
Parra (1998)	50's and early	Homicides rate	GDP growth rate per year (pp)	-1.2
Montenegro and Posada (1995)	70's and 80's	Homicides rate	GDP growth rate per year (pp)	
Vargas (2003)	1988-2001	Attacks, clashes and casualty rates	TFP growth rate per year (pp)	-1
	1990-1999	Homicide rate	GDP growth rate per year (pp)	-0.37
Querubin (2003)	1990-1999	number of kidnappings	GDP growth rate per year (pp)	-0.13
	1990-1999	number of actions of illegal armed groups	GDP growth rate per year (pp)	-0.07
Violence and mechanism of growth				
Camacho and Rodriguez, 2011	1993-2005	Guerrilla and paramilitary attacks	probability of plant exit (pp)	5.5
Camacho, 2008	1998-2003	Terrorism attacks	weight of new births (grams)	-8.7
Castañeda and Vargas, 2011.	2008-12	Attacks and clashes	prices of CDS colombia sovereign bonds	n.a

There is plenty of evidence on the effects of violence on factor accumulation, but too little on its effects on factor productivity. Rubio (1995) and Parra (1998) find that between 0.7 and 1.2 percentage points of GDP were lost due to the negative effect that violence had on investment rates. In the same line Castañeda and Vargas (2011) find that conflict events can affect foreign perceptions of sovereign risk, which ultimately is a strong fundamental of the price to access international markets. Thus the investment is greatly affected by the violence in the country, and as long as the country is more integrated into the global capital markets the size of this effect will tend to increase. On the other side, the human capital could be also affected by the conflict; for instance, Camacho (2008) finds that terrorist activities that occur during a woman's first trimester of pregnancy have negative impact on child health, affecting the long-term human capital accumulation. In terms of factor productivity, Cardenas (1995) argues that violence destroys the "social infrastructure"⁴⁴ causing predatory behavior that diverts capital and labor to unproductive activities; in fact the conflict has significant effect on the exit decision of firms (Camacho and Rodriguez 2011). Finally, Vargas (2003) estimates that 90 percent of the impact of conflict on growth is via TPF growth, while the remainder takes place through factor accumulation.

Going forward: Risks associated with an extractives-driven growth mode and opportunities for sustaining growth in the future

68. Colombia's resource boom has been a blessing in many dimensions, but poses social and economic policy challenges. As discussed, the boom has boosted foreign investment, economic growth, and government revenues. However, the rising terms of trade and related capital inflows have contributed to the appreciation of the exchange rate, which may have undermined the competitiveness of other sectors. As previously discussed in the chapter, fuel exports increased to almost two-thirds of total exports, while the share of manufactures exports relative to total merchandise exports declined significantly. In addition, as extractive activities are often capital intensive, the boom did not lead to the direct creation of many jobs, although indirect job creation can be linked to the commodity boom, especially in oil producing regions. Extractive activities create high and concentrated rents. If rents are not well redistributed and invested by the government, these activities can worsen the already unequal distribution of wealth. Finally, the relatively large share of extractive activities trade and government revenues increases macroeconomic exposure to price fluctuations and volatility. Volatile revenues and associated procyclical spending could have real costs for growth.

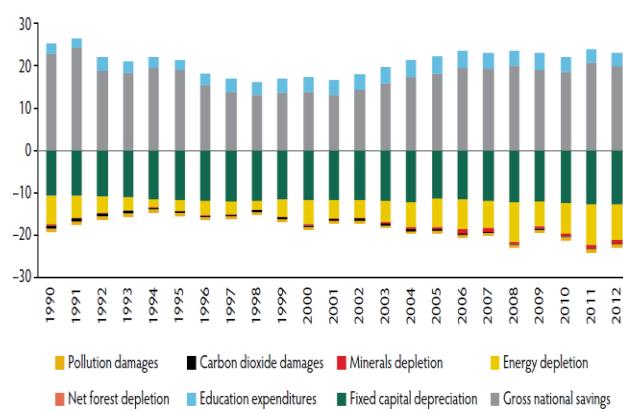
69. The ability to manage dividends from commodity production and natural resource abundance is directly linked to long-term growth outcomes. The associated increase in oil export revenues brings along certain opportunities for Colombia because—if well managed—it might serve as a financing source to promote economic development. There are many examples of countries rich in natural resources that managed their resources well, achieved high growth, and diversified their economy beyond commodities, such as Norway, Chile, Botswana, Indonesia, Malaysia, and Thailand. In contrast, many other commodity-rich countries are lagging in development, supporting the ideas that a "curse" can emerge if resources are poorly managed. Examples in this group might include Nigeria, Venezuela, and Algeria.

70. Colombia has taken important step for protecting against volatility, but achievements on investment and redistribution of natural resources revenues have been more modest. Colombia distinguishes itself as one of the countries with the largest marginal savings rate at 91.5

⁴⁴ As it is defined by Hall and Jones (1999).

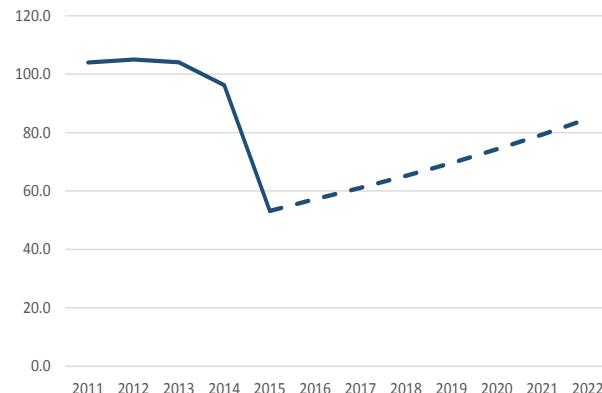
percent of windfall income. Colombia's national saving rate rose by almost 4 percentage points of GDP over the past decade to 21.4 percent of GDP, driven mainly by the public sector.⁴⁵ This saving, combined with the macro policy reforms discussed earlier in the chapter, provide the country with adequate buffers to face commodity shocks fluctuations. However, the country has not been able to allocate these resources effectively to promote redistribution and investment. As will be discussed in Chapter 3, Colombia fiscal policy is not effective in redistributing resources and many of the government programs and transfers are still very regressive. The royalties reforms was a first step in redistributing resources geographically, but lack of coordination between different levels of government and low local design and implementation capacities have constrained the effective use of this resources so far. Finally, as it will be discussed in Chapter 4, investments have not fully compensated for resource depletion (Figure II-28). The use of natural resource rents is not being converted effectively to other forms of capital (either physical or human capital), which raises question about long term growth sustainability under the current model.

Figure II-28: Net Asset Accumulation (%GNI)



Source: World Bank (2014b), World Bank GEP

Figure II-29: Oil Prices Dynamics (Actual and Forecast)



71. Structurally lower international prices and uncertainties about future production impose challenges for maintaining high growth rates under an extractives driven model in the short and medium terms. Since mid-2014, oil prices have dropped to almost half of the value sustained during the past decade. This drop seems to be driven by structural changes in supply (new technologies significantly increased production in the U.S.) and in demand (slower growth in China). These changes are likely to be long lasting (Figure II-29), affecting the profitability and investment prospects of oil activities. In addition, Colombia's current proven oil and gas reserves are estimated to last only seven to eight years. Oil production is expected to peak in 2018 and then decrease slowly to less than 0.8 million bpd in 2035. Reserves and future production in Colombia is, however, difficult to estimate because exploration in much of the country has barely started and there is great uncertainty about future discoveries.

72. Going forward, Colombia's economic performance will be closely linked with its ability to successfully transition to a lower oil-price equilibrium, and promote productivity and competitiveness in non-extractive activities. This chapter has described key drivers,

⁴⁵ Data taken from Sosa, Tsounta, and Kim (2013).

bottlenecks and opportunities for sustaining growth in Colombia, taking into account the external context. The analysis helped identify critical challenges for the country going forward. The first set of challenges relates to the process of adjusting to the new external context. While Colombia possesses fiscal and monetary buffers that will ensure a smooth transition, the country will need to address the Government's reliance on commodity revenues and the revise use of these (now) scarce resources. This implies increasing tax revenues, carefully considering the social returns of commodity financed investments, and increasing the efficiency and redistributive power of government spending. The second set of challenges relates to promoting productivity and competitiveness beyond extractives, by addressing critical horizontal barriers to economic development. This includes: i) addressing low trade integration by reducing transportation costs, tariffs, and non-tariff barriers to trade; ii) reducing barriers to domestic competition and information gaps that discourage innovation; iii) in particularly, reducing barriers to competition in the financial sector, to expand access and reduce cost of credit; iv) improving access to and quality of tertiary education to align it to market needs; and v) integrating lagging regions through better connectivity and business climates, particularly security and property rights.

III. WHAT ARE THE CRITICAL FACTORS THAT DETERMINE INCLUSION?

73. This chapter aims to identify the factors that determine inclusion in Colombia and how these factors are associated with the three aspects of violence and armed conflict, territorial diversity, and extractives-based economic growth. If social inclusion is understood as “*The process of improving the terms for individuals and groups to take part in society*,” it is then necessary to identify the individuals and groups that do not fully take part in society, the forces that prevent them from taking part in society and what forms of societal participation one is considering. This chapter concentrates on groups defined by gender, location, and ethnicity; on poverty and inequality as forces of exclusion; and on access to monetary incomes and social welfare as forms of participation (although these are not the only groups, forces and forms to be considered when thinking about inclusion).⁴⁶ The chapter starts with a thorough description of profiles and trends of poverty, shared prosperity, and inequality in Colombia, followed by two sections on its main drivers, i.e., labor markets and social policy, each with its own connection to the three aspects. The following matrix provides a synopsis of the main findings in this chapter.

Inclusion-related constraints mapped onto Colombia's distinguishing characteristics.	
<i>Uneven Territorial Development</i>	<ul style="list-style-type: none">Gaps across region, departments and municipalities in social service delivery (education, health, housing and citizen security) partly due to limited capabilities at the local level and fragmented social protection system
<i>Armed Conflict</i>	<ul style="list-style-type: none">Affected municipalities and IDPs suffer losses of productive assets and means for coping with risks, as a consequence of the armed conflict.
<i>Extractives-based growth</i>	<ul style="list-style-type: none">Extractives-based growth in recent years have reduced extreme poverty and promoted shared prosperity. The question is: where jobs and earnings would come from if extractive activities stop growing?
<i>Systemic</i>	<ul style="list-style-type: none">Tax and transfer system has limited impact on inequality.Unfunded and regressive pension systemHigh costs imposed by labor regulations and unequal employment opportunities.

Advances in poverty eradication, shared prosperity, and inequality reduction in Colombia⁴⁷

74. **Colombia has made its most impressive strides in reducing monetary poverty during the last decade.**⁴⁸ Extreme poverty fell from 17.7 percent in 2002 to 8.1 percent in 2014, an average annual drop of 0.8 percentage points (Figure III-1, left panel). Total poverty (which includes both extreme and moderate poverty) fell from 49.7 percent in 2002 to 29.5 percent in

⁴⁶ For a thorough discussion of inclusion, see World Bank (2013a).

⁴⁷ This section draws extensively from Rodríguez, Giménez and Valderrama (2014).

⁴⁸ Poverty, measured by headcount rates to 4US\$ and 2US\$ PPP, is benchmarked priority 1 or 2 (i.e., less than 50 percent distance/gap to the best performer) in most comparisons. See Figures A2-4, A2-5, and A2-6 in Annex 2: Benchmarking Colombia in the World.

2014, an average annual drop of 1.7 percentage points (Figure III-1, right panel).⁴⁹ The decline in poverty translates into an absolute decrease of 6.2 million people—from nearly 19.7 million in 2002 to 13.5 million in 2014. The reduction of extreme poor population amounts to 3.3 million people: from 7.0 million to 3.7 million, in the same period. The rate of poverty reduction was comparable across urban and rural areas; however, it should be noted that poverty continues to be significantly higher in rural areas than in urban areas.

75. Despite this rapid reduction in poverty, large historical disparities between urban and rural areas persist. Both moderate and extreme poverty levels remain significantly higher in rural areas. From 2002 to 2014, rural areas' extreme poverty rates fell from 33.1 to 18 percent; in urban areas, they fell from 12.2 to 5.1 percent. During the same period, total poverty in rural areas declined from 61.7 to 41.4 percent, while urban areas saw a drop from 45.45 to 24.6 percent. Moreover, the rural-urban ratio in the poverty headcount increased from 1.35 to 1.68 percent, suggesting that urban areas were more effective than rural areas at lifting Colombians out of poverty. The positive effect of urbanization has been documented in the academic literature: a study comparing Colombia to other countries in the region finds that the presence of small, medium, and large size cities in a given area of Colombia accelerates poverty reduction, whereas deep rural areas show less poverty reduction. This study also finds that the main reason for poverty and inequality urban/rural differentials in Colombia is the existence of an urban/rural investment gap.⁵⁰ The lack of intercity connections, the low quality of tertiary and secondary roads, the differences in water, sewage, and other public utilities between urban and rural areas—to be discussed further in coming paragraphs—are all elements of this urban/rural investment gap that needs to be closed.⁵¹ Interestingly, the lack of infrastructure also creates a divide within cities: a recent study shows that the daily distance to travel to work and the cost of transportation is much higher for the poor (who tend to use public transport) due to long distances and congestion, all indicators of a lack in urban infrastructure.⁵² Urbanization and rural development are, hence, important poverty reduction policies to consider.

⁴⁹ These numbers refer to extreme and moderate poverty estimates using the Colombian official poverty line. In 2012, for instance, the extreme (moderate) poverty line was 91,207 (202,083) CO pesos per capita per month; that is approximately 1.83 (4.06) US\$ -PPP 2005- per day. World Bank staff estimates indicate that declines in the \$1.25 a day (PPP) poverty rate were similarly impressive, going from 11.7 percent in 2002 to 6.6 percent in 2012. For a report about the production of new official poverty numbers in Colombia see Azevedo (2013). For a detailed description of the official methodology, see: DNP-DANE (2012) “Monetary Poverty in Colombia: New methodology and 2002-2010 figures”, and visit:

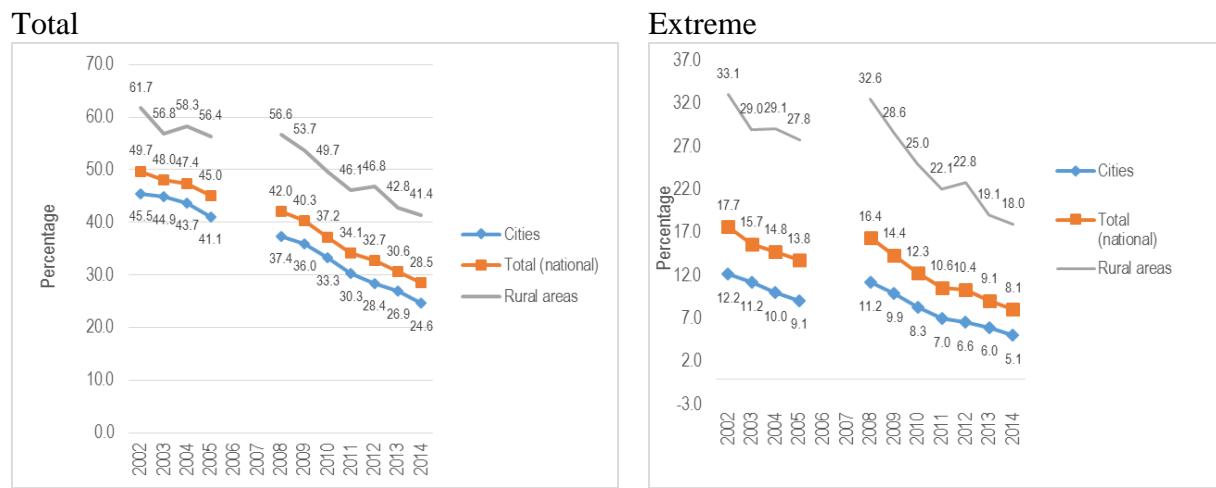
http://www.dane.gov.co/files/investigaciones/condiciones_vida/pobreza/ingles/Monetary%20Poverty%20in%20Colombia.pdf

⁵⁰ See Berdegué et al. (2015).

⁵¹ Cuellar (2014, 148-149), reports that 58 percent of secondary and tertiary roads are in regular, bad, or very bad condition. More specifically, 100 percent of rural roads and 73 percent of secondary roads are unpaved.

⁵² World Bank (2014, 53), shows that, in 2011, the poorest 20 percent of the population in Bogotá spend 71.5 daily minutes commuting, vis-à-vis 39.3 minutes by the richest 20 percent. Kash and Hidalgo (2015, 127) say: “Twenty one percent of Bogotá residents report that their income is inadequate to cover even minimum expenses. When faced with this situation, twice as many residents said that they would sacrifice food than said they would reduce transportation expenditures. Increased costs could price-out low income residents from public transport, forcing many to walk or bike long distances.” Lack of housing, particularly among the poor is documented in Departamento Nacional de Planeación (2013): “Según la Encuesta de Gran Encuesta Integrada de Hogares – GEIH de 2011, en Colombia hay un total de 12,5 millones de hogares, de los cuales 9,7 millones habitan en zonas urbanas y 2,8 millones se encuentran en el área rural del país. Del total de hogares, los que no son propietarios de vivienda y tienen ingresos entre cero (0) y

Figure III-1: Monetary Poverty in Colombia, 2002-2014



Source: DANE (2014), Gráficos 5 and 8, pages, 10 and 13

76. Poverty incidence is especially high among specific groups of households: female headed, low-skilled headed, and uninsured headed have the highest likelihood of being poor. These characteristics are associated with high poverty rates, both total and extreme, regardless of geographic area (e.g., urban and rural, large and small cities). However, poverty among ethnic minorities and displaced population is not appropriately measured in regular surveys and is not described in official reports. Some studies highlight the bad quality of data regarding ethnic condition and displacement yet offer a tentative gauge of the situation of these groups.⁵³ Old estimates indicate that poverty incidence among Afro-Colombians is similar to non-minorities, but indigenous populations do have a much higher poverty rate than the rest of the population.⁵⁴

77. Internally displaced persons (IDP) merit special attention because, due to the ongoing armed conflict, they are one of the most disadvantaged groups, facing enormous barriers to escape from poverty. Dearth of a unified survey data is equally severe here, but there is evidence that there are more than 5.5 million IDP.⁵⁵ IDP tend to be consistently classified in the lowest income quintiles. The recent Effective Access to Rights Survey (Encuesta de Goce Efectivo de Derechos, in Spanish)—a survey of internally displaced people—documents an extreme poverty rate of 33 percent and a total poverty rate of 63.8 percent for the period 2013-2014 among IDP

un (1) SMLM corresponden a 1,7 millones de hogares (13,6% del total) y los ubicados en el rango entre un (1) y dos (2) SMLM a 2,3 millones de hogares (18,2% del total)."

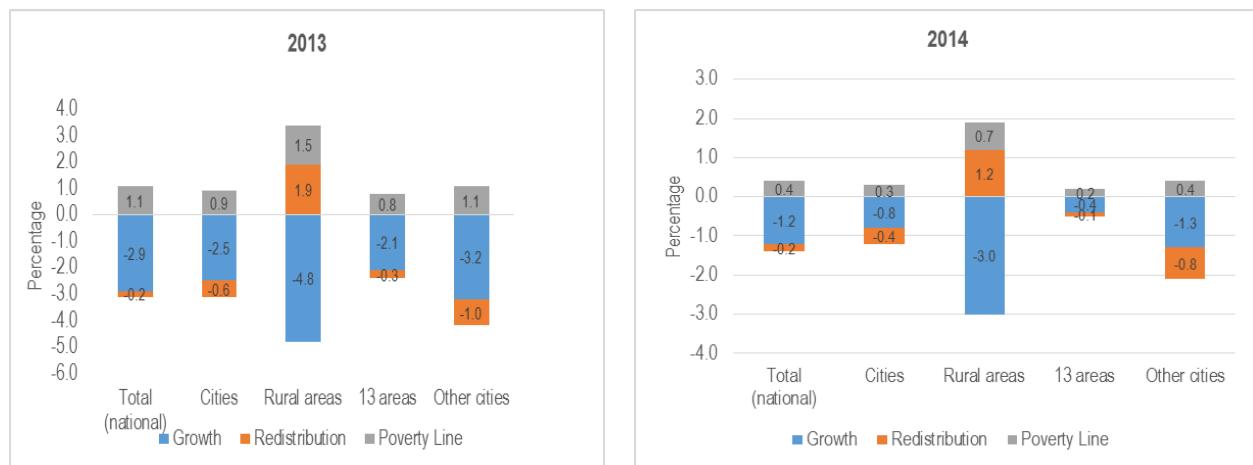
⁵³ For year 2006, poverty incidence in urban areas is higher among indigenous people (71 percent), followed by Afro-Colombians (53.2 percent) and non-minorities (47.3 percent). In rural areas, however, the ranking is: indigenous (89.7 percent), non-minorities (76.2 percent) and Afro-Colombians (64.4 percent). See Cruces, Gasparini, and Carbajal (2010). This report includes an extensive discussion about the deficiencies of data in Colombia to ascertain the size and characteristics of Afro descendants and indigenous population. See, in particular, pages 17 to 21. The lack of appropriate data, and the "invisibility" that this creates about the problems of specific ethnic population groups was voiced during stakeholder consultations. See Annex 4, Stakeholder Consultations, sessions with Afro descendants and with UN system organizations in that reference.

⁵⁴ Data using a US\$4/day poverty line from Cruces, Gasparini and Carbajal (2010).

⁵⁵ Statistics about IDP are controversial. By 2012, the NGO CODHES estimates 5,712,506 while the government registered 4,744,000 IDPs since 1985, date established by law for recognizing the status of victim. (Commission of monitor public policy IDPs 2010. Third report of verification of the fulfillment of rights of the displaced population). The official victims' registry (RUV), as of April 2015, however, accounts for 6.2 million IDP.

(well above the national averages of 8.1 and 28.5, respectively). These numbers imply a reduction of poverty rates documented at the beginning of the decade, but a persistent gap with the national averages and a predominance of IDPs among the poor.⁵⁶ This survey also documents the success of social policy in facilitating access to health, education, and safety: 86.7 percent of IDP report having access to health insurance and health services, 87.8 percent of the IDP children report attending primary or secondary school, and more than 95 of IDP report not having suffered attempts against their life, security, or freedom since they were displaced. On the other hand, access to dignified housing or compensation for displacement are still very limited. Only 19.5 percent of IDP report having access to a dignified housing (i.e., with enough rooms and adequate construction materials), only 5 percent have received some form of public apology for acts that occurred, 19 percent have requested and received some compensation for losses incurred, and 26 percent of IDP who have attempted return or re-settlement in current areas have actually received government support.⁵⁷

Figure III-2: Decomposition of Poverty Change into Growth-Redistribution and Inflation, 2013-2014



Source: DANE (2014), Op. Cit, Gráficos 12 and 13, page 17.

78. Economic growth is the main driver of poverty reduction, but redistribution and food inflation also play a role. For the period 2002-2013, economic growth explains 73 percent of the reduction in extreme poverty and 84 percent of the reduction in total poverty, which implies that changes in income distribution have a more important role in reducing extreme poverty than total poverty. Moreover, changes in food prices may have a non-negligible impact on the poverty line, and hence on poverty changes. Due to price increases, and its impact on the nominal poverty line, poverty would be 1.1 percentage point larger in 2014 than in 2013 (see Figure III-2). This price impact was especially severe during the 2006-2008 international food price crisis when food prices in Colombian cities were almost twice the average consumer prices, affecting disproportionately

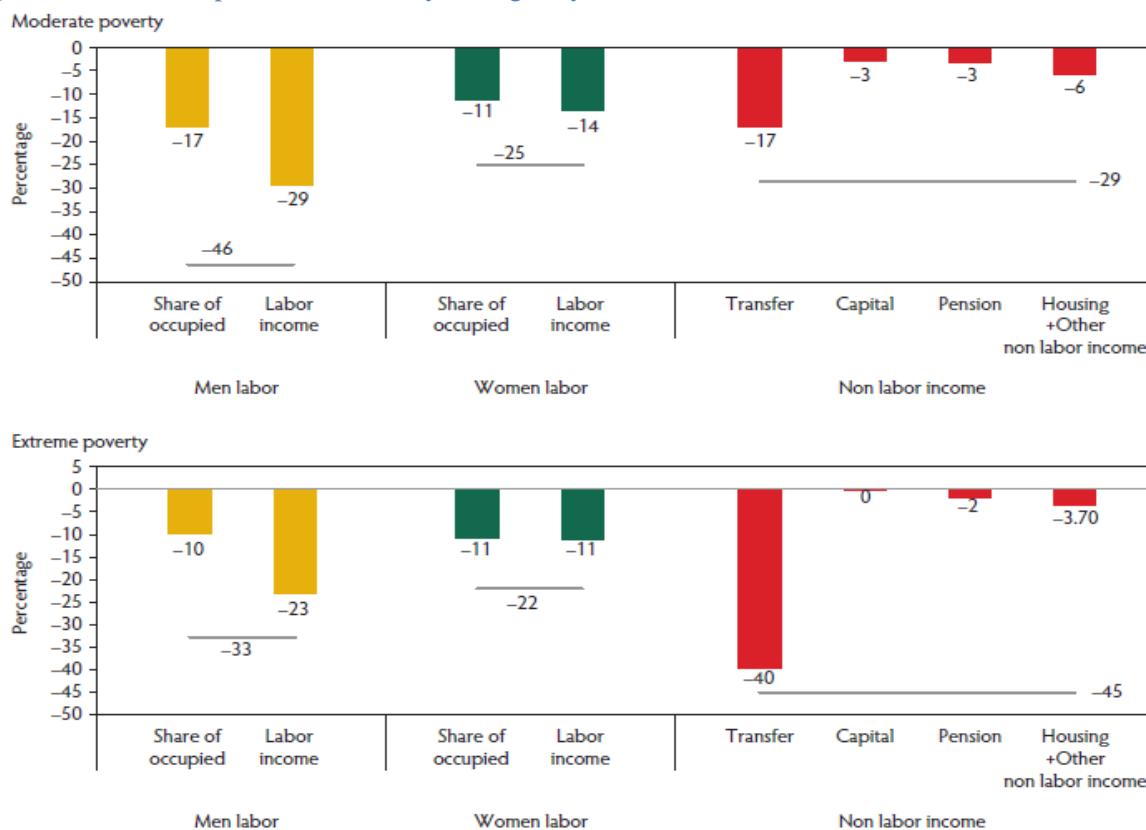
⁵⁶ In 2010, their poverty rate was 96.7 percent, and their extreme poverty rate 66.4 percent. These data and analysis are taken from: Acción Social, Agencia Presidencial para la acción social y la cooperación internacional (2010). See also Joumard and Velez (2014, 8), citing Garay (2008). Given the relative size of the displaced population in Colombia, and these high poverty rates, one can reckon that around one out two of extreme poor in Colombia may be a displaced person. This is an estimate using different surveys since no unified survey exists.

⁵⁷ Data from DANE (2015) “Encuesta de Goce Efectivo de Derechos EGED 2013 -2014” Boletín Técnico, Bogotá, 7 enero, 2015.

those at the bottom of the distribution.⁵⁸ In fact the extreme poverty reversed its trend of steady reduction in 2005 and showed an increase of 2.1 and 4.8 percentage points in urban and rural areas during this period, but after 2008 the poverty recovered its downward path. This evidence highlights the importance of high growth and low inflation as key poverty reduction measures.

79. The effect of economic growth upon poverty reduction in Colombia was driven primarily by labor market changes, such as increases in labor income and a greater employment of household members. Figure III-3 shows the decomposition of observed changes in total household income that can be attributed to changes in household demographic characteristics, in the share of employed adults, in labor income, and in non-labor income.⁵⁹ The increase in labor income explains 43 percent of the decline in total poverty, broken down as higher female earnings (14 percent) and male earnings (29 percent), respectively. Moreover, the share of employed household members, a measure of effective labor force access to the labor market at household level, explains 28 percent of the variation for total poverty and 21 percent for extreme poverty. In other words, more than 70 percent of the total poverty decrease is related to changes in labor market indicators, namely more jobs and higher wages per job in each household. Moreover, around one-quarter of poverty reduction, both total and extreme, can be attributed to increases in female employment and female earnings.

Figure III-3: Decomposition of Poverty Changes by Income Source, 2002-2013



Source: Rodríguez, Giménez, and Valderrama (2014), Figure 2-11, page 38.

⁵⁸ See Rodríguez-Takeuchi and Imai (2013) for a study of the welfare impact of food-price crisis in 2006-2008 on urban Colombia.

⁵⁹ For technical details on the underlying methodology used in this decomposition, see Paes de Barros et al. (2006).

80. **The expansion of well-targeted public transfers proved effective in terms of reducing poverty in Colombia, particularly extreme poverty.** The change in poverty associated with transfers was -16.8 percent for total poverty and -39.7 percent for extreme poverty; the corresponding changes in LAC were -13 percent and -23 percent. These patterns suggest that the safety-net expansion that took place in 2002–13 was both effective in reducing poverty—in particular extreme poverty—and well targeted. On the other hand, compared to the LAC region as a whole, the contribution of pensions to poverty reduction in Colombia was low. In particular, the change in poverty associated with pensions in Colombia was -2.8 percent for moderate poverty and 0.1 percent for extreme poverty: the analogous numbers for LAC were -13 percent and -15 percent.⁶⁰ This is not surprising given Colombia’s “pay as you go” pension system, which has 1.4 million beneficiaries who are almost exclusively at the upper end of the income distribution. (More on the pension system in following sub-sections of this chapter.)

81. **Multidimensional poverty has also experienced a remarkable decline.** In 2011, the Government adopted a multidimensional measure of poverty. To be classified as multidimensionally poor, a person must be deprived in at least 5 out of 15 designated welfare indicators, grouped in five categories: education, health, labor, childcare, and housing.⁶¹ Colombia’s multidimensional poverty index (MPI) declined from 49 percent in 2003 to 21.9 percent in 2014, indicating that the country more than halved the share of its population that is multidimensionally poor. This represents a drop in multidimensional poverty of 2.5 percentage points per year. The number of multidimensional poor declined by 9.8 million, from 20.3 million to 10.4 million.

82. **The MPI also has a strong geographical divide and little convergence.** Urban areas have a MPI rate of 15.4 percent while rural areas’ rate is 44.1 percent. This disparity is also observed across regions: while the Atlantic and Pacific regions have MPI rates of 34.6 percent, Bogotá has only a 5.4 percent.⁶² Differences across regions have remained at about 30 percentage points over the period (2010-2014), indicating very little convergence in this indicator (see Figure III-4, left panel). This lack of convergence in MPI is similar to what has been observed in monetary poverty: while there is a rapid convergence with extreme poverty, there is almost no convergence with total poverty (see Figure III-4, right panel). This evidence points to areas that are persistently lagging, both in monetary and multidimensional measures (i.e., Pacific and Atlantic), and specific departments with little or no poverty reduction in recent years (i.e. Cauca, Chocó and La Guajira). These are areas also largely affected by the conflict and with a large displaced population; and, despite its coastal position, they endure serious lack of infrastructure.

83. **The key drivers behind the MPI’s decrease were improvements in the health and education dimensions.** In particular, over the five-year period 2010-2014, the number of households without health insurance; with low educational attainment; and with an educational

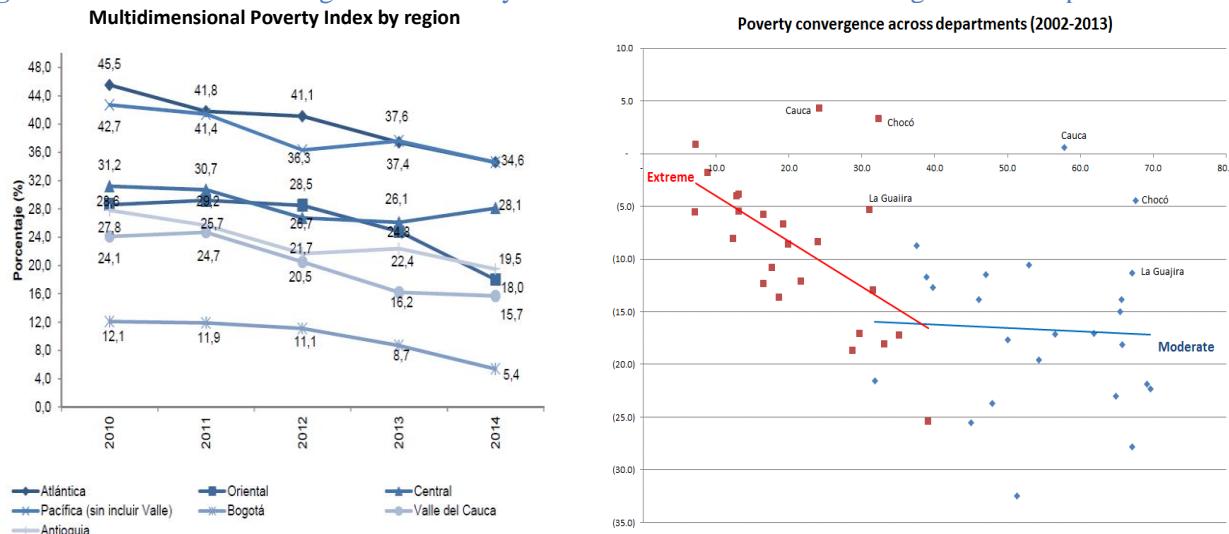
⁶⁰ For comparisons within the Latin American region see World Bank (2013b) and World Bank (2014c).

⁶¹ For a description of the official methodology on multidimensional poverty see DNP (2012) and also Angulo, Díaz and Pardo (2011). The indicators are: educational achievement, illiteracy, school attendance, educational gap, access to childcare services (health, nutrition, care), child labor, long-term unemployment, formal employment, healthcare access, healthcare access when needed, access to drinking water, access to sanitation, quality of floor in the housing, quality of wall, and critical overcrowding.

⁶² Using an adjusted MPI, which weights the number of deprivations by its incidence, the difference is even starker: Atlantic’s adjusted MPI is 14.9 percent while Bogotá’s is only 2 percent. See DANE (2015).

gap declined by 8.8 (the largest decline of all), 4.7, and 3.1 percentage points, respectively. On the other hand, dimensions related to housing show little progress. Households without safe access to water declined by only 0.1 percentage points and still constitute more than 10 percent of dwellings. Inadequate sewage system declined by 1.5 percentage points but still affected more than the 10 percent of households. Inadequate materials in floors and walls declined a little more than 1 percentage point each, but are among the dimensions with lowest incidence. Finally, variables related to labor market performance show a mixed record. The number of households with a member working in the informal sector declined in 4.1 percentage points, and those with child labor declined in 1.2 percentage points; but the share of households with a member in long-term unemployment increased in 0.5 percentage points (see Table III-1).

Figure III-4: Lack of Convergence in Poverty Reduction Across Colombian Regions and Departments



Source: DANE (2014), Figure 15, page 29 (left panel).

84. Again, the evolution and levels of various dimensions of the MPI are very different in urban and rural areas. The most noticeable differences refer to housing infrastructure: only 3.3 percent of urban households lack adequate water supply whereas 41.8 of rural households do. An adequate sewage system is missing in 6.9 percent of urban households compared to 24 percent of rural households; earthen floor is prevalent in 1.7 percent of urban and 18 percent of rural. Education levels are also significantly different: 7 percent of urban households have an illiterate member, but 24 of rural households do; 42 percent of adults have less than primary education in urban but 83 percent of rural households do. Health shows a more even record: only 11 percent of both urban and rural households lack health insurance, while 6 (9) percent of urban (rural) households face access barriers to health services. Differences among children and youth in both areas are not as severe: lack of school attendance is 2.5 percent in urban and 6.6 in rural areas; lack of childcare is 9.6 percent in urban and 8.7 in rural areas. Labor market conditions are not very different: informality is above 70 percent and long-term unemployment is around 10 percent in both areas.⁶³ In summary, the main drivers of differences in poverty as measured by the MPI are housing and education conditions, pointing to the importance of infrastructure and public service delivery across regions, especially in the Atlantic and Pacific regions which are the most in need.⁶⁴

⁶³ Data for 2014. See DANE (2015).

⁶⁴ The same conclusion is reached in a recent OECD study: Joumard and Londoño (2013).

Table III-1: Multidimensional Poverty Rates by Dimension in Colombia

Variable	2010	2011	2012	2013	2014	2014/2010
Without health insurance	21.0	19.0	17.9	17.1	12.2	-8.8
Low educational attainment	55.4	54.6	53.1	51.6	50.7	-4.7
Critical overcrowding	15.1	14.2	13.1	12.4	10.8	-4.3
Informal employment	80.9	80.4	80.0	78.1	76.8	-4.1
Schooling gap	35.1	34.1	33.3	31.7	32.0	-3.1
Illiteracy	13.2	12.0	12.1	11.7	10.7	-2.5
Barriers to early childhood care services	11.8	10.8	9.4	9.7	9.4	-2.4
Inadequate sewerage system	12.0	14.5	12.1	11.8	10.5	-1.5
School non-attendance	4.6	4.8	4.1	3.8	3.3	-1.3
Inadequate material for outside walls	3.0	3.2	2.2	2.1	1.8	-1.2
Child labor	4.6	4.5	3.7	3.6	3.4	-1.2
Inadequate flooring materials	6.3	6.3	5.9	5.8	5.2	-1.1
Barriers to access to health care services	6.9	8.2	6.6	7.2	6.3	-0.6
Without access to clean piped water	11.6	12.0	12.3	11.2	11.5	-0.1
Long term unemployment	9.9	9.1	10.0	9.7	10.4	0.5

Source: DANE (2015) Pobreza Monetaria y Multidimensional en Colombia, 2014. Boletín Técnico. Table 18, page 33. (see http://www.dane.gov.co/files/investigaciones/condiciones_vida/pobreza/bol_pobreza_14.pdf)

85. The World Bank's Shared Prosperity Indicator (SPI) for Colombia shows pro-poor growth in recent years. The SPI measures the annualized growth rate of average income among the bottom 40 percent of the population. It gives an indication of how well prosperity is shared among those who are relatively less well off while keeping a focus on overall economic growth.⁶⁵ Over time, some qualitative differences emerge in the distribution of economic prosperity's benefits in Colombia. In the pre-crisis period of 2002-2008, real income per capita of the bottom 40 percent—i.e. the SPI—grew at 2.7 percent, below the mean growth rate of about 3.1 percent. Between 2008 and 2013, however, the bottom 40 percent of Colombia's income distribution fared better. The SPI rose to 6.6 percent, significantly higher than the 4.1 percent growth in average income per capita. Over the 11-year period, the SPI was 4.5 percent per year, slightly higher than the 3.6 percent for the general population.⁶⁶

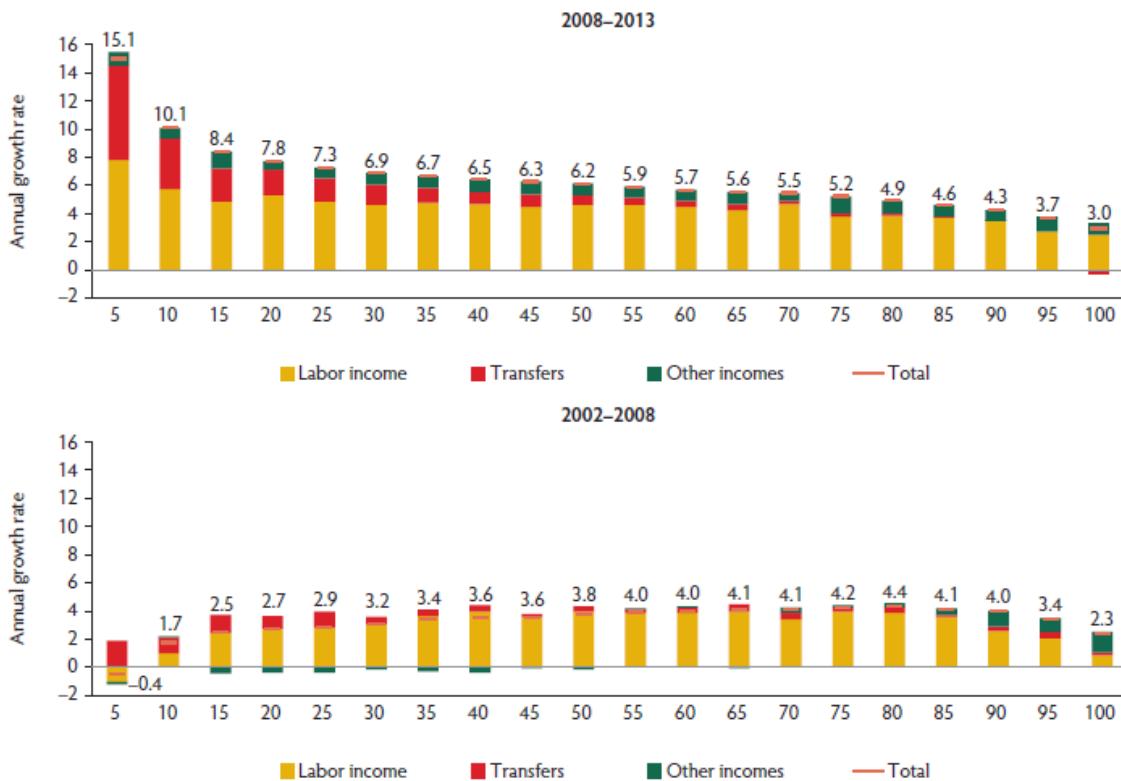
86. As in the case of poverty reduction, labor income growth is the main determinant of shared prosperity in recent years in Colombia. Labor income represents at least fifty percent of income growth for the poorest 10 percent of the population, and up to 70 percent for those in the fourth decile, in the period 2008-2013. Transfers represent between 40 and 20 percent of the income growth for those in the first four deciles of the distribution. The importance of labor incomes and transfer is seen in stark contrast for the period 2003-2008, when both sources of growth were very limited (even negative for some) among the poorest 40 percent (see Figure III-5).

⁶⁵ See Basu (2013).

⁶⁶ Income/consumption growth of the bottom 40 percent is ranked priority 1 (i.e., less than 20 percent distance/gap to the best performer) in all benchmarking exercises. See Figures A2-4, A2-5, and A2-6 in Annex 2: Benchmarking Colombia in the World.

87. **Shared prosperity and poverty reduction in Colombia have been accompanied by an increase in the size of the middle class but also in vulnerability to poverty.** While poverty declined to 32.0 percent of the population by 2012, the vulnerable to poverty reached 37.7 percent and the middle class represented 27.2 percent.⁶⁷ Differences among these three groups are mainly due to human capital accumulation and its use in labor markets. The three groups have the same number of adult household members (three adults on average), but the poor have lower participation rates (66 and 42 percent for males and females) than the vulnerable (76.2 and 54.5 percent) and the middle class (79.4 and 62.9 percent). The poor also have higher unemployment rates (11.5 and 22.1 percent for males and females) than the vulnerable (7.3 and 13.4 percent) and the middle class (4.9 and 6.6 percent). These trends accompany important differences in schooling. While only 4 percent of members have tertiary education in poor households, the respective figures are 11 percent among the vulnerable and 34 percent in the middle class.⁶⁸ Further, only 36 percent of households' heads in poor households have secondary education or more, while 62 percent and 72 percent do so in vulnerable and middle class families. Education, and the employment opportunities it brings forth, is the transition force from poverty and vulnerability to middle class.

Figure III-5: Growth Incidence Curve by Sources of Income, 2008-2013



Source: Rodríguez, Giménez and Valderrama (2014), Figure A 3.3, page 49.

⁶⁷ A person is considered poor if his/her monthly per-capita income falls below the national poverty line; a person is considered vulnerable if his/her monthly per-capita income falls above the national poverty line and below the income level that corresponds to the lower bound used to define the middle class. See Lopez-Calva et al. (2012) who estimate the bottom and top thresholds of Middle Class between US\$10–US\$50 (2005 ppp) daily per-capita. Incomes within these thresholds minimize the probability of falling again into poverty defined as US\$4 (2005 ppp) daily per-capita.

⁶⁸ Profile was estimated using data for 2012 taken from Rodríguez, Giménez and Valderrama (2014), Annex 2: 46.

88. **Vulnerability defined as propensity to shocks is also high.** Studies using panel data report that, over a three year period, 23.4 percent of urban households and 30.1 percent of rural households are chronically poor (i.e., remain in poverty in both years 2010 and 2013), while 8.5 percent and 9.5 percent, respectively, entered into poverty (i.e. those who were not poor in 2010 and became poor in 2013).⁶⁹ These data imply that those out of poverty face a 14.6 percent (20.1 percent in rural areas) likelihood of becoming poor, and those in poverty face a 55 percent (57 percent in rural areas) of remaining poor.⁷⁰ These data indicate high levels of poverty persistence and vulnerability to poverty that may be linked to welfare shocks of different types. Another study using the same panel data shows that social, health, and assets shocks are pervasive: 32.5 percent of urban and 37.3 percent of rural households report having had at least one shock between 2010 and 2013. Health and labor shocks are the most prevalent in urban areas (15.3 and 12 percent of surveyed households, respectively) whereas asset and health shocks are the most prevalent in rural areas (22.8 and 16.8 percent, respectively). Moreover, in rural areas, when adopting a locality rather than household perspective, natural disasters are the shock reported more often: 17.6 percent of rural households. Finally, there is evidence that propensity to shock is higher among the poor.⁷¹ This higher propensity to shocks, and limited protection against them, widens an already very unequal income in Colombia and makes risk prevention and insurance a central poverty reduction mechanism.

89. **Inequality has declined a little in recent years, but Colombia's income distribution remains among the most unequal in the region and the World.**⁷² For example, the ratio of per capita income of the richest 10 percent to the bottom 10 percent to the income distribution declined slightly, from 13.36 in 2002 to 12.1 in 2013. Similarly, the Gini coefficient and the Theil index remained practically stagnant during the earlier part of the decade, and declined only marginally in recent years (Table III-2). With comparable or higher levels of inequality at the beginning of the 2002-12 period, regional peers (e.g. Bolivia and Brazil) achieved better results in reducing income inequality over the 10-year span. Moreover, Colombia's Gini coefficient remained higher than the regional average in 2012, placing Colombia among the three most unequal countries in LAC, one of the most unequal regions of the world (Figure III-6).

⁶⁹ Data from Camacho and Zárate (2015) using the Encuesta Longitudinal Colombiana de la Universidad de los Andes (ELCA). It is a sample of 10,800 households (4,800 in rural areas). It surveys a panel sample of households from strata 1 to 4 in urban areas, and strata 1 in rural areas, so it oversamples the poor. For details, see CEDE (2011).

⁷⁰ Another study using pseudo-panel data spanning years 2004 through 2012 shows that in Colombia most of the poor (more than 90 percent) are chronically poor. This makes Colombia one of the countries with the highest proportion of chronically poor in Latin America. See Vakis, Rigolini and Lucchetti (2015).

⁷¹ See Ballesteros and Jaramillo (2011). These authors use the ELCA questionnaire to define shocks as follows: sickness or accident of any household member that prevented her normal activities (health shock); any household member lost her job (labor shock); loss of land/animals/remittances/dwelling/family business (assets shock). For details, see Ballesteros and Jaramillo (2011), Annex 1.

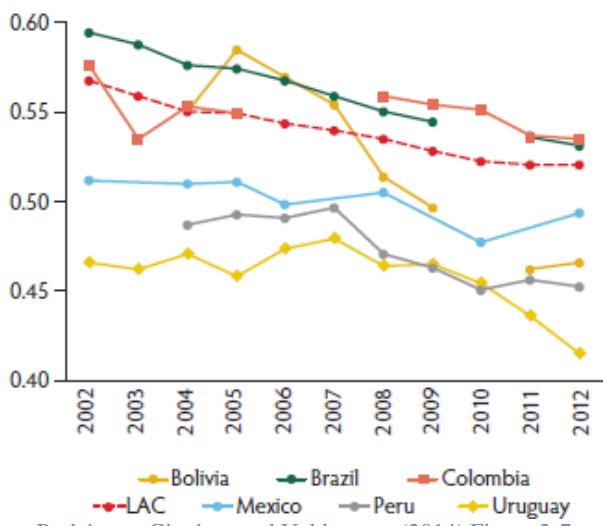
⁷² Inequality, as measured by the Gini coefficient, is benchmarked priority 4 (i.e., distance/gap of more than 80% to the best performer) in three out of four rankings. See Figures A2-4, A2-5, and A2-6 in Annex 2: Benchmarking Colombia in the World.

Table III-2: Evolution of Inequality Indexes in Colombia

	2002	2008	2010	2013
Gini	0.572	0.566	0.560	0.539
Theil	0.692	0.651	0.641	0.586
p90/p10	13.4	14.4	13.0	12.1
p75/p25	3.6	3.8	3.7	3.6

Source: Rodríguez, Giménez and Valderrama (2014), Table 2-1, page 31.

Figure III-6: Evolution of Gini Coefficient in Seven Large Latin American Countries

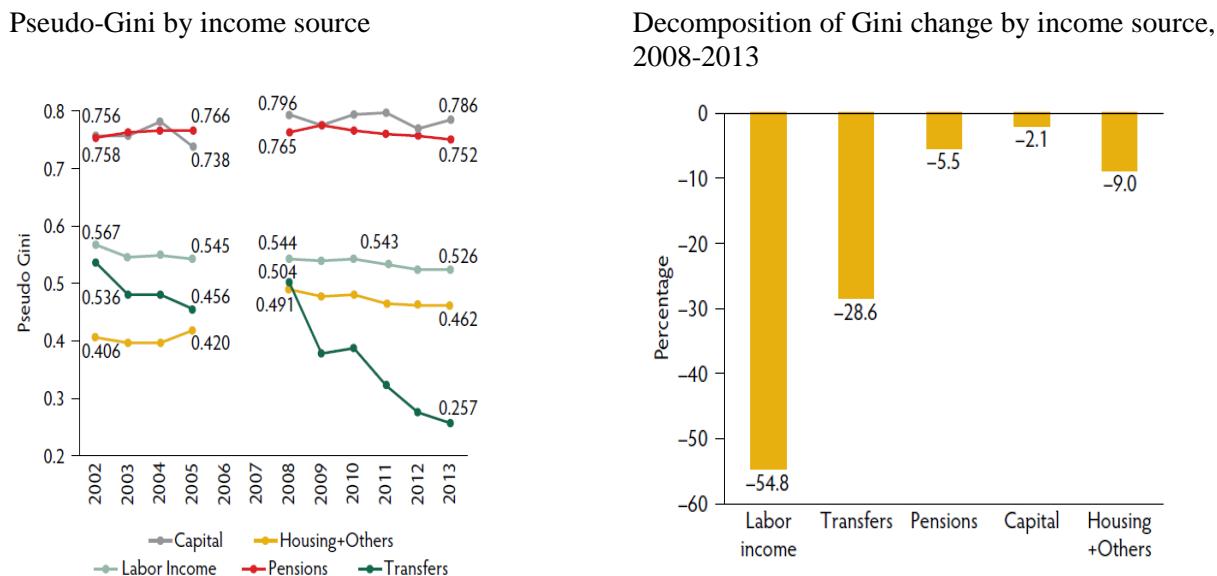


Source: Rodríguez, Giménez and Valderrama (2014), Figure 2-7, page 32.

90. **High inequality in Colombia is due to persistent inequality in incomes from all sources, with the exception of transfers, which have become more pro-poor.** Pensions and capital income are the most regressive sources of income in Colombia, but they do not account for a significant proportion of Colombia's income inequality. Pension and capital income, being primarily held by those in the higher income deciles, have a pseudo-Gini coefficient of around 0.75, but pensions explain only 8.5 percent of the observed level of income inequality in 2002–13 and capital income only 4.3 percent (see Figure III-7, left panel).⁷³ On the other hand, the slight descent of the highly unequal distribution of labor income—its pseudo-Gini declined only marginally, decreasing from 0.567 in 2002 to 0.526 in 2013—coupled with the fact that labor income represented more than two-thirds of total income, explains Colombia's persistently high level of inequality but also that labor income accounted for more than half of the observed reduction in inequality in Colombia (see Figure III-7, right panel).

⁷³ The Gini coefficient can be defined as the weighted sum of the pseudo-Gini coefficients corresponding to different income components, weighted by the share of each income source in the total income for the whole distribution. See Lerman and Yitzhaki (1985).

Figure III-7: Components of Inequality Trends in Colombia



Source: Rodríguez, Giménez and Valderrama (2014), Figures 2-12 and 2-13, page 39 and 40.

91. Transfers were a surprisingly important driver of reduced inequality. Representing less than 5 percent of total income throughout 2010-13, transfers are linked to a 28.6 percent decline in inequality. Two factors contributed to this relatively high elasticity of inequality to changes in transfers. As noted earlier, transfers not only grew at a high rate relative to other sources of income during 2008-13, but they also benefited those at the lowest end of the income distribution the most. As a result of this focalization, the pseudo-Gini of transfers declined by more than 50 percent over 2002-13—from 0.536 to 0.257. Overall, the growth in transfers combined with their “pro-poor” redistribution effects had a positive and relatively large impact on the reduction of income inequality over the past decade.

92. Another explanatory force of inequality in Colombia is inequality of opportunities. Inequality of opportunities refers to the share of total inequality that can be ascribed to circumstances at birth such as birth place, race, gender, or parents’ income. A recent study finds that 18-24 percent of inequality in adult labor outcomes in Colombia (labor income or per capita household income) is explained by circumstances such as parental education—the most relevant—followed by place of birth (defined by county, department, or urban/rural area).⁷⁴ Another study asserts that 3.5 additional years of parental education in Colombia are, on average, associated with more than 2.5 additional years of schooling in the next generation. This ranks Colombia seventh among 42 countries—rich and poor—in the correlation of education attainment across generations.⁷⁵ Other studies—using different methodologies—reach similar conclusions: parent’s education and place of birth (urban vs. rural area) explain most of the inequality in access to education, sanitation, and adequate housing across children and youth. All studies coincide in indicating that the Pacific and Atlantic regions have the highest inequality of opportunities in several indicators. These studies, however, show that these indicators have had a favorable

⁷⁴ One of the highest among comparable countries. See Ferreira and Meléndez (2012).

⁷⁵ Ferreira et al. (2013).

evolution (i.e., circumstances at birth explain less of total inequality over time) and Colombia exhibits inequality of opportunities similar to other countries in the region.⁷⁶

93. There is also some evidence of significant assets and capital inequality. Some indirect evidence refers to factorial income distribution. The share of labor incomes vis-à-vis capital incomes as a proportion of GDP in the national accounts has declined more than 10 percentage points in the last fifteen years. This growing inequality in factorial income distribution is not captured in inequality measures based on survey data. In fact, recent evidence using tax record data indicates that income inequality is higher than reported with survey data, and its trend has worsened in recent years.⁷⁷

94. Access to credit and financial services is also limited for the poor. Credit for SMEs, particularly microcredit, remains limited. According to Asobancaria, the number of firms with at least one financial product reached 632,000 in December 2013, an increase of 25 percent compared to 2012. The most used product is the savings account. However, just 1 percent of these firms offer microcredit. The 2013 Gran Encuesta PYME (GEP) survey indicated that more than 50 percent of SMEs reported no access to the financial sector; in particular, SMEs have difficulties accessing sufficient long-term financing to modernize their operations, and they lack alternative non-bank financing sources. Despite progress in promoting financial inclusion, a large share of the population still lacks access to formal financial services. Internationally comparable data show that only 30.4 percent of Colombia's population over 15 years old has access to formal financial services, below the regional average of 39 percent. This is similar to the levels in Ecuador (36.7 percent), Mexico (27 percent), and Argentina (33.1 percent) but lower than Chile (42.2), Brazil (55.9), and Venezuela (44.1 percent). Women and those living in rural areas utilize financial services less. There is evidence that 35.9 percent of men have a bank account, compared with 25.4 percent of women. Only 24.6 percent of the population in the rural areas has an account at a formal financial institution, compared to 33.5 percent of the urban population. Recent research findings highlight the importance of increasing financial services availability, including improved household welfare, reduced vulnerability to risks, and increased business activity.⁷⁸

95. The most serious asset inequality in Colombia is due to extremely severe land concentration. All studies concur in reporting that Colombia has one of the highest concentrations of land in the world. A recent study using cadastral data report that land concentration is not only high but also growing: for the period 2000-2009, land concentration has increased 1-2 Gini points and has reached levels around 0.85-0.90. This study proposes four causes that explain this high level of land concentration: (i) historic antecedents from colonial times when land distribution created landowning elites that implemented policies in their favor; (ii) weak land markets which

⁷⁶ For studies on inequality of opportunities for children and youth with a regional perspective, see Paes de Barros et al. (2009) and for a Colombian perspective, see Vélez, Azevedo and Posso (2010). Interestingly, gender does not appear to be an important determinant of inequality of opportunities in Latin America and Colombia. In these studies, gender is usually among the characteristics explaining the lowest share of total inequality.

⁷⁷ Evidence of more income inequality in tax-record data than in survey data is available in de la Torre et al. (2014). A recent study on worsening income inequality when including tax-record data is available in Londoño Vélez (2014). This author reports that, "Income is highly concentrated at the top, with the top 1 per cent of the distribution accounting for 20.5 per cent of total income in 2010. The evolution of income inequality has followed a U-shaped pattern in past decades. Since 2003, top shares of income have surged, and most of the changes are concentrated among the ultra-rich."

⁷⁸ Caraballo (2014).

complicated the formalization of land property and open market transactions; (iii) public policies that have tended to benefit large landowners—the so-called three “failed” land reforms; and (iv) the armed conflict and drug-trafficking activities that used land as a main input for funding their activities. The importance of the latter is highlighted by a statistical association between areas of high and growing land concentration with areas with attacks by armed groups.⁷⁹ Other studies using panel data surveys among low income populations find, most interestingly, that land concentration and formal land titling are related. Localities surveyed in departments of Boyacá and Cundinamarca had lower land Gini coefficients and lower percentage of informal land titling (0.55 and 35.6 percent, respectively); whereas localities in the Atlantic region (0.72 and 73 percent) and Santander/Norte Santander departments (0.74 and 68 percent) show higher land inequality and informality. This lack of formality affects dynamics of land markets by hindering new investments, buy/sell/rent transactions and income/consumption returns to agricultural activities.⁸⁰

96. Previous paragraphs have described the main forces that explain levels and evolution of poverty, shared prosperity and inequality in Colombia. Labor incomes appear as the main explanatory force for almost all of these indicators. Moreover, access to education, health, pensions, housing infrastructure, insurance against shocks, and protection against violence show direct impact upon several dimensions of poverty and inequality. The following sections explore further these two mechanisms of inclusions: the labor market and social policy (a term we use to agglutinate public access to the social services indicated above).

Labor markets as mechanisms of inclusion

97. The Colombian labor market is characterized by high rates of unemployment and informality.⁸¹ Unemployment rates in Colombia averaged 10 percent for the years 2007-2010, while countries like Brazil, Mexico, Argentina, and Peru have rates of 7, 5, 8, 5 and 8 percent, respectively for the same period. The informality rate in Colombia hovers around 60 percent, whereas in the aforementioned countries it has stayed around 45-50 percent. Similar to many countries in the region, however, unemployment and informality have higher incidence among women and youth. Female unemployment rate is regularly around three percentage points above the male unemployment rate, and the unemployment rate for youth (those aged 15 to 24) is among the highest in the region at around 20 percent.⁸² High rates of unemployment and informality is one of the main drivers of high inequality in Colombian labor markets. These rates have declined in recent years, but remain higher than those in other countries in the region.

98. The high level of informality is attributed to complex and expensive employment protection legislation (EPL) and the high level of unemployment is attributed to high minimum wages. Certainly, Colombia has a very high wage wedge due to labor taxes and quasi-

⁷⁹ Ibáñez and Muñoz (2010).

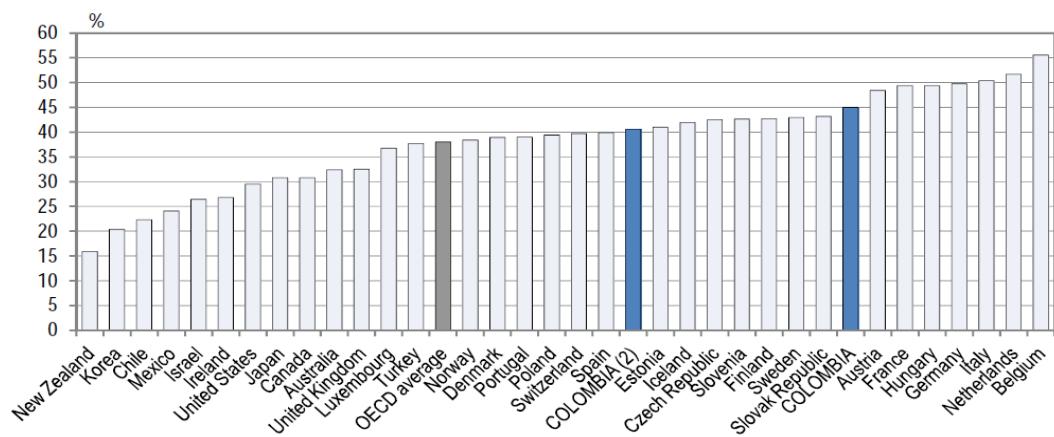
⁸⁰ See Helo and Ibáñez (2010).

⁸¹ Benchmarking of wage-growth rates positions Colombia as priority 2 among peers (i.e., between 20 and 50 percent distance to the best performer) but priority 3 in the world (i.e., between 50 and 80 percent distance to the best performer). Its unemployment and informality rates also rank priority 2 or 3 depending on the comparison group. See Figures A2-4, A2-5, and A2-6 in Annex 2: Benchmarking Colombia in the World.

⁸² Freije (2014).

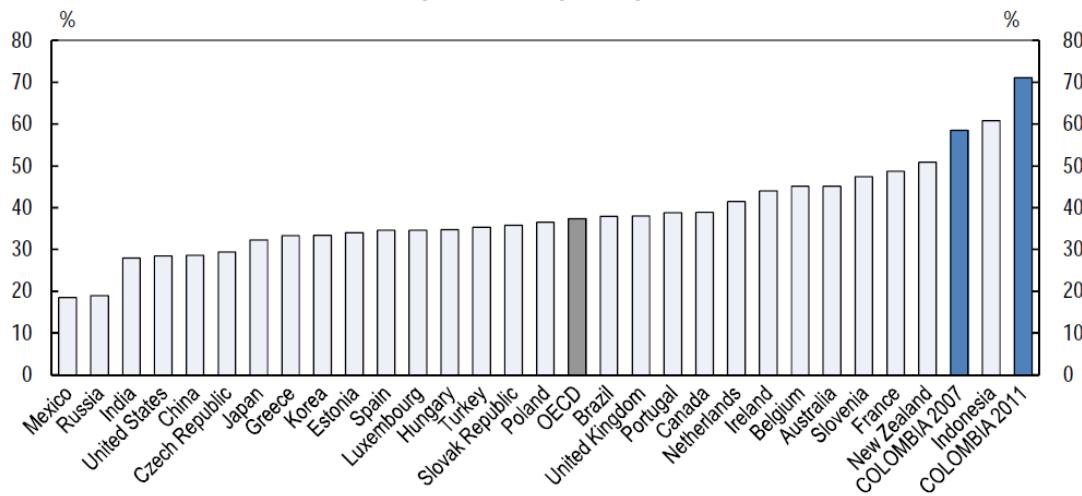
fixed labor costs instituted in its labor and tax legislation.⁸³ When compared to OECD and emerging countries, Colombia has one of the highest wage wedges in the world, even after the recent reform of *parafiscales* and social security contributions (Figure III-8). Similarly, Colombia's minimum wage strictness, defined as percentage of minimum wage to average wage is among the highest in the world (Figure III-9). The literature about the close association between informality and unemployment and higher labor taxes and quasi-fixed labor costs in Colombia is extensive.⁸⁴ The international literature also finds this link for some countries in the developing world, but highlights that the impact occurs mainly through an increase in the incidence of informality in two groups: women and youth.⁸⁵

Figure III-8: Non-Wage Labor Costs as Share of Total Costs, 2011



Source: Joumard and Londoño-Vélez (2014), page 16, figure 11.

Figure III-9: Ratio of Minimum Wage to Average Wage, 2011 or Latest Available Year



Source: Joumard and Londoño-Vélez (2014), page 13, figure 9.

⁸³ Joumard and Londono-Vélez estimate that social security contributions, and employment protection legislation amounts to around 40 percent of total labor costs. This is below the pre-reform level (45 percent) in 2011, but still higher than in 1992 (38 percent). See Joumard and Londono-Vélez (2014, 15).

⁸⁴ See Kugler and Kugler (2008) and Mondragón-Vélez et al. (2010).

⁸⁵ See Betcharman (2015).

99. Labor risks are insufficiently covered. Programs for the more than two million unemployed are limited to job training, largely through SENA, with a smaller number accessing labor intermediation services. Very few benefit from temporary employment, unemployment insurance, or other supports for obtaining work or starting a small firm. Support for the working poor is particularly scarce. The quality of these services is questionable as well. Over a nine-month period, for example, only 15.3 percent of SENA graduates who registered with the labor intermediation service obtained jobs in a labor market with 8.5 percent unemployment. A recent study finds that the unemployment insurance serves only as a consumption smoothing mechanisms, but has no impact upon employability or productivity when the worker is re-employed.⁸⁶

100. However, not all of informality and unemployment can be attributed to the institutional setting of the Colombian labor market. Human capital accumulation and the returns it conveys as well as differences in regional development also play a role in explaining informality and average wages. Education, particularly tertiary education, is the main determinant of the likelihood of being informal in Colombia,⁸⁷ and its impact upon inequality has grown in recent years but it is the consequence of structural forces put in motion decades ago. Recent studies show that the economic and demographic transformation initiated in the sixties and seventies led to a massive increase in the demand for secondary and tertiary education two decades later. Despite the expansion of public expenditures in education, the access to and quality of secondary and tertiary education was insufficient to satisfy growing demands from the cohorts born in the sixties, seventies, and eighties. As a result, the rate of return to education and inequality both rose for several decades.

101. Education is key to understanding wage differentials by gender and race. The average male-female wage gap has remained of around 13 percent in the mid 2000s, a decline from the 18 percent recorded in the early nineties. More recent data reports no decline, but an even higher male-female wage gap.⁸⁸ In this case there is a wide literature that reports that wage differentials between men and women are largely unexplained (i.e., are due to unexplained differences in returns to similar characteristics) and that an important occupation segregation prevails.⁸⁹ Unexplained wage differentials are higher in the two extremes of the earnings/education distribution: it is larger among the less and the most skilled. This U-shaped pattern of wage differentials is attributed to lack of legal protection, particularly among women working as housemaids, and some evidence of glass-ceiling, that is the inability of high-education women to reach higher ranks in organization structures, among those with high skills.⁹⁰ This is despite a remarkable increase in female labor force participation (more than 20 percentage points between 1986 and 2006, the largest in the region during the last decade⁹¹) that is due to growing participation of married (or cohabitating) women and growing average education. In other words,

⁸⁶ See Medina, Núñez and Tamayo (2013).

⁸⁷ Bernal (2009) shows that those with college education are at least 27 percent less likely to be informal workers than those without primary education, after controlling for other observable personal and productive characteristics.

⁸⁸ DNP (2013). “Informe de seguimiento de los objetivos de desarrollo del milenio” reports average gender wage gaps above 20 percent for years 2010, 2011 and 2012, using data from Gran Encuesta de Hogares.

⁸⁹ See Hoyos, Nopo and Peña (2010).

⁹⁰ Fernandez (2006)

⁹¹ For a documentation of the expansion of Colombia’s female labor participation in regional comparison see Elias and Nopo (2010)

there is a persistent gender divide in labor markets, in terms of informality rates, unemployment rates, and average wages, despite a growing participation of women in the labor force.⁹²⁹³

102. In the case of Afro-Colombians and indigenous peoples, access to education is the main barrier but location also plays a special role. Among Afro-Colombians, for instance, average wages are around 16-18 percent lower than the rest of the labor force. This difference, however, is not due to differences in the average return to education between blacks and others, but to the difference in educational endowments between these two groups. In other words, if other explanatory variables are included in the analysis (i.e., occupation, location) no unexplained difference in wages remains. Differences in accumulation of human capital, and segregation into specific occupations and locations are then the main obstacle for Afro-Colombians to attain similar wage levels than the rest of the population.⁹⁴ In the case of indigenous population, the average wage gap is around 67 percent (more than three times larger than against Afro-Colombians). In this case, however, the unexplained part amounts to nearly 26 percent. Interestingly, if type of occupation and location are added to this analysis, then the unexplained component share declines to 17 percent. In the case of indigenous, unexplained wage differentials add to barriers to access to education and occupation/location segregation.⁹⁵ Given that Afro-Colombians and indigenous peoples concentrate in the Pacific and Atlantic regions, this evidence matches with the previously described fact of departmental differences in average incomes being an important and unabated source of total inequality.

What is the impact of territorial diversity, armed conflict, and extractives-based growth upon the labor market?

103. Territorial diversity plays a distinctive role in labor market incomes. Different private capital accumulation, public infrastructure, and skills availability across Colombian regions creates stark differences in labor productivity. These differences lead to contrasts in informality rates: Bogotá has an informality rate of 45 percent whereas the Pacific and Atlantic regions have informality rates above 65 percent. Figure III-10 shows that higher average and median income are associated with lower informality rate, less stringent the minimum wage, and lower unemployment rates. This indicates that national labor market regulations have different impacts on different regions, depending on each region's productivity. High informality and unemployment rates are associate with a combination of national regulations that do not respond to regional differences; and, on the other hand, investment gaps—in infrastructure, in human capital, and in local governance—that cause wide productivity differentials. The importance of local labor markets is also highlighted by recent studies on the wage curve (the link between wave

⁹² Furthermore, gender gaps in entrepreneurship are pervasive in Colombia. Lack of access to finance is highlighted earlier in this report, but women face specific constraints faced aside from financial assets (e.g. lack of technical support, access to key markets, and other factors). See Bruhn, M. (2009), World Bank (2010g). For a case study in Bucaramanga, Colombia, see Powers, J. and B. Magnoni (n.d.).

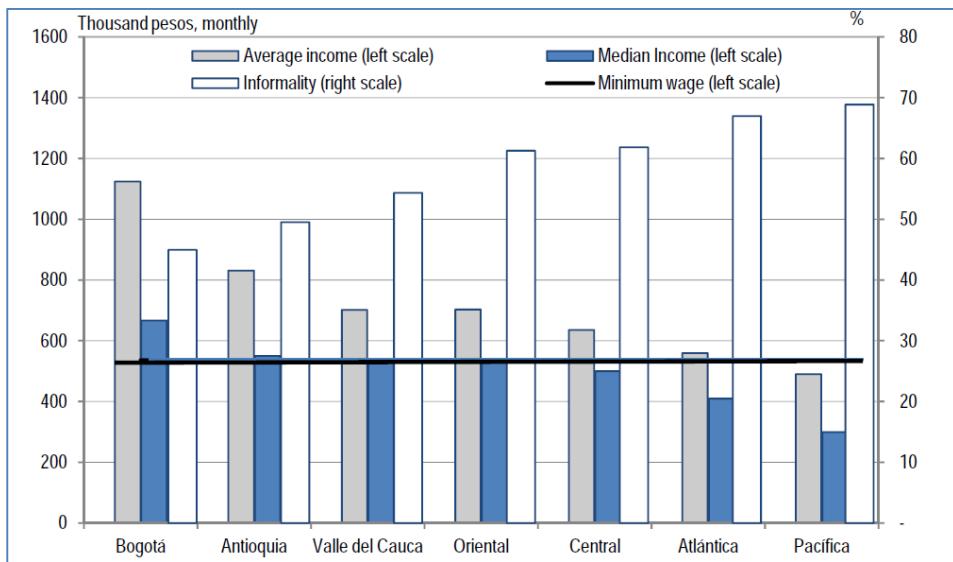
⁹³ During stakeholder consultations for this diagnostics, representatives of female-based organizations voiced that not only the labor market has signs of discrimination against women, but that institutions and culture in Colombia do not react to combat this discrimination. See Annex 1: Stakeholder Consultations, sessions with female-based organizations.

⁹⁴ See Rojas-Hayes (2008).

⁹⁵ See Peña and Wills (2010).

levels and unemployment) in Colombia, showing that there is a significant negative relation between wages and unemployment, particularly for informal workers.⁹⁶

Figure III-10: Minimum Wage, Average Income and Informality by Region in Colombia, 2011



Source: Joumard and Londoño-Vélez (2014), page 14, figure 10.

104. The armed conflict has had a massive impact upon labor markets, particularly in rural areas. The sheer numbers of displaced population, mostly from rural areas, is a first indicator of the disruption in economic activities that the conflict has created. Recent studies show that the presence, or perceived presence, of paramilitary groups, guerilla groups, and cases of violence are the main determinants of population displacement. Similarly, the existence of land ownership and livestock in a given community, also makes that community more likely to suffer attack from violent groups, thereby leading to population displacement. On the other hand, the presence of military force and police, as well as access to social services, education, and media are factors that reduce the likelihood of displacement.⁹⁷ In other words, the conflict threatens the productive use of assets (be it land, machinery, or animals) and workers; it hinders legal economic activity; and it propels families into limited economic activity, displacement, and poverty. There is evidence that off-farm employment is a mechanism used by the displaced or by those remaining in localities affected by the conflict. However, off-farm employment opportunities are limited, particularly for women, and do not fully compensate the household for consumption losses due to the conflict.⁹⁸ Again, public policy directed at helping the displaced to rebuild their lives, by restituting or compensating for loss of assets and by helping create new employment opportunities—particularly

⁹⁶ Using data for thirteen metropolitan areas in the period 2002-2006, Ramos, Duque and Surinach (2010) find that a 10 percent increase in the unemployment rate of a given city is associated with a 10 percent lower average wage among male private formal workers, and 18 (20) percent lower wage among male (female) informal workers. This is evidence of efficiency wages, not only labor law regulations, as an explanatory force of unemployment and limited integration/mobility across different local labor markets in Colombia.

⁹⁷ Ibáñez and Engel (2007).

⁹⁸ See Fernández, Ibáñez and Peña (2011). This U-shaped profile of wage gaps is also reported by Badel and Peña (2010).

with an accent on agricultural activities—seems to be a necessary and effective mechanism to reduce the poverty and inequality impacts of the conflict upon labor markets.⁹⁹

105. Moreover, the armed conflict has a direct impact, through the expropriation and/or destruction of productive assets, upon poverty and inequality in Colombia. The risk of forced expropriation of land, loss of animals and equipment, as well as loss of human life severely affects the means of living among households affected by the conflict. Several studies indicate that productive assets not only serve as sources of income generation, but also as guarantees/collaterals against shocks. Therefore, conflict-affected households not only lose their means of subsistence but also the insurance mechanisms against the risks of losses due to health/employment shocks. If, in addition, households are displaced, they also lose social capital; that is all the social interactions they had with members of the same locality/village which helped them to find jobs, insure against risks, and share a community. In their reception locality the displaced not only lack assets but also social capital, making it more difficult for them to integrate and to escape poverty. Statistical evidence shows that the presence of armed conflict and violence in a locality increases the likelihood of displacement, which in turn increases the likelihood of assets loss. On the other hand, the presence of the military forces, policy, social services, education, and media reduces the likelihood of displacement and of assets loss. Furthermore, for those already displaced, new accumulation of assets and hence reconstruction of life is associated with length of settlement in a new locality, as well as the access to income generating programs, particularly related to agriculture if this was the original activity of the displaced.¹⁰⁰ All this evidence highlights the importance of concluding the armed conflict and having, during the post-conflict, an active policy of state presence in conflict-affected localities through renewed safety, economic opportunities, and rural development.¹⁰¹

106. Extractive industries have played a positive role in the growth of living standards and labor productivity in the past decade. Between years 2012 and 2014, the mining industry has become the sector with the highest and fastest growing output/worker.¹⁰² However, the sector has created less than one percent (0.6 percent) of total direct new employment in the period, so it is not a direct contributor to poverty or inequality reduction through employment creation. Extractives may have helped though the expansion of other sectors, such as construction and services, through the indirect demand that oil/carbon/gold industries created upon other activities. Certainly, construction and services are the two economic activities with the largest output/worker growth in the decade. But, how important, or how dependent have standards of living in Colombia been on extractive industries?

107. Extractive industries represent around 7.5 percent of output/head growth in the last decade. A decomposition of changes in output per head shows the relative importance of extractives (see Table II-1). For the period 2001-2013, nearly half the growth in value added/head in Colombia can be ascribed to favorable demographics and increasing employment. In other words, the country has made use of more labor and has then been able to produce more output for everybody. The working age population rose from 75 percent to 79.1 percent of the total, labor

⁹⁹ See Ibáñez and Moya (2010) and Ibáñez and Engel (2007).

¹⁰⁰ See Ibáñez and Moya (2010) and Ibáñez and Engel (2007).

¹⁰¹ See Castañeda, Fabre, Puerto Gomez and Kostner (2014) and Morris (2014) on main policy recommendations from World Bank experts to a sustainable peace and rural development agenda during the post-conflict.

¹⁰² Figures refer to extraction of hydrocarbons, coal, and other minerals. Oil refining is not included.

force participation grew from 61 to 65.3 percent, mostly due to growing female participation, and open unemployment declined from 14.9 to 9.3 percent, for the same period.¹⁰³ The other half of output/head growth corresponds to labor productivity. This growth in labor productivity can be accounted for by increases in productivity in a given sector (a within-sector component) and employment shifts from low to high productivity sectors (a between-sector component). One-quarter corresponds to more people working in high productivity sectors (a between-sector movement), mostly due to movement of workers to the financial sector industry. The other quarter is a combination of within-sector productivity growth in which services and mining show the highest contributions (13.9 and 7.3 percent, respectively).

108. **These numbers highlight the importance of new sources of employment creation.** If the extractives industry falters in coming years, output/head would be at least 8 percent slower than in the previous decade. If one adds an associated slowing in services and construction the deceleration in productivity growth can reach 20 percent. If the recent reduction in unemployment rates wanes in the future, an additional 30 percent of output/head growth is at stake. There are some apparent areas for improvement. Agriculture has not contributed to productivity growth in the last decade, and it is repeatedly mentioned as a potential boon for the Colombian economy.¹⁰⁴ Financial services have seen a large descent in average productivity. Even public utilities (electricity, gas and water) have had no contribution to output/head growth which, given the gaps in terms of sanitation and housing in rural areas gauged by the multidimensional poverty index, would merit a more robust pace of growth in coming years.

109. **In summary, from the previous analysis there appear to be a set of obstacles to eradicate poverty, to share prosperity, and to reduce inequality through labor markets.** Without implying order of importance, the following are identified: First, access to quality education, particularly secondary and tertiary education, is a crucial driver of poverty reduction (as those with secondary and tertiary education are less likely to be poor) and to inequality (as the Afro-Colombian wage gap is mostly due to lower educational levels). Second, promotion of equality of opportunities in the labor market is also needed. Women, despite growing participation and human capital accumulation are systematically less likely to receive the same payment for the same job and qualifications. Indigenous peoples face a combination of both limited access to education and unexplained wage differentials. Third, special employment policies seem necessary for those affected by the conflict, due to the severe asset losses that characterize their situation. Fourth, regional development, through narrowing of the public investment gap across regions/departments is necessary to reduce the productivity disparity across departments and its unabated impact upon inequality. Fifth, further reconsideration is needed of payroll taxes and other labor market regulations, such as minimum wages, in order to reduce the high informality rates that characterize the Colombian economy.

¹⁰³ Data for the month of June, taken from DANE, Gran Encuesta Integrada de Hogares.

¹⁰⁴ The potentiality of Colombia as an agro-industry and agro-export economy was voiced by different groups during stakeholder consultations that helped inform this diagnostic. See Annex 1: Stakeholder Consultations, sessions with Academics, Private Sector Representatives, and Organizations of the Pacific Region.

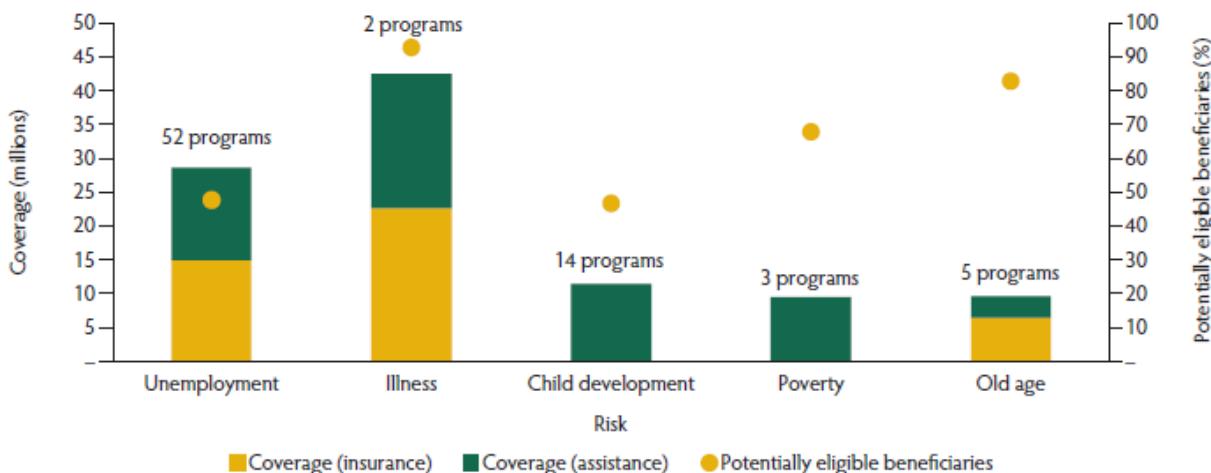
Social Policy as a mechanism of inclusion¹⁰⁵

110. Social policy (understood as the mechanisms through which the Colombian state funds and/or delivers health, social assistance/insurance, education, housing, and security, particularly for those at the bottom of the distribution) is a key instrument to influence the coverage and equity of access to several dimensions of monetary poverty, multidimensional poverty, shared prosperity, and inequality. This section discusses these aspects individually. Education and training have already been discussed in previous sections because of its close connection to growth/productivity and inclusion in labor markets so it is not elaborated further here.

Health and Social Insurance/Assistance

111. Over the past 20 years, Colombia has developed a rich array of social security and social assistance programs to support the needs of vulnerable populations. Approximately 80 national programs are operating to manage a range of social risks, some of which have achieved substantial coverage (See Figure III-11). The contributory social security schemes offer pensions, health insurance, occupational hazard insurance, and a set of other benefits (via *Cajas de Compensación*, workers' clubs that provide services ranging from unemployment insurance to sports clubs) to those who pay into the system. These programs are intended to protect against income shocks and help smooth consumption over the life cycle. To reduce poverty and promote greater human development, Colombia has a broad range of social promotion (assistance) interventions, many of which provide the same service as the contributory system but to a population that does not pay into the system. The objective of these programs is to "graduate" the poor to the social security programs and to protect against shocks.

Figure III-11: Components of Colombia's Social Protection System



Source: Botero et al. (2014), figure 11-1, page 195.

¹⁰⁵ This section draws extensively from Corchuelo et al. (2014).

112. The health insurance program is globally applauded for its universal coverage.¹⁰⁶ The Law 100 of 1993 created the General System of Social Security in Health (*Sistema General de Seguridad Social en Salud*, or SGSSS), which has seen a rapid expansion in coverage, financial protection, and equity over the years. As of December 2013, 43.2 million people were covered by health insurance (approximately 92 percent of the eligible population); nearly half paid through payroll contributions of a household member (Contributory Regime, or RC) and the other half paid through general taxes (Subsidized Regime, or RS). The financial protection of the system is quite effective; out-of-pocket expenses of the population represent 17 percent of total expenditures in health, compared to a regional average of 34 percent.¹⁰⁷ Evidence also points toward increased access to services, especially those related to reproductive health. The percentage of pregnant women that had at least four prenatal check-ups grew from 70 percent in 1990 to 90 percent in 2014. These accomplishments have also helped to increase equity in access and use of health services, especially for those living in rural areas and the poor, and reduced the risk of catastrophic and impoverishing health expenditures in cases of illness. This is also documented in the favorable results of health-related indicators within the multidimensional poverty index (see Table III-1).

113. Colombia created the conditional cash transfer program *Familias en Acción*, which was introduced in response to the 1999 crisis and has now grown into the country's largest social assistance program. It aims to break the intergenerational transmission of poverty by providing more than 2.6 million families with cash transfers when they comply with their co-responsibilities in terms of investments in their children's human capital; in parallel, the Government provides basic health, nutrition, and education services. In 2013, the program was expanded to provide cash transfers to nearly 80,000 high school graduates from *Familias*, eligible households who attend technical or technological training programs in the SENA (*Servicio Nacional de Aprendizaje*) and universities (1,753 students). The program covers about 35 percent of the poor. Numerous impact evaluations have found that participation in *Familias* improves human capital outcomes of children.¹⁰⁸

¹⁰⁶ Giedion and Villar Uribe (2009) summarize several studies and state that universal health insurance in Colombia has increased access to and use of health services, reduced the incidence of catastrophic health spending, and has had an impact upon the vulnerable and the poor.

¹⁰⁷ In terms of Health and Nutrition, the indicators included in the benchmarking exercise show Colombia in favorable terms. Life expectancy at birth, prevalence of children anemia, prevalence of communicable diseases, perinatal or nutritional conditions as cause of death, mortality rates under five, and out-of-pocket expenditures all show levels of priority 1 or 2 in most rankings (i.e. distance to the top performer of less than 20 or 50 percent, respectively). However, adolescent fertility rate shows priority rate 3 in all rankings. See Figures A2-4, A2-5, and A2-6 in Annex 2: Benchmarking Colombia in the World.

¹⁰⁸ Econometric evidence from Econometria - Sistemas Especializados de Información (IFS 2006) and IEG (2011) show the impact of this program in several dimensions. Primary school attendance of *Familias* beneficiaries increased by nearly 2 percentage points and secondary school attendance increased by nearly 7 percentage points. Beneficiaries are 4 to 8 percentage points more likely to complete high school (relative to a graduation rate of 50 percent for the control group) and are more likely to attend a higher education institute than similar youth who were not beneficiaries. *Familias* beneficiaries are similar to non-beneficiaries in performance on standardized tests. In terms of health, malnutrition among children less than three years old living in rural areas decreased by 6 percentage points, and a reduction of 4.1 percentage points was measured in urban areas. Children were taller and heavier (by 0.21 standard deviation) by age 9-12. In rural households, the cash transfer reduced income poverty by 5.4 percentage points and extreme poverty by 12.6 percentage points, with a decline in extreme poverty among urban household of 17.1 percentage points. However, Baez and Camacho (2011), using long-term data, report that program recipients who graduate from high school seem to attain test scores at the same level as equally poor non-recipient graduates, so the positive impacts on high school graduation may improve the employment and earning prospects of participants, but

114. With the growth in universal health insurance, a large social assistance program, and an increase in the number of social programs, social spending in Colombia is on par with that of the Latin America region. Colombia's social expenditure as a share of GDP is 9.7 percent, compared to a regional average of 8.3 percent, but far less than the 20 percent in Argentina and Brazil. The steady growth in social expenditure from 3 percent in 1990 to nearly 10 percent two decades later mirrors a growth pattern across the region, although Colombia had one of the largest increase in social expenditures as a share of GDP. Furthermore, the creation of SISBEN, a means test tool for identifying beneficiaries, in the mid-90s; the RUAF, an unified registry of beneficiaries; and *Red Juntos*, a one-stop-shop with social workers to help the poor access programs in mid 2000s; the creation of Social Protection Ministry in 2010; and the "De cero a Siempre" initiative, an early childhood development program, in 2013 all mean that Colombia has pieces of a Social Protection System.¹⁰⁹

115. The Social Protection Programs are fragmented among many dimensions, however. First, multiple programs address the same risk, partly due to financing mechanisms that create different programs covering the same risk, funded by different sources (contributory and subsidized) and, in some cases, providing the same benefit. This fragmentation is increasing as Colombia fills coverage gaps by creating subsidized programs that provide the non-contributing population the same benefits as the contributory programs. For example, Colombia is in the process of developing its fifth program to provide cash to the elderly population.

116. The fragmented health financing system creates significant inefficiencies due to administrative cost, multiple processes, legal decisions, and perverse incentives. The RS is funded by up to 16 different sources, which include payroll contributions, earmarked levies from general taxes, local revenues from lotteries, and RC solidarity contributions distributed to multiple intermediaries (EPS) who then pay service providers. Due to the heterogeneity of the sources and limited capacity of some actors, RS financial resources do not always reach the providers, jeopardizing the financial stability of the system. Several studies show that the current practices of including risk adjustments in insurance premiums (UPC) are not sufficient to avoid risk-selection by EPS, and the current POS definition leads to the reimbursing of medical procedures that are not cost-effective. In addition, the system complexity creates vulnerabilities related in particular to fraud and corruption in claims processing and beneficiary affiliation, areas of vulnerability that do not exist in integrated public-provision systems.

117. This fragmentation leads to horizontal equity, but it creates potential distortions in the labor market and vertical inequities. Workers in the RC system pay a percentage of their salaries for health insurance, while workers who earn the same amount but are in the RS system pay nothing to access the same POS, which could discourage formal employment.¹¹⁰ Regarding

the lackluster effects on test scores raises concerns about quality of education received and impact upon future productivity and wages.

¹⁰⁹ Camacho et al. (2014) document implementation challenges of *Red Unidos* and a limited favorable perception from beneficiaries, particularly IDP, as well as limited impact upon objective variables due perhaps, to the early implementation of the program. A more recent experimental impact evaluation by Abramovsky, Attanasio and others (forthcoming) argues that *red Unidos* has null impact on uptake of social programs mainly due to the limited number of visits to potential beneficiaries by social workers, and other funding and implementation limitations.

¹¹⁰ See Camacho, Conover and Hoyos (2013). Cuesta and Bohórquez (2014) also find that health insurance coverage reduces mobility across employment sectors. Cuesta and Oliveira (2014) do a thorough analysis of willingness to pay

vertical inequities, a pensioner in the *Prima Media* regime and one in the *Ahorro Individual* may pay the same amount into the system but the former may receive a much higher payout due to the different structures of the programs. Finally, the system has severe regressivity due to a patching together of benefits over time. For example, while all formal sector employees contribute to pension and contributions are capped, higher earners receive more during retirement and therefore take a disproportionate amount out of the system (see Box III-1).

118. In spite of a large number of social programs for various populations, and much overlap, Colombia faces two coverage issues: insufficient coverage of some risks and insufficient coverage of some populations. The risk of poverty from illness is effectively mitigated by health insurance that covers around 92 percent of the population, but the risk of illness is not well covered. The health insurance model focuses on the provision of individual and specialized health services, rather than wider-reaching public health, prevention, and health promotion activities and addressing health problems at the primary care level. Evidence shows that health systems with a strong primary care orientation are able to produce better health outcomes and higher levels of satisfaction. Expensive, individualized care—for example, a high rate of general hospitalization (9 percent), most of which the evidence suggests was unnecessary, or 16 percent of Ministry of Health budget for individualized legal claims for services outside of the POS (*tutelas*)—distorts expenditure and coverage of the health care system. More generalized health prevention and promotion activities are increasingly needed in Colombia, a country facing an aging population and an epidemiological transition characterized by an increase in the burden of diseases related to chronic conditions and non-communicable diseases.¹¹¹

119. The elderly population is well covered, but the benefits are insufficient. While nearly half of the 2.4 million people over age 60 are poor, only 30 percent receive pensions, and most of those beneficiaries are not poor. The rest receive a stipend equal to US\$20-\$35 a month (the minimum pension payment is approximately US\$300 monthly). However, the elderly poor have needs in addition to money, including healthcare, housing (25 percent live alone or with another elderly person), nutrition, and psycho-social well-being. Healthcare itself is covered by the health insurance system, but out-of-pocket expenses are substantial. With the conversion of PPSAM (*Programa de Protección Social al Adulto Mayor*) and *Juan Luis Londoño de la Cuesta* programs to the cash-transfer *Colombia Mayor*, 500,000 more people are receiving benefits (for a total of 1,213,500), but the nutrition and psycho-social well-being dimensions are no longer addressed by any program.

Box III-1: Pensions, Poverty, and Inequality in Colombia

As shown in Figure III-3 and Figure III-7, pensions contribute very little to poverty or inequality reduction in Colombia. The regressivity of this pension system sits in its design: contributory pensions are tied to contributions from formal employment for more than 25 years, a feat very few workers achieve in Colombian

and valuation of social services paid through social security contributions and “parafiscales” and find that bias towards informality is not only due to the payroll taxes but also to the sub-par valuation of the services perceived by workers.

¹¹¹ Selected indicators of social protection coverage have a mixed record when benchmarked. Social coverage, as measured by the share of workers who contribute to pensions- is priority three (i.e., 50 to 80 percent distance/gap to the best performer) in most rankings. Share of population covered by some social protection program have priorities 2 and 3, while share of those in the bottom quintile who are covered is priority 2 (i.e., between 20 and 50 percent distance to best performer) in all rankings. That is, there are gaps in coverage, but focalization is pretty good. See Figures A2-4, A2-5, and A2-6 in Annex 2: Benchmarking Colombia in the World.

labor market; pensions rights are defined using the last ten years of contributions, in contrast to 30 years or even lifetime contributions in OECD countries; and pension contributions are deductible from the income tax base and benefits are largely tax exempt. Consequently, only 30 percent of the elderly are beneficiaries (and 80 of these belong to the top income quintile) but pensions payments represent around 18 percent of the central government budget in 2011.

The Programa de Protección Social para el Adulto Mayor (PPSAM), now called Colombia Mayor, on the other hand, provides a monthly pension of around US\$35/month for elderly aged 65 and more, defined as poor, i.e., who are in SISBEN 1 or 2. Approximately 38 percent of the elderly population is covered, but the program represents only 0.1 of GDP and its expansion is limited by budgetary availability.

The concern with the lack of coverage and protection to the low income elderly led to a new legislation in 2009 (Law 1328), implemented since 2012, that allowed the creation of Beneficios Económicos Periódicos (BEPS), a form of individual retirement accounts for low-income workers that the government can top-up with subsidies of up to 20 percent of the contribution so that retirement benefits for the account holder reach, at most, 85 percent of the minimum wage.

The Colombian Government is working to expand the coverage of Colombia Mayor and the uptake of BEPS, as well as a more integrated contributory system, so that the coverage, sufficiency, and progressivity of the pension system increases in future years. In any case, and given that the design of the contributory system and that the funding of old-age insurance for those at the bottom of the income distribution depend on transfers from the contributory system as well as central government, a more progressive pension system will involve expanding budgetary outlays as well as some parametric reforms to the contributory system. These reforms are a necessary condition for a more sustainable and equitable pension system in Colombia.

Source: Joumard and Londono-Velez (2014) and Rofman (2014)

120. By the nature of its work, the rural population is more likely to be outside the social insurance programs and has not fully benefitted from their rapid growth. In addition to the *Familias en Acción* program, which originally targeted the rural population (until 2011), there are 10 programs solely focused on rural areas, with coverage of 450,000 in a population of more than 11 million. While non-contributory insurance covers rural areas (for example, 83 percent of the rural population is covered by the RS) it is not clear which of the smaller programs are operating in rural areas. The lack of social support is reflected in rural poverty statistics. While poverty has declined in Colombia over the past decade, only one-quarter of the reduction was due to lower rural poverty. This is not to say that the situation in rural areas has not improved. Poverty rates are down a third over the past decade to 41.4 percent for the broad measure and 18.0 percent for extreme poverty by 2014. However, the improvement has been much greater in urban areas, where both rates dropped by 50 percent over the same period to 24.6 percent for poverty and 5.1 percent for extreme poverty.

Housing and urbanization

121. Housing and urbanization policies have two sides regarding their impact on wellbeing in general, or on poverty and share prosperity in particular. First, there is the value of the service of housing and urbanization amenities (public transport, recreation facilities, etc.) and, second, the capital accumulation that owning a dwelling close to or far from these amenities may imply for families. The measurement of these impacts within monetary poverty is a matter of technical debate. In the case of Colombia, however, the multidimensional poverty index does include specific reference to housing conditions, specifically, access to sanitation, treated water,

building materials, and number of rooms. Most of these indicators show little progress in recent years (Table III-1).

122. Colombia has a long history of housing and urbanization policies. These policies have ranged from public rural housing as part of sanitation campaigns at the beginning of the twentieth century, to more recent policies based on the three pillars of family savings, public subsidies/guarantees, and private sector mortgages since the mid-nineties. The most recent aspect of housing policy even includes free houses for those in extreme poverty or displacement.¹¹²

123. These policies have produced an important reduction in the housing deficit over the last four decades, although a deceleration in this trend has been observed recently. Both the quantitative (lack of housing) and qualitative (housing with inadequate services) deficit have fallen in relative terms, although due to population growth the deficit in absolute numbers is much bigger than in the early seventies (see Table III-3). The deficit has continued falling in cities, where the quantitative deficit has fallen from 13 percent to 5 percent of households (a reduction of nearly half a million households) from 2005 to 2013, although the qualitative deficit only fell from 14 to 13 percent (an actual increase of 200 thousand households up to 1.3 million, for the same period).¹¹³

124. The deceleration in the reduction of the deficit affects more those at the bottom of the income distribution. Access to piped water and sewage services for those in the first quintile of the distribution in rural areas went from 48.1 and 8.9 percent, respectively, in 2003 to 50.6 and 11.7 in 2012. The figures for those at the top quintile in rural areas went from 53.9 and 32.2 in 2003 to 57 and 23.8, respectively, in 2012. The gap is starker when considering urban areas: adequate sewage handling incidence ranges 93 to 99 percent and piped water ranges 83 to 98 of households across quintiles in 2012.¹¹⁴ These differences involve a serious poverty and inequality problem in quality of housing.¹¹⁵

Table III-3: Colombia Housing Deficit: 1973-2012

Year	Quantitative deficit		Qualitative deficit		Total deficit	
	Number	%	Number	%	Number	%
1973	403	18.2	1807	52.5	2210	74.7
1985	492	13.6	1719	33.2	2211	49.0
1993	1579	16.4	2391	26.5	3970	41.2
2005	1307	12.4	2520	23.8	3828	36.2
2012	1476	12	2952	24	4428	36

Source: Gilbert (2014), Table 1, page 256.

Note: Quantitative deficit refers to households living in non-mitigatable dwellings. Qualitative deficit refers to households living in dwellings built with inadequate materials, without access to services, or without a room for cooking.

¹¹² For a review of the history of public housing and urbanization in Colombia, see Ministerio de la Vivienda, Ciudad y Territorio (2014). For a critical view of recent free housing policies in Colombia see Gilbert (2015).

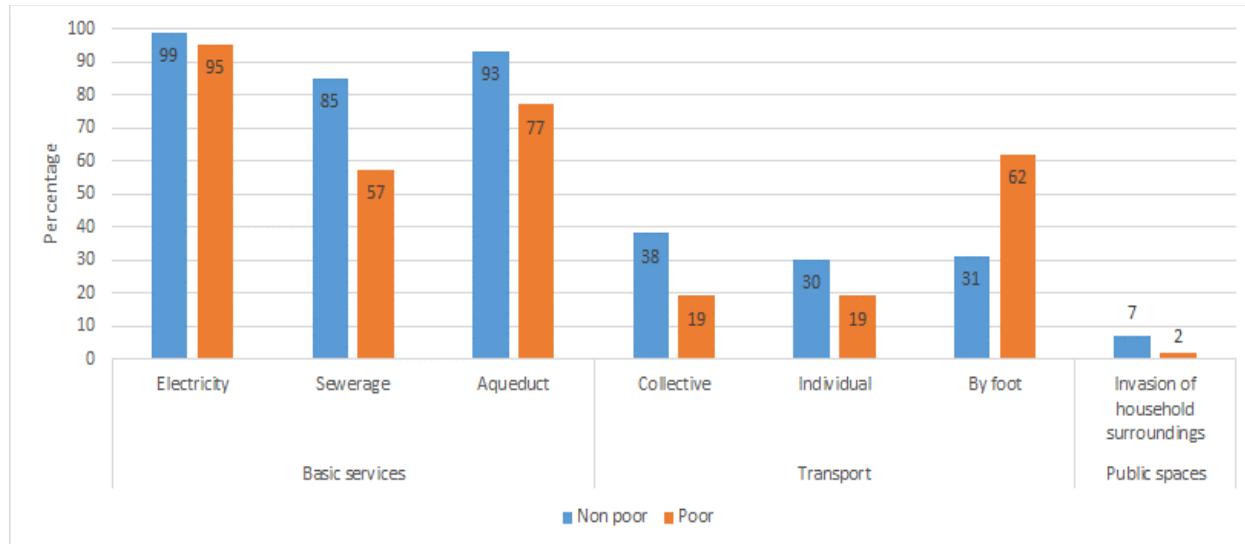
¹¹³ Figures from Ministerio de la Vivienda, Ciudad y Territorio (2014), table 5, page 89. No numbers for rural areas reported.

¹¹⁴ Data from Ministerio de la Vivienda, Ciudad y Territorio (2014), table 8 and 9, pages 113 and 114.

¹¹⁵ Access to an improved water source in rural areas and improved sanitation facilities in both urban and rural areas are benchmarked as priority 3 (i.e., distance of 50 to 80 percent to the best performer) when compared to peers. Access to electricity in urban and rural areas is ranked priority 1 or 3 depending on the comparison group. See Figures A2-4, A2-5, and A2-6 in Annex 2: Benchmarking Colombia in the World.

125. **The poor also endure gaps in transportation and urban amenities.** The poor not only have lower access to adequate sewage handling and piped water services than the non-poor, but also are less likely to use public or private transportation (see Figure III-12). This means that the poor are more likely to walk to work and, given the territorial segregation of Colombian cities, job opportunities are more limited to them. Access to public spaces is limited in most Colombian cities (the national average in 2010 was 3.7 meters/habitant whereas the OMS recommends 12 meters/habitant and global cities have ranging from around seven meters in Barcelona to 31 meters/habitant in Boston), but even this indicator is less favorable to the poor.

Figure III-12: Access to Housing and Urban Services, Colombia 2012



Source: Ministerio de la Vivienda, Ciudad y Territorio (2014), figure 16, page 113.

126. **Urbanization can be an instrument of social inclusion and regional convergence.** But urban expansion that responds only to building targets merits careful evaluation because it can be counterproductive in terms of affordability (by increasing household expenditures on transport and municipal expenditures on investments and maintenance of infrastructure), urban and economic densities, and social exclusion.¹¹⁶ Land-use planning at the agglomeration level can help in understanding mobility patterns and identifying underutilized areas within city limits as alternatives to urban expansion. Municipal and regional integration is not only crucial to providing better services, planning, and governance but also to fostering stronger, more resilient and inclusive economies. The concentration of economic activity within regions is inevitable and usually desirable for economic growth, but the large spatial disparities in welfare levels that often accompany this concentration are not.¹¹⁷

¹¹⁶ One of the main tensions of unbalanced growth in Colombia relate to the high level of urbanization, coexisting with such a high importance of the primary sector in the economy. The OECD has recently focused on how the level of urbanization in Colombia is way above its peers. That creates tensions in labor markets, provision of services, housing, transport and crime. See OECD (2014c)

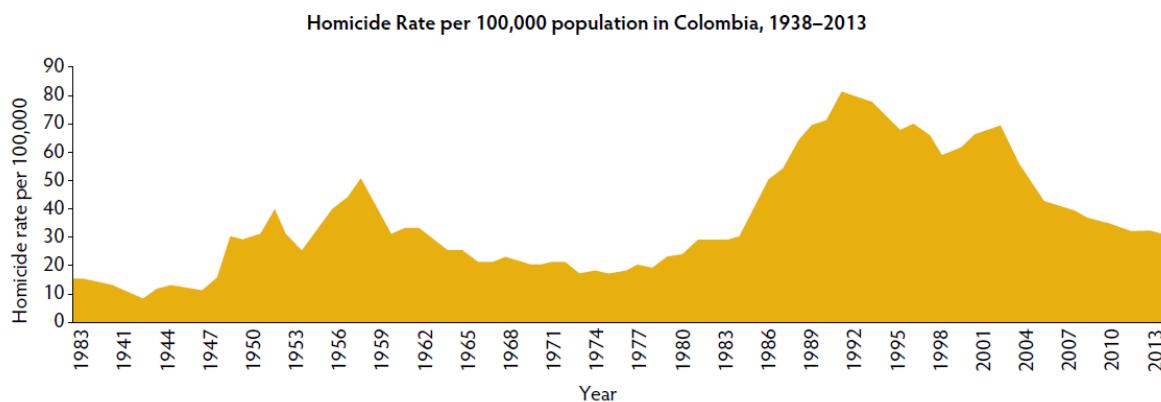
¹¹⁷ International comparisons and policy recommendations for more inclusive urbanization in Nuñez and Acero (2014).

Citizen security

127. **Citizen security is a fundamental condition for wellbeing in general and for socio-economic prosperity in particular.** Living in a safe environment that guarantees life and property is a fundamental human right but it is also pre-condition for individuals and families to freely make use of their assets—human, physical and financial—to earn a living and to insure against risks. Although not directly included in official indicators of multidimensional poverty, there is evidence of a close connection between violence and poverty in Colombia, and many other countries in the world.¹¹⁸

128. **Most indicators of political and common violence in Colombia have shown noticeable improvement in recent years.**¹¹⁹ Political assassinations, victims of mines, and massacres have declined to a minimum in the period 2002-2012. Figure III-14 shows that the homicide rate, although the lowest since the early nineties, is still higher than in the mid-seventies or before the eruption of *La Violencia*. This general improvement, however, hides important differences across departments. The homicide rates range from 104.9 and 94.9 per 100,000 habitants in Guaviare and Arauca to 10.5 and 11.2 in Boyacá and Amazonas. The rates of 46.8 and 68.9 per 100,000 habitants in departments of Antioquia and Valle del Cauca, are a sign of still serious security problems in largely populated areas of the country and not only in isolated zones. Kidnappings range from 11.8 and 3.9 per 100,000 habitants in Arauca and Casanare to 0.1 in Quindío and Sucre (see Table III-4)

Figure III-13: Homicide Rate, Colombia 1938-2012



Source: Castañeda et al. (2014), figure 1-1, page 5..

¹¹⁸ Lemus (2013) finds econometric evidence of causation of the armed conflict on rural poverty in Colombia. For a general study of the impact of violence and conflict upon poverty and development, see World Bank (2011).

¹¹⁹ Still, indicators of governance and rule of law do not fare well for Colombia. Index of political instability and absence of violence is priority four (i.e., distance/gap of 80 percent or more to the best performer) in all rankings. Control of corruption and rule of law are ranked priority two or three, always. See Figures A2-4, A2-5, and A2-6 in Annex 2: Benchmarking Colombia in the World.

Table III-4: Indicators of Citizen Security in Colombian Departments, c.2010

Indicator	Homicides	Kidnaps: simple or with extortion	People expelled or forced displacement
Definition	Deaths caused by one or more persons illegally and with violence, per inhabitant	Acts in which a person or a group of people are deprived of their liberty unlawfully	Total population expelled by forced displacement
Unit	(rate per 100,000 population)		
Source	Sistema Estadístico de Delitos y Contravenciones-SIEDCO-Policía Nacional	Dirección operativa para la defensa y a libertad personal-Ministerio de Defensa Nacional	Acción Social-DPS
Year	Average 2009-2010	Average 2009-2012	Average 2008-2011
Amazonas	11,2	0.0	0.55
Antioquia	46.8	0.4	0.60
Arauca	94.1	11.8	0.57
Atlántico	23.5	0.1	0.62
Bogotá, D.C.	18.2	0.3	0.93
Bogotá/Cundinamarca	18.0	0.3	0.82
Bolívar	18.5	0.1	0.69
Boyacá	10.6	0.6	0.88
Caldas	39.2	0.6	0.91
Caquetá	69.0	2.1	0.77
Casanare	22.6	3.9	0.58
Cauca	43.9	1.6	0.67
Cesar	26.4	0.8	0.57
Chocó	27.4	1.3	0.60
Córdoba	34.1	0.2	0.64
Cundinamarca	14.7	0.3	0.50
Guaviare	104.9	1.3	0.31
Huila	33.4	0.6	0.72
La Guajira	29.9	0.8	0.46
Magdalena	26.3	0.4	0.47
Meta	50.4	1.2	0.46
Nariño	39.4	1.4	0.45
Norte de Santander	39.4	1.1	0.81
Putumayo	60.7	2.2	0.40
Quindío	43.4	0.1	0.89
Risaralda	57.8	0.3	0.68
San Andrés	21.2	0.0	0.78
Santander	21.8	0.4	0.77
Sucre	19.4	0.1	0.77
Tolima	29.5	0.5	0.68
Valle del Cauca	68.5	0.8	0.75

Source: Ramírez et al. (2014), page 68, figure A.6

129. The improvement in national averages of indicators of political and common violence is a sign of the improvements in security in Colombia since the beginning of the 2000s, but new security challenges may arise in the future. Global experiences show that the main challenge in the aftermath of a peace agreement is preventing the recurrence of cycles of violence,

allowing society to implement the necessary and agreed-upon changes.¹²⁰ The recurrence or persistence of violence is sometimes the result of rival criminal organizations competing to control illegal activities formerly organized by insurgency groups. In the case of Colombia, drug-trafficking, money laundering, extortion and kidnappings may become the trade of Bacrim (Spanish acronym for criminal bands) and other groups.¹²¹ At the same time, there are also positive experiences of economic resurgence, socio-political integration, and violence decline in Colombian cities that enter a post-conflict process.¹²² Replicating these experiences and implementing a strategy for a sustainable peace that conveys security to all Colombians is a challenge of social policy in coming years.

Box III-2: Funding Social Policy: Progressivity of Tax and Transfers in Colombia

The tax and transfers system has little redistributive capacity in Colombia. Both when compared to OECD (Joumard and Londoño 2013) and LAC countries (Hurtado, Lustig & Melendez, 2013), inequality after taxes and social policy remains roughly the same as before them. The lack of redistribution of the tax system is both a problem of low taxation in the top of the distribution and weak targeting of the expenditure benefitting the bottom. When Colombia is compared with Brazil, a natural peer in terms of inequality levels, the country has a gap of about 9.6 Gini points in terms of redistributive capacity, and most of the gap is attributed to cash and in-kind transfers, through public spending (World Bank 2015).¹²³

As Colombia faces a challenging scenario with growing spending pressures and external conditions dampening the revenues, the funding of social policy demands further fiscal reforms. In the medium term, Colombia will face challenging external conditions that could dampen fiscal revenues, mostly due to its dependency on natural resource revenues (EIU 2015).¹²⁴ This highlights the risk of a heavy reliance on natural resources to increase the funding of the government's income, and also it makes a call for new revenue sources that are less sensitive to the economic cycle. At the same time, the current social agenda, involving reforms over the CCTs, housing policies, non-contributory pensions, plus a potential peace agreement is creating additional spending pressures. Despite important progress achieved in regards to taxation in Colombia with the recent tax reform in 2012, such reform did not aim to increase revenue in a significant way,¹²⁵ making this issue a priority in the tax-policy agenda that needs to be addressed. There is a recent tax law passed by Colombia's lower house in October of 2014, however this was just to protect in the short-term the government budget. Further and more structural fiscal reforms are needed.

There is space to increase revenues without widening the tax base or increasing tax rates of direct taxes. Tax revenues represent 20 percent of GDP in Colombia, a low value when compared to other countries (LAC and OECD) and below its potential capacity of revenue (24 percent OECD 2015). Increased tax collection can be achieved without changing present tax rates but through policies that lower tax evasion and make changes in fiscal exemptions. The progressivity of income taxes, for example, has been undermined by generous tax reliefs, which

¹²⁰ “Conflicts are not one-off events; they are ongoing and repeated. In the 2000s, for instance, 90 percent of the civil wars occurred in countries that had experienced a civil war in the past 30 years. Additionally, many countries that have negotiated political and peace agreements face high levels of crime and violence—for example, El Salvador, Guatemala, and South Africa.” Castañeda et al. (2014), footnote 13.

¹²¹ See Ince (2013).

¹²² For a documentation of the case of Medellín and other cities in the world with post-conflict challenges, see Goldberg, Kim and Ariano (2013). For the case of Cali, see Cuesta and Alda (2012).

¹²³ Estimations from commitment to Equity studies for 2010 show that once the fiscal system is applied to the market income in Colombia, the Gini falls from 57.5 to 53.5; while in the case of Brazil this fall is from 57.4 to 43.8. It means a difference of 9.6 Gini points in redistribution capacity of the fiscal system, where 6.9 of this reduction happened during the operation of in-kind transfers (see Lustig and Melendez 2010).

¹²⁴ Economist Intelligence Unit, Country Report.

¹²⁵ Rather, the reform reworked the progressivity among the taxpayers and the reduction of tax burden for formal employment.

benefit most the well off and increase tax avoidance opportunities (Juormand and Londoño 2013). On the other hand tax evasion is between 2 percent and 4 percent of GDP (OCDE 2015); explained not only by the high informality of the economy but also by some institutional weaknesses in the tax custom administration.

There is also room to increase revenues through indirect taxes, as long as the urgent changes that are needed to achieve the progressivity over the indirect tax system are considered. Different from other Latin American countries, in Colombia the VAT is regressive (OECD 2015). In addition to policies that aim to increase the progressivity of indirect taxation, as the exemptions on basic food stuffs, the inclusion of goods that are produced by other sectors as construction, education, transport, among others, could increase revenues and help to make the system more progressive. The current revenue loss from not taxing the excluded activities is around 2.4 percent of GDP (Yori Parra et al. 2013). Moreover the VAT is relatively low compared to emerging markets as Peru and Chile, which means that increases in overall VAT system are feasible if they are followed by increments in the social policy in order to compensate the less well off.

Jointly with the revenue side, the funding for social policy could come from more efficient social spending of the current revenues. Most of the weak redistributive capacity of the fiscal system in Colombia is due to the in kind transfers (World Bank 2015). The improvement over the targeting system for these subsidies is an area that needs further work. One of the policies that can pave the road to this goal is the unification of targeting systems, since the SISBEN and Estratos are simultaneously operating as tools for targeting (Juormand and Londoño 2013). The recent design of SISBEN III is a policy that is working toward that direction. Its expansion over other kind of subsidies, for instance the cross-subsidized utility prices, would be crucial in order to reduce the proportion of inclusion and exclusion errors (OECD 2015 and Camacho et al. 2010). On the other hand the expenditure in housing and tertiary education is still regressive, the policies to ensure the access of the less well-off population to these systems would increase the redistributive capacity of tax system and also could liberate resources that were not well targeted to funding the current social agenda.

What is the impact of armed conflict, territorial diversity, and extractives-based growth upon social policy

130. **The expansion of extractives industries and the new royalties' regime may potentially influence social policy.** The commodity price boom has provided a new abundance of resources to regions that, before the new royalties' regime, benefitted little from the expansion of extractive activities. However, despite growing responsibilities regarding delivery of social services (basic education and health) as well as local infrastructure, many localities still fail to level its social spending with respect to the rest of the country. In June 2011, the Congress approved a constitutional reform geared toward introducing results conditions in the royalties system (*Sistema General de Regalías*, or SGR). Created in 1991, the royalty transfer system was based on the revenues of commodities, such as oil, gas, and minerals. While the annual amount of royalties was previously insignificant, it increased substantially over the past two decades with rising commodity prices and production. In 2008, royalty payments amounted to COP 6 trillion (about US\$3 billion, or 1.3 percent of GDP), six times higher than the levels of the 1990s. For the period 2013-2014 the budget of royalties amounted COP 10.4 trillion (about US\$5 billion).

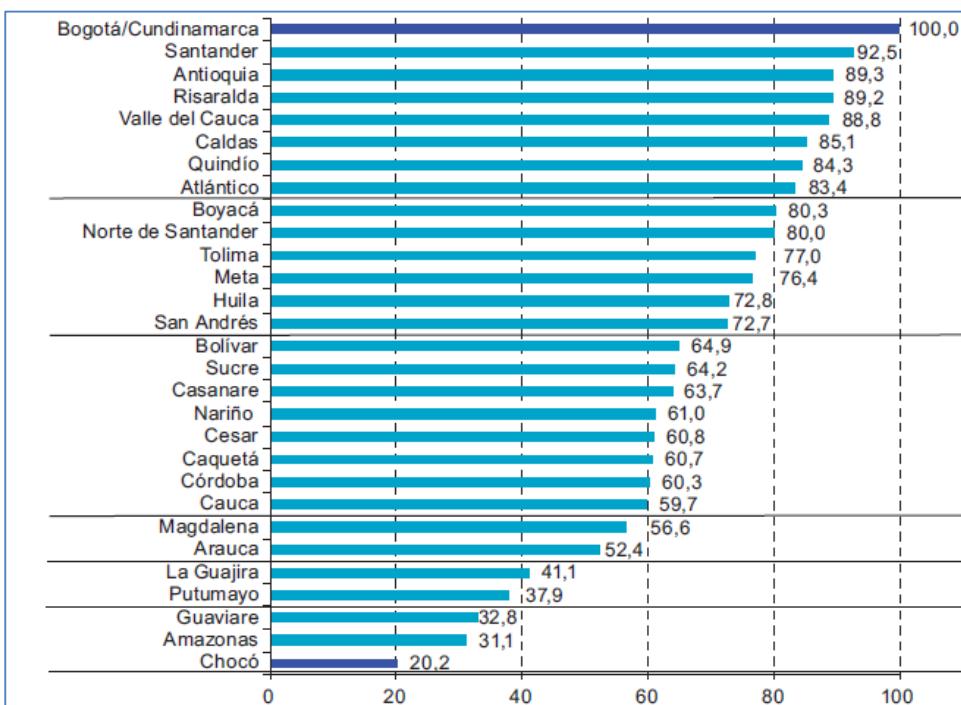
131. The growing flow of resources for subnational governments has contributed to better subnational planning and efficiency in the use of resources. However, the increase in the coverage of basic services has not been accompanied by increases in the quality of these services.¹²⁶ Evaluation reports from the Ministry of Finance and Public Credit (*Ministerio de Hacienda y Crédito Público*, or MHCP), the Comptroller General's Office (CGR), and the National Planning Department (DNP) indicate significant shortcomings in the overall management of resources. The evidence suggests that subnational governments lack the capacities, the systems, and the data to

¹²⁶ See Arizti (2014).

properly manage, monitor, control, evaluate, and report on the use of resources affecting service delivery.¹²⁷

132. Also related, the territorial diversity of Colombia translates into significant heterogeneity in service delivery. A recent study shows that security conditions and provision of basic social services are extremely different from one department to another. Figure III-14 shows a ranking of access to basic services by department. Most departments are 20 percent below the leader, but Chocó, Guaviare, Amazonas, Putumayo, La Guajira, Arauca and Magdalena report indexes 40 or more lower than the best performers (Bogotá/Cundinamarca).¹²⁸ This evidence implies that a national social policy needs to be a regional policy that focus on those departments lagging with respect to social development indicators.

Figure III-14: Ranking of Access to Basic Services by Department



Source: Ramírez et al. (2014), page 26, figure 8

Note: ECLAC basic services index include indicators about: number of beds per population, mortality rates, number of affiliates to the subsidies social security system, primary enrollment rates, illiteracy rates, access to water, sewage and electricity, poverty rate, adolescent pregnancy rate, unemployment rate, GDP/head growth and IDP per 10.000 inhabitants.

¹²⁷ The convenience of the royalties' reform and the abilities of subnational governments to efficiently manage the new availability of resources was a subject of contention during stakeholder consultations for this diagnostic, with some experts indicating this reform could involve progress and convergence across regions whereas others claim that it will be a waste of resources. See Annex 1: Stakeholder Consultations, sessions with experts on growth, macro and fiscal issues.

¹²⁸ The index includes a combination of indicators of access to health, education, public utilities, and security. Ramírez et al. (2014) also include other rankings of indicators for economic development, modernity, security, competitiveness and infrastructure. In all of these, the main message is the wide performance dispersion across departments in Colombia.

133. The armed conflict has an important impact upon social policy, particularly among those directly affected by the violence: displaced peoples, victims, and ex-combatants. Making social policy work for those affected by the conflict will require three transitions: a security transition from violence to respect of the rule of law and international humanitarian standards; a development transition from a war economy to a peace economy; and a political transition towards democracy for all. These transitions involve implementation of a complex set of security, judicial, and socio-economic policies at the national and local levels.¹²⁹ Regarding the development transition, stabilizing the labor market for better livelihoods and making local economies more dynamic and better connected to the national economy is a necessity. Both serve the objective of reintegrating ex-combatants, IDPs, and victims into society. This implies an improved operating environment clear property rights, land registers, business-friendly taxes, and the delivery of essential services (electricity, water, justice). IDPs have priority access to social assistance programs and tend to have higher coverage than other population groups, but the redefinition of the rural institutional framework, particularly concerning land titles, is essential for economic and social development to take place. However, current policies for titling rural land, updating cadasters, and registering land-use information have been difficult to implement even on a small scale. Land restitution programs have faced challenges at the administrative and judiciary level; so far only 16,700 restitutions have been made, or less than 2 percent of potential claims. At the local level, early delivery of results include concrete actions, such as demining, that are needed not only to reduce deaths, but also to allow people to move freely and without fear and to enable public services to be delivered. In addition, it is essential to protect social leaders, human rights activists, and leftist groups. These actions will allow for the efficient implementation of important policies for the economic and political transitions, such as land restitution, victims' return, and service delivery in isolated areas.

134. In summary, from the previous analysis there appears to be a set of challenges to the eradication of poverty, shared prosperity and reduced inequality through social policy. Without implying order of importance, these are: incomplete access to water and sanitation infrastructure, health services, quality education, road infrastructure, and security, particularly in departments distant from main city centers and/or affected by violence; a fiscal system with limited sufficiency and progressivity of tax and transfers; a pension regime that is extremely regressive and provides little support to the elderly population in poverty; and a local administration that, despite having access to new resources through oil royalties, has institutional limitations to fully implement local development policies.

¹²⁹ For an elaboration of the three transitions see Castañeda et al. (2014).

IV. HOW SUSTAINABLE ARE CURRENT PATHS OF GROWTH AND INCLUSION?

Mixed sustainability outlook

135. **The World Bank goals emphasize the importance of fiscal, environmental, and social sustainability aspects of a country's development strategy.** Achieving the twin goals of reduced poverty and shared prosperity in the short-term, but only at a cost of sacrificing those same goals in the future, makes no economic, social, environmental, or moral sense. Therefore, sustainability analysis must ask about both the short- and longer-terms, i.e., about both current and future generations. This chapter does that, and identifies key sustainability-related constraints on achieving the twin goals over the longer-term. The analysis, as in previous chapters, explores sustainability in terms of Colombia's three historical characteristics and other more recent policy-based systemic issues (the matrix below is a synopsis of the findings of this chapter).

Sustainability-related issues as mapped onto Colombia's distinguishing characteristics.	
<i>Uneven Territorial Development</i>	<ul style="list-style-type: none">• Regional social unrest, unrelated to armed conflict (Social)• High pollution levels in large cities (Environmental)
<i>Armed Conflict</i>	<ul style="list-style-type: none">• The fiscal cost of compensations and reparations in the post-conflict era. (Fiscal)• Lack of citizen security as consequence of both armed conflict and its legacy of increased common violence. (Social)• Insufficient forest, land, and natural resource management in post-conflict areas. (Environmental)
<i>Extractives-based growth</i>	<ul style="list-style-type: none">• Volatile natural resource public revenues. (Fiscal)• Insufficient environmental regulation of oil and illegal mining activities. (Environmental)
<i>Systemic</i>	<ul style="list-style-type: none">• Fiscal consolidation heavily skewed towards public expenditure reduction. Un-funded and regressive pensions. (Fiscal)• Inadequate disaster risk management and adaptation in the face of worsening natural disasters and climate change. (Environmental)

Note: "Sustainability" has fiscal, social and environmental dimensions, considered separately.

Fiscal sustainability

136. **While fiscal policy in Colombia maintains a strong commitment to fiscal consolidation, the demand for public spending will rise in coming years.** Building on previous chapters, the country faces expanded rural infrastructure and service requirements to reduce inequities associated with historically uneven territorial development; the high cost of conflict-related reparations and restitution; and expenditure needs associated with improving the rule of law, particularly as regards citizen security.

137. Fiscal discipline, strong economic growth, and an important increase of oil-related fiscal revenue have brought down the public debt-to-GDP ratio. The gross debt-to-GDP ratio over the past decade came down from 45 percent in 2003 to 36 percent in 2014¹³⁰. This result was led by a combination of factors. Prudent debt management reduced interest payments, and improved debt profile. High growth and commodity revenues, combined with changes in the tax policy, contributed to continued increase in government revenues, while prudent allocation has reduced the waste of these additional resources. The budget balance fiscal rule for Colombia's central government adopted in 2011 requires a reduction in the central government's structural deficit to 2.3 percent in 2014, 1.9 percent in 2018 and 1.0 percent in 2022. The most recent annually updated Medium Term Fiscal Framework (MTFF) extends the projection of a deficit of 1.0 percent to 2023-2025.

138. Colombia's fiscal policy program faces the challenge of inter-temporal use of revenue from resource wealth. The exhaustibility of natural resource revenue poses the challenge of how to allocate the natural resource rents between saving for future generations and use of resources to meet current economic and social development needs, including investment in human capital and infrastructure needs to enhance economic growth. This policy choice is further complicated by the uncertainty regarding the size of the rent, which in the case of Colombia mainly refers to uncertainties in both volume and value of the future oil production. The fiscal rule and the annual MTFF seems to strike an adequate balance in this regard.

139. Going forward, some of the favorable conditions that contribute to fiscal consolidations are likely to revert. Until last year, Colombia's MTFF was built on the basis of a continued strong economic growth (annual growth of 4.8 percent), a relatively high oil price (\$97 in 2014 and increasing at 1 percent per year) and a volume of oil production of about 1 million bpd. These assumptions might be too optimistic going forward. While the fiscal rule leaves room for a short term transition to a new scenario, it is important to explore further the sensibility of the fiscal deficit to sustained changes in commodity prices as well what has been the behavior of income tax elasticity to possibly lower economic growth.

140. Even under lower commodity prices, Colombia public debt is sustainable if the government remains committed to the fiscal rule, which will require important structural adjustments. The debt sustainability analysis indicates that public debt is expected to reach a declining path in the baseline case. This analysis is consistent with the updated macroeconomic assumptions outlined, taking into account lower expected economic growth in 2015-17 and 2 percent of GDP drop in government revenues in 2015-16 due to lower oil prices, and its stabilization as a share of GDP following a recovery in economic activity. In the baseline scenario, the combined public debt-to-GDP ratio is projected to increase to 39.7 percent of GDP in 2015 and decrease there after reaching 37 percent in 2020. This scenario is largely based on an updated version of the government's consolidation plans supported by the medium term fiscal framework, which implies decreasing expenditures, and in particular capital expenditures, as a share of GDP.¹³¹ Because a large share of central Government debt is in local currency and on fixed terms, shocks to the interest and exchange rates have only a modest impact on the debt trajectory. At the

¹³⁰ Debt of the Non-financial public sector represents 27.4 percent of GDP.

¹³¹ The baseline scenario assumes a gradual reduction of expenditures amounting to 3pp of GDP by 2020 – 0.7 in current spending and 2.2pp in capital spending.

same time, the debt outlook is not severely affected by shocks to economic growth or if the primary balance is left unchanged. Contingent fiscal liabilities represent a potential risk to fiscal accounts, but after simulated increase of 10 percent in debt-creating flows, the public debt continues to converge to a declining path.

141. Furthermore, implementing any peace accord will involve significant public expenditures which, even with international support, raises fiscal sustainability concerns. The projected cost of implementing the Victims and Land Restitution law (VLR) and other reparations to be defined by the peace process are estimated to be over US\$25 billion. Achieving the twin goals will not be possible without investments in rural environment and social sustainability, making the implementation of fiscally sustainable post-conflict investments essential to success.

142. The political commitment to balance revenue-enhancing measures with expenditure needs will determine the ultimate success of Colombia's fiscal framework and the balance between fiscal sustainability and long-term growth. Colombia has been able to meet the fiscal targets during the first three years of its new fiscal rule. The longer-term fiscal consolidation effort as expressed in the annual MTFF is heavily skewed towards a reduction of public expenditure (as a share of GDP). The size of public expenditure reduction does not look realistic or socially desirable. Many of Colombia's development goals will imply additional government expenditures that were not accounted for under the MTFF and our DSA. For example, the implementation of the peace agreement, currently under negotiation, would require large investment in victim reparation, infrastructure, service delivery, and institutional strengthening in affected areas. While the exact time or even size estimates are hard to assess, the pressure on the budget would be important. Issues like demographic trends (and their implications on health, education, and pension costs), and the need for coping with prevention and mitigation of natural disasters will also add to the fiscal pressures. Compliance with the fiscal rule while meeting some of the country's more pressing economic and social development needs may require additional revenue-enhancing tax policy measures as well as efforts to improve efficiency in the allocation of current spending. In recognition of these challenges the authorities have established a committee of experts to prepare proposals on a comprehensive tax reform. On the efficiency side, however, there is a need for a comprehensive and systematic analysis that can help inform the reallocation of resources towards priority areas.

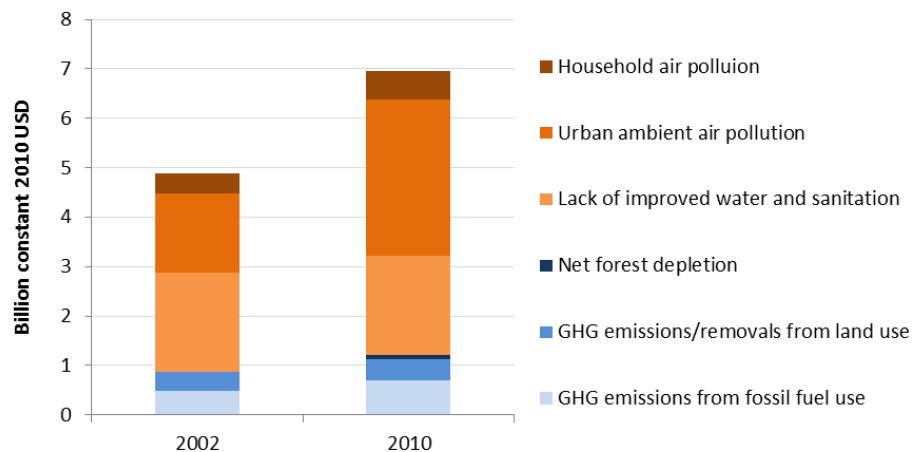
Environmental sustainability

143. In terms of environmental sustainability, Colombia faces challenges similar to many upper middle-income countries with high dependence on natural resources. Benchmarking Colombia's environmental performance shows that Colombia has levels of environmental degradation that are typical of its selected peers and of other upper middle income countries, and that these costs are significant and have risen over the past decade.¹³² The damages are economically significant, and can be valued at approximately US\$7 billion in constant 2010 dollars

¹³² The benchmarking of environmental costs for 1990-2010 relies on data drawn from global sources, including the FAO and the Global Burden of Disease study (GBD). Benchmark indicators 14-06 and 14-03, referring to waste water treatment and water productivity, are rated priority 3 and 4 (i.e., always more than 50 percent of distance/gap to best performer) in all rankings. See Figures A2-4, A2-5, and A2-6 in Annex 2: Benchmarking Colombia in the World.

(see Figure IV-1).¹³³ This estimated cost of environmental degradation exceed levels that would occur if the country's existing standards were fully complied with. Fortunately, Colombia has basic policies and institutions (albeit under-funded and with some capacity constraints) in place to address these concerns over the medium term. Other key areas of concern for ensuring long-term environmental sustainability have to do with emerging natural resources, disaster risk management, and climate change issues that will worsen in the near term. For all of these issues, early action will avoid potentially large downstream costs.¹³⁴

Figure IV-1: Environmental costs in Colombia in 2002 and 2010 (in constant 2010 USD)



Note: forest depletion values include rents from the over-harvest of timber; GHG emissions are valued at \$20/ton CO₂eq; and all forms of pollution-induced environmental health damages are valued in terms of welfare losses due to sickness and death. The costs of water pollution are not included because no standard valuation exists.

Sources: Data on forest depletion and GHG emission damage from fossil fuel use from World Bank, World Development Indicators database (2015); Data on GHG emissions/removals from land use from FAO, FAOSTAT database; pollution damages estimated by Golub et al (2014)

144. Environmental sustainability can be thought of as having two distinct time frames. In diagnosing the importance of sustainability for a country achieving the twin goals of poverty eradication and shared prosperity, it is useful to look at both:

- The short-term time frame that encompasses acute threats to environmental sustainability. These are typically: (i) pollution and natural resources degradation issues that threaten both human and ecosystem health at levels that challenge economic growth; and (ii) vulnerability to natural disasters that are statistically predictable based on historic trends.

¹³³ The estimated health impacts from pollution and the resulting economic costs are drawn from country-specific studies performed in Colombia. These studies apply different valuation approaches, consider a different range of health outcomes, and use different measures of exposure to pollution compared with those used in the World Bank World Development Indicators database which is restricted to data sources available in countries worldwide. Therefore, the results of these studies are not directly comparable to the results presented from the benchmarking exercise. Nevertheless, both the benchmarking exercise and these previous studies support the claim that the cost of environmental degradation in Colombia is rising.

¹³⁴ World Bank (2014g).

- The medium- and long-term time frames that encompass risks to sustainable development that can be avoided through prudent investment and proactive risk mitigation. There are two distinct aspects of these risks: (i) the importance of preserving the economy's natural capital required to both generate income and protect ecosystems services for future generations; and (ii) minimizing risks from likely impacts arising from climate change.

145. The main high priority environment-related issues are: (a) forest, land and natural resource management (including in the oil, mining and agricultural sectors) in post-conflict areas and other important watershed ecosystems; (b) the increasing social and economic impact of natural disasters (including the likely impact of climate change in worsening future disasters); and (c) pollution levels, particularly air pollution in Colombia's largest cities, and low levels of wastewater treatment. These issues have both short-term and long-term aspects, and they threaten Colombia's achievement of poverty reduction and shared prosperity in the longer time frame. To illustrate this, this section will analyze the relationship between these various environmental sustainability issues and these twin goals. It is divided into analyses of natural resources, disaster risk management issues, pollution, and economy-wide aspects of environmental sustainability. Closely linked to natural resource management issues, particularly in the post-conflict areas, are the social and infrastructure issues related to access and land rights, which were addressed earlier in the chapters on Growth and Inclusion.

Degradation and depletion of natural resources

146. Colombia's abundant natural resources are under pressure.¹³⁵ Colombia is more than half covered by forests, is the second-most bio-diverse country, and is one of the richest countries in terms of water availability in Latin America. Yet the spread of inefficient and unsustainable agricultural practices, extractive industries, livestock grazing, road traffic, and urbanization exert major pressures on biodiversity and ecosystems. Internal armed conflict has undermined the rule of law, exacerbated a range of environmental pressures (mainly from illegal mining, cultivation of illicit drug crops, and deforestation) and restricted access to protected areas and the management of natural resources. In one early study, deforestation, land degradation, and soil erosion result in annual economic losses were estimated to be around 0.7 percent of GDP, and occur primarily in areas of agricultural expansion, and illegal mining and drug-related activities.¹³⁶

147. Deforestation has declined since 2000, though the rate of forest loss continues to be cause for concern. On average, around 2,400 km² of forest are being destroyed every year. Cumulative loss (net of plantation forestry) totaled around 33,100 km² between 2000 and 2013, or 5.4 percent of total forest area.¹³⁷ The greatest threat to habitat loss is the expansion of agricultural

¹³⁵ OECD, 2014, pg13.

¹³⁶ Sanchez-Triana, et al, 2007, cited in World Bank, Colombia Policy Notes, 2014.

¹³⁷ Data for 2000-2010 from SIAC (2011). Data for 2011-2013 are drawn from Hansen et al (2013). Benchmark indicator 04-04, change in forest area 2005-2012, is ranked priority 2 (i.e., between 20 and 50 percent distance to best performer) in three out of four comparisons. See Figures A2-4, A2-5, and A2-6 in Annex 2: Benchmarking Colombia in the World. The benchmarking data on change in forest area are drawn from FAO data, using statistics reporting by national agencies. Furthermore, the data on the cost of forest depletion are derived from the adjusted net savings (ANS) indicator in the World Bank's World Development Indicators database. As a global indicator, ANS makes broad assumptions about annual commercial increment and natural growth rates of forests in different regions. In contrast, however, the figures for deforestation cited above in the text, meanwhile, are based on remotely-sensed imagery of forest cover in Colombia from 2000 to 2013.

and livestock frontiers. The regions where the largest numbers of species are concentrated and under some degree of threat are the Andes and Chocó.¹³⁸ For example, the coastal lowland forests of Chocó province that are most impacted by palm oil production are amongst the most biodiverse forests on earth, home to 7,000 to 8,000 species, with over 2,000 endemic plant species and 100 endemic bird species. Coca production and illegal gold mining, the latter leading to increased siltation and mercury contamination in rivers, have extensively impacted Pacific and Andean ecosystems.

148. While 20% of Colombia's land has moderate or severe erosion,¹³⁹ the economic impact of this erosion is relatively low due to the very land-extensive and low input-intensity of much Colombian agricultural and livestock production. The country enjoys 22 million hectares of arable land, of which only 5.3 million are currently cultivated; 38.8 million hectares of grazing land for livestock production, but with an average stocking rate of less than one animal per hectare; and 60 million hectares of forest, of which less than 1 percent is being managed as commercial plantations.¹⁴⁰

149. Future risks pose a greater threat to the country's medium-term development than current, acute resource degradation issues. The underlying drivers of deforestation and ecosystem loss will likely increase in many regions in the near future. Particularly vulnerable are the post-conflict areas in the Pacific coastal departments (Nariño, Cauca, Valle de Cauca, and Chocó), the eastern plains (Orinoquía), and areas east of the Andes but north of Amazonas (such as the departments of Meta, Caquetá, and Guaviare). In fact, virtually all of the current drivers of deforestation and rural resource degradation are likely to increase in the medium term, especially with the likelihood of a peace agreement. These factors and their likely future impacts are:

- Accelerated expansion of the agriculture frontier (which was responsible for 65 percent of Colombia's deforestation over the past decade);
- Continued construction of roads and other infrastructure improving access to forested and remote plains areas, and granting of new mining and petroleum concessions;;
- Continued uncontrolled forest fires, particularly in the context of more frequent climate change-induced droughts;
- Continued expansion of illegal logging, mining, and concealed planting of illegal crops;
- Continued hotspots of rural pollution and land degradation associated with formal petroleum and mining sector operations; and
- Accelerated migration of a significant percentage of over 5.5 million displaced people from either current temporary residence in cities back to rural areas, or across rural areas.

150. In other words, one of Colombia's greatest opportunities—access to its under-utilized rural areas facilitated by potential peace—is simultaneously the source of its greatest risk to long-term natural resource sustainability. IDP's and other minority populations have been

¹³⁸ Bello, et al (2014).

¹³⁹ IDEAM (2015).

¹⁴⁰ Data from IGAC (2012). In addition, benchmark indicator 01-01, agricultural land as percentage of total land area, positions Colombia between 20 to 80 percent distance to best performer, depending on the comparison group. See Figures A2-4, A2-5, and A2-6 in Annex 2: Benchmarking Colombia in the World.

forced to abandon good, arable land, and moved to poor neighborhoods in urban centers or to other parts of the country. At present, UNHCR and the government report that 6.5 million hectares (about 15 percent of Colombia's fertile land) were abandoned or forcibly sold by the now-IDPs. (It is even possible however that these figures are understated, because the system of land registry is weak and land tenure informal.) A peace agreement would facilitate some return by some parties, as well as other movements to new areas where land claims may be settled. Of course, peace alone would not enable rapid migration: public infrastructure investment, expanded government services, and land rights are also essential ingredients.

151. The 2014-2018 National Development Plan, approved in June 2015 (ley 1753 of June 9, 2015), puts a strong emphasis on rural development. It addresses the need for resolving land rights for IDPs, indigenous and afro-descendent communities; promoting higher value-added agriculture, livestock and forestry production; improving the regulation of oil and mining sector operations; and protecting globally important primary forests (for both biodiversity and carbon sequestration purposes) with the financial assistance of the international community. Improved income distribution in Colombia will be, to a large extent, dependent on promoting rural income growth and reducing rural-urban income disparities.

152. In assessing the risk associated with expanding the rural production frontier in the context of peace, this study modeled the relationship between violence, access, and deforestation. The developed model uses spatial data at the level of Colombia's 1,120 municipalities to look at deforestation and land-use change as a function of migration (changing population), access (road density), agricultural production, and other variables. (For a detailed description, see Box IV-1.) The country's highest deforestation rates, as shown in Figure IV-2, are in the coastal, Meta-Guaviare, and Putumayo-Caquetá regions. While agricultural production typically follows deforestation by a year or so, the model looked at the issue slightly differently: Did the expansion of agriculture in a given municipality in a previous year become a pull factor in accelerating subsequent forest loss?

Box IV-1: Modeling the Impact of a Potential Peace Agreement on Colombia's Deforestation

The relationship between deforestation and armed conflict is extremely complex, but may be summarized by three processes: (a) hostilities can reduce deforestation by driving people out of forested zones; (b) conflict can fuel increased extraction of timber and other forest resources, whether through rent-seeking behavior by armed groups or through the displacement of communities into forest refuges; and (c) conflict can worsen deforestation by undermining the institutions designed to conserve forests, for example, in the killing or implication of park authorities (Ordway 2015).

This SCD explores the question of “What net effect, over time, would a cessation of fighting have on deforestation rates?”

In Colombia, about 16 percent of the nation's forest cover is located in municipalities that the Conflict Analysis Resource Center (CERAC) has identified as having experienced “intense” fighting since 2004. Another 60 percent is located in municipalities that have seen “low-intensity” or “intermittent” fighting.¹⁴¹ There is documented evidence of both “gunpoint conservation” and “gunpoint fragmentation” in these forests (Dávalos 2001; Álvarez 2003). In a few areas, forests have benefited by guerilla fighters have restricting access to habitat, either out of strategic or ecological concern. But in many other areas, opportunistic land takings, diminished incentives for

¹⁴¹ Forest cover data are from Hansen et al. (2013). Classification of municipalities by conflict type is from <http://www.cerac.org.co/es/recursos/datosconflictoscolombia/>. The islands of Providencia and Santa Catalina are not included.

sustainable land management, the illicit crop trade, and illegal mining or ranching activities involving armed groups on all sides have taken a toll (Fjeldså et al. 2005; Fergusson et al. 2014).

There is much more literature on the effects of war on deforestation in Colombia than on the possible effects of peace. To uncover the potential impact of a peace agreement on forest, econometric analysis was performed using time-series data on changes in forest cover in 1,120 municipalities from 2000 to 2013. Data on forest cover were derived from high-resolution Landsat imagery and aggregated at the municipal level for each year (Hansen et al. 2013). The annual percent change in the rate of forest loss was regressed against a range of control variables describing demographic, economic, social, and environmental characteristics of the municipality. The variable of interest was whether a municipality had experienced an attack by an armed group (including both paramilitaries and guerillas). Spatial weights were added to the model to account for the spillover effects of deforestation occurring in the area surrounding the municipality.

The model looked first at the relationship between conflict and deforestation. The analysis, consistent with previous work (Fergusson et al. 2014), revealed that the occurrence of violence in a municipality has both an immediate and lagged effect on forest loss. The immediate effect is to reduce deforestation in the year in which an attack occurs. But this temporary dip in forest loss is negated by worsening deforestation in the following year, resulting in higher rates of forest loss overall.

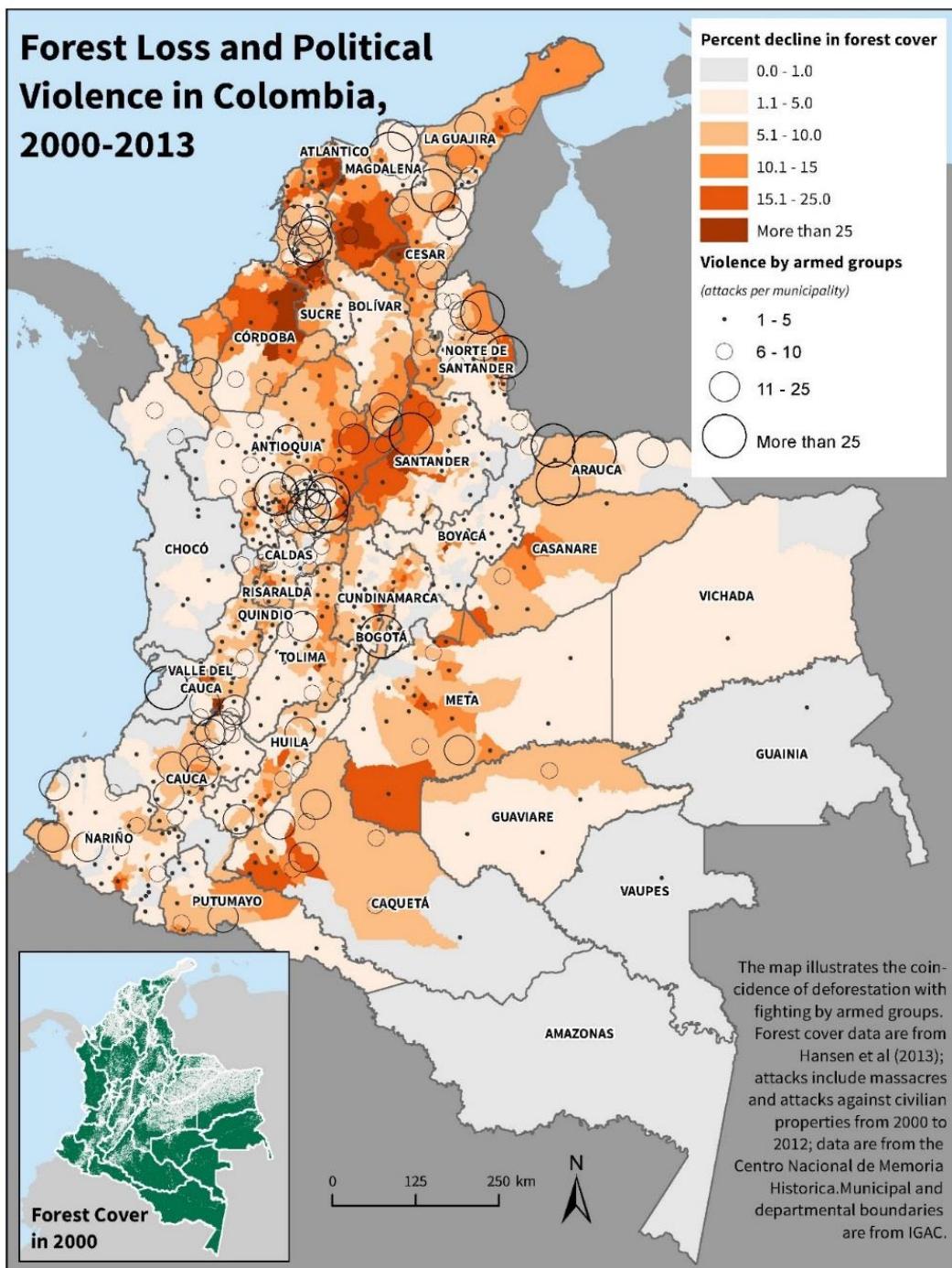
Attention then turned to the impact of a peace agreement on deforestation. Peace is not the inverse of war, as peace itself opens up new channels for access, improved tenure, and long-term stability. To analyze this dynamic, additional analysis was performed on a subsample of around 750 observations for which municipalities experienced fighting in the year prior to observation. It was found that in the municipalities where violence subsided (i.e., there were no attacks the following year), deforestation was 16 percent higher compared to in municipalities where the fighting continued, all else being equal. By the second consecutive year of no fighting, the direct effect of reduced violence was found to be internalized, with no discernable difference in forest loss compared to other municipalities. Hypothetically, if following a peace agreement, all 90 municipalities identified by CERAC as zones of intense fighting experienced a 16 percent increase in deforestation, this would translate into an additional 7,040 ha of forest loss. By comparison, nationwide forest loss totaled 126,550 ha in 2013. Therefore, the potential magnitude is an additional 5-6 percent in total deforestation for one year.

To shed light on one of the possible mechanisms through which armed conflict contributes to forest loss, the relationship between violence and the expansion of agriculture was also tested. The results demonstrated that fighting by armed groups is correlated with an increase in the area of planted land in the municipality. Yet, the size of this effect was insignificant after accounting for such factors as rural population, climate, soil quality, poverty, public investment in the agricultural sector, the availability of credit, and unexplained differences between municipalities located in different departments. There are more fundamental economic factors that are more important, especially access to credit and population size.

The main takeaway from this analysis is that while putting an end to the conflict may potentially increase forest loss in the near term, there are more powerful forces influencing land use in the Colombian countryside. Other factors that had a greater effect in determining rates of deforestation include population growth and competing land use by agriculture (including coca cultivation). The relative influence of these factors suggest that rural development policies to encourage sustainable forestry and land use practices will be crucial to preventing an increase in forest loss after a peace agreement is signed.

Sources: Álvarez, M. (2003); Conflict Analysis Resource Center, Colombia – CERAC- (2012); Dávalos, L. (2001); Fergusson, L., D. Romero, and J. Vargas. (2014); Fjeldså, J., M. Álvarez, J. Lazcano, and B. León (2005); Hansen, M., P.V. Potapov, R. Moore, M. Hancher, S.A. Turubanova, A. Tyukavina, D. Thau, S.V. Stehman, S.J. Goetz, T.R. Loveland, A. Kommareddy, A. Egorov, L. Chini, C.O. Justice, and J.R.G. Townshed (2013); and Ordway, E.M. (2015)

Figure IV-2: Annual Forest Loss in Colombia (2000-2013)



153. **The model shows that the direct impact of “peace” (i.e., reduced violence) on forest loss is only modest and short-lived, as other more fundamental economic variables are more important over the longer term.** Specifically, a year without fighting in a municipality that experienced previous conflict increases the risk of forest loss in that area by 16 percent. By the second year, the effect of no fighting is significantly diminished. Armed conflict has much less influence on the risk of forest loss than other factors, such as **conservation status** (an increase in the portion of a municipality’s area contained in national parks or indigenous reserves strongly reduces the rate of forest loss), **population pressures, poverty** (deforestation is worse in poorer areas), the **intensity of agricultural activity** (especially coca cultivation), and **natural factors** (rates of forest loss are greater in municipalities experiencing worse levels of soil erosion). As a direct driver of deforestation, agricultural expansion appears to have an even greater impact than minerals or energy extraction, though the model is not able to account for illegal or informal mining activities.¹⁴²

154. **Beyond reduced fighting, the wider effects of peace on deforestation are harder to measure but are potentially even more of a risk than simply “reduced violence” in the post conflict transition.** International experience demonstrates that there is often political urgency to scale up investment and kick-start recovery in war-affected areas so as to deliver a peace dividend. Additionally, the pressure to resettle displaced persons and to open up new forested lands as a source of revenue—whether for mining, palm plantations, or agriculture—are enduring stress factors. Finally, weak state presence, groups of unemployed young people, access to weapons, lingering social networks forged between criminal groups and local elites that benefited from violence, and the availability of easily lootable resources all compound the risk of excess deforestation following the cessation of violence (Harwell 2011; Farah 2011).

155. **Given the importance of expanded rural development to a sustainable peace in Colombia, the country faces two main areas of public policy weakness that it must manage in order to avoid the pitfalls of excess deforestation in the transition period.** These are:

- a. *First, the absence of land use controls and rapid development will enable the conversion of valuable intact forest areas without taking into account the full value of those lands, thereby accelerating deforestation in an economically sub-optimal manner.* Forest lands have economic and ecosystem values that far exceeds the financial value of standing timber. Those values are not typically included in investment planning, and include values associated with ecosystem services (water enhancement, land conservation, carbon sequestration) and existence (biodiversity).

Proper valuation of the economic cost associated with conversion would show that in many areas, extensive land clearing for agriculture and livestock development is not a particularly productive investment. Conversion is, at worst, to an abandoned state with relatively low long-term economic return. More viable conversion is to some form of ongoing agricultural, livestock, mineral or petroleum sector use. In many parts of Colombia, economically under-utilized land is widely available, and wide-spread access to native

¹⁴² For the extractive industries, the model tested the relationship between forest loss and production of gold, silver, platinum, coal, and oil in the municipalities. Production data at the municipal level were drawn from DANE, UPME, and other official sources and therefore do not account for illegal or informal extraction. The model did not find a strong, statistically significant relationship between the rate of forest loss and the growth of extractives.

forest land is not a requirement for development. In many areas, more intensive agricultural and livestock production may be more economically feasible than extensive clearing of native forests.¹⁴³ Furthermore, more intensive agricultural and livestock production, especially in areas with adequate input and product market access, supports the rural poor more efficiently than land extensive production in newly deforested, poor access areas.

An important element of Colombia's rural development policies are land use planning and land use control policies that balance short term needs with the longer-term values of maintaining intact forests. Brazil's Amazon land policies have led to dramatically reduced deforestation since 2000, although refinements are needed to favor greater inclusion of the rural poor.¹⁴⁴ Lessons from Brazil can inform how Colombia manages the risk of rapid expansion into intact forest areas in coming years.

- b. *Second, the lack of effective environmental regulation, monitoring, and enforcement will lead to excess pollution loads and degraded ecosystem functioning in the converted forest areas.* One of Colombia's most acute rural environmental issues is from informal and illegal mining, posing the triple threat of deforestation, toxic releases (such as mercury and cyanide), and river sedimentation. One study reports that Colombia has the highest level of mercury contamination worldwide, and that in the period 2008-2010, informal mining took place in 44 percent of the country's municipalities.¹⁴⁵ Colombia, along with other countries in the region (Brazil, Bolivia, Peru and Venezuela) has not been successful in controlling informal mining and its impacts. Environmental regulation of informal mining is made difficult by likelihood of armed conflict and corruption. Approaches to improving the environmental performance of the mining sector involve programs that do not focus only on individual miners, but on the entire gold (and gem) value chain – and that may have integrated technical, social, economic, legal and organizational dimensions.¹⁴⁶

156. In summary, the benefit of peace in enabling access to Colombia's under-utilized rural areas is also a source of great risk to the sustainability of its natural resources and ecosystems.

Disaster Risk Management and Adapting to Climate Change

157. Colombia has a high and increasing level of damages from natural disasters, compared with its peers. It has the world's 10th highest economic risk of two or more hazards, including both low-frequency/high-impact events, such as earthquakes, Pacific tsunami, volcanic eruptions, and occasional Atlantic hurricanes, and high-frequency but lower impact events, such

¹⁴³ Several studies cited there show that the adoption of intensive silvo-pastoral systems at the landscape scale has been shown to increase cattle stocking rates (from <1 to 3 animals per ha), increase net per hectare income farmer productivity (by 132 percent), enhance biodiversity levels, reduce the use of herbicides and fossil fuels (by 43 percent), release areas for biodiversity protection and sequester additional carbon above-ground. See Harvey, C.A. et al. (2014).

¹⁴⁴ See Lapola, D. et al (2014). .

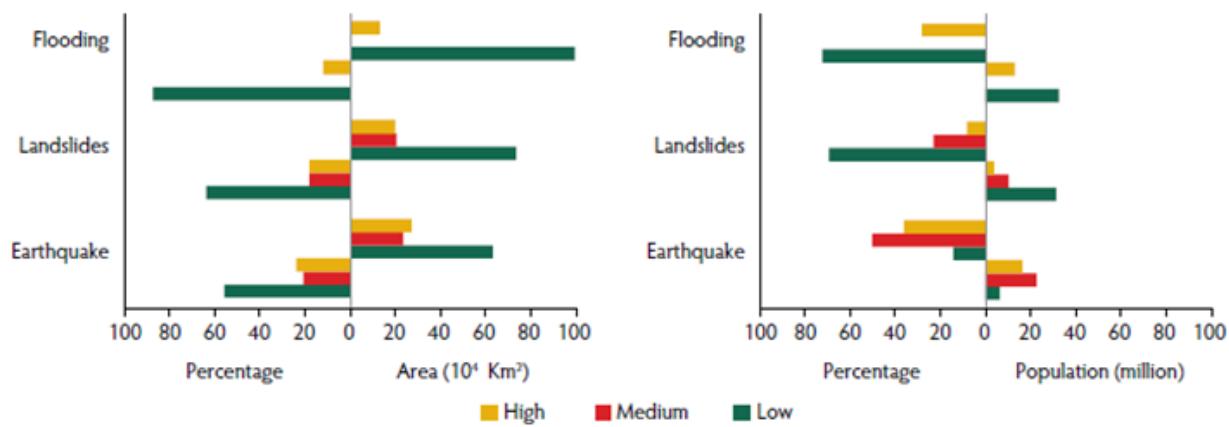
¹⁴⁵ "Impacto Socio-económico de la Minería en Colombia," FEDESARROLLO. 2012, Bogotá.

¹⁴⁶ "Small-Scale and Informal Mining: A Big Problem for Latin American States," ELLA Policy Brief, Dec. 2012, <http://ella.practicalaction.org/node/1074>.

as floods and landslides (see Figure IV-3).¹⁴⁷ Colombia also has Latin America's highest rate of recurrent events, with an average of more than 600 reported disasters each year. For example, the 2010-11 La Niña—a phenomenon that is recurring with increasing frequency—affected 3.2 million people and two-thirds of the nation's farmers (Figure IV-4). Economic losses were up to US\$1.1 billion (0.4 percent PIB-2010) and the total damage was estimated at US\$6.1 billion. Among the most affected areas were housing (44 percent), infrastructure (38 percent), social services (11 percent), and productive sectors (7 percent).¹⁴⁸ Total losses over the past ten years were the fourth highest in Latin America, after Haiti, Cuba, and Brazil (Figure IV-5). The natural disaster risks of flooding, drought, storms and sea level rise are likely to worsen with climate change.

158. Agriculture is likely to be the most seriously impacted productive economic sector. Projected yield declines due to climate change are projected to be 10-20 percent by 2020 for maize, soybeans, and wheat, even after taking into account adaptation efforts involving adoption of new plant varieties and better land and crop management practices. There are likely to be major contractions in the areas most suitable for coffee by 2050 (see Figure IV-6), as will be the case in Central America as well. In contrast, irrigated rice may benefit from climate change with 10-15 percent increase in yields by 2050, and tree plantations, fruit trees, and other perennial crops could provide alternatives to coffee. While these climate impacts may not be felt for 15 years or more, proactive agricultural and infrastructure investment decisions—and climate adaptation policies—adopted now can avoid expensive future mistakes due to "lock-in" effects or economic rigidities (see Box IV-2).

Figure IV-3: Area and Population Exposed to Earthquakes, Slides, and Floods in Colombia

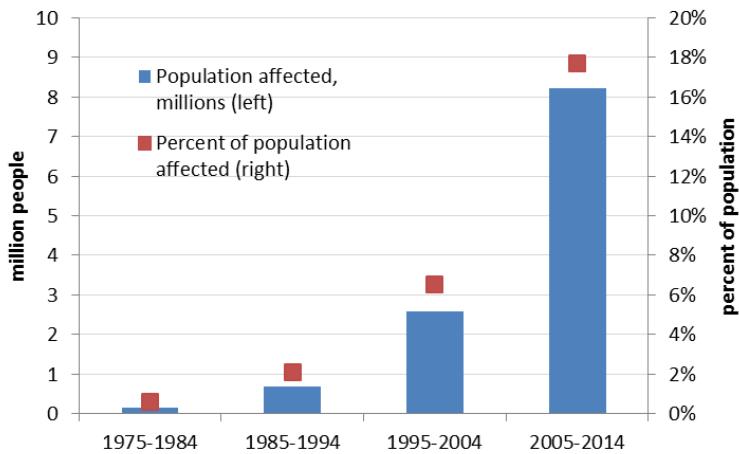


Source: OSSO-EAFIT (2011).

¹⁴⁷ Benchmark indicator 04-03, population affected by draughts, floods and extreme temperatures, positions Colombia in priority 1 (i.e., less than 20 percent to best performer) in most comparisons. See Figures A2-4, A2-5, and A2-6 in Annex 2: Benchmarking Colombia in the World.

¹⁴⁸ BID-CEPAL (2012).

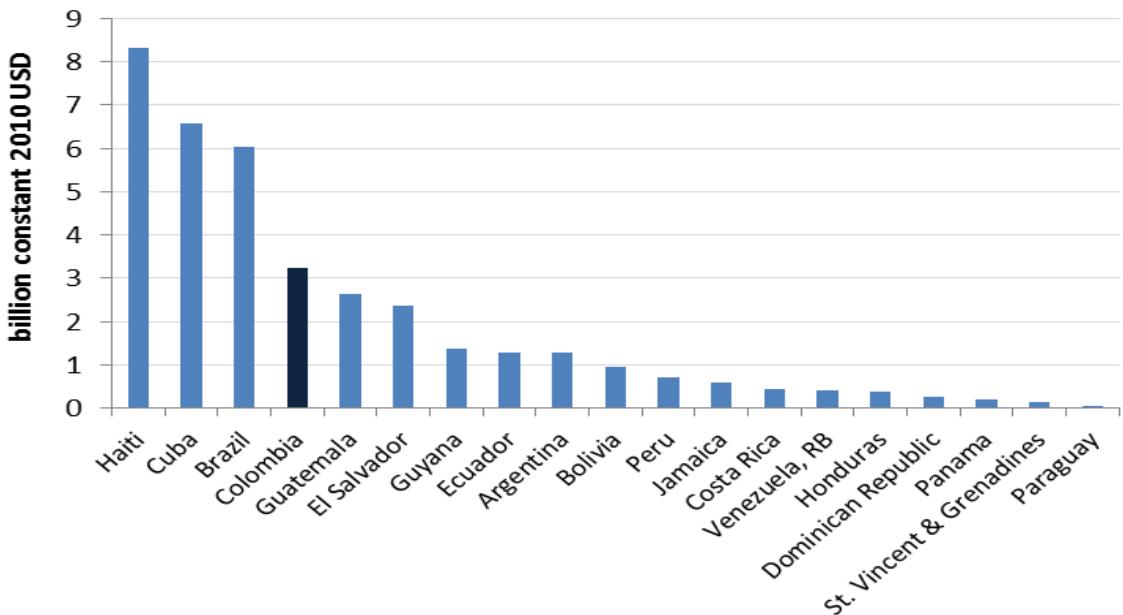
Figure IV-4: Population in Colombia Affected by Natural Disasters, 1975-2014



Note: Percent of population affected is equal to the total number of people affected divided by the middle-of-period population; natural disasters include climatological, meteorological, hydrological, and geophysical disaster events.

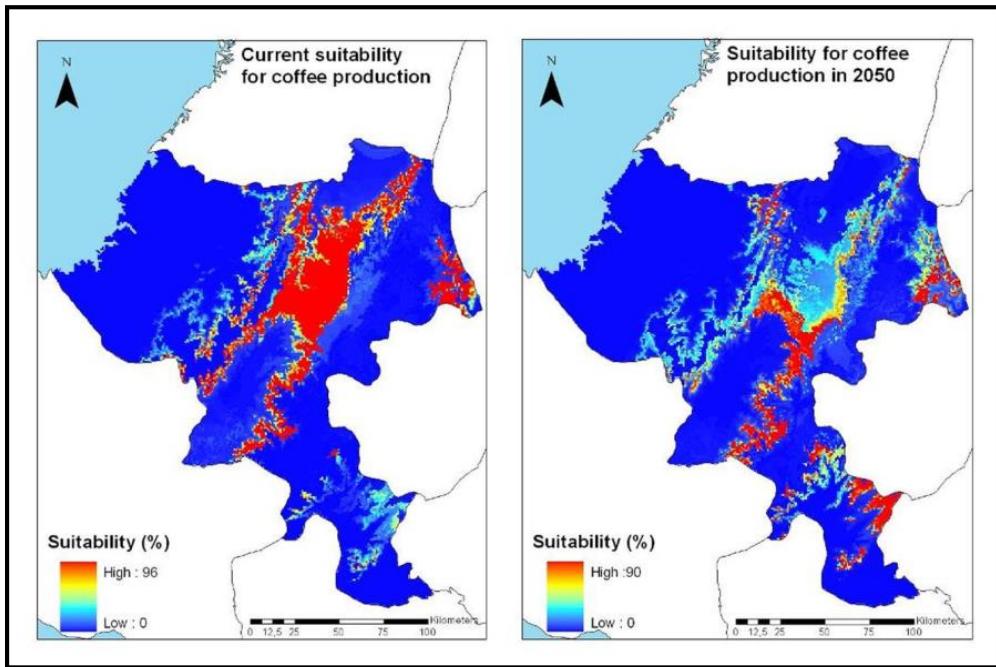
Source: EM-DAT database, <http://www.emdat.be/database>

Figure IV-5: Economic Damages from Natural Disasters in LAC (Constant 2010 US\$ bns), 2005-2014



Source: EM-DAT database, <http://www.emdat.be/database>

Figure IV-6: Climate Change Impacts in Coffee Growing Areas of Colombia

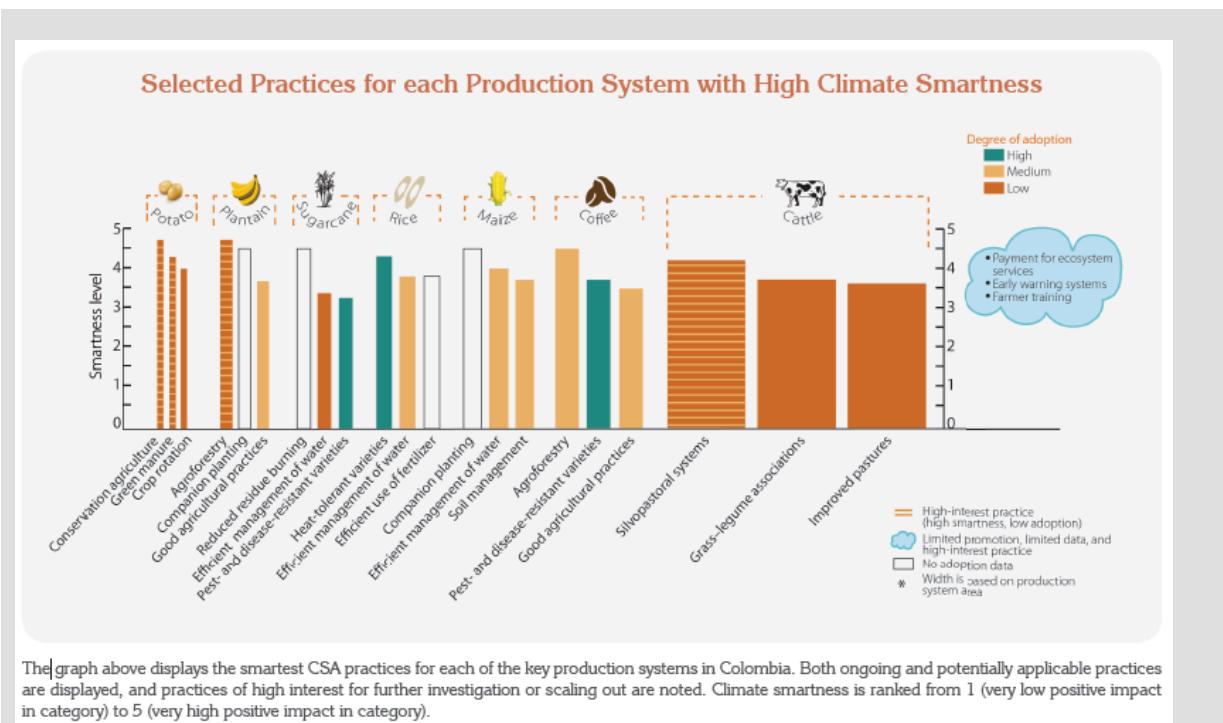


Source: CIAT (2014).

Box IV-2: Climate-Smart Agriculture in Colombia

“Climate-smart agriculture” (CSA) aims to achieve food security and broader development goals during a time of changing climate, increasing food demand, and persistent rural poverty. Successful CSA initiatives increase productivity, enhance resilience, and reduce/remove greenhouse gases (GHGs). They require planning to address both tradeoffs and synergies between these three pillars [FAO, 2010]. CIAT (the International Center for Tropical Agriculture), located in Cali, Colombia, has led efforts to research and introduce CSA concepts in Colombia and across Latin America.

Between 1998 and 2011, 90 percent of natural disasters in Colombia were related to climate. The excessive rain associated with the most recent La Niña (2010-2011) caused agricultural production losses equivalent to 2.1 percent of the GDP in addition to casualties and property damage due to flooding. In 2008, El Niño reduced yields of 17 nationally important crops by an average of 5 percent. Looking forward, climate change is expected to increase the intensity and frequency of extreme weather events, including droughts (IDEAM, 2010).



The graph above displays the smartest CSA practices for each of the key production systems in Colombia. Both ongoing and potentially applicable practices are displayed, and practices of high interest for further investigation or scaling out are noted. Climate smartness is ranked from 1 (very low positive impact in category) to 5 (very high positive impact in category).

Agronomic research shows that there are viable productive system improvements that can be made in each of Colombia main crop areas, such as improved pastures and silvo-pastoral systems across three million hectares (see graph). (Of course, separate from modified production systems, it is also projected that there will be a reduction or change in the land areas with overall climatic suitability for major crops.) Climate change will impact all Colombian farmers, from large- to small-scale. Large-scale producers are often better placed to deal with emerging challenges due to their higher incomes, better access to land, and greater ability to invest in new technologies. However, neither large- nor small-scale farmers will be able to fully adapt without the adopting critical CSA practices, such as improved pest and disease control, and resistant crop varieties.

Implementation of new CSA approaches will require expanded access to extension services, especially for farmers not associated with producers' organizations. Increasing government investment in research, development, and extension services, as well as strengthening local capacities are key aspects of transforming small-scale agriculture to more competitive and sustainable agriculture. Given that 40 percent of the rural population lives in poverty and 17 percent of national employment comes from agriculture (World Bank, 2014), strengthening government support to agriculture and developing and implementing technologies appropriate to the changing socioeconomic and climatic conditions of farmers is required to improve agricultural productivity and shared prosperity.

Sources: FAO. (2010), IDEAM. (2010), World Bank. (2014b); and World Bank; CIAT; CATIE. (2014).

159. Disaster risks are also high in rapidly growing cities where long-lived infrastructure and housing are increasingly concentrated in hazard-prone areas. Some of Colombia's largest metropolitan areas are located in zones with the highest potential of floods, including Bogota, Cali, and Barranquilla. While the loss of life associated with events such as floods has declined in recent decades thanks to impressive public investments in disaster warning and response systems,

economic losses have risen and more people are being exposed to risky conditions.¹⁴⁹ Lack of coordinated urban planning processes, inadequate regulatory controls, land speculation, affordability, and other factors have led to the expansive growth of informal settlements on steep slopes or in flood plains. Site-specific issues like poor construction, erosion from road cuts, inadequate stabilization of slopes, water infiltration from leaky pipes and sewers, and deficient rainwater collection systems further elevate the risk of floods and landslides. As a consequence, about 70 percent of houses that are lost due to natural disasters in Colombia are destroyed by floods and landslides, and the majority of economic damages have come from low- to medium-intensity events that can be mitigated or avoided. In a business-as-usual scenario without more targeted interventions and investment in risk reduction, disaster losses in Colombia will likely continue to rise. Further, once the urban footprint is set in hazard-prone areas, risk reduction becomes increasingly difficult and expensive.

160. In the context of climate change, water resource management presents a multi-dimensional challenge which will impact both rural and urban areas.¹⁵⁰ Over the course of this century, runoff is projected to decrease overall in the Andes watersheds due to decreased precipitation, higher temperatures, greater evapotranspiration, degradation of highland wetlands, and loss of glaciers and snow pack. Given that 75 percent of the Colombian population lives in the Andean regions, water pollution and a lack of adequate wastewater treatment will compound pressures on water supply and the degradation of valuable ecosystems. Colombia's hydropower capacity will also be threatened, which currently generates 70 percent of the country's power. The Caribbean region is also expected to experience significant drying and may shift from a semi-humid to a semi-arid climate by the end of the century. At the same time, about 55 percent of the coastal population in the region will be exposed to greater coastal flooding from sea level rise and periods of excessive rainfall.¹⁵¹

161. The economics of investments in improved DRM and early adaptation to climate change show unambiguously high rates of return, particularly for affected people in coastal areas, on marginal lands, and on farms of all sizes. Obviously, extreme events affect people in all income brackets, but DRM actions can disproportionately favor the poor and bottom 40 percent living on marginal lands and working in agriculture. Government choices can specifically favor interventions in favor of the poor. Just as for the other environmental sustainability issues raised, pollution management and natural resources degradation, government commitment to proactive DRM strategies in the short-term has not only immediate affects in case of short-term disasters, but has long-term benefits due to the worsening of climate risks over time.

Pollution

162. The third topic addressed with regard to environmental unsustainability is Colombia's level of pollution, and specifically the estimated level of sickness and death associated with human exposure to air pollution and waterborne diseases. Immediate challenges are urban and indoor air pollution, inadequate water supply, sanitation, and wastewater treatment. In Colombia, about 6.8 percent of all deaths can be attributed to these environmental factors (see Box IV-3). Air pollution, including household air pollution from cooking with solid

¹⁴⁹ World Bank (2012).

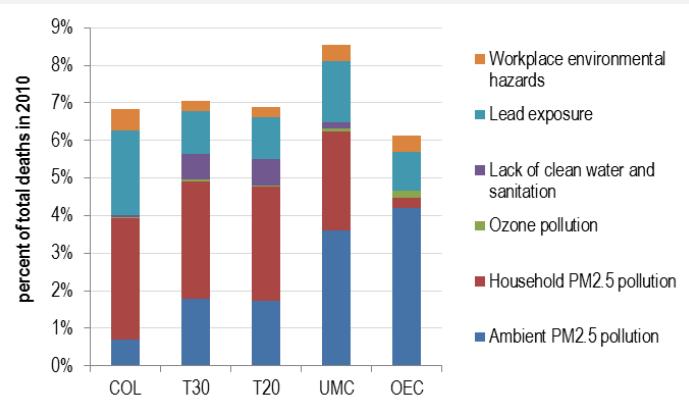
¹⁵⁰ BID, CEPAL, DNP, IDEAM (2014).

¹⁵¹ OECD (2014b).

fuels, causes many times more deaths than inadequate water supply, sanitation, and hygiene.¹⁵² The Colombian cities of Caldas/Manizales, Medellin, Bogota, and Itagui have levels of fine particulate pollution ($PM_{2.5}$) that exceed allowable levels under Colombian regulations (benchmark indicator 04-05, see also Figure IV-7).

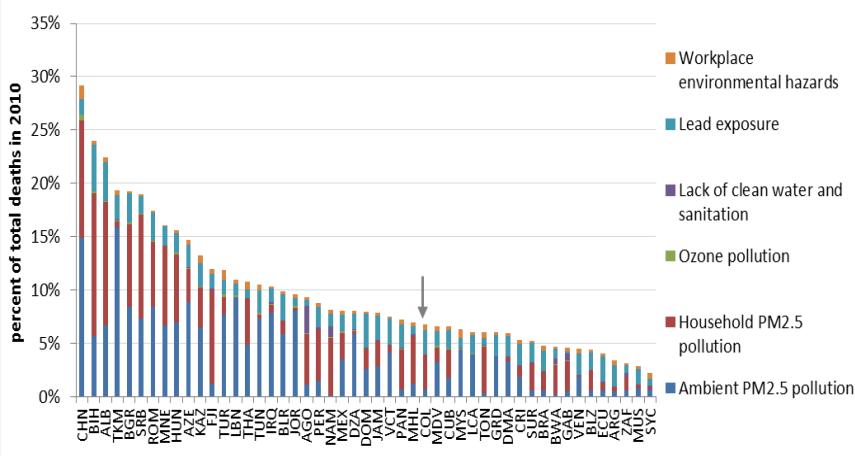
Box IV-3: Mortality Burden of Pollution in Colombia vs. Benchmark Country Groupings, 2010

Using internationally available data (which differs in some aspects from locally managed data), pollution-caused illnesses accounted for 6.8 percent of all deaths in Colombia in 2010. This is roughly comparable to both the 20 and 30 peer countries used for benchmarking Colombia in this SCD. The average for other upper middle-income countries was 8.5 percent of all deaths—not including China, where 29 percent of all deaths in 2010 were attributable to pollution. In the OECD countries, pollution caused 6.1 percent of deaths in 2010. The definition of pollution for this analysis includes exposure to ambient $PM_{2.5}$ pollution; indoor (household) air pollution from use of solid fuels for cooking; ozone pollution; lack of access to clean water and sanitation; exposure to lead; and workplace environmental hazards.



Note: China is excluded from the average for “UMC”

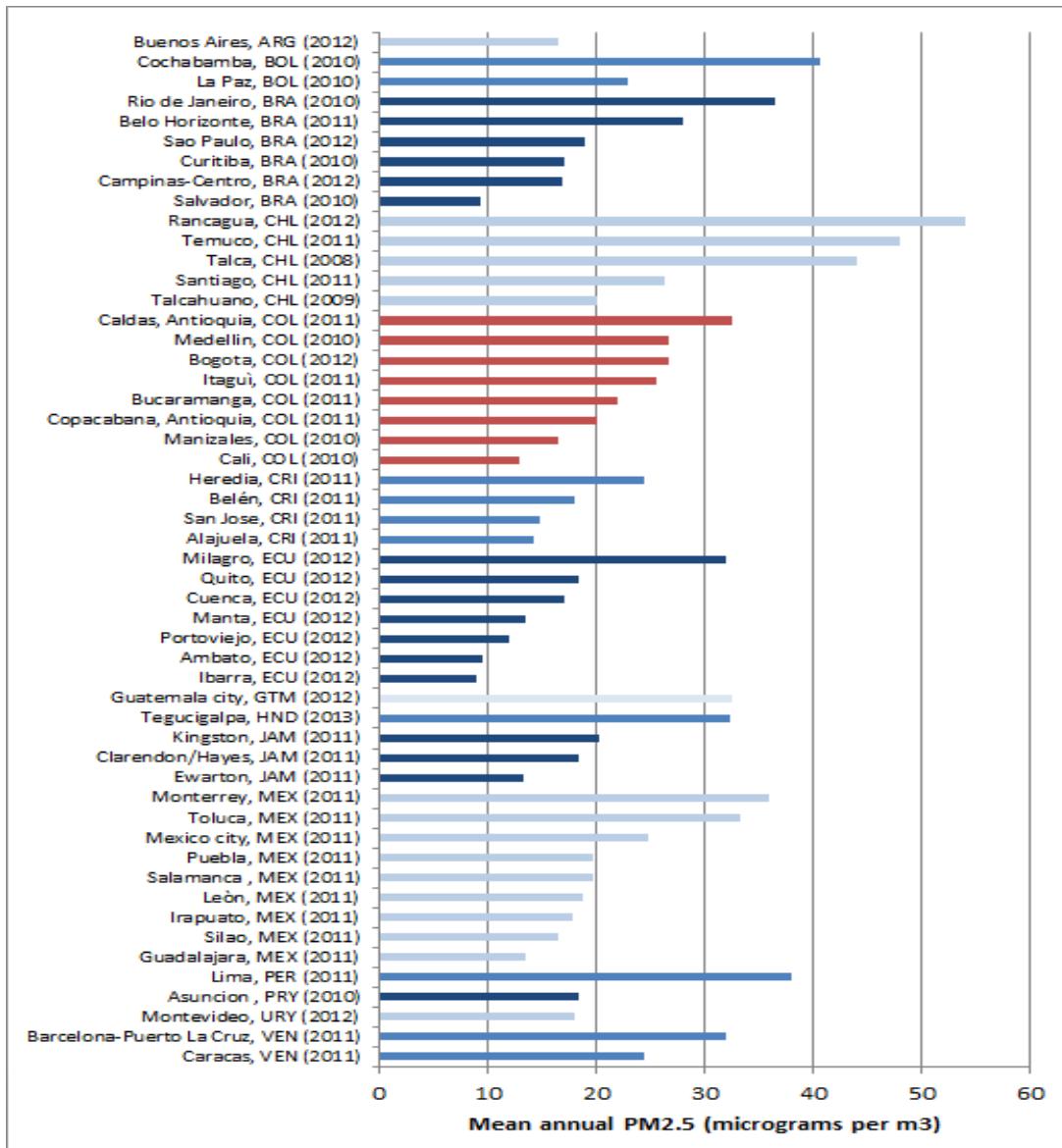
Mortality burden of pollution in Colombia versus in other upper middle income countries, 2010



¹⁵² Access to non-solid fuels in rural and urban areas (indicators 11-03 and 11-04) are ranked priority 3 (between 50 and 80 percent distance to best performer) and 1 (less than 20 percent distance to best performer), respectively, in most comparisons. Again, a stark urban rural divide in pollution due to fumes from cooking. See Figures A2-4, A2-5, and A2-6 in Annex 2: Benchmarking Colombia in the World.

These two graphs draw upon the findings of the Global Burden of Disease 2010 study (IHME, 2013). That study provides data for more than 180 countries on a wide array of health outcomes, making this sort of cross-country analysis possible. For Colombia, the GBD estimates of mortality due to air pollution are derived from satellite and model-based estimates of exposure to ambient PM_{2.5} pollution. Country-specific studies from Colombia that rely on ground-based monitoring data tend to show higher concentrations of pollution in major population centers and a greater impact on health (see Golub et al 2014 and Larsen and Skjelvik 2014).

Figure IV-7: Concentrations of Ambient PM Pollution in Colombian and Other LAC Cities

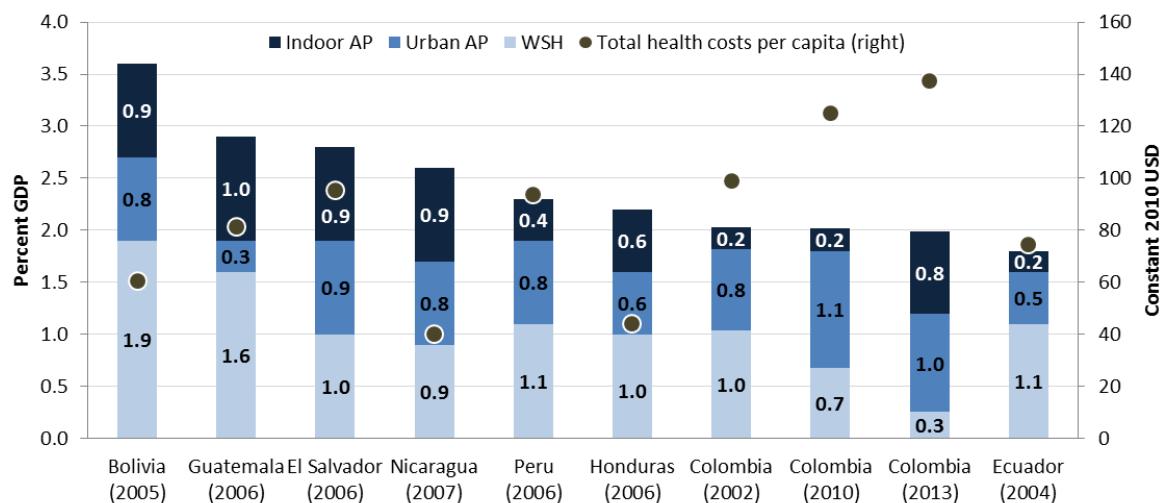


Note: PM_{2.5}= particulate matter smaller than 2.5 microns. For 35 of the 52 cities shown, PM_{2.5} has been estimated indirectly from monitored PM₁₀ concentrations by assuming an average ratio of PM_{2.5} to PM₁₀.

Source: WHO, Outdoor Air Pollution database (2014).

163. Based on available data, the economic valuation of these health impacts is in the range of 2 percent of GDP per year (see Figure IV-8). This level of environmental health damages associated with pollution represents a significant income and welfare loss. Some aspects of environmental health have improved, such as the level of water-borne diseases associated with poor water quality and lack of sanitation, and the level of respiratory diseases associated with indoor air pollution. For example, household use of solid fuels (wood or coal) for cooking in Colombia declined by 54 percent between 1990 and 2010 (Bonjour et al 2014). For urban air pollution, while pollution levels have improved in monitored cities over the past 20 years, the urban population has also grown dramatically. Health costs from urban air pollution rose by 82 percent from 2002 to 2010 in real terms, reaching \$3.21 billion (Golub et al 2014; year 2010 US\$).¹⁵³ In the case of percent of wastewater treated, benchmarking shows that Colombia has one of the largest gaps with other countries of all indicators.¹⁵⁴ Finally, “other” environmental issues have worsened. By some estimates, damages associated with workplace environmental hazards and lead poisoning rose by nearly 50 percent between 1990 and 2010 to US\$ 470 million (year 2010 US\$).^{155,156}

Figure IV-8: Environmental Health Costs in Colombia and the Region



Source: Golub et al (2014); Larsen and Skjelvik (2014).

¹⁵³ Damages estimated by Golub et al (2014) in figure IV-1 use data from the international benchmarking exercise done for the SCD. This is due to differences in valuation approach, range of health outcomes considered, and measures of exposure to pollution. One of the key differences is that Golub et al (2014) monetize health impacts in terms of welfare losses, whereas the costs presented in figure IV-1 are lower-end estimates of losses valued in terms of reduced labor productivity.

¹⁵⁴ Benchmark indicator 14-06, percent of wastewater treated, is ranked top priority (with more than 80 percent distance to the World’s best performer). See Figures A2-4, A2-5, and A2-6 in Annex 2: Benchmarking Colombia in the World.

¹⁵⁵ Workplace environmental hazards include exposure to asthmagens, carcinogens, noise, particulate matter, and fumes in the workplace. Damages from workplace environmental hazards and lead contamination are expressed in terms of labor productivity losses (see figure IV-1).

¹⁵⁶ Benchmark indicator 04-01, environmental health costs as percentage of GNI, is ranked priority 1 (less than 20 percent distance to best performer) when compared to the World but priority 2 (i.e. between 20 and 50 percent distance to the best performance) when compared to peers. See Figures A2-4, A2-5, and A2-6 in Annex 2: Benchmarking Colombia in the World.

Note: For Colombia, components of health costs for years 2002, 2010, and 2013 shown above are not directly comparable because of slight differences in the methodologies of separate assessments. For urban air pollution, the latest data take into account significant income growth in Colombia over the past decade and an expansion of the air-quality monitoring network (and populations of cities with monitoring data are included in the 2010 analysis, whereas in 2002 an extrapolation was used for cities without monitoring networks). About half of the costs are due to population exposure to air pollution in Bogota, and air quality has improved there since 2002. Sensitivity analysis reveals that, keeping all other factors constant, health costs due to air pollution in Bogota alone would have been 7 percent higher in 2010 had air quality not improved. For indoor air pollution, the 2013 data account for a wider range of health outcomes. Finally, health costs in Colombia due to lack of access to improved water and sanitation (WSH) are substantially lower for 2013 compared to 2002 and 2010 due to a recent reassessment of how much diarrheal disease is actually associated with WSH.

164. There is much that Colombia can do to improve its pollution management as an upper middle-income country (MIC). To continue growing and diversifying its economy, MICs require cities that attract well-educated and entrepreneurial people to become residents. Cities that are polluted, congested, and unsafe do not attract the populations necessary for innovation, strong management, and investment. The recent OECD review of Colombia's environmental management regime found it inadequate and a potential barrier to Colombia's OECD accession. The formal review process gave 72 recommendations and decisions for strengthening environmental Colombia, and urged higher levels and improved efficiency of public and private sector spending on protecting environment services (see Box IV-4).¹⁵⁷ Prominent among the OECD recommendations were to increase expenditures, both public and private, on environmental management. Colombia's current level of environmental expenditures is low, about 0.5 percent of GDP, compared with 1 percent and above for OECD countries, and the OECD Environmental Review shows clearly that this is inadequate.

Box IV-4: Key issues raised by the OECD Environmental Management Review of Colombia

After recognizing the positive strides that Colombia has taken in the conservation of its natural resources and strengthening of its environmental institutions, last year's OECD Environmental Management Review flagged these key areas for improvement as the country works toward OECD accession:

Promoting a socially inclusive and environmentally sustainable growth remains a challenge. Weaknesses in Colombia's environmental institutions, policies, and accountabilities hinder the development of the national environmental information system, the implementation of environmental impact assessment and licensing procedures, and impede a consistent approach to environmental enforcement. The lack of coherence between economic sectorial plans and environmental goals persists. Further efforts are needed to enhance public participation.

Low public environmental expenditure impedes environmental authorities from carrying out their functions; more investment is needed in environmental infrastructure. It is the poor who lack access to environmental services and suffer most from pollution. A recent reform of the royalty system is expected to increase resources available for infrastructure development and to distribute revenue more equitably across regions. However, the transition to greener growth requires stronger, market-based incentives. Revenue from environmentally related taxes is low and the government's tax take from natural resource extraction could be increased. User charges remain below the cost of providing environmental services. Reviewing the environmental impact of tax expenditure and subsidies would provide a good basis for a reform.

Progress in waste and chemicals management is uneven. Colombia has developed an extensive regulatory framework for waste management, but it needs to be streamlined. Municipal waste generation

¹⁵⁷ OECD (2014a).

per capita is less than half the OECD average. Although waste disposal capacity has increased and the number of dumpsites has been reduced, 30 percent of landfills do not comply with environmental standards and in several large cities those dumpsites have reached capacity. Management of hazardous waste in the oil and mining sectors has been uneven, and suffers from limited financial resources. For the safe use of chemicals, further steps should be taken to provide information to workers, consumers, and other users in line with good international practice. Managing the health and environmental impact of mercury is by far the most challenging chemicals-related issue.

The role of natural capital in underpinning economic development should be given appropriate recognition. Uncertainties about the tenure of indigenous people, illegal seizure of land during the armed conflict and the subsequent displacement of more than 8 percent of the population have contributed to deforestation and intensified pressures on biodiversity. Although the deforestation rate fell in the past decade, between 30 percent and 50 percent of natural ecosystems have been transformed in some way. There is an urgent need to remove incentives for increasing extensive cattle rearing and to stop the authorization of mining in areas of ecological importance.

The challenge of long-term sustainability

165. **At the macro-economic level, Colombia needs to preserve all productive forms of capital including its natural capital; but it is not currently doing so.** The World Bank uses a core indicator of sustainability known as “change in total wealth per capita” to determine if a country is saving enough for the future. This indicator measures both economic and environmental sustainability, and includes [(gross national savings) – (physical capital depreciation) + (education expenditures) – (natural resources depletion of minerals, energy, and forests) – (an adjustment for a growing population which shares the nation’s total wealth)].¹⁵⁸ Since total wealth, or capital, is required to generate income, the income of future generations cannot sustain itself if a country does not protect its total wealth, including natural assets. Figure IV-9 shows the calculation of the Colombia’s change in total wealth per capita, which dips negative with the final adjustment related to its growing population. In contrast, other upper middle-income countries (excluding China) maintain a positive change in total wealth per capita.

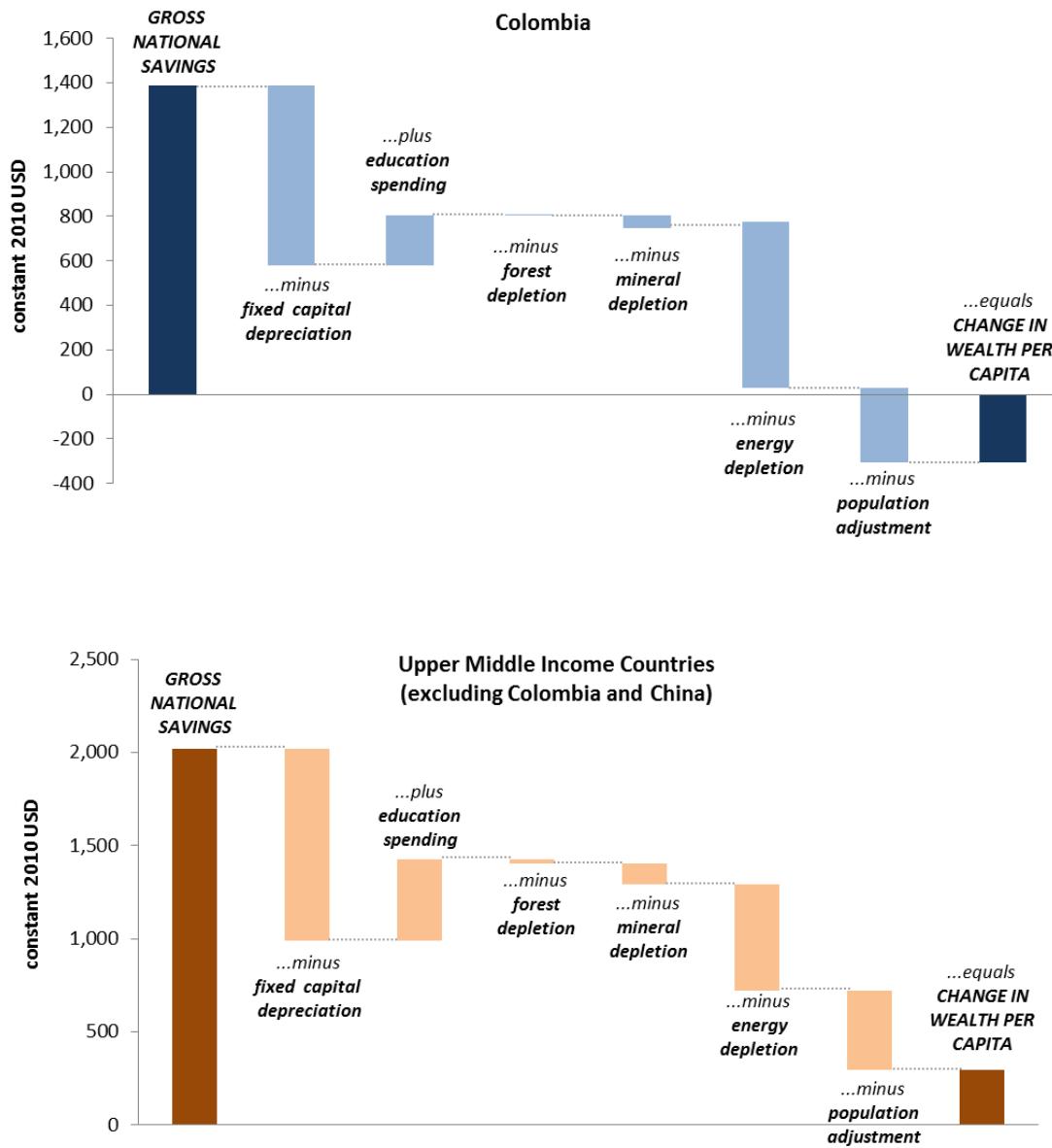
166. **A large negative component of Colombia change in total wealth per capita in 2013 is its depletion of natural capital.** As per Figure IV-9 this reduction in the change in total wealth per capita amounts to 7.8 percent of gross national income in the depletion of oil and 0.6 percent in the depletion of other mineral wealth. Of course, exploiting its non-renewable oil and mining commodities is a crucial part of the country’s development success. But the key finding in this analysis is that Colombia can better use the rents received from the extraction of this natural capital to invest in other forms of capital that preserves the total wealth per capita. The use of mineral royalties, whether from petroleum or gold, can be better invested in other forms of physical capital (infrastructure) and human capital (education) to ensure the longer-term sustainability of the economy.

167. **In conclusion, even though Colombia’s current costs of environmental degradation and resource depletion are consistent with its upper middle income peers, the drivers of that degradation are poised to worsen more than in other countries.** The economy’s high dependence on natural resource extraction, potential expansion into under-regulated and resource

¹⁵³ World Bank (2011b).

rich rural areas, high and increasing vulnerability to natural disasters, and under-investment in control of both air and water pollution, emphasizes the importance of expanding its environmental management efforts and expenditures (as recommended by the OECD). The Colombia of the future, with productive and attractive cities, and rural areas with adequate investment to address the needs of migrants and ethnic minorities, will require no less.

Figure IV-9: Colombia's Change in Wealth Per Capita (CWPC) and in Other Upper-Middle Income Countries, 2011



Source: World Bank (2015b).

168. **To avoid a surge in environmental costs, early investment is a critical step to ensure downstream environmental sustainability of the economy.** The priority areas for such

investment are in (a) improved forest, land, watershed and natural resource management (including in the oil and mining sectors) in post-conflict areas that are increasingly opening up; (b) improved disaster risk reduction and management in the face of worsening natural disasters; and (c) improved air quality management in the larger cities; and (d) sanitation investments generally. In all areas, the targeted beneficiaries are the poor and bottom 40 percent. For rural areas enjoying new access, the primary populations and potential beneficiaries of improved sustainability are ethnic minorities (indigenous and Afro-descendants), peasant farmers, and displaced migrants. In the case of investment in disaster risk reduction and management, the main beneficiaries are those living on marginal lands disproportionately affected by natural disasters.

Social sustainability

169. **The re-integration of millions of internally displaced people (IDP) is the highest priority social inclusion issue facing the country.** IDP total more than 5.5 million people, according to most recent accounts.¹⁵⁹ Of registered IDPs, 52 percent are women and 22 percent are children under the age of twelve. Up to one of two people in extreme poverty in Colombia is an IDP. As emphasized earlier, poverty cannot be eradicated in Colombia without providing a pathway out of poverty for IDPs.

170. **Separately, the other main categories of marginalized populations—Afro-descendants (10.5 percent of the population) and indigenous peoples (3.3 percent)—pose important social sustainability issues as well.** Experience has shown that the trickle-down effect of enclave extractive economic growth in rural areas is not sufficient to improve the welfare of these groups. The dual challenge of promoting welfare of these minority populations, while also respecting their ethnic and cultural differences, is an important complement to the IDP component of Colombia's development strategy.

171. **The essential step for reducing the social sustainability challenges to the twin goals is to implement a process towards sustainable peace that specifically helps rural poverty pockets.** But achieving this peace dividend will be enormously difficult, as those rural poverty pockets have precisely the least presence of the State in the country, the lowest levels of access, and often the highest penetration of illegal and coercive economic activity. Achieving a pro-poor peace dividend will require simultaneous progress in strengthening the role of the State in underserved rural areas, improving infrastructure and opportunities for rural investment, clarifying land rights and tenure, accelerating property compensation schemes, and policing and reducing illegal drug, gold, and timber production.

What is the impact of armed conflict, territorial diversity, and extractives-based growth on sustainability?

172. **Colombia's environmental sustainability issues are closely linked to the three identified crosscutting concerns.** Taken in turn, the impacts are:

- **Armed conflict** underlies the prospects for environmental sustainability in forested areas; and ironically, it does so in times of both violence and peace. By undermining the rule of

¹⁵⁹ See Chapter III, particularly footnote 55 on the number and welfare levels of IDP.

law, undermining citizen security, and creating millions of IDPs, conflict has led to deforestation, illicit drug crops, and highly polluting illegal mining. The cumulative impact is that restoring improved land use, natural resource management, and even water management in the *páramos* will require massive efforts to restore land tenure and improve local governance. During the time required for this to happen, econometric analysis and international experience predict that the short-term effect of peace could be accelerated deforestation.

- ***Colombia's territorial diversity*** is what creates its globally important ecosystems and natural wealth, and therefore defines the importance of managing that natural wealth for future generations. Territorial diversity, and the resulting complexity of land tenure and access, is partly behind the low productivity agriculture and livestock production in much of the country. It also exposes the country's infrastructure and agriculture sector to highly variable impacts from climate change. Finally, it complicates the efforts of government and communities to manage natural resources, due to poor access and the difficulty of enforcing regulations.
- ***The impact of extractives-based growth*** poses relatively less complexity for long-term environmental sustainability, as long as the extractives industries are well managed and regulated. The worst pollution hot-spots are in the illegal mining sector, which pose strong governance challenges

173. **The fiscal sustainability dimension of Colombia's future development path is related to the fiscal costs of any potential peace agreement, as well as the future development of the proceeds that the Colombian state receives from the oil industry.** The country is currently managed in a fiscally sound fashion but its evolution in the medium term needs further attention.

174. **Finally, the social sustainability dimension of Colombia's development is defined by issues analyzed in the previous chapter on inclusion, i.e., the re-integration of millions of IDPs and the promotion of the welfare of ethnic minorities that have high rates of poverty in both absolute terms and relative to the rest of the country.** These concerns are predominately rural, and therefore overlap with aspects environmental sustainability. Both social and environmental sustainability will require the resolution of rural land titling and access, rural land policies, and improved local governance in rural areas.

V. PRIORITIZATION OF CONSTRAINTS ON PROGRESS TOWARD THE TWIN GOALS

175. **This chapter summarizes the SCD's principal findings, and builds on the key issues identified in the previous three chapters as constraints on achieving inclusive and sustainable growth.** This SCD follows a three-step procedure for diagnosis and prioritization. Each of the foregoing chapters on growth, inclusion, and sustainability concludes with a list of key constraints. Combined, this list of issues raised constitutes a “long list” of issues emerging from the SCD analysis. They emerged from the two explicit steps that underlie each of the three chapters: (a) a review of the extensive literature that studies the Colombian economy and society; and (b) an extensive benchmarking analysis that ranks Colombia’s performance (see Annex 2: Benchmarking Colombia in the World). The many issues emerging from Chapters 2-4 constitute the first part of the priority-setting process undertaken in this SCD.

176. **The final step in prioritizing Colombia’s most urgent and fundamental developmental constraints was to follow an expert consultation process, based on the evidence accumulated in the first two steps.** This third step was done in consultation with World Bank experts, involving specific criteria that are summarized below and the expertise of those involved in the consultation, leading to a ranking of constraints. But first, this chapter summarizes the long list of key issues emerging from the analysis, and relates them to the overall framework presented in Chapter 1.

Key issues

177. **Chapter II expounds the main obstacles to output and productivity growth.** In this diagnostic, slow productivity growth—outside of extractive industries—is mostly associated to low integration to international markets and lack of competition in domestic markets. Colombia trade openness is well below expected for its size and income. Despite the recent free trade agreements, the country still possess relatively high tariff and non-tariff barriers, which limit access to and competition from external markets. Barriers to internal competition include limited access to finance, information gaps that prevent innovation and a regulatory framework that is perceived not to do enough to enhance competition and anti-monopoly policies. Moreover, output and productivity convergence across Colombian regions is forestalled by lack of connectivity (insufficient infrastructure + costly services) to the main internal and external markets, thereby affecting Colombian competitiveness. Last but not least, there is a severe mismatch between the demand and supply of skills that hamper labor productivity.

178. **Obstacles to inclusion, particularly those related to extreme poverty eradication and shared prosperity, can be found in the functioning of the labor market and the delivery of social services in Colombia.** Regarding labor markets, the diagnostics highlights three elements. First, access to quality education, at all levels, is a crucial driver of poverty and inequality reduction. Second, further reconsideration of payroll taxes and other labor market regulations (such as minimum wages), as well as enforcement of equality in job market opportunities, are needed in order to reduce the high informality and gender/race/ethnic differentials that characterize the Colombian economy. Third, special re-employment and asset rebuilding policies—with special attention to land but also other productive assets—seem necessary for those affected by the conflict, due to the severe asset losses that characterize their situation. In terms of social policy,

four challenges are highlighted. Without implying order of importance; first, incomplete access to sanitation infrastructure, health services, quality education, road infrastructure, and security (particularly in departments distant from main city centers and/or affected by violence); second, a fiscal system with limited sufficiency and progressivity of tax and transfers; third, a pension regime that is extremely regressive and provides little support to the elderly population in poverty; and fourth, a local administration that, despite having access to new resources through oil royalties, has institutional limitations to fully implement local development policies.

179. Finally, there are several main challenges in terms of fiscal, social, and environmental sustainability. Regarding fiscal sustainability, the political commitment to balance revenue-enhancing measures with expenditure containment will determine the ultimate success of Colombia's fiscal framework. Colombia has been able to meet the fiscal targets during the first three years of its new fiscal rule, but the longer-term fiscal consolidation effort as expressed in the annual MTFF is heavily skewed towards a reduction of public expenditure (as a share of GDP) in terms that do not look realistic or socially desirable. Regarding environmental sustainability, the main issues are: (i) inadequate forest, land, and natural resource management (including the oil and mining sectors) in post-conflict areas that are increasingly opening up for economic and social development; (ii) inadequate disaster risk management in the face of worsening natural disasters and climate change (including inadequate adaptation to climate change, particularly in the agricultural sector); and (iii) high pollution levels, particularly air pollution in Colombia's largest cities, and low levels of wastewater treatment. Lastly, regarding social sustainability the main challenge is to implement a sustainable peace that specifically helps the rural poor and provides growing safety and security to all citizens. Achieving this peace dividend will be enormously difficult, as the rural poor have precisely the least presence of the State in the country, the lowest levels of access to public services, and often the highest penetration of illegal and coercive economic activity. Moreover, experiences in other parts of the world warn about a resurgence of criminality in post-conflict situations.

180. Most of these problems are linked to the three factors that characterize Colombia. Table V-1 summarizes the selection of main obstacles to inclusive and sustainable growth by its impact upon growth, inclusion or sustainability, and its connection to Colombia's defining characteristics of uneven territorial development, armed conflict and extractives-based growth. The matrix summarizes the problems discussed in forgoing paragraphs and assigns them to specific cells in an attempt to synthesize the systematic country diagnostic. Most issues emerging from the earlier chapters can be mapped onto these three defining characteristics. However, other problems identified in the diagnostic do not seem amenable to be linked to the three factors, and a fourth column of "systemic issues" is added in the matrix. These systemic issues are more associated with fundamental and crosscutting government policies that are not tied to specific country characteristics. They include, for example, government policy shortcomings in the areas of trade, the financial sector, taxation, pensions, and disaster risk management. These are sophisticated issues linked to Colombia's future aspirations and needs. They go beyond the historical forces and defining characteristics that have prevailed so far.

Table V-1: Origin of Challenges to Inclusive and Sustainable Growth in Colombia

		Uneven Territorial Development	Armed Conflict	Extractives- based growth	Systemic
GROWTH		Investment gap in physical infrastructure, especially transport, partially due to institutional constraints	Land tenure and land market institutions hinder growth	Slow TFP growth in non-extractive activities, linked to limited exposure to domestic and external competition. <i>Should Colombia embark in an agriculture-products-based export strategy?</i>	Limited trade openness / Financial sector provides insufficient support to individuals and small firms / Inadequate provision of productive skills / <i>Is Colombia a relatively closed economy?</i>
INCLUSION		Gap in service delivery (education, health, housing) partly due to limited services delivery capabilities at the local level and fragmented social protection system	Affected municipalities and IDPs suffer losses of productive assets and means for coping with risks, as a consequence of the armed conflict	Where jobs and earnings growth would come from if extractive activities stop growing?	Tax and transfer system has limited impact on inequality / High costs imposed by labor regulations and unequal employment opportunities / <i>What is the impact of regulations and anti-competitive behavior as an impediment to output and productivity growth in Colombia?</i>
SUSTAINABILITY	Fiscal		<i>What is the fiscal impact of compensations and reparations associated with the post-conflict process?</i>	Volatile natural resource public revenues	Fiscal consolidation heavily skewed toward public expenditure reduction. Un-funded and regressive pensions/ <i>Could inefficiencies in public spending be identified and removed?</i>
	Social	Regional social unrest, unrelated to armed conflict	Lack of citizen security as consequence of both armed conflict and its legacy of increased common violence		
	Environmental	High pollution levels in large cities	Insufficient forest and land management in post-conflict areas	Insufficient environmental regulation of oil and illegal mining activities	Inadequate disaster risk management and adaptation in the face of worsening natural disasters and climate change.

Note: text in red refer to areas of further research

Knowledge gaps and further research

181. **In addition to flagging key constraints, this SCD also underlines knowledge gaps and areas that merit further research.** These are areas that despite their importance have not been sufficiently discussed in this document. These are topics that either have a limited evidence base or still remain highly controversial among analysts and policy makers. These could become important research programs in coming years. The most salient topics for further research are the following:

- a. What are the fiscal implications of compensations and reparations associated to the Victim's Law and other agreements reached through the post-conflict process? As the peace agreements are still being negotiated, of course the final costs and fiscal burden is unknowable. Some preliminary estimates may be available, but more tracking and analyses of the size and sources of funding of the process will be necessary.
- b. There is an important debate on the potential of Colombia as an agriculture and agro-industry producer and exporter. The topic has strong advocates as well as skeptics both in terms of the feasibility, desirability, and specific characteristics of such a development. Should Colombia aim toward a stronger development of agriculture and make agriculture-related products the basis of enhanced integration in international markets? An even broader research would go beyond agriculture sector and would pose the question of where jobs and earnings growth would come from if extractive activities stop growing.
- c. Some researchers and analysts call for a re-examination of subsidies vis-à-vis investment in public goods in Colombia. A case in point is the detrimental impact on investment in rural development from the excessive concentration of subsidies within the budgets of Government agencies attending rural areas. There is also the perception that there is duplication of public agencies with similar mandates and responsibilities, together with lack of enforcement in many areas, (e.g., innovation policy, land, safety and environmental regulations) which are signs of a need to reconsider explicit or implicit subsidies that drag public finances and hinder, or plainly prevent, investments in public goods. Could inefficiencies in public spending be clearly identified and effectively removed? Are detailed public expenditure reviews and spending reviews needed?
- d. Despite more than 40 free trade agreements, Colombia remains a country with relatively low import/export penetration in its economy. Some argue that Colombia still remains a relatively closed economy due to several non-tariff barriers. Is this true? What type of trade barriers and what is their real impact?
- e. Many argue that Colombia is an economy with excessive regulations and red tape that stifle entrepreneurship and growth, while others posit that regulations are not enforced in the areas of competition anti-monopoly regulation. Are these assertions true, and what is the impact of regulations and anti-competitive behavior as an impediment to output and productivity growth in Colombia?

Prioritization exercise

182. **This chapter takes the key constraints identified in the analysis and suggests final priorities that identify which are the most critical that Colombia must overcome to achieve inclusive and sustainable growth.** Using the information derived from the literature review, benchmarking analyses, and local consultations, a group of World Bank experts was requested to categorize the challenges of the Colombian economy into two tiers. As per guidance from the World Bank SCD advisory group, experts were requested to consider three dimensions to gauge the overall importance of each challenge:

- First, its direct impact upon the twin goals of poverty eradication and shared prosperity.
- Second, the forward/backward linkages and complementarities that the challenges may have with other challenges or other development goals.
- Third, a sense of opportunity/urgency of the challenge based on the expert's knowledge of the subject as well as the expert's view of current affairs, public opinion, and policy agenda in the country.

The experts discussed each challenge in light of these three dimensions. Any challenge deemed to meet all three dimensions was deemed to be a top priority concern for Colombia, and was put into a basket of “Tier One” challenges. Those challenges deemed to meet only one or two of the dimensions were categorized as “Tier Two” challenges.

183. **The final outcome of this prioritization exercise is included in Table V-2.** Interestingly, all challenges are deemed to have forward and backward linkages. This is a sign of the perceived importance of them all in the Colombian quest for inclusive and sustainable growth. The separation between tiers responds to perceptions about the clear and direct impact on the twin goals and sense of opportunity.

184. **In closing, it is important to note that the creation of Tier 1 and Tier 2 challenges does not suggest that Tier 2 does not remain important, or that other challenges not listed here should be forgotten.** All the issues discussed in this note are important to ensuring sustainable, inclusive growth in Colombia. To some degree, government will need to put time and resources into all of them, as development is not a zero sum game where progress on one area implies that another must be ignored. The purpose of the SCD prioritization is to identify those challenges that are likely to have the greatest bearing on eliminating absolute poverty and improving prosperity in the medium term. Thus, they are necessary but may not be sufficient; they propose areas of emphasis rather than a sole focus.

Table V-2: Prioritization of Main Challenges to Inclusive and Sustainable Growth in Colombia

		Problems/Challenges to Inclusive and Sustainable Growth	Twin goals	Linkages	Opportunities
Tier 1	Infrastructure gap (particularly transport infrastructure) across regions/departments hinders output and productivity growth, while gaps in the delivery of public services (particularly utilities such as water, sewage, health, citizen security, and urban transport) across regions/departments directly contributes to poverty/inequality outcomes. These issues are closely linked to institutional constraints, such a fragmented social protection system, lack of coordination across levels of government and limited local capacity to design and implement projects and policies.		✓	✓	✓
	Low quality of education at all levels, insufficient access at early childhood and post-secondary levels, and lack of access to training in job skills. Combined, these hinder output and productivity growth, and contribute to widening wage inequalities.		✓	✓	✓
	Financial sector does not provide adequate support for private firm development and access to financial services in general by individuals and small firms, affecting economic growth and inclusion.		✓	✓	✓
	Land tenure and land market institutions hinder growth and equity in rural areas. This compounds already limited re-employment possibilities for internally displaced people and victims due to losses of land, human capital, and other productive assets.		✓	✓	✓
	Poor citizen security as a consequence of the armed conflict and of expanding criminal activities whether related or not to the conflict itself, hinders economic growth and inclusion, as well as social sustainability.		✓	✓	✓
Tier 2	Insufficient/limited forest, land, and natural resource management (including in the oil and mining sectors) in post-conflict areas that are increasingly opening up.		✓	✓	✓
	Slow TFP growth on non-extractive activities, which is linked to limited exposure to domestic and external competition, limit economic growth.		✓	✓	
	Inadequate disaster risk management and adaptation in the face of worsening natural disasters and climate change.		✓	✓	
	High pollution levels, particularly air pollution in Colombia's largest cities, and low levels of wastewater treatment.			✓	✓
	Volatile natural resource public revenues pose additional challenges to the fiscal consolidation plan set under the fiscal rule. The current implementation strategy, based on public expenditure reduction, does not seem realistic or socially desirable. Moreover, the Tax/Transfer system is of limited progressivity and the pension system is regressive and will require increasing amounts of funding.			✓	✓
	Labor market legislation leads to relatively high labor costs for the average labor productivity of the country. In parallel, unequal opportunities and outcomes in labor markets for women, displaced population, and ethnic minorities such as indigenous and afro-Colombians, affect economic growth and social inclusion.			✓	

VI. ANNEXES

Annex 1: Stakeholder Consultations

A brief introduction

Stakeholder consultations consisted of a series of open conversations with different groups of representatives of Colombian civil society. Representatives of business associations, academia, environmentalists, gender-based groups, Afro-Colombians, and indigenous groups, as well as members of the donor's community and multilateral agencies in Colombia, were invited to attend round table conversation with the authors of this Systematic Country Diagnostic (SCD). The conversations were organized by group of interests, and took place between March 2nd and March 6th in the cities of Bogotá and Cali. In every case the authors of this SCD prompted participants to talk about the main obstacles that, in their opinion, Colombia faced to achieve inclusive and sustainable growth. All the conversations followed "Chatham House Rule." That is, "...participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed."¹⁶⁰ This encourages openness and sharing of information. In what follows, the authors of this SCD summarize the main ideas and comments shared during these consultations. The authors thank all the participants for their interest and enthusiasm in sharing their views about Colombia's development. We do not claim this to be a complete or exhaustive review of opinions and views of the Colombian civil society about its main development challenges. It is, simply, a limited sample of these views and opinions. We have made every effort to be as accurate and comprehensive as possible to the actual conversations. Any mistaken fact or misinterpreted opinion in this transcription is the SCD authors' fault only.

Consultations

Academics and Experts on Growth, Macro, and Fiscal Issues (March 2, 2015)

Academics emphasized that sustainable growth will depend on Colombia's ability to undergo structural changes boosting productivity and implement measures to further reduce inequality. Academics stated that the lack of a healthy industrial policy and reliance on external factors gains, such as coffee or oil revenues, would likely stall Colombia's economy. Despite maintaining strong macroeconomic stability, due to its focus on capital-intensive economic activities, the country is not able to transition out of low-productivity sectors, limiting access to formal employment opportunities. While they recognized the need to identify sectors of higher productivity, participants did not reach a consensus on the possible sources of employment for the future. They identified the high level of informality as the main driver of inequality, which remains persistent and strikingly high among regions. Key recommendations included enhancing the quality of regional investments; assessing the causes of the vicious cycles of poverty that affect regions; and prioritizing skill development.

Many pointed to the need to strengthen institutions and make headway on the fiscal reform for a more effective decentralization process. There was a general agreement that the

¹⁶⁰ For more information see <http://www.chathamhouse.org/about/chatham-house-rule>.

decentralization framework is limited to transferring resources with little emphasis on building capacity and monitoring results in municipalities. This has resulted in institutional gaps between central and local governments, which require ad hoc and more targeted policies. However, academics highlighted that the decentralization process provides a window of opportunity to advance fiscal reform, as many agreed that resources from the *regalías* are not sufficient to address inequality. On this front, academics were divided between those in favor of establishing a value-added tax and those advocating for higher income tax.

Academics also indicated that they believe that the post-conflict setting will have minimal impact on growth. They argued that once an agreement is reached, resources that are currently allocated towards the defense budget will be needed to fund a police force. Given the high level of organized crime in urban areas, security costs required for these zones may be higher than expected. Moreover, the Government will also need to establish effective mechanisms to reinsert former military personnel into the labor force, in line with the country's priority on increasing productivity and competitiveness.

Finally, the lack of exposure to international markets was cited as an impediment to developing the business environment and increasing firm competition in Colombia. After an initial trade-opening experiment in the 1990s, the imposition of non-trade barriers and lack of transparency led the country to remain protectionist. Academics are of the opinion that the limited commercial opening and markets focused on internal consumption have prevented Colombia from becoming competitive in its sectors of comparative advantage. Participants agreed that the issue of low human capital is also a key barrier to competition.

Academics and Experts on Agriculture, Services, and Manufacturing (March 2, 2015)

The primary debate was whether Colombia should open its agriculture sector to global markets or focus on internal consumption. One group highlighted the experience of a number of Latin American countries in reducing poverty and boosting productivity through trade opening. In fact, they recognized that Colombia has the potential to become a supplier of meat and milk to meet global demand. On the other hand, others were adamantly opposed to the country's strategy being overly focused on agricultural commodity exports, which are subject to high price volatility. In their view, strengthening internal markets and linking small producers to various regions within Colombia should be the priority to mitigate this risk. They also indicated that the political scheme to enhance the quality of national products is necessary, as Colombia cannot currently compete against external subsidies.

Rural development will be a necessary condition for the growth of the agricultural sector. The Government will need to transition from providing subsidies to farmers toward improving access to and quality of public goods such as roads, electricity, or new technology in rural areas. Participants raised the issue that due to lack of education and opportunities in these areas, many producers move to cities in search of better employment, thus not tapping into the resources of their land.

Another key challenge is the implementation of a territorial order approach. Meeting participants indicated that land tenure and the lack of formal titles are the main obstacles to implementing territorial order. This has prevented the country from building a long-term vision

built on common regional characteristics and the types of products that should be prioritized to maximize the economic potential of regions. Furthermore, academics pointed to the lack of a participative process for territorial development: for instance, as the Government was developing a master plan for transport infrastructure, there was not enough consideration for mechanisms to link centers of production to markets.

There was also emphasis on improving coordination among institutions in charge of competition and trade. The main institutional issues for the development of economic sectors included: weak anti-competition regulations, difficult access to credit markets, and unclear rules of operation. Furthermore, the experts attribute the difficulties in implementing territorial order to the lack of inter-ministerial coordination among entities in charge of promoting the rural agenda. Participants indicated that the national development plan should have a more transversal approach on productivity, and that information on production costs should be made public.

Academics on Social Policies (March 2, 2015)

The consultation showed a high level of consensus on establishing programs targeted at specific groups. This group of academics indicated that the territorial and socio-ethnic heterogeneity of Colombia should lend itself to a different set of policies that are tailored to specific characteristics. A suggestion was made as to put in place special quotas in terms of access to education, health, and jobs for marginalized groups. However, “universality does not necessarily imply uniformity.”

Departments will be called to review the economic costs of displacement and establish more integral compensation schemes. It has been shown that displacement and violence have a significant impact on cognitive capacity. This has the potential to further limit opportunities for displaced people to move out of poverty. Furthermore, Afro-descendant communities represent a large proportion of the displaced population; the state needs to put in place alternative interventions to address their needs. For instance, displaced communities were said to deserve and require differential programs as they have a history of mistrust in the Government that has failed to protect them from the conflict. While departments with high numbers of internally displaced people receive up to nine times more resources than other departments, little analysis has been carried out on actual achieved results.

The rural agenda should be a priority in Colombia’s strategy to eradicate extreme poverty. There has been a misleading conceptualization of the rural world as only encompassing small individual properties of coffee producers. This has caused many littoral rural areas of the territory, namely on the Pacific and Caribbean coasts where the incidence of poverty is significantly higher, to be excluded from the framework of rural development policies. It was stated that the pockets of poverty in these regions need to be addressed in the context of their production systems, which, for instance, does not allow them to access credit. Participants also discussed how to link rural populations to labor market opportunities and increase the level of formal employment.

Other key challenges discussed included the direction of social programs and the redistribution system. The meeting called for a number of changes in the flagship poverty reduction program, including the design of an exit strategy. For instance, participants pointed to the need to focus on mechanisms through which youth who participate in the program can enhance

their opportunities to access labor markets or higher education. A number of consultation participants suggested that a minimum income guarantee and unemployment insurance could have a positive impact on inequality. Furthermore, the tax system needs to be more redistributive to decrease the segregation and inequality that are perpetuated by the strata system. In this regard, enhancing the supervision and control of the budget would allow the Government to bridge knowledge gaps and make more effective recommendations. With regards to pensions, it was shown that telenovelas could be an effective medium to create more awareness and knowledge on the rights and tools available to workers to manage their retirement.

Donor Roundtable (March 3, 2015)

There was general consensus that coordination among donors and within the Government should be enhanced to help Colombia achieve its development goals. The donor community agreed that development partners should capitalize on one another's lessons learned and that country strategies should be complementary. In particular, there was a high level of interest in understanding how the multi-donor trust fund for peace would operate. The meeting also called for better inter-donor collaboration in the area of environmental sustainability. Identifying and mobilizing the most relevant entities and counterparts in the early stages of reform implementation was identified as the most effective way to avoid issues of duplication and overlaps in programming and ensure continuity.

The complexities of the public administration system have led to several implementation bottlenecks in Colombia. Participants pointed out that the Government demonstrates strong planning capabilities, but the country's implementation capacity remains weak, in large part due to the lack of inter-ministerial coordination. High administrative staff turnover does not lend itself to much political continuity. Participants agreed on the need to further enforce complex laws and norms, as well as develop a long-term vision for growth through which decentralized entities have adequate resources to fulfill their mandate.

Development partners noted that tax reform will play an important role in reducing inequality. Public finances have been significantly impacted by the fall in oil prices. As a result, tax reform is perceived as the key instrument in boosting revenues for Government. A key recommendation is that the reform should aim for further inclusion, and include a provision for property tax. The meeting also highlighted the need for Government to put more emphasis on redistributive programs such as social insurance and transfers. It also called for increased long-term investments in education.

The meeting also drew attention to the challenges that the Government will need to overcome in the post-conflict period. It was stated that the end of the armed conflict will result in a generalized form of violence, which will further exacerbate security issues. The peace agreements also imply a change in power relations and the need to further promote local empowerment. Participants also underscored illegal mining and demining interventions as top environmental and social priorities for peace building. Demining was highlighted as particularly important for rural development, as well as land restitution and resettlement of internally displaced people. The international community could contribute its experience and knowledge on this front.

Land use has gained momentum in the political agenda, and is a crucial point in the peace discussions. Participants expressed concern over the fact that Colombia has accelerated its urbanization at the expense of the development of rural areas. This has caused issues with regards to land tenure and use, which reflect the political challenges associated with land redistribution. It was noted that while a cadaster is an important exercise, an approach for land tenure should be embedded into a comprehensive rural development strategy. In turn, this strategy was noted as the most important element to unlock Colombia's potential in the agro-industry.

Organizations focused on victims of the conflict and IDPs (March 3, 2015)

The end of the use of arms as political means is seen as the most immediate benefit from reaching the peace agreements. However, expectations in terms of socio-economic changes from the post-conflict period are quite low. Representatives from civil society noted that while the agreements may give impetus to rebuilding the nation and bridging the gaps between urban and rural areas, a series of measures need to be taken to maximize their potential. These include: establishing guarantees for citizen security; promoting economic and political participation rights; and boosting rural development. The issue of security in territories previously occupied by the FARC was cited as the most important impediment to regaining the trust of displaced citizens. In particular, the meeting called for special attention to be given to the periphery of municipalities, which have been completely excluded from the legal system and subject to high crime levels.

Building the capacity of institutions will be primordial to secure early wins upon signing the peace agreements. Local institutions, at both municipal and sub-municipal levels, remain weak, especially in their ability to restore security and social order in areas where state authorities have been absent. To overcome this challenge, suggestions have been made to: (i) strengthen the governance system between the national and local levels; (ii) develop participatory processes for development and peace building led by grassroots organizations; and (iii) determine a transitional justice system that can revive a sense of community and nationhood among Colombians. The upcoming elections in October should give local governments the opportunity to highlight concrete mechanisms for participatory mechanisms in their development plans.

The peace agreements offer the country a window of opportunity to address issues related to demobilization. To successfully reintegrate ex-combatants, it will be very important to provide access to formal employment opportunities. This is closely linked to the need to implement a territorial transformation that puts in place adequate conditions for the development of productive alliances and income generation activities. The private sector should also play a significant role in facilitating the reinsertion of demobilized agents. As compensation funds have been deemed insufficient, the focus should be on designing viable lifelong plans for victims and displaced people that would allow them to actively participate in the development of their communities.

Gender-based Organizations (March 4, 2015)

There has been a generally accepted discrimination towards women in labor markets. The first barrier to quality employment for women is their difficulty in enrolling in competitive educational training or finishing university. With no specific scholarships targeted for them, women remain underrepresented in science and technology programs, which are necessary to gain the skills needed for the new economy. These two factors partially explain the low rate of female

participation in the five key sectors laid out in Colombia's development strategy, namely infrastructure, public and private security, local public works, the mining and extractive sector, and science and technology. In addition to receiving salaries that are generally lower than those of men, women are often subject to many conditions that are not linked to their skill level before being deemed employable. In light of this, participants highlighted the need to not only build more awareness of labor rights among women, but also allow for class actions to be carried out in the event that these rights are breached.

This discrimination is fueled by many existing cultural and social norms. Some young men are conditioned into adopting behaviors to assert their masculinity that often lead to violence against women. Civil society representatives pointed out that the media have also played a role in perpetuating a culture that does not empower women to exercise their rights. They also noted that indicators of violence against women at home are on the rise, in large part due to the fact that women are more likely to report this type of events.

Organizations that advocate women rights have not been successful in Colombia because there is little political will to invest in women's education, employment opportunities, or political participation. One of the most challenging issues is that the Government has tended to give high visibility and priority to women who are victims of the armed conflict, yet they only represent a small fraction of the overall female population. The meeting showed that once women are in the labor force or pay taxes, they become invisible and are systematically excluded from the design of public policies. There is currently no grassroots organizations platform that gives a collective voice to women. It was highlighted that it would be imperative to create or strengthen coalitions of rural and urban women around productive activities to promote their financial independence. Additionally, programs that benefit women need to have better monitoring, evaluation and follow-up mechanisms.

Women remain disproportionately affected by the impact of the armed conflict and natural disasters. Participants pointed to the weak institutional capacity in responding to emergencies following natural disasters. Following the flooding events in 2011, it was documented that there were no shelters exclusively designated for women, exposing them to severe public health risks. Similarly, women are often the most affected by landmine accidents. Whereas displacement and landmine accidents are the most visible consequences of the armed conflict, the law does not provide the same compensation schemes. When a family is forced into displacement, all household members receive benefits, whereas in the case of landmine accidents, compensation is only given to the person directly in contact with the landmine. As a result, women may become the sole breadwinner of families, further limiting their possibilities to escape poverty.

Private Sector Consultations- Financial Sector: (March 4, 2015)

While the petroleum industry undoubtedly played an important role in bolstering growth in Colombia, respondents agreed that new sectors should be promoted. The petroleum sector has been a key source of growth in creating, good (albeit few) jobs. However, respondents recognized that hydrocarbons represent an overly large proportion of Colombia's exports, which are low as a percentage of GDP. Thus, the priority is on diversification, especially as the country adjusts to the oil price shock and the resulting current account deficit. The challenge lies in the lack of consensus for a Government strategy on alternative sources of growth. Industry was put forth as a possibility

but high production and energy costs, as well as weak logistics and connectivity constitute significant barriers to its expansion. Similarly, reforming the agricultural sector could be crucial in revitalizing rural areas. Financial sector representatives also highlighted that Colombia has a comparative advantage in the service economy.

Diversification could catalyze the productive capacity of the economy. Furthermore, enhancing the quality of the labor force and combating informality could further promote Colombia's insertion into global supply chains. Respondents agreed that universities currently do not provide sufficiently relevant skills; rather, their focus should be on producing more technical experts in addition to service professionals. Education is seen as an important way to raise awareness on employment opportunities outside of the petroleum sector. Raising the level and quality of training and skills will allow entry into other competitive industries. It was also acknowledged that minimal knowledge of external markets and available resources has hampered Colombia's ability to overcome informality and lack of training and capacity.

Innovation was also another major topic. Colombia has three million micro-entrepreneurs, yet 70 percent of them are characterized as informal and unproductive, and only large companies innovate. SMEs are an important source of growth, but Government support is required to maximize their scale and potential impact. Minimal investments in technology and innovation are partially attributed to the issue of access to credit. Meeting participants urged plans that would support SME expansion. They highlighted that SMEs could play a significant role in meeting the national job creation target. To help this sector grow, Government is called on to properly channel support into training, skills, and access to credit. Cash transfers were perceived as a counter-effective option to raise productivity and efficiency.

The meeting ended with a discussion around the opportunities that Mercado Integrado Latinoamericano (MILA) will offer. MILA has been ready for foreign investment, but the different systems still need to be aligned more harmoniously. Meeting participants indicated that taxes, laws, and regulations have made this process complicated. There was also an indication that the increase in foreign funds represents an important source of financing for the economy. In the same vein, the financial system should have the capacity to emit bonds in international markets, and further develop its capital markets.

United Nations Organizations in Colombia on Peace, Human Rights, and Development (March 4, 2015)

Primary conclusion: Colombia's efforts to eradicate poverty and its incredibly high levels of inequality have been insufficient. Structural reforms in terms of political representation, strategic planning, law enforcement, justice, data availability, and physical and social infrastructure are needed to establish a road to prosperity. Finally, despite the fact a peace agreement will not solve all the country's problems, it will crack the vicious cycle of doing politics through arms.

Colombia has great potential to increase the quality of life of its citizens, but there are still great inequalities lingering that limit the benefits of growth to a few. These inequalities don't just refer to the unprecedented income gaps; they also refer to the basic presence of the State in the territory. There are regions of the country which armed groups replaced the State, making these conditions part of the cause of the current conflict. Policy-making decisions can be biased since information in the country is completely aggregated; the state has not yet been able to gather

detailed sub national databases to correctly redirect policies. In fact, data regarding the conflict is also weak; no one knows how many children are in the guerrilla, and collecting that data is difficult because those organizations are secretive. However, cases are known where conditions pushed children into enrollment in guerilla and paramilitary activities.

Colombia is accustomed to the conflict and underestimates the benefits of peace. The 50-year-old conflict has even deeper roots in the country's long history of civil wars. Colombian society has become, in a certain way, indifferent to the conflict, mostly fought in the rural areas. As of today the great debate around the peace process has revolved around the costs of the agreement rather than the benefits derived from it.

A peace agreement will not solve all the problems but will end the vicious cycle of politics through arms, nonetheless a correct implementation of the agreements and reforms are key to ensure peace. The agreement should reduce political violence, however social unrest will not disappear. The first year after the agreement will be crucial to convince people, with more efficient articulation between institutions, that a real change will come to them, particularly for the seven million victims, of which 35 percent are displaced persons in extreme poverty conditions.

There will still be populations that will not benefit from a peace agreement. Colombia still faces various bottlenecks to development that will persist despite a peace agreement. To begin with, the country continues to be greatly segregated by lack of political representation, racism, and heterogeneous poverty and income inequality rates. Furthermore, illegal economies involving smuggling, drug trafficking, criminal bands, and corruption will persevere if an effective rule of law is not enforced.

Impunity remains one of the biggest obstacles to ensuring a peaceful environment in the country. Special guarantees must be given for political participation in a post-conflict context so that no political force is excluded or exterminated as happened before. In this sense, the ordinary and transitional justice systems capacities play key roles, which still have not yet been strengthened.

Representatives of Private and Public Sector at Centro Nacional de Productividad in Cali (March 5, 2015)

Primary conclusion: The Valle del Cauca region faces important challenges to increasing business competitiveness, particularly a detangled institutional arrangement, short-term business culture, and a lack of articulation between the private and public sectors.

In regional terms, Valle del Cauca doesn't face a great shift in its economic structure with the end of the commodity boom in Colombia. The region is not an important producer of either coal or oil and no important royalties are received. Moreover, the agriculture and manufacturing sectors are the ones pulling the regional economy, so this new scenario of low commodity prices opens an opportunity for the region to focus on its competitiveness agenda. A regional approach for this purpose is crucial to obtain results promptly.

The private sector identifies great obstacles in the cost of electricity, infrastructure, and the current tax rates. The institutional arrangement of the electricity market in Colombia has pushed profits to generators while imposing high prices to the manufacturing sector. In addition, poor

infrastructure increase freight costs despite the country's strategic location in the Pacific. Furthermore, the tax system relies heavily on firm's profits rather than targeting individuals, affecting job creation and R&D investments. Finally, illegal activities such as drug trafficking continue to disrupt the allocation of productive resources in the region.

Business culture, vision, and management remain a barrier to better innovation and competitiveness policies within the private sector. A recent research study by the Chamber of Commerce of Cali identified business culture as a key factor that limits innovation. Businessmen appear to have a short-term vision of management that lacks coordination with a public strategy. Additionally, the great majority of companies are small and are underrepresented in policy stances. For instance, in Valle del Cauca there are 23 thousand companies, of which 159 are large groups, three thousand are medium size firms and the rest are small enterprises.

There is a vacuum regarding the strategic development planning of the regions. There is no institution responsible for regional development, as the department planning secretaries are not required to take on such responsibility. At the national level no one is answering for a regional development strategy and the short-term political dynamics have limited policy fluency. In addition, corruption and lack of law enforcement have established mistrust between the public and private breaking links of policy articulation. In fact, in the last four years the department has had six governors, meaning that any kind of attempt to articulate policies is unreliable. The institutional framework continues to limit the development of a comprehensive business development strategy for the private sector in the region.

Centro de Estudio Multiculturales de la Universidad Javeriana on Conflict Resolution (March 5, 2015)

Primary conclusion: In a region where ordinary justice institutions have proven insufficient or ineffective for the task of resolving conflicts, the Center has implemented a conflict resolution methodology that successfully fills out the State roll as a mediator between culturally and ethnically diverse communities in disagreement.

The center's work has focused on contributing to negotiations between some parties in economic, social, and political conflicts; particularly, the center works with indigenous communities, afro communities, unemployed communities and others. The challenge is determining how to build a multicultural government. There are some mechanisms that these communities are already building as plans for life. Contemplate rezoning based on cultural and environmental economic criteria.

Invisibilities and denials: poverty maps coincide with the location of Afro communities, indigenous people, and peasants. From a legal and political standpoint, indigenous rights have been earned but have been delayed more than 23 years to achieve regulation over their territories. Afros are in the process of achieving recognition of governance over their territories. There is a lack of recognition of the existential rights of these communities.

Context of Cauca: great conflicts between communities. As the composition of the great diversity in the Cauca there are peasants, Indians, and blacks living in the department. There are overlapping territorial claims. In addition the system for granting mining rights, collective

reserves, and environmental reserves generates many conflicts. There are also illegal activities and groups outside of the law that aggravate the situation. There is asymmetric information; sources and databases are not consolidated. There is a clear problem of zoning. There is also a differential scheme rights.

Why is the guerrilla located in this area? This is a strategic sector due to its central location, in which there is quick access to mobility routes. Therefore, it is a geographical and strategic issue that lends itself to the guerrilla force remaining and surviving.

An agreement will not drastically change the situation of the department. The communities have also demonstrated concern regarding the new post-conflict scenario with the emergence of new actors who will seek to capture power. This is considered a logical development. The agreement of Havana is the cornerstone to peace. The need for arbitration is imminent must have a moral authority. The State must be adequate to the task, legislative and supervisory bodies are necessary. Again, there are information asymmetries that at the end prevent justice.

Environmental organizations (March 6, 2015)

The National Development Plan highlights green growth as a transversal theme but does not clearly articulate how biodiversity is an asset for all stakeholders. Under the plan, *regalías* offer an opportunity for Colombia to capitalize on links between technology and conservation for economic growth. However, civil society and academics believe that it falls short of setting clear environmental objectives and roles for economic sectors in preserving biodiversity. To gain a comprehensive view of environmental priorities, they underlined the need for more inter-sectorial planning and coordination among the country's environment, territorial and science, and technology management systems.

One of the main obstacles to achieving green growth is the lack of territorial order. Historically, territorial management has been urban-biased and not sufficiently reflective of the actual challenges of population vis-à-vis their environment. The complex legislation has marginalized regional institutions that often do not have the technical capacity to implement effective territorial plans. Environmental entities are not involved in investment decisions under *contratos planes*, yet these are the most important planning tools between the national and local governments. A key recommendation is to plan by macro-basins as the country is organized by economic eco-region; it is also important to understand the usage of water, which is essential for sectors to operate well.

Finding the equilibrium between economic development needs and conservation policies is also a controversial issue. The Amazon region was cited as an example of the important role that indigenous reserves play in preserving natural forests in the country. However, poverty leads indigenous people to engage in illicit production activities or to cede land for energy or mining companies, thereby damaging soils. Ineffective livestock ranching practices also threaten water and food security in the region. Building awareness on the economic value of biodiversity, for example through payment for environmental services, could show communities how they can benefit from products derived from natural forests in a sustainable manner.

Illegal mining has fueled the conflict and become one of the most significant environmental threats in Colombia. Unregulated mining activities take place in areas with strong connections with guerillas, yet the peace agreements have excluded the topic. An important challenge is that because the products derived from mining are legal, there is currently no judicial mechanism to address the issue of illegal mining activity. Additionally, mining requires the use of mercury, which is extremely costly for companies to remove once they exit. This causes irreversible damage to the land and health risks, leading communities into forced displacement. On this front, there was agreement that resettlement packages needed to include a package of services that would allow these communities to fully benefit from their environment.

The consultation highlighted a clear overlap between areas affected by natural disasters or deforestation and vulnerability. A national priority to lessen the impact of natural disasters on the poor must be to enhance the capacity of the environmental management system to respond and adapt to climate change. Participants emphasized the importance of building on the results of important studies such as WAVES or creating awareness in the productive sector on conservation priorities.

Afro-Colombian community (March 6, 2015)

Why does the bank only engage with the Colombian state rather than civil society organizations? Civil society has more presence in the regions than the state. A peace agreement will not solve the social conflict immediately. The municipality of Barbacoas in Tumaco or Timbiquí in Cauca are probably not going to see the benefits of the agreement. We are not poor; we are impoverished. There are racist and segregationist attitudes in the country. Recent research between Uniandes and PCN found there is still a great discrimination in different aspects of social life toward Afro-descendant people. Access to tertiary education is extremely low resulting in unequal opportunities for Afro and white persons. Hence, high school and college desertion rates are very high.

Missing information and statistics worsens the situation. Different agencies of the government do not exchange databases. Additionally, there are no social indicators concerned with the communities that measure social characteristics of the African population. Development promotion is missing. That's why the coming population census is so important.

There is no recognition of the Afro communities; they don't feel represented in the decision-making process. Strategic planning and zoning is still a big issue to development; if Afro communities don't have real inference in the decision making process on zoning nothing will change.

A reform to the fifth chapter of Law bill 70 should be the next step towards race equality. These communities need a development plan and strategy to help them prosper. It should include investments in the physical as well as social infrastructure of the region, always taking into account the different vision of life these communities hold compared to the interior. Finally new incentives should be given for young professionals to stay in the region instead of leaving as soon as they finish their education.

These regions and their Afro inhabitants suffer all the country's bad habits and problems in an intensified magnitude. Illegal mining and impaired road infrastructure limits growth and even increases prices. Corruption is rampant and the institutional framework for applying justice or coordinating communal initiatives is precarious. Poverty is widespread limiting the opportunities for the communities to access the same quality of life than in the interior of the country.

Indigenous Communities (March 6, 2015)

Education was underscored as the top priority to enhance the quality of life of indigenous people. Participants expressed significant concern for the fact that the current academic system is overly homogeneous and not necessarily suitable to the needs of their communities. Buenaventura was cited as an example of a city in which the state has failed to meet citizens' basic needs, leading, for instance, to high levels of teenage pregnancy among indigenous people. Participants indicated that this phenomenon can be attributed to the lack of education opportunities for youth, further perpetuating vicious cycles of poverty. They advocated for autonomous educational institutions run by indigenous communities for indigenous people. A number of programs whose language of instruction is the local language are already in place. Participants indicated that this would be the most effective way to ensure that academic programs offer a curriculum that is more pertinent than that offered in traditional universities.

The meeting highlighted the need to invest in improving communication and information media on indigenous communities, as there has been a general tendency to focus on the conflicts and challenges that they face. Participants emphasized that it is imperative to create more awareness on the positive attributes of these communities, including their culture, identity, and philosophy. In 2013, the State officially recognized new political and administrative units run by indigenous communities. In light of this, participants in the meeting encouraged the World Bank to showcase best practices of good governance as a way to further promote their political capacity.

Indigenous-people representatives indicated that current macroeconomic policies and interventions from the international community may exacerbate their socio-economic challenges. Participants stated that the current economic policy framework has led to the impoverishment of their communities. They explained that conflicts over land remain their main challenge and have significantly contributed to disrupting the social fabric. Furthermore, while indigenous communities play a vital role in preserving the ecosystems that are in the national parks and reserves, they are also forced into engaging into activities that threaten environmental sustainability to be able to subsist. As a result, they agreed on the need for Government to put more emphasis on expanding their access to basic services.

Annex 2: Benchmarking Colombia in the World

The goal of the prioritization exercise aims to define the most urgent policy areas for Colombia to achieve higher growth, inclusion and sustainability. This exercise is supported by an analytical benchmarking which measures Colombia's performance in a number of indicators in comparison to the World. Additionally, a comparison with a group of peers was conducted to ensure that results take into account the key constraints that Colombia is facing.

Selection of Peers

This section explains the algorithm used to find countries that share Colombia's key constraints, namely uneven territory, high violence, and high dependency on commodities. These also reflect the country's structural features. The resulting variables were selected because they are partially exogenous to the recent performance of Colombia in different areas such as education, growth, infrastructure, poverty, and inequality, among others.

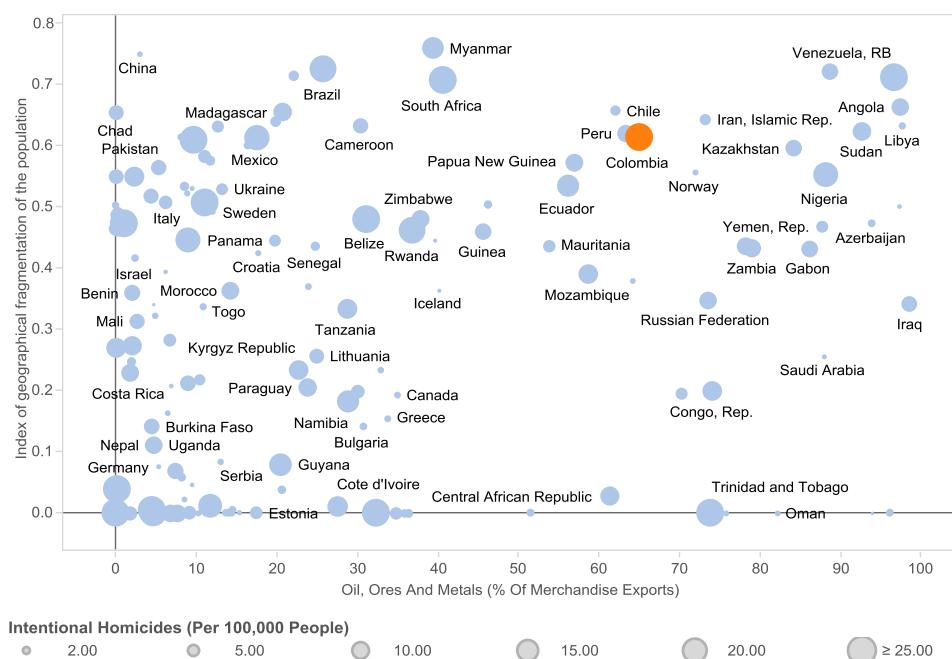
Below is a detailed explanation on the measurement of each variable across countries:

- **Uneven territory.** Inequality among different segments in the country can be historically attributed to Colombia's topography and the presence of multiple geographic conditions across regions. In turn, this has isolated many regions and prevented them from having access to favorable conditions for development. As a result, geography is used as an exogenous measurement. Existing literature on the measurement of social fragmentation (Alesina et al. 2003) could be combined with that of geographical division of ecozones proposed by Köppen-Geiger (1992) to create an index of geographical fragmentation. This indicator was computed using the data on ecozones and population merged by PSU¹⁶¹ and should be interpreted as the probability that two individuals taken at random do not live in similar eco-zones. The index goes from zero (0), indicating that the entire population lives in the same eco-zone, to one (1) when all individuals live in different eco-zones (Gallup, Gaviria and Lora, 2003).
- **High violence.** While conflict and criminality generate different types of violence, their consequences could be positively correlated. Thus, while the roots of violence in Colombia are unique, the country has faced development constraints similar to countries in which there is no armed conflict but a high recurrence of violence, such as South Africa. As a result, the team decided to use the *rate of intentional homicides per 100,000 inhabitants* (WDI 2009-13) to identify countries that have been facing constraints related to general violence.
- **Dependency on natural resources.** Especially in the last decade, Colombia has been characterized by a high share of oil exports and the importance of extractive activities on export performance and the country's macroeconomic policies. More broadly, Colombia's constraint lies in its dependence on mineral resources that are not well integrated into the economy and that have a low labor/capital ratio. In order to identify countries which have faced a similar constraint, the team has selected the *share of natural resources such as oil, gold or minerals to total exports (%)* as the variable to define the dependency of exports on extractive activities (WDI 2009-13).

¹⁶¹ The data on area and population by eco-zones was processed by the economics department of Portland State University. The data on population to estimate the proportion of population living in each eco-zone was based on data circa 1995.

Figure A2-VI-1 illustrates that Colombia occupies some of the highest positions in the world distribution for geographic fragmentation (86th percentile), rate of intentional homicides (95th percentile) and share of minerals and oil to total exports (87th percentile). Despite its territory size, Colombia is as highly fragmented as countries such as China, Brazil, and the United States whose large areas may explain the population dispersion across the territory. In the world, only 15 countries have had an average homicide rate above 25 out of 100,000 people in the past five years, including Colombia (32.6). Finally, more than half of Colombia's exports (65 percent) are based on mining commodities, which is on par with countries that have been more successful on welfare outcomes, such as Norway (72 percent) and Chile (62 percent).

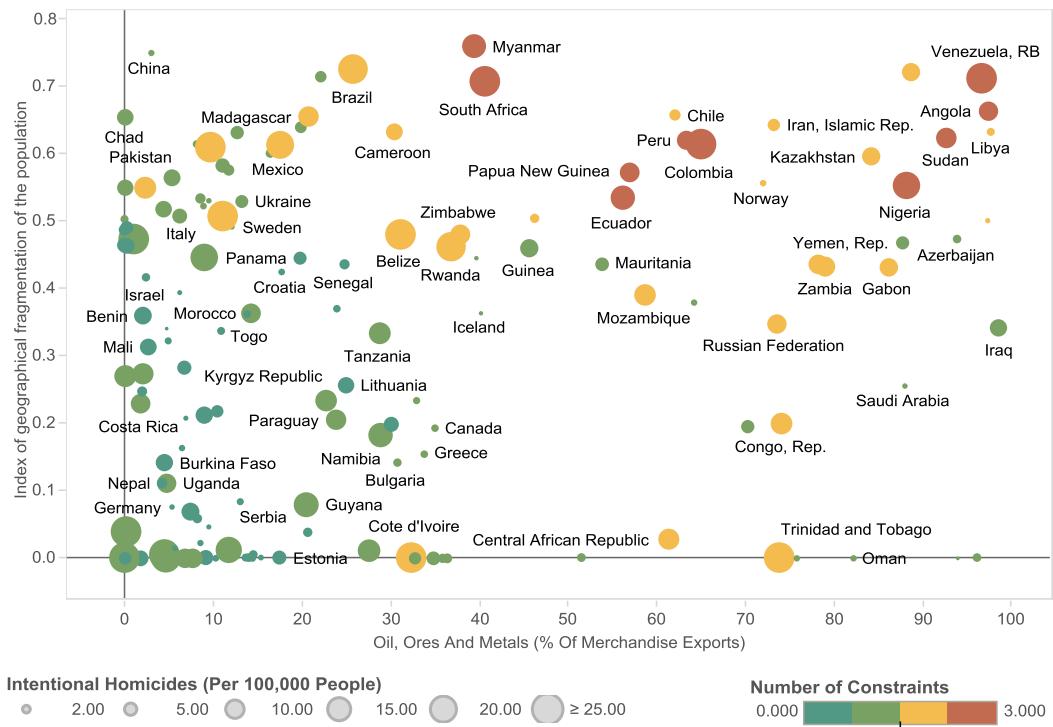
Figure A2-VI-1: Colombia Ranks High in Three Constraints



The next step of the exercise consisted in defining the distance between Colombia and its peers on these characteristics. Using the Find my Friends methodology, a range is defined for each of these variables to obtain the subset of Colombia's peer countries. Given the high dispersion of countries for certain indicators, ranges based on absolute or proportional distances were not selected. Instead, the team opted to find countries closest to Colombia in the world in cardinal terms. As such, the distance in terms of percentiles in the world distribution was used.

Given that Colombia ranks high on the previously identified variables, peer countries were selected as the ones at the highest percentiles in the world for each of these variables. Specifically, these include countries at the 70th percentile and above, meaning that the first set of potential peers is composed by the top 30 percent of countries in the world in each of these key constraints. To ensure that the final number of peers would be high enough to draw robust conclusions, the team decided to select countries with at least two similar constraints. Figure A2-VI-2 shows countries that share one (in light green), two (in yellow) or three (in red) constraints with Colombia according to the aforementioned criteria. For instance, Brazil is characterized by high geographical fragmentation and high intentional homicide rates while Panama only has high homicide rates.

Figure A2-VI-2: Who May Be Colombia's Peers?



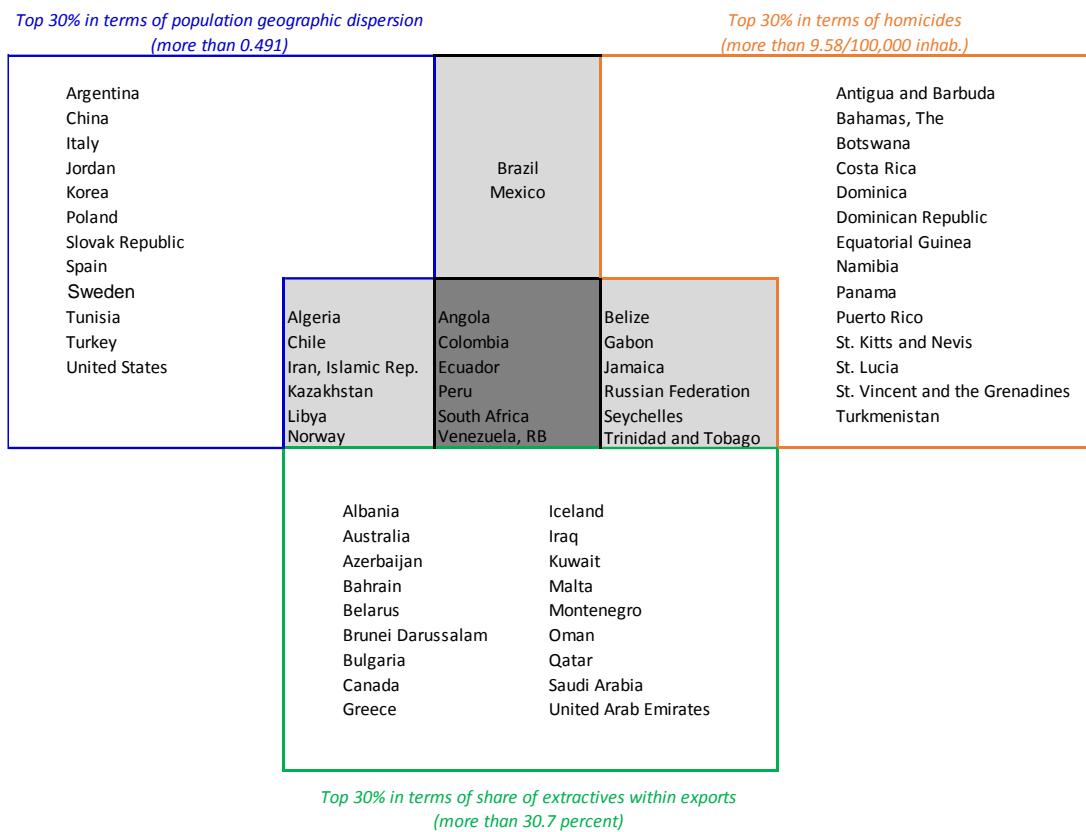
In spite of having similar constraints as Colombia, a number of these countries are at different levels of development. Thus, to ensure a more adequate analysis, per capita gross national income level was selected as the final filter. Given that Colombia is an upper-middle-income country, this filter was based on the World Bank definition of both upper-middle and high-income countries.¹⁶²

Results

Figure A2-VI-3 below shows that 63 upper middle income or high-income countries share at least one of these characteristics with Colombia. Out of these 63, 19 countries were established as Colombia's final peers. These include five countries from Africa, nine from Latin America and the Caribbean, two from the Middle East and North Africa, and three from Europe and Central Asia.

¹⁶² Each year on July 1, the World Bank revises analytical classification of the world's economies based on estimates of gross national income (GNI) per capita for the previous year. As of 1 July 2014, low-income economies are defined as those with a GNI per capita, calculated using the World Bank Atlas method, of \$1,045 or less in 2013; middle-income economies are those with a GNI per capita of more than \$1,045 but less than \$12,746; high-income economies are those with a GNI per capita of \$12,746 or more. Lower-middle-income and upper-middle-income economies are separated at a GNI per capita of \$4,125 (<http://data.worldbank.org/about/country-and-lending-groups>).

Figure A2-VI-3: Colombia's Peers



Country	GNI per capita (US\$)	Index of geographic fragmentation	Intentional homicides (per 100,000 inhabitants)	Exports of oil, gold and minerals (%)
Algeria	12,611	0.50	0.73	97.51
Angola	7,179	0.66	10.00	97.42
Belize	8,206	0.48	39.47	31.12
Brazil	14,080	0.72	23.45	25.78
Chile	20,095	0.66	3.42	62.11
Colombia	11,256	0.61	32.6	65.05
Ecuador	9,821	0.53	15.80	56.21
Gabon	17,390	0.43	9.10	86.17
Iran	15,602	0.64	4.10	73.28
Jamaica	8,501	0.00	48.65	32.42
Kazakhstan	20,574	0.59	8.88	84.32
Libya	22,842	0.63	1.70	97.81
Mexico	15,769	0.61	20.77	17.54
Norway	62,285	0.56	1.13	72.06
Peru	10,379	0.62	9.70	63.30
Russian Federation	22,409	0.35	10.00	73.53
Seychelles	21,787	n.a	9.50	35.60
South Africa	11,831	0.71	31.27	40.69
Trinidad and Tobago	29,200	0.00	32.15	73.95
Venezuela, RB	17,162	0.71	48.85	96.69

Ranking Methodology

The team requested five indicators from experts from each Global Practice that would best represent their respective sectors, constituting the basis for the benchmarking analysis. Practices that cover two or more thematic areas (e.g. the Rural, Urban, and Social Development and Macroeconomics and Fiscal Management GPs) may have more than five indicators. When available, each indicator is measured by the average value of the last five years (2009-2013) to reduce the outlier effect of atypical years, i.e. years in which any given country may have had results that deviate from the norm, which could lead to misleading rankings among countries. The full list of indicators, their descriptions and sources can be found in Annex Tables 1 and 2.

Upon selection, the team selected the following two measures to determine the distance of Colombia to the achievements possibility frontier in each of the indicators. In other words, the measures aim to determine how far Colombia is to the best performance achieved based on the performance on the country in the 95th percentile of the indicators distribution. This analysis was carried out to allow for a comparison both with its peers, defined as the set of countries p , and the World, defined as the set w , where w includes all the countries of p . While p is a conditional comparison that controls for the country's main constraints and its income level, w is an unconditional comparison.

Measures

Gap with respect to the best performer: this measure aims to evaluate the gap in any given indicator i between Colombia (co) and the best performer (bp) in the set $s = \{p, w\}$ $g_{i(bp,co)}^s$. It is defined as:

$$g_{i(bp,co)}^s = 100 \frac{|v_{i,bp}^s - v_{i,co}|}{|v_{i,bp}^s - v_{i,wp}|} \quad (1)$$

Where $v_{i,bp}^s$ is the value of the best performer of the set s , including either the World (w) or the peer group (p), in indicator i ; $v_{i,co}$ is the value of Colombia in indicator i ; and $v_{i,wp}$ is the value of the worst performer in indicator i .

Given the small number of countries that constitute p , the best performer is defined as the country with the lowest value in the 10th decile. On the other hand, in the case of set w , considering that there is a sufficient number of countries to define percentiles, the best performer is the country at the 95th percentile.

Once each indicator's best performer has been defined, the gap is normalized using the range of the distribution. To isolate the effect of the outliers in the value of the range, the range is defined as the distance between the 5th and 95th percentile for both sets.¹⁶³ This normalization allows for the control of the specific variance of each indicator, assigning a higher value for narrow distributions, such as the Gini index or mathematics PISA score. Moreover, this range allow for

¹⁶³ Given that the set p has a maximum of 20 observations, the definition for the 5th percentile is the country with the maximum value within the first decile. On the other hand, the 95th percentile is defined as the country with the lower value of the tenth decile.

the limitation of the gap from 0 to 100 for indicators in which the best performers are countries with the lowest indicator value. This is the case for inflation or time (as measured by number of days) to pay taxes.

Position with respect to the best performer: this measure aims to evaluate the distance, in quintiles in any given indicator i between Colombia (col) and the best performer (bp) in the set $s = \{p, w\}$. It is defined as $q_{i(bp,col)}^s$ and computed as:

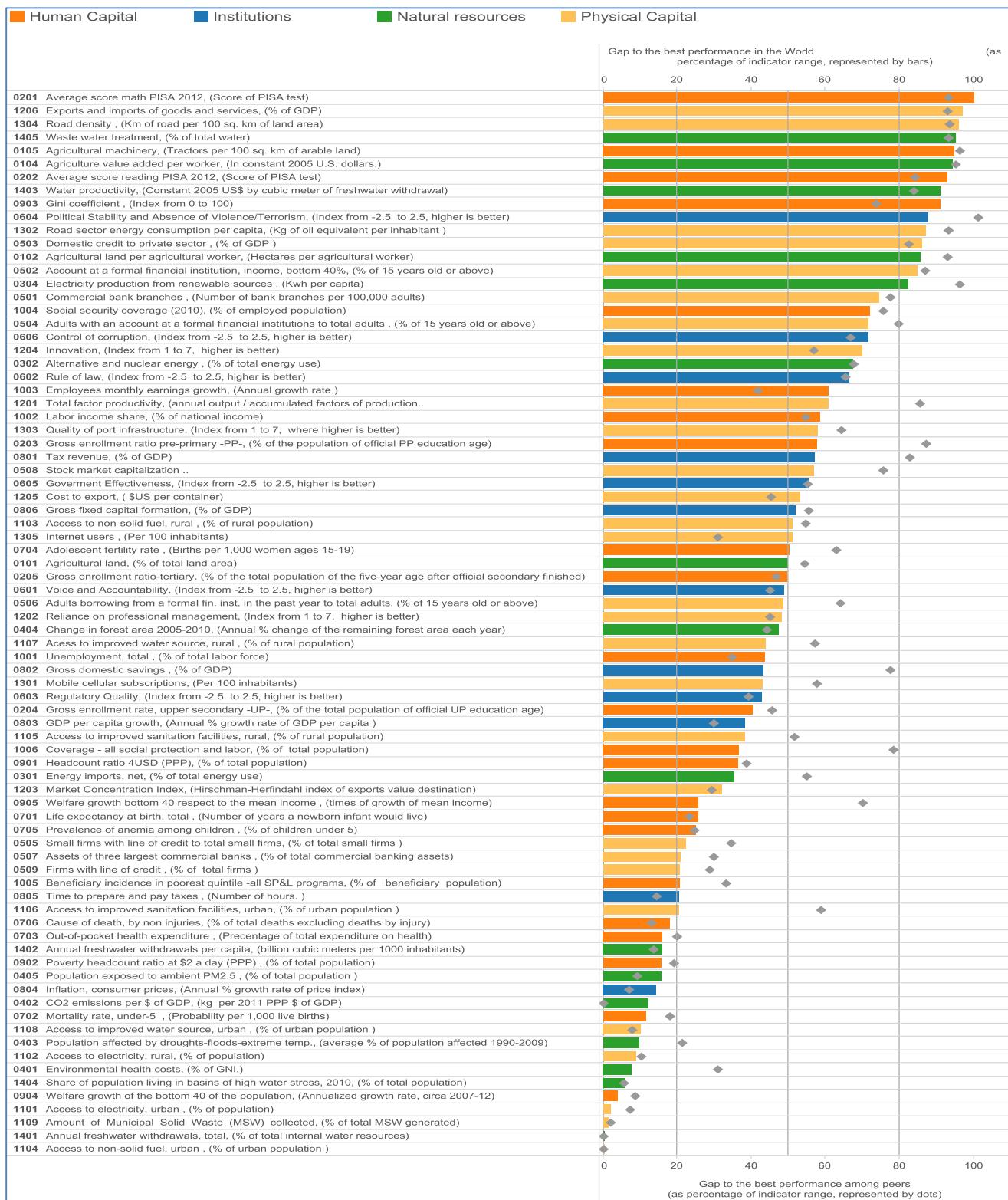
$$q_{i(bp,col)}^s = q_{i,bp}^s - q_{icol}^s + 1 \quad (2)$$

Where $q_{i,bp}^s$ is the quantile of the best performer in the groups, either the world w or the peers p , in the indicator i and q_{icol}^s is the quintile of Colombia in the indicator i . Both values depend on the set of countries used for comparison. Given the small number of countries that constitute p , quantiles are defined at the decile level. This means that possible values for Colombia go from 1, where it would be within the best performer group to 10, where it would be among the worst performers in the peer group.

In turn, in the case of set w , quantiles were defined as percentiles. Thus, 1 means that Colombia is among best performers, whereas 95 would indicate that Colombia is within the worst performer group in the indicator in the world. The 95th percentile was selected, to ensure consistency with the definition of the frontier, as per the measure defined in equation (1).

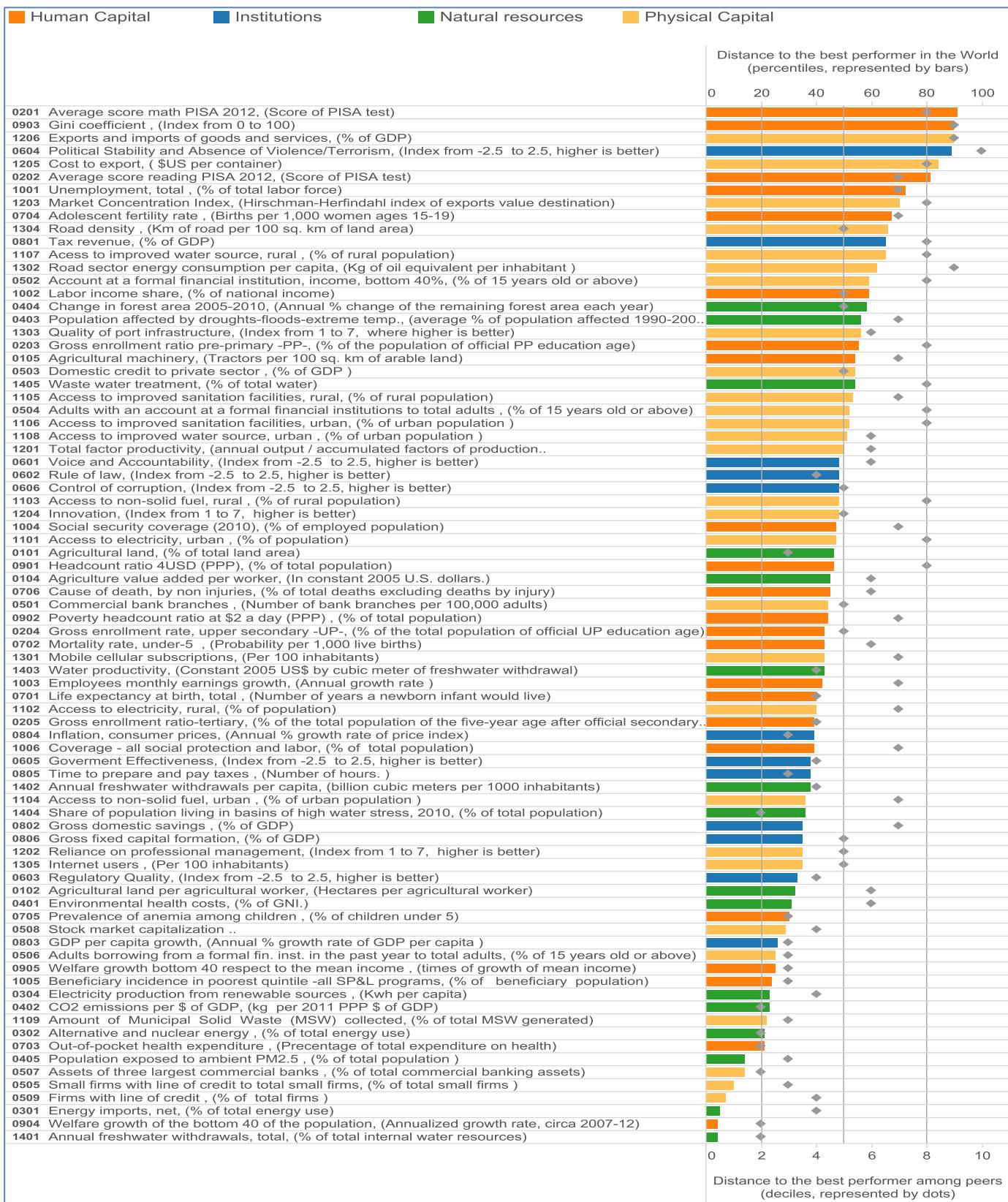
Ranking of the variables collected is shown in Figures A2-4 to A2-5.

Figure A2-VI-4: Gap between Colombia and Best Global and Peer Performer (c. 2009-2013)



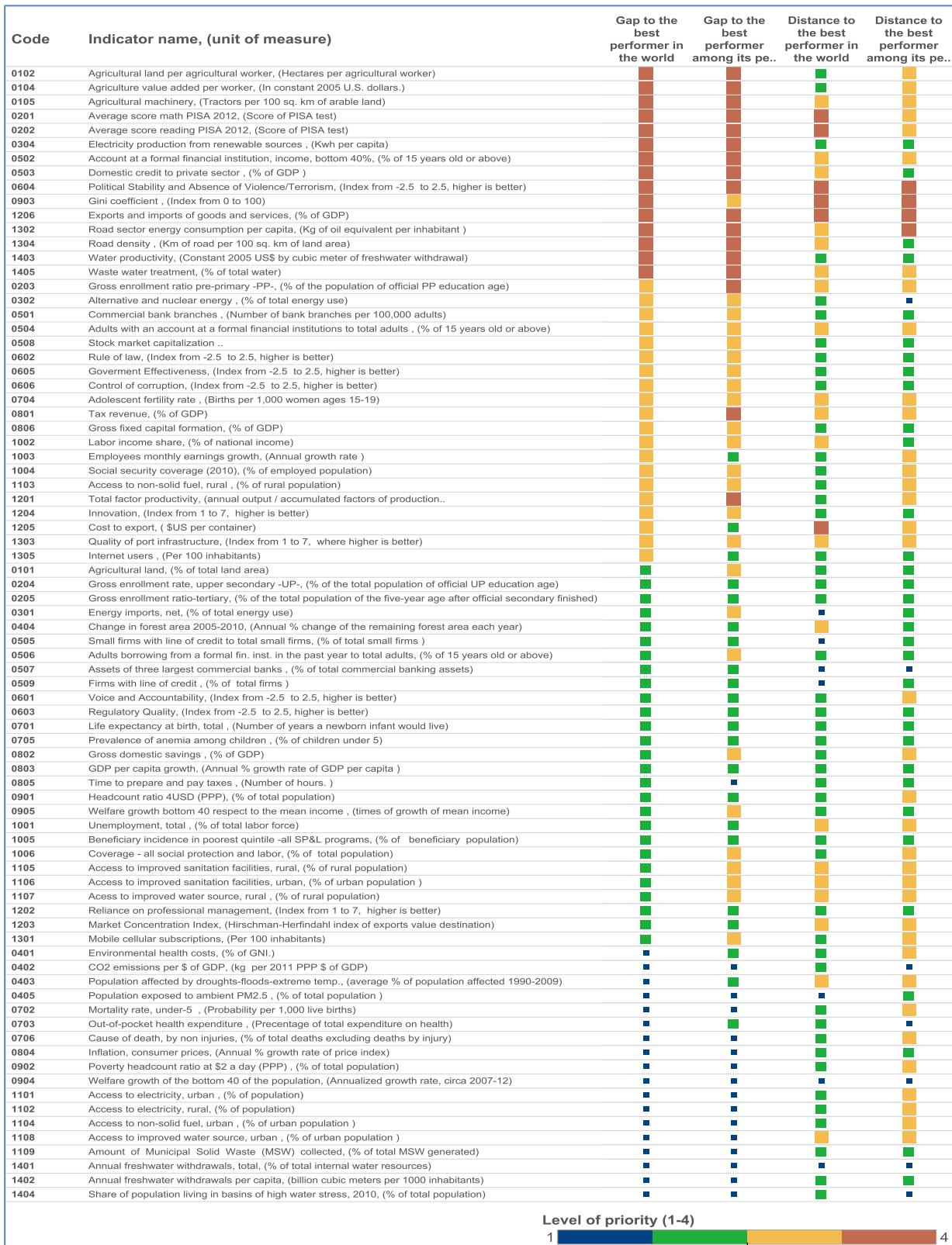
Source: See Table A2-2 for the source of each indicator. Note: Gap is computed as the ratio of the distance between Colombia and the top performer (95th percentile) in a specific set (world or its peers) and the range of the distribution of this set (5th and 95th percentile). See Annex 2 for more information. The bars measure the gap over the world and the dots among the Colombia's peers. In the case that Colombia has a value outside the range its gap could score higher than 100.

Figure A2-VI-5: Distance between Colombia and Best Global and Peer Performer (c. 2009-2013)



Source: See Table A2-2 for the source of each indicator. Note: Distance is computed as the difference in percentiles between Colombia and the top performer, in the case of the peers the difference is expressed in deciles. See Annex 2 for more information. The bars measure the distance over the world and the dots among Colombia's peers.

Figure A2-VI-6: Comparison of Rankings and Prioritization



Source: See Table A2-2 for the source of each indicator and Annex 2 for the explanation about the computation. Note: The four levels of priority were defined as follows high (red) where the gap or distance is higher than 80, medium high (yellow) where the gap or distance is higher than 50 up to 80, medium low (green) where the gap or distance is higher than 20 up to 50, and low (blue) where the gap or distance is lower than 20.

Table A2-1: Indicators of Colombia and Top Performer in the World

Code	Indicator name, (unit of measure)	Top performer in the world	Top performance in the world	Number of countries with information available	World's range ^a	Colombia value	Gap to the best performance in the World ^b
0201	Average score math PISA 2012, (Score of PISA test)	Japan	536.0	61	160	376.0	100
1206	Exports and imports of goods and services, (% of GDP)	Slovak Republic	164.8	177	132	36.6	97
1304	Road density, (Km of road per 100 km ² of land area)	Puerto Rico	302.7	109	299	16.0	96
1405	Waste water treatment, (% of total water)	Australia	92.3	173	92	4.6	95
0105	Agricultural machinery, (Tractors per 100 km ² of arable land)	Ireland	1684.2	137	1683	88.3	95
0104	Agriculture value added per worker, (In constant 2005 US\$.)	Finland	57609.6	167	57389	3522.8	94
0202	Average score reading PISA 2012, (Score of PISA test)	Korea, Rep.	536.0	61	143	403.0	93
1403	Water productivity, (Constant 2005 US\$ by cubic meter of freshwater withdrawal)	Congo, Rep.	189.6	171	189	17.6	91
0903	Gini coefficient , (Index from 0 to 100)	Denmark	26.9	159	31	54.8	91
0604	Political Stability and Absence of Violence/Terrorism, (Index from -2.5 to 2.5, higher is better)	Vanuatu	1.2	191	3	-1.5	88
1302	Road sector energy consumption per capita, (Kg of oil equivalent per inhabitant)	Australia	1119.6	135	1106	155.0	87
0503	Domestic credit to private sector, (% of GDP)	Hong Kong SAR, China	189.0	145	182	32.2	86
0102	Agricultural land per agricultural worker, (Hectares per agricultural worker)	South Africa	0.8	166	1	0.1	86
0502	Account at a formal financial institution, income, bottom 40%, (% of 15 years old or above)	Singapore	97.4	148	96	15.5	85
0304	Electricity production from renewable sources, (Kwh per capita)	Austria	5351.2	135	5351	945.4	82
0501	Commercial bank branches, (Number of bank branches per 100,000 adults)	Peru	51.6	179	50	14.3	75
1004	Social security coverage (2010), (% of employed population)	United Kingdom	93.2	126	91	27.8	72
0504	Adults with an account at a formal financial institutions to total adults, (% of 15 years old or above)	Germany	98.1	147	94	30.4	72
0606	Control of corruption, (Index from -2.5 to 2.5, higher is better)	Australia	2.0	190	3	-0.4	72
1204	Innovation, (Index from 1 to 7, higher is better)	Netherlands	5.3	142	3	3.2	70
0302	Alternative and nuclear energy, (% of total energy use)	Norway	36.6	135	37	11.9	68
0602	Rule of law, (Index from -2.5 to 2.5, higher is better)	Switzerland	1.8	191	3	-0.4	66
1003	Employees monthly earnings growth, (Annual growth rate)	Oman	9.7	111	13	1.6	61
1201	Total factor productivity, (annual output / accumulated factors of production)	Turkey	166.0	74	139	81.5	61
1002	Labor income share, (% of national income)	United Kingdom	60.1	97	43	35.0	59
1303	Quality of port infrastructure, (Index from 1 to 7, where higher is better)	Iceland	5.9	144	4	3.7	58
0203	Gross enrollment ratio pre-primary -PP-, (% of the population of official PP education age)	Thailand	110.3	166	105	49.5	58
0801	Tax revenue (% of GDP)	Malta	27.1	150	24	13.1	57
0508	Stock market capitalization, (% of GDP)	Malaysia	130.0	107	128	57.3	57
0605	Government Effectiveness, (Index from -2.5 to 2.5, higher is better)	Hong Kong SAR, China	1.7	190	3	0.0	55
1205	Cost to export, (\$US per container)	Sri Lanka	592.5	166	3093	2237.5	53
0806	Gross fixed capital formation, (% of GDP)	Niger	36.3	180	25	23.3	52
1103	Access to non-solid fuel, rural (% of rural population)	Venezuela, RB	95.0	175	90	49.0	51

Code	Indicator name, (unit of measure)	Top performer in the world	Top performance in the world	Number of countries with information available	World's range ^a	Colombia value	Gap to the best performance in the World ^b
1305	Internet users, (Per 100 inhabitants)	Korea, Rep.	83.6	191	82	41.5	51
0704	Adolescent fertility rate, (Births per 1,000 women ages 15-19)	Denmark	5.3	186	129	70.3	50
0101	Agricultural land, (% of total land area)	Syrian Arab Republic	75.7	197	74	38.6	50
0205	Gross enrollment ratio, tertiary, (% of the total population of the five-year age after official secondary finished)	New Zealand	81.5	154	79	42.4	50
0601	Voice and Accountability, (Index from -2.5 to 2.5, higher is better)	Australia	1.5	191	3	-0.1	49
0506	Adults borrowing from a formal fin. inst. in the past year to total adults, (% of 15 years old or above)	Bahrain	21.9	147	20	11.9	49
1202	Reliance on professional management, (Index from 1 to 7, higher is better)	Switzerland	5.9	144	3	4.4	48
0404	Change in forest area 2005-2010, (Annual % change of the remaining forest area each year)	Bulgaria	7.6	189	18	-0.8	47
1107	Access to improved water source, rural, (% of rural population)	United Kingdom	100.0	189	61	73.3	44
1001	Unemployment, total, (% of total labor force)	Papua New Guinea	2.4	173	20	11.2	44
0802	Gross domestic savings, (% of GDP)	Azerbaijan	49.7	182	65	21.5	43
1301	Mobile cellular subscriptions, (Per 100 inhabitants)	Oman	157.3	190	137	98.6	43
0603	Regulatory Quality, (Index from -2.5 to 2.5, higher is better)	Canada	1.7	190	3	0.3	43
0204	Gross enrollment rate, upper secondary -UP-, (% of the total population of official UP education age)	Netherlands	119.4	164	103	78.0	40
0803	GDP per capita growth, (Annual % growth rate of GDP per capita)	Libya	6.6	190	10	2.8	38
1105	Access to improved sanitation facilities, rural, (% of rural population)	Uzbekistan	100.0	188	94	64.0	38
1006	Coverage - all social protection and labor, (% of total population)	Thailand	79.6	45	78	50.9	37
0901	Headcount ratio US\$4 (PPP), (% of total population)	Iceland	0.4	118	96	35.5	37
0301	Energy imports, net, (% of total energy use)	Azerbaijan	-428.0	135	524	-242.3	35
1203	Market Concentration Index, (Hirschman-Herfindahl index of exports value destination)	Finland	4.3	154	43	18.0	32
0905	Welfare growth bottom 40 respect to the mean income, (times of growth of mean income)	Bolivia	3.2	71	6	1.6	26
0701	Life expectancy at birth, total, (Number of years a newborn infant would live)	Singapore	81.7	188	32	73.5	26
0705	Prevalence of anemia among children, (% of children under 5)	Netherlands	13.1	184	62	28.6	25
0505	Small firms with line of credit to total small firms, (% of total small firms)	Macedonia, FYR	58.2	95	55	45.9	22
0507	Assets of three largest commercial banks, (% of total commercial banking assets)	Argentina	37.3	154	63	50.5	21
0509	Firms with line of credit, (% of total firms)	Croatia	67.3	95	60	54.8	21
1005	Beneficiary incidence in poorest quintile -all SP&L programs, (% of beneficiary population)	Bangladesh	29.1	45	19	25.1	21
0805	Time to prepare and pay taxes, (Number of hours)	Saudi Arabia	76.2	187	620	203.0	20
1106	Access to improved sanitation facilities, urban, (% of urban population)	Uzbekistan	100.0	189	75	84.7	20
0706	Cause of death, by non injuries, (% of total deaths excluding deaths by injury)	Belarus	2.6	172	71	15.4	18
0703	Out-of-pocket health expenditure, (Percentage of total expenditure on health)	Vanuatu	7.0	186	61	16.8	16

Code	Indicator name, (unit of measure)	Top performer in the world	Top performance in the world	Number of countries with information available	World's range ^a	Colombia value	Gap to the best performance in the World ^b
1402	Annual freshwater withdrawals per capita, (billion cubic meters per 1000 inhabitants)	Djibouti	0.0	179	1	0.3	16
0902	Poverty headcount ratio at \$2 a day (PPP), (% of total population)	Ukraine	0.1	118	82	13.2	16
0405	Population exposed to ambient PM _{2.5} , (% of total population)	Zimbabwe	0.0	191	100	15.7	16
0804	Inflation, consumer prices, (Annual % growth rate of price index)	Morocco	1.2	179	13	3.0	14
0402	CO2 emissions per \$ of GDP, (kg per 2011 PPP \$ of GDP)	Central African Republic	0.1	183	1	0.1	12
0702	Mortality rate, under-5, (Probability per 1,000 live births)	Cyprus	3.8	190	123	18.0	12
1108	Access to improved water source, urban, (% of urban population)	United Kingdom	100.0	191	30	96.9	10
0403	Population affected by droughts-floods-extreme temp., (average % of population affected 1990-2009)	Sweden	0.0	168	7	0.7	10
1102	Access to electricity, rural, (% of population)	Venezuela, RB	100.0	194	98	91.1	9
0401	Environmental health costs, (% of GNI.)	Vanuatu	0.0	190	4	0.3	8
1404	Share of population living in basins of high water stress, 2010, (% of total population)	Zimbabwe	0.0	195	98	6.1	6
0904	Welfare growth of the bottom 40 of the population, (Annualized growth rate, circa 2007-12)	Cambodia	9.2	72	11	8.8	4
1101	Access to electricity, urban, (% of population)	Venezuela, RB	100.0	194	63	98.7	2
1109	Amount of Municipal Solid Waste (MSW) collected, (% of total MSW generated)	Venezuela, RB	100.0	122	80	98.9	1
1401	Annual freshwater withdrawals, total, (% of total internal water resources)	Guinea	0.2	197	100	0.5	0
1104	Access to non-solid fuel, urban , (% of urban population)	Yemen, Rep.	95.0	175	90	95.0	0

Source: see Table A2-2 for the source of each indicator. Note: a) the range of the distribution in each indicator is the distance between the 5th and 95th percentile in the world distribution. b) The gap is computed as the ratio of the distance between Colombia and the top performer and the range of the distribution. See Annex 2 for more information. The information needed to compute the rank among its peers and to compute the distances is upon request.

Table A2-2: Glossary of Benchmarking Indicators

Practice ID	Indicator ID	Practice	Indicator	Indicator Description (Explanation & Methodology)	Data Source(s)	Link(s)
01	01	Agriculture	Arable land (1) and permanent cropland (2). (% of total land area)	Total of land (1) defined by the Food and Agriculture Organization as land under temporary crops (double-cropped areas are counted once), temporary meadows for mowing or for pasture, land under market or kitchen gardens, and land temporarily fallow, i.e. land that has been left fallow for less than five years, and (2) cultivated with crops that occupy the land for long periods and need not be replanted after each harvest, such as cocoa, coffee, and rubber. Under (1), land abandoned as a result of shifting cultivation is excluded. Category (2) includes land under flowering shrubs, fruit trees, nut trees, and vines, but excludes land under trees grown for wood or timber.	World Development Indicators. Food and Agriculture Organization	http://data.worldbank.org/indicator/AG.LND.ARBL.HA.PC http://data.worldbank.org/indicator/AG.CROP.ZS
01	02	Agriculture	Arable land (1) and permanent cropland (2) per agricultural worker (1000 workers). (Hectares per agricultural worker)	Total of land (1) defined by the Food and Agriculture Organization as land under temporary crops (double-cropped areas are counted once), temporary meadows for mowing or for pasture, land under market or kitchen gardens, and land temporarily fallow, i.e. land that has been left fallow for less than five years, and (2) cultivated with crops that occupy the land for long periods and need not be replanted after each harvest, such as cocoa, coffee, and rubber. Under (1), land abandoned as a result of shifting cultivation is excluded. Category (2) includes land under flowering shrubs, fruit trees, nut trees, and vines, but excludes land under trees grown for wood or timber.	World Development Indicators. Food and Agriculture Organization	http://data.worldbank.org/indicator/AG.LND.ARBL.HA.PC
01	04	Agriculture	Agriculture value added per worker. (In constant 2005 U.S. dollars.)	Measure of agricultural productivity. Value added in agriculture measures the output of the agricultural sector (ISIC divisions 1-5) less the value of intermediate inputs. Agricultural value added includes that from forestry, hunting, and fishing as well as cultivation of crops and livestock production. Figures are based on agricultural data collected by the Food and Agriculture Organization of the United Nations (FAO).	World Development Indicators. World Bank national accounts files and Food and Agriculture Organization	http://data.worldbank.org/indicator/EA.PR.D.AGRI.KD
01	05	Agriculture	Agricultural machinery. (Tractors per 100 sq. km of arable land)	Agricultural machinery refers to the number of wheel and crawler tractors (excluding garden tractors) in use in agriculture at the end of the calendar year specified or during the first quarter of the following year. Arable land includes land defined by the FAO as land under temporary crops (double-cropped areas are counted once), temporary meadows for mowing or for pasture, land under market or kitchen gardens, and land temporarily fallow. Land abandoned as a result of shifting cultivation is excluded.	World Development Indicators. Food and Agriculture Organization	http://data.worldbank.org/indicator/AG.LND.TRAC.ZS
02	01	Education	Average score Math PISA 2012.	The Programme for International Student Assessment (PISA) is a triennial international survey that aims to evaluate education systems worldwide by testing the skills and knowledge of 15-year-old students. To date, students representing more than 70 economies have participated in the assessment.	Organization for Economic Cooperation and Development (OECD) - 2012	http://www.oecd.org/pisa/pisaproducts/

Practice ID	Indicator ID	Practice	Indicator	Indicator Description (Explanation & Methodology)	Data Source(s)	Link(s)
02	02	Education	Average score reading PISA 2012.	The Programme for International Student Assessment (PISA) is a triennial international survey that aims to evaluate education systems worldwide by testing the skills and knowledge of 15-year-old students. To date, students representing more than 70 economies have participated in the assessment.	Organization for Economic Cooperation and Development (OECD) - 2012	http://www.oecd.org/pisa/pisaproducts/
02	03	Education	Gross enrollment ratio (GER), pre-primary, both sexes. (% of the total population of official pre-primary education age)	Total is the total enrollment in pre-primary education, regardless of age. GER can exceed 100% due to the inclusion of over-aged and under-aged students because of early or late school entrance and grade repetition.	World Development Indicators. UNESCO Institute for Statistics	http://data.worldbank.org/indicator/SE.PR.E.ENRR
02	04	Education	Gross enrollment rate (%), upper secondary, total. (% of the total population of official upper secondary education age)	Gross enrolment ratio. Upper secondary. All programmes. Total is the total enrollment in upper secondary education, regardless of age.	Education Statistics UNESCO Institute for Statistics	http://datatopics.worldbank.org/education/wDataQuery/QFull.aspx
02	05	Education	Gross enrollment ratio, tertiary, both sexes (%). (% of the total population of the five-year age group following on from secondary school leaving)	Gross enrolment ratio. Tertiary (International Standard Classification of Education, ISCED 5 and 6). Total is the total enrollment in tertiary education (ISCED 5 and 6), regardless of age.	World Development Indicators. UNESCO Institute for Statistics	http://data.worldbank.org/indicator/SE.TE.R.ENRR
03	01	Energy and Extractives	Energy imports, net. (% of energy use)	Net energy imports are estimated as energy use less production, both measured in oil equivalents. A negative value indicates that the country is a net exporter. Energy use refers to use of primary energy before transformation to other end-use fuels, which is equal to indigenous production plus imports and stock changes, minus exports and fuels supplied to ships and aircraft engaged in international transport.	World Development Indicators International Energy Agency (IEA Statistics © OECD/IEA, http://www.iea.org/stats/index.asp) and United Nations, Energy Statistics Yearbook.	http://data.worldbank.org/indicator/EG.IM.P.CONS.ZS
03	02	Energy and Extractives	Alternative and nuclear energy. (% of total energy use)	Clean energy is non-carbohydrate energy that does not produce carbon dioxide when generated. It includes hydropower and nuclear, geothermal, and solar power, among others.	World Development Indicators International Energy Agency (IEA Statistics © OECD/IEA, http://www.iea.org/stats/index.asp).	http://data.worldbank.org/indicator/EG.US.E.COMM.CL.ZS
03	03	Energy and Extractives	Electricity production from renewable sources, excluding hydroelectric. (% of total)	Electricity production from renewable sources, excluding hydroelectric, includes geothermal, solar, tides, wind, biomass, and biofuels.	World Development Indicators IEA Statistics © OECD/IEA, http://www.iea.org/stats/index.asp , Energy Statistics and Balances of Non-OECD Countries, Energy Statistics of OECD Countries, and Energy Balances of OECD Countries	http://data.worldbank.org/indicator/EG.EL.C.RNWX.ZS

Practice ID	Indicator ID	Practice	Indicator	Indicator Description (Explanation & Methodology)	Data Source(s)	Link(s)
03	04	Energy and Extractives	Electricity production from renewable sources. (Kwh per capita)	Electricity production from renewable sources includes hydropower, geothermal, solar, tides, wind, biomass, and biofuels.	World Development Indicators IEA Statistics © OECD/IEA, http://www.iea.org/stats/index.asp , Energy Statistics and Balances of Non-OECD Countries, Energy Statistics of OECD Countries, and Energy Balances of OECD Countries	http://data.worldbank.org/indicator/EG.EL.C.RNEW.KH
04	01	Environment and Natural Resources	Environmental health costs. (% of GNI.)	These refer to costs from ambient air pollution, household air pollution, lack of access to clean water and sanitation, lead exposure, and workplace environmental hazards. The gross national income (GNI) was from WDI.	World Bank Environment & Natural Resources GP in collaboration with MFM GP	-
04	02	Environment and Natural Resources	CO ₂ emissions per \$ of GDP. (kg per 2011 PPP \$ of GDP)	Carbon dioxide emissions are those stemming from the burning of fossil fuels and the manufacture of cement. They include carbon dioxide produced during consumption of solid, liquid, and gas fuels and gas flaring.	World Development Indicators. Carbon Dioxide Information Analysis Center, Environmental Sciences Division, Oak Ridge National Laboratory, Tennessee, United States.	http://data.worldbank.org/indicator/en.atm.co2e.pp.gd.kd
04	03	Environment and Natural Resources	Population affected by droughts, floods, and extreme temperatures. (% of population (is calculated by dividing the sum of total affected for the period stated by the sum of the annual population figures for the period stated), Average 1990-2009)	Population affected by droughts, floods and extreme temperatures is the annual average percentage of the population that is affected by natural disasters classified as droughts, floods, or extreme temperature events. A drought is an extended period of time characterized by a deficiency in a region's water supply that is the result of constantly below average precipitation. A drought can lead to losses to agriculture, affect inland navigation and hydropower plants, and cause a lack of drinking water and famine. A flood is a significant rise of water level in a stream, lake, reservoir or coastal region. Extreme temperature events are either cold waves or heat waves. A cold wave can be both a prolonged period of excessively cold weather and the sudden invasion of very cold air over a large area. Along with frost it can cause damage to agriculture, infrastructure, and property. A heat wave is a prolonged period of excessively hot and sometimes also humid weather relative to normal climate patterns of a certain region. Population affected is the number of people injured, left homeless or requiring immediate assistance during a period of emergency resulting from a natural disaster; it can also include displaced or evacuated people.	World Development Indicators. EMDAT: The OFDA/CRED International Disaster Database: www.emdat.be , Universite Catholique de Louvain, Brussels (Belgium), World Bank.	http://data.worldbank.org/indicator/en.clc.mdat.zs
04	04	Environment and Natural Resources	Percent change in forest area 2005-2010. (% of change in forest area)	Total forest area.	FAO Global Forest Resources Assessment 2010	http://www.fao.org/forestry/fra/fra2010/en/

Practice ID	Indicator ID	Practice	Indicator	Indicator Description (Explanation & Methodology)	Data Source(s)	Link(s)
04	05	Environment and Natural Resources	Population exposed to ambient PM _{2.5} . (% of total population exposed to concentrations PM _{2.5})	Defined as the portion of the country population that is exposed to annual mean concentrations of ambient PM _{2.5} pollution above the WHO's guideline value (10 micrograms per cubic meter).	Brauer, M., M. Amman, R.T. Burnett, A. Cohen, F. Dentener, M. Ezzati, S.B. Henderson, M. Krzyzanowski, R.V. Martin, R. Van Dingenen, A. van Donkelaar, and G.D. Thurston. 2012. "Exposure Assessment for Estimation of the Global Burden of Disease Attributable to Outdoor Air Pollution." Environmental Science & Technology 46, doi: 10.1021/es2025752.	http://www.healthdata.org/gbd/data
05	01	Finance and Markets	Commercial bank branches. (Number of bank branches per 100,000 adults)	Retail locations of resident commercial banks and other resident banks that function as commercial banks that provide financial services to customers and are physically separated from the main office but not organized as legally separated subsidiaries.	World Development Indicators. International Monetary Fund, Financial Access Survey.	http://data.worldbank.org/indicator/FB.CB.K.BRCH.P5
05	02	Finance and Markets	Account at a formal financial institution, income, bottom 40%. (% of 15 years old or above)	Denotes the percentage of respondents with an account (self or together with someone else) at a bank, credit union, another financial institution (e.g., cooperative, microfinance institution), or the post office (if applicable) including respondents who reported having a debit card (income, bottom 40%, % age 15+).	Global Findex database. (Aslı Demirgürç-Kunt and Leora Klapper, 2012. "Measuring Financial Inclusion: The Global Findex," World Bank Policy Research Working Paper 6025).	http://elibrary.worldbank.org/doi/pdf/10.1596/1813-9450-6025
05	03	Finance and Markets	Domestic credit to private sector. (% of GDP in domestic credit to private sector)	Domestic credit to private sector refers to financial resources provided to the private sector, such as through loans, purchases of non-equity securities, and trade credits and other accounts receivable that establish a claim for repayment. For some countries these claims include credit to public enterprises.	World Development Indicators. International Monetary Fund, International Financial Statistics and data files, and World Bank and OECD GDP estimates.	http://data.worldbank.org/indicator/FS.AS.T.PRVT.GD.ZS
05	04	Finance and Markets	Adults with an account at a formal financial institution to total adults. (% of adults with an account (self or together with someone else) at a bank)	Percentage of adults with an account (self or together with someone else) at a bank, credit union, another financial institution (e.g., cooperative, microfinance institution), or the post office (if applicable) including adults who reported having a debit card to total adults.	Global Findex database.(Aslı Demirgürç-Kunt and Leora Klapper, 2012. "Measuring Financial Inclusion: The Global Findex," World Bank Policy Research Working Paper 6025).	http://elibrary.worldbank.org/doi/pdf/10.1596/1813-9450-6025
05	05	Finance and Markets	Small firms with line of credit to total small firms. (% of small firms with line of credit to total small firms)	Proportion of small firms in the formal sector with a line of credit or a loan from a financial institution.	World Bank, Enterprise Survey	http://data.worldbank.org/data-catalog/enterprise-surveys

Practice ID	Indicator ID	Practice	Indicator	Indicator Description (Explanation & Methodology)	Data Source(s)	Link(s)
05	06	Finance and Markets	Adults borrowing from a formal financial institution in the past year to total adults. (% of adults who report borrowing any money from a bank)	Percentage of adults who report borrowing any money from a bank, credit union, microfinance institution, or another financial institution such as a cooperative in the past 12 months.	Global Findex database.(Aslı Demirgür-Kunt and Leora Klapper, 2012. "Measuring Financial Inclusion: The Global Findex," World Bank Policy Research Working Paper 6025).	https://openknowledge.worldbank.org/bitstream/handle/10986/6042/WPS6025.pdf?sequence=1
05	07	Finance and Markets	Bank concentration of the largest three banks. (%)	Assets of three largest commercial banks as a share of total commercial banking assets. Total assets include total earning assets, cash and due from banks, foreclosed real estate, fixed assets, goodwill, other intangibles, current tax assets, deferred tax assets, discontinued operations and other assets. Only reported if number of banks in Bankscope is three or more. (Calculated from underlying bank-by-bank unconsolidated data from Bankscope)	Global Financial Development Database (GFDD). Raw data are from Bankscope.	http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTGLOBALFINREPORT/0,,contentMDK:23492070~pagePK:64168060~piPK:64168060~theSitePK:8816097_00.html
05	08	Finance and Markets	Stock market capitalization. (% of GDP)	Total value of all listed shares in a stock market as a percentage of GDP.	Global Financial Development Database	http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTGLOBALFINREPORT/0,,contentMDK:23492070~pagePK:64168060~piPK:64168060~theSitePK:8816097_00.html
05	09	Finance and Markets	Firms with line of credit to total firms (all firms) (%). (% of firms with line of credit to total firms)	Proportion of firms in the formal sector with a line of credit or a loan from a financial institution.	World Bank, Enterprise Survey	http://data.worldbank.org/data-catalog/enterprise-surveys
06	01	Governance	Voice and Accountability (WGI).	Captures perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media. This table lists the individual variables from each data sources used to construct this measure in the Worldwide Governance Indicators.	Worldwide Governance Indicators. Daniel Kaufmann, Aart Kraay and Massimo Mastruzzi (2010). "The Worldwide Governance Indicators : A Summary of Methodology, Data and Analytical Issues". World Bank Policy Research Working Paper No. 5430	http://info.worldbank.org/governance/wgi/index.aspx#home

Practice ID	Indicator ID	Practice	Indicator	Indicator Description (Explanation & Methodology)	Data Source(s)	Link(s)
06	02	Governance	Rule of law (WGI).	Reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.	Worldwide Governance Indicators. Daniel Kaufmann, Aart Kraay and Massimo Mastruzzi (2010). "The Worldwide Governance Indicators : A Summary of Methodology, Data and Analytical Issues". World Bank Policy Research Working Paper No. 5430	http://info.worldbank.org/governance/wgi/index.aspx#home
06	03	Governance	Regulatory Quality (WGI).	Reflects perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.	Worldwide Governance Indicators. Daniel Kaufmann, Aart Kraay and Massimo Mastruzzi (2010). "The Worldwide Governance Indicators : A Summary of Methodology, Data and Analytical Issues". World Bank Policy Research Working Paper No. 5430	http://info.worldbank.org/governance/wgi/index.aspx#home
06	04	Governance	Political Stability and Absence of Violence/Terrorism (WGI).	Reflects perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically motivated violence and terrorism.	Worldwide Governance Indicators. Daniel Kaufmann, Aart Kraay and Massimo Mastruzzi (2010). "The Worldwide Governance Indicators : A Summary of Methodology, Data and Analytical Issues". World Bank Policy Research Working Paper No. 5430	http://info.worldbank.org/governance/wgi/index.aspx#home
06	05	Governance	Government Effectiveness (WGI).	Reflects perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.	Worldwide Governance Indicators. Daniel Kaufmann, Aart Kraay and Massimo Mastruzzi (2010). "The Worldwide Governance Indicators : A Summary of Methodology, Data and Analytical Issues". World Bank Policy Research Working Paper No. 5430	http://info.worldbank.org/governance/wgi/index.aspx#home
06	06	Governance	Control of corruption (WGI).	Reflects perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. The six aggregate indicators are based on 31 underlying data sources reporting the perceptions of governance of a large number of survey respondents and expert assessments worldwide.	Worldwide Governance Indicators. Daniel Kaufmann, Aart Kraay and Massimo Mastruzzi (2010). "The Worldwide Governance Indicators : A Summary of Methodology, Data and Analytical Issues". World Bank Policy Research Working Paper No. 5430	http://info.worldbank.org/governance/wgi/index.aspx#home

Practice ID	Indicator ID	Practice	Indicator	Indicator Description (Explanation & Methodology)	Data Source(s)	Link(s)
07	01	Health, Nutrition, and Population	Life expectancy at birth, total. (Years a newborn infant would live)	Life expectancy at birth indicates the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life.	World Development Indicators. Derived from male and female life expectancy at birth from sources such as: (1) United Nations Population Division: World Population Prospects, (2) United Nations Statistical Division: Population and Vital Statistics Report (various years), (3) Census reports and other statistical publications from national statistical offices, (4) Eurostat: Demographic Statistics, (5) Secretariat of the Pacific Community: Statistics and Demography Programme, and (6) U.S. Census Bureau: International Database.	http://data.worldbank.org/indicator/FS.AST.PRV.T.GD.ZS
07	02	Health, Nutrition, and Population	Mortality rate, under-5. (Probability per 1,000 live births)	Under-five mortality rate is the probability per 1,000 that a newborn baby will die before reaching age five, if subject to age-specific mortality rates of the specified year.	World Development Indicators. Estimates developed by the UN Inter-agency Group for Child Mortality Estimation (UNICEF, WHO, World Bank, UN DESA Population Division) at www.childmortality.org .	http://data.worldbank.org/indicator/SH.DYN.MORT
07	03	Health, Nutrition, and Population	Out-of-pocket health expenditure. (% of total expenditure on health)	Out of pocket expenditure is any direct outlay by households, including gratuities and in-kind payments, to health practitioners and suppliers of pharmaceuticals, therapeutic appliances, and other goods and services whose primary intent is to contribute to the restoration or enhancement of the health status of individuals or population groups. It is a part of private health expenditure.	World Development Indicators. World Health Organization National Health Account database (see http://apps.who.int/nha/database/DataExplorerRegime.aspx for the most recent updates).	http://data.worldbank.org/indicator/SH.XPD.OOPCT.ZS
07	04	Health, Nutrition, and Population	Adolescent fertility rate. (Births per 1,000 women ages 15-19)	Adolescent fertility rate is the number of births per 1,000 women ages 15-19.	World Development Indicators. United Nations Population Division, World Population Prospects.	http://data.worldbank.org/indicator/SP.ADO.TFR.T

Practice ID	Indicator ID	Practice	Indicator	Indicator Description (Explanation & Methodology)	Data Source(s)	Link(s)
07	05	Health, Nutrition, and Population	Prevalence of anemia among children. (% of children under 5)	Prevalence of anemia, pregnant women, is the percentage of pregnant women whose hemoglobin level is less than 110 grams per liter at sea level. World Health Organization, Worldwide Prevalence of Anemia.	World Development Indicators. 1. WHO. Global anemia prevalence and trends 1995-2011. Geneva: World Health Organization; forthcoming. 2. Stevens GA, Finucane MM, De-Regil LM, et al. Global, regional, and national trends in hemoglobin concentration and prevalence of total and severe anemia in children and pregnant and non-pregnant women for 1995-2011: a systematic analysis of population-representative data. <i>The Lancet Global Health</i> 2013; 1(1): e16-e25.	http://data.worldbank.org/indicator/SI.AN.M.CHLD.ZS
07	06	Health, Nutrition, and Population	Cause of death, by communicable diseases and maternal, prenatal and nutrition conditions. (% of total deaths excluding deaths by injury)	Cause of death refers to the share of all deaths for all ages by underlying causes. Communicable diseases and maternal, prenatal and nutrition conditions include infectious and parasitic diseases, respiratory infections, and nutritional deficiencies such as underweight and stunting.	Data computed based on World Development Indicators	http://data.worldbank.org/indicator/SI.DT.H.COMM.ZS
08	01	Macroeconomics & Fiscal Management	Tax revenue. (% of GDP)	Tax revenue refers to compulsory transfers to the central government for public purposes. Certain compulsory transfers such as fines, penalties, and most social security contributions are excluded. Refunds and corrections of erroneously collected tax revenue are treated as negative revenue.	World Development Indicators International Monetary Fund, Government Finance Statistics Yearbook and data files, and World Bank and OECD GDP estimates.	http://data.worldbank.org/indicator/GC.TA.X.TOTL.GD.ZS
08	02	Macroeconomics & Fiscal Management	Gross domestic savings. (% of GDP)	Gross domestic savings are calculated as GDP less final consumption expenditure (total consumption).	World Development Indicators World Bank national accounts data, and OECD National Accounts data files.	http://data.worldbank.org/indicator/NY.GD.S.TOTL.ZS
08	03	Macroeconomics & Fiscal Management	GDP per capita growth. (Annual % growth rate of GDP per capita based on constant local currency.)	Aggregates are based on constant 2005 US\$. GDP per capita is gross domestic product divided by midyear population. GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.	World Development Indicators World Bank national accounts data, and OECD National Accounts data files.	http://data.worldbank.org/indicator/NY.GD.P.PCAP.KD.ZG

Practice ID	Indicator ID	Practice	Indicator	Indicator Description (Explanation & Methodology)	Data Source(s)	Link(s)
08	04	Macroeconomics & Fiscal Management	Inflation, consumer prices.	Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly. The Laspeyres formula is generally used.	World Development Indicators International Monetary Fund, International Financial Statistics and data files.	http://data.worldbank.org/indicator/FP.CPI.TOTL.ZG
08	05	Macroeconomics & Fiscal Management	Time to prepare and pay taxes (Hours)	Time to prepare and pay taxes is the time, in hours per year, it takes to prepare, file, and pay (or withhold) three major types of taxes: the corporate income tax, the value added or sales tax, and labor taxes, including payroll taxes and social security contributions.	World Development Indicators World Bank, Doing Business project (http://www.doingbusiness.org/).	http://data.worldbank.org/indicator/IC.TAX.DURS
08	06	Macroeconomics & Fiscal Management	Gross fixed capital formation. (% of GDP)	Gross fixed capital formation (formerly gross domestic fixed investment) includes land improvements (fences, ditches, drains, and so on); plant, machinery, and equipment purchases; and the construction of roads, railways, and the like, including schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings. According to the 1993 SNA, net acquisitions of valuables are also considered capital formation.	World Development Indicators World Bank national accounts data, and OECD National Accounts data files.	http://data.worldbank.org/indicator/NE.GDI.FTOT.ZS
09	01	Poverty	Headcount ratio US\$4 (PPP). (% of population)	Population below US\$4 a day is the percentage of the population living on less than US\$4.00 a day at 2005 international prices. As a result of revisions in PPP exchange rates, poverty rates for individual countries cannot be compared with poverty rates report.	Povcalnet	http://iresearch.worldbank.org/PovcalNet/
09	02	Poverty	Poverty headcount ratio at US\$2 a day (PPP). (% of population)	Population below US\$2 a day is the percentage of the population living on less than US\$2.00 a day at 2005 international prices. As a result of revisions in PPP exchange rates, poverty rates for individual countries cannot be compared with poverty rates reported in earlier editions.	World Development Indicators World Bank, Development Research Group. Data are based on primary household survey data obtained from government statistical agencies and World Bank country departments. Data for high-income economies are from the Luxembourg Income Study database. For more information and methodology, please see PovcalNet (http://iresearch.worldbank.org/PovcalNet/index.htm).	http://data.worldbank.org/indicator/SI.POV.2DAY

Practice ID	Indicator ID	Practice	Indicator	Indicator Description (Explanation & Methodology)	Data Source(s)	Link(s)
09	03	Poverty	Gini coefficient povcalnet, external sources.	Gini index measures the extent to which the distribution of income or consumption expenditure among individuals or households within an economy deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual or household. The Gini index measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. Thus a Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality.	Povcalnet	http://research.worldbank.org/PovcalNet/index.htm?0.0
09	04	Poverty	Growth bottom 40 2007-12.	The growth rate in the welfare aggregate of the bottom 40% is computed as the annualized average growth rate in per capita real consumption or income of the bottom 40% of the population in the income distribution in a country from household surveys over a roughly 5-year period. The final year of the growth period (T1) is defined as the most recent survey year no earlier than 2009. The initial year (T0) is defined as close to (T1 - 5) as possible, with a bandwidth of +/- 2 years; thus the gap between initial and final survey years ranges from 3 to 7 years. If two surveys are equidistant from (T1 - 5), all other things being equal, the more recent survey year is selected as T0. In the database, growth rates are assigned to the final year of the period used, i.e. T1.	World Bank, Global Database of Shared Prosperity (GDSP) circa 2006 - 2011	http://www.worldbank.org/en/topic/poverty/brief/global-database-of-shared-prosperity
09	05	Poverty	Relation growth bottom 40.	Ratio of bottom 40 percent growth to average growth. The growth rate in the welfare aggregate of total population is computed as the annualized average growth rate in per capita real consumption or income of total population from household surveys over a roughly 5-year period. See Indicator 09-04 for definition of the bottom 40 percent.	World Bank, Global Database of Shared Prosperity (GDSP) circa 2006 - 2011 (http://www.worldbank.org/en/topic/poverty/brief/global-database-of-shared-prosperity).	http://www.worldbank.org/en/topic/poverty/brief/global-database-of-shared-prosperity
10	01	Labor and Social Protection	Unemployment, total (modeled ILO estimate). (% of total labor force)	Unemployment refers to the share of the labor force that is without work but available for and seeking employment.	World Development Indicators International Labour Organization, Key Indicators of the Labour Market database.	http://data.worldbank.org/indicator/SL.UE.M.TOTL.ZS
10	02	Labor and Social Protection	Labor share. (% of national income)	Compensation of employees as a share of GDP. Compensation of employees is measured by account D.1 in the System of National Accounts (SNA), and GDP by account B.1. Compensation of employees includes payments in cash and in-kind. It also includes government contributions to social insurance schemes that provide benefits to the employees.	World Bank, World Development Report 2013 UNDATA, at http://data.un.org .	http://data.worldbank.org/data-catalog/wdr-2013-jobs

Practice ID	Indicator ID	Practice	Indicator	Indicator Description (Explanation & Methodology)	Data Source(s)	Link(s)
10	03	Labor and Social Protection	Mean Real Monthly Earnings of Employees, Annual Growth. (%)	Mean real monthly earnings growth of employees refers to the year on year percentage growth (or decline) of mean real wages. The earnings of employees relate to the gross remuneration in cash and in kind paid to employees deflated by the country's consumer price index, as a rule at regular intervals, for time worked or work done together with remuneration for time not worked, such as annual vacation, other type of paid leave or holidays. Earnings exclude employers' contributions in respect of their employees paid to social security and pension schemes and also the benefits received by employees under these schemes. Earnings also exclude severance and termination pay. Statistics of earnings relate to the gross remuneration of employees, i.e. the total before any deductions are made by the employer.	International Labor Organization Global Wage Report 2014-2015	http://www.ilo.org/ilostat/GWR?_afrLoop=1338955075782656&_adf.ctrl-state=k1d4c52do_4#%40%3F_afrLoop%3D1338955075782656%26_adf.ctrl-state%3Dp6t8y7cns4
10	04	Labor and Social Protection	Social security coverage (2010). (% of employed population)	Share of the labor force actively contributing to old-age pension schemes.	World Development Report 2013	http://data.worldbank.org/data-catalog/wdr-2013-jobs
10	05	Labor and Social Protection	Beneficiary incidence in poorest quintile - All Social Protection and Labor. (% of total beneficiaries)	Percentage of program beneficiaries in a quintile relative to the total number of beneficiaries in the population. The indicator is estimated by program type and by quintiles of both the post-transfer and pre-transfer welfare distribution. Programs are aggregated into social assistance, social insurance, and labor market according to ASPIRE classification. Indicators for all SPL programs provide the totals summing up the social assistance, social insurance, and labor market figures. Specifically, beneficiary incidence is (Number of individuals in each quintile who live in a household where at least one member participates in a SPL program)/(Number of individuals participating in SPL programs in the population). The indicator includes both direct and indirect beneficiaries.	World Bank, The Atlas for Social Protection Indicators of Resilience and Equity (ASPIRE)	http://datatopics.worldbank.org/aspire/documentation
10	06	Labor and Social Protection	Coverage - All Social Protection and Labor. (%)	Percentage of population participating in Social Protection and Labor programs (includes direct and indirect beneficiaries). The indicator is estimated by program type, for the entire population and by quintiles of both the post-transfer and pre-transfer welfare distribution. Programs are aggregated into social assistance, social insurance, and labor market according to ASPIRE classification. Indicators for all SPL programs provide the totals summing up the social assistance, social insurance, and labor market figures. Specifically, coverage is (number of individuals in the quintile who live in a household where at least one member receives the transfer)/(number of individuals in that quintile).	World Bank, The Atlas for Social Protection Indicators of Resilience and Equity (ASPIRE)	http://datatopics.worldbank.org/aspire/documentation
11	01	Social, Urban, Rural, and	Access to electricity, urban. (% of population)	Access to electricity, urban is the percentage of urban population with access to electricity.	World Bank, Sustainable Energy for All (SE4ALL) database from World Bank, Global Electrification database.	http://data.worldbank.org/indicator/EG.EL.C.ACCTS.UR.ZS

Practice ID	Indicator ID	Practice	Indicator	Indicator Description (Explanation & Methodology)	Data Source(s)	Link(s)
11	02	Social, Urban, Rural, and Resilience	Access to electricity, rural. (% of population)	Percentage of the rural population with access to electricity.	World Bank, Sustainable Energy for all (SE4ALL) database from World Bank, Global Electrification database.	http://data.worldbank.org/indicator/EG.EL.C.ACCTS.RU.ZS
11	03	Social, Urban, Rural, and Resilience	Access to non-solid fuel, rural. (% of rural population)	Percentage of the rural population with access to non-solid fuel.	World Bank, Sustainable Energy for all (SE4ALL) database from WHO Global Household Energy database.	http://data.worldbank.org/indicator/EG.NS.F.ACCTS.RU.ZS
11	04	Social, Urban, Rural, and Resilience	Access to non-solid fuel, urban. (% of urban population with access to non-solid fuel.)	Percentage of the urban population with access to non-solid fuel.	World Bank, Sustainable Energy for all (SE4ALL) database from WHO Global Household Energy database.	http://data.worldbank.org/indicator/EG.NS.F.ACCTS.UR.ZS
11	05	Social, Urban, Rural and Resilience	Improved sanitation facilities, rural. (% of rural population with access)	Percentage of the population (either rural or urban) with access to improved sanitation facilities refers to the percentage of the population using improved sanitation facilities. The improved sanitation facilities include flush/pour flush (to piped sewer system, septic tank, pit latrine), ventilated improved pit (VIP) latrine, pit latrine with slab, and composting toilet.	WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply and Sanitation (http://www.wssinfo.org/). Sanitation (http://www.wssinfo.org/).	http://data.worldbank.org/indicator/SH.ST.A.ACSN.RU
11	06	Social, Urban, Rural, and Resilience	Improved sanitation facilities, urban. (% of urban population with access)		WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply and Sanitation (http://www.wssinfo.org/).	http://data.worldbank.org/indicator/SH.ST.A.ACSN.UR
11	07	Social, Urban, Rural, and Resilience	Improved water source, rural. (% of rural population with access)	Percentage of the population (either rural or urban) with access to an improved water source refers to the percentage of the population using an improved drinking water source. The improved drinking water source includes piped water on premises (piped household water connection located inside the user's dwelling, plot or yard), and other improved drinking water sources (public taps or standpipes, tube wells or boreholes, protected dug wells, protected springs, and rainwater collection).	WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply and Sanitation, available at: http://www.wssinfo.org	http://data.worldbank.org/indicator/SH.H2.O.SAFE.RU.ZS
11	08	Social, Urban, Rural, and Resilience	Improved water source, urban. (% of urban population with access)		WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply and Sanitation, available at: http://www.wssinfo.org	http://data.worldbank.org/indicator/SH.H2.O.SAFE.UR.ZS

Practice ID	Indicator ID	Practice	Indicator	Indicator Description (Explanation & Methodology)	Data Source(s)	Link(s)
11	09	Social, Urban, Rural, and Resilience	Amount of Municipal Solid Waste (MSW) collected. (% of total MSW generated)	Amount of Municipal Solid Waste (MSW) collected as a proportion of total MSW generated	Waste Atlas: 2013 Report, available at: http://www.atlas.d-waste.com/	http://www.atlas.d-waste.com/
12	01	Trade and Competitiveness	Total factor productivity.	This database provides measures of labor productivity (LP), capital and labor productivity (KLP) and TFP updated for the period 1960-2011 along with the inputs used to calculate them. The paper by Daude and Fernández-Arias (2010) was also updated to reflect the new database.	Fernández-Arias, Eduardo. 2014. "Productivity and Factor Accumulation in Latin America and the Caribbean: A Database (2014 Update)". Washington, DC, United States: Research Department, Inter-American Development Bank. Available at: http://www.iadb.org/research/pub_desc.cfm?pub_id=DBA-015	http://www.iadb.org/en/research-and-data/publication-details.3169.html?displaytype=&pub_id=DBA-015
12	02	Trade and Competitiveness	Reliance on professional management.	Since 2005, the World Economic Forum has based its competitiveness analysis on the Global Competitiveness Index (GCI), a comprehensive tool that measures the microeconomic and macroeconomic foundations of national competitiveness. The Executive Opinion Survey (the Survey) is the longest-running and most extensive survey of its kind. The Survey captures the opinions of business leaders around the world on a broad range of topics for which data sources are scarce or, frequently, nonexistent on a global scale. The indicators derived from the Survey are used in the calculation of the GCI and other Forum indexes. The 2014 edition of the Survey captured the opinions of over 14,000 business leaders in 148 economies between February and June 2014. Respondents were asked to evaluate the following question on a scale of 1 to 7: "In your country, who holds senior management positions?" [1 = usually relatives or friends without regard to merit; 7 = mostly professional managers chosen for merit and qualifications]	The Global Competitiveness Index is based on the result of the work of Sala-i-Martin and Artadi 2004. World Economic Forum, Executive Opinion Survey (2014)	http://reports.weforum.org/global-competitiveness-report-2014-2015/introduction-2/
12	03	Trade and Competitiveness	HH Market Concentration Index.	Hirschman Herfindahl index is a measure of the dispersion of trade value across an exporter's partners. A country with trade (export or import) that is concentrated in a very few markets will have an index value close to 1. Similarly, a country with a perfectly diversified trade portfolio will have an index close to zero. Data Notes: 1) Mirror Exports is considered for export data. 2) All Countries except World and EUN are considered as partner group. 3) Product 'Total' is used for this computation. 4) The indicator is computed at reporter-partner level and aggregated to reporter level.	World Integrated Trade Solution (WITS) - United Nations Statistics Division (UNSD) Comtrade	http://wits.worldbank.org/CountryProfile/country/ALL/startyear/2009/endyear/2013/indicator/HH-MKT-CNCNTRTN-NDX

Practice ID	Indicator ID	Practice	Indicator	Indicator Description (Explanation & Methodology)	Data Source(s)	Link(s)
12	04	Trade and Competitiveness	Pillar_innovation. (Index)	The different aspects of competitiveness are captured in 12 pillars, which compose the Global Competitiveness Index. Innovation can emerge from new technological and non-technological knowledge. Non-technological innovations are closely related to the know-how, skills, and working conditions that are embedded in organizations and are therefore largely covered by the eleventh pillar of the GCI. The final pillar of competitiveness focuses on technological innovation. Although substantial gains can be obtained by improving institutions, building infrastructure, reducing macroeconomic instability, or improving human capital, all these factors eventually run into diminishing returns. The same is true for the efficiency of the labor, financial, and goods markets. In the long run, standards of living can be largely enhanced by technological innovation.	The Global Competitiveness Index is based on the result of the work of Sala-i-Martin and Artadi 2004. World Economic Forum, 2014-2015 Global Competitiveness Index	http://reports.weforum.org/global-competitiveness-report-2014-2015/methodology/
12	05	Trade and Competitiveness	Cost to export. (\$US per container)	Cost measures the fees levied on a 20-foot container in US\$. All the fees associated with completing the procedures to export or import the goods are included. These include costs for documents, administrative fees for customs clearance and technical control, customs broker fees, terminal handling charges, and inland transport. The cost measure does not include tariffs or trade taxes. Only official costs are recorded. Several assumptions are made for the business surveyed: Has 60 or more employees; Is located in the country's most populous city; Is a private, limited liability company. It does not operate within an export-processing zone or an industrial estate with special export or import privileges; Is domestically owned with no foreign ownership; Exports more than 10% of its sales. Assumptions about the traded goods: The traded product travels in a dry-cargo, 20-foot, full container load. The product: Is not hazardous nor does it include military items; Does not require refrigeration or any other special environment; Does not require any special phytosanitary or environmental safety standards other than accepted international standards.	WITS - World Bank, Doing Business project (http://www.doingbusiness.org/).	http://wits.worldbank.org/CountryProfile/country/ALL/startyear/2009/endyear/2013/indicator/IC-EXP-COST-CD
12	06	Trade and Competitiveness	Exports and imports of goods and services, (% of GDP)	Imports (exports) of goods and services represent the value of all goods and other market services received from (sold to) the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude compensation of employees and investment income (formerly called factor services) and transfer payments.	WDI. Using data for exports as percentage of GDP and imports as percentage of GDP.	http://data.worldbank.org/indicator/NE.EX.P.GNFS.ZS http://data.worldbank.org/indicator/NE.IMP.GNFS.ZS
13	01	Transport & ICT	Mobile cellular subscriptions. (Per 100 people)	Mobile cellular telephone subscriptions are subscriptions to a public mobile telephone service using cellular technology, which provides access to the public switched telephone network. Post-paid and prepaid subscriptions are included.	World Development Indicators International Telecommunication Union, World Telecommunication/ICT Development Report and database, and World Bank estimates.	http://data.worldbank.org/indicator/IT.CEL.SETS.P2

Practice ID	Indicator ID	Practice	Indicator	Indicator Description (Explanation & Methodology)	Data Source(s)	Link(s)
13	02	Transport & ICT	Road sector energy consumption per capita. (Kg of oil equivalent)	Road sector energy consumption is the total energy used in the road sector including petroleum products, natural gas, electricity, and combustible renewables and waste.	World Development Indicators International Road Federation, World Road Statistics and electronic files, except where noted, and International Energy Agency (IEA Statistics © OECD/IEA, http://www.iea.org/stats/index.asp).	http://data.worldbank.org/indicator/IS.ROD.ENERGY.PC
13	03	Transport & ICT	Quality of port infrastructure.	This indicator is a component of the Executive Opinion Survey (the Survey), which is the longest-running and most extensive survey of its kind. The Survey captures the opinions of business leaders around the world on a broad range of topics for which data sources are scarce or, frequently, nonexistent on a global scale. The indicators derived from the Survey are used in the calculation of the GCI and other Forum indexes. The 2014 edition of the Survey captured the opinions of over 14,000 business leaders in 148 economies between February and June 2014. Respondents were asked to evaluate the following question on a scale of 1 to 7. "In your country, how would you assess the quality of seaports? (For landlocked countries: How accessible are seaport facilities?)" [1 = extremely underdeveloped—among the worst in the world; 7 = extensive and efficient—among the best in the world] 2013–14 weighted average	World Economic Forum, Executive Opinion Survey 2014–2015 Global Competitiveness Index	http://reports.weforum.org/global-competitiveness-report-2014-2015/technical-notes-and-sources/
13	04	Transport & ICT	Road density. (Km of road per 100 km ² of land area)		World Development Indicators, using wbopendata	-
13	05	Transport & ICT	Internet users (Per 100 people)	Internet users are people with access to the worldwide network.	World Development Indicators International Telecommunication Union, World Telecommunication/ICT Development Report and database, and World Bank estimates.	http://data.worldbank.org/indicator/IT.NET.USER.P2
14	01	Water	Annual freshwater withdrawals, total. (% of total internal water resources)	Annual freshwater withdrawals refer to total water withdrawals, not counting evaporation losses from storage basins. Withdrawals also include water from desalination plants in countries where they are a significant source. Withdrawals can exceed 100 percent of total renewable resources where extraction from nonrenewable aquifers or desalination plants is considerable or where there is significant water reuse. Withdrawals for agriculture are total withdrawals for irrigation and livestock production. Data are for the most recent year available for 1987–2002.	World Development Indicators. Food and Agriculture Organization, AQUASTAT data, and World Bank and OECD GDP estimates.	http://data.worldbank.org/indicator/er.h2o.fwtr.zs

Practice ID	Indicator ID	Practice	Indicator	Indicator Description (Explanation & Methodology)	Data Source(s)	Link(s)
14	02	Water	Annual freshwater withdrawals per capita. (Total (billion cubic meters) per 1000 inhabitants)	Annual freshwater withdrawals refer to total water withdrawals, not counting evaporation losses from storage basins. Withdrawals also include water from desalination plants in countries where they are a significant source. Withdrawals can exceed 100 percent of total renewable resources where extraction from nonrenewable aquifers or desalination plants is considerable or where there is significant water reuse. Withdrawals for agriculture and industry are total withdrawals for irrigation and livestock production and for direct industrial use (including withdrawals for cooling thermoelectric plants). Withdrawals for domestic uses include drinking water, municipal use or supply, and use for public services, commercial establishments, and homes. Population data is from WDI	World Development Indicators. Food and Agriculture Organization, AQUASTAT data, and World Bank and OECD GDP estimates.	http://data.worldbank.org/indicator/ER.H2.O.FWTL.K3
14	03	Water	Water productivity, total. (Constant 2005 US\$ by cubic meter of total freshwater withdrawal)	Water productivity is calculated as GDP in constant prices divided by annual total water withdrawal.	World Development Indicators. Food and Agriculture Organization, AQUASTAT data, and World Bank and OECD GDP estimates.	http://data.worldbank.org/indicator/ER.GD.P.FWTL.M3.KD
14	04	Water	Share of population living in basins of high water stress, 2010. (% of population)	Baseline water stress measures total annual water withdrawals (municipal, industrial, and agricultural) expressed as a percent of the total annual available flow. Higher values indicate more competition among users. Arid areas with low water use are shown in gray, but scored as high stress when calculating aggregated scores. (Gassert et al. 2013: 8).	Gridded population data from CIESIN, Gridded Population of the World v4, for 2010: Center for International Earth Science Information Network - CIESIN - Columbia University. 2014. Gridded Population of the World, Version 4 (GPWv4), Preliminary Release 2 (2010). Palisades, NY. http://www.ciesin.columbia.edu/data/gpw-v4 Water stress by major basin from WRI, c2010: Gassert, F., M. Landis, M. Luck, P. Reig, and T. Shiao. 2013. "Aqueduct Global Maps 2.0." Working Paper. Washington, DC: World Resources Institute.	http://www.wri.org/publication/aqueduct-metadata-global
14	05	Water	Waste water treatment. (% of total water)	Wastewater Treatment (WASTECXN) - Percentage of anthropogenic wastewater that receives treatment	Source: Malik, O. (2013). Global database of National Wastewater Treatment. New Haven, CT: Yale Center for Environmental Law & Policy.	http://epi.yale.edu/content/water-resources-raw-data-file

Annex 3: Private Sector Notes

This annex contains ten short industry notes covering sectors both where the International Finance Corporation (IFC) is currently active and also where it is not active. The purpose of the notes is to provide additional information on the current private sector climate, reviewing recent trends in each sector, key players, the regulatory environment, and emerging challenges and opportunities. It is not the purpose of the notes to pre-determine or select “winning” sectors. Instead, the notes should merely serve as an additional diagnostic focusing on the private sector, offering another glimpse into the Colombian economy.

Notes where IFC is currently active include: transport, logistics, agribusiness, power, mining, and financial markets. Where IFC is not active, four sectors were selected based on a quantitative export analysis using UN Comtrade data. The analysis reviewed and analyzed the most recent trends in tradable sectors. The purpose of it was to understand which products are growing in terms of export value and export markets. Products with an increasing share in international markets, based on country and world growth rates, and potential for increased value added were selected for additional notes. These sectors include vehicle manufacturing, livestock, pharmaceuticals (medicaments) and chemicals (insecticides/pesticides). Finally, a note was written on the tourism sector.

IFC’s industry notes seek to explain the landscape in which IFC will operate in the coming years in both existing and potential new sectors.

Overview of Colombian Automotive Industry

Colombia’s automotive industry includes the assembly (of light vehicles, light weight trucks, buses and motorcycles) and manufacturing of parts used in assembly for the Original Equipment Manufacturer (OEM) markets replacement markets, which includes suppliers of inputs from other industries such as metal-works, petrochemicals (plastics and rubber), and textiles. The automotive sector contributes to 6.2 percent of the country’s GDP and employs about 2.5 percent of the country’s population. With an estimated population of 45 million, Colombia has on average one vehicle per every 15 inhabitants. The automotive market in Colombia is comprised of 40 percent locally produced vehicles and 60 percent imported vehicles from South Korea, México, India, Japan, Ecuador, China, and United States. In regards to the supply chain, more than 106 countries compete in Colombia’s automotive parts market. The U.S., Brazil, Japan and China have the highest market shares.

Key Players

There are three major organizations that produce most of the vehicles in Colombia: **General Motors, Renault, and Mazda**. In 2012, the percentage of nationally produced vehicles was 40 percent (126,387 units of the 315,968 units sold in 2012). General Motors sold the greatest amount of units in 2012 totaling 50,793. Vehicles from General Motors have a large percent of imported parts from the U.S., which also represents a good opportunity for American companies that sell parts for this type of vehicles. For commercial cargo vehicles, domestic production is led by General Motors and Hino (Toyota).

Recent Trends

The bulk of Colombia’s motorcar exports go to Mexico (37.6 percent) followed closely by Argentina. All exports are primarily concentrated in Latin America. The light vehicles market was

at 312k units in 2012, will likely be 349k in 2015 and should exceed 400K in 2019. Some cars assembled in Colombia are exported to Ecuador and Peru due to the FTA for Andean countries but this is limited, ranging between 15,000 and 25,000 per year. Beyond the CBU (Completely Built Units) imported into Colombia, most cars are made out of very comprehensive kits and are SKD (Semi-Knocked Down) or a low degree of CKD (Completely Knocked Down).

In 2014, ten different models were produced in Colombia, the most popular produced at less than 42,000 units (Dacia Duster), the next ones being at less than 22,000 units (Chevrolet Spark, Dacia Sandero). At those levels only a few OEM parts with high labor content could be produced economically in Colombia (e.g., headrests, seats, wire harnesses).

In terms of exports, Colombia is not taking advantage of the demand for motorcars in United States and China, which are the top two importers globally. Moreover it is not tapping into the full potential of markets outside South America like Germany and United Kingdom. Recently, Colombia's auto industry has started selling an increasing number of vehicles to Canada and the U.S., after bilateral trade pacts came into force in 2011 and 2012, respectively

Regulatory Framework & Trade Agreements

Colombia offers a regime of free zones that includes two schemes: single-enterprise free-trade zones and multiple-enterprise free-trade zones. This has created incentives for investors interested in the automotive industry. Additionally Colombia has **Assembly or Transformation Authorized Warehouses (DHT)** an instrument intended primarily to promote the transfer of technologies, market expansion, and development of automotive industry and domestic auto parts.

Colombia also benefits from a strategic location, which gives the country a competitive advantage in logistics:

- Colombia is a mandatory transit way for shipping companies that cover the Northern and Southern routes.
- Presence of large megacarriers and prime maritime connectivity with the world.
- 75 percent of all major shipping companies in the world have access to dock-in services for import and exports in and out of Colombia.
- Low cost freight rates for transport of general cargo to markets in North, South and Central America.
- Due to existing Free Trade Agreements Colombia has preferential access to 1,500 million customers. The Government is committed to negotiating and implementing new trade agreements with strategic countries to promote investment and trade.

Free Trade Agreements (FTAs)

Currently tariff preferences for vehicles as a result of the current trade agreements are: Peru, Ecuador, Bolivia (CAN-Cartagena Agreement), Chile (Free Trade Agreement), Mexico (G2) with free tariff. In the case of El Salvador, Honduras and Guatemala (Northern Triangle), Chapter 87 from the harmonized tariff code, was excluded from the negotiation. The MFN measure or (Most Favored Nation) applies to Colombia with a preferential tariff.

On October 21, 2011, President Obama signed the United States-Colombia bilateral trade agreement (U.S.-CTPA) following its approval by the U.S. Congress. On May 15, 2012 the FTA entered into effect finishing the implementation phase. A significant amount of auto parts, which were previously on average at 13 percent, now have zero tariffs to enter into the Colombian market.

Some other parts fall under staging baskets from five- to ten- year tariff reductions.

Challenges and Emerging Opportunities

Colombia is at the heart of the northwest corner of south-America. That corner offers a long term potential for a small regional automotive industry cluster with about 80M consumers (including Venezuela, Colombia, Ecuador and northern Peru). However in the short to medium-term it is unlikely that this cluster can grow significantly due in particular to the isolation and poor economic prospects of Venezuela. Exports outside this set of countries face logistics disadvantages as compared with what can be found in Mexico (large scale effects, direct proximity to the U.S. market).

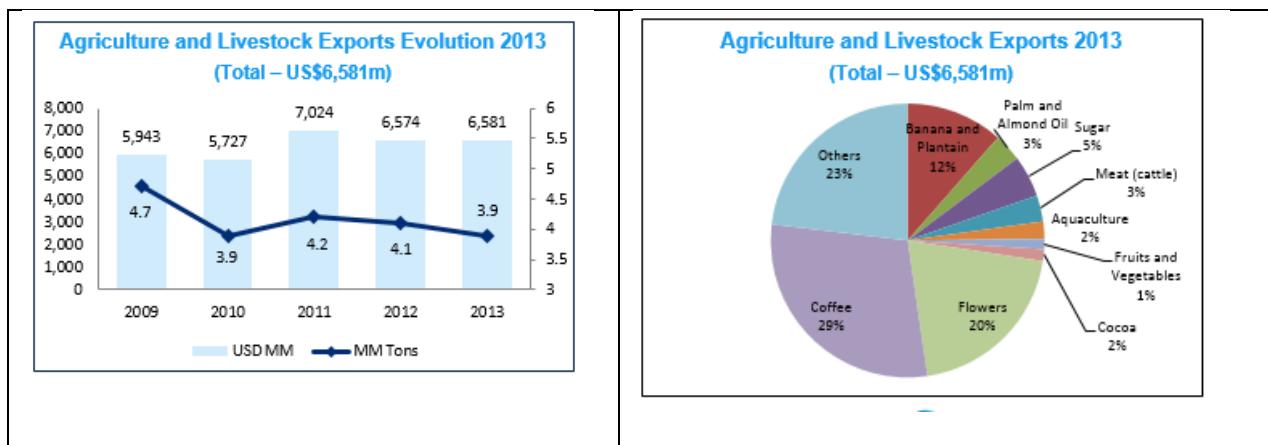
Mazda's (Japan's company) decision to end production in Colombia has raised doubts about the competitiveness of Colombia's auto producers. This has led to an increase in imports from 52 percent in 2009 to 67 percent in 2013. Some companies such as General Motors and Renault have made substantial investments in Colombia in recent years, however expected returns may not be as anticipated. The looming free trade agreement with South Korea may add to the pressure. The government has also announced a development program for the automotive industry called Profia. It aims to boost competitiveness and exports, building on Mexico's experience of slashing tariffs on components imported for vehicle assembly.

Additionally, the development of automotive clusters in Colombia seeks to organize the production chain and provide logistical advantages of scale, to favor the export of vehicles and auto parts. Moreover new infrastructure, mining, and oil projects present an opportunity in the truck segment; it is estimated that these new projects will require a fleet of 3000 additional trucks to move their loads. There could be niche opportunities for special trucks (mining trucks, off-road road construction equipment in the wake of the large road projects in the making, special buses for BRT) where scale effects would not be as critical. Such niches may be also fields for growing specific added-value applications in hardware and software related to telematics, routing and loading optimization, etc. where scale may not be a decisive factor.

In summary an automotive industry strategy for Colombia is feasible on a moderate scale but it should be very focused on specific segments. Conversely, trying to grow a full size automotive industry is much too early especially with Mexico being so close and so competitive in short range (U.S.) and long range exports.

Overview of the Agribusiness Sector in Colombia

- Colombia had a total agriculture, animal products and forestry production of US\$23.4 billion in 2013, with Exports at US\$6.6 billion (12% of national exports) and imports at US\$6.1 billion (mainly corn, wheat, sorghum, soybeans and barley)
- Agribusiness exports have presented a downward trend since 2009, due to i) a fall in international coffee prices, ii) Appreciation of the COP-USD, iii) the impact of the cold wave on agricultural production and iv) the increase of international freight costs on account of rising oil prices.
- The main agribusiness sectors (according to participation on agriculture, livestock and forestry GDP) are:
 - Cattle ranching (19.5% of agri GDP)
 - Dairy (15% of agri GDP)
 - Milling (13% of agri GDP)
 - Beverages (6.4% of national GDP)
 - Sugar (3% of agri GDP)
 - Poultry (2% of agri GDP)

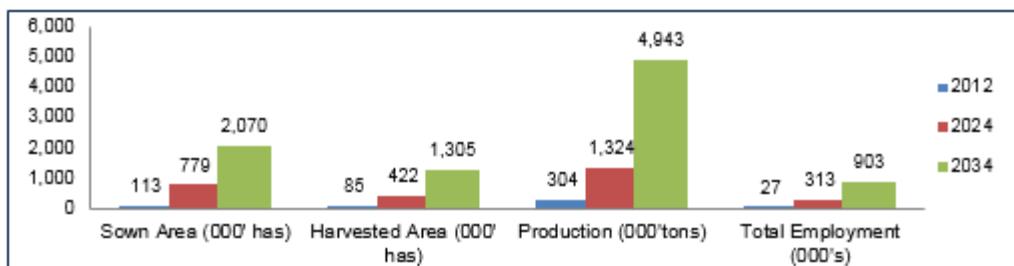


Competitive Advantages and Opportunities

- Colombia has a wide range of soils and climates making the country naturally suited to large scale agricultural production across a diversified range of products;
- It also has a strategic geographical location, with access to Pacific and Atlantic oceans and proximity to important markets – US, Mexico, Brazil
- Large and attractive domestic market with a growing middle class.
- Free Trade Agreements
 - 14 Free Trade Agreements (FTA) signed (including, among others, US, Canada, EU, Korea, Mercosur) and in conversations with China and Japan
 - Pacific Alliance (Peru, Mexico, Colombia, Chile) should provide wider market access
- Political/Macroeconomic Stability and favorable investor regulation
 - Political and macroeconomic stability with steady growth

- Credit Risk: BBB / Positive (2013)
- Foreign direct investment promotion through favorable regulation
- Peace process negotiation could bring security to the rural areas and government investments to improve competitiveness.
- Land Availability
 - COLOMBIA has 51 million ha available for agribusiness activities. Currently, land use is not ideal with 7% being used for agriculture and 77% for cattle ranching.
 - There is an opportunity to transform inefficient and uneconomical extensive cattle ranching systems to higher concentration and commercially viable projects. This could leave more available land for large-scale agricultural production.
 - **Altillanura region** has >3M ha of undeveloped suitable land with no natural forest. National and international companies have identified it as one of the few areas in the world with land available for agriculture. Over 15 Companies announced projects for over 350,000 has. As of 2013, almost 100k has had been planted.

Altillanura Agriculture, Forestry and Livestock Expectations



Advantages:

- Available Land: Altillanura holds 4.3 million hectares from which 3.0 million are suitable for agriculture/forestry
- Attractive Land Prices: USD500-3,000/ha (undeveloped land)
- Available Water

Limitations:

- Poor infrastructure increasing in/outbound logistics costs.
- Poor land needs to be developed (high acidity). Estimated land development cost: USD4,500-6,500/ha
- Uneven distribution of rainfall affects productivity => Strong rainy season (Apr-Nov), followed by an equally strong dry season (Dec-Mar)
- Low state presence which implies housing, health and education investments from the private sector.



Sector Issues and Risks

- The sector has fragile individual property rights/land titling and limitations, characterized by:
 - A fragile regulatory framework (land ownership has become a highly visible and political issue);
 - Decades of violent conflict have led to evictions and displacements of peasants and indigenous communities

- Law 160/94 limits individual idle land ownership (UAF)
- High production costs affect competitiveness
 - Lack/poor internal basic and transport infrastructure connecting producing regions to consumption centers and ports
 - Appreciated local currency
 - Historically highly protected sector discouraging the pursuit of efficiencies at farm level;
 - Limited access to finance and technical assistance to small farmers;
 - Limited research and development
- Environmental and Social Risks
 - Biodiversity concerns around the expansion of the agricultural frontier
 - *Altillanura* region: soil erosion/degradation, water contamination, deforestation in other areas of the country;
 - Latent social unrest connected to land restitution to displaced farmers/indigenous communities and the need to assign land to large quantities of demobilized paramilitaries;
- Lack of state presence in many rural areas
 - Serious security concerns/costs. Some rural areas still controlled by or with high influence of guerrilla or paramilitary groups
 - Reputational risk for companies operating in those areas (i.e. bananas in the Urabá region);
 - Limited basic infrastructure (public roads, basic services for employees such as schools, hospitals and utilities)
- Free Trade Agreements:
 - The free trade agreements could be a risk as Colombia could start importing low cost products either due to subsidies or more competitive production.
 - Barriers to exports due to low phytosanitary standards

Overview of Colombian Bovine Livestock Industry

Colombia had the fourth highest beef herd inventory in Latin America in 2008 and has consistently been an important regional beef cattle producer. The country maintains a popular breed of cattle (the Cebú/Brahman) that is known internationally for its quality. Combined with the fact that Colombia has geographic properties that allow for year-round grazing and breeding, the sector shows potential for growth and investment.

Key Players

The biggest player in the in the livestock/beef industry is the National Cattlemen's Federation, FEDEGAN. They help finance and coordinate cattle development initiatives and strategies, some of which involve working with national universities. They also frequently work with another major player in Colombia, the Colombian Corporation for Agricultural & Livestock Research (CORPOICA). In terms of private entities, the firms below have (as of 2011) been authorized to export and work in bovine products by INVIMA:

- Friogán S.A. (With plants in Villavicencio, La Dorada, and Corozal)
- Frigosinú S.A.
- Frigorífico Vijagual S.A.
- Frigorífico Fondo Ganadero de Santander – Frigofogasa S.A.
- Cooperativa integral lechera del Cesar – Coolesar S.A.
- Frigorífico Camaguey S.A.
- Frigorífico San Martín
- Red Cárnicia S.A.

Recent Trends

Colombia was one of the top 10 exporters of live bovine animals in 2013, with a high country growth rate of 195.86. Of particular interest are live bovine animal exports of non-pure bred breeds (HS: 010290), which had a country growth rate of 193.16. One of Colombia's most important trade partners in the area of cattle and beef is Venezuela, whose economic troubles and price controls have hurt Colombia through the continued illegal smuggling of cattle and meat, among other items.

Regulatory Framework and Government Role

Several national government entities help regulate the cattle and beef industry, notably National Institute for Control of Medicines and Food (**INVIMA**) and the Colombian Agriculture and Livestock Institute (**ICA**). Of interest are also **PROCOLOMBIA**, an organization focused on nontraditional exports, international tourism and FDI in Colombia, and the Colombian Ministry of Commerce, Industry and Tourism (**MINCIT**).

Relevant regulations and resolutions include:

- MINCIT Decree 4837 (2008) establishes annual export quotas of:
 - Ten thousand (10,000) purebred breeding female cattle heads (tariff subheading 0102.10.00.10);
 - One thousand (1,000) purebred breeding male cattle heads (0102.10.00.20); and
 - Fourteen thousand (14,000) other males bovine cattle heads (0102.90.90.20), with weight equal to or greater than 440 kilograms.

- INVIMA Resolution 000161(2011) – Regulation on Export of Bovine Cattle
- INVIMA Resolution 2905 (2007) – Establishes technical regulations for health and safety requirements of beef and beef products for human consumption and provisions for their benefit, cutting, storage, marketing, sale, transport, and import or export

Main Challenges and Emerging Opportunities

- Since 2010, Colombia has only exported live bovine cattle to Ecuador, Jordan, Lebanon, Venezuela, Vietnam, and Peru. While Lebanon and Venezuela are among the major global importers of these, there are several other markets available to Colombia, including the United States, Spain, and China.
- Continued price controls in Venezuela make smuggling a continued problem for various industries, including the beef and cattle export sectors.
- The formalization of the National Slaughter System presents a possible investment opportunity as these plants seek to modernize and build capacity to formalize existing informal slaughter actors, which represent approximately 55 percent of Colombia's total slaughters according to FEDEGAN and PROCOLOMBIA.

Overview of Colombian Tourism Industry

In 2013, Colombia attracted 1.7 million tourists; more than a 300 percent increase compared to the number of visitors in 2002. Similarly, the latest tourism revenue figures from the World Bank equate to approximately \$3.2 billion, whereas in 2002 it was close to \$1.2 billion. And according to the Ministry of Tourism now “the only risk for tourists is wanting to stay.” Moreover, the country receives billions of dollars in foreign exchange through tourism each year, making it the ***third most important sector by this measure, behind oil and coal.*** The growing tourism sector has both created new employment opportunities for locals and influenced migration to tourist-heavy cities, such as Bogotá, Cartagena, and Medellin.

Recent Trends

In 2013 the tourism sector reportedly contributed 5.4 percent of the country’s GDP; and provided employment opportunities to over 1.1 million people. For the collective amount of visitors that landed in the country in 2013, 1,726,300 visitors were accounted for by land, sea and air travel. More precisely, 306, 694 were passengers by cruise, 561,703 were residents of Colombia, while the remaining 1,153,248 stemmed from border integration zones. Foreign investment in tourism has helped reduce the country’s unemployment rate, which fell from nearly 20 percent in the early 2000s to about 12 percent in recent years. Despite the positive forecasts the country’s progress, the tourism industry still pales in comparison to the rest of the South America. The region saw tourism increase by 4.2 percent in 2012 whereas Colombia’s individual growth figures were revealed to be 1.8 percent.

Key Players

The two main entities in Colombia responsible for tourism promotion and development, ***ProExport*** (charged with marketing and promotion) and the ***Vice Ministry of Commerce for Tourism*** (responsible for policy and execution of tourism initiatives), are already aware of most of the challenges of poor brand management, a misunderstanding of the importance of the country’s international reputation and a number of larger, strategic infrastructural challenges and are taking steps to overcome them. ProExport, is preparing to replace the ineffective “Only Risk” campaign.

Emerging Opportunities & Government’s Role

Several new initiatives have been taken by the government over the past decade to foster growth in the tourism sector:

- In 2005, a multidimensional international marketing campaign, “Colombia Is Passion,” was launched. This campaign, a cooperative effort between the Ministry of Commerce, Industry, and Tourism and public and private institutions, invites airline representatives, tourism-agency executives, politicians, celebrities and international media figures to see Colombia’s tourist attractions and recent achievements in safety, foreign direct investment, and economic development. This is an ongoing project with many successes realized so far, including the inauguration of the coastal town of Cartagena as host of the World Tourism Organization’s 2007 convention.
- There are also ***plans in the pipeline to upgrade seven airports throughout the country*** including the current expansion of the international airport in Bogotá, which will make it one of the largest and most modern in Latin America. Since 2000, international flights to Colombia have increased by 120 percent, reaching an average of 5,600 flights per month

as of 2008. In addition, the 2011 Open Skies air-transport agreement between Colombia and the U.S. increases the number of passenger and cargo flights and spurs price competition among airlines.

- Recent *initiatives aimed at supporting broader infrastructure in the tourism industry* have also been announced. For example, in September 2010, President Juan Manuel Santos introduced a 118 billion pesos (US\$66 million) plan directed toward projects that benefit the construction and expansion of shipping docks and convention centers throughout the nation.
- In hopes of *boosting private investments in the hotel sector*, the government began a program in 2003 that offers a 30-year income tax break on all construction or remodeling projects through 2018. By 2006, this had led to the addition of more than 7,300 hotel rooms and more than 152 billion pesos (US\$85 million) in investment.
- The government also recently cooperated with the private sector to change legislation and allow the formation of Real Estate Investment Trusts (REITs), investment vehicles that facilitate the flow of foreign capital into real estate development and management, which has facilitated construction of several hotel projects that are financed via international parties. By allowing the formation of REITs, the government made it easier for outside institutions to finance and participate in the country's growth.
- **Colombian Tourism and Technology.** The tourism industry of Colombia has gradually gotten connected online through both industry and consumer driven initiatives which include EnMiColombia.com, Colombia.travel, and Worksurfers.co site that allows those who travel as a work or business requirement to organize their stay within the republic.
- **Change of Social Tourism Perspectives.** With Mayor Gustavo Petro's direction, Bogota is currently working on guided tours that will draw visitors into natural attractions, ethnic streets, and indigenous zones, as well as to the architectural landmarks of the city that would give a better impression to inbound travelers. This perspective change will be of the essence in driving wealth to the city, particularly to the low-income sectors.
- **Seeking Global Recognition.** National Geography has featured the northern coast of the republic, claiming it to be among the 2012 best trips by natural beauties and preserves. In addition, Bogota recently passed a tourism safety test conducted by a global experts team, drawing more potential visitors to it for the coming peak seasons.

Challenges

Fundamental challenges that confront the successful development of the Colombian tourism industry include; (i) low institutional capacity in formulating and executing plans for tourist development; (ii) low offering of tourist products according to local or regional vocations; (iii) low-quality services, low qualification of personnel, and reduced availability of bilingual personnel; and (iv) insufficient and low quality of support infrastructure for tourism. Some initiatives have been taken to support technical and technological training for employment in tourism and eco-tourism like the Caribbean Colombian Alliance, which aims to improve education in the coastal region. Moreover the Colombian higher education institutions have partnered with foundations and trade unions, local communities and the private sector to accomplish the goal of increasing matriculation by 30,000 students, redesigning competency-based curricula to ensure alignment with those skills relevant to the tourism sector and improving educational infrastructure. Within three years, 1,500 young adults received technical training in Cartagena and now have the competencies and skills necessary to work in tourism.

Overview of Colombian Pesticide Industry

The insecticide sector makes up 0.8 percent of Colombia's total exports and had a total value of \$441 million in 2013. This represents a relatively small portion of Colombia's GDP at 0.1 percent in 2013, but recent trends indicate that this is a quickly growing sector in which Colombia is becoming a more influential player. Products in the insecticide sector include disinfectants, fungicides, herbicides, insecticides, and rodenticides, with fungicides being the most profitable product.

Key Players

Bayer CropScience, Dow AgroScience, BASF, and Syngenta are the largest players in the Colombian and international insecticide sector. All four companies produce insecticides, fungicides, and herbicides. Bayer CropScience is a subsidiary of the Bayer group, a German-based pharmaceutical company that now produces insecticide products. Its Colombia office is just one of 60 international branches. Dow AgroScience is a subsidiary of the U.S. based Dow Chemical Company, the second largest chemical company in the world. German-based BASF is the largest international chemical company. It has a local office in Colombia, one of its many international locations. Syngenta is a Swiss owned agrochemical company that operates in more than 90 countries. Its products are popular in emerging countries, which is where more than half of the company's sales occur.

Recent Trends

Colombia is the 15th largest exporter of insecticides in the world. Since 2010, Colombia's insecticide industry has had an average growth rate of almost 18 percent. Colombia's export market for insecticides has been growing at a faster rate than the world export market: 18 percent compared to a world growth rate of 10 percent, potentially making it an industry of increasing value for Colombia. Yet, Colombia's share of the international insecticide market has remained the same from 2003 to 2013 at 1.2 percent. Insecticides are the 10th fastest growing export sector in Colombia. Examining trends in individual products, fungicides make up the largest portion of the insecticide industry with a value of \$179 million. Insecticides are the fastest growing, however, as the value of insecticide exports grew by almost \$127 million between 2012 and 2013, from \$55 million to \$172 million.

Regulatory Framework and Government Role

The insecticide sector is a privately controlled sector that follows government regulations determined through a collaboration of Colombian governmental agencies and institutes. The regulatory framework for pesticides (under which insecticides falls) has two approaches. The first regulates pesticides for human use while the second regulates pesticides for agricultural use. The insecticide sector is for agricultural purposes and therefore subject to agricultural regulations. Companies that produce and export insecticides for agricultural purposes must first receive permission by applying through the Ministry of Agriculture and Development. The Ministry will classify products, examine studies, and assess the impact of production before giving approval. Once approval is gained through the Ministry, producers must then gain approval from the ICA. Companies must be registered as Colombian.

Main Challenges and Emerging Opportunities

The insecticide sector creates conservation concerns. Government regulations were developed out of concern for the environment, but increasing insecticide production could create concerns for

environmental sustainability in the future. Insecticides are a compliment to the cut flower sector in which Colombia is the second largest exporter in the world. Concern over increased demand for insecticides for local use results in less pressure on creating successful export markets for Colombian insecticides. Colombia is the second largest exporter of insecticides, behind only Argentina. There is potential for Colombia to become the leading insecticide producer in South America, but it must start targeting markets outside of South America. It is not properly tapping into the North American and European market and relies too heavily on exports to Brazil.

Future Perspective

1. Insecticides are a promising sector but make up a very small portion of Colombia's export market. The insecticide sector represents 0.8 percent of Colombia's exports and 0.1 percent of Colombia's GDP.
2. There is uncertainty around whether Colombia could grow its share of the international insecticide market. Over 10 years, Colombia's portion of the market has stagnated at 1.2 percent. But its recent increase in growth indicates an increased share of the international market. Colombia must be able to compete with much larger economies if it wants to increase its share of the international insecticide market.

Overview of Colombian Medicaments Industry

ProColombia reports that as of 2012, there are 260 establishments that are processors of pharmaceuticals and medicaments and the industry represented 2.3 percent of national gross production in the same year. The same report indicates that the Colombian market has an especially high amount of low price generics and the value of non-prescription products is US\$1.061 million while over-the-counter (OTC) products are valued at US\$746 million.

Key Players

In terms of national associations linked to the pharmaceutical industry, the most notable players are the National Association of Colombian Business Owners (ANDI), the Association of Pharmaceutical Research and Development Laboratories (AFIDRO), the National College of Pharmaceutical Chemists, and the Association of Colombian Pharmaceutical Industries (ASINFAR). Private sector companies, as listed by Bloomberg Business, include the following:

- ABL Pharma Colombia SA
- Laboratorios Genéricos Farmacéuticos S.A.
- Laboratorio Franco Colombiano LAFRANCOL S.A.
- Laboratorios Chalver de Colombia S.A.
- Biogen Laboratorios de Colombia S.A.
- Procaps S.A.

Recent Trends

According to statistics released by ProColombia, in 2013, pharmaceutical exports grew by 7.7 percent from 2012 for US\$517 million worth of exports; there has been a steady growth of exports in the sector since 2010. Fifty-five percent of the exports were non-specified medicaments for retail sale; ‘other’ medicaments made up 21 percent of exports while medicaments containing hormones made up another 8 percent. This coincides with export analysis findings indicating that Colombia’s strength is in exports of medicaments with two or more constituents and which do not include penicillin, hormones, insulin, other antibiotics or are medicaments of alkaloids or other derivatives. In this category (HS: 3003090), Colombia shows as 62.5 percent growth rate versus a world rate of 9.64 percent.

Furthermore, figures released by the Ministry of Commerce, Industry and Tourism (MINCIT) and reported by Marca País Colombia indicate that there are growing sales of health services to foreign medical tourists, with a total worth US\$216 million in 2013. With this in mind, the country hopes to position itself as a major destination for pharmaceutical clinical trials.

Regulatory Framework and Government Role

The Ministry of Health and Social Protection (MINSALUD) and the National Institute for Control of Medicines and Food (INVIMA) are the main regulatory body for pharmaceuticals. Statistics and export information are regularly published by ProColombia, an organization focused on nontraditional exports, international tourism and FDI in Colombia, and the Colombian Ministry of Commerce, Industry and Tourism (MINCIT).

Notable regulations include:

- MINSALUD Resolution 0444 (2008): Verification of Compliance with Best Manufacturing Practices
- MINSALUD Decree 2200 (2005): Regulation of Pharmaceutical Services and Medicaments
- MINSALUD Resolution 6980 (1991): Regulations controlling importation, exportation, manufacture, distribution, and sale of medicaments.

Emerging Opportunities

- According to ProColombia, projected global spending on pharmaceuticals will be approximately \$1.2 billion and there is an expected 13 percent growth in sales of pharmaceuticals in Latin America; they also highlight Brazil as the biggest emerging market for this sector.
- 65 percent of total pharmaceutical exports in 2013 went to Ecuador, Venezuela, Panama, Peru, and Mexico. Aside from these countries, ProColombia further identifies the Caribbean as promising region for exports as it has shown increasing amounts of spending in health, as well as medicament imports. The Dominican Republic serves as a potential market, with imports medical and pharmaceutical imports reaching US\$13.875 million in 2013.
- Indian pharmaceutical companies such as CIPLA and IPCA have established operations in Colombia and further investments could follow under Law 1449 (2011) which ratified an “agreement for the promotion and protection of investments between the Republic of Colombia and the Republic of India.”

Main Challenges

- Organized crime groups have been taking advantage of the growing market however the Colombian government has made progress in the past few years to tighten regulations.
- According to the Pharmaceutical Research and Manufacturers of America (PhRMA), Colombia has inadequate implementation of mechanisms for the early resolution of intellectual property disputes and marketing approvals. Furthermore, they have identified Colombia as one of the countries with behavior of concern related to the scope of patentability.

Overview of Transport & Logistics in Colombia

Colombia has an urgent need to overcome transport infrastructure bottlenecks: roads do not cover most of the national territory, and many are in precarious state, airports are exceeded by demand and ports are operating very close to their maximum capacity. For this reason, improving transport infrastructure has been one of the main priorities of the Government of Colombia (“GoC”) during the last years. In an attempt to overcome the major transport bottlenecks, the GoC has launched the 4th Generation of Concessions (the “4G Program”), which represents the largest investment program that Colombia has seen to date. Priority has been given to transport with the aim of connecting the country's vast territory. The 4G Program is worth US\$25 billion and it includes more than 30 concessions to improve roads, airports, fluvial transport, and ports infrastructure. In addition, a new framework was put in place to permit the development of private initiatives, intended to bring infrastructure projects developed by private players to the market. Development of 4G expects to add a sustained 1.5 percent per year to GDP

Key Players

Previous concessions awarded by the Government are held by mostly local investors. Some of the larger names include: Odinsa (recently acquired by Grupo Argos), Corficolombiana (part of Grupo Aval), El Condor, Concreto, Mario Huertas, and Solarte. One of the main priorities of the GoC when launching the 4G Program was to attract international investors to the process, to make it more competitive, and to elevate the infrastructure to international standards. The most relevant international players participating in the 4G Program are Odebrecht, ACS Group (through its subsidiary Iridium), Mota Engil, Shikun & Binui, and OHL. Many national players have been awarded 4G concessions, including: Mario Huertas with three toll roads; Odinsa, Corficolombiana, Valorcon and Equipo Universal (one toll road and the Barranquilla Airport).

Recent Trends

The ten projects that comprise the first phase of the 4G Program have been awarded to the concessionaires and are in the process of financial closing. The nine projects belonging to the second phase of the Program have been launched, but none has been awarded so far. The GOC expects to award these by July, 2015. Other relevant projects are the recovery of the navigability of the Magdalena River and the Bogota Metro. The first one has been awarded to Odebrecht, and the second one is still under study.

Regulatory Framework and Government Role

Law 1508 (2012) has set the framework for PPPs in Colombia. Under this law, the 4G Program has been developed, and simultaneously, the Law has enabled private players to present initiatives (called private initiatives) to the GoC, which, after feasibility studies, are awarded in a competitive process. Law 1668 (Infrastructure Law) was enacted in 2013 with the aim to solve some of the economic, political, and institutional obstacles that have hindered the development of infrastructure in Colombia. This law regulates, for instance, the procedures for land acquisition and the award of environmental licenses.

Main Challenges and Emerging Opportunities

The financing of such a large program is a challenge. Local commercial banks have the risk appetite to invest, but given the size of their balance sheets it is unlikely that they will be able to finance the entire program. International banks are attracted given the availability of U.S.-pegged revenues, but some lack the ability to lend at the required tenors. Instruments to attract capital

markets and/or institutional investors to the Program are needed to guarantee its success, especially to deal with construction risk and with the lack of expertise by such investors in evaluating infrastructure investments. Some initiatives are already underway, such as the development of debt funds and construction-wrapped bonds, both supported by IFC. Another key challenge is to attract international and financial investors to the Program, to diversify the equity funds.

Future Perspectives

President Santos has said that the free-trade agreements that have been signed during his mandate will boost the country's cargo transport and double it to 350 million metric tons per year by 2019. This will be accompanied by a development in the ports sector in Colombia thanks to mainly private investment, and an increased focus on roads and airports. By 2018 the GoC wants to quadruple the kilometers of divided highways, triple the length of railways in operation, double the loan capacity of ports and increase passenger capacity in airports by 50 percent.

Overview of the Financial Industry in Colombia

Colombia's financial system is the third largest in the region accounting for total assets of US\$186.1 billion as of December 2014. The system has grown rapidly over the past decade at Compounded Annual Growth Rate ("CAGR") of 17.9 percent driven by the good macroeconomic environment. Yet, although penetration has increased from 15 percent in 2000 to 32.4 percent in 2014 it still remains low when compared with countries such as Chile, which reports financial penetration above 100 percent.

The system's total loan portfolio size reached US\$140 billion as of December 2014, while maintaining sound and well capitalized, with low levels of non-performing loans, now at around 3.8 percent of gross loans. Concentration levels remain high, with the largest five banks (Bancolombia, Banco de Bogota, Davivienda, BBVA Colombia, and Banco de Occidente) accounting for 63 percent of total loans and 61 percent of deposits in the system, yet competition is expected to continue increasing as new strong players are entering into the sector in Colombia.

Industry Composition

The financial industry is mainly private and is made up of 65 financial institutions: (i) twenty-two licensed banks (88 percent of total loan portfolio), including a state-owned bank (Banco Agrario) and seven international banks (Citibank, BBVA, Santander, Pichincha, Corpbanca, Falabella, and Procredit), (ii) twenty-two finance companies (5.2 percent of total loan portfolio), (iii) five cooperatives (0.6 percent of total loan portfolio), (iv) eleven special official institutions (6.6 percent of total loan portfolio), and (v) five finance corporations (0.1 percent of total loan portfolio) which book the majority of its lending operations outside of Colombia.

The industry's loan portfolio is mainly composed by commercial loans (59 percent), followed by consumer loans (28 percent), and mortgage loans (11 percent). Although the micro segment still accounts for a small portion of the system (3 percent of total loan portfolio) it is the segment that has grown at a faster pace (CAGR 05-14 of 25 percent).

In addition to the aforementioned regulated entities there are various non-bank financial institutions (NBFIs) focused on catering niche segments that are not well served by regulated entities. These NBFIs (credit and savings cooperatives and microfinance institutions among others) have experienced significant growth; yet, there are no official statistics on the aggregated size of these entities.

Key players - Banking

1. The banking sector is highly concentrated with the five largest banks holding 66 percent of total assets:
2. Bancolombia is a local bank focused in commercial and consumer lending. Bancolombia is controlled by Grupo Empresarial Antioqueño, the largest conglomerate in Colombia, engaged in various industries (food, cement, infrastructure, power, insurance, and banking). As of December 2014 Bancolombia reports a US\$28 billion loan portfolio holding a 23 percent market share.
3. Banco de Bogota, is a full services bank focused on commercial and consumer lending. The major shareholder, Grupo Aval, is the largest financial conglomerate in Colombia with business operations in commercial and retail banking, merchant banking and pension funds. Banco de Bogota holds a 14 percent market share reporting a US\$16.8 billion loan portfolio.

4. Davivienda, is focused on commercial and consumer lending. Davivienda's controlling shareholders is Grupo Bolívar, a conglomerate with interests in banking, insurance, construction and brokerage. Davivienda holds a 13 percent market share and reported a total loan portfolio size of US\$16.4 billion as of December 2014.
5. BBVA is part of BBVA Group, the Spanish financial conglomerate. It focuses on commercial, mortgage and consumer loans holding a market share of 10 percent and reporting a total loan portfolio of US\$13 billion as of December 2014.
6. Banco de Occidente, also part of Grupo Aval, focuses on the corporate segment and top-of-the-pyramid clients. It holds a market share of 7 percent with a total loan portfolio of US\$8 billion as of December 2014.
7. Banco de Bogotá and Banco de Occidente, along with Banco Popular and Banco AV Villas, are part of the aforementioned Grupo Aval, a local financial conglomerate that accounts for 28 percent of total banking assets.

Key players – Microfinance

The microfinance segment also presents relevant concentration as Banco Agrario, a public owned bank, has more than 47 percent of loan market share. The other main top 5 players are:

1. Bancamia, whose main sponsor is Fundación BBVA, holds an 11.6 percent market share and reports a micro loan portfolio of US\$538 million.
2. Banco Mundo Mujer, which transformed from an NGO into a bank in February 2015, holds an 11.5 percent market share and reports a micro loan portfolio of US\$536 million.
3. Banco WWB is a recently created entity as a spin-off of Fundación WWB Cali. Fundación WWB Cali is also an NGO part of the WWB network. Banco WWB holds a 7.2 percent market share and reports a micro loan portfolio of US\$332 million.
4. Fundación Mundo Mujer Bucaramanga, an NGO part of the WWB network, holds a 7.1 percent market share and reports a micro loan portfolio of US\$329.1 million.
5. Banco Caja Social, owned by Fundación Social, a Colombian NGO, holds a 6.8 percent market share and reports a micro loan portfolio of US\$315.5 million.

Snapshot for Other Financial Sectors

Insurance: the insurance industry in Colombia has grown at attractive rates (10 percent in average since 2008) reaching a penetration level of 2.43 percent, which although it's one of the highest in the region it's still below those of more developed countries such as Chile, which reports 4.2 percent. The market is concentrated with the top five companies holding a 47 percent market share of non-life insurance and 64 percent market share of life insurance. Main players are: (i) Suramericana, part of Grupo Empresarial Antioqueño, (ii) Boliviar, part of Grupo Bolívar, (iv) Colpatria, part of Scotiabank, and (v) Mapfre, an international insurance player headquartered in Spain.

Pensions: The private pension system has grown at a CAGR of 20 percent since 2004, reporting total assets under management of US\$67 billion. However, out of the total 22 million people employed, only 7.7 million are active in the pension system and only two million are expected to reach retirement. The Government has been evaluating a pension reform that will be aimed at increasing coverage and system's long-term sustainability. The private pension system is highly concentrated with two main players holding 80 percent of total assets under management.

Protección, part of Grupo Empresarial Antioqueño recently acquired ING operations in Latin America becoming the largest pension management Company in the region. Porvenir is part of Grupo Aval.

Capital markets: Colombia's capital market is the second largest market in the region after Brazil, reporting a total annual traded volume of US\$920 billion. The Colombian Stock Exchange (BVC), together with the Santiago Stock Exchange (SSE) and the Lima Stock Exchange (BVL) recently created the Mercado Integrado Lationamericano (MILA) aiming to integrate the capital markets of the three countries, Colombia, Chile, and Peru. The Mexican Stock Exchange (BVM) has also recently joined the MILA thus becoming the largest stock exchange in Latin America.

Regulatory Framework and Government Role

Colombia's regulatory framework comprises a wide regulatory perimeter and a variety of macroprudential and microprudential regulations. Bank regulations have been recently upgraded to improve compliance with Basel requirements regarding eligible bank capital. The Unidad de Regulación Financiera, ascribed to the Ministry of Finance, is in charge of issuing broad financial regulation. The Financial Superintendence, also ascribed to the Ministry of Finance is in charge of the supervision activities and specific financial regulation activities.

Conglomeration and internationalization of the Colombian financial system poses substantial challenges to supervisors who are working on adapting regulation and supervisory practices to the new financial sector structure.

Recent trends, challenges and opportunities

- Infrastructure finance: Aiming to enhance the Country's competitiveness the Government recently approved the Private Public Partnership law mainly intended to foster infrastructure development. The road program alone will entail US\$24.4 billion in capital expenditure investments, of which US\$5.5 billion were awarded in 2014. These investments will require the financial system to play a critical role in funding the infrastructure projects. However, local banks' project finance structuring capabilities are limited. Therefore, FDN, together with IFC, CAF, and SMBC are expected to help mobilize funds and foster structuring capabilities.
- Merger and acquisition (M&A) activity: During the last years the M&A space was very active with relevant transactions in banking, capital markets and pensions. Various international competitors entered the market looking to tap the Colombian growth opportunity. Likewise, local FIs also expanded their regional footprint acquiring relevant operations abroad mainly in Central America. The expansion of the local FIs was supported by internal generation and successful equity issuance in local and international capital markets. For the upcoming years the M&A activity could be limited as the groups are integrating and consolidating the recently acquired operations and equity markets are currently not presenting favorable conditions in terms of pricing and appetite.

Financial penetration and unserved segments: Financial penetration is expected to continue to increase, supported by good macroeconomic perspectives. Yet, financial access for low and middle income segments, especially in rural areas remains low. Thus, supporting niche entities taping these segments is vital to foster financial penetration in the Country. Supporting rural regions will

become even more important if a peace agreement is reached, as rural areas would become a relevant driver for the economy.

Basel III: As long as the financial system keeps gradually adapting to Basel III the system might face constraints on growth, specially due to capital requirements. New requirements for subordinated debt to compute as Tier II Capital would come due and could affect capital cost for banks.

-Pensions: Due to the high informality in the country only 7.7 million workers out of the total 22 million are active in the pension system. Furthermore, it is expected that only two million of the 7.7 million will reach retirement. The Government has been evaluating a pension reform aimed at increased coverage, equality, and long-term sustainability for the system.

Capital Markets: Although the Colombian capital market is well positioned vis-à-vis other countries, companies rated below AA+ lack access to markets because investors, mainly pension funds, are not willing to take increased risk. The Integrated Latin American Market (MILA) composed by the stock exchanges of Colombia, Peru, Chile, and Mexico would become a catalyst to mobilize capital markets, yet, several operational, tax, and regulatory barriers have to be solved before having a strong and integrated MILA.

Overview of the Power Sector in Colombia

In 2012, the average electricity coverage reached 97.1 percent, though access to electricity in rural areas stood at 89.1 percent. Colombia's total installed capacity reached 15,554 MW in 2014, of which 70.2 percent accounts for hydropower plants, 29.2 percent from thermal power plants, and the difference from wind and biomass plants.

In 2004, Laws 142 and 143 (i) allowed the participation of the private sector to render public services; (ii) unbundled the sector into generation, transmission, distribution, and commercialization; and (iii) designed the regulatory system through the creation of the Energy and Gas Regulation Commission (CREG). In addition it identified mechanisms to defend quality and reliability of public services rendered with the creation of the Superintendence of Household Public Services (SSPD). Since then, the system has operated on a competitive environment, with relative efficiency, with a functioning wholesale (spot) market and a bilateral contract market. The system is financially healthy.

In 2008 the government implemented the reliability charge, a mechanism intended to provide incentives to develop projects that provide firm capacity to the system. Through a series of auctions a number of projects were awarded reliability charges and a number of them we developed or are in the process of being developed. Small hydros (<20MW) enjoy the benefit of not having to contribute to the pool of funds that pay for the reliability charge enjoying a competitive advantage that has incentivized its development.

On the distribution sector, there is a system of cross-subsidies from users living in areas considered as being relatively affluent, and from users consuming higher amounts of electricity, to those living in areas considered as being poor and to those who use less electricity.

A number of state-owned regional electricity companies have been privatized and the majority now enjoy positive financial health.

Key Players

Private participation in the sector is moderate. The country has a mixed of partly state-controlled companies operating alongside of private firms. Colombia has 56 generation companies. The most important power generators in 2014 were Empresas Pùblicas de Medellin (state-owned), EMGESCA (mixed), Isagen (mixed), Celsia (private), and GECELCA (mixed) with a combined market share of about 77 percent. There are 12 transmission companies operating in the National Interconnected System. The largest company is ISA (mixed-owned) with about 46 percent market share. There are 94 commercializing and distribution companies, some also operating in the generation and/or transmission sector (those not unbundled in 1994). Key players in the segment include Empresas Pùblicas de Medellin (state-owned), Empresa de Energia de Bogota (mixed), Electrificadora del Caribe (mixed), and Codensa (mixed).

Recent Trends

Development of other renewable energy. Despite the country's large potential in new renewable energy technologies (mainly wind, solar, and biomass), this potential has been barely tapped. In 2014, CREG introduced a renewable energy law intended to provide certain benefits (mostly tax related) for the development of new renewable projects, especially non-conventional technologies. CREG is considering implementing regulatory changes to limit the incentives to small hydros (<20MW). This could jeopardize the development of these projects. The GoC is selling its 57

percent stake in Isagen, as part of a program to raise money to fund the 4G infrastructure project. Bids are expected by May/14.

International interconnection. ISA (Colombia) and Etesa (Panama) continue the development of a 614 km transmission line connecting the Colombian and Panamanian power grids. The line will have a transmission capacity of 300 MW. Work on the project have been delayed due to E&S permitting and the latest estimated launch of operations is 2018.

Key Challenges and Opportunities:

Colombia faces supply concerns due to its reliance to hydropower generation. With the completion of large hydropower plants (Ituango, Sogamoso and Quimbo, together adding 2.5GW to the system) the country has secured capacity for the next few years, however large developments are needed in the medium term. Price volatility associated with the reliance on hydro generation is a factor of concern as in dry seasons, prices spike significantly due to the need to run on the margin of thermal generation. The fact that the spot market in Colombia works on declared prices rather than actual costs allows for speculation in the system. Finally, lack of interconnection between the center and the coast creates inefficiencies that lead to much higher prices in the north coast due to forced generation. Other important challenges are:

- Lack of availability of long-term PPAs is a hindrance in the development of power projects, especially by incumbents looking for project finance structures not available in the market (local large companies normally finance on balance sheet).
- Delays in permitting have affected the development of hydro power projects.
- Expected decline in gas production is also hindering the development of thermal plants, and the ability of existing ones to get long-term gas supply contracts to comply with their obligations to back up the reliability charge. Last year, the government launched a tender for the construction and operation of a liquid natural gas import terminal, intended to provide alternative gas supply options to the country in the event of low hydrology years, in lieu of utilizing the declining (and uncertain) local gas sources.
- New non-conventional renewable energy projects are expected to be developed (some already advanced in the process), taking advantage of the renewable energy law, the declining in technology costs, and the increase of local electricity prices. Still price volatility and lack of long-term PPA are going to be important challenges in the financing of projects. Those projects need to compete on their own merits as the GOC has opted not to subsidize any generation technology.

Overview of the Mining Sector in Colombia

- Colombia is very prospective for gold, copper and silver, yet its vast mineral potential has remained largely untapped in recent decades due to years of political violence.
- Colombia's mining production is dominated by and large by the production of coal, and to a lesser extent nickel and gold, which has been growing in the last years mostly based on artisanal and illegal mining which accounts for more than 80 percent of the country's production (approximately 1.8 M oz Au in 2013).
- Over the past few years, however, as the Country made progress on security and the metals' price increased, Colombia experienced a boom in gold exploration by several mining juniors and Anglo Gold Ashanti that arrived to the country attracted by its extraordinary geological potential for gold.
- A new mining code (Law 1382) approved by former president Alvaro Uribe's administration in March 2010, was repealed a year later by the constitutional court as it ruled that the mining code reform was unconstitutional because it lacked prior consultation with indigenous communities. The court gave the Government two years to fix the mistake but ultimately the GoC decided to amend the previous law of 2001 instead.
- In order to eliminate alleged corruption the GoC revoked the delegation of authority to process mining applications it had granted to six departments, including the Department of Antioquia, where most of the gold exploration activity occurs.
- In order to modernize the concessions applications system, in Feb 2011 the GoC suspended the granting of new mining concessions; it was expected that the suspension would last six months but so far the application system remains closed and no new mining concessions have been granted since suspension.
- Despite a number of significant discoveries in the last years no new mines have been built in the country in the last three decades due to regulatory inconsistencies and difficulties to obtain development permits which, together with difficult capital market conditions for raising financing, have almost stopped the exploration activity observed in recent years.
- The barriers to invest in some emblematic projects derived in part from tensions between the central government that voiced its support to large developments, and regional autonomous environmental authorities ("corporaciones autónomas") that subsequently stopped the large developments because they felt bypassed by mining companies. This was the case for Anglo Gold Ashanti's La Colosa and EcoOro's Angostura (IFC investee) projects.

Key Players

Besides the large coal producers, which IFC doesn't target given its climate change strategic pillar, key players are the following:

- Anglo Gold Ashanti: one of the largest global gold producers, it is the only major producer active in the country. AGA was a first mover into Colombia and staked a large package, which has been downsized in the last years to rationalize its high holding cost. To date its portfolio of properties includes three large projects that have been declared projects of strategic national interest (Proyectos de Interés Nacional y Estratégico – PINES): (i) La Colosa, a large gold deposit (+30Moz) located in the Department of Tolima, near the city of Cajamarca; (ii)

Gramalote, a smaller (6.0Moz) gold project located in the Department of Antioquia which is JV with B2Gold (49 percent); and (iii) Quebradona, a large high grade copper and gold deposit (604.5Mt containing 3.95Mt Cu @ 0.65 percent, 6.13Moz Au @ 0.32g/t, 85.19Moz Ag @ 4.4g/t and 70.08Kt Mo @ 115.9ppm) also located in Antioquia, near the town of Jericó.

- Gran Colombia Gold, a Vancouver-based gold miner listed in the Toronto Stock Exchange that produces around 100,000 opy in two operations: Frontino Mines and Marmato Mine. The company is struggling to earn money in these high cost operations. In addition the expansion potential of Marmato is challenging to realize, as the deposit suffers from significant socio-environmental challenges that have proved difficult to overcome.
- Mineros S.A.: a private Colombian gold mining company based in Bogota that produces about 75,000 opy from alluvial operations. Last year Mineros bought its first international operation, a Nicaraguan company called Hemco which produces about 45,000 opy in its Bonanza mine.
- Atico Mining: a Vancouver based junior miner focused on expanding and optimizing the El Roble copper and gold mine, since acquiring it in 2012 from a local family. In 2014 El Roble produced 9.08Mlb Cu and 9,538oz Au in concentrates. The Company will require risk capital to fund an exploration program for its large land tenancy.
- Cerro Matoso: the second largest nickel producer worldwide, its own by BHP Billiton. The Company is financially self-sustainable.
- There are a number of explorations projects owned by listed mining juniors that are by-and-large on hold due to the drought of risk capital financing. Only a few relatively advanced projects are still active and three are close to construction: (i) Red Eagle's San Ramon, a modest gold deposit (500,000 oz Au) located in Antioquia; (ii) Continental Gold's Buritica; and (iii) Gramalote, controlled by AGA which is not seeking investors.
- AUX: a mining junior that is focused on advancing its Ventana project, a high grade gold deposit located downstream to Angostura. Eike Batista recently sold AUX to Mubadala, Abu Dhabi's (UAE) sovereign wealth fund.
- Eco Oro (formerly named Greystar): Is an IFC's investee company which been awaiting the delimitation of the Páramo of Santurban (moorland) to define how to approach the development of its Angostura project. The paramo limits have been recently announced and Eco Oro is working on adjusting the project design accordingly.

Regulatory Framework and Government Role

The Colombian Mining Code was enacted in 2001 and states that all resources can be explored and exploited with a single concession license, which covers the exploration, construction, and exploitation phases. Concessions are issued on a first-come first-serve basis and are bound by the fiscal regime described in the Mining Code. The initial duration of a concession contract is 30 years, but may be extended for up to 30 additional years. The exploration phase lasts for the first three years of the contract and may be extended for terms of two years, except for licenses issued under the 2010 Law which allows for consecutive additional two-year renewals for a total of 11 years maximum. In order to proceed to the construction phase, companies are required to complete a feasibility study and prepare a development plan (Plan de Trabuco de Obras – “PTO”) that needs to be approved by the Ministry of Energy and Mines. In addition companies need to file an ESIA which has to be approved by the autonomous regional environmental authorities (Corporaciones

Departamentales), except for the case of PINES which are filed before the national level environmental licensing authority (Autoridad Nacional de Licenciamiento Ambiental – ANLA). Mining operations are subject to government royalties of 4 percent and the corporate tax rate is 25 percent.

The Mining Code was amended in 2010 to reflect Law 1382, which provided improvements on addressing environmental and social issues, and fostering a close collaboration between the Ministry of Mines and the Ministry of Environment. In particular, Law 1382 was meant to ban mining in the *paramos* ecosystems, which generally lie at elevations above 3,000 masl, and other type of protected natural areas. In that sense Law 1382 was also meant to protect indigenous people, including Afro-Colombian communities. However, in May 2011 the Constitutional Court ruled that Law 1382 was unconstitutional as it failed to meet prior and freely informed consultation with indigenous people. The constitutional court gave the government two years to conduct the consultation, however the government decided to let Law 1382 disappear and modify specific aspect of the old law through ministerial decrees. In May 2013, the Constitutional Court repealed the 2010 amendment given and the new law was not enacted. Hence, the original 2001 mining law remains in force yet amended by specific supplementary decrees. Licenses issued under the 2010 code (Law 1382) continue to be governed as such, even though the amendment was repealed.

The gold exploration boom that the mining sector experienced earlier this decade led to a huge backlog in the processing of applications for mineral concessions while the administrative platform was not prepared to cope with the sudden surge in demand. In addition, its lack of automatization and transparency allegedly favored corruption. With assistance from the WBG's SEGOM (EI policy team), the GoC embarked on a sector reform. The National Mineral Agency (ANM) was created to oversee the performance of mining activities, administer the mining cadaster, and manage the granting of new titles. The former mining authority (INGEOMINAS) was dissolved and a new geological survey was created to undertake mapping of the territory in order to establish the country's mineral potential. The implementation of the new concessions applications system is work in progress; so far the GoC has failed to resume the granting of new mining titles.

The GoC also made the decision to designate 20.5 M ha of land as areas of strategic interest to be auctioned. SEGOM is also helping the GoC to ensure that this process is done in a transparent and efficient manner. As part of the reorganization of the sector, the GoC allowed for certain mining projects with mining titles and proven and probable reserves to be declared as PINES, which are licensed by the ANLA. The national level environmental licensing authority was created in Nov 2011 as part of the restructuring of the old Environment and Housing Ministry.

Despite the progress made in reforming the mining industry framework, a number of regulatory, environmental and social challenges remain. Social protests over natural resources activities have been a recurring issue in Colombia for decades. Despite the country's vast mineral wealth, there hasn't been any construction of a new gold mine for the past 30 years. A number of marquee projects have faced environmental and social challenges, which have delayed their development.

Recent Developments

There are a few key developments that have affected the sector:

- Pressured by a significant decrease in its O&G revenues, the GoC has increased its efforts to resolve the regulatory inconsistencies and boost its support to mining companies.

- As part of a mining sector reform the GoC transferred the authority to grant mining titles to a newly created Agencia Nacional de Minerales (ANM); and the old national geology and mining bureau, INGEOMINAS, was renamed Servicio Geológico Nacional and is now solely focused on providing geological studies services.
- In addition a new regulation allows for project declared of national interest (PINES) to be permitted at the national level.

Main Challenges, Emerging Opportunities

- Colombia's mining regulatory framework is improving. Three projects seem to be approaching development phase, which will be an awaited endorsement of the sector and might trigger a new wave of mining investments.
- The commodity minerals sector is under intense pressure from the downturn in the market; financing from equity and debt is less available.
- Asset prices are depressed, creating an opportunity to purchase participations in major mineral assets at a favorable price.
- Anglo Gold Ashanti is financially constrained and is looking for partners to co-invest in La Colosa, one of the largest gold deposits worldwide, and Quebradona, a large high-grade copper gold porphyry deposit.
- Strong environmental anti-mining activism requires that miners address stakeholder's concerns permanently starting with the early exploration stage.

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