URUGUAY SYSTEMATIC COUNTRY DIAGNOSTIC
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Currency Equivalent

1 US$ = 26.7 Uruguayan Peso (UYU)

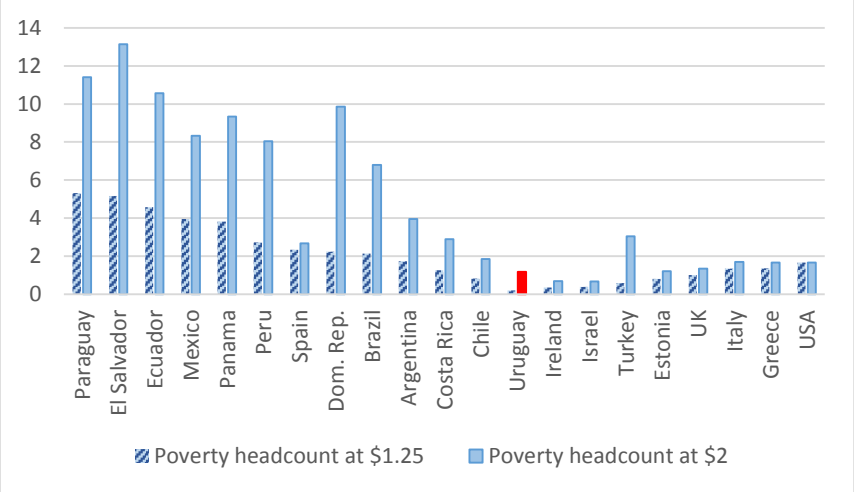
ABBREVIATIONS AND ACRONYMS

ANCAP *Administración Nacional de Combustibles, Alcoholes y Portland*
ANTEL *Administración Nacional de Telecomunicaciones*
BROU *Banco República Oriental del Uruguay*
CAF *Corporación Andina de Fomento*
CASEN *Caracterización Socioeconómica Nacional*
CEDLAS Center for Distributive, Labor and Social Studies
CGS Credit Guarantee Schemes
CUTI *Cámara Uruguaya de Tecnología de la Información*
ECH *Encuesta Continua de Hogares*
ECLAC Economic Commission for Latin America and the Caribbean
ENH *Encuesta Nacional de Hogares*
EU European Union
FDI Foreign Direct Investment
FOB Free on Board
FONASA *Fondo Nacional de Salud*
FSAP Financial Sector Assessment Program
FTA Free Trade Agreement
FTAA Free Trade Area of the Americas
FTZ Free Trade Zone
GDP Gross Domestic Product
GHG Greenhouse Gas
ICT Information & Communication Technology
IDB Inter-American Development Bank
IFC International Finance Corporation
IMF International Monetary Fund
INAC *Instituto Nacional de Carnes*
INE *Instituto Nacional de Estadísticas*
INEC *Instituto Nacional de Estadística y Censos*
INIA *Instituto Nacional de Investigación Agrícola*
IRP *Impuesto a las Retribuciones Personales*
IRPF *Impuesto a la Renta de las Personas Físicas*
LAC Latin America and Caribbean
MAGP *Ministerio de Agricultura, Ganadería y Pesca*
MIC Middle-Income Country
MIGA Multilateral Investment Guarantee Agency
ninis *Ni Estudian Ni Trabajan* (out of school and out of work)
OECD Organisation for Economic Co-operation and Development
OSE *Obras Sanitarias del Estado*
PANES *Plan de Atención Nacional a la Emergencia Social*
PER Public Expenditure Review
PISA Program for International Student Assessment
PMR Product Market Regulation
PPP Purchase Price Parity
PPP Public-Private Partnership
R&D Research and Development
SCD Systematic Country Diagnostic
SIGA *Sistema Nacional de Garantías*
SME Small and Medium Enterprise
SNIS *Sistema Nacional Integrado de Salud*
SOE State-Owned Enterprise
SPCI Shared Prosperity Convergence Index
TEU Ton-Equivalent Unit
TFP Total Factor Productivity
TISA Trade in Services Agreement
VAT Value-Added Tax
USD United States Dollar
UTE *Usinas y Trasmisiones Eléctricas*
WBG World Bank Group
WDI World Development Indicators
WEF World Economic Forum
WITS World Integrated Trade Solution

Executive Summary

Over the past decade, Uruguay's growth has been sustained, strong, and inclusive and the country has bolstered its resilience and reduced its vulnerability to external shocks. The expansion that followed the economic and financial crisis of 2001-02 was the first significant acceleration in GDP growth since the early 1970s. Annual growth since 2003 has averaged five percent, as ground lost during the crisis was more than recouped, and it has been inclusive. Shared prosperity was boosted, as the mean per capita income of the bottom 40 percent rose far more rapidly than that of the population as a whole. Income inequality—while high by the standards of the Organisation of Economic Co-operation and Development (OECD)—fell from a Gini coefficient of 45.5 in 2006 to 38.4 in 2013, and poverty has been reduced by nearly two-thirds—from 35 percent in 2002 to 12 percent in 2013 (both are the lowest in Latin America). Per capita GDP is among the highest in Latin America at $18,940[1] (current PPP $, 2013), and the country's middle class, as a proportion of the population, is the largest in the region. One of Uruguay's greatest successes during this period has been the sharp reduction in unemployment, a function of rapid job creation (labor force participation rates rose to historical highs) accompanied by a growth in real wages.

Poverty Headcounts, Selected Latin American and OECD Countries, 2010-2011



Source: PovcalNet: the on-line tool for poverty measurement developed by the Development Research Group of the World Bank, http://iresearch.worldbank.org/PovcalNet.

This strong economic performance and progress in attaining the World Bank's twin goals, has been framed by two fundamental features: Uruguay's status as a small, open economy and its strong social compact. As a small, open economy, Uruguay's growth is a function of the extent and quality of its integration into global markets, and the recognition of this reality has propelled the country to integrate into global markets. Without recourse to significant economies of scale and with a social compact that supports decent wages earnings,

[1] Unless otherwise specified, the currency used throughout this report is the US$.

Uruguay's growth has to rely on the export of goods and services that embody high levels of productivity. Over the past decade Uruguay has moved along this path, adding value to its exports, diversifying into new products and markets, and promoting non-traditional services exports. Moreover, with the bulk of its exports originating in its rich endowment of natural resources (agriculture, including agri-business, forestry, livestock and tourism), Uruguay is branding itself as a source of clean, green products, hoping to reap the benefits of exporting to high-price niche markets, but also contributing to significant global public goods through sustainable agriculture and low carbon emissions.

Uruguay's significant achievements in poverty reduction and shared prosperity are in good part a function of its social compact. The compact reflects a high societal value placed on the reduction of poverty, on equity and decent labor conditions, as well as on a strong social welfare system and an important role for the State in service delivery. Great importance has been placed on ensuring that economic growth translates into good jobs and on improving income distribution while maintaining a near-universal approach to social welfare. In practice, this has translated into significant reforms over the past decade that have had important redistributive and social benefits and that have ensured that the gains from strong growth are shared widely across the population. These measures have included a progressive tax reform, social security and health reforms, investment promotion favoring investments with job creation, the reintroduction of Wage Councils with a focus on raising the lowest wages more rapidly than the average, and the formalization of large sectors of hitherto informal workers, including own-account and agricultural workers.

Challenges to the Growth Model

This model of employment creation through global market expansion, wage increases aimed at lowering income inequality, and the progressive expansion of an encompassing social welfare model faces a number of challenges. One challenge relates to global conditions, which have turned less favorable, with softer commodity prices, lower demand, and the likelihood of reduced international liquidity in the coming years. In Uruguay's immediate neighborhood, Argentina and Brazil are experiencing economic slowdowns. For Uruguay this translates into the likelihood of reduced economic growth in the medium term. GDP growth in 2014 is estimated at 3.5 percent, and projections are for further slowdowns in 2015 and 2016. In light of more constrained domestic, regional, and global economic conditions, a central concern facing policymakers is the sustainability of Uruguay's substantial achievements in the reduction of poverty and inequality.

Second, with waning economic growth, coupled with an aging society, the financial sustainability of the social model can become a challenge, and sustaining a social compact built upon near-universal social benefits and a strong social welfare system becomes more onerous. Population aging will have a sizable impact on Uruguay's social security and health care system. Preliminary analysis indicates that primary fiscal deficits will increase by 1.8 percentage points of GDP between 2014 and 2050, from 0.4 to 2.2 percent under the baseline assumptions, and will also be reflected in higher debt levels, in the absence of further reforms.

Third, a significant education and skills deficit is a challenge for the sustainability of Uruguay's accomplishments, particularly in the context of an advanced aging process and a growth model that depends on high levels of productivity. While Uruguay's human capital and skills endowment has been the cornerstone of its ability to innovate in areas such as agriculture, software, and nontraditional services, skills appear to be in increasingly short supply, and there is a growing labor endowment gap with respect to some comparators. Uruguay's endowment of human capital appears to underlie its labor productivity gap with respect to comparators and the OECD, affecting the ability to absorb and adopt new technologies. The education system does not perform at a level commensurate with the needs of the country in terms of growth based on high skills, innovation, and productivity.

Fourth, the quality of infrastructure is inadequate given the growth model; while exports (particularly agricultural exports) have increased exponentially over the past decade, this has not been met with increased investment or maintenance in transport infrastructure. It is estimated that the volume of merchandise transported largely on the road network grew by 180 percent between 2000 and 2011, and projections point to an increase in the demand for transport of between 68 and 135 percent for Uruguay's key agricultural exports. However, Uruguay suffers from an infrastructure gap that poses a constraint to continued high growth rates. The quality of road and railroad infrastructure rank 90th and 103rd out of 144 countries, respectively, in the World Economic Forum's 2014 Global Competitiveness Index. Improved infrastructure, logistics, and better trade facilitation are key to enhancing competitiveness, and a seamless connection between farms, firms and global markets is essential.

Fifth, Uruguay suffers from a significant productivity gap relative to aspirational comparators, and productivity upgrading through improved managerial quality and a greater propensity to innovate in processes and products will be key to competing in international markets. Although innovation in some value chains is high, indications are that on average, Uruguay lags far behind Asian Tigers and some middle-income countries in its ability to innovate at the technological frontier, and that it has fallen farther behind as it has grown richer. Sustaining high productivity growth to support a growth model based on trade integration and participation in global value chains will require closing the technology and innovation gap, improving production and marketing processes, cultivating entrepreneurship, adaptability, and nimbleness, ensuring adequate access to finance, as well as upgrading institutions and markets. However, in terms of innovation, Uruguay ranks 86th out of 144 countries (Global Competitiveness Report, 2014-2015), and innovation explains less than 10 percent of total factor productivity (TFP) growth in the country, compared to more than 40 percent in high-productivity growth countries such as Finland, Ireland, Korea, and Singapore when they had per capita incomes levels similar to Uruguay's. Uruguay's spending on research and development (0.4 percent of GDP) is significantly less than OECD countries (2.2 percent) and below some Latin American countries with a lower GDP per capita.

Additionally, a number of tensions in Uruguay's growth model are emerging. One such tension is that between a growth model based on high skills, productivity, and innovation and Uruguay's social compact, which focuses on equity. Over the short term an innovation-driven

growth model may result in increased inequality as skill premia rise, although over the longer term the spillovers from stronger growth and additional investment in skills—mediated by a progressive social compact—may be expected to have a net positive impact on inclusion. On the other hand, the aspiration of rising wages in the future, especially for the lower income groups, will need to take into account productivity changes.

The importance of a massive push in terms of education and skills emerges as critical to sustaining the advances in both growth and the twin goals that have characterized the past decade, but this is confronted with significant disparities and deficiencies in the school system, particularly at the secondary level. And while Uruguay's advances in reducing poverty and enhancing inclusion are very considerable, children and youth suffer disproportionately from exclusion, in terms of incomes and education in particular. Low social mobility, driven by highly unequal education outcomes across income groups is another major concern. The result is clearly untenable in terms of the social compact and the needs of an aging society, and cracks are already emerging, as illustrated by a substantial number of marginalized youth who are not in school or at work. There is also some friction between Uruguay's significant reliance on its natural resources as the foundation for export expansion and its objective of increasingly exploiting a "green" niche in global markets. Resolving these tensions in ways that support a deepening of the social compact without undermining the engines of growth will determine the sustainability of Uruguay's achievements.

Priorities and the Way Forward: Global Integration with Equity

Following a decade of strong growth accompanied by important social progress, Uruguay seems to have reached a juncture where it needs to reinvigorate its development model by strengthening its focus on global integration with equity. A first ingredient of such a strategy is to stimulate productivity growth in a way that ensures broad social participation in the resulting benefits. The requirements imposed by global integration with high productivity and value addition on the one hand, and by a wage bargaining model that has helped to ensure greater income equality on the other, mean that a massive education and skill-building effort, with particular emphasis on those who need them most, is essential. Removing bottlenecks to greater connectivity and integration into global markets through enhanced transport infrastructure is another priority. With the bulk of its exports originating in its rich endowment of natural resources, Uruguay can use its innovations in sustainable agriculture and resource use to promote itself as a source of clean, green products, translating this asset into greater value addition and the possibility of capturing premiums in high-price export markets.

A second ingredient of such a renewed strategy is adaptation of the social compact to a changing reality. As Uruguay has advanced in reducing poverty and enhancing equity, other challenges have come to light and will need to be addressed. These include the need for a greater emphasis on early childhood development in order to combat the impacts of child poverty and to ensure equality of opportunity. Poverty is more prevalent among children than adults, and although poverty declined in all age groups in recent years, it fell faster for adults and the elderly than for children, resulting in a larger proportion of the poor being concentrated

in the 0-18 year old group. Another major concern is the low social mobility associated with youth exclusion and poor educational outcomes. Unemployment is far more prevalent among young people than it is in older cohorts. The social welfare model will need to shift to address these rising challenges.

Uruguay Systematic Country Diagnostic

I. Introduction and Motivation

1. **This Systematic Country Diagnostic (SCD) seeks to identify the opportunities and critical binding constraints that face Uruguay in achieving sustainable progress towards ending extreme poverty and boosting shared prosperity.** It is intended to stimulate an open and forward-looking dialogue between the World Bank Group, the Uruguayan Government, and the broader public. It is a joint product of the World Bank Group and has included consultations with the national authorities, members of academia, civil society, and other stakeholders. Following this introduction, Chapter II describes the country context, characterizing the main features of poverty, inclusion, and growth. Chapter III discusses the implications of being a small, open country for sustainable, inclusive growth on the one hand, and the repercussions of Uruguay's social compact and strong premium placed on an equitable, homogeneous society, on the other. The key constraints facing Uruguay in terms of poverty reduction, inclusiveness, growth, and sustainability emerge from this discussion. Section IV prioritizes these constraints in the context of emerging tensions or tradeoffs that inhere in Uruguay's social and economic realities.

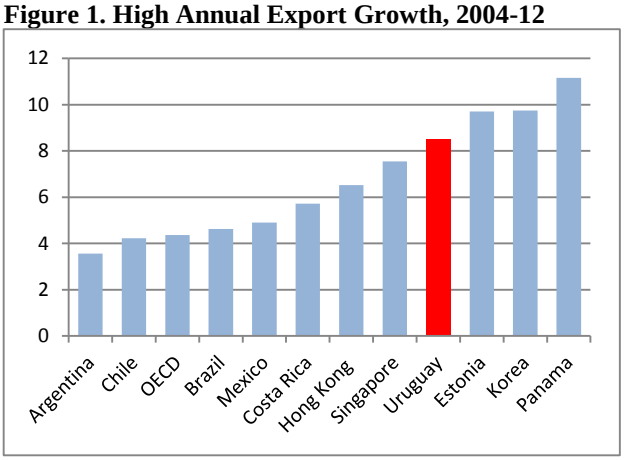
2. **Uruguay today stands out in Latin America for its high per capita income, low inequality, low poverty, and virtual absence of indigence.** Uruguay has a long history as an egalitarian society with a strong welfare state and powerful unions. As a proportion of the total population, the size of Uruguay's middle class is the largest in Latin America, encompassing well over half the population. The country ranks at or near the top of Latin America on many measures of well-being, including the Human Development Index (3rd in region after Chile and Argentina) and the Human Opportunity Index, where it is at the top of the region. It ranks third on the Index of Economic Freedom, after Chile and Colombia. The stability of its institutions and low levels of corruption are reflected in a high degree of trust in government by citizens.

3. **Two defining characteristics—the country's smallness and openness, and its strong and deeply rooted social compact—help explain Uruguay's achievements in the areas of growth, poverty reduction, and shared prosperity as well as future opportunities and challenges.** Uruguay's population (3.4 million) is slightly smaller than that of Panama and half that of the city of Bogota, while in its own neighborhood, Brazil and Argentina have economies that are 40 and 11 times the size of Uruguay's, respectively. It is also a highly urbanized country: 95 percent of the populace lives in urban areas, including 52 percent that lives in Montevideo, the capital.

4. **Uruguay has emerged as a successful exporter, behind only Panama and Peru in the region over the past decade in terms of export growth, and compares favorably to Asian counterparts** (see Figure 1), with an export basket grounded in its comparative advantage of natural resources. Nevertheless, smallness and openness can have adverse implications in terms of volatility and exposure to shocks, in terms of the options for diversification, as well as the limitations arising from the inability to benefit from economies of scale.

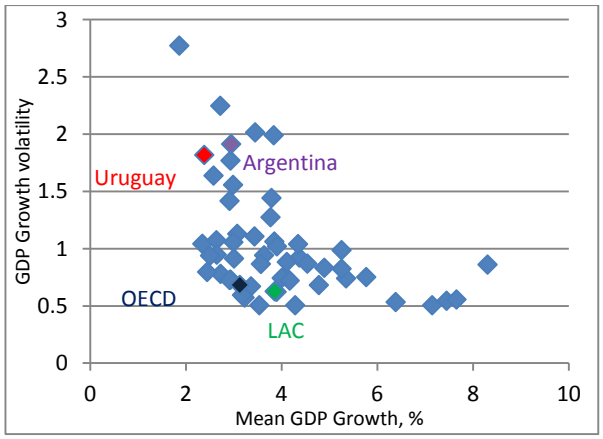
5. **Uruguay's size and increasing global integration render it particularly sensitive to conditions in the global economy and to those in its neighborhood.** Historically, this has been reflected by high volatility and low growth (see Figure 2) as international commodity prices and fluctuations in capital flows, upon which Uruguay depends to a large extent, have had a particularly strong impact on its economic performance. Moreover, in addition to these typical external disturbances faced by small, open economies, Uruguay is subject to a number of additional idiosyncratic shocks stemming from its much larger neighbors, Brazil, and especially, Argentina. This is illustrated by a high correlation between GDP growth rates (and the business cycles) of Uruguay and Argentina, although this has declined in recent years (see Figure 3). The two deepest crises in recent Uruguayan history have followed on crises in Argentina. Uruguay is also exposed to climate change, further heightening its vulnerability. Building resilience to these various sources of volatility is essential to protect the achievement in poverty reduction and equity.

Figure 1. High Annual Export Growth, 2004-12



Source: World Bank, WDI.

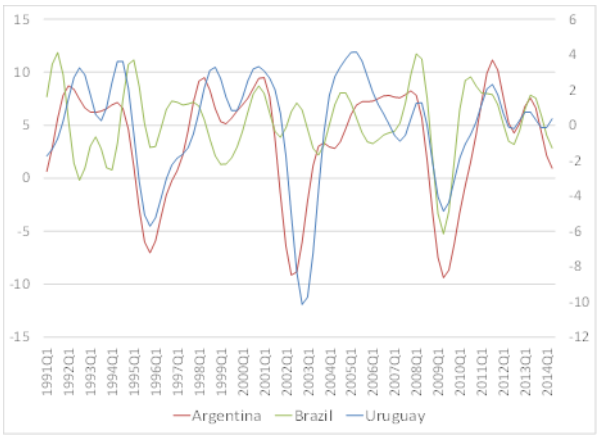
Figure 2. Historically High GDP Volatility and Low Growth



Note: Data are for 1961-2013, covering middle-income and high-income countries with available data in Latin America and the Caribbean (LAC), Organisation for Economic Co-operation and Development (OECD, and East Asia. Real GDP growth rate is a 3-period centered moving average.

Source: World Bank, WDI.

Figure 3. Correlation of De-trended GDP between Uruguay and Argentine



Note: De-trended quarterly GDP, using the Cristiano-Fitzgerald filter. The correlation coefficient between Uruguay and Argentina GDP is 0.66 for the 2003-2013 period, down from 0.88 during 1990-2002.

Source: Staff calculations.

6. **Smallness also implies limitations to the potential for economic diversification.** Uruguay cannot aspire to diversify its economy to the same extent as a larger country such as Brazil, Mexico or the United States. It is constrained to choose within a more limited spectrum of options, grounded in its comparative advantage. Similarly, a lack of economies of scale

affects costs throughout the economy: due to fixed costs, the provision of many services is more expensive than it would otherwise be. For instance, the public sector in small states—including in Uruguay—is often larger, per capita or as a proportion of GDP, than it is in larger states. Again, this implies that it is difficult for a small country such as Uruguay to compete on the basis of costs.

7. **As Uruguay cannot easily compete in the world on the basis of lowering costs through increasing scale, it must do so with higher levels of productivity and value addition.** Thus, issues related to human capital, skills, and innovation are particularly important. Similarly, in a country where the bulk of exports derives from the natural resource base—agriculture and agro-industries—sustainable resource management and climate change adaptation and mitigation are critical to sustained productivity and competitiveness. Indeed, Uruguay has sought to develop strategies to simultaneously conserve its vital natural wealth while expanding low carbon growth strategies in agriculture that embody significant innovation as well as market opportunities globally in response to increasingly aware and demanding consumers.

8. **The second characteristic feature of Uruguay is its deeply ingrained social compact, which places a high value on the reduction of poverty and on equity and decent labor market conditions.** A social compact can be considered across a variety of sometimes overlapping dimensions: (a) satisfactory material conditions, such as employment, income, health, education, and housing; (b) solidarity, reflected in social networks that generate shared values that influence democratic participation and adherence to legal norms; (c) inclusion, as reflected in integration in civil society and the existence of a functioning social protection network; (d) equality in terms both of access to opportunities and in material circumstances; and (e) social safety and order. Expressed in another way, the social compact may be understood as the ability to achieve economically effective and socially legitimate policies and public-private cooperation. This fosters a solid democracy and institutions that are able to deliver public goods necessary for the development of new growth activities and broad (and broadly accepted) social policies.

9. **Reflecting its strong social compact, Uruguay stands out in Latin America for its high per capita income, low poverty, and virtual absence of indigence as well as low inequality.** Uruguay also has the region's largest middle class as a proportion of the total population, at 56 percent. Even relative to a number of high-income OECD countries, Uruguay performs well in poverty indicators, although not in terms of inequality. These achievements are the results of over a century's worth of pioneering social policies that represent an important aspect of the country's strong social compact. Uruguay's social security system—whose origins can be traced back to the 1800s—was one of the first and most comprehensive in Latin America; by 1920 it covered a significant coverage portion of the working population, including teachers, public sector employees, and private sector workers (Rofman and Carranza, 2005). Ethnically, Uruguayan society is relatively homogeneous, with close to 94 percent of the population identifying itself as white, while around 8 and 5 percent self-identify as of African and indigenous descent, respectively.[2]

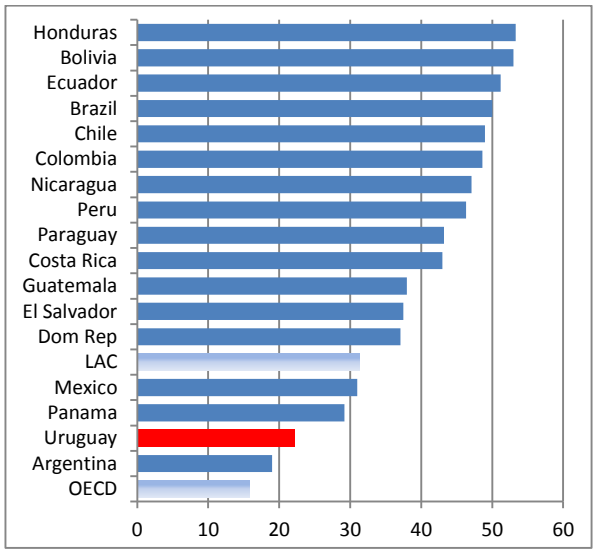
10. **Labor policies provide higher quality jobs for Uruguayan workers than do conditions for workers in the rest of the region.** The rate of vulnerable employment—i.e.,

[2] Respondents to the household survey are permitted to identify themselves with more than one ethnicity, thus the sum is over 100 percent.

the number of own-account workers and unpaid family workers as a share of total employment—is low, signaling that the quality of jobs available is relatively high (see Figure 4). Informal employment is the lowest in the region, and stood at 25.6 percent of total employment in 2012, following successful efforts by the State to register domestic employees and agricultural workers, sectors that have traditionally been characterized by a high degree of informality (see Figure 5). A strong welfare state is accompanied by powerful unions; over the past decade, unionization has tripled from about 110,000 in 2003 to over 350,000 in 2013 or about 21 percent of employed workers (US Department of State, 2014) and the reported collective bargaining coverage for Uruguay, at 89 percent (2007) of all wage and salaried earners, remains considerably higher than that of most countries in the region, and is similar to levels in OECD countries.

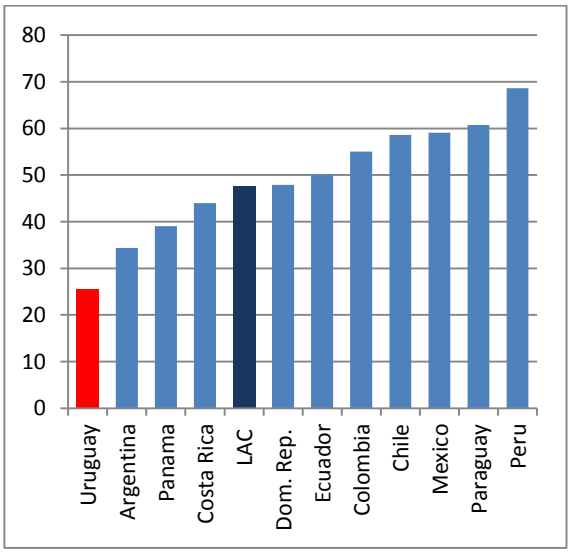
11. **An aging population is another distinctive feature of Uruguayan society with important ramifications for the country's social compact.** Uruguay is at a more advanced stage in its demographic transition than its peers in the region, and in this respect, is more similar to Eastern European countries. The number of people 65 years or older grew from 8 percent of the total population in 1950 to 14 percent in 2010, and is expected to reach nearly 30 percent by 2100. Conversely, the 15 and under population is shrinking, from 28 percent of the total population in 1950 to approximately 23 percent in 2010, and is expected to decline to close to 15 percent by 2100. A large and growing aging population, in the context of a strong social compact, generates expectations for ever-greater health and pension coverage and quality. There may also be important consequences for intergenerational equity if the pressure to provide services for the elderly is resolved at the expense of younger and future generations.

Figure 4. Share of Vulnerable Employment
2012 or latest available



Source: World Bank, World Development Indicators (database)

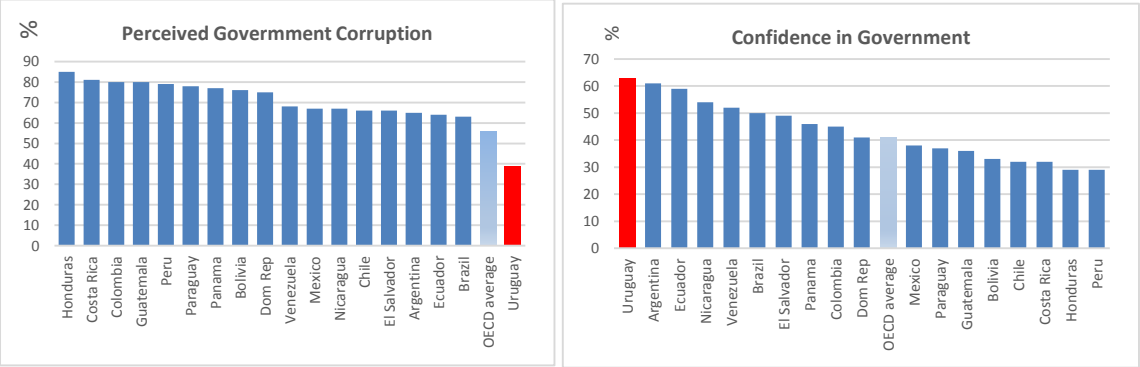
Figure 5. Informal Employment, % of Total
2010-2014 (latest available)



Note: LAC average for 13 countries, non-agricultural informal employment in 2012. *Source*: ILO FORLAC for all countries except Costa Rica where the source is INEC, and Chile, where the source is INEG. Data is for 2010 in the Dominican Republic; 2011 in Paraguay; 2012 in Argentina, Ecuador, Mexico, Peru and Uruguay; 2013 in Costa Rica and Colombia and 2014 in Chile and Panama.

12. **Uruguay's institutional capital—another aspect of the social compact—is high not only in comparison with Latin America, but also with Organisation for Economic Co-operation and Development (OECD) countries.** People have considerable trust in government and the perception of corruption is low. The State is widely recognized as trustworthy and effective in the delivery of public goods, and society has explicitly voiced its preference for having the State play an active and expansive role in most public service sectors. This trust is a reflection of the country's tradition for consensus-based policies and of the strong performance of the public sector in ensuring nearly universal coverage and adequate quality and transparency in the provision of services. Figure 6 shows two subjective measures of government performance: perceived governmental corruption and confidence (or trust) in government. Fewer than 40 percent of people say that they believe corruption is widespread in government. This is by far the lowest score in the region, and more than 20 percentage points lower than in the second-lowest scoring country, Brazil. It is significantly lower than the OECD average (56 percent). Uruguay also has the highest levels of confidence in government for the region, with almost two-thirds of people saying that they trust national government (compared to 41 percent of people in OECD member countries). Trust in government is one of the most important foundations upon which the legitimacy and sustainability of political systems are built.

Figure 6. Perceived Levels of Corruption and Trust in Government



Source: OECD/ECLAC (2014), from Gallup Organization (2013), *Gallup World Monitor* (database).

13. **Finally, a stable democracy forms a central anchor of the social compact.** Uruguay has Latin America's oldest two-party political system, democratic institutions, a long-standing, broadly based, and effective social welfare system, and a deeply ingrained preference for equality and political consensus—all somewhat unique in the region. In 2004, the Uruguayan electorate in 2004 voted into power a center-left coalition, the *Frente Amplio* (FA); the 2002 crisis, with soaring poverty rates and unemployment afflicted more than 40 percent of the working force, may have contributed. The FA won its third successive election in November 2014. It is a reflection of the stability of Uruguay's democracy that this shift away from the two parties (the *Blancos* and the *Colorados*) that had dominated the political scene for nearly 200 years did not generate significant disruptions in the post-crisis period, and that institutional continuity was ensured.

14. **Smallness, openness, and a society with a strong and progressive social compact have played a central role in the significant achievements Uruguay has made toward the**

twin goals. The need to focus on productivity and value addition by virtue of being a small open economy had allowed an improved correspondence between existing skills and jobs, resulting in efficiency gains and higher wages. A progressive social compact ensures that the benefits of growth are shared more equitably across the population. With a negligible rate of extreme poverty and good performance in promoting shared prosperity—although challenges remain—the relevant questions to be addressed by this Systematic Country Diagnostic (SCD) relate to the sustainability of the processes that have led to such success.

15. **It can be argued that since the 2002 crisis and until recently, Uruguay's two characteristics have been mutually supportive:** the need to tackle the dramatic rise in poverty and vulnerability resulting from the 2002 crisis was supported by domestic policies that addressed social imperatives as well as imbalances and constraints to growth in a context of very favorable external conditions. Yet inherent in these two characteristics is the possibility, or probability, of serious challenges in the future, particularly as external conditions turn less favorable and as domestic pressures—including those associated with an aging population—emerge. Over the past decade, Uruguay has succeeded in balancing the demands of a strong social compact with those emerging from its reality as a small and open economy. It has been possible to support poverty reduction and improved equity, perhaps at the cost of some loss of economic efficiency, principally because economic growth has been so robust. How easy will it be to accomplish this over the next few years, as both domestic and external conditions change and economic constraints become more binding?

16. **The SCD addresses this and related questions, helping to frame the constraints to sustainability of Uruguay's achievements and to foster the achievement of the twin goals.** As a small open economy, how has Uruguay managed to circumvent the economics of scale issue that hampers diversification and raises costs, and what may be the emerging challenges? Similarly, the fixed costs of providing some key services in a small economy often impact production costs as inputs are more expensive than they are in larger markets; how has Uruguay addressed this constraint?

17. **Similarly, the future of Uruguay's social compact raises a number of questions:** What has been the key to the movement out of poverty and is the pace of poverty reduction likely to continue? Is equality of opportunity assured? Who are the remaining poor and is a broad social protection system adequate to reach remaining excluded groups—and, if not, what else is required?

18. **Tensions and tradeoff are likely to emerge between the two defining national characteristics.** One tradeoff may be between the importance of competitiveness to a small, open economy and the centrality of a highly regulated labor market that ensures decent wages and working conditions as elements of the social compact. Another is the need to balance economic efficiency with the social preference for a large role for the State. And in relation to Uruguay's demographic transition, will tensions emerge between the demands of an aging society and the coming reality of a smaller work force as the working-age population starts to decline? These questions and tensions, as well as others identified in the analysis, will guide the SCD discussion as it moves from a description of the country context to an identification of the key challenges facing Uruguay in sustaining its achievements, and will inform the identification of priorities.

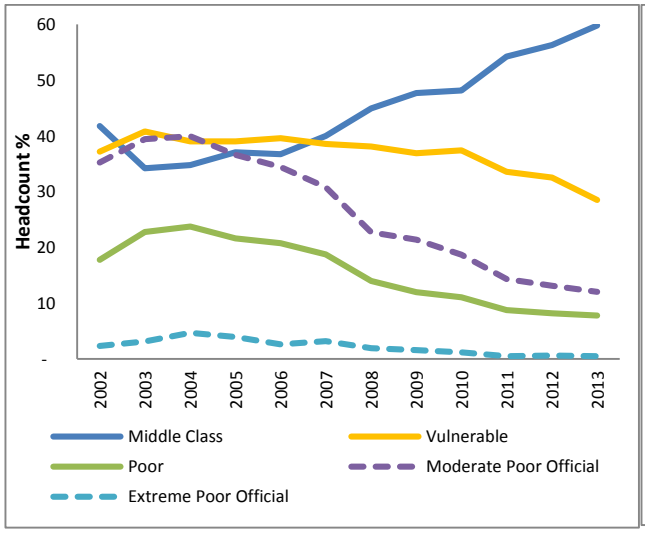
II. Country Context

A. Poverty, Shared Prosperity and Inclusiveness—Determinants and Trends

19. **Uruguay has all but eliminated extreme poverty and has seen moderate poverty decline significantly in the last decade** (see Figure 7). Close to one million people have been lifted out of poverty, recouping the ground lost during the crisis of 2001-2002. By 2013, only 12 percent of the population lived below the official poverty line, less than one-third of the rate observed seven years earlier. Extreme poverty declined even more, to 0.5 percent, representing less than one-ninth the rate in 2004, the year in which poverty levelled off after the 2001-2002 crisis. Nevertheless, poverty reduction has slowed since 2008.

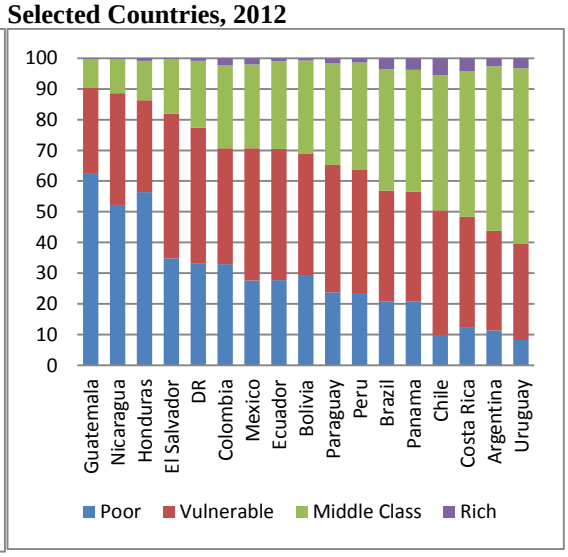
20. **In the last 10 years the size of the middle class has grown steadily, and today represents the largest socioeconomic group in Uruguay.** In 2002, 42 percent of Uruguayans were living on incomes between $10-50 per person per day[3] (in PPP 2005 values), the World Bank's economic definition of the middle class (Ferreira et al. 2013). By 2013 more than 60 percent of the population belonged to this group (see Figure 8). This implies that close to 300,000 Uruguayans have joined the middle class during the recent growth spurt, making Uruguay the country with the largest middle class in the region (in relative terms), and together with Argentina, one of only two countries in the region where the middle class composes more than half the population. The vulnerable—defined as those with incomes between $4-10 per day—account for 28 percent of the population. They compose the second largest income strata in the population, and are at high risk of slipping back into poverty in the event of shocks.

Figure 7. Socioeconomic Groups: Uruguay, 2002-13



Source: Own calculations based on data of SEDLAC and ECH, 2002-2013.

Figure 8. Class Composition in Latin America, Selected Countries, 2012



Source: Own calculations based on data of SEDLAC.

Note: Data correspond to Montevideo and urban areas with more than 5,000 inhabitants. Poverty, vulnerability and middle class estimates based on World Bank definitions (poverty line = $4 USD per day, Vulnerable are those living on incomes between $4 and $10 USD per day, middle class are those living with $10 to $50 USD per day, and rich are those with more than $50 USD per day).

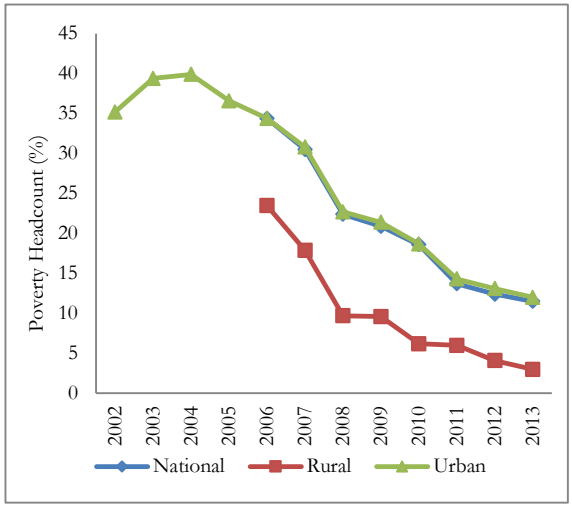
[3] Unless otherwise specified, the currency used throughout this report is the US$.

21. **A distinguishing feature of poverty in Uruguay relative to the Latin America and Caribbean (LAC) region is that poverty is more of an urban phenomenon than a rural one** (see Figure 9). This may be explained in part by the facts that 95 percent population lives in urban areas, and that the average family farm is more than 200 hectares (ha) in size and engages in production for the market rather than in subsistence farming. Nevertheless, while they may be physically large relative to the regional average, family farms can be economically small and vulnerable to changing market conditions or climate.

22. **Although average poverty is low in Uruguay, considerable regional variation exists.** For example, in the department of Maldonado, only 3 percent of the population lived in poverty in 2013 (see Table 1), whereas in Montevideo the poverty rate was closer to 16 percent, and in places like Rivera or Artigas it was 18 percent. There is therefore scope for regional convergence strategies.

23. **Despite success in reducing absolute poverty rates when compared to its regional peers, in the past few years child and youth poverty has declined more slowly than adult and elderly poverty.** The number of poor children in Uruguay, as measured by the national poverty line, has fallen by more than one-half between 2006 and 2011, as has the incidence of poverty among children; rates of child poverty are the lowest in the region (Figure 10). Despite these notable achievements, the incidence of poverty remains highest among children and youth – and lowest among the elderly (see Figure 11) and is high compared the levels in OECD countries. In 2011, 44 percent of children aged 14 or under were deprived of at least one basic need, compared to 34 percent for the population as a whole (INE-PP, 2013). In the same year, close to 57 percent of all individuals living in moderate poverty (under $4 dollars a day) were under 18 years of age, compared to 35 percent in the 24 to 64 year group, and 2.5 percent of those aged 65 and above. As a result of strong real wage growth, the high coverage of contributory and non-contributory pensions, and the indexation of contributory pensions to wages, poverty rates among the adult population, particularly the elderly, have declined dramatically, leading to a relative concentration of poverty among children and youth over the past decade. Government programs have identified youth poverty as a key concern in the poverty reduction agenda, and a main pillar of the proposed *Sistema Nacional Integrado de Cuidados* is to address some of the underlying issues through expanded pre-school education and other related interventions. Beyond poverty, exclusion and more limited opportunities, the impacts of child and youth poverty extend to the potential for productivity, competitiveness and growth in the economy as a whole.

Figure 9. Urban, Rural and National Poverty, 2002-2013

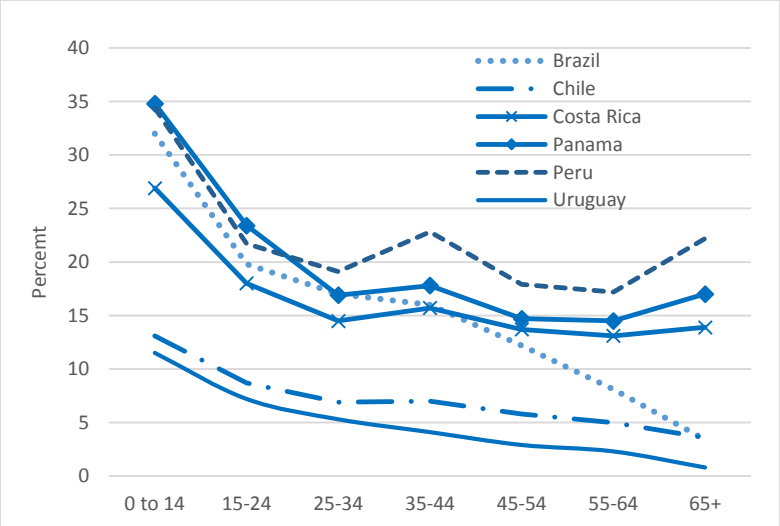


Source: INE (National Institute of Statistics) 2014.

Table 1. Official Poverty Percentage Rates by Department (2006-2013)

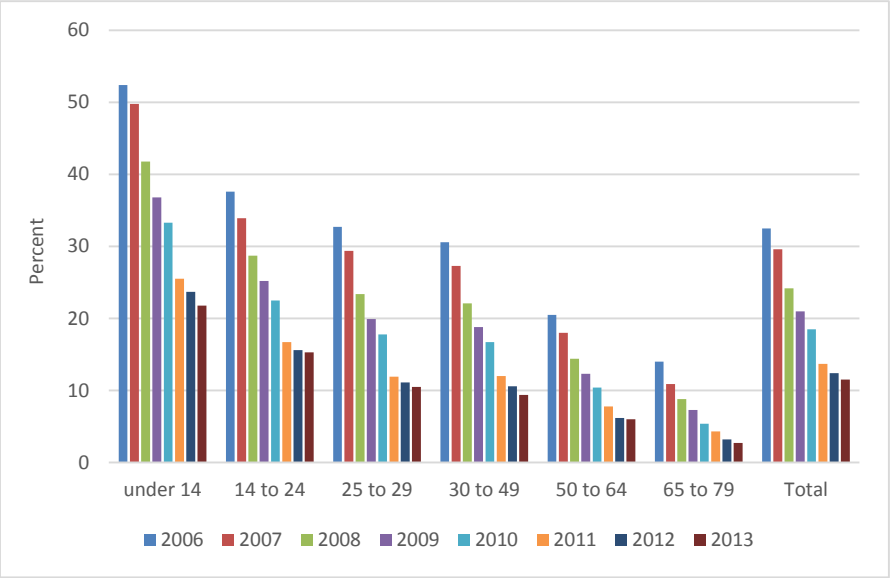
	2006	2013
Maldonado	14	3
Colonia	18	2
Flores	21	5
Florida	21	7
San Jose	22	6
Lavalleja	22	6
Canelones	23	8
Rio Negro	24	11
Soriano	24	6
Montevideo	26	16
Rocha	27	9
Paysandu	28	8
Durazno	28	11
Treinta y Tres	31	8
Salto	31%	10
Tacuarembo	34	12
Cerro Largo	34	12
Rivera	37	18
Artigas	42	18

Figure 10. Poverty Incidence by Age Group in Latin America, 2013



Source: Economic Commission for Latin America and the Caribbean (CEPAL)
Note: Poverty figures reflect CEPAL estimates of poverty lines, which differ from official figures.

Figure 11. Poverty Incidence by Age Group, Uruguay 2006-2013



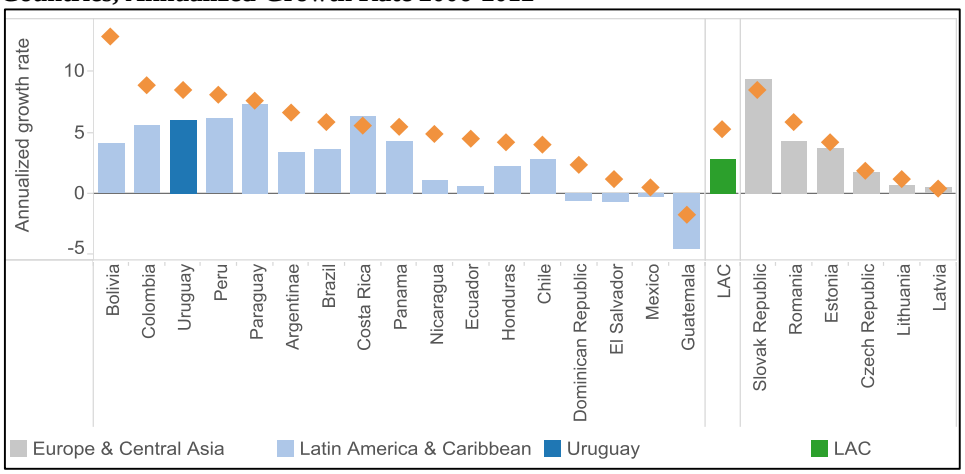
Source: Ministry of Social Development, Social Observatory.
Note: Poverty incidence measured against the national poverty line.

Shared Prosperity

24. **Uruguay has seen an improvement in shared prosperity as the income of the bottom 40 percent has grown faster than that of the population as a whole.** Between 2003 and 2012, the real per capita income of the bottom 40 percent grew by more than 7.8 percent annually, while mean income growth was around 4.3 percent. In contrast, households in the top 20 percent of the income distribution experienced the smallest increase in income. In fact, in Uruguay the bottom 40 percent has seen an increase in income much greater than the regional average, just behind Bolivia and Colombia (see Figure 12). Moreover, the income growth of the bottom 40 percent in Uruguay has been greater than in other countries with similar levels of development, such as Estonia, Latvia, and Lithuania. Nevertheless, in terms of boosting shared prosperity Uruguay still has some way to go to attain welfare levels of the world's top performers as measured by the Shared Prosperity Convergence Index (SPCI).[4]

[4] In 2012, Uruguay was at 34 percent of the "benchmark" associated with the top 10 performers in 2000, well ahead of LAC's weighted average, which stood at 21 percent in the same year. The SPCI tracks progress of equity-adjusted growth in different regions and thus underscores the challenges faced in delivering inclusive growth. The SPCI is based on the Sen's Welfare Index, which consists of a measure of GDP per capita ($Y_{\bar{t}}$) adjusted by income inequality (Gini), and is calculated: Sen $\text{index}_t = Y_t^- * (1 - \text{Gini}_t)$ This indicator provides useful information when compared to a benchmark, which is the population-weighted average of Sen's Welfare Index of the world top 10 performers in 2000. The Sen's Welfare Index benchmark is 65.9, derived from the population weighted average of the Sen's Welfare Index of the top 10 countries in 2000 (Luxembourg, Qatar, Norway, Denmark, USA, Netherlands, Switzerland, Austria, Canada, and Singapore), based on WDI data as of June 2014. To accurately calculate and track changes in the Sen Index, a comparable series of surveys for each specific country is needed to compute the inequality indicator. In the case of GDP per capita in constant PPP, values are obtained from WDI indicators. GDP per capita is used instead of the mean of the household surveys because the former captures more information than the latter. Still, income from household surveys could also be used, though it does not necessarily present the same trend and growth levels as GDP per capita.

Figure 12. Shared Prosperity in Latin America, the Caribbean, and Other Selected Countries, Annualized Growth Rate 2006-2012



Note: The orange diamonds represent the annualized growth rate of per capita income for the bottom 40% of the income distribution and the solid bars represent the annualized growth rate of per capita income for the whole population.

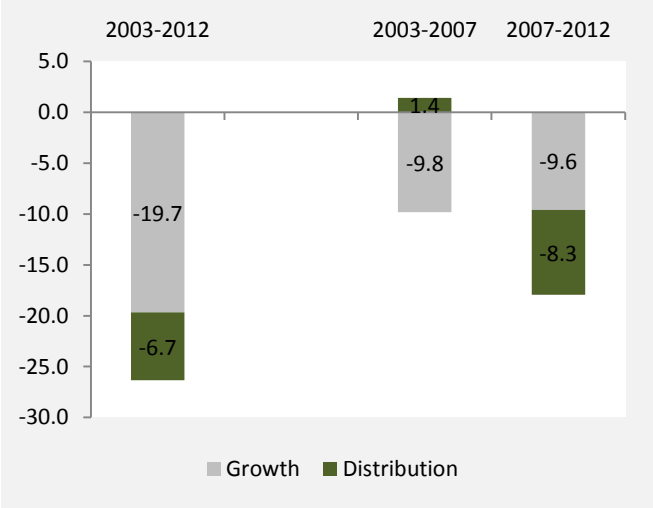
Determinants of Poverty Reduction

25. **Gains in poverty reduction have been mainly driven by household income growth.**[5] Following the Datt-Ravallion (1992) decomposition for the 2003-12 period, almost 20 points of the reduction of 26.4 percentage points in the moderate poverty headcount (from 39.4 to 13.1 percent) came from income growth, while the remaining 6.7 was a function of improvements in income distribution (see Figure 13). However, this is the result of two very different periods: between 2003 and 2007, growth was the main driver of the observed reduction in the proportion of people in poverty, whereas over the next five years (from 2008 to 2012) the almost 10 percent decline in the poverty headcount driven by economic growth was accompanied by a decline of similar magnitude associated with an improved distribution of income due to transfers, pensions, and taxes. Poverty reduction decompositions in other LAC countries during this period reveal similar trends: economic growth accounted for two-thirds of poverty reduction between 2003 and 2012 with changes in the distribution of income accounting for the remaining third. In Uruguay this situation can be largely explained by the array of reforms that were approved between 2005 and 2007, including (a) a progressive tax reform that simplified the tax system, reduced indirect taxes, and reformulated personal income tax; (b) health reform that increased coverage to virtually every Uruguayan; and (c) reinstatement of the Wage Councils, in which employers, government, and labor unions negotiate sectorial wage increases (see Box 1). Also, Uruguay observed a marked reduction of informal employment—measured as the working population not covered by social security—with respect to total employment, which fell from a peak of 40.7 percent in 2004 to 25.6 percent in 2012 (ILO 2014).

[5] Reductions in the proportion of people who fall below a poverty threshold (the poverty line) can be decomposed into two parts: rising income levels (economic growth: seen as shifts in the income distribution) and/or improvements in the distribution of these incomes (income redistribution: reduction in the dispersion of the income distribution). See Datt and Ravallion, 1992.

26. **The remarkable progress on the social front is explained largely by labor income growth.** According to a recent analysis (Perera and Llambí, 2014, in OECD/ECLAC, 2014), labor income dominates household income in Uruguay, with an average share of 60 percent of total income in 2012. The decline in unemployment and rising wages have been instrumental in the fall in poverty rates since the crisis. Following Barros et al. (2006) and Azevedo, et al. (2012b), it is possible to isolate the role played by different income sources in reducing poverty in Uruguay (Figure 14). As labor income is the main income source at the household, household income is very sensitive to changes in labor income. Almost 83 percent of the decline in extreme poverty and 60 percent of the reduction in moderate poverty after the crisis can be attributed primarily to the increase in the average monthly labor earnings of workers, and 22 and 24 percent of the decline in extreme and moderate poverty, respectively, is a function of more household members being employed. Transfers, both public and private, also played a significant role in the reduction of poverty, particularly to lift households out of extreme poverty (22 and 11 percent of the reductions in extreme and moderate poverty, respectively).

Figure 13. Decomposition of the Total Changes in Moderate Poverty, Uruguay, 2003-12



Source: ECH.

Note: The figure shows a Datt-Ravallion (1992) decomposition based on official moderate poverty lines between 2003 and 2012 relative to households in Montevideo and in urban areas with more than 5,000 inhabitants.

Box 1. Equity Enhancing Reforms in Uruguay (2006-2007)

The **Tax Reform** approved by Congress and ratified by the President on December 26, 2006 introduced several changes to the composition of fiscal revenues. One of the reform's main objectives was to create a more progressive tax system by reducing the importance of indirect taxes and increasing the share of income tax in total tax revenue. The reform also aimed at increasing efficiency and transparency by removing taxes that were distortive or had low collection rates. By reducing the profit tax and unifying social security contributions across sectors, the reform further promoted investment and employment.

More specifically, the *IRP* (*Impuesto a las Retribuciones Personales*, a tax on wages and pensions) was replaced by the *IRPF* (*Impuesto a la Renta de las Personas Físicas*), which taxes both capital and labor income, but at different rates. For labor income, the latter is structured by income bands and the marginal rates increase with income, ranging from 10 percent to 25 percent, whereas for capital income it ranges from 3 percent to 12 percent, depending on the source. Similarly, the *Basic VAT* rate was reduced from 23 percent to 22 percent, and the *Minimum VAT* (applied to basic goods and services such as bread, vegetables, beef, rice, health services) rate was reduced from 14 percent to 10 percent.

The **Wage Councils**—reinstalled by the *Frente Amplio* administration that took office in 2005*—consist of a tripartite negotiations among employers, labor unions, and government representatives and are organized in "Rounds." The first two Rounds took place in 2005 and 2006, the third in 2008, a fourth in two annual instances in 2010 and 2011, and the fifth in 2014. For each of the Rounds, the government has set guidelines regarding the duration of the agreements (trying to favor increasingly longer periods), the within agreement periodicity of adjustment, expected inflation, correction factors for discrepancies between expected and observed inflation, targets for real wage growth, and ceilings for adjustment above such proposed increases. The duration of the agreements remained largely within the government guidelines. The results of the Wage Councils are reached by voting (in which government representatives break any tie).

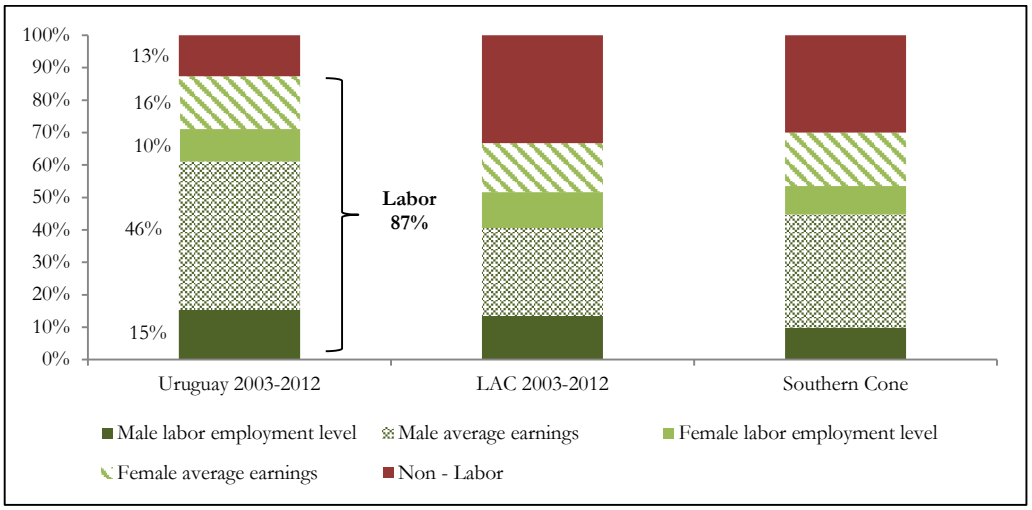
The **Health Reform—**one of the most important reforms of the 2005-2009 administration—restructured the health financing and service provision system. The new Integrated National Health System (*Sistema Nacional Integrado de Salud*) was created by law with the main objective of providing universal integral health services and universal and equitable coverage. The reform extended health insurance coverage to all, and significantly reduced out-of-pocket spending on health. As lowest income individuals without insurance face health shocks, the related expenditures can be catastrophic, forcing people to incur debt or sell assets to cover costs. Health insurance coverage helps to reduce such situations; similarly, insurance coverage allows the poor greater access to preventive medicine, in turn helping to reduce poverty and inequality.

* The Wage Councils were created by law in 1943, suspended by the military rule between 1973 and 1985, and then reinstated for a second period between 1985 and 1990.

27. **Social spending and income transfers have also had an important impact on poverty reduction in Uruguay.** Complementing the fundamental role of labor markets in improving living conditions in Uruguay, the introduction of income transfer schemes targeting the bottom of the income distribution and improvements in the personal income tax code have also contributed to reducing poverty. Expanding the coverage of social assistance programs softened the impact of the crisis on the welfare of the poor. Health care and some other government transfers were monetized gradually, becoming part of calculated household income. Additionally, the PANES (*Plan de Atención Nacional a la Emergencia Social*) program implemented in 2005–07 and its successor, the *Plan de Equidad* (Equity Plan), significantly lowered the incidence and intensity of poverty. PANES was expanded and reformulated into the program *Plan de Equidad*, which included tax and health care reforms,

continued the family allowance $8-16 cash transfers per child among households that did not exceed the national minimum salary, maintained food cards, expanded the coverage of early childhood services, and reduced the years of service required to retire (See Box 2). By 2009, there were 364,000 beneficiaries, covering 76 percent of destitute children and 68 percent of children living in poverty, and almost all the households living in the poorest quintile.

Figure 14. Changes in Moderate Poverty ($4/day) by Income Sources, 2003-2012, Uruguay and Regional Averages



Source: Harmonized data from ECH by SEDLAS; non-labor income includes capital gains, private transfers, and public transfers.

28. **In Uruguay, household skills level and intensity of use have been the factors that led to increased labor income among the less well-off, lifting them out of poverty.** Changes in poverty can be attributed to changes in the quantity of assets, the intensity with which the households use these assets, and the returns obtained from trading them (Attanasio, 1995; Lopez-Calva and Rodriguez. 2014).[6] For a typical household, the most important asset is its human capital—its members' labor market potential. Since poverty rates are highest among the least skilled, most labor income of the poor comes from unskilled and low skilled workers; this is the main channel by which labor income reduces poverty. In analyzing how labor market changes have led to falls in poverty rates, it is important to consider households not just in terms of their poverty status, which can be temporary, but also by their skill level.[7] In Uruguay, the unskilled exhibit the highest poverty rates followed very closely by the low-skilled. Despite the decline in the poverty rates of the unskilled and low-skilled over the past 10 years, these groups still constitute the largest share of the poor (see Figure 15). Moreover, the low-skilled are the largest group in the first two quintiles, composing almost 80 percent (see Figure 16). Thus, to understand the relation between labor market changes and both poverty reduction and shared prosperity the analysis should focus on the low-skilled and unskilled and how their employment has changed in Uruguay.

[6] The asset model also includes household's exposure to risk and access to transfers as two additional components affecting household income.

[7] The *unskilled* are defined as those who did not complete primary schooling (including those with no formal schooling), the *low-skilled* as those who only completed primary school, and the *skilled* as those with at least a secondary school education.

Box 2. The Social Protection System in Uruguay*

The social protection system in Uruguay includes traditional social security programs such as old age pensions and contributory unemployment insurance, as well as non-contributory components; health insurance completes the system.

Contributory (social security) and non-contributory (social assistance) transfers are integrated, financed, and provided by a single institution, the *Banco de Previsión Social* (BPS, Social Security Institute). Old-age, survivor, and disability benefits constitute the bulk of social protection spending (70 to 75 percent), followed by transfers for unemployment benefits, health insurance, and maternity leave (15 to 18 percent), and family allowances (5 to 7 percent).

Contributory programs. Uruguay has a mixed pension system composed of two main pillars: (i) a mandatory pay-as-you-go (PAYG) system with intergenerational solidarity features that is financed by payroll and other taxes, as well as financial contributions from the Treasury; and (ii) an individual capitalization element requiring mandatory individual savings in an *Administradora de Fondo de Ahorro Previsional* (AFAP, Social Security Fund Administrator). The replacement rate for a worker who retires at 60 years with 30 years of contributions to the pensions system is 45 percent; this rate increases with retirement age and years of contribution. Pension coverage for those older than 64 years is about 90 percent. For those who have not contributed the minimum 30 years, contributory pensions can only be accessed at age 70.

Unemployment insurance covers all formal sector workers, with benefits for six months with a declining replacement rate over time (66 to 40 percent of the average wage during the six months prior to unemployment). Recent reforms established added benefits under special circumstances (economic crises, unemployed aged 50 or more).

Non-contributory programs. Since 1999, and particularly with reforms in 2007/8, Uruguay instituted an active social assistance policy that targets the population without access to formal employment and associated benefits. Old-age benefits consist of a transfer paid to people 70 years of age and older who fall below the poverty line or live with a disability. In 2007, an old-age assistance scheme was created for the elderly aged between 65 and 70 years who were not enrolled in a contributory pension program (previously, such individuals lacked access to non-contributory pensions).

Family allowances, the main conditional cash transfer program in Uruguay, are paid to vulnerable households with children aged less than 18 years. The transfers are determined according to the number of beneficiaries in the household, the stage of education in which the children are enrolled, and disability status. Approximately half a million family allowances are currently delivered, covering 80 percent of households with children in the three lowest income deciles.

Health Insurance. The 2007 health care reform created a broad insurance system that combines contributory and non-contributory criteria for eligibility. The law created the *Fondo Nacional de Salud* (FONASA, National Health Fund), which is financed by contributions from formal sector workers and the general Treasury. If one member of a household contributes to social security, all members are eligible and can select either a state provider or a private sector non-profit provider (MAS, mutual aid society) of their choosing. In households where no one contributes to social security, only state providers may be used. Although they differ in terms of waiting times and quality of service, both public and private sectors provide comprehensive health insurance and access to all levels of medical attention. All insured have access to the same package of benefits. Since the reform, virtually all Uruguayans have access to some form of health care, with 60 percent affiliated with MAS and the rest with access to state providers.

** Based on Filgueira and Hernandez, 2013, and Rofman, 2014.*

Figure 15. Poverty Rates and Skill Level for Selected Countries (2003 and 2013)

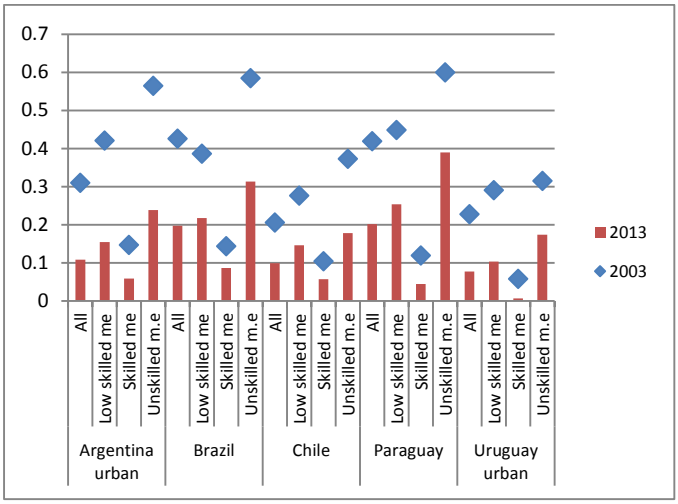
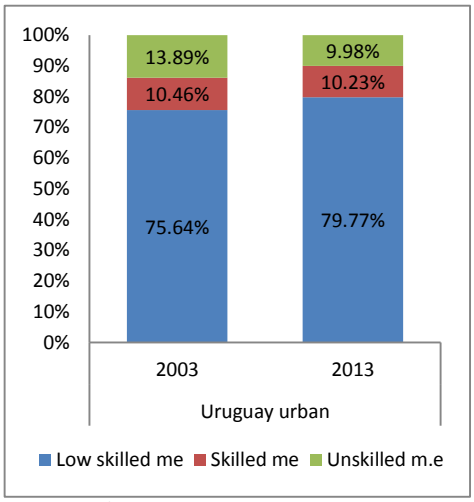


Figure 16. Skill-Composition Main Earner of Bottom 40 Percent Households (2003 and 2013)



Source: SEDLAC (CEDLAS and the World Bank), adapted from Poverty and Labor Brief, Working to End Poverty in LAC: The Role of Labor Markets..

29. **Increased labor force participation was an important driver of Uruguay's poverty reduction, although not the most important one.** Uruguay has the highest labor force participation rates in LAC, but participation of the bottom 40 percent (81 percent) is lower than that of the top 60 percent (92 percent) see Figure 17. In addition, although labor force participation increased for both groups between 2003 and 2013 (as opposed to some countries in LAC, such as Argentina, Bolivia, Brazil, and Ecuador), the growth was higher for the top 60 than for the bottom 40 (see Figure 18).

Figure 17. Labor Force Participation of Bottom 40 and Top 60, 2013

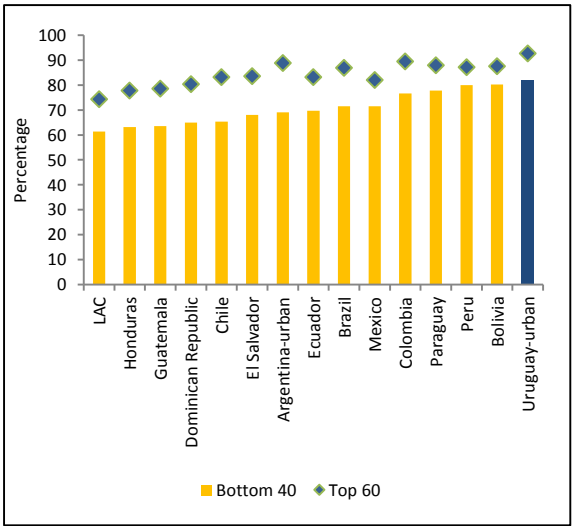
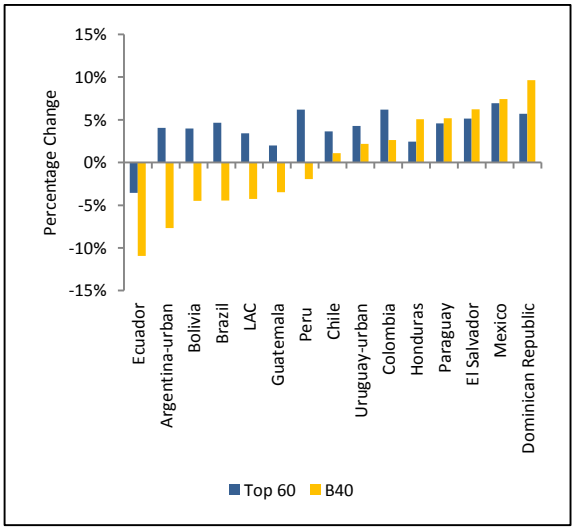


Figure 18. Change in Labor Force Participation Rates for Bottom 40 and Top 60 (2003-2013)



Source: SEDLAC (CEDLAS and the World Bank), adapted from Poverty and Labor Brief, Working to End Poverty in LAC: The Role of Labor Markets.

30. **Labor force participation in the last 10 years has declined among the youngest, but has increased among the elderly and among women.** Between 2003 and 2013, the largest reductions in labor force participation occurred among the youth of both genders (those between 15 and 18 years old). In this age group, average annual participation declined by 2.4 percent for women and 2.6 percent for men (see Figures 19 and 20). While unattached youth—those who are neither working nor in school (often referred to as "ninis")—remain a sizeable group, representing 15 and 17 percent of boys and girls, respectively, in 2013, the number of older teens still enrolled in school has increased, a positive contribution to Uruguay's human capital stock. On the other hand, the average annual increase in female labor force participation in Uruguay for those older than 18 years was 1 percentage point over the 2003-2013 period. Conversely, male labor force participation remained about the same in the 10-year period, with the exception of a slight increase in participation for those 55 years and older.

Figure 19. Male Labor Force Participation (2003 and 2013)

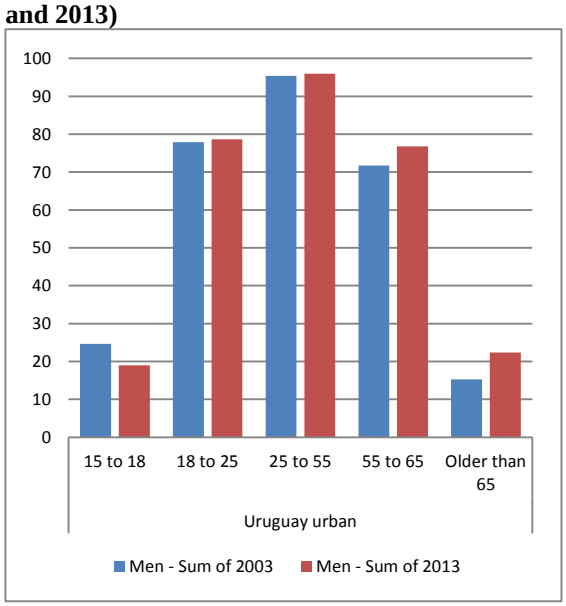
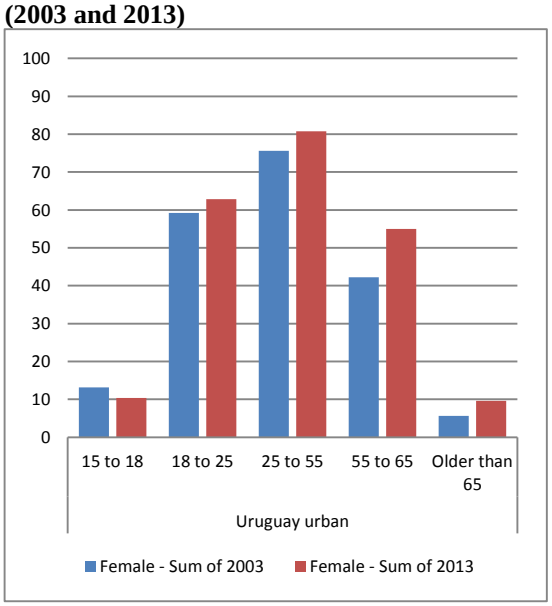


Figure 20. Female Labor Force Participation (2003 and 2013)



Source: SEDLAC (CEDLAS and the World Bank), adapted from Poverty and Labor Brief, Working to End Poverty in LAC: The Role of Labor Markets.

31. **Changes in labor supply and human capital accumulation have been relatively modest and do not explain the significant progress in poverty alleviation in Uruguay in recent years; increases in the returns to labor have played the more important role.** Human capital accumulation has slowed and the quality of education as well as educational attainment relative to regional peers have declined (this is discussed further in Chapter III). Human capital accumulation has therefore not been the main factor behind poverty alleviation. As explained in more detail in the following sections, shifts in the types of jobs—both in sector of employment and type of employment—as well as wage increases due to external conditions and policies such as minimum wages and wage negotiations by labor unions, have all played a more important role. In particular, wage growth for the low-skilled and unskilled between 2003 and 2013 was substantial, and more rapid than that for higher skilled workers (see Figure 21). The annual growth rate of low-skilled wages was almost 5 percent, for the unskilled it was more than 4 percent, and for skilled workers it was 3 percent. Similarly, wages for the medium

wage sector[8] showed the largest increase for the low skilled (see Figure 22). One plausible explanation, backed by anecdotal evidence, for the sustained growth in labor income is that, within skill groups, workers are transitioning to higher productivity jobs. Wages could also be rising within narrowly defined economic sectors as a function of a general increase in worker productivity (perhaps attendant upon improved infrastructure or technology) or increased labor demand as a consequence of positive shocks.

Figure 21. Annualized Wage Growth by Skill Level for Selected Countries (2003 and 2013)

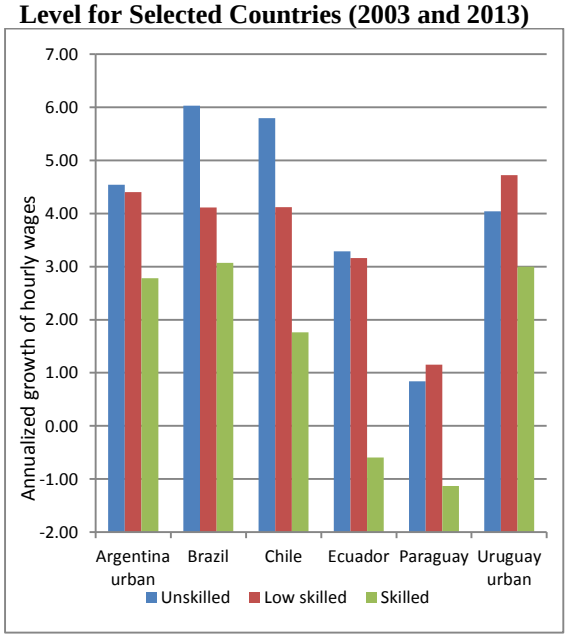
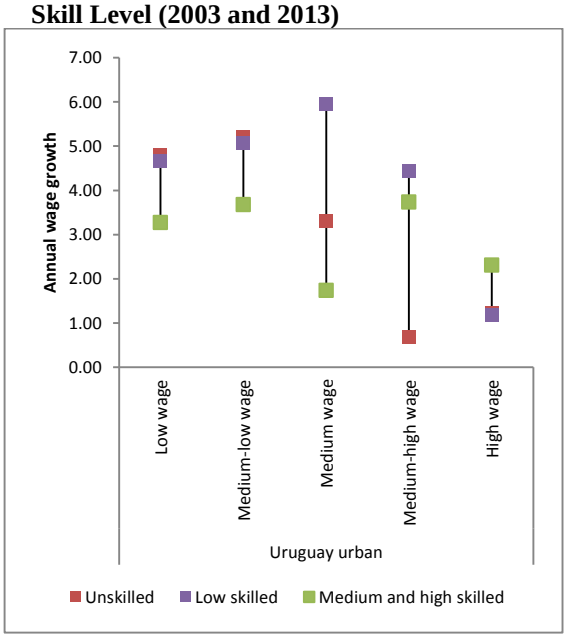


Figure 22. Annualized Wage Growth by Sector and Skill Level (2003 and 2013)



Source: SEDLAC (CEDLAS and the World Bank), adapted from Poverty and Labor Brief, Working to End Poverty in LAC: The Role of Labor Markets. Note: low wage sector includes activities of private households as employers, agriculture, hunting and forestry, wholesale and retail trade; medium-low wage sectors include construction, manufacturing, hotels and restaurants; medium wage sectors include mining and quarrying, other community, social and personal service activities, and real estate, renting and business activities; medium-high wage sectors include health and social work, public administration and defense, transport, storage and communications; and high wage sectors include education, electricity, gas and water supply, and financial intermediation.

32. **Despite significant variation in growth rates among sectors over the past 10 years, wage increases across sectors have been fairly homogenous.**[9] Between 2007-2013 real wages across most sectors increased (see Figures 23 and 24), not only in specific sectors that benefitted from rapid growth (such as cereals, meat, auto parts), but also in services (construction, trade, education). Wage increases were larger for those living in the bottom 40 percent of the distribution, across most sectors of the economy (see Figures 25 and 26), contributing not only to poverty reduction but also to wage compression and to falling

[8] Low wage sector includes activities of private households as employers, agriculture, hunting, and forestry, wholesale and retail trade; medium-low wage sectors include construction, manufacturing, hotels, and restaurants; medium wage sectors include mining and quarrying, other community, social and personal service activities, and real estate, renting, and business activities; medium-high wage sectors include health and social work, public administration and defense, transport, storage, and communications; and high wage sectors include education, electricity, gas and water supply, and financial intermediation.

[9] This indicates that wage increases have not generally followed growth in sectoral productivity. In some sectors, given the very large reduction in wages as a result of the crisis, wage increases may have merely been catching up with productivity. It is difficult to clearly ascertain the relationship between wages and productivity in Uruguay given the lack of sectoral data on productivity. See Chapter III, Section B for a fuller discussion.

inequality during the period (see Figure 27). Since 2007, the Wage Councils (*Consejos de Salarios*) comprising labor unions, employer representatives, and the central government, have taken a more prominent role in the wage negotiations process. Wage Council negotiations have led to higher wage increases for workers at the bottom of the income distribution.

Figure 23. Changes in Hourly Wage (2007-2013)

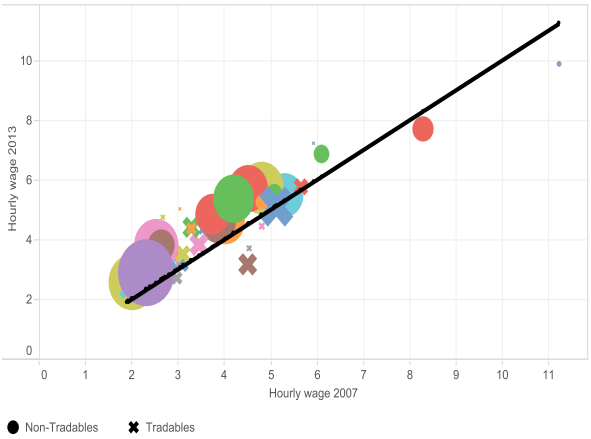
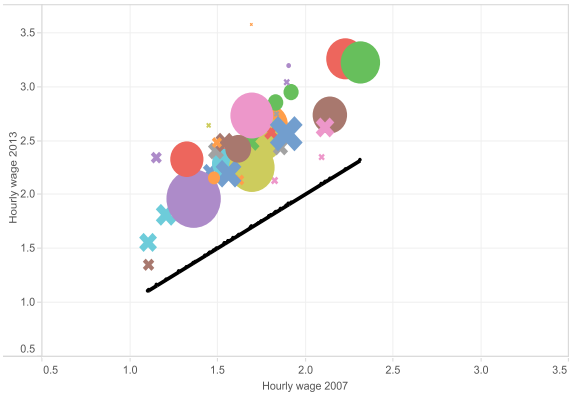
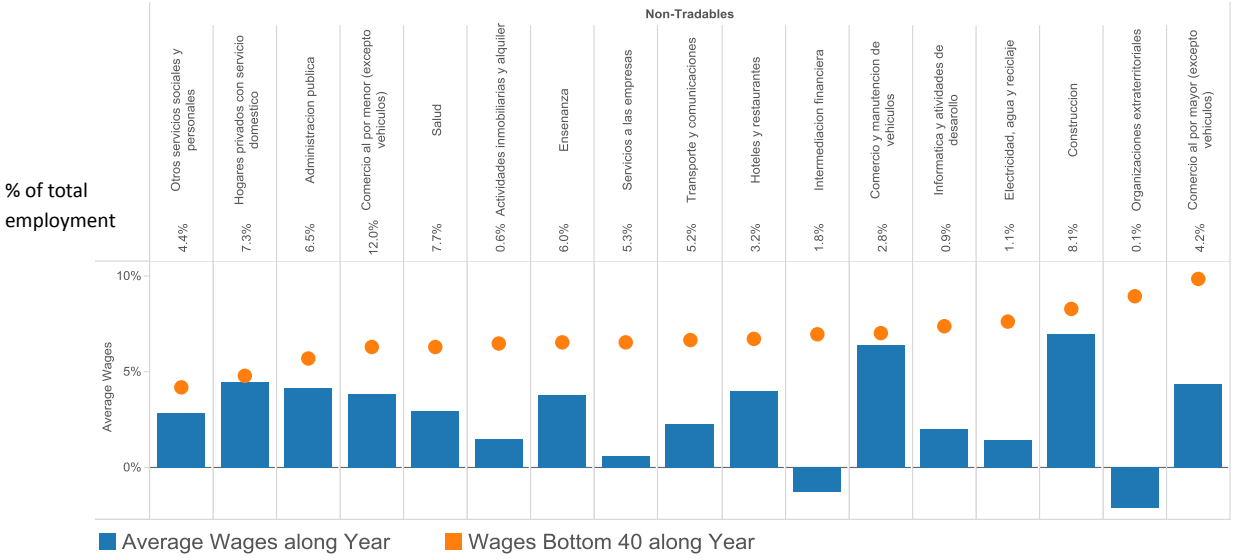


Figure 24. Changes in Hourly Wage (2007-2013) for the Bottom 40%



Note: Bubbles represent industries in the non-tradable sector and "X" represents the industries in the tradable sectors. The size of the bubbles and Xs represent the relative size of employment in the sectors.
Source: Own elaboration using the ECH.

Figure 25. Average Wage Changes in Non-Tradable Sectors, 2007-2013



Source: Own elaboration using the ECH.

Figure 26. Average Wage Changes in Tradable Sectors, 2007-2013

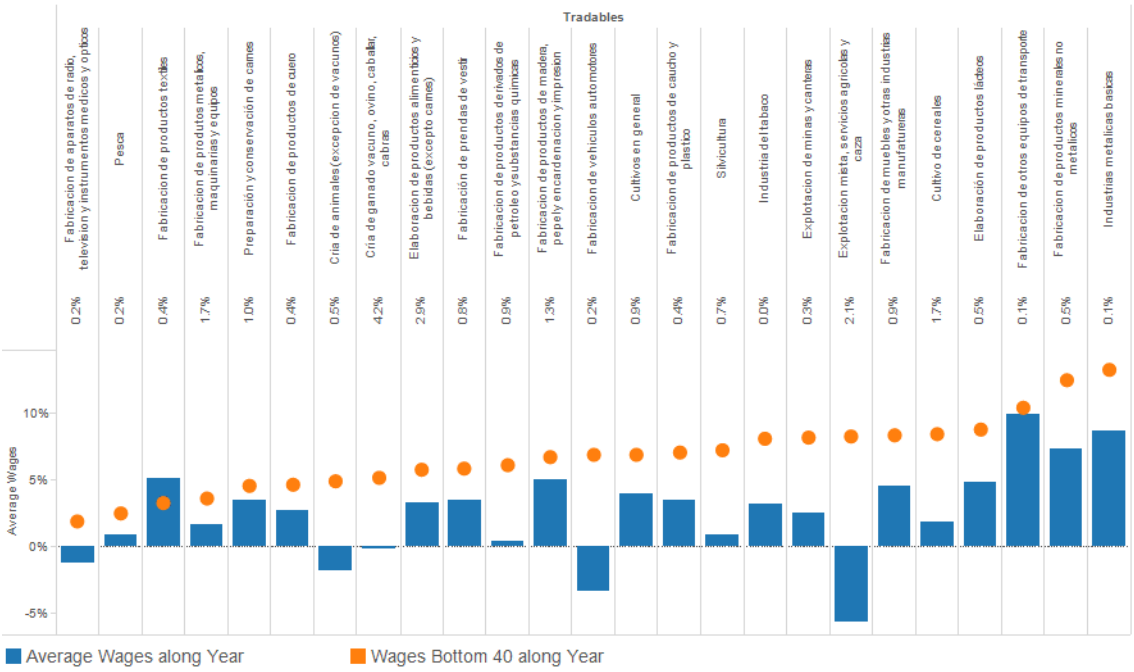
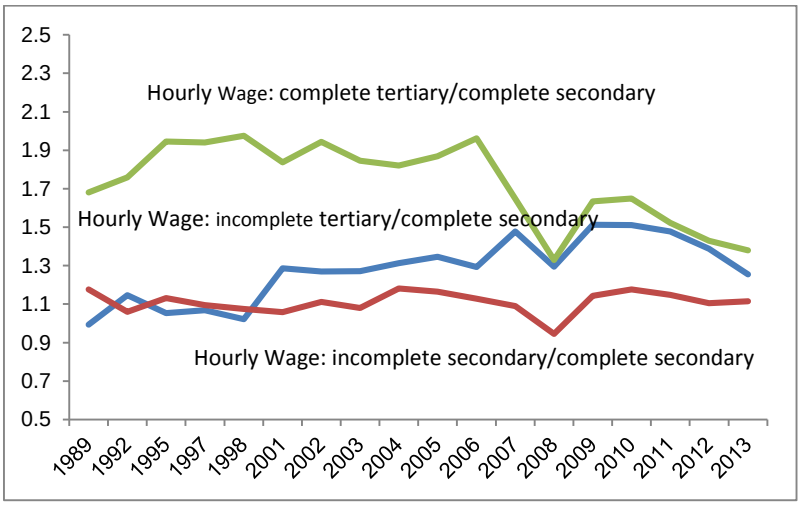


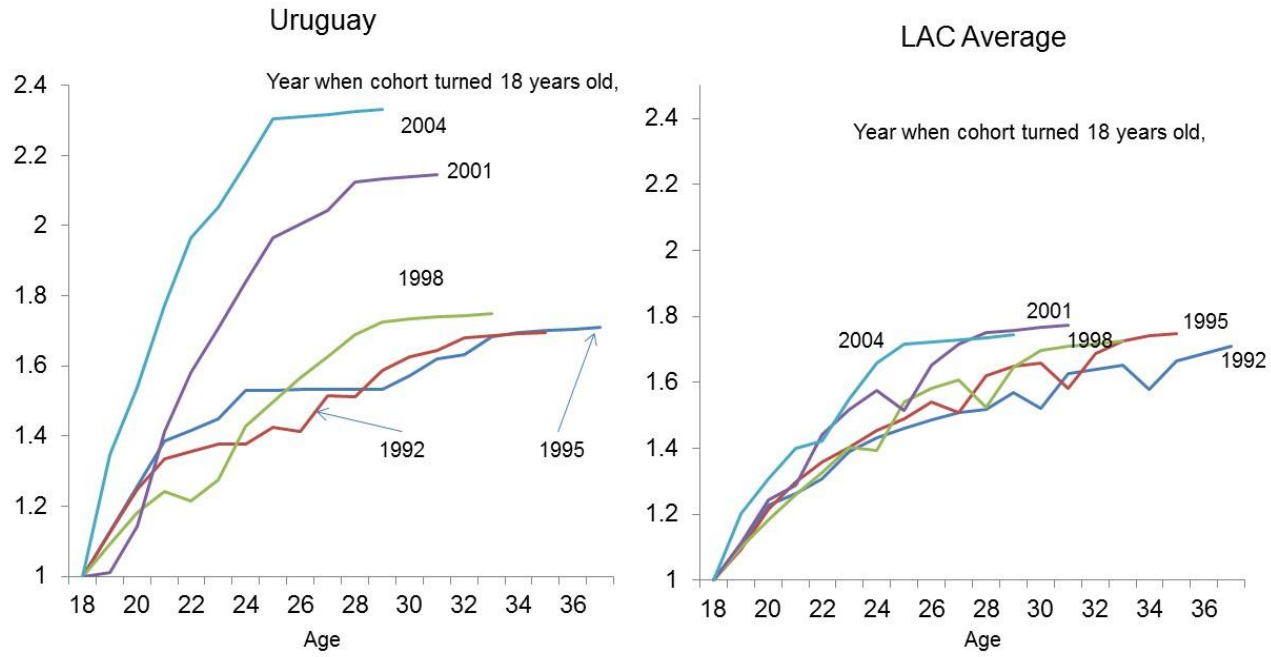
Figure 27. Recent Years Have Witnessed Wage Compression



Source: ECH based on Education Policy Note.

33. **It is noteworthy that 18-year-olds have joined the labor market at increasingly higher rates in Uruguay in recent years, and at much faster speeds than in the rest of the region** (see Figure 28). This may be related to the perception of an increasing opportunity cost to staying in school for the young and relatively unskilled, driven by the combination of a positive macroeconomic environment and perceptions of low educational quality. This issue is subsequently addressed in greater detail.

Figure 28. Younger Workers Have Been Integrated Into the Labor Force at High Rates

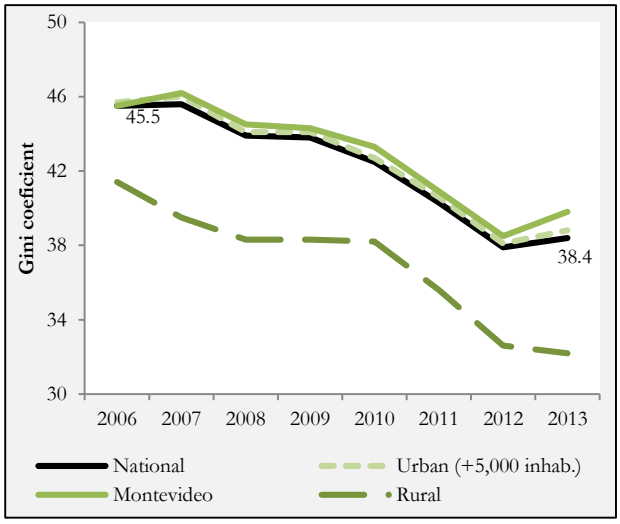


Source: Own calculation based on household surveys and SEDLAC (CEDLAS and the World Bank).
Note: The graphs show the rate of labor market insertion for workers of different cohorts with respect to the number employed when the cohort was 18 years old. For instance, for the 2001 Uruguay cohort of 18-year olds, the members of the cohort who were employed roughly doubled by the time the cohort was 26 years old. The y-axis indicates the ratio of the number of employed members of cohort x to the total employed members of cohort x at 18 years old.

Inequality

34. **Uruguay is one of the most equitable countries in Latin America and the Caribbean.** Improvements at the bottom of the income distribution were reflected in reduced income inequality starting in 2007 and this has accelerated since 2010. Uruguay's Gini coefficient remains one of the lowest in the region, falling from 0.45 in 2007 to 0.38 in 2012 (see Figure 29). This reduction in inequality took place in both the urban and rural populations and is now lower than pre-crisis levels. Despite its strong standing regionally, and the remarkable progress that has brought inequality to historically low levels, Uruguay is a relatively unequal country by OECD standards (see Figure 30, panel b).

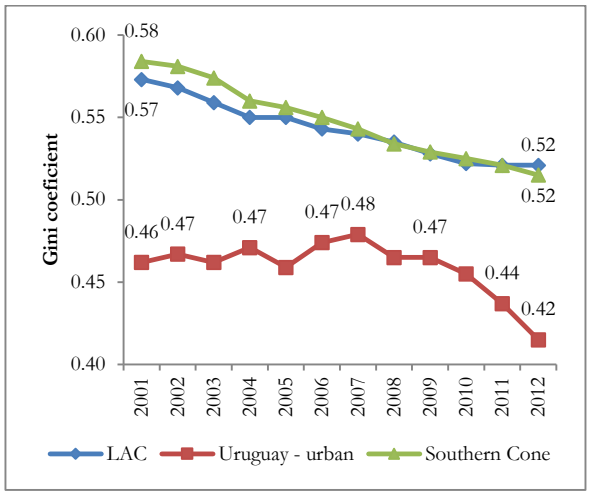
Figure 29. Gini Coefficient, Uruguay, 2003-12



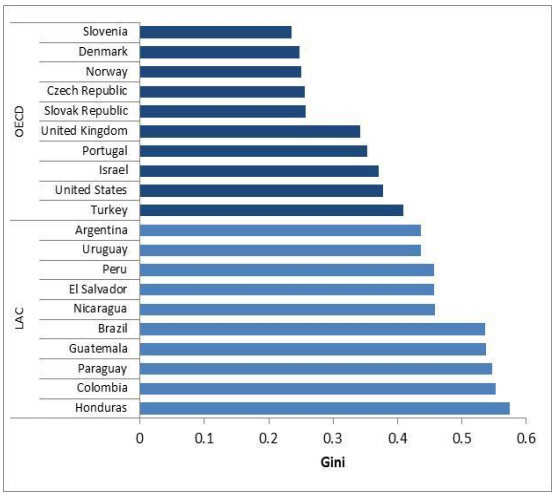
Source: World Bank calculations based on official income data from the ECH. The income aggregate differs from SEDLAC, which is standardized for comparisons across countries in LAC.

Figure 30. Gini Coefficient (Uruguay, LAC, and OECD)

a. Inequality, 2001-12



b. Income Gini: LAC and the OECD

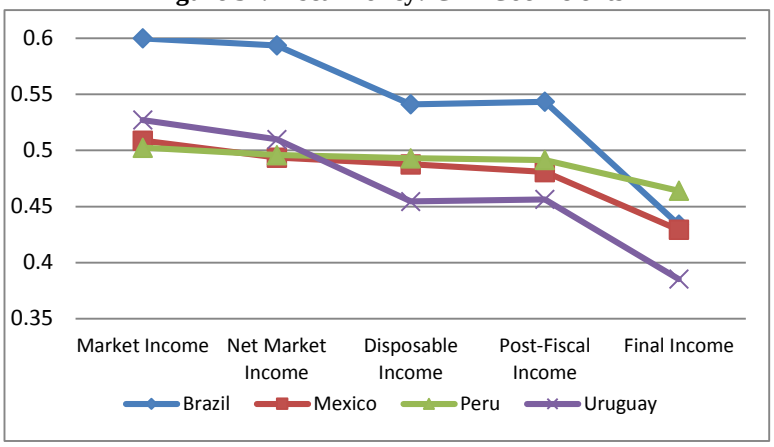


Source: Based on data of SEDLAC (World Bank and CEDLAS) for Uruguay and the region and OECD Stats for the Organisation for Economic Co-operation and Development (OECD) countries. Gini index for Uruguay-Urban was calculated using SEDLAC as it is standardized and comparable with other countries in the region.

35. **The reduction in inequality is related to declining schooling premia, combined with progressive fiscal policies and wage increases that have been on average higher for workers who belong to the bottom 40 percent.** There has been a steep decline in returns to education since the mid-2000s. By 2013 the difference in hourly wages between workers with complete and incomplete secondary education had fallen to 30 percent. The wage differential between a complete university education and completed secondary schooling has declined even more sharply, and stood at about 15 percent in 2013.[10] Fiscal policy has also been instrumental. Based on analysis carried out following the Commitment to Equity methodology, market income inequality in Uruguay corresponds to a Gini coefficient of 0.527, and is higher than the net market income Gini, indicating that direct taxes have an equalizing effect. It is worth noting that direct personal income taxes were introduced in the 2007 fiscal reform (in contrast, a comparison of post-fiscal income and disposable income suggests that indirect taxes have a regressive effect in Uruguay). In-kind transfers in education and health have the largest effect in terms of reducing inequality, as shown when calculating the Gini index with final income, which declines by 20 percent, from 0.456 to 0.385 (see Figure 31). Uruguay's fiscal policy has an important impact on inequality when compared to other countries in the region such as Mexico and Peru.

[10] Their positive impact on wage equality notwithstanding, falling education premia may have an adverse effect on the incentive to pursue higher levels of schooling.

Figure 31. Fiscal Policy: Gini Coefficients

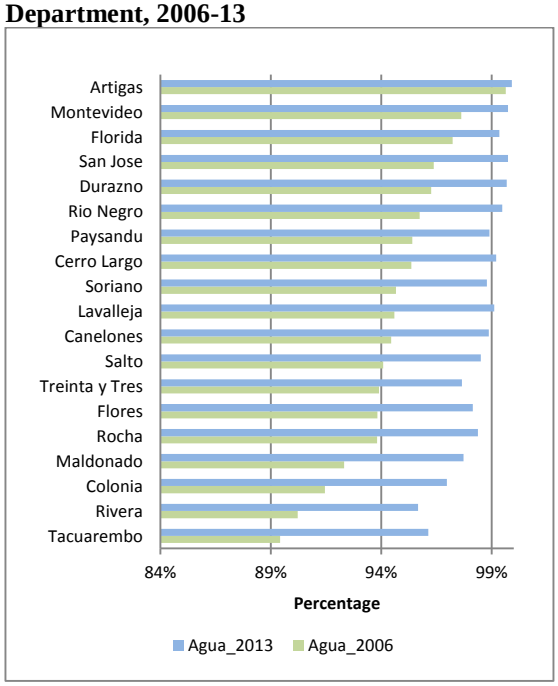


Source: LAC Equity Lab tabulations based on the Commitment to Equity (CEQ) project.
.*Note:* Led by Nora Lustig, CEQ is a project of the Center for Inter-American Policy and Research and the Department of Economics at Tulane University and the Inter-American Dialogue. (http://www.commitmentoequity.org/) © The CEQ Compendium of Indicators presented here is the property of the Tulane Educational Fund and the Inter-American Dialogue.

Equality of Opportunity

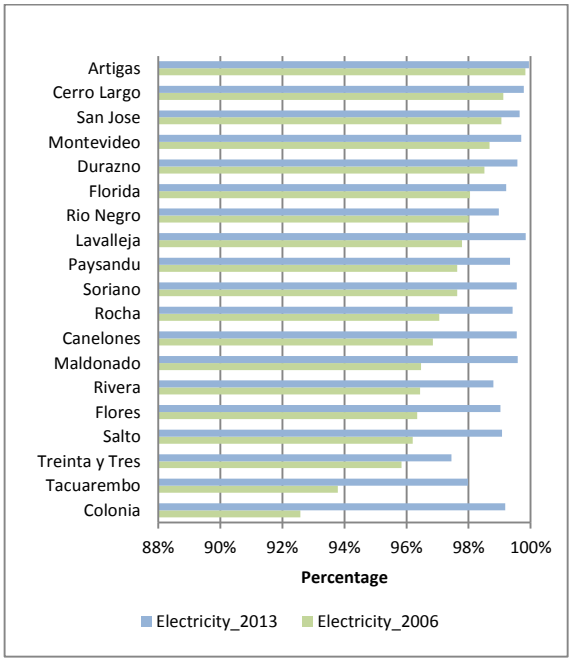
36. **Uruguay has attained significant progress in a number of areas in terms of equality of opportunities.** This is the case both in absolute terms and when compared to other countries in the region. The principle of equality of opportunities rests on the idea that access to basic goods and services should not depend on initial circumstances. Uruguay has reached high levels of access to basic services such as electricity, drinking water, sanitation, and basic education. Moreover, from already high levels, access to basic services has improved further in recent years. Access to water (see Figure 32) and electricity (see Figure 33) are uniformly high and regional variations within the country have narrowed significantly over the past decade, although access to sanitation remains a challenge, with marked variation across regions and departments. Similarly, Uruguay has done better than Brazil in terms of sanitation and water (with 99 percent coverage versus 92, and 97 versus 921.73), Peru (with 73 and 71), and Paraguay (with 70 and 55).

Figure 32. Access to Drinking Water by Department, 2006-13



Source: ECH.

Figure 33. Access to Electricity by Department, 2006-13



Source: ECH.

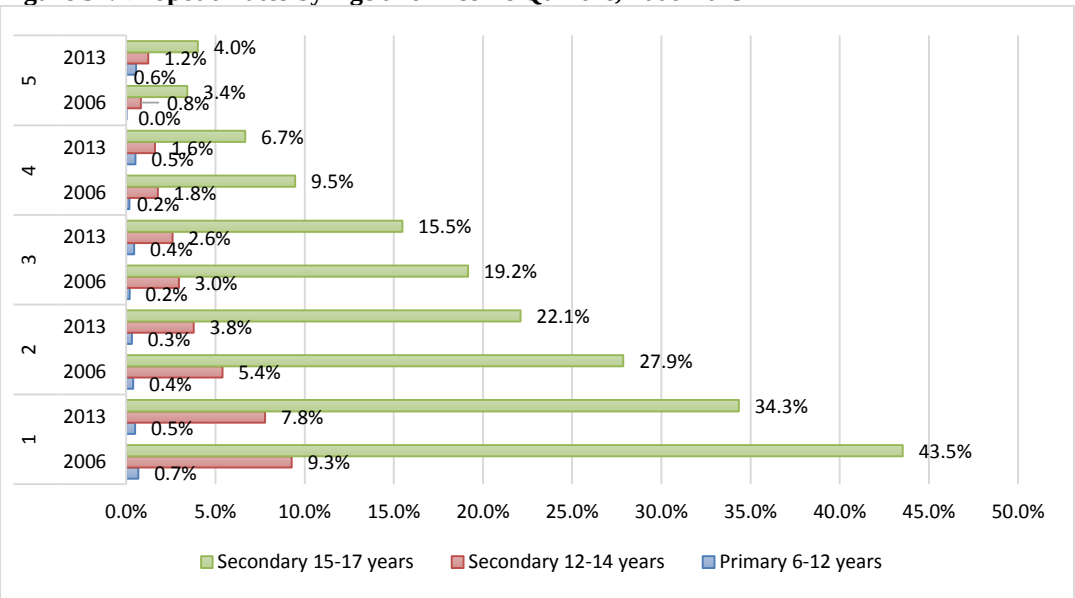
37. **Nevertheless, there remains an important challenge in terms of equality of opportunity with respect to education.** Although dropout rates declined between 2006 and 2013, large inequalities in educational attainment and school quality persist (see Figure 34). Educational performance remains tightly linked to income and socioeconomic background. As in other Latin American countries, the impact of income and socioeconomic status on educational achievement tends to be very high. Uruguay is one of the worst performers in terms of the impact of socioeconomic background on PISA[11] performance, ranking fifth-worst in the world and third-worst in Latin America (OECD/ECLAC, 2013). In 2010, only 25 percent of 15-17 year-olds in the lowest income quintile completed secondary education, compared to 85 percent of those in the top quintile. A mere 7 percent of 18-20 year olds in the lowest income quintile completed upper secondary education. Lack of opportunities in the educational system can contribute to increasing social exclusion and marginalization and reduced employment opportunities, particularly with respect to better-paying formal sector jobs.

38. **Access to quality education is also unequal, depending on income and the ability to pay for private education.** There is a significant disparity between the scores of Uruguayan students who attend public school and those who attend private school. In mathematics, for example, 79 percent of private school students achieved a grade of level 2 or higher—double the passage rate of public school children, of whom only 35 percent scored 2 or higher. Similar disparities in achievement were seen in science and reading. Since attending private school is strongly correlated with parental earnings and educational attainment, this disparity in test

[11] The Programme for International Student Assessment (PISA) is a worldwide study by the Organisation for Economic Co-operation and Development (OECD) in member and non-member nations of 15-year-old school pupils' scholastic performance in mathematics, science, and reading. It was first conducted in 2000 and has since been repeated every three years.

scores strongly suggests that the provision of quality schooling in Uruguay is inequitable across socioeconomic groups. This significantly impacted intergenerational mobility, inequality, and, potentially, prospects for economic growth.

Figure 34. Dropout Rates by Age and Income Quintile, 2006-2013



Source: World Bank, based on ECH.

39. **Opinion surveys reflect a growing concern with crime and violence in Uruguay in recent years, particularly among urban dwellers, who associate a perceived decline in personal safety with high youth unemployment, school dropouts, and a lack of opportunities for an important segment of the young population.**[12] Further work would be needed to understand the linkages, if any, between poor educational outcomes, lack of opportunity, and crime. Nevertheless, some evidence points to correlations, including a particularly high incarceration rate for minors (1 in every 1963 of the adolescent population is in prison), where the vast majority of adolescents (93.6 percent) arrested had failed to complete upper secondary education, and two-thirds of those in the penal system were neither working nor in school at the time of their arrest (*Fundacion Justicia y Derecho* and UNICEF, 2010).

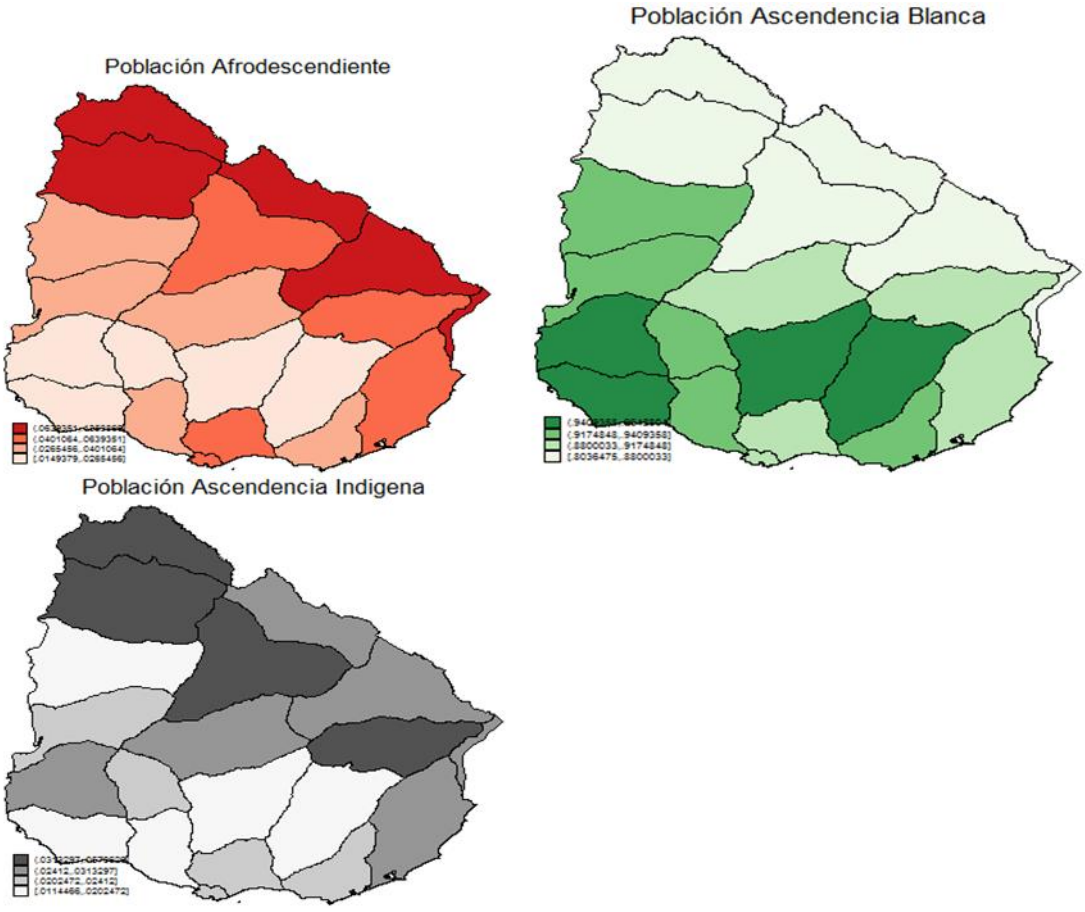
40. **Like the young, the population defined as being vulnerable needs particular attention, both because of the size of this group as well as its susceptibility to shocks.** Simulations indicate that in the event of a severe crisis (similar in size as that of 2001-2) the per capita income of the vulnerable group would fall by 30 percent on average, sending a significant number back into poverty (Barriga et al., 2014). Although the overall effect of such a crisis on poverty would be small, the effect would be felt disproportionately by the young, by female-headed households, larger households, and those individuals with incomplete secondary education. Even in the absence of an economic shock, it is important that policies

[12] Uruguay continues to be one of the safest countries in the region, with the number of reported crimes having fallen since 2005.

be designed to protect the gains in poverty reduction and shared prosperity, particularly for those who are most vulnerable. (World Bank, 2014b)

41. **Afrodescendants face higher levels of poverty, unsatisfied basic needs, and exclusion.** Geographically, the departments of Artigas and Rivera in the north of the country, bordering Brazil, have the largest proportions of afrodescendants in their population, at 17 percent in both cases (see Map 1). Uruguay's indigenous population is more heavily represented than average in the departments of Tacuarembo and Salto, where they make up eight and six percent of the population, respectively. Income poverty rates for both groups are higher than the national average. The income poverty rate based on the $4/day poverty line stands at 19.3 percent for afrodescendants, compared to 8.3 percent for the population as a whole. Close to half of all afrodescendants live in households belonging to the lowest quintile of the income distribution, characterized by, among other attributes, low educational attainment. Similarly, nearly one third of the indigenous population belongs to the lowest income quintile, and poverty among urban Uruguayans of indigenous ancestry is 1.7 times that of the national average, while extreme poverty is 1.4 times the average.

Map 1. Total Population by Department



42. **While educational attainment, job characteristics such as occupation and industry, and geographic location contribute to explaining wage differentials between afro-descendant and non-afro-descendant workers, significant differences in labor**

income remain.[13] Higher poverty rates among the afro-descendant population is mainly explained by low-paying jobs associated with lower educational levels. On average, non-afro-descendants have 9.6 years of education whereas afro-descendant workers have 8 years and returns to schooling are lower for afro-descendants (although this may be biased as a larger proportion of non-afro-descendants attend private schools.) Wage differentials between the two groups decline considerably when job characteristics are controlled for, implying that there may be occupational sorting or segregation. Similarly, wage differentials are larger among men than among women, and in particular, wage differentials are larger for men in the bottom deciles of income distribution.[14] Housing conditions of afro-descendants are poorer compared to those of non-Afro-descendants. Although the proportion of the population living in slums in Uruguay is lower than in neighboring Argentina and Brazil, the Afro-descendant population who live in slums reaches 12.7 percent, triple that of the white population (4.2 percent), indicating residential segregation linked to poverty and destitution. Also, the percentages of Afro-descendant youth who neither work nor study exceeds that of other youth: 18.3 percent versus 13.5 percent of young people between 14 and 24 years in the two groups do not study, do not work, and are not looking for a job. Overall, however, quantitative analysis of the economic and social conditions faced by Uruguay's ethnic minorities is relatively scarce, making it difficult to reach robust explanations regarding the causes of exclusion.

43. **In conclusion, although Uruguay has made much progress in reducing poverty and boosting shared prosperity in the last few years, it still faces challenges related to vulnerability, youth poverty, and unequal access to quality education.** Today, the middle class has become the largest strata in Uruguay, reaching almost 60 percent of the populace. This important achievement was mainly a consequence of economic growth fueled by labor income growth over the last decade (which favored the bottom 40 percent), complemented by effective fiscal reforms and successful targeted social assistance to the specific groups that required it, Nonetheless, the vulnerable—a group at risk of slipping back into poverty in the event of a shock—compose the second largest strata. In addition, poverty is more prevalent among the children and the youth, a situation that has worsened in the last few years through a combination of secondary and tertiary school dropouts and growing urban youth unemployment, and it is not homogenously distributed across regions. More importantly, although assets have improved in the last few years, it is not clear if gains are strong among the poorest and among the vulnerable youth as both the quality of education and labor participation appear to be declining for these groups. This raises important concerns about the possible emergence of new forms of social exclusion that may make it more difficult to reduce entrenched pockets of chronic poverty (mainly in urban areas), which may even become self-perpetuating, jeopardizing the sustainability of poverty reduction and shared prosperity.

[13] The situation of Uruguay's indigenous population has not been studied to the same extent, and is an area in need of further analysis.

[14] In-house analysis concludes that the coefficient for ethnic minorities is lower among female workers when wage equations are estimated separately for the two genders.

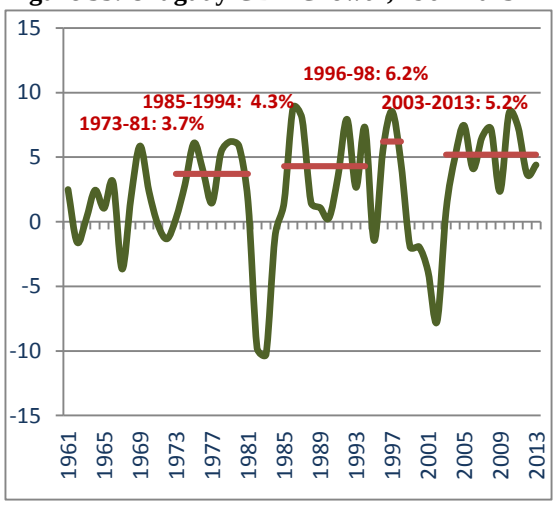
B. The Nature of Growth in Uruguay

Drivers of recent growth

44. **Since 2004, Uruguay's GDP growth rate has been higher, and sustained over more years, than at any time in the country's recent history, propelled by a sharp increase in productivity and by high investment.** Following four years of contraction between 1999 and 2002, and reaching a nadir of -7.7 percent in 2002 with the Argentine crisis, economic growth has averaged 5.2 percent between 2003 and 2013, well above the country's potential growth rate estimated at about 4 percent (see Figure 35). By 2004 the economy was expanding briskly, with both inflation and unemployment falling (see Annex II). By the end of 2006, Uruguay had recovered from the 2002 crisis. This was followed by continued strong expansion during 2006-14, although growth has slowed in more recent years.

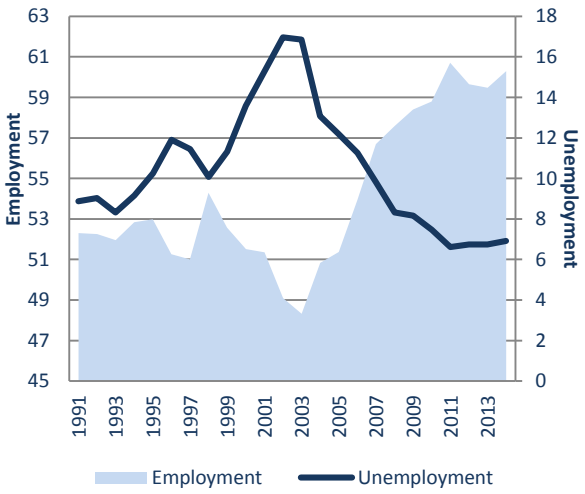
45. **Rapid economic growth has been accompanied by significant job creation at all skill levels, underwriting a significant portion of the achievements in regard to the twin goals.** Unemployment declined to a historically low level (6.5 percent by 2014), in a context of marked increases in labor force participation[15] (see Figure 36). Rising real incomes, and in particular labor incomes, further fueled growth, bolstering private consumption. In part, rising labor incomes were the result of broad-based wage negotiations that ensured substantial real wage increases. The remarkable improvement in economic performance has been supported by sound macro policies and favorable external conditions characterized by strong external demand, high commodity prices, and high global liquidity.

Figure 35. Uruguay GDP Growth, 1961-2013



Source: World Development Indicators, staff calculations.

Figure 36. Employment and Unemployment



Source: Instituto Nacional de Estadistica.

46. **Strong macroeconomic management has been crucial for fostering and sustaining growth.** Uruguay has implemented prudent fiscal, exchange rate, and skillful debt management policies that have enhanced its resilience to external shocks. Prudent fiscal policies and strong

[15] The labor force participation rate in the 2007-2013 period was 7.5 percentage points higher than the historical average.

growth led to a significant reduction in indebtedness. Gross public sector debt declined to 58.4 percent of GDP by 2014, down from 75 percent in 2006, with net debt falling to 21 percent. The country has also accumulated sizeable international reserves and its proactive debt management has markedly improved the country's debt profile, by reducing rollover, exchange rate, and interest rate risks. The country has also contracted contingent financing to build additional financial buffers to respond to potential adverse shocks associated with still uncertain global economic and financial conditions.

47. **A significant acceleration in TFP growth has been the main driver of growth in Uruguay, explaining about half of growth since 2007.**[16] Uruguay has, over the past half century, lagged its comparators in terms of growth (see Table 2). Poor TFP growth—along with low factor accumulation, particularly human capital—explains a large part of this underperformance. Following the crisis, however, patterns shifted, and productivity surged. While this pattern is shared with a number of Latin American countries, the acceleration of TFP growth in Uruguay stands out in the region (along with that in Panama).

Table 2. Growth Accounting: Growth Rates of Capital, Labor and TFP, %

	1961-2013					2007-2013				
	Real GDP	Human Capital per Labor	Capital Stock	Labor	TFP	Real GDP	Human Capital per Labor	Capital Stock	Labor	TFP
Uruguay	**2.2**	**1.0**	**1.7**	**1.6**	**-0.1**	**5.5**	**0.9**	**4.3**	**1.5**	**2.5**
Argentina	2.7	2.2	3.2	1.3	0.3	4.1	1.2	4.5	0.9	1.9
Brazil	4.2	3.2	4.9	1.9	0.5	3.1	2.3	3.9	0.9	0.3
Chile	4.3	2.6	4.9	1.6	1.0	3.9	1.2	7.7	0.9	0.8
Costa Rica	4.8	3.3	6.0	2.5	0.7	3.3	1.1	5.7	1.5	0.8
Mexico	4.0	3.6	5.3	2.2	-0.1	1.8	2.0	3.6	1.3	-0.7
Panama	5.1	3.4	5.5	2.3	1.0	8.0	1.9	8.4	1.7	4.1
Estonia	3.2	1.3	4.3	0.1	1.0	-0.5	0.6	2.4	-0.2	-1.6
Hong Kong SAR, China	6.3	3.0	7.1	1.6	2.0	2.6	1.1	3.6	0.6	0.7
Korea	7.4	3.1	9.5	1.3	2.4	3.2	1.9	3.9	0.6	0.6
Singapore	7.6	4.1	8.6	2.2	2.1	4.7	5.1	5.9	2.8	-0.6

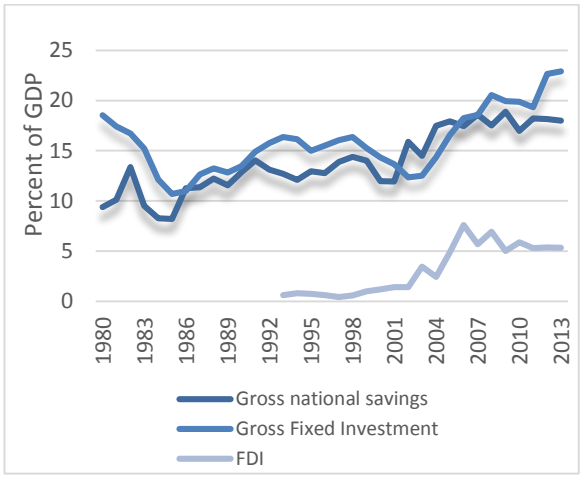
Source: World Bank, Policy Note Overview, 2015.

48. **Capital accumulation, both physical and human, has been another force propelling growth in the country.** Rapid economic growth immediately following the crisis (2003-2007) was achieved through increases in labor force participation. As more people joined the labor force and employment creation accelerated (see Figure 36), labor's contribution to GDP growth averaged 80 percent, although it levelled off after 2007 and is today low relative to peers. Since 2007, physical capital stock growth has emerged as a strong driver of growth as investment ratios rose from historic levels of 15 percent of GDP to 20 percent, reaching a high of 24 percent in 2014.

[16] TFP measurements should be interpreted with care, as they are calculated as a residual, and tend to be highly correlated with the business cycle. Moreover, they include a number of assumptions that may be problematic. For instance, the assumption of a constant capital share throughout the period of analysis may not be appropriate in all contexts; similarly, there is no explicit role for terms of trade shocks, which can be critical in an open economy.

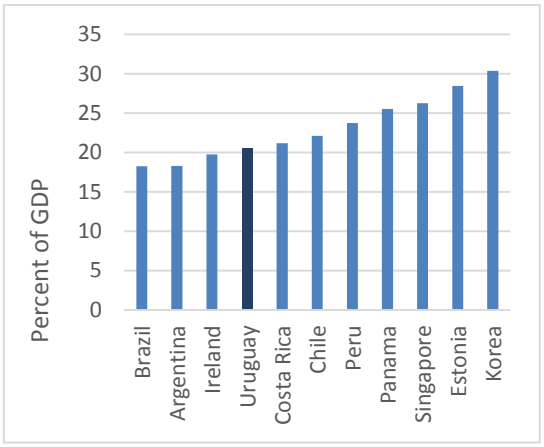
49. **Investment, most of which has been undertaken by the private sector, increased dramatically over this period.** Although a low investment rate has been an Achilles' heel of Uruguay's economy (see Figures 37 and 38), the acceleration in recent years puts its investment-to-GDP rate, which rose to a record 24 percent of GDP[17] by 2014, on a par with prevailing investment rates in East Asia. While public investment has increased as the government has undertaken large projects to address infrastructure needs, private investment has been the main driver of this rapid increase in the investment ratio, attracted by good institutions, clear and predictable rules of the game, prudent macroeconomic policies, and macroeconomic stability, as well as a relatively attractive investment promotion regime.[18]

Figure 37. Saving , Investment, FDI % of GDP



Source: World Bank, World Development Indicators.

Figure 38. Comparative Investment/GDP Ratios, 2006-2014



Source: Banco Central de Uruguay and World Development Indicators database.

50. **Foreign direct investment (FDI) has played an important role in the acceleration of Uruguay's investment and economic growth rates.** With a low domestic saving rate, FDI has filled the resource gap. While FDI has historically been negligible in Uruguay, today the country is second only to Chile in attracting FDI (relative to GDP). FDI has risen from under 1.5 percent of GDP in 2002, to a peak of 7.6 percent in 2006, and to 5.3 percent ($3 billion) in 2013, attracted by a business climate that is friendly to foreign investors, granting foreign and domestic investors the same benefits.[19] Argentina has been the main source of FDI to Uruguay over the past decade (particularly since 2006), and is responsible for 27 percent of total FDI

[17] The investment ratio increased by 6 percentage points since 2006 and contributed to about one-third of GDP growth.

[18] About a quarter of the private investment for the period 2007-2014 ($11.5 billion) was undertaken under the recent investment promotion policies, Decree 455/007 and Decree 002/012, which complement Law 16,906. The cumulative investments under the Free Zone regime over the period 2006-2013 stood at close to $4 billion, with Punta Pereira and UPM accounting for 52 and 26 percent, respectively.

[19] For instance, foreign investors benefit from the same rights and fiscal incentives as local investors, and investments are not subject to limits on the transfer of profits or repatriation of capital.

inflows (concentrated in construction, agriculture and industry) during the period.[20] FDI has increased the technology absorption and the know-how in selected sectors and has contributed to a marked increase in productivity in the agro-exporting sector.

51. **As a result of this confluence of prudent macroeconomic management, high TFP growth, and booming investment and FDI, Uruguay has enjoyed broad-based economic growth across most sectors in the post-crisis period** (see Figure 39). Growth within subsectors often paints a more telling picture, however, than aggregate sectoral growth. Thus, while primary activities contributed little to overall growth or employment, with most of the increase in output attributable to increased labor productivity, a number of subsectors have enjoyed significant growth as well as TFP increases. During the last decade, for instance, the agricultural sector has undergone important structural transformations. Average annual productivity growth in the beef sub-sector increased 1.3 percent when measured as meat production per cow, while average annual milk productivity increased on average by 3.4 percent, when measured as milk liter/cow (OECD/ECLAC, 2014). Investments have raised the productivity of milk production to the frontier (5,000 liters/cow/year). Bovine traceability has helped create a country brand that has secured higher prices on international markets, attracted FDI, and helped gain access to new markets. There have also been large increases in soybeans production and remarkable increases in productivity and yields, stimulated by investment, technology adoption, and innovation. Overall productivity in the agriculture sector accounted for about half of the sectoral growth over the past decade.

52. **Similarly, while the manufacturing sector expanded at a slower pace than the overall economy during the boom period, contributing less than 10 percent to overall growth, there is a large heterogeneity in productivity within the sector and across firms.** One exception to relative stagnation of the sector has been the wood pulp, paper, and paper products subsector. Growth in this subsector was triple that of total GDP, and the sector's share in GDP grew by 1.6 percentage points during the period. Nevertheless its contribution to annual growth has been modest, as it comes from a small base. The coming on line of the Montes del Plata cellulose plant in late 2014 will further boost the manufacturing sector and manufacturing exports. Agro-food subsectors are another growing area within manufacturing. Dairy processing, for instance, is also at the production frontier—with costs for milk powder in some of the largest producers, for example, well below that of main competitors. Textiles, clothing, and leather products on the other hand have contracted at a 5.8 percent annualized rate, with a marginal negative contribution to growth. Growth in many other manufacturing subsectors has been weak. Overall, employment in the manufacturing sector stagnated during the boom period, after recovering from the sharp decline during the crisis. Labor productivity halved to less than 2 percent during the expansion period relative to recovery period.

53. **Information and Communication Technology (ICT) and commerce have been sources of dynamic sectoral growth.** The ICT sector has been particularly dynamic during the recent expansion period, accounting for a quarter of growth, and led by important investments in telecommunications. Employment in the transport, storage, and communications has the second fastest growth, after construction, expanding on average by 2.4

[20] FDI in construction has focused on the building of the Montes del Plata pulp mill, while luxury residential construction in Montevideo and Punta del Este is mostly of Argentine origin. FDI in foodstuffs is related to the presence of the largest global grain processors and traders, such as ADM, Cargill, and Louis Dreyfus, while the energy sector has received FDI largely for the development of wind farms from the Spanish firm TEYMA. (Uruguay XXI. National investment and export promotion agency.)

percent annually (Bértola, Isabella, Saavedra (2014). Labor productivity in this sector has grown at a double-digit pace. Commerce, buoyed by strong domestic demand, has been another important contributor to growth, although its contribution has decelerated in recent years in line with a moderate deceleration in private consumption. Similarly, hotels and restaurants' contribution to growth has dropped to close to 0, affected by weaker tourism demand from Argentina, which has not been compensated by rising demand for tourism services from other countries (Brazil accounted for 16.5 percent of tourism revenues in 2014). Meanwhile, financial intermediation has continued its recovery from the 2002 crisis, albeit at a subdued rate, with the annual contribution to growth less than half a percentage point. Transport and associated services have also expanded, linked to strong domestic and external demand, contributing about a tenth of the growth on average over this period.

54. **Construction saw a modest deceleration during this period despite large projects.** The contribution to growth from construction activity has been subdued, accounting for less than 5 percent of overall growth. Nevertheless with a high degree of labor intensity, especially in unskilled labor, its indirect (second round) impact on growth has been larger. Employment in construction continued to increase at a robust pace, recording the highest growth rate across sectors (4 percent) while labor productivity was stagnant during the expansion period. Productivity dynamics in this sector have been disproportionately affected by large projects linked to foreign investment. This includes the large pulp mills of Botnia and Montes del Plata as well as the new airport built in Montevideo.

Figure 39. Sectoral Contributions to Growth

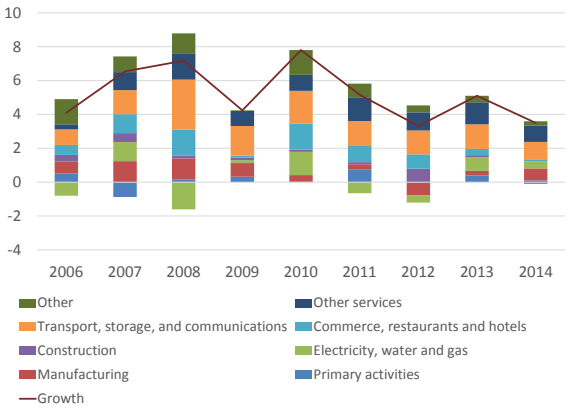
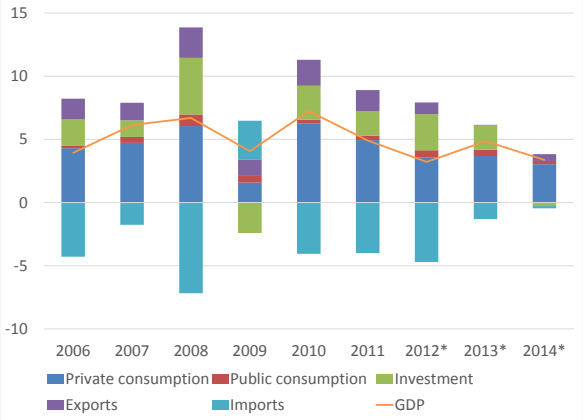


Figure 40. Demand Components Contribution to Growth



55. **Despite strong performance over the past decade, significant per capita income disparities exist between Uruguay and its counterparts, explained by productivity gaps and insufficient human capital.** In 1960, Uruguay enjoyed a per capita income level 3.3 times that of a number of selected fast-growing Asian economies;[21] today Uruguay's per capita income level is at close to 83 percent of the simple average for this group.[22] A substantial labor productivity gap also remains between Uruguay and more developed economies. Although labor productivity in Uruguay has been among the highest for the region during the 2000s and has doubled its rate of growth since 2007 relative to the 1990s and early 2000s, Uruguay's

[21] Indonesia, Malaysia, South Korea, Singapore, and Thailand.
[22] Simple average of the GDP per capita expressed in 1990 International GK$ as per Maddison Project database.

observed labor productivity is only about 35 percent of that of the U.S. Human capital and TFP are currently the main drivers of this labor productivity gap. Traditional development accounting techniques point mainly to TFP as the principal contributor, accounting for about 53 percent of the gap, while physical capital contributes 31 percent and labor 16 percent. When the quality of human capital and the endogeneity of physical capital accumulation and TFP are taken into account, human capital emerges as a main factor behind the labor productivity gap[23] (OECD/ECLAC 2014; Daude 2012).

Exports are spearheading a new model of integration

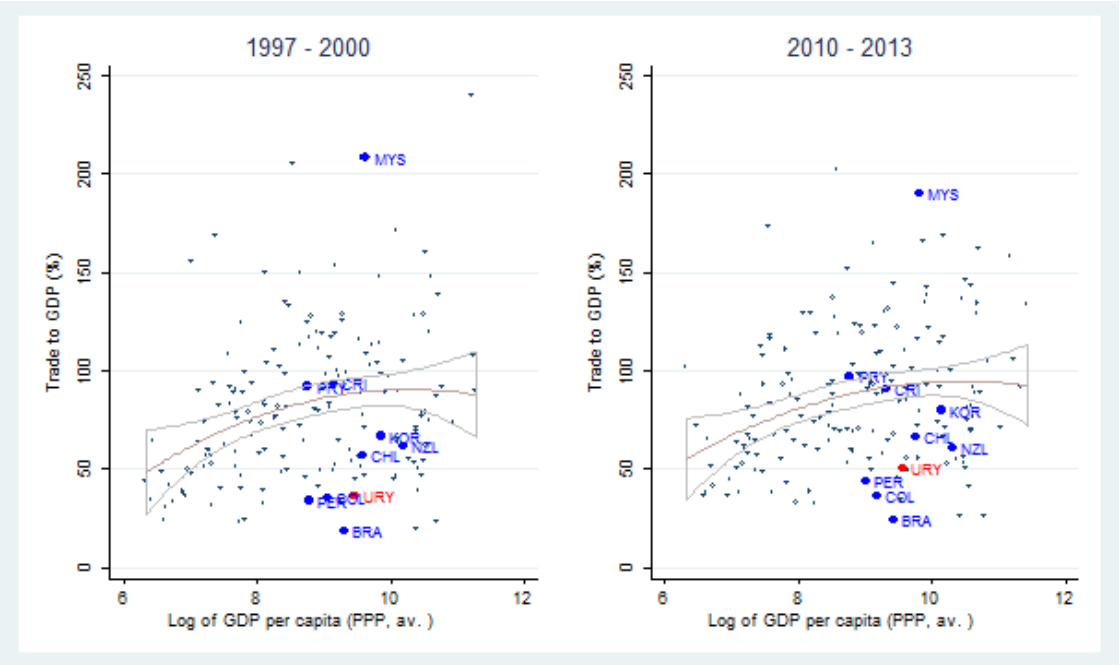
56. **Exports are an important part of Uruguay's successful growth with jobs over the past decade, reflected in greater competitiveness and diversification.** Prior to the crisis, in 2000, trade (exports plus imports) constituted about 34 percent of GDP, with exports at 16 percent. By 2008, exports had nearly doubled, to 31 percent of GDP, while trade stood at 65 percent of GDP (the respective 2013 figures were 26 and 50 percent). This growth in exports is not the result of a general rising tide of world trade, or the specialization in specific commodities. Rather, two-thirds of export growth can be attributed to increasing market shares, achieved by gaining an advantage relative to competitors. Uruguay has doubled its share of world goods exports to 0.06 percent between 2003 and 2012 (IMF, 2014), although its share in global markets is much higher in a number of products, including soy, beef, dairy, and rice (see Figure 43). Uruguay has expanded its presence in world markets more rapidly than Argentina and Brazil, its main, and much larger, regional trading partners.

57. **There is, however, room for increasing trade integration.** Uruguay is less open to international trade than would be expected given it level of economic development for both merchandise and services (see Figures 41 and 42). So while 2014 trade as a share of GDP stood at an estimated 53 percent of GDP, trade in Panama, Chile and Costa Rica was at 75.2, 66.5, and 58.6 percent, respectively. Uruguay's openness in commercial services is less than expected given its level of development (see Figure 42). However, when comparing the two periods reflected in Figures 41 and 42, Uruguay has narrowed the distance to the predicted curve. In fact, in contrast to trade in merchandise, Uruguay's openness to services trade is higher than that of some regional comparators, such as Argentina, Chile, and Paraguay. Only Costa Rica and New Zealand outperformed Uruguay in 2013.

[23] As human capital indicators are based on years of schooling, this indicator masks differences in the quality of education and cognitive skills. Employing differences in PISA scores are a relatively good proxy; they can be used to adjust formal years of schooling to compute human capital. The endogeneity of physical capital and TFP refers to the fact that the efficiency with which factors of production are combined depends on the human capital endowment.

Figure 41. Merchandise Trade as a Share of GDP vs. Income Level

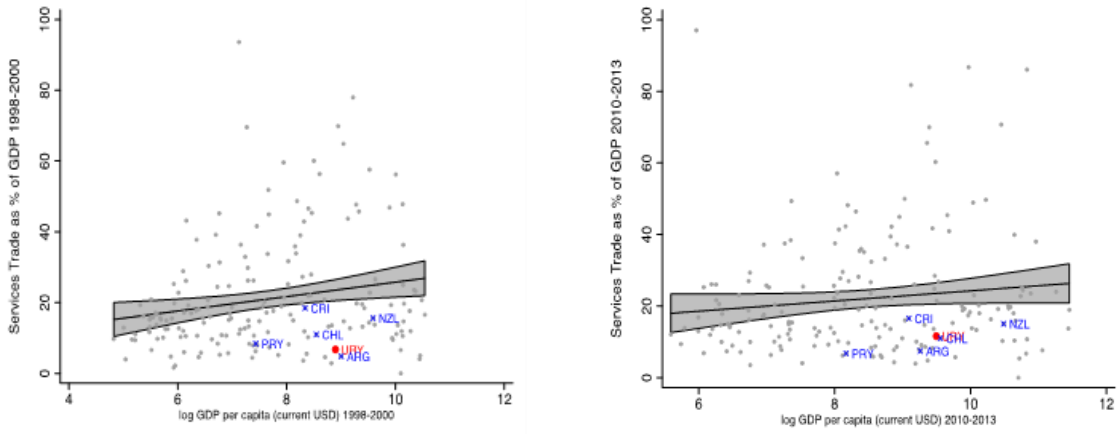
a. 1997-2000 b. 2010-2013



Note: The panels plot the relationship between trade openness and GDP per capita for all countries in the world. Relevant comparators are labeled. The curve shows the expected trade openness for a given per capita income. The white band represents the 95% confidence interval. Countries above (below) the confidence interval are said to be more (less) open to international trade than is implied by their level of economic development.
Source: Own calculations using data from WDI.

Figure 42. Services Trade as a Share of GDP vs. Income Level

a. 1998-2000 b. 2010-2013

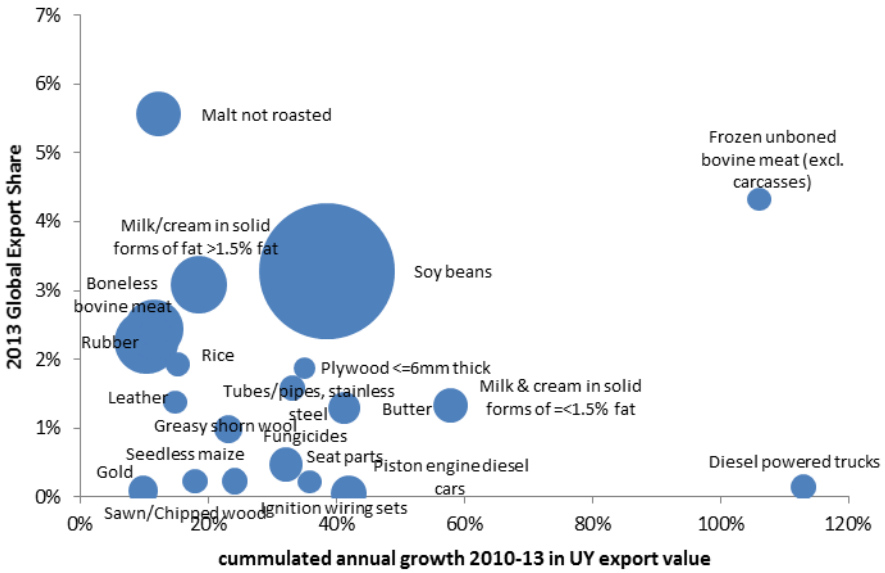


Note: The panels plot the relationship between trade openness (in services) and GDP per capita for all countries in the world. Relevant comparators are labeled. The curve shows the expected trade openness for a given per capita income. The gray band represents the 95% confidence interval. Countries above (below) the confidence interval are said to be more (less) open to international trade than what their economic development implies.
Source: Own calculations based on data from WDI.

58. **Uruguay has managed a structural transformation in its primary sector exports toward higher value agricultural-based exports.** The primary sector, which accounts for nearly 40 percent of all exports, has been the engine of export growth; and within the primary sector, agricultural-based exports have grown particularly dynamically to represent almost 60 percent of total merchandise exports (vs. 30 percent in the late 1990s). With a natural competitive advantage in agricultural-based exports, Uruguay has managed a structural transformation within the sector, moving toward soy, lumber, beef, and dairy, all of which have performed strongly (see Figure 43). Innovations (software) that have made cattle 100 percent traceable have enhanced the quality of exports, helping create a country brand and secure higher prices in international markets, attracting FDI, and gaining access to new markets. Cereal and oil seed (soy) exports, which represented less than 4 percent of total merchandise exports in 1999, surged to over 33 percent of the total in 2013 by virtue of both an increase in quantity exported and a positive price shock. Lumber exports have grown from a 0.4 percent share of total goods exports to 6.3 percent over the same period, and dairy has increased from 6 percent to 9 percent. The Montes del Plata pulp mill began production in June 2014. Its exports are estimated at $300 million in 2014 and are projected to more than double in 2015 (close to 1½ percent of GDP).

59. **Services exports have also performed strongly in recent years, and today account for one-third of all exports.** Non-traditional services exports (i.e., services beyond tourism and transport) doubled their export value between 2007 and 2011. Conversely, traditionally important manufacturing goods, such as skins and textiles, leather, and auto parts, have lost ground. Manufacturing activity has increasingly shifted to sectors that are competitive internationally, such as wood/wood products and dairy, and activity has consolidated in the area of chemicals, plastics, rubber, and electronics. As a result, manufacturing goods continue to be an important export for Uruguay, contributing 29 percent of all exports.

Figure 43. Selected Merchandise Exports, Growth and Global Shares, 2010-2013

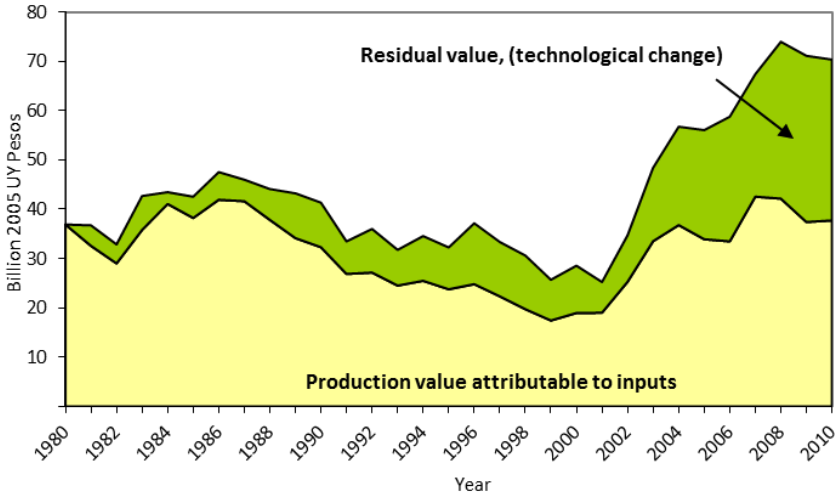


Source: Staff estimates based on World Integrated Trade Solutions (WITS) database.

60. **The Free Trade Zone (FTZ) model has played an important role in attracting FDI and boosting exports.** In an effort to boost quality employment and increase the links with the domestic economy, the government has launched a second wave of FTZ that included Global Services (Aguada Park and WTC) and Specialized Services (Parque de la Ciencias), which are labor intensive. The Free Trade Zones are now seeking to attract maquila-type investments, to supply the region and create development poles for the interior of the country. More broadly, investment promotion in recent years has given incentivized projects that create "quality" employment and foster research and development, innovation, and labor force training. Special incentives to small and medium-size enterprises (SMEs) are also being implemented. The government is complementing the FTZ with Special Economic Zones to include specialized services (health care, audiovisuals, entertainment, etc.) and changes to the minimum requirements of the national labor force, while also seeking to promote decentralization of economic activities and the development of disadvantaged areas.

61. **Merchandise export dynamism is a function of a successful focus on product quality and a consequent move to export higher value agricultural goods to more diversified markets.** Investment has led to an upgrading of production technologies, productivity, and quality in a number of sectors (see Figure 44), and has opened access to markets that pay better prices for higher quality goods in a number of products. Activities that have experienced growth in recent years are relatively intensive in innovation and R&D, have benefited from the explicit public policy focus on quality promotion, and are characterized by important linkages to the rest of the economy. Consequently, Uruguay today commands a quality premium in some exports, suggesting a high level of value addition. For instance, Uruguay's price premium over world beef prices has averaged more than $100 per ton of beef as quality improvements have focused on logistics in the distribution chain, including the introduction of technology to permit traceability of beef exports to the production unit. This has enabled access to high price European markets in particular. Traceability technologies have been expanded to other strategic value chains, including citrus, wine, honey, and poultry. Another example of innovation is in cattle genomics, with Uruguay being the first country to use genomics for Hereford cows, allowing the incorporation of new attributes linked to production but also to human health. Production has also shifted to cereals and oil seeds, particularly soybeans, as a consequence of seed improvements and increases in agricultural yields as well as the expansion of cultivated land through the use of improved techniques. Productivity has played a key role in the shift in livestock production from beef to milk, as the productivity of beef production has increased on average by 1.3 percent in the last decade, while milk production productivity has increased by 3.4 percent (OECD/ECLAC 2014; Bervejillo et al. 2014). Other examples include R&D activities related to the UPM pulp factory and to rice production, where yields and quality have been improved. Such productivity improvements have contributed about half of the primary sector's economic growth over the past decade (Bervejillo et al. 2014). Reflecting the high investments in upgrading and production technologies, Uruguay ranks at the top alongside Chile in the publication of scientific articles related to agriculture and in spending on R&D as a share of the primary sector's GDP (2 percent), which is five times larger than the country's overall R&D investment as a share of GDP.

Figure 44. Technological Change in Agriculture, 1980-2010



Source: Ministry of Agriculture, based on Bervejillo, et al. 2011. Anuario de OPYPA.

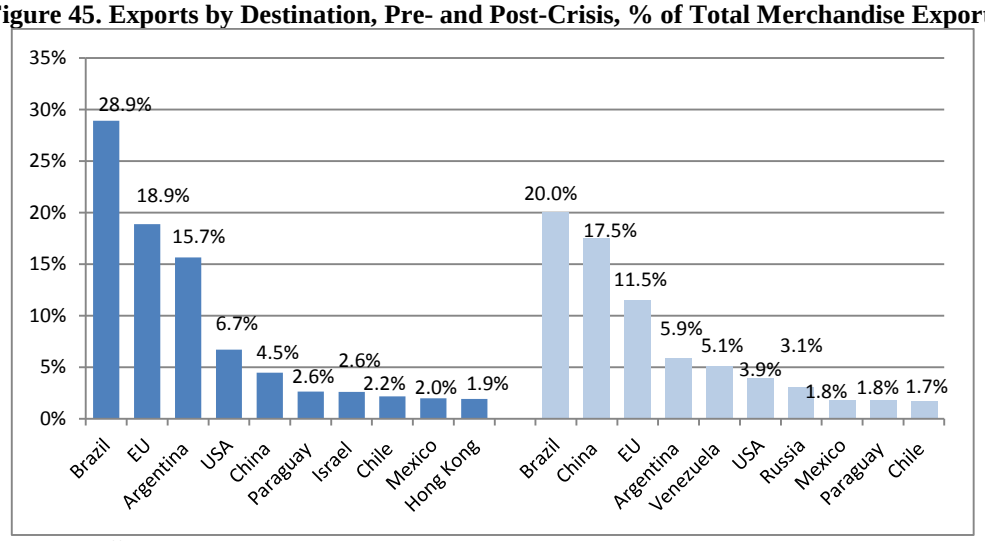
62. **A similar process of increasing sophistication is occurring in parts of the services sector.** Uruguayan software exports have experienced dynamic growth, expanding significantly more rapidly than total exports, and today represent 1.5 percent of GDP, double their share in 2004. Exports go to numerous countries in region, with more than 25 percent going to the US and 10 percent to Europe. The sector is made up of about 350 firms producing and selling products and services to 55 markets (Betarte, Cancela, and Moleri, 2008). At the turn of the century, Uruguay briefly became the largest software-exporting country in Latin America. It still ranks first in the region in terms of per capita exports. Significantly, this is the first time in Uruguay's history that knowledge accumulation at the national level has generated significant exports that are not based on natural resources (IDB, 2012). Other non-traditional service exports doubled their export value between 2007 and 2011, and in addition to ICT include professional services such as financial services, consulting, and commercial and logistic services. (OECD/ECLAC 2014).

63. **Uruguay has also achieved a degree of diversification of markets for its merchandise exports, with the share of Mercosur declining, while dynamic emerging economies, particularly China, are rising.** While Brazil (at #1) and Argentina (#4) remain top export destinations for merchandise exports, Uruguay has diversified away from these two countries, and particularly from Argentina, which today accounts for less than 5 percent of Uruguayan exports (see Figure 45).[24] Mercosur accounted for about 47 percent of total goods exports during the 1994-2001 period, but this proportion fell by nearly one-third to 33 percent in 2013. The fall would have been greater (to 28 percent) had it not been for the entry of Venezuela into Mercosur in 2012. China, the main market for soy, frozen beef, and cellulose pulp has grown from representing less than 4.5 percent of merchandise exports in 1994-2001

[24] The exports discussed here include merchandise exports from the FTZs (i.e., FTZ exports are distributed among markets and are not treated as "exports to FTZs"). Internal "exports" to FTZs have grown ten-fold, from 1.6 percent to nearly 16 percent of total exports between 2003 and 2012. FTZs as a whole today are second only to Brazil as an export destination.

to 17.5 percent today, or in excess of 22 percent if exports from the Free Trade Zones are attributed based on final destination. In contrast, the importance of the EU and the US has declined to 11.5 and 4 percent of total exports in 2013, from 19 and 7 percent, respectively, in 1994-2001. Russia and Venezuela have also gained in importance as export destinations.

Figure 45. Exports by Destination, Pre- and Post-Crisis, % of Total Merchandise Exports



Source: staff calculations based on INE and Vaillant and Lalane.

64. **However, there is still untapped potential for expanded trade in traditional and regional markets and significant scope for greater value addition and sophistication in Uruguay's exports.** A country-by-country analysis of observed vs. potential exports shows a proclivity toward trading with new growth poles, mostly at the expense of the United States (see Table 3). This holds true for both the differentiated and the commodities segments, with the latter being even more pronounced in intensity and including a substantial under-trading with Japan. In contrast, the commercial relationship with Europe falls within the gravity-predicted range in both cases. Uruguay is also trading below its potential with some large markets in South America and with Canada. In particular, Uruguayan exports to Argentina, Brazil, and Chile are well below the benchmark. Policy instruments to support destination diversification and the positioning of Uruguayan products in regional markets could harness these potential opportunities. Although market access and other obstacles such as non-tariff barriers may create obstacles in some cases, the potential to expand the export basket of the country undoubtedly exists. And although product sophistication has increased in some sectors, overall this has not be captured in measures such as those developed by Hausmann, Hwang, and Rodrik (2007).[25] Uruguay's exports tend to embody greater sophistication than Chilean and Paraguayan exports, but they are below the levels achieved by Costa Rica and New Zealand (a substantially more developed country).

65. **Exports have been an important part of Uruguay's inclusive growth story through their link to the country's rapid job growth following the crisis.** The labor content of exports as a whole more than doubled between the late 1990s and 2011. Today, 30 percent of jobs depend on external demand, relative to just 15 percent a decade ago. The increase in labor content of exports took place at all skill levels, but has been especially strong for those workers with 9-14 years and 15 years of education, (medium and high skill levels, respectively). The high-skilled labor content of exports increased by a factor of 2.3, while the labor content of

[25] Although this measure has a number of limitations, including not capturing services exports.

medium-skilled multiplied by a factor of 3. Even for low-skilled workers with less than eight years of education, labor content of exports rose by 60 percent, although it declined by nearly one-fifth for the economy as a whole (OECD/ECLAC 2014). More jobs linked to external demand bring positive consequences and opportunities, but also risks. The benefits are linked to possible productivity gains as greater contact with sophisticated clients and markets induces improved practices by local suppliers of exporting firms. However, when jobs, especially low-skilled and medium-skilled ones, become dependent on external demand, market access becomes critical. A crucial question for Uruguay is how to continue to integrate globally through trade in ways that enable and encourage it to move along a path of greater value addition and productivity, participating in global value chains that provide it with access to the right markets and may help it to overcome scale disadvantages.

Table 3. Uruguay: Over-Trading and Under-Trading Export Relationships

	Differentiated Products	Commodities
Mercosur		
Argentina	-3.28	-4.31
Brazil	-0.62	-0.70
Paraguay	0.55	-0.52
Old Growth Poles		
United States	-1.56	-1.98
Europe-27	-0.14	0.11
Japan	0.90	-2.61
New Growth Poles		
India	-0.37	-2.03
Indonesia	0.11	-1.87
China	0.44	1.20
Russia	1.08	2.20

	Differentiated Products	Commodities
Rest of America		
Canada	-1.93	-0.34
Chile	-0.91	-1.34
Peru	0.12	0.22
Mexico	0.46	1.31
Bolivia	0.61	-0.80
Colombia	0.63	-0.76
Ecuador	1.13	-1.24
Costa Rica	1.32	-1.27
Panama	2.29	-0.08
Venezuela	2.37	2.03
Nicaragua	2.74	-0.88
Guatemala	3.74	-1.87
El Salvador	4.37	-1.16

Note: The table presents the gravity-predicted coefficients by type of product—commodities vs differentiated—for selected countries, including regional comparators and key global players termed *Growth Poles*. A positive (negative) coefficient indicates over (under) trading and its magnitude reflects the size of the deviation from the predicted value.
Source: Uruguay Trade Outcomes, World Bank 2014, using data from WITS.

66. **To conclude, Uruguay's growth in the years since the crisis has been more robust and sustained than has been the case in several decades.** Rising investment rates, where FDI has played an important role, as well as increases in TFP, factor accumulation, and labor productivity have supported this growth. As a small, open economy, exports have been a key ingredient in the current expansion, embodying greater product sophistication, value addition, and competitiveness. Nevertheless, important gaps remain with respect to Uruguay's peers: gaps in terms of GDP per capita, productivity, investment levels, and openness. Moreover, as growth moderates and international conditions become less buoyant, the bottlenecks reflected in these gaps will become more binding.

III. Sustaining Uruguay's Inclusive Growth

68. **The emerging challenge for Uruguay is to sustain the economic growth levels needed to protect and expand the gains in poverty reduction and shared prosperity by navigating a less supportive external environment and addressing domestic bottlenecks that have been exposed as a result of rapid economic growth.** While the past decade has been very good to Uruguay, today the global tailwinds that helped to spur demand for the country's exports and supported brisk growth of FDI are subsiding and bottlenecks to growth are emerging domestically. Growth has moderated as the commodity boom has lost steam, the prospects for continued high international liquidity are uncertain, and economic conditions in some of the country's main trading partners have deteriorated. This chapter explores some of the main challenges and bottlenecks that are beginning to constrain the opportunities for growth after a decade of rapid progress, viewed through the lens of Uruguay's two fundamental characteristics: smallness and openness and its strong social compact.

A. Implications of Smallness and Openness

68. **Being small and open, Uruguay must continue to improve the competitiveness and productivity of its economy.** Although great strides have been made in this area since the 2002 crisis, which have propelled growth, reduced poverty, and strengthened equity, a number of concerns are emerging. Addressing these bottlenecks is essential to maintaining improvements in competitiveness, and in turn to sustaining growth and progress on the twin goals. These emergent concerns include (a) aspects of macroeconomic management; (b) limitations in firms' access to finance; (c) inadequate human capital and skills shortages; (d) lagging innovation and productivity in many sectors; (e) infrastructure bottlenecks; and (f) issues in the management of the natural resources upon which the country depends heavily. This section will provide an overview of these emerging concerns.

i. Smallness, Openness, and Macroeconomic Management

69. **Uruguay's external environment is expected to be more challenging in the coming years.** Commodity prices for some of its major merchandise exports have declined, external demand is weaker in large part due to the gradual slowdown in China but also as growth in South American economies -- including Brazil, Argentina and Venezuela -- slows, and as normalization of monetary policy in advanced economies, and in particular the United State is anticipated to increase funding costs which can lead to volatility in capital flows to emerging markets. Diverging monetary policy stances in advanced economies will continue to contribute to large shifts in major exchange rates, with implications for domestic inflation in Uruguay. However, lower oil prices are expected to have a positive impact on fiscal accounts and on economic activity. Overall, the risks to economic performance in Uruguay over the next few years are therefore mostly on the downside**.**

70. **Fiscal policy must carefully balance the objective of fostering growth with that of consolidating macroeconomic stability and creating space to respond to shocks in a countercyclical manner.** As a small, open economy, Uruguay is particularly exposed to events beyond its borders, and strengthening its fiscal framework would help enhance fiscal risk management, promote fiscal stabilization through the economic cycle (thus delivering a growth dividend), and contribute to supporting debt sustainability. Implementing a countercyclical fiscal policy would help hedge against risks and smooth fluctuations in consumption and

output, mitigating the impact of shocks particularly on the poor. Fiscal policy, however, tends to be pro-cyclical in Uruguay; this is in part a consequence of the high output volatility of the Uruguayan economy, which makes it difficult to evaluate correctly in real time its cyclical stance. Counter-cyclical policy implementation is also limited by a relatively high gross debt-to-GDP ratio and associated debt servicing as well as a high degree of rigidity in fiscal spending. Fiscal policy has been somewhat expansive recently, with the consolidated public sector deficit deteriorating to 3.4 percent of GDP in 2014. While there is no near term threat to fiscal or debt sustainability given the comfortable level of liquid assets at the Central Bank and the central government, as well as the robust profile of public debt, a stronger fiscal position would reduce vulnerability to risks while helping to protect crucial spending needs in the event of a shock. Given emerging bottlenecks to growth at the micro level—discussed below—which will require increased public expenditure, and the demands of an aging population, pressures on the fiscal accounts will increase and fiscal consolidation is necessary to help to reduce vulnerability to downside risks.

71. **In the near term, the needed fiscal adjustment is not likely to be large given the expected improvements in state-owned enterprises (SOE) balances resulting from the completion of major investments and falling oil prices.** Nevertheless, fiscal consolidation is more difficult to undertake in a context of slowing growth. Opportunities may exist, however, in terms of increasing the efficiency of the public sector, since one implication of being a small country is that that the cost of providing certain public goods and services are relatively higher because of limited opportunities to reap economies of scale.

72. **The persistence of a relatively high, though stable, rate of inflation in Uruguay is another topic of importance for overall macroeconomic stability and competitiveness.** Inflation has remained above the Central Bank's target range of 3-7 percent since 2007, and shows little signs of converging to the middle of the targeted range despite a contractionary monetary stance. This reflects a number of factors including robust growth in domestic demand, persistent inflation linked to backward-looking wage indexation, and rising unit labor costs in recent years. The persistence of inflation in the context of a growth slowdown may reduce the latitude for moderating the rise in wages and therefore a smooth adjustment in labor markets to changing conditions. In addition, above-target inflation creates macroeconomic uncertainty and adversely affects low income households. The recent fall in oil prices is likely to help reduce inflationary pressures, depending on how much of the fall in is reflected in domestic fuel prices and how much is maintained as fiscal savings.

73. **While the country has significant liquidity buffers to help weather an external shock, the above-target inflation leaves little room for countercyclical monetary policy.** Furthermore, a relatively high degree of financial dollarization, including a relatively large, though declining, share of foreign currency-denominated loans, risks generating balance sheet effects in the case of a sharp depreciation, which could affect the real economy and the financial sector. The importance of finding new ways to insert itself into global trade makes exchange rate management another major concern for Uruguay.

74. **A potentially important constraint to growth from the macro side relates to the combination of low saving rates given an expected tightening in international financing conditions and potential volatility in capital flows.** Uruguay is a significant under-saver relative to international benchmarks, after controlling for the stage of economic development, terms of trade, natural resource endowment, and other relevant structural factors. Empirical

evidence finds that successful growth acceleration episodes have been associated with high domestic savings (World Bank, 2008). At the same time, due to its investment grade and abundant capital inflows, its exchange rate will tend toward overvaluation.

75. **Nominal depreciation since the Federal Reserve's tapering announcement has helped bring the exchange rate more in line with fundamentals.** The peso has depreciated by close to 30 percent since the US tapering announcement. In the past, Uruguay's exchange rate has been subject to large fluctuations over time as a result of the country's openness to investment and the resulting exposure to large capital flow movements; these make macroeconomic management more difficult and costly. As a small, commodity-based open economy, Uruguay will continue to be subject to large capital fluctuations with periods during which its currency would tend to appreciate, particularly given short-run incentives related to the high degree of dollarization of the economy. Prudent monetary and fiscal policies help to minimize the impact of these fluctuations. Considering instruments such as sovereign wealth funds and investments in human capital accumulation, innovation and technology absorption would help Uruguay raise overall economic productivity and cope with the adverse effects of currency appreciation.

76. **Uruguay's small, open economy is exposed to spillovers from events in its larger neighbors, particularly Argentina.** The resulting volatility can adversely affect growth and welfare (particularly that of the poor and vulnerable population). A key question in terms of resilience is whether Uruguay has managed to decouple its economy from Argentina's. Uruguay has important economic connections with Argentina and Brazil through the financial sector, trade, tourism, and FDI flows, and its economic cycle has historically been highly synchronized especially with that of Argentina (see Figure 3).

77. **However, Uruguay's exposure to Argentina, in particular through economic and financial linkages, has declined markedly since the 2002 crisis, and the country has taken measures to ring-fence potential spillovers from Argentina that might threaten macroeconomic stability, growth, and social gains.** The correlation coefficient of the cyclical component of Uruguay's GDP with the that of Argentina's GDP has declined in the recent boom period, although it remains relatively high, in part because of the commodity cycle (down from 0.8 in 1990s-2002 to 0.6 in 2003-2013). Uruguay has also built large liquidity buffers to deal with potential spillovers. Thus, in contrast to the notable deceleration in its neighbors, Uruguay has continued to grow robustly in recent years, perhaps suggesting a moderating impact of spillovers from the region.

78. **Uruguay has diversified away from Argentina in its exports, and crucially, in terms of financial linkages.** Financial linkages, mainly in the form of non-resident deposits in the Uruguayan banking system, were an important transmission channel in the 2001-2002 crisis, but their importance has since declined. The share of non-resident deposits to GDP has declined to about 8 percent, or about 14 percent of total deposits, down from more than 40 percent at their peak. Similarly, Uruguay has diversified its exports away from Argentina, which today accounts for less than 5 percent of total merchandise exports, down from close to 17 percent in 1999-2000. Argentina remains an important destination for some of Uruguay's industrial exports, however, including manufactured goods, machinery and transport equipment, mineral fuels, and chemical products. Uruguay's exports to Brazil are dominated by commodity exports, which are more inelastic and can be more easily reallocated to other markets, making Uruguay's trade balance less sensitive to changes in Brazil's domestic demand.

79. **Nevertheless Argentina remains Uruguay's main source of FDI and is also by far the country's largest source of tourism revenues.** Argentine FDI represented 22 percent of total FDI flows to Uruguay between 2003 and 2013, and its importance has increased in recent years, suggesting that these flows may be countercyclical relative to the Argentine economy, rising as economic and investment-related conditions deteriorate. The destination of these investments has changed over time from the financial sector to the agricultural and construction sectors. Argentina has also accounted for more than half of all tourist arrivals and tourism receipts in recent years (e.g., 54.6 percent of tourist receipts in 2014), although this proportion has declined somewhat since the early 2000s. Brazilian tourists accounted for an additional 17.2 percent of tourist receipts in 2014. An analysis of the income elasticity of tourist spending in Uruguay by Argentines and Brazilians found that in both cases the elasticity was larger than one (1.9 in the case of Argentines and 2.7 for Brazilians) and thus likely to decline as economic conditions in the sending countries worsen (Altman et al., 2012). The relatively less elastic Argentine demand may be partially explained by the fact that many Argentines own summer homes in Uruguay.

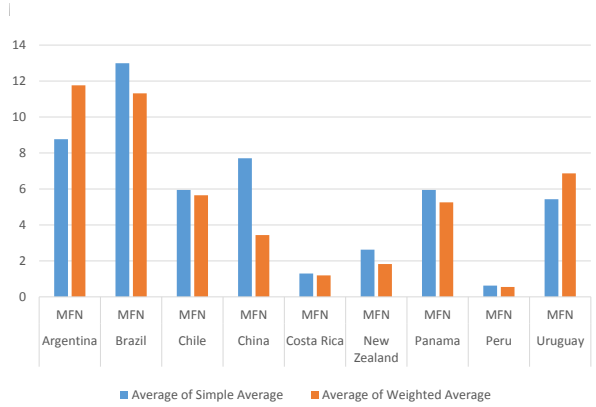
80. **In addition to managing potential spillovers from its neighbors, Uruguay must also manage the implications of being a small partner in Mercosur**[26] **in the context of its global integration vision.** Although internal Mercosur trade has grown significantly in absolute terms, it represents a relatively small percentage of members' total exports, and its share in total trade has declined over time, after an initial period of intra-zone trade deepening. Preferential, unhindered access to Mercosur's large market could provide much needed economies of scale to Uruguay. However, gravity models shows that during the 2010-2012 period Uruguay under-traded with Argentina on both commodities and differentiated products while it under-traded with Brazil in commodities. This in part because of the bloc's failure to fulfill its original ambition of establishing a customs union with a common external tariff and no internal barriers to trade. Tariff and non-tariff barriers within the union continue to exist. For instance, Argentina in 2011 eliminated automatic licensing on imported goods, including those from its Mercosur partners, causing an immediate and measurable slowdown in imports. Recently introduced rules target services imports to Argentina, and require importers to seek government permission before spending more than $100,000 on foreign services or making large installment payments for such services. Brazil has sought tariff hikes on goods affecting trade with a wide range of partners and has retaliated against Argentine actions with measures of its own. These barriers constrain Uruguay's preferential access to the Mercosur market and encourage investments to gravitate to the larger markets. Differences between investment promotion regimes among the Mercosur countries also influence investors' decisions of where to locate their investments.

81. **A challenge for Uruguay as it tries to further diversify its economy and exports is that, as a result of Mercosur rules, it faces relatively high tariffs on capital goods imports from countries outside Mercosur.** Although Most Favored Nation (MFN) tariffs on capital goods imports have declined over time (and are lower than in Argentina or Brazil), they remain higher than in comparator countries (see Figure 46). This increases the cost of capital goods, which can reduce technology adoption and productivity with implications more generally for

[26] Mercosur was established in 1991 by Argentina, Brazil, Paraguay, and Uruguay with the goal of creating a seamless single market. Today the combined market (including Venezuela) encompasses more than 250 million people and accounts for more than three-quarters of the economic activity on the continent—a market that is approximately 46 times that of Uruguay in terms of GDP and 65 times by population.

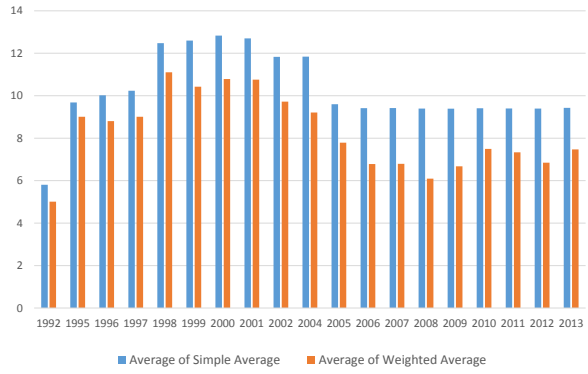
Uruguay's diversification strategy. Tariffs for intermediate imports are also higher in Uruguay than in comparator countries.

Figure 46. MFN Tariffs on Capital Goods Imports



Note: 2011-2013 average.
Source: UN, TRAINS.

Figure 47. Uruguay MFN Tariffs on Capital Goods Imports



Source: UN, TRAINS.

82. **A Mercosur consensus clause requires that all five (Venezuela joined Mercosur in 2012) full members must agree on any major decision, and this includes sensitive issues such as expanding trade partners and setting tariffs.** Consensus has been difficult to reach: talks to secure a trade agreement with the EU began in 1999 but have not advanced, with subsidies for European farmers and tariffs on industrial goods being among the stumbling blocks. Other outstanding issues relate to intellectual property, government procurement, services, and competitiveness rules. Negotiations on a planned, US-backed Free Trade Area of the Americas (FTAA) have been similarly stalled.

83. **Uruguay has continued to promote a policy of open regionalism within the Mercosur framework, and to seek greater flexibility overall, particularly regarding trade agreements with third countries.** The loss of access to the Generalized System of Preferences as Uruguay graduated to high-income status, as well as the weak economic performance of its Mercosur trading partners, underlines the need for the second prong of such a strategy. As shown in the previous section, there still exists significant untapped potential for increasing Uruguayan exports in traditional and regional markets. Uruguay has looked for additional opportunities to increase access to its numerous non-Mercosur trading partners. FTZs have also formed a core part of the effort to diversify markets and exports. Uruguay has focused on increasing its presence in new markets such as China, Russia, and emerging countries, and has targeted high-quality and high-price niches in Europe and the US for some of its products. Another case in point is Mexico, with whom Uruguay already has a free trade agreement (following the granting of an exception to Mercosur rules) and has encouraged companies from third-party countries to set up a portion of their production chain in Uruguay. Uruguay has also pursued closer relations with the Pacific Alliance (whose members include Chile, Colombia, Mexico, and Peru), with which it currently has observer status. While Mercosur has preferential trade access to less than 7 per cent of global markets, the economies of the Pacific Alliance on average have trade pacts with countries representing almost 75 percent of the world economy (abeceb.com). Expanding exports of non-traditional services could play an important role in sustaining growth, especially since remoteness plays a much smaller role in the comparative

advantage. Subsequently gaining market access through participating in the Trade in Services Agreement (TISA) effort is crucial to diversifying exports and, ultimately, to creating good quality jobs.[27]

84. **The Free Trade Zone regime has provided greater trade flexibility to Uruguay albeit at a fiscal cost.** The free zone regime that has been implemented since 1987 exempts companies operating in these zones from all national taxes, except from social contributions, and goods and services may be imported free of import duty or taxes no matter the origin. Goods produced in these zones may be sold in Uruguay's customs territory after payment of all customs duties and taxes.

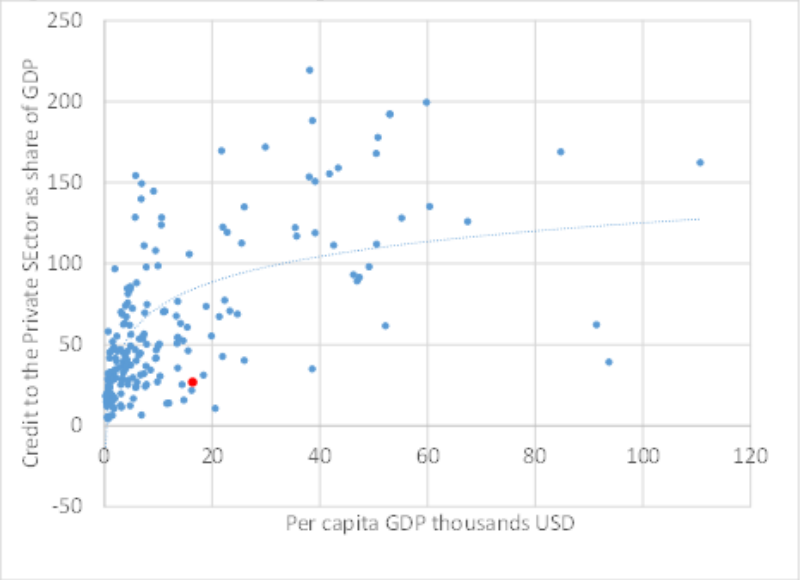
ii. Access to Finance

85. **Domestic credit to the private sector is low in Uruguay relative to its income level.** Credit to the private sector rose to about 26 percent of GDP in 2013, compared with close to 150 percent in high-income countries (see Figure 48). Access to credit domestically, particularly long-term credit, may be a constraint to some firms, particularly large ones, although the evidence is mixed and interviews with firms did not uniformly identify it as a key constraint. For instance, while access to finance was noted as a major constraint for 16 percent of Uruguayan firms, only 8.8 percent of firms identified this as the top constraint (World Bank Enterprise Survey, 2010). However, only 5.7 percent of firms whose exports represented 10 percent or more of sales reported access to finance as a major concern. These firms rely to a greater extent on bank finance for their working capital (11 percent) and investment (23.4 percent). Own-financing plays an important role in financing investment for Uruguayan exporters, accounting for 63.9 percent of needs, while supplier credit accounts for 9.4 percent. The role of supplier credit is more important in Uruguay than in high-income non-OECD countries, where it finances about 4 percent of investment, and it is an even more important source for financing working capital, accounting for 20.9 percent.

86. **The role of capital markets in financing investments in Uruguay is negligible for exporting firms.** Long-term financing is dominated by institutional investors, such as pension funds, insurance companies, and banks (who hold around 85 percent of total issuances). There has been some increase recently in the issuance of debt by financial trusts (*fideicomisos*) and Obligations now account for a growing part of long-term financing of projects and firms. Moreover, prudential regulations on banks limit the loans to any single borrower to 15 percent of bank assets (5 percent in the case of *Banco Republica Oriental del Uruguay);* thus, the largest firms have to diversify their sources of financing, including borrowing abroad. The degree of financial development has been empirically shown to have an important impact on trade flows and economic growth (Manova, 2013).

[27] The Trade in Services Agreement (TISA) is currently being negotiated in Geneva, Switzerland with 51 participants that represent 70 percent of the world's trade in services. As of July 2014, participants in the TISA negotiations included Australia, Canada, Chile, Colombia, Costa Rica, the European Union, Hong Kong SAR, China, Iceland, Israel, Japan, Liechtenstein, Mauritius, Mexico, New Zealand, Norway, Pakistan, Panama, Paraguay, Peru, Republic of Korea, Switzerland, Taiwan, China, Turkey, and the United States.

Figure 48. Financial Development and Income Level



Source: WDI, World Bank.

87. **Small and medium-size enterprises (SMEs) have less access to credit than larger firms, because of lack of collateral or guarantees and asymmetry of information, among other constraints.** In Uruguay small enterprises finance only 6.6 percent of their investments with bank loans, with 8.1 percent financed from supplier credit. Like other countries in the region, Uruguay has taken steps to reduce the credit constraint for SMEs through the use of private and public credit guarantees schemes (CGS). In 2008 it created the National System of Guarantees for Enterprises (SIGA).

88. **The overall access to financial services is Uruguay at the household level is also below that of comparators.** In Uruguay only about 10 percent of the poorest 40 percent had an account at a financial institution in 2011, compared to the LAC average of 24 percent and 49 percent in high-income non-OECD countries. Furthermore only 1.7 percent of the bottom 40 percent and 8.4 percent of the top 60 percent of the population reported that they had a savings account at a financial institution. The financial inclusion law approved in 2014 is expected to significantly raise these numbers.

ii. Human Capital, Skills and Education

89. **While Uruguay's human capital and skills endowment has been the cornerstone of its ability to innovate in areas such as agriculture, software, and nontraditional services, skills increasingly appear to be in short supply, and there is a growing labor endowment gap with respect to some comparators.** An increasingly sophisticated export base is a central pillar of a trade and integration vision based on high productivity and value addition, and depends on the availability of skilled labor that is able to absorb and adapt technologies and to innovate. Adequate levels of human capital and skills are also essential to maintaining progress on jobs and inclusion. But opinion surveys, such as the World Economic Forum survey and Enterprise Surveys, point to human capital and skills shortfalls. The supply of high-skilled workers in engineering and technology lags that in other Latin American economies. A survey conducted by Inter-America Development Bank (2012) found that 16

percent of companies that sought to hire were not able to fill all the advertised positions, with the positions most difficult to fill being semi-qualified and office jobs and professionals and technical positions. There appears to be a particular shortage of technical, socio-emotional skills, and non-cognitive abilities (punctuality, motivation, effort, respect, etc.). Paragraph 55 above noted the evidence suggesting that one of the key drivers of Uruguay's substantial labor productivity gap with respect to more developed economies is low human capital.

90. **As noted above, Uruguay's endowment of human capital appears to underlie its labor productivity gap, affecting the ability to absorb and adopt new technologies.** In addition to its human capital endowment disparity with respect to OECD countries, there is a considerable disparity in human capital endowment with respect to Asian comparators: In 2010 Uruguay had a 2.2 schooling year disparity vis-à-vis the Republic of Korea for the 55-59 age cohort, rising to five years for the 20-24 age cohort. Even vis-à-vis its comparators in the region, human capital appears to be lagging: while Uruguay has a nearly three-year advantage with respect to Argentina, Brazil, and Chile in the older age group, for the cohort age 20-24 the disparity with Brazil has closed and it has become negative with respect to Argentina and Chile (Barro & Lee 2013).

91. **Today the education system does not perform at a level commensurate with a growth strategy based on high skills, innovation, and productivity.** Uruguay enjoys the one of the highest rates of gross primary enrollment in Latin America (see Table 4), and net enrollment, at 99.5 percent of primary school age children, is higher than that the OECD member countries average of 96.8 percent (OECD/ECLAC 2014). But performance in other areas is less positive. Relative to comparators in the region, secondary school repetition and drop-out rates are high (see Figures 49 and 50), and quality is lacking throughout the system as measured by PISA scores. By the age of 18, only slightly more than half of Uruguayan children—53.9 percent—attend school. This compares poorly with OECD age counterparts (more than 84 percent). Uruguay has one of the lowest rates of secondary school graduation in the region; only Brazil, Colombia and Paraguay have higher upper-middle school dropout rates. At the other end of the spectrum, despite being mandatory, only around 65 percent of 3 year-old children attend preschool (Chile, Ecuador, and Mexico all outperformed Uruguay)**.** These trends are exacerbated by high repetition rates. For the first year in primary school, the repetition rate is 13.7 percent; in the first year of secondary nearly one-third of all students repeats the year (Filgueira, 2013). Repetition rates have increased continually over the past seven years in basic secondary school.[28] This situation is doubly troubling as public expenditure on education has more than doubled as percentage of GDP since 2003, although it is still relatively low at 4.5 percent of GDP (2011).

[28] Several factors have been suggested as underlying Uruguay's high dropout rates. One is high repetition rates. Uruguay's secondary school system was conceived as an elite preparation ground for higher studies, and the transition from primary to secondary is an abrupt one, with repetition rates rising sharply in the first year of lower secondary. According to a recent survey, other factors include lack of interest in what is being taught, taking up employment, pregnancy, and difficulty of subject matter. An additional aspect is the labor market. In recent years, similar to the situation in other Latin American countries, the returns to education have declined in Uruguay. Moreover, it is thought that the labor market is currently at full employment, and employment opportunities for the less skilled at relatively high wages are available in the formal sector. These factors make it increasingly attractive for some to consider the labor market as a viable alternative to remaining in school.

Table 4. Gross Enrolment Ratios (2003-2012)

	Pre-primary (% of children of pre-school age)	Primary (% of primary school-age population)	Secondary (% of secondary school-age population)	Tertiary (% of tertiary school-age population)
Spain	127	104	129	83
Lithuania	77	99	107	77
Poland	74	99	97	74
Estonia	90	98	109	72
Latvia	90	105	99	67
Turkey	29	102	89	61
Hungary	87	101	101	60
Croatia	64	94	98	59
Slovakia	90	102	94	55
Argentina	75	118	90	75
Chile	112	102	90	71
Uruguay	89	112	90	63
Costa Rica	73	107	101	47
Colombia	49	107	93	45
Peru	77	105	91	43
Panama	65	100	84	42
Ecuador	150	114	87	39
Dominican Republic	37	105	75	33
Mexico	99	104	84	28
Belize	47	121	84	26

Note: Gross enrolment ratio: Total enrolment in a given level of education (pre-primary, primary, secondary or tertiary), regardless of age, expressed as a percentage of the official school-age population for the same level of education.
Source: UNESCO Institute for Statistics (2013).

Figure 49. School Attendance by Age Cohort, 2006–2012

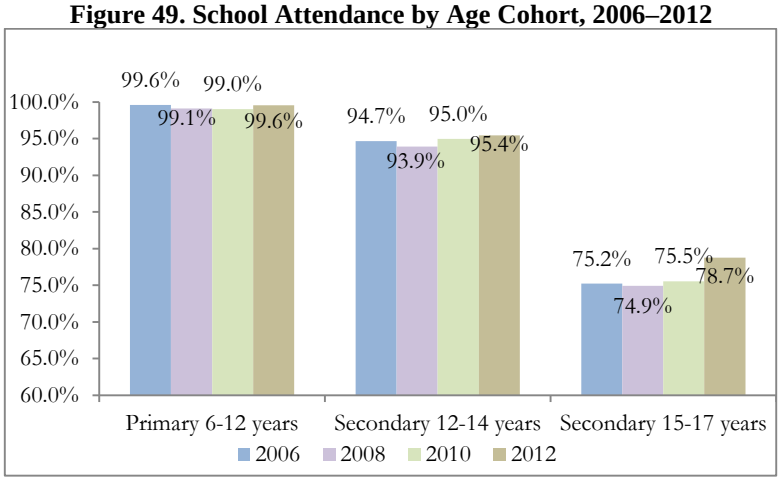
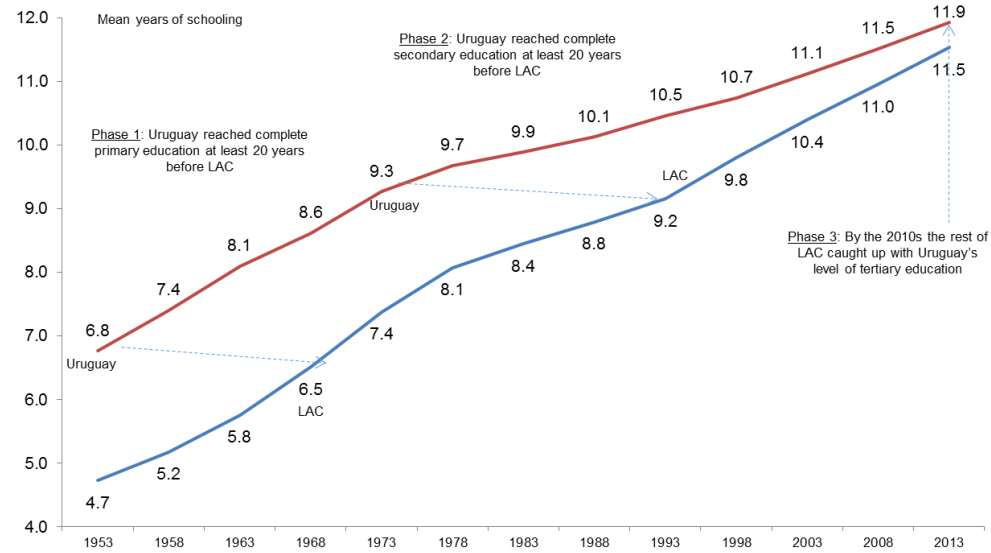


Figure 50. Uruguay Has Lost Its Historical Educational Advantage vis-à-vis LAC Average



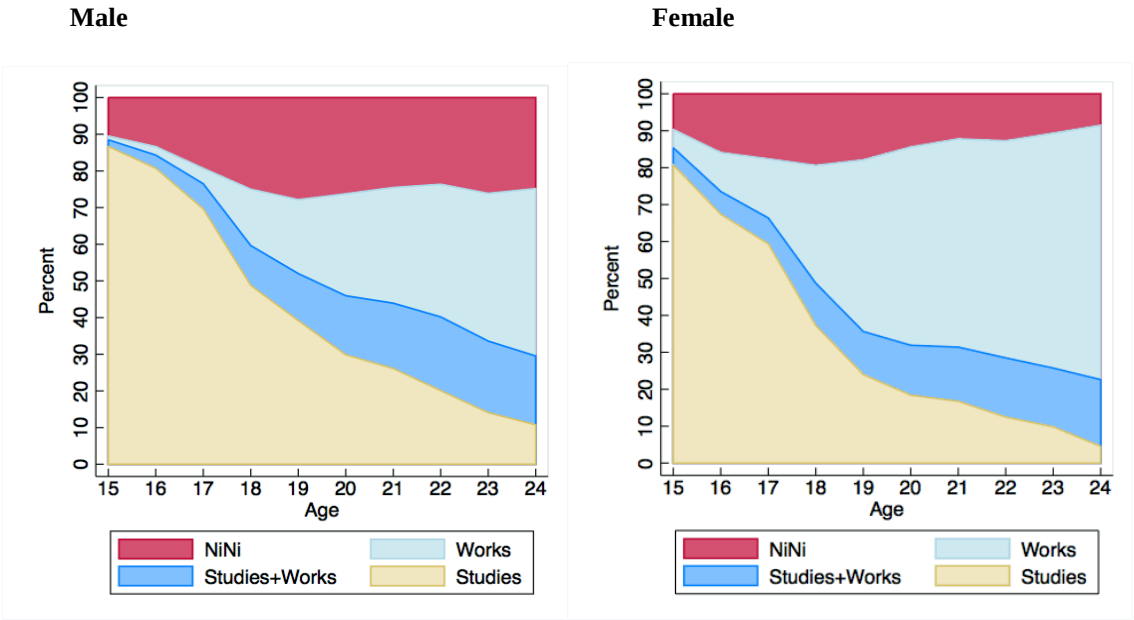
Source: Adapted from Uruguay Education Policy Note.

92. **Educational quality, although high for the LAC region, appears to be deteriorating relative to other nations and is well below that seen in non-LAC OECD countries.** A World Bank (2014) report notes that in the 2012 PISA exams 48 percent of Uruguay's students failed to achieve a score of 2 in science, 49 percent in mathematics, and 39 percent in reading—a score of 2 is considered only a basic ability to apply the material to real world contexts. Moreover, the quality of education, as measured by the PISA test score, has declined in recent years in Uruguay, and the country today ranks 55 out of 65 countries that participate in mathematics for students 15 years old, and in terms of the capacity to solve problems Uruguay ranks 42 out of the 44 participating countries. Closing the disparities in the quality of human capital could give a strong impulse to growth. One estimate suggests that increasing PISA scores by 50 points in 10 years, in conjunction with training workers already in the labor market, could increase GDP per capita by more than one-third by 2050 (IDB, 2014).

93. **One consequence of elevated school withdrawal is that 17.9 percent of the high-school age cohort neither study nor work** (see Figure 51). In 2013 this represented 94,000 youth, almost all (95 percent) concentrated in urban areas, in keeping with the country's overall urban population percentage. This share is somewhat lower than the average for Latin America, where one in five youth is a nini, but it is significantly higher than the global average in high-income countries (about 11 percent of the cohort). Furthermore, the distribution varies markedly within Uruguay, from 22 percent in the northern departments to 14 percent in the south.

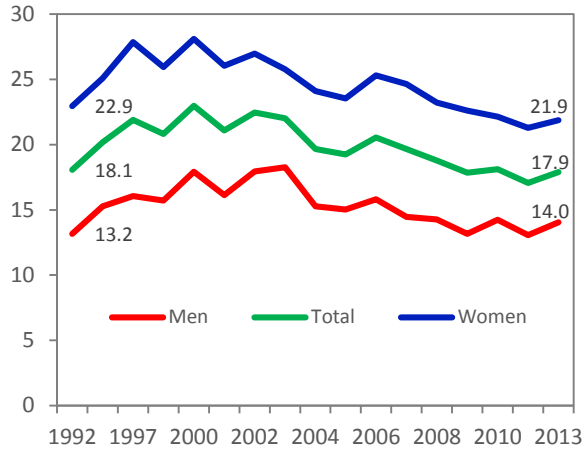
94. **The share of ninis in Uruguay declined steadily between 2000 and 2013 for both genders**. (Elsewhere in the region, the decline in the number of ninis over the last two decades is entirely accounted for by a reduction of female ninis.) Women account for 60 percent of the total nini population in Uruguay; of these, 23 percent between 15 and 18 years of age were married (Figure 53). The latter factor follows the Latin American norm, where the single most important factor associated with the probability of being a female nini is marriage before age 18, compounded by teenage pregnancy.

Figure 53. Education and Labor Market Status by Age and Gender, 2013



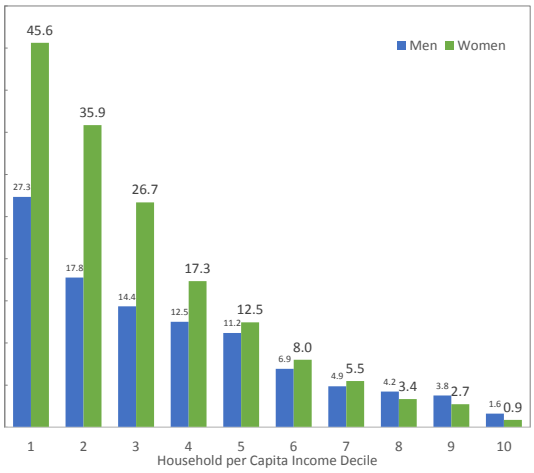
95. **The ninis phenomenon has a strong equity and gender dimension, with implications for intergenerational social mobility.** The incidence of ninis varies greatly across the income distribution, reaching 40 percent in the bottom decile versus only 1 percent in the top decile (see Figure 52). Overall, 75 percent of all ninis in Uruguay are from a household in the bottom 40 percent of the income distribution, making the phenomenon far more biased toward vulnerable households than in other Latin American countries. These are troubling statistics as a significant proportion of young people are not accumulating human capital, whether through formal education or through on-the-job experience. Moreover, given an emphasis on trade integration based on productivity and value addition, as well as an advanced demographic transition toward an aging society, Uruguay can hardly afford to forgo the productive contributions of a fifth of its youth.

Figure 51. Proportion of Ninis (15-24 years of age) by Gender in Uruguay, 1992–2013



Source: World Bank with data from SEDLAC, various years.

Figure 52. Share of Youth (15-24 years of age) Who are Ninis, by Income Decile and Gender in 2013



Source: de Hoyos, Rogers and Székely (2015) "Out of school and out of work: challenges and solutions around the ninis in Latin America."

96. **Beyond the consequences for future growth, competitiveness, and the quality of the labor force, the shortcomings of the education system may jeopardize the sustainability of achievements in inclusive growth in Uruguay.** Sharp differences in educational attainment between the top and bottom income quintiles contribute to the strong association between educational achievement and socio-economic status and to low educational mobility relative to peers. High dropout rates and a large number of youth out of school and out of work may contribute to the perpetuation of concentrated, chronic poverty.

iii. Innovation and Productivity

97. **Maintaining high productivity growth is critical for sustaining economic growth in a less favorable external environment.** Uruguay has achieved high productivity growth in recent years but the gap with aspirational comparators remains significant and the country lags in innovation and R&D,[29] key factors for sustaining productivity convergence.[30] Sustaining high productivity growth to support a growth model based on trade integration and participation in global value chains will require closing the technology and innovation gap; improving production and marketing processes; cultivating entrepreneurship, adaptability, and nimbleness; ensuring adequate access to finance; and upgrading institutions and markets.

98. **A multi-pronged strategy to intensify the knowledge content and sophistication of Uruguay's traditional primary exports and to increasingly specialize in high-value modern services exports can bring benefits.** In particular, such a strategy might focus on

[29] There is a positive correlation between innovation and productivity. After controlling for relevant variables such as human capital, the relationship between these variables in OECD countries is positive and statistically significant.

[30] Some evidence suggests that growth decelerations are essentially explained by productivity growth slowdowns rather than by a slowdown in physical capital accumulation—with 85 percent of the growth deceleration explained by a slowdown in the rate of total factor productivity growth. (Eichengreen, Park, and Shin, 2011.)

sustained growth in value added and sophistication in upstream phases of production in resource-based agricultural chains, along with a strategy of selectively upgrading toward downstream phases of the chain and further diversification of the primary products export mix. It would also entail broadening the portfolio and knowledge-intensity of those export services that are not constrained by scale or geographical proximity requirements. Identifying and addressing both the economy-wide and industry-specific policies and regulatory changes that would enable the implementation of such a global integration strategy remains a critical policy priority for Uruguay (see Box 3).

Box 3. Strengthening Uruguay's Participation in Global Value Chains

Opportunities for better international integration and insertion into global value chains vary by industry and depend on global demand trends, multinational sourcing and localization strategies, and competitive dynamics within each segment of the chain, among many other variables. An analysis of some of Uruguay's key industries reveals the following opportunities and policy challenges:

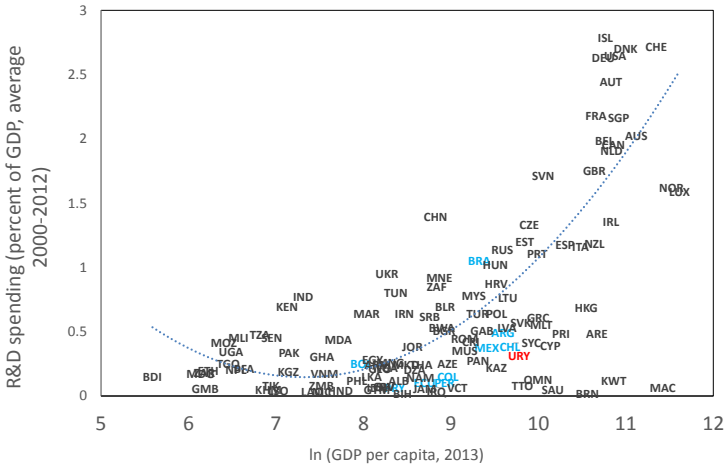
The forestry and pulp & paper industry in Uruguay is characterized by strong vertical integration (with up to 50 percent of plantations owned by processing companies), high entry barriers with a minimum capital investment of $2.5 billion, long investment and production cycles, and high logistics and transport costs (which can amount to half the cost of wood logs delivered to the processing plant). Compliance with international sustainability certifications and close-to-the-technological-frontier productivity levels are the two critical success factors that have enabled Uruguay to gain a solid foothold in global markets. Pursuing a strategy of continual investment in innovation and variety development in partnership with the National Institute of Agricultural Research (INIA) will continue to drive productivity and consolidate Uruguay's international positioning as a sustainable, cost-effective producer. Policies to supporting this strategy include (i) strengthening the public-private innovation ecosystem and regulatory framework; (ii) striking the right balance between the devolution of the licensing powers for forestry plantations to local authorities and the need to ensure policy predictability for an industry characterized by high capital investments and decennial production cycles; and (iii) investing in transport infrastructure, as high costs adversely affect the competitiveness of the industry and the rate of reinvestment by foreign operators.

The dairy and beef industries in Uruguay benefit from the same set of agricultural innovation and extension services and both enjoy internationally competitive production costs and productivity levels. Whereas the beef industry has repositioned itself as the sixth largest producer of top-quality beef, which is exported to more than 100 countries at significant price premiums, the export mix of the dairy industry is primarily constituted of powdered milk and casein, sold as commodities to global industry players for further processing. The far-sighted vision of the beef industry (and the National Institute of Beef/INAC) to invest in a state-of-the-art public-private traceability system and leverage it for country brand recognition and as a value chain-upgrading mechanism largely explains the better positioning of the beef industry. Two factors constrain the industry's effort to replicate the trajectory of the beef industry. First, volatile trade policies in neighboring and regional markets include sudden trade policy shifts and non-tariff barriers, which deter firms from investing to upgrade toward higher-value dairy consumer products characterized by a short shelf-life and just-in-time linkages that require seamless cross-border operations. Exacerbating this are the limitations within Mercosur in negotiating bilateral trade agreements to gain access to more profitable albeit distant export. Second, the shift toward automation of the dairy production process, which according to firms is in response to challenging industrial relations and high labor costs, does not lend itself to the production of labor-intensive, high-end dairy consumer products.

Box 3. (Continued)

Software and global business services explain much of the dynamism of the services sector in Uruguay over the last decade. The software industry is characterized by relatively low capital investment and start-up costs, a modular and scalable business growth model based on portfolio diversification as the main strategy of financing continuous innovation, and human capital as the critical asset representing up to 90 percent of operating costs. The initial service partnership with the first wave of FDI in the financial and distribution sectors has fostered the entry into regional export markets, as these multinational clients have consolidated their operations throughout Latin America and brought with them their Uruguayan software services providers. At the same time, Uruguay has been able to ride the wave of global business services offshoring, attracting key players in the industry. While both industries seem well positioned to contribute to the overall strategy of further specialization into high-value modern services exports, they would both benefit from a concerted policy initiative to address the following issues. First, the Program for Animal Product Traceability launched by the Ministry of Agriculture, Livestock, and Fishing/MAGP in 2003 was very successful in catalyzing the technological growth of the Uruguayan software industry and, ultimately, in significantly enhancing the sophistication of the beef export process. Leveraging and expanding this experience to other export-oriented products in agriculture, agribusiness, health, biotech, and energy would help boost the export competitiveness of both the software services and resource-based industries. Second, the initial entry into a new export market by an individual software company requires a minimum investment of $300,000, a business development effort of one year, and a minimum annual turnover of $4 million. There is a mismatch between these minimum entry requirements, which can primarily be met by medium-sized or larger companies, and the focus of government export promotion programs, which target small enterprises unable to meet these entry requirements. Third, these service industries have grown their exports despite a lack of bilateral or multilateral free trade agreements. However, this situation is beginning to erode the cost competitiveness of software exporters, as they are subject to differential tariff rates (for example, 10 percent in Paraguay, 25 percent in Peru). The participation of Uruguay in multilateral trade agreements such as the Trade Agreement in Services (TISA) currently under negotiation would enhance the export competitiveness of Uruguayan service exporters. Fourth, human capital is the key asset for the sustainability of a knowledge-intensive modern services industry, and Uruguay has performed well over the past decades in supplying a sizable pool of skilled workers. However, the strong demand growth for skilled workers by the software and global business services industries (estimated by the Uruguayan Bureau for Information Technology/CUTI at 500 technical graduates annually) has already outpaced the supply of technical graduates (300 annually) by the Uruguayan educational system.

Figure 54. Uruguay Spends Little on R&D



99. **Although Uruguay does relatively well in some aspects central to boosting productivity and innovation, such as technological readiness** (see subsequent Box 4 for sectoral examples), **ranking 46 of 144 countries in the Global Competitiveness rankings, it lags in others.** It ranks at number 86 in innovation (Global Competitiveness Report, 2014-2015)**.** Economy-wide, Uruguay spends little on innovation (although there is significant variation by sector):[31] today Uruguay spends 0.4 percent of GDP on research and development, significantly less than OECD countries (2.2 percent) and less than some Latin American countries with a lower GDP per capita. Although innovation in some value chains is high, preliminary data indicate that on average, Uruguay lags far behind Asian Tigers and some middle-income countries in its ability to innovate at the technological frontier, and that it has fallen farther behind as it has grown richer (World Bank 2014a), in part because its returns to innovation are relatively low (Nguyen and Jaramillo 2014). Regardless of sector, Uruguay, like other Latin American countries, makes less intensive use of R&D compared to other industrialized countries (see Figure 54). Innovation in Uruguay explains less than 10 percent of TFP growth, compared to more than 40 percent in high-productivity growth countries such as Finland, Ireland, Korea, and Singapore when they had per capita incomes levels similar to Uruguay's. Productivity across and within sectors is heterogeneous, and is linked in part to the prevailing degree of innovation.

100. **Low productivity, together with a lack of technological information and organizational rigidities, appear to be important deterrents of innovation for about a third of firms in Uruguay.** Other factors that inhibit innovation include the low capacity for technology absorption of Uruguayan firms relative to those in other countries, partly as a result of the quality of human capital (years of schooling, quality of education, curricula) as well as insufficient access to technological services. This insufficient access is more pronounced for intangible technologies as opposed to technologies embedded in capital. The degree of innovation varies significantly across sectors, with export-oriented agricultural sub-sectors such as rice, citrus, dairy, cattle, and forestry innovating more on average. Low productivity

[31] There is a large dispersion in spending on R&D across sectors in Uruguay, averaging 2.6 percent of output value in informatics, 1.5 percent in animal rearing, 1.3 percent in cereals cultivation, and 0.2 percent in the auto sector (Aboal et al. 2014).

and scarce innovation may also be linked to insufficient entrepreneurial capabilities of Uruguayan firms. Uruguay ranks lower on managerial capacity in firms and exhibits a lower level of private sector financing for research and development compared to Australia, Chile, Costa Rica, New Zealand, and other comparators.

101. **Upgrading institutions and markets is also central to sustaining productivity growth and spurring innovation.** A higher degree of competition in the domestic market can boost productivity and competitiveness in global markets by ensuring the availability of competitively-priced inputs to the production process. Limited competition and the lack of a level playing field can also limit innovation. Competition in Uruguay is still perceived as weak by global standards and Uruguay ranks 103rd out of 144 countries in the intensity of local competition and 109th in the effectiveness of its anti-trust policy (WEF, 2014). Limited competition and an uneven playing field may limit innovation and constrain competitiveness. Although a new Competition Law entered into force in 2007 and the Commission for the Promotion and Defense of Competition was established in 2009 as a decentralized body of the Ministry of Economy and Finance, according to a 2010 study by MEF, only 7 percent of firms were aware of the new competition policy legislation.

102. **The State is involved in many economic activities in Uruguay, and SOEs often play a dominant role in markets that in other contexts are typically served by the private sector.** There are 13 public enterprises in Uruguay (100 percent public), and most are dominant in the local market. The major ones include ANCAP (energy), ANTEL (telecommunications), UTE (electricity), OSE (water and sewerage), and BROU (bank). This large role for the State is partly explained by a small market size, which in certain cases may lead to the rise of natural monopolies or to a determination that specific services are part of the public domain because of their importance (referenda have supported State control of some key utilities). Although exceptions may be granted to protect specific public policy goals, it is desirable that they be limited in scope and based upon clearly defined criteria. In the EU, undertakings entrusted with the provision of "*general interest*" are exempted from the application of general competition and State aid rules, but only to the extent that the application of such rules obstructs the provision of the service. A preliminary assessment using the OECD's Product Market Regulation methodology indicates that the degree of State control—public ownership and direct involvement of the State in the business sector—is higher in Uruguay than in OECD countries, with regulations that restrict number of firms or ban private investment in certain sectors, may facilitate anti-competitive practices or discriminate against certain market players, and allow for discretional application of rules. Among the main identified challenges for public enterprises are the need to (a) strengthen governance through greater transparency, monitoring, and accountability, and (b) improve efficiency to increase the quality of service delivery (World Bank, 2015)

103. **Another important aspect in the innovation and productivity discussion is the role of SMEs; this is particularly important from an inclusion and shared prosperity perspective.** SMEs represent close to one-fifth of all firms in Uruguay. When micro enterprises are included, the proportion rises to close to 97 percent of all firms (OECD/ECLAC 2012) and 60 percent employment (Inter-American Development Bank, 2012).[32] Compared to larger firms, SMEs face major constraints on efforts to innovate: restrictions on access to domestic and foreign financing, as well as requests for guarantees and high interest rates. Innovation also

requires economies of scale and of scope, adding a further difficulty for SMEs. The result is that many firms do not grow and new ventures are fewer. The gap between the innovation-related activity of large and small firms in Uruguay appears to be larger than that in other countries in the region, at 17 percent, compared to a figure closer to 10 percent in Argentina, Chile, Colombia, and Costa Rica (OECD/ECLAC, 2012). Despite these constraints, SMEs bring flexibility to innovation processes thanks to a more malleable organizational structure that allows them to respond quickly to change. Moreover, private financial institutions in Uruguay are focused almost solely on large or sophisticated enterprises or upper-middle and high-income households. Part of the reason for this may be the sector's high-cost labor structure. This depresses investments among Uruguayan SMEs and leaves much of the population to be served by high-cost, non-bank intermediaries that provide only basic services, with an important impact on equity and shared prosperity. Some evidence also suggests that innovation-driven growth is inclusive from an employment standpoint, with the strength of firms' innovation-driven employment growth being significantly and positively associated with the share of the firms' unskilled work force. This supports the propositions that innovation is a powerful driver of employment growth, and that innovation-driven growth is inclusive in its creation of unskilled jobs (Dutz et al., 2011).

iv. Infrastructure

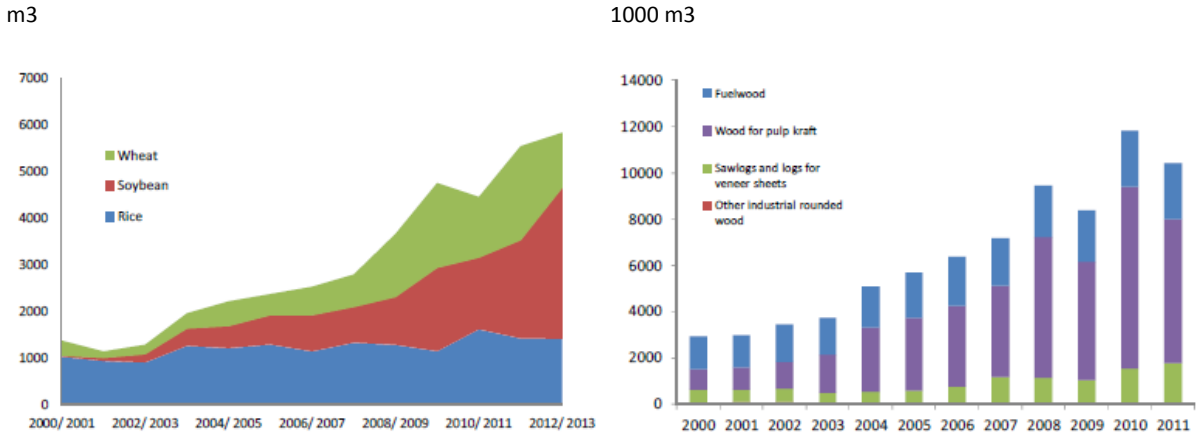
104. **To enhance competitiveness it is also important to improve connectivity through strengthened infrastructure (especially transport) and logistics.** Given Uruguay's distance from the main international trade growth poles, excellent connectivity is key to competitiveness and exports. Despite significant investments in infrastructure and key successes in the telecommunications and energy sectors (see Box 4), substantial further investment is required to close the gaps in transport infrastructure so as to improve access to markets.

105. **While exports, and in particular agricultural exports, have increased exponentially over the past decade, this has not been met with increased investment or maintenance in transport infrastructure.** It is estimated that the volume of merchandise transported largely on the road network grew by 180 percent between 2000 and 2011. Projections are for an increase in the demand for transport of between 68 and 135 percent for Uruguay's key agricultural exports (wood, grains, milk and dairy products, and beef); see Figure 55. However, Uruguay suffers from an infrastructure gap that poses a constraint to continued high growth rates. The quality of road and railroad infrastructure rank 90th and 103rd out of 144 countries, respectively, in the World Economic Forum's 2014 Global Competitiveness Index. The vast bulk of all domestic transport in Uruguay occurs on roads; rail and riverine transport is marginal, transporting less than 3 percent of all cargo within the country.

106. **Although the density of the road network is high, its uneven quality is a particularly problematic factor for competitiveness, contributing to high logistics costs relative to competitors.** The deterioration of road network quality appears to have reached a critical juncture. Increased use, particularly by heavy trucks, has resulted in the progressive deterioration of the road network in recent years, especially since 2008. By 2013 only 40 percent of the national road network was classified as being in very good or good condition. Many of the most heavily used corridors for export—the transversal roads crossing the country west to east—which have not been designed for heavy cargo traffic, are also in the worst state,

imposing increasing costs in terms of time and vehicle maintenance on users. For soy, for instance, it is estimated that logistics costs represent about one-third of the FOB cost in Nueva Palmira, despite this being a short (less than 250 km) chain, compared to only one quarter of the FOB cost in Rosario (Argentina) for a similar logistics chain (World Bank, 2015). Another study concluded that logistics costs in forest products represent more than half of production value. Addressing cost issues will be important if these are not to act as a brake on Uruguay's competitiveness

Figure 55. Grain and Wood Production in Uruguay, 2000-2012



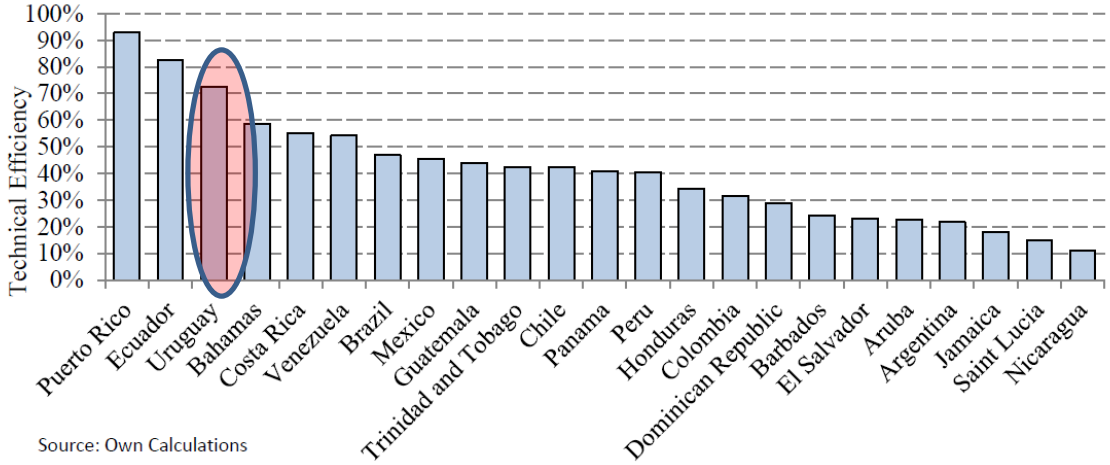
Source: Logistics Policy Note, World Bank, 2014.

107. **Under current financing modes, Uruguay cannot afford its road network and new financing mechanisms are needed.** Recent analyses (Caceres and Farinasso, 2013; Capurro et al., 2014) have attempted to estimate the financing needed to salvage the quality of the road network and ensure its continued maintenance. Although public spending on road maintenance has increased in recent years, it remains insufficient to compensate for the deterioration of the network. Estimates suggest that annual maintenance expenditure needs to double from the current 0.5 percent of GDP. In addition to this recurring annual requirement for maintenance, an investment on the order of 4-4.5 percent of GDP is required to compensate for the maintenance deficit in the main road network since 2000. Given the current fiscal realities and the need for fiscal adjustment in the medium term, financing all of these needs through the budget is simply out of the question. Complementary financing for the maintenance of the road network may include tolls, user charges, and specific taxes, and Public-Private Partnerships (PPPs), although each has its limitations. As only about 30 percent of gasoline tax revenues are allocated to transport and road safety, the possibility of additional budgetary resources to the sector is a consideration.

108. **Rail transport does not represent an alternative to roads as it is largely uncompetitive, with severely deteriorated infrastructure as a result of numerous years of lack of maintenance and investment.** Broadly, rail transport is likely to only be competitive for a few route segments. Only half of the rail network is operational and the State Railways Administration (*Administración de Ferrocarriles de Estado*/AFE) is highly inefficient and its efforts at institutional reform are incomplete. The costs of wholesale rehabilitation of the system appear to be too high given the demand and existence of cheaper alternatives.

109. **Another challenge to increasing Uruguay's global competitiveness and to integrating into global value chains relates to port infrastructure.** Montevideo's port performance has improved substantially in recent years, although it is challenged by difficult land and maritime accesses; maintaining this competitive advantage is a key challenge if Uruguay wants to consolidate its competitive position in the River Plate Basin. Volumes passing through the port of Montevideo increased from 588,000 ton equivalent units (TEUs) in 2009 to 830,000 in 2013, a testament to the port's technical efficiency (see Figure 56), representing over half of all merchandise movements through commercial ports in the country (the port of Nueva Palmira moves most of the remaining cargo).

Figure 56. Port Technical Efficiency in Latin America (containers)



Source: Logistics Policy Note, 2014, based on "World Bank- Benchmarking Container Port Efficiency in LAC."

110. **Looking beyond the transportation of its domestically produced cargo, Uruguay aims to position itself as a distribution center and logistics hub in the Southern Cone,** building on its central location in the south-eastern South American market; its free-trade-zone legislation; more competitive transit times to major destinations than Buenos Aires; low port costs; and the Paraguay-Paraná river connection to inland production areas of Uruguay and Argentina, as well as Paraguay and Bolivia and interior parts of south-western Brazil. With logistics and transport services that compare favorably with others in the region and with middle-income countries generally, Uruguay's potential as a regional logistics hub depends on a highly efficient logistics system and low logistics costs. Domestic and trade policies have played a crucial part in the development of Uruguay's logistics sector. In particular, trade and investment policies and policies for trade in services have enabled the provision of logistic services by national and foreign providers, which have been able to benefit from two special regimes: the free port and the free zone laws, which have enabled the development of world class maritime and logistics services and allowed providers to handle goods in transit and to add value to traded goods beyond transshipment.[33]

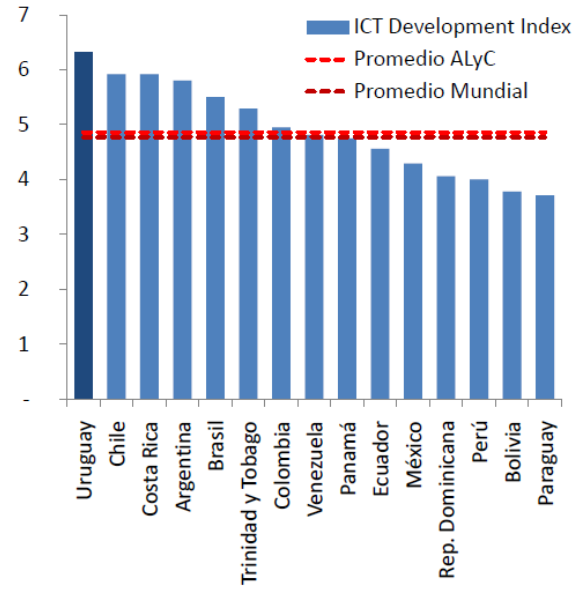
[33] For the longer term, the construction of a deep water port at Rocha has been under discussion for decades, including feasibility and other studies. The development of a deep water port is in the near term conditional on the existence of sufficient demand, such as that from a potential development of iron ore mining (the recent fall in iron ore prices appears to have put negotiations on hold).

Box 4. Energy and Telecoms

Uruguay is revolutionizing its energy matrix, moving toward wind and biomass, in the search for reliable and reasonably priced energy. The electricity sector has traditionally been heavily dependent on hydropower, which has represented anywhere between 40 and 80 percent of the electricity mix in a given year, depending on water availability. During drought years, supply is complemented with costly thermal electricity and imports. The result has been a weighted average tariff of 12.27 cents per kWh, among the highest in Latin America. As Uruguay has reached its hydroelectric potential, large investments by both the public and private sectors are transforming the electricity matrix to one where about half of electricity will be generated by non-traditional renewable sources, including Eolic energy and biomass from forest and paper pulp plants residue. As a result, the cost and volatility of electricity production will decline markedly. As many wind farms begin production in 2015, the structural vulnerabilities of Uruguay's electricity system consequent upon hydro dependence will start declining. Wind energy installed capacity is expected to increase by a factor of 30 by early 2017 meeting, nearly a third of the country's electricity needs. Moreover, the regasification plant under construction, which is expected to come on-line in 2015, will lower the costs of thermal energy; and investments of $1.6 billion are expected in off-shore hydrocarbon exploration. With this transformation, Uruguay should achieve energy security and independence even in drought years, and be in a position to export energy in rainy years. On the social front there has been a universalization of access to electricity in the country, where almost 98 percent of households—including 97 percent of poor households—have access to the national electricity grid.

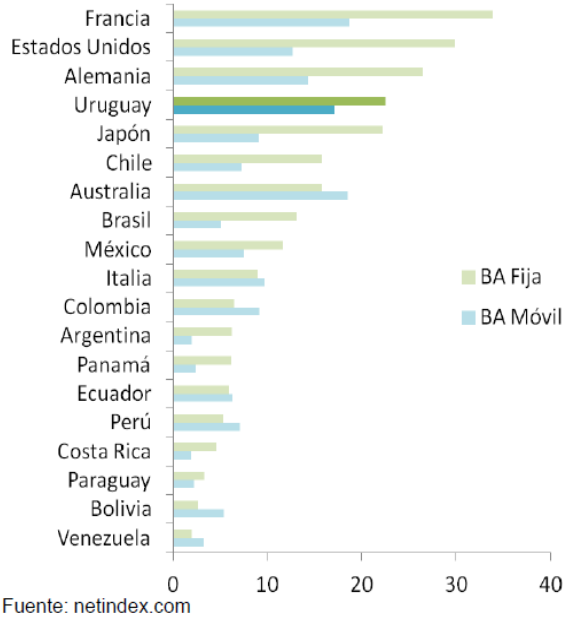
A similarly positive story can be told for ICT, a sector whose development is central to promoting increases in productivity in the economy as a whole. Uruguay is an ICT leader in the region according to a variety of measures. The number of households with computers has grown rapidly since 2004 and today surpasses that of Argentina, Brazil, Chile, and Colombia and is on a par with Italy. Similarly in terms of mobile telephony, the number of telephones per 100 persons surpasses that in regional comparators (with the exception of Argentina, which has a similar figure) as well as a number of OECD countries, such as the Germany, Spain, and the US. Uruguay also leads regional comparators in the index of ICT development. Data services stand out globally for their high speed and low price.

Figure 57. Index of ICT Development



Fuente: UIT (2014), *Measuring the information society*.

Figure 58. Broadband Downloading Speeds, Fixed and Mobile, 2014 (in mbps)



Fuente: netindex.com

v. Natural Resource Management

111. **Uruguayans' prosperity has been built to a significant degree upon the country's natural resources wealth.** A key ingredient for the sustainability of economic growth and continued progress in improving livelihoods is ensuring the sustainable management of Uruguay's natural resources. **Uruguay** has one of the highest proportions of land suitable for agricultural production in the world, at 85 percent of its total land area. Tourism, a significant sector in the economy, depends to a large extent on the quality of Uruguay's natural resources. Water resources are also abundant, and aquatic ecosystems are critical given the many environmental services they provide, including water quality, fisheries, generation, tourism, and a rich biodiversity. Uruguay's biodiversity is globally significant thanks to its location in the confluence of the Amazonian and Chaco domains, comprising savannah, native forests, wetlands, coastal ecosystems, and their associated wildlife. Resolving resource sustainability issues is essential for Uruguay as it aspires to brand itself a leader in the sustainable and integrated management of its soil, water, and biodiversity resources, differentiating itself through building a reputation as an exporter of clean, green goods and services.

112. **As a small country with limited land on which to expand production, Uruguay has intensified land use and production practices for higher productivity in the agricultural, livestock, and forestry sectors.** Rising international commodity prices have encouraged significant investments in major agricultural production chains, with intensive use of natural resources, expansion of the agricultural frontier, and increases in yields. The result has been a number of key changes in agriculture management, including (a) a rapid increase in arable land, which has grown at an average annual rate of close to seven percent between 2006 and 2011, driven by an expansion of cropland; (b) expansion of forest cover, with large investments in the forestry, wood, and cellulose complex; (c) more intensive fertilizer and pesticide use; (d) greater reliance on irrigation; and (e) increases in livestock densities.

113. **The intensification of production has revealed a number of vulnerabilities.** Some challenges in this area include the expansion of crop (especially soy, whose share of total arable land increased from 2 percent in 2000 to almost 50 percent by 2011) and forest production into marginally suitable lands. This has contributed to an increase in the use of agrochemicals, a higher incidence of environmentally unsustainable mono-cropping, soil erosion, a growing need for irrigation as well water resources degrade, and reduced biodiversity. The conversion of natural grasslands, which represent close to 85 percent of agricultural land, into arable land is approaching its agronomic limits.[34]

114. **In light of these challenges—as well as opportunities—the principle of sustainable intensification has become central to the government's strategic priorities.** In response, Uruguay has moved to regulate soil management and associated environmental impacts; two measures to mitigate potential degradation have been the provision of incentives to promote sustainable forestry and the implementation of soil management plans in 2011 that oblige a majority of crop producers to submit annual land use plans along with evidence of resource-adapted crop rotation. In 2013, this pilot was scaled up and became a requirement for any farmer cultivating more than 100 hectares. By early 2014, more than 8 percent of the country was covered by approved soil management plans. These activities are conservatively estimated to have increased annual soil carbon sequestration by about 2 million tons, valued at $74

[34] Arable land prices have risen rapidly as a result, by more than five-fold since the early 2000s.

million annually. “Landscape approaches” that integrate the management of land, water, and biodiversity resources, and promote conservation and sustainable use in an equitable manner have also received increased attention.

115. **Agricultural policy has also focused primarily on the provision of public goods rather than the direct support of individual incomes.** One such example is Uruguay’s consistent focus on product traceability, food safety, and quality standards to ensure the sector’s sustained, strong, and successful links to export markets. The provision of information required to make policy and/or entrepreneurial decisions, the internalization of external environmental costs through stimulating responsible management of soil, and the provision of technology packages for enhanced resilience through climate-smart agricultural water management are three key public goods emphasized by public policy.

116. **Uruguay is a global leader in advocating for climate-smart agriculture and agricultural development and in innovating techniques and technologies for sustainable intensification, providing a global good in this domain.** Agriculture is likely to be the sector most directly and severely affected by climate change. According to General Circulation Models, land productivity could fall to a level 62 percent below the current levels for commercial farms and 54 percent below for small family-owned farms by 2020 as a consequence of weather-related events. Analysis comparing current flood-prone areas in Latin America with areas likely to receive significantly more rainfall in the future finds that much of Uruguay’s territory will become more endangered by flooding—an ominous development given the country’s reliance on agricultural exports.

117. **With a low emissions footprint, Uruguay has minimal responsibility for global warming and unilateral reduction of its own national emissions will make scant difference in the eventual impact of climate change on its citizens.** However, beyond important altruistic motives, there are also reasons to think that climate-smart agricultural development through a strategy of reduced emission could position Uruguay to take advantage of market opportunities and improved competitiveness in an increasingly carbon-conscious global market, as products that can be branded “low carbon” may command premium prices. Moreover, some options that reduce emissions have significant additional benefits: better agricultural practices can improve soil conservation and biodiversity, while sequestering carbon, reducing emissions from the soil, and collecting methane from waste to generate power production—thus either generating revenue or reducing spending on energy. (World Bank, 2014).

118. **As Uruguay’s emissions mix is dominated by agriculture, the sustainability metrics for this sector are of critical importance for the mitigation efforts of the country overall.** There are a number of attractive mitigations options available to the Uruguayan agriculture and forestry sectors that could provide a significant reduction in emissions and an increase in net sequestration at a relatively low cost, although the private sector is unlikely to undertake these mitigation strategies in the absence of policy incentives. These key options include the expansion of commercial forestry, improved livestock diets, changes in natural grasslands management, and increases in irrigated area. These four key technology adjustments—which are already beginning to be implemented in Uruguay—would annually account for at least 13,000 ktCO2e (321 ktCO2e) until 2025. Beyond greenhouse gas (GHG) mitigation, many of these low carbon interventions are associated with environment services, enhanced rural livelihoods, and resilience to climate change. For instance, increasing the

productivity of grasslands has the potential to contribute significant increases in soil carbon sequestration while enhancing returns to livestock production and improving rural incomes. Silvo-pastoral systems can create a more sustainable landscape for livestock production as well as enhancing biodiversity through the creation of biological corridors.

119. **While soil management and conservation through innovative practices have been a major focus of policy attention, and integrated management of soil, water and biodiversity is a policy goal, progress in the conservation of water resources has been slow.** Uruguay has abundant water resources (per capita renewable water resource availability of more than 40,000 m3 compared to a world average of 8,500 m3).[35] Nevertheless, in recent years water availability and quality of important water bodies have significantly deteriorated. Among the main risks affecting Uruguay's water resources are (a) the deterioration in the quality of superficial waters (streams, rivers, lagoons, and reservoirs), (b) loss of biodiversity, (c) acceleration of urban development in fragile coastal areas, (d) weak governance and conservation, and (d) aging water storage infrastructure. Poor water resources management can have significant effects on public health, water access, on livelihoods in tourism-dependent local economies, as well as on economic activity in all sectors.

120. **While Uruguay enjoys almost universal coverage in terms of potable water (at about 98 percent), the increasing pressure on water resources by agriculture and other users combined with the weak water integrated resources management practices and lack of enforcement of updated environmental law threaten to reduce, in both quantity and quality, peoples' access to water.** In terms of water quality, point source pollution (industrial and municipal wastewater discharges) and diffuse pollution from agriculture and urban sources have had a significant impact. According to the 2012 Montevideo water quality annual report, coliform bacteria, biochemical oxygen demand, sediments, heavy metals, and agrochemical runoff are affecting many of Uruguay's drinking water sources. Coastal areas of Montevideo, Ciudad de la Plata, Maldonado, and Santa Lucia, and international rivers such as the Río Uruguay, have high concentrations of total solids and heavy metals, among others parameters. Agricultural production and its intensification are placing stress on Uruguay's water resources. The growing use of fertilizers and agrochemicals is leading to the degradation of water quality. Industrial pollution and municipal wastewater discharges are serious concerns. An example of the impact of growing contamination of water resource is the case of the Santa Lucia River, which is the main drinking source for the Montevideo metropolitan area, home to about 60 percent of Uruguayans. The algae bloom episode in 2013 Rio Santa Lucia, which caused bad taste and odor in the drinking water of roughly 2 million Uruguayans, is a reminder of the vulnerability of freshwater systems to nutrient pollution. About 80 percent of contamination in the Santa Lucia derives from diffuse agricultural sources. The most recent incident occurred in April 2015, when significant algae blooms occurred in the water of the reservoirs contained by the *Presa Severino* and *Laguna del Sauce* dams, affecting the distribution of drinking water to Montevideo and Punta del Este-Maldonado. The latter is the coastal area that is the most important economic driver of tourism in the country.

[35] In addition to the agriculture sector's reliance on consistent water resources availability, Uruguay's 3.4 million inhabitants depend on safe water availability and adequate sanitation to reduce health risks associated with waterborne illness. Moreover, proper domestic and industrial wastewater management is essential not only to protect human health, but for Uruguay's aquatic environments, including wetlands (which comprise over 4 percent of its territory) and the more than 200 bird species that depend on it.

121. **Aquatic ecosystems are also important because of the many environmental services they provide, including a rich biodiversity.** Yet extensive drainage, soil erosion, and agricultural runoff have affected many wetlands, largely through the expansion of rice cultivation since the 1980s, which included drainage operations and construction of dams to provide land and water to producers. At the same time, the creation of new protected areas has been slow. Only about 1 percent of the country enjoys some form of protection, such as a national park, monument, or protected wetland. In this sense, Uruguay lags several countries in the region, such as Costa Rica and Colombia, which have made significant public investment the protection of biodiversity and in creating instruments to ensure long-term conservation of protected areas. This reinforces the importance of conservation efforts targeted to private holdings.

122. **A key challenge to improving water resources management is enhancing cross-sectoral coordination among the numerous institutions involved in the use and management of water resources, and the development of an integrated water resource management approach.** Integrated water resources management and governance in Uruguay implies the participation of at least 10 agencies in addition to local Municipalities in the provision of water for drinking supply, irrigation, hydropower, navigation, recreational use, and environmental use. And while sectoral legislation may appear robust, there are important gaps in regulation and in enforcement.

123. **In the context of a limited policy framework and relatively weak institutional arrangements for environmental management, the potential of developing oil, gas, and iron ore extractive industries presents opportunities as well as challenges** (see Box 5). The environmental challenges are substantial because of the absence of the necessary legal environmental framework for the operation of an oil sector, including in relation to air quality issues associated with gas flaring, monitoring at very deep waters, high demand for water for inshore operations (where water sources might be scarce), risk and safety regulations, and the definition of roles and needed coordination of the many different agencies involved in energy, mining, land, environmental protection, and waterways.

Box 5. Non-Renewable Resources

The recent discovery of iron ore and potential offshore oil discoveries could have a significant impact on Uruguay's growth and public finances. The "Valentines" iron ore project is estimated to have up to 5 billion tons of high-grade magnetite ore, and initial production is estimated at 18 million metric tons per year, gradually rising to double this amount thereafter (OECD 2014). The government had estimated that with iron ore prices of $120 per ton, production would have accounted for 4 percent of GDP. The IMF (2014) forecast government revenues at $26.3 billion over the 27-year estimated life of the project, largely composed of royalties and income tax. The sharp decline in industrial commodities prices, however, together with environmental objections have stalled the project. According to World Bank projections, iron ore prices are expected to average $64.5 per ton over the next five years, which means the value of production has more than halved since the MEF estimates. In preparation for non-renewable exploitation, Uruguay passed a new mining law, the *Ley de Mineria de Gran Porte (Large Scale Mining,* or MGP) in September 2013; the law grants significant fiscal benefits to mining companies while requiring them to setting aside funds in a special account to be used for ensuring that the exploited sites are suitable for other uses, once the exploitation ends. The fiscal regime that applies to MGP seeks to calibrate the effective tax rate to the fluctuations in commodity prices, decomposing revenues into normal revenues, extraordinary rents, and production costs. According to the new law, 30 percent of non-renewable resource revenues will be a direct income transfer to the government budget, and 70 percent will be saved in an Intergenerational Investment Sovereign Fund. The resources transferred to the budget are earmarked as follows: 60 percent must be invested in productive projects, 30 percent goes to the regional development fund, 5 percent is to be spent on educational projects in the rural area, and 5 percent is earmarked for strengthening the technical capabilities of the institutions in charge of implementing the MGP law.

Meanwhile, the potential impact of oil exploitation is also significant. During the second round of offshore exploration, Uruguay awarded eight exploration and exploitation contracts in the continental part of Uruguay in 2012. The successful launch of the second round and the large investments have prompted Uruguay to prepare a third round for offshore exploration. The National Administration of Fuels, Alcohols, and Cement/ANCAP has confirmed that there may be oil in 20 wells in the areas of Salto and Piedra Sola, and if reserves are confirmed this could mean 1769 million recoverable oil barrels, the equivalent of 120 years of oil consumption for Uruguay. Advances in oil exploration have sparked the start of the second phase of exploration, which means the drilling of four wells over the 2015-2017 period. If oil is discovered, ANCAP has the right to associate with the exploring oil company for up to 50 percent of production. The State would also be entitled to a portion of the profits as well as the taxes on profits.

Longer term issues and climate change

124. **Climate change poses a significant threat to the well-being of Uruguay's population.** It exacerbates the volatility and vulnerability inherent in being a small, open economy. Beyond the impact on agriculture and agri-business sectors, noted above, climate change threatens all aspects of the country's economy, including infrastructure (e.g., urban infrastructure, transport, storage) and livelihoods. The country has suffered from extreme floods and droughts, increasing in intensity and frequency relative to the historical record, and inflicting serious damage on the population and the economy (especially through damage to agricultural infrastructure). Uruguay's geography renders it particularly vulnerable to climate

change, and the country has faced an unprecedented number of adverse weather events. In the last decade, floods have represented about half of all extreme events registered by the National Emergency System. The 2007 floods—the worst recorded in the last half-century—affected more than 100,000 people, destroyed infrastructure, and led to significant agricultural losses. Droughts have also become more severe: a drought in 2008-09 resulted in direct losses of more than $340 million and estimated indirect losses of about $1 billion, equivalent to 2 percent of GDP (World Bank, 2014b). In part, the exacerbation of the impact of extreme events is also related to territorial development and urban planning issues, including the expansion into areas that are subject to flooding. Coastal zones—important for tourism, fisheries, maritime transport, and urban sites (about 70 percent of the country's population lives along coastal regions)—are some of the areas expected to be heavily impacted by climate change.

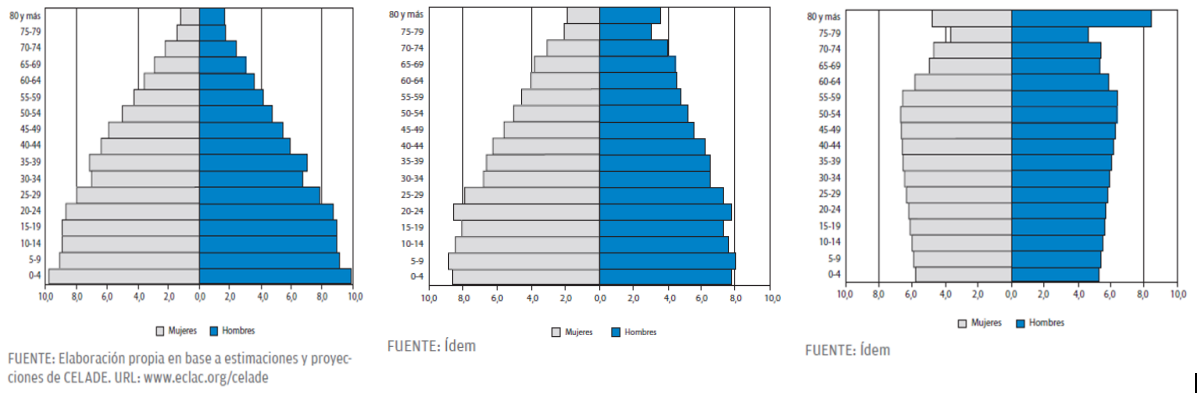
B. Challenges to Uruguay's Social Compact

125. **Uruguay's deeply held social compact faces growing tensions in a number of areas.** An aging society, combined with a premium on equity and a large middle class, creates a strong demand for high quality and generous public services. This has important implications not only for fiscal sustainability but also for saving and growth—these, in turn, have potentially significant implications for the sustainability of the social compact. Uruguay also faces challenges in terms of social mobility, particularly as it relates to deficiencies in the education system, challenges that may strain the country's social fabric and compact. Related concerns with respect to social mobility are the condition of relatively marginalized groups (particularly youth), the concentration of seemingly chronic poverty in some population groups, and the related question of whether Uruguay's broad social policies are able to address effectively the challenges of concentrated pockets of poverty and exclusion. Finally, the social compact hinges on the availability of jobs, particularly high-quality jobs, and good labor conditions. These are a central tenet of Uruguay's social compact. The preference for job stability, however, may restrict the economy's capacity to adjust flexibly to changing conditions.

i. An Aging Society

126. **With its strong social compact, its small and open economy, a distinctive feature of Uruguayan reality is its aging population.** The challenges raised by Uruguay's demographic transition are at the macro and at the micro levels. From a macroeconomic perspective, Uruguay's medium-term fiscal sustainability will come under pressure from the demands of an aging population. Uruguay is at an advanced stage in its demographic transition, and in this respect, is more similar to Eastern European countries than it is to most countries in LAC. The number of people 65 years or older grew from 8 percent of the total population in 1950 to 14 percent in 2010 and is expected to reach nearly 30 percent by 2100. Conversely, the 15 and under population is shrinking, from 28 percent of the total population in 1950 to approximately 23 percent in 2010, and it is expected to decline to close to 15 percent by 2100. The trends can be seen in Figure 59.

Figure 59. Uruguay Age Pyramids, 1950, 2000, and 2050



Source: Ministry of Social Development.

127. **Population aging will have a sizable impact on Uruguay's social security and health care system.** In particular, the health system will be affected as an older population will require and demand more expensive health services; this impact will also extend to other sectors, especially pension payments. Nevertheless, while demography will play an important role in driving public expenditure growth, policy choices can have an even greater effect. Thus while an aging-only scenario (i.e., where policy remains frozen) suggests a modest increase in health costs of 0.55 percent by 2025, policy responses will imply different costs. For instance, analysis suggests that in Uruguay, the impact of aging on health care costs may reach 2 percent of GDP by 2050, because of growing pressure for expanded and improved health care services. This pressure is a likely effect of the combination of population aging, the consequent increased weight of non-communicable diseases, and a high income elasticity of the demand for health care likely to accompany economic growth during the next several decades. Furthermore, health care is likely to present a greater challenge to fiscal accounts than pensions (Cotlear, 2011). In part, this is because many countries, as in the case of Uruguay, have already reformed their pension systems in ways that shift future costs away from government budgets, moving away from pay-as-you-go systems. On the other hand, projections for the increases in pension costs for LAC are similar to those faced by the European Union—a mean increase of about 2.4 percent of GDP over the next 40 years. (World Bank, 2013; World Bank 2014b)

128. **Beyond the impacts on health care and pensions, however, the fiscal impacts of aging can be ambiguous.** Per capita and aggregate education spending typically decline as the population ages, pension spending rises almost linearly with the share of the elderly, and per capita health care spending is broadly U-shaped in terms of age, with spending by the youngest and oldest significantly higher than the rest. A shrinking working-age population implies a narrower tax base and reduced public revenues from income taxes; on the other hand, revenues from consumption taxes may increase as the elderly consume a higher share of their incomes. A simple model was applied to integrate these different transmission channels to demonstrate broad fiscal implications of an aging population in Uruguay (see Annex V for a fuller description). More specifically, the model examines effects of the expected demographic change over the 2010-50 period on output, fiscal expenditures, and public debt trajectory under three demographic scenarios. The baseline scenario is the medium variant from the UN population projections. Two alternative demographic scenarios are a more "pessimistic" low

fertility scenario and a more "optimistic" high fertility scenario, again from the UN Population projections. Public health and pension expenditures are expected increase as a result of aging in Uruguay. Declining education expenditures are expected to fall short of compensating for this increase. As a result, the primary fiscal deficit is projected to increase by 1.8 percent of GDP between 2014 and 2050, from 0.4 to 2.2 percent under the baseline assumptions. Interestingly, the widening of the deficit is expected to be even larger under the more "optimistic" high fertility scenario, by 3.5 percent of GDP, over the projection horizon. This is a function of significantly higher public health care spending for infants, in per capita terms, and increasing education expenditures. In the low fertility scenario, the primary deficit is projected to increase by 0.9 percent of GDP. A growing fiscal deficit, together with a slowdown in GDP growth would be reflected in the debt-to-GDP ratio, controlling for valuation effects (see Figures 60 and 61).

Figure 60. Primary Fiscal Deficit Scenarios, 2010-30

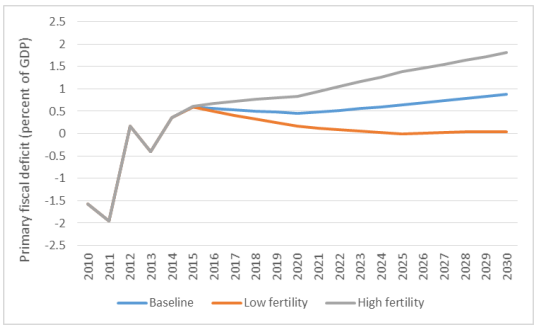
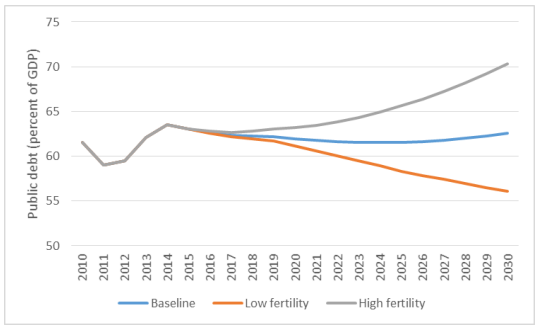


Figure 61. Public Debt Scenarios, 2010-30



Source: World Bank calculations

129. **In addition to its effects on the fiscal accounts, the demographic transformation in Uruguay will have an impact on economic growth and on productivity and competitiveness.** In the longer term without behavioral adaptation by current and future generations, aging is likely to reduce economic growth as fewer workers support more dependents per worker. Nevertheless, Uruguay has a window of opportunity of at least a decade where the number of active workers (and savers) will continue to grow and where policy reforms may have an important role to play. Improvements in educational outcomes, both in the average number of years of completed schooling as well as in educational quality can also help mitigate the impacts of aging on productivity and growth. Moreover, increases in female labor force participation can contribute to a lengthening of this window of opportunity.

130. **Aging should also induce behavioral adjustments in savings and labor force participation.** Uruguay is characterized by a low saving rate, and an aging demographic is likely to accentuate this. As a small and open economy dependent on high levels of investment to support trade integration and exports and productivity upgrading, low savings have a direct impact on growth. And given Uruguay's large middle class and an aging society, low savings have serious implications for the sustainability of the social compact as well. Behavioral shifts such as higher female labor force participation or later retirement, or incentives toward greater saving vs. insurance in the social security system, may have a role in making this constraint

less binding in the future.[36] In particular, an increase in female labor force participation (which currently broadly parallels that in the United States and LAC)[37] has the potential to ease the impact of the demographic transition in Uruguay. The government's proposed new program, the *Sistema Integrado Nacional de Cuidados* (National Integrated Care System) was conceived partly as a means to encourage greater female labor force participation by providing child care as well as elderly and disabled services in order to free women to enter the labor market.[38]

131. **A number of conditions will determine if these adjustments are large enough to reverse the adverse effects of demographic change.** Whether aging is driven by an increase in longevity or by a decline in fertility has an impact on the size and direction of these demographic effects. The type of unfunded social security system that exists in the economy could also influence the net effect of aging. For instance, when aging is mainly driven by declining fertility rates and the pension system is characterized by defined (fixed) contributions, it leads to a reduction in benefits per beneficiary, which could spur behavioral changes toward higher saving during active labor force years, resulting in higher capital per worker, and higher labor productivity. When aging is driven by increasing longevity, the effects on savings are ambiguous. Individuals may also choose to work longer, if regulations allow, implying a larger labor force than in the case where there is no behavioral adaptation (Onder and Pestieau, 2014).

132. **The fiscal implications of a strong social compact, a universal approach to social services, compounded by the effects of an aging society, can exert pressure on budget management.** This highlights the need for high-quality fiscal management and the importance of continued fiscal vigilance.

ii. Social Mobility

133. **As was discussed earlier, Uruguay performs poorly when compared to the LAC region in terms of social mobility.** Challenges to increasing social mobility can eventually cause fissures in the social compact. Studies have also found an association between larger social mobility and entrepreneurship (Carrillo et al. 2014; Castellani and Lora, 2014).

134. **Educational achievement in Uruguay is strongly associated with socio-economic status, as it is in most of the region.** In terms of the impact of socio-economic background in PISA performance, for instance, Uruguay is one of the worst performers in the world. Uruguay scores poorly on an Educational Mobility Index measuring the impact of socio-economic background on educational attainment and the potential for educational mobility. Uruguay is also the only country where, according to this index, educational mobility has declined in the last five years, and one of the few where it has fallen since the 1990s (Daude, 2013). Other analyses also point to a decline in social mobility in the country between the 1980s and 2000, because of the uneven distribution of improvements in education, with a bias against the disadvantaged (Carrillo et al. 2014). Young people from socio-economically disadvantaged backgrounds in Uruguay are highly unlikely to complete upper secondary education. In 2010,

[36] Encouraging immigration from neighboring countries may also be an option, as would the return of those nationals currently living abroad (an estimated 600,000 Uruguayans—more than the 18 percent of the population). Indeed, return 'migration' has grown as economic conditions have improved, with an estimated 110,000 returnees in 2006). (IOM, www.iom.int/cms/en/sites/iom/home/where-we-work/americas/south-america/uruguay.html)

[37] The labor participation rate for women in Uruguay stood at 56 percent in 2013 (compared to Peru at 68 percent, Brazil at 59 percent, Colombia and Paraguay at 56 percent, Panama at 49 percent, and Costa Rica at 47 percent).

[38] The program is currently under deliberation by the legislature.

only 25 percent of 15-17 year-olds in the lowest income quintile completed lower secondary education, as opposed to 85 percent of those in the top quintile. Even fewer, just 7 percent of 18-20 year-olds in the lowest income quintile completed upper secondary school, compared to 57 percent in the top quintile (OECD/ECLAC 2014).

iii. Excluded Groups

135. **It is estimated that the chronically poor make up about 8 percent of Uruguay's population.** A better understanding of who the chronic poor are in Uruguay is needed to inform and better target policies, including an analysis of the adjustments in the social welfare system and social compact that are needed to ensure their inclusion. Urban youth and afrodescendants, constitute the most vulnerable groups in the country. Many live in households that belong to the lowest quintile, characterized by low educational attainment, low levels of employment, and high rates of income poverty.

136. **Youth poverty, unemployment, and the proportion of young people who neither work nor study are a substantial concern for Uruguay.** While Uruguay has one of the lowest child and youth poverty rates in Latin America, children and youth face a higher risk of material deprivation and poverty than the adult population. Unemployment is much more prevalent among young people. In 2011, 17.4 percent of those aged 14-24 were unemployed, compared to just 3.8 percent of those over 25, reflecting a difficult transition from education to the labor market. Increasing urban crime, violence, and incarceration are associated with these trends and are a major concern for the population and for the stability of Uruguay's social compact (OECD/UN-ECLAC, 2014). Crime and violence undermine the formation of social and human capital; increased levels of crime and victimization destroy social capital by fomenting social mistrust, weaken societal unity, and contribute to generalized fear and the erosion of institutions—basic requisites for the collective action needed for development. Moreover, in terms of growth and fiscal sustainability, Uruguay relies on its youth to support its future growth and welfare in the future and cannot afford to lose a significant portion of youth, particularly as the general population ages. The inclusiveness and quality of the education system are critical factors here.

137. **Youth exclusion appears to be differentiated by gender.** While boys tend to overlap school dropout and entrance into the labor market, girls often form a new family earlier than boys; low-income girls in particular tend to start a new family earlier and bear more children than their wealthier counterparts, and unlike boys they tend to fall out of, or never enter, the labor market. Wealthier youth, on the other hand, tend to delay their entrance into the labor market and parenthood, having invested in education. Data comparison for 1990 and 2009 reveals that girls with limited education are at more of a disadvantage than in the past, with higher rates of unemployment, while their male counterparts are faring worse in the quality of jobs they can access but not in terms of unemployment. The effects of exclusion of youth with low educational attainment appears to have worsened over time, especially for girls (Gelber and Rossel, 2010).

iv. Jobs and Labor Markets

138. **The availability of high quality jobs is a central feature of Uruguay's social compact.** The growth in employment and labor income has been a driver of poverty reduction over the past decade. Uruguay enjoys one of the lowest unemployment rates among Latin American countries, and while real average wages declined dramatically with the 2002 crisis, they have recovered steadily, attaining and surpassing previous levels. Labor demand as well as has expanded as a result of strong economic growth.

139. **The creation of more and better-paid jobs relies on continued economic growth, but this is challenged by a lack of human capital and skills.** Labor shortages are currently constraining growth in several sectors of activity. Exports are becoming more skill-intensive, particularly at medium- but also at high-skill levels. A number of bottlenecks exist to effectively meeting the demand for labor. The transition from school to employment is difficult, hampered by a shortage of relevant skills and high-quality vocational training. There is a dearth of programs to train the unemployed and those outside the workforce, or to increase on-the-job acquisition of skills. Without such improvements, it may be difficult to increase the value-added content and competitiveness of new economic activities where Uruguay has recently demonstrated strong performance.

140. **Despite its positive performance overall in terms of labor and employment, Uruguay ranks low in terms of labor-market efficiency, positioned 134th out of 144 in the World Economic Forum's labor market ranking** (WEF, 2014). The system of wage negotiations (see Box 6) has been a pillar of the social compact and has contributed to ensuring that the lowest wage-earners reap the benefits of economic growth. Nevertheless, in its current form, it tends to complicate efforts to reduce inflation toward the target range, fuels overheating of the economy, and could present challenges to competitiveness if labor productivity moderates. Reducing backward-indexation in wage contracts and downward rigidity of real wages could raise the resilience of labor against adverse shocks. The government has in recent years proposed mechanisms to restrain the growth of real wages, although there are few signs of stabilization in wage growth as GDP growth has moderated.

141. **The preference for job stability and the form of collective bargaining raises questions regarding compatibility with sustained economic growth, competitiveness, and nimbleness and flexibility.** Being small, with limited diversification possibilities at any single point in time, Uruguay needs to be nimble and flexible across time in order to adapt to changing global and domestic conditions. Yet its strong social compact, a large role for the State in many sectors, and a high proportion of the workforce covered by collective bargaining may present challenges to flexibility and nimbleness. Encouraging greater labor flexibility while maintaining the social compact may require a rethinking of the design of unemployment insurance or its expansion, enhanced vocational training, and approaches to collective bargaining that incorporate information on productivity. In this area, poor data on productivity at a disaggregated sectoral level is a significant constraint to evaluating the relationship between wages and productivity in Uruguay, and correcting the paucity of information is a priority. As wages fell precipitously during and immediately following the 2002 crisis, the large growth in wages since that time may merely represent a positive reversion of wages to productivity in some sectors. Better data would assist in evaluating whether wages are compatible with productivity, and thus help policy-makers to ensure that high costs are not an obstacle to global competitiveness.

Box 6. Collective Bargaining in Uruguay

The rapid growth in wages, combined with the extension of the proportion of workers covered by collective bargaining, following the 2002 crisis has been a central component of the improvement in well-being in Uruguay. Moreover, the labor framework is seen as a core part of Uruguay's social contract in the search for fair treatment and a sustainable social equilibrium. Collective bargaining has also promoted the formalization of workers—the number of rural and domestic workers covered by collective agreements has increased substantially since 2008, reaching almost 100 percent of these sectors—reducing their income vulnerability.

Collective wage bargaining has undergone a significant transformation in Uruguay in recent years. Legislation introduced in 2008 reinforced wage bargaining councils and extended the coverage of collective agreements. The reported collective bargaining coverage for Uruguay in 2007, at 89 percent as a proportion of wage and salaried earners, remains considerably higher than that of most countries in the region, and is similar to coverage in OECD countries. Collective bargaining in Uruguay is undertaken at the sector level, rather than occurring at the firm level or following a more centralized arrangement. This has implications for inflation and for alignment with productivity. In sectors with little competitive pressure, such as non-tradables, workers and employers can agree to pass the cost of higher wages onto the consumer; more broadly, at the sector level, negotiators do not internalize the effects on inflation and aggregate employment, as would occur in a more centralized arrangement. Firm-level negotiation allows firm-specific issues and performance to be taken into account, allowing more flexibility in the event of shocks. (OECD 2014)

C. Data and Knowledge Gaps

142. Some important data gaps were identified during the preparation of this report. Addressing these gaps is necessary to support evidence-based policy-making in a number of areas that are central to continued growth with poverty reduction and equity.

Data gaps

143. Firm-Level Data. More timely and comprehensive firm-level data is essential to understanding a range of critical issues, from job creation and innovation, to productivity. Existing firm-level data covers primarily the manufacturing sector, with only a handful of services sub-sectors being covered. Given the dominance of services in the economy, this data gap need to be filled promptly. Panel data would provide insights into a multitude of questions central to understanding the Uruguayan economy, including the patterns of firm creation, expansion, and exit; job creation, losses, and stagnation; and the characteristics of exporting firms, among many others.

144. Productivity Data. Poor data on productivity at a sufficiently disaggregated sector level is a significant constraint to evaluating the relationship between wages and productivity in Uruguay, and correcting this paucity of information is a priority. Moreover, within-sector productivity information is also needed to more fully understand firm dynamics, given the likely existence, as identified by the literature, of significant dispersion of productivity levels within sectors. Better data would assist, for instance, in incorporating allowances for productivity into wage negotiations and in evaluating whether wages are compatible with productivity, thus helping policy-makers ensure that high costs are not an obstacle to global competitiveness.

145. Disaggregated Data on Crime and Violence. To the team's knowledge, data on crime and violence, including rates of incarceration, disaggregated by ethnicity, spatial location, and age, are not available. This is an important ingredient to an understanding of the potential impact of exclusion. It is an important gap given the growing concern with security in urban Uruguay.

Knowledge gaps

146. Sector- and Firm-Level Analyses. As noted above, data limitations have led to important knowledge gaps in terms of changes in productivity. This limits understanding of a number of significant relationships, including shifts in employment opportunities for the poor and the importance of between-firm vs. within-firm efficiency gains.

147. Characteristics of Excluded Groups. Ethnic minorities' relative economic disadvantage is difficult to disentangle from other groups' inequality of opportunities. This may be a story of employment and geographic sorting, and is another item to add to knowledge gaps. More comprehensive knowledge of the household and geographic characteristics, access to services, educational performance, ethnicity, and gender-related issues of excluded groups is critical.

148. Declining Education Premium. The decline in the premium for completing secondary or tertiary level education is a puzzle in Uruguay, as it is in other countries in the LAC region. Filling this knowledge gap may help in identifying appropriate education sector reforms, and may have an impact on future innovation, productivity, and competitiveness.

149. Education, Exclusion, and Crime. Further analytical work is needed to understand the linkages, if any, between poor educational outcomes, lack of opportunity, and crime.

150. Natural Resources Accounting. Uruguay's growth has relied to a great extent on its natural resource endowment, and its future global integration will continue to focus on the country's comparative advantages in this area. A central question is whether the intensification of natural resource use is sustainable. Implementing natural resource accounts would help to answer this question and to place the sustainability of resource use at the core of economic decision-making.

151. Integration into Global Value Chains. The SCD undertook an initial investigation of key opportunities and constraints to Uruguay's increased integration into global value chains; further work on this would be an important addition to knowledge. A number of questions may be addressed: what is the right balance between horizontal (cross-sectoral) and vertical (sector/value chain-specific) policies for more successful integration into global value chains? Should policies support specialization or aim for more diversification, or a judicious combination of both? What are the constraints to enhancing SME integration into global value chains (e.g., information, financing, intellectual property rights)? Uruguay is near the frontier in a number of processes such as beef traceability, cattle genomics, and software, yet spillovers across value chains appear to be limited; how can technologies and processes developed in one value chain be successfully replicated or adapted in others and what bottlenecks to this exist in Uruguay?

IV. Tensions and Prioritization

152. **Uruguay's decade of dynamic and inclusive growth reflects the strengths of its social compact and its ability to translate rapid economic growth into gains for the less well-off segments of its population.** Similarly, robust economic management and business- and investment-friendly policies have combined with buoyant global conditions to boost trade, diversify markets, and encourage the export of new goods and services. However, as described above, bottlenecks have emerged as economic growth has surpassed its potential, and as poverty and unemployment have been reduced to historic lows. Global conditions are also less favorable today, with softer commodity prices, lower demand, and the likelihood of reduced international liquidity in the coming years. In Uruguay's immediate neighborhood, Argentina and Brazil are experiencing economic slowdowns. For Uruguay this translates into the likelihood of lower economic growth in the medium term. GDP growth in 2014 is estimated at slightly over 3 percent, and projections are for a further slowdown in 2015 and 2016. In light of more constrained domestic, regional and global economic conditions, a central concern facing policy-makers today is the sustainability of Uruguay's substantial achievements in the reduction of poverty and inequality. With waning economic growth, sustaining a social compact built upon near-universal social benefits and a strong social welfare system becomes more onerous. As economic conditions become more constrained, tensions—which may not have been apparent in more affluent times—materialize.

A. Tensions

153. **This section begins by highlighting some of the key tensions facing Uruguay in the coming years.** Many of these tensions may emerge in the near term, if economic growth slows more substantially than anticipated; some may only emerge in the medium or longer term, as is likely the case of the impacts of aging, for instance. These tensions and tradeoffs will help to organize the subsequent discussion of priority areas for sustaining progress on the twin goals.

154. **Youth exclusion in an aging society is a challenge.** Uruguay's social protection system has meant that public resources have flowed disproportionately to the elderly. Yet it is precisely today's children and youth—a significant proportion of whom may not be in a position to contribute productively to the labor force and to productivity and growth—who will have to shoulder a growing elderly dependency ratio. While Uruguay's aging process is not the most rapid in the region, it is the most advanced. And although there remains a window of opportunity of about a decade in which the working-age population will continue to grow, beyond this window it will begin to shrink. Uruguay can ill-afford to forego the full productive participation of a significant proportion of its youth. Policies have begun to correct the bias in public programs, with new programs introduced to focus on children's needs. Nevertheless, while a reformed education and training system that is inclusive and assures high quality will be central to resolving the tension between the needs of the young and those of the elderly, relatively little has been implemented in this respect to date.

155. **Wages, productivity, and competitiveness become more prominent issues in a challenging economic environment.** Uruguay's strong social compact prizes decent working conditions, strong labor protection and a generous welfare system. This has been reflected in a rapid formalization of employment and in strong wage growth, particularly among the bottom 40 percent of the income distribution. Wages of the bottom 40 percent of the income distribution have grown more rapidly than wages in the economy as a whole, and as illustrated

in Figures 23 and 24, this wage growth has been quite uniform and virtually universal across sectors (2007-2013). Centralized wage negotiations have explicitly emphasized wage increases for the lower wage groups. With labor income being the main factor behind poverty reduction over the past decade, the contribution of these efforts to Uruguay's social achievements is undeniable. Yet it is also clear that average wage growth across sectors has not reflected sectoral growth, particularly in more recent years, with the likely implication that wages, at least in some sectors, are out of step with productivity. Incorporating allowances for productivity (where data exists) into wage negotiations has not been possible, and most firms have been reluctant to share productivity data with their employees. With a booming economy and expanding employment, a wedge between productivity and wages has not been a significant issue. Wages had plummeted during the 2002 crisis, and efficiency gains from the reallocation of labor across sectors in a growing economy were substantial.

156. **Today, despite slowing growth, there still appears to be very little slack in a labor market, with many commentators assessing the economy to be at full employment.** This is borne out by interviews with firms who report significant difficulties in hiring at all skill levels. While it is not clear that rising wages represent a brake on competitiveness at present, some firms do mention labor costs—as well as onerous labor regulations—as a constraint. The importance of any wedge that may exist between productivity and real wages depends on occupation and sector, and data disaggregated to a sufficient degree is not available to ascertain the extent of the problem. Going forward, however, in an environment of lower growth and little employment expansion, if not contraction, the impact on competitiveness may become significant. The wage negotiation process will increasingly need to take into account productivity changes if competiveness is not to be lost.

157. **A large role for the State potentially impacts efficiency and competitiveness.** Small countries tend to have relatively large public sectors, and Uruguay is no exception. The "fixed costs" associated with service provision are spread over a smaller population and economy. Small market size may make it difficult to accommodate more than one or two service providers, creating natural monopolies. The public sector in Uruguay accounts for about 14 percent of total employment, a higher proportion than that in many larger countries. State Owned Enterprises, all of which are wholly owned by the government, represent 2.3 percent of total employment and their expenditures amount to nearly 14 percent of GDP (World Bank 2014b). They are the sole providers of a number of essential goods and services. In this case the implications of smallness—and a large public sector—appear to coincide with the high trust in government embedded in the social compact. Unlike the situation elsewhere, there does not appear to be a generalized dissatisfaction with state of public services—with the possible important exception of education. Nevertheless, frictions may arise between the importance of the State in the provision of economic goods and services and the need for a level playing field for economic agents, whether public or private, in order to enhance the competitiveness of the Uruguayan economy as a whole.

158. **Increased competition in the domestic market can have a strong impact on international competitiveness.** Competition enables productivity growth by shifting market share toward more efficient producers, allocating factors of production to the most competitive sectors, and induces firms to become more efficient in order to survive. As most firms acquire inputs in local markets, if these inputs are not produced efficiently or priced competitively, exporting firms may be less competitive than foreign rivals. There is an evident tradeoff between a large economic role for the State and the importance of competitiveness to

Uruguay's economic growth model. Given the country's social compact as well as the limitations imposed by small market size, one avenue to ensure improved outcomes and greater efficiency may be through a focus on corporate governance challenges within the State, particularly public enterprises. A recent analysis finds that Uruguay performs below the regional average in the Corporate Governance Transparency Index (World Bank 2015). Some areas for improvement found by the analysis include the need to reinforce transparency and control mechanisms in public enterprises, including access to and dissemination of information, as well as the importance of defining a regulatory framework and a Corporate Governance code for public enterprise performance.

159. **Balancing a high reliance on the intensive exploitation of natural resources with sustainable natural resources management and efforts to brand Uruguay as a clean and green exporter to niche markets is critical.** Uruguay's reliance on its natural resource base for the bulk of its exports makes ensuring the sustainable management of soil, water, air, and biodiversity wealth key to future growth and livelihoods. Sustainable intensification of resource use is a government priority and is being implemented in some areas, and the low carbon economy has been a source of significant innovation and productivity for the country. Pressures nevertheless remain, including in terms of land conversion to permanent crops, soil erosion, water availability and quality, biodiversity protection, and coastal zone erosion.

160. **Fiscal consolidation and vigilance in the presence of structurally large spending pressures will become more challenging.** A strong social compact and a large middle class with a preference for generous social benefits generate a continual demand for high levels of public spending. These spending pressures are magnified by the large role that the State undertakes in providing economic services and infrastructure. Macroeconomic management has been prudent over the past decade and debt levels have been substantially reduced and debt profiles dramatically improved. Nonetheless, in periods of prolonged growth slowdown and fiscal pressures, there may be pressures to increase public debt. This inherent tension between fiscal restraint and social demands highlights the importance of high-quality fiscal management and continual fiscal vigilance in the future.

B. Priority Areas for Achieving the Twin Goals

161. **The prioritization exercise is built upon analytical evidence, which has relied on benchmarking whenever data allow, and is validated by expert advice.** Prioritization adhered to the following process. First, analytical evidence: although there are gaps, the existing literature on Uruguay is extensive and provides a solid foundation of analytical evidence on which to build the prioritization process. Gaps in a few areas were addressed by commissioning new analysis (including additional work on the potential fiscal impacts of aging, a closer look at the poverty and employment characteristics among ethnic minorities, employment and wage evolution by sector, and a first inquiry into potential opportunities and obstacles for Uruguay to further integrate into global value chains). Second, consultations: the evidence base was complemented with consultations with the World Bank Group's Country Team as well as in-country consultations (in December 2014 and April 2015). Third, validation: the storyline and results were validated with the public and private sectors as well as with independent analysts in Uruguay. Analysis of growth determinants in Uruguay supplemented these validations (see Box 7). Fourth, timeframe: Uruguay faces both short- and long-term constraints, and the timeframe was taken into consideration in selecting priorities. For instance, while aging is a central issue for Uruguay, a window of opportunity of a decade

or more exists in which the country can implement needed measures and reforms, although some of these may need to be considered today because of a long gestation period; similarly, an overhaul of many aspects of the education system is essential although the impact of such measures will only be perceived in the long run. Understanding that most available prioritization strategies are imperfect, the team has tried to structure the prioritization in a methodical way, as reflected in Table 5.

Box 7. Determinants of Growth in Uruguay

As a framework to validate priority areas, the SCD examined the determinants of growth analysis to identify areas where further reforms and changes are warranted. The determinants of growth were grouped into three general categories: (i) structural factors (secondary enrollment rate as a proxy of human capital; credit to the private sector as a share of GDP as a proxy for financial development and trade openness; main telephone lines as a proxy for infrastructure, government consumption, and institutions; (ii), stabilization policies (as captured by inflation, real exchange rate, and occurrence of banking crises); and (iii) external conditions (terms of trade changes and export prices). The empirical analysis uses dynamic panel data regressions (five-year non-overlapping averages). The model does a relatively good job of predicting per capita growth between 1996 and 2000 and the 2006-2010 ("late 2000s") periods, explaining more than 70 percent of the actual growth in real GDP per capita at PPP.

According to these results, during the 2000s structural reforms help explain close to 20 percent of the actual growth in per capita GDP (expressed in PPP). A closer look at the main structural determinants reveals that increased trade openness played a key role in supporting growth, while the decline in size of the government as proxied by the share of government consumption in GDP also had a positive contribution to growth of similar magnitude. Meanwhile the base model suggests that contributions from improvements in human capital as proxied by secondary enrollment rates had a small impact on growth over this period. However, if average years of schooling is used as the proxy for human capital, the impact on growth increases when compared with the base model. Furthermore, empirical analysis by Hanusheck and Woessman (2012) using cross-sectional data suggests that emphasis on the quality of education could have a significant impact on growth. Meanwhile, slow financial development appears to have undermined growth. The analysis also highlights the importance of stabilization. The stabilization policies have also had a positive impact on growth, as did external conditions (See Annex II)

Improving access to finance and reducing inflation could strengthen growth. Using a growth regression model (Araujo et al. 2014) we produce counterfactual GDP per capita estimates for the scenarios in which Uruguay closes the gap with the top 10th percentile performer in LAC on various structural and policy dimensions. This would raise GDP per capita by 9.3 percent in five years – or about 1.6 percent per year. Similarly further reducing inflation to the top 10th percentile performer in the LAC region would deliver growth dividends of 4 percent over a five-year period.

162. **The SCD proposes two priorities to address the most binding constraints and thus enhance Uruguay's capacity to sustain its significant achievements: (a) sustaining the social compact by strengthening inclusion and equality of opportunity and (b) sustaining growth with productivity and competitiveness**. If Uruguay is to continue to advance toward the Bank's twin goals, it needs to undertake structural and institutional reforms while sustaining macroeconomic stability in order to relax constraints to inclusive growth that in some areas are becoming binding. To ensure the sustainability of its achievements in poverty reduction and shared prosperity, Uruguay needs to reach the excluded and ensure equality of opportunity, and

continue to grow based on increasing competitiveness and productivity to support its social compact. A crucial component of this growth is the preservation of high levels of employment and high-quality jobs; these have been at the core of poverty reduction and advances in equity.

163. ***Sustaining the social compact by strengthening inclusion and equality of opportunity.*** Despite Uruguay's low rates of income poverty and generally high degree of social inclusion, the young are disproportionately represented among the poor and the unemployed. Within about a decade Uruguay's working population will begin to shrink due to the country's advanced demographic transition. The labor force will need to be more skilled and more productive as the elderly dependency ratio rises. The role of a reformed educational system is key in this respect. Addressing childhood poverty and tackling youth exclusion are the two key priorities.

a. ***Address childhood poverty.*** There is a growing realization that resources have been skewed toward programs for the older generations (pensions, health) at the expense of the young, and there has been a proliferation of programs focusing on the needs of children and youth. The new government's flagship program, *Sistema Nacional Integrado de Cuidados,* now under discussion in the legislature, includes a significant focus on providing early childhood (0-3 years) education and related interventions targeted to improving household and family conditions. The impact of such programs on women's ability to participate in the labor force, augmenting their incomes, is a significant complementary aspect of such programs. Guarding against fragmentation of programs will be important, as well as a focus on monitoring and evaluation of services and outcomes.

b. ***Tackle youth exclusion by reducing school dropout rates*** (middle school and high school). Large inequalities in educational attainment and school quality persist and are linked to income and socio-economic background. Reforms to the education system are key to addressing these problems. Educational quality needs to improve and be more relevant to the job market. Curricular shortcomings and a difficult transition between primary and secondary school are other problems that discourage students from staying in school. A tight labor market and declining educational premia further underscore the deficiencies of an antiquated schooling system as the opportunity cost of remaining in school rises. While Uruguay boasts a number of programs targeting at-risk youth (*Compromiso educativo, Transito, CERCANÍAS*), there is a high degree of fragmentation into small-scale programs, overlapping objectives, and weak articulation with the educational system or with labor markets.

164. ***Sustaining growth with productivity and competitiveness.*** Given Uruguay's effective, redistributive and generous social protection system, an aging society and significant investment needs, economic growth is essential to supporting the social compact. The priorities identified below are in turn important to sustaining economic growth and to ensuring the availability of resources essential to poverty reduction and the promotion of shared prosperity. Priorities in this area are: investing in human capital, upgrading technical skills, boosting innovation, improving connectivity and logistics, enhancing integration into the global economy and further promoting natural resources management.

a. ***Invest in human capital.*** Uruguay's human capital endowment is a cornerstone of its ability to foster the development of an increasingly sophisticated export base. Adequate education and skills are also essential to maintaining progress on jobs and inclusion. But the advantage that Uruguay had attained with respect to other countries in Latin America in terms of universal primary school and increased years of education has vanished as the rest caught up as progress in Uruguay stalled. Moreover, skills shortages are emerging in several high-productivity sectors. The inadequate endowment of human capital appears to underlie the labor productivity gap with aspirational peers, affecting the ability to absorb and adopt new technologies. A central priority for long-term economic growth is the reform of education toward a system that can take part in promoting a skill-intensive, innovation- and productivity-based growth model. A broad educational reform—encompassing efforts to make secondary education universal, improve quality and equity, modernize and review the curricula, enhance teacher training and education, and improve the system of teacher assignments to schools—has been a priority in Uruguay for some time and is a central concern of the current government and would have impacts in the longer term.

b. ***Upgrade technical skills.*** Apart from boosting cognitive as well as social skill development of Uruguay's youth by reforming the secondary school system, the country will also need to upgrade technical skills, which are core to its high productivity-focused development model. Here, assessing the model of technical and vocational skill building, including its prominence within the wider education system, will be important. Evidence from other countries suggests that the close integration of technical skill building with attaining work experience renders the most positive results in terms of improving technical competencies and positive job and productivity outcomes. Importantly, technical skill building should not compromise the emphasis in secondary school on the formation of broad cognitive and flexible skills, which are central for job success in today's demanding labor market. In addition to this, it will be important to focus on skill formation of the existing labor force to address skill shortages and mismatch.

c. ***Boost innovation.*** Uruguay lags with respect to comparators in terms of innovation and research and development, key factors in sustaining productivity convergence. Sustaining a high productivity growth model based on trade integration will require closing the technology and innovation gap, improving production and marketing processes as well as firm managerial capacity, cultivating entrepreneurship and adaptability, ensuring adequate access to finance, as well as upgrading institutions and markets. From and inclusion and shared prosperity perspective, the participation of SMEs in innovation and productivity upgrading will be important, as they account for the bulk of employment but face major constraints to innovation.

d. ***Improve connectivity and logistics through infrastructure upgrading.*** With the boom in exports over recent years, the demand on Uruguay's roads has significantly outstripped the resources invested in the network's maintenance. The poor quality of a significant portion of the network is leading to increased user costs in terms of time and vehicle maintenance, to the detriment of competitiveness and the sustainability of Uruguay's growth model. In addition to the impact of transport costs on firm profitability and competitiveness, the poor state of road infrastructure undermines Uruguay's efforts to emerge as a logistics and transport services hub

for the region. The importance of the sector to the continued competitiveness of Uruguay's goods and services exports makes this a priority area. The key binding constraint is the availability of financial resources. Insufficient budgetary resources have been allocated to road maintenance and rehabilitation over the past 15 years as expenditure priorities have targeted other sectors. And while private resources may be able to contribute to filling the resource gap, traditional infrastructure finance through the budget will remain important—and will need to expand—because of the limited revenue-raising potential of many of the segments central to agricultural traffic. Although some road segments may be economically important, private financing may not be viable without public subsidies. Decisions in this regard would be facilitated by improvements in investment budgeting, and in the selection and evaluation of investment projects. Additional analysis may also needed in terms of evaluating potential revenues from taxes, user fees, and so forth.

Public-Private Partnerships (PPPs) may be a promising instrument in some cases, and are being pursued by government to fill the infrastructure financing gap. The definition of a deep portfolio of projects is needed to signal the seriousness of government policy toward PPPs; long-term certainty regarding public investment resources is also needed to tap private sector interest. Government should carefully analyze the scope for a PPP instrument in instances where revenue-generating capacity is limited relative to capital investment needs, given the likely need for public subsidies in such cases. Any financial structure should aim to reduce capital costs and service levels to control subsidy costs.

e. ***Enhance integration into the global economy.*** Uruguay needs to continue diversifying its exports and destinations by seeking international market access and progress in trade facilitation. Identifying and addressing both the economy-wide and industry-specific policies and regulatory changes that would enable the implementation of a global integration strategy remains a critical policy priority. Uruguay's path toward greater integration into regional and global value chains and a more favorable repositioning of its products and services mix within these will require a multipronged strategy that envisages the intensification of the knowledge content and sophistication of its traditional resource-based primary exports and a further specialization into high-value modern services exports that are not constrained by lack of economies of scale or distance.

f. ***Promote green growth and natural resource management, with special emphasis on water resources.*** The availability of high-quality water resources plays a central role in providing environmental and economic services across fisheries, tourism, biodiversity, agricultural and industrial uses, power generation, and public health. However, the myriad pressures on water resources arising from booming economic activity, fragmented institutional oversight, and weak enforcement of regulations make adequate water resources management a priority for Uruguay. The main challenge is the deterioration in the quality of superficial waters (streams, rivers, lagoons, and reservoirs) because of increasing pressure on water resources from both point source (industrial and municipal discharges) as well as diffuse pollution (agricultural and urban sources.

While significant progress in defining a new legal and institutional framework has been made, including approval of the Water Law centered on the principles of

integrated water resources management, risk management, and stakeholder participation, and the creation of regional and local water resource management committees and the production of policy documents (including a National Response to Climate Change Plan), there has been relatively limited implementation of these actions. A major challenge to effective implementation is the sheer number of institutions—10 in all—that are responsible for different regulations that impact the water sector. There is a need to foster better coordination and articulation of actions among the different institutions involved in water management in Uruguay. Better coordination is also necessary in ensuring the implementation of legal provisions, including (a) the water use fee, a provision to ensure societal contribution to the conservation of water resources, and (b) the application of the principle of user and polluter payments through water pricing systems so as to align incentives and costs. Collection of the water fee is not being enforced, however, resulting in a lack of financial resources to water agencies. Addressing these issues would enhance efforts to ensure the availability of high-quality water resources in the face of rising demand.

Table 5. Prioritization					
Fundamental characteristic	**Key challenge**	**Sustainability analysis**	**Policy tradeoffs**	**Poverty and shared prosperity filter**	**Priority/prerequisite**
I. Smallness, openness, natural resource reliance					
	Managing vulnerability to external shocks: As a small, open economy Uruguay is disproportionately exposed to external shocks, which have adverse effects on economic activity, fiscal balances, and on the poor and the bottom 40%. Inclusive growth in a less supportive external environment: Global and regional economic activity has weakened, reducing tails winds for Uruguay. Weaker economic activity will slow employment creation and put pressure on fiscal resources, including social transfers to the poor.	Macroeconomic stability is a prerequisite for sustained growth. With above-target inflation and high degree of dollarization there is little room for countercyclical monetary policy. Increasing competitiveness is essential to further integrate into the world economy.	Need for fiscal consolidation, while there are increasing spending needs in education and infrastructure. Backward-looking wage indexation related to high degree of inflation inertia. Wages, productivity, and competitiveness: Wages that are linked to productivity are necessary for ensuring efficient allocation of resources.	Fiscal consolidation in a progressive manner, shielding the poor. Augmenting skills and labor productivity, especially for the bottom 40%.	Maintain prudent macroeconomic policies and rebuild fiscal space by improving the efficiency of public spending, public financial management, public investment decision-making, and corporate governance of SOEs. International economic integration and global value chains insertion through the intensification of the knowledge content and sophistication of traditional resource-based primary exports, and specialization into high-value, modern services exports.

Trade openness provides opportunities for Uruguay to diversify its economy.		Connectivity is key for competitiveness. Adequate human capital endowment and supply of relevant skills are key to sustaining growth. To sustain productivity growth it is critical to close the technology and innovation gap, improving production and marketing processes as well as firm managerial capacity, and	Education and skill formation: Given the need for fiscal consolidation, prioritization of expenditure is important		Improving connectivity through infrastructure upgrading and logistics enhancements: Upgrading road infrastructure. Education and skill formation: Investing in skills to address skill shortages and help reduce the mismatch between skill supply and demand, improving collaboration among the government, training institutes, and private sector. Invest in pre-primary education and secondary education and increase equality of opportunity. Foster innovation by increasing technological absorption capacity, stimulating R&D spending, and boosting entrepreneurship.

		cultivating entrepreneurship and adaptability. Low domestic saving and intermediation adversely impact investment. Access to financing for SMEs.	A large role for the State and the importance of the State in the provision of economic goods and services needs to be consistent with a level playing field for economic agents.	Enhancing corporate governance of SOEs and improving their services, especially for the bottom 40%.	Ensure transparency, accountability, and efficiency of SOEs.
Revealed comparative advantage in agricultural-based exports.	The State plays an important role as an economic agent in sectors that are key for competitiveness and have a large fiscal impact. The rapid increase in agricultural-based exports through the intensification of the use of land and water resources over the last decade affects environmental	Environmental degradation and inefficient use of natural resources could harm Uruguay's comparative advantage and	Balancing a high reliance on the intensive exploitation of natural resources with sustainable natural resources management, and efforts to brand Uruguay as a clean and green exporter to niche markets.		Green growth model with a low carbon growth strategy (energy, transport, waste, and agriculture).

	sustainability of these resources. Climate change poses risks to Uruguay's main export base (agriculture) as well as to its fiscal accounts.	reduce longer-term economic potential. Uruguay is close to the production frontier of agribusiness and may not sustain similar productivity gains as seen over the past decade without significant technological change.			Climate change mitigation and adaptation through continued innovation, knowledge, and actual carbon reduction.
II. Social Compact					
Strong social compact has put emphasis on reducing poverty and inequality, thereby allowing Uruguay to create an inclusive society.	Changing global environment and slowing growth are likely to reduce the space and economic means for inclusive social policies. Aging population is likely to put pressures on fiscal balances, through increased pensions and health care costs. Preference for job stability may reduce flexibility in labor markets and slow diversification.	Poverty and inequality have declined, yet challenges remain to avoid vulnerable populations falling back into poverty, and for dramatically reducing child and youth poverty. Chronic poverty unresponsive to broad social system interventions.	Youth exclusion in an aging society: Uruguay's social protection system has meant that public resources have flowed disproportionately on the elderly. Yet today child poverty, youth school drop-outs, and the proportion of young people who neither work nor study are a substantial concern for the country.	How to sustain elderly welfare benefits under a scenario of high levels of school dropouts and increasing youth poverty. How to increase female labor force participation and encourage behavioral changes.	Addressing childhood poverty. Tackling youth exclusion by reducing school dropout rates. Taking advantage of specific sector growth to benefit redistribution and wage increases without jeopardizing future growth.

		High youth poverty, unemployment, and exclusion. Declining social mobility and poor relative performance. High inequality in educational attainment and strong association between socioeconomic status and educational indicators. Resilience of labor demand to shocks may be affected by regulation.		How to enhance equality of opportunities for afro-descendants and ethnic minorities.	

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Annex I. Engagement and Planning

Consultations, team budget, and timeline

Team

1. The team was co-led by Zeinab Partow (Sr. Economist, GMFDR), Alan Fuchs (Economist, GPVDR), and Cristina Savescu (Country Economist, GMFDR). Zafer Mustafaoglu (Program Leader) provided overall coordination. In addition, the following people provided substantive inputs and guidance: Jesko Hentschel (Country Director), Augusto de la Torre (LAC Chief Economist), Daniel Lederman (Lead Economist, LCRCE), Frank Sader (Principal Strategy Officer), and Louise J. Cord (Practice Manager). Program leaders Zafer Mustafoglu, Julian Lampietti, Michele Gragnolati, Rafael Rofman, and Javier Suarez were essential to guiding the team in identifying key constraints and concerns in their respective sectors. Luis Felipe López-Calva, Lead Economist; Peter Siegenthaler, Lead Economist; Norbert Matthias Fiess, Principal Economist; and David Rosenblatt, Economic Adviser were peer reviewers.

2. The full list of extended team members consulted in the preparation of this SCD and who have contributed their time, expertise, and affiliations appear below.

Table A1.1 Team

CMU/Global Practice/Cross Cutting Solution Area/IFC	Team Member
Agriculture	Holger Kray
Education	Diego Ambasz, Rafael de Hoyos Navarro
Governance	Daniel Alvarez
IFC	Frank Sader, Alex Cantor
Poverty	Carlos Rodríguez-Castelan, Maria Ana Lugo
Social Protection and Labor	Rafael Rofman, Anil Onal (Aging)
Trade and Competitiveness	Alberto Criscuolo, Luis Rubalcaba, Graciela Miralles Murciego, Jose Daniel Reyes
Transport and ICT	Gregoire Gauthier, Daniel Benitez
Urban, Rural and Social Development	Catalina Marulanda, Sarah Keener, Joan Hoffman, Santiago Scialabba
Energy	Lucia Spinelli
Water	Remi Trier, Carmen Yee-Batista
Environment	Ruth Tiffer-Sotomayor
Uruguay Country Office	Ruxandra Burdescu, Valeria Bolla
CMU team	Program Leaders plus Sabine Hader, Yanina Budkin, Eugenia Marinova

Engagement with country team

3. The team has followed an inclusive process in the development of the report and the elaboration of the diagnostics. Several rounds of bilateral consultations with sectoral teams were held to focus on key issues and knowledge gaps to be filled prior to the elaboration of the overall storyline. This was complemented with a country team brainstorming meeting to validate the storyline. The team also met with the Chief Economist's Office to discuss the storyline, entry points to understanding Uruguay, as well as the analytic underpinning of the SCD. Several meetings to review in detail the concept note and decision draft were held with the CMU.

Engagement with counterparts in Uruguay

4. The SCD preparation was accompanied by a consultation process in Uruguay to ensure that all stakeholders provided inputs to the deliberations. Missions were conducted in December 2014 and April 2015, in which the SCD team held meetings with counterparts in Uruguay from the Government, private sector, academia, think tanks, and unions to elicit their views on the growth pattern of Uruguay and its performance in various dimensions over the past decade as well as to validate the storyline being developed.

Timeline and Budget

Table A1.2. Timeline

SCD Activity	Estimated Date
1st Brainstorming session with Country Team: Identifying key hypotheses	November 11, 2014
Uruguay Mission: Fact finding	December 7-12, 2014
2nd Brainstorming session with Country Team: Review and revise storyline	January 21, 2015
3rd Brainstorming session with Country Team: Review and revise storyline	February 5, 2015
Consultation with LAC Chief Economist	February 10, 2015
Consultation with GPs	February 26, 2015
CMU Review	March 3, 2015
Concept Note Review- ROC	March 16, 2015
Uruguay Mission: Filling the Knowledge Gap and commissioning studies	
Country Consultations: Ground truth with stakeholders, Government and Civil Society	April 27-30, 2015
CMU and Country Team Consultations (Decision round)	May 2015
ROC Review	End-May
Completion	June 2015

Annex II. Selected Macroeconomic Indicators and Growth Determinants

Selected Macroeconomic Indicators

	2002	Average 2003-2006	Average 2007-2013	2013	2014 (est)
Real GDP growth, %	-7.7	4.3	5.6	5.1	3.5
GDP per capita growth, %	-7.6	4.2	5.3	4.7	3.1
GDP per capita, US$	4,256.0	4,685.0	11,877.0	16,722.0	16,592.0
Unemployment rate*	17.0	13.4	7.7	6.7	6.9
Inflation, CPI, % yoy, eop	25.9	7.3	7.9	8.5	8.3
REER index (2010=100)**	109.4	162.3	107.9	91.0	96.0
Exports of G&S, % growth	-6.7	14.8	4.9	0.2	1.9
Imports of G&S, % growth	-20.8	12.9	9.2	3.5	0.5
Current account balance, % of GDP	2.7	-0.6	-3.2	-4.9	-4.4
FDI, net inflows, current million US$	180.0	755.4	2185.0	3027.0	2710.0
GDP, billion US$	13.7	15.7	40.4	57.5	57.5

* Urban areas (population > 5000).
** decrease = appreciation.
Sources: Banco Central del Uruguay, Instituto Nacional de Estadística, Ministerio de Economía y Finanzas, World Development Indicators.

Determinants of Growth in Uruguay

1. **As a framework to validate priority areas, the SCD examined the determinants of growth analysis to identify areas where further reforms and changes are warranted.** The determinants of growth were grouped into three general categories: (a) structural factors (secondary enrollment rate as a proxy of human capital; credit to the private sector as a share of GDP as a proxy for financial development and trade openness; main telephone lines as a proxy for infrastructure, government consumption, and institutions ; (b), stabilization policies (as captured by inflation, real exchange rate, and occurrence of banking crises); and (c) external conditions (terms of trade changes and export prices). The empirical analysis uses dynamic panel data regressions (five-year non-overlapping averages). The model does a relatively good job of predicting per capita growth between 1996 and 2000 and the 2006-2010 ("late 2000s") periods, explaining more than 75 percent of the actual growth in real GDP per capita at PPP.

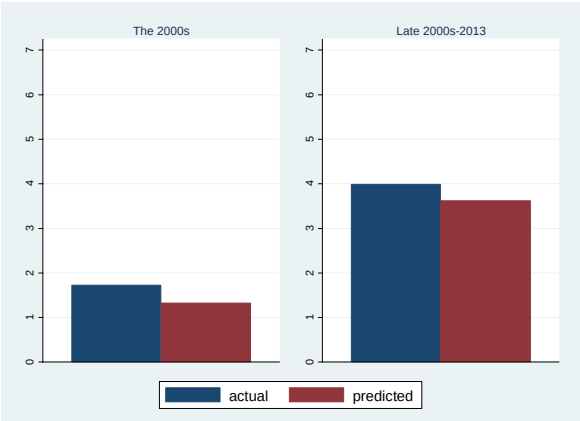
2. **During the 2000s structural reforms help explain close to 20 percent of the actual growth in per capita GDP (expressed in PPP).** A closer look at the main structural determinants reveals that increased trade openness and infrastructure played a key role in supporting growth, while the decline in size of the government as proxied by the share of government consumption in GDP also had a positive contribution to growth of similar magnitude. Meanwhile the base model suggests that contributions from improvements in human capital as proxied by secondary enrollment rates had a small impact on growth over this period. However, if average years of schooling is used as the proxy for human capital, the impact on growth increases when compared with the base model. Furthermore, empirical analysis by Hanusheck and Woessman (2012) using cross-sectional data suggests that emphasis on the quality of education could have a significant impact on growth. Meanwhile, slow financial development appears to have undermined growth. The analysis also highlights the importance of stabilization in supporting growth and the positive impulse to growth from external factors.

Table A2.1 Growth effects of structural, stabilization and external factors in Uruguay

		Predicted effect, Annualized	
	parameter	The 2000s	Early 2010s
Persistence	0.781	**0.62**	**3.93**
Structural		**0.29**	**0.03**
Schooling (Secondary enrollment rates)	0.018	0.00	-0.01
Credit to the Private sector (% of GDP)	0.074	-0.31	0.05
Government consumption (% of GDP)	-0.262	0.17	-0.41
Infrastructure proxy (Main lines per 100 people)	0.141	0.21	0.08
Institutions (polity2)	-0.003	0.00	0.00
Trade openness	0.082	0.22	0.31
Stabilization		**0.15**	**-0.29**
Inflation	-0.011	0.01	0.00
Real Exchange Rate	-0.064	0.14	-0.29
Banking crisis	-0.040	0.00	0.00
External factors		**0.26**	**0.03**
Commodity export price	10.482	0.23	-0.32
Terms of trade	0.118	0.03	0.35
Predicted per capita GDP at PPP		**1.32**	**3.70**

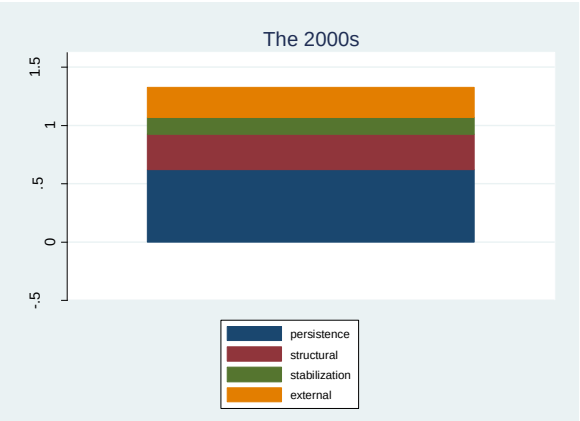
Source: Own calculations, adapted from Araujo et al. 2014.

Figure A2.1 Actual and predicted changes in GDP per capita at PPP



Source: Staff calculations based on Araujo et al. 2014

Figure A2.2 Growth determinants



Source: Staff calculations based on Araujo et al. 2014

Annex III. Note on Ethnic Minorities and Exclusion in Uruguay

1. General Context

1. Academic research and empirical analyses of the economic and social characteristics of ethnic minorities in Uruguay (Afro-descendants and indigenous groups) are not abundant. As pointed out by Bucheli and Porzecanski (2010), this may be the result of an idea, prevalent for many years in Uruguay, that the country was an integrated society, that interracial integration was free of conflict, and that the observable inequalities between groups were to be attributed less to issues of ethnic descent than to class and income differences. Additionally, until the mid-1990s ethnic data was not collected in official statistics (the first indicators on ethnicity were collected in the 1996-97 Household Surveys/ECH), preventing researchers and scholars from inquiring about ethnic issues through this medium. It had been even suggested that including such items in the National Census and Surveys could increase discrimination and social inequality, as this would "create high rejection rates or force the population to classify in socially meaningless and scientifically invalid categories" (Rodriguez, 2006).

2. In recent years, however, there has been an increase in research on social issues specifically related to ethnic minorities, especially regarding the population of African descent. This was probably encouraged by the growing activism of the Afro-Uruguayan minority, and further stimulated by multilateral organizations and local political actors.

3. References to cultural minority and multicultural society have become more common in public discourse during recent years in Uruguay. This is revealed in some concrete initiatives at the political and institutional levels: for instance, Law 19122, which encourages affirmative action to promote the incorporation of more people of African descent in the labor market (in particular in executive roles) and their inclusion in higher education, was passed in 2013. Other examples are the creation of Unidad Temática para los Afrodescendientes within the Montevideo local administration, and the Secretaría de la Mujer Afrodescendiente within the Ministry of Social Development (MIDES).

4. Specific knowledge on issues related to ethnic minorities has improved substantially since data on ethnic origins was incorporated into official statistics, both through items included in the National Census of 2011 and through the systematic availability of such indicators in the Continuous Household Survey (Encuesta Continua de Hogares/ECH) since 2006. The availability of official data enabled examination of a wide variety of information disaggregated by ethnic groups.

5. The indicators reviewed in this report consistently show that while most of the population of African descent generally have acceptable levels of human development—as highlighted by UNDP (UNDP, 2008), 70 percent of the black population has acceptable levels of human development in relation to the country level of development—indicators of income and other economic, social, and cultural assets are systematically less satisfactory for the Afro-descendant population and, according to some available measurements, also for the population of indigenous descent.

6. The main studies and empirical research on ethnic inequalities conducted in Uruguay focus on unequal opportunities in education and the labor market available for people of African descent (Bucheli and Cabella, 2007; Bucheli and Porzecanski, 2008; Gonzalez and Sanroman, 2010). The

focus on these issues is partly explained by the availability of ECH data, which provide considerable robust information on structures of income and the labor market. Studies on subjective perceptions of discrimination also exist, but they are mainly based on qualitative research techniques, and therefore their insights and findings cannot validly implicate the entire population (Rudolf et al., 2008; Arocena et al., 2007; Rudolf et al., 2004; Tenembaum Hughes, 2011).

7. The interest in issues related to Uruguayans of African descent has not been duplicated with equal strength in the field of studies on indigenous populations. The growth and consolidation of Afro-Uruguayan identity and cultural movements[39] have not occurred among the population of indigenous background, and although there are some civil society organizations promoting recognition of indigenous identity and rights,[40] their visibility is low and they have achieved little impact in academia and the media. The cultural and political weakness of these efforts may have resulted in fewer incentives for people of indigenous descent to self-identify as such. Low self-identification in turn results in lower visibility in official statistics for indigenous people (as ethnic data is collected through self-declaration items). Weaker cultural identity, therefore, may result in lower incentive for academic research and in turn reinforce the prevalent idea that "in Uruguay there are no substantively and geographically distinguishable indigenous communities [...] local *indios* were gradually disappearing as a result of wars, extermination campaigns, disease and forced assimilation processes" (Bracco, 2004).

8. This note is an overview of the situation of Afro-descendants and indigenous minorities in Uruguay, based mainly on information provided by the last census available (Censo Nacional 2011) and on ECH data. In the case of the Afro-descendant minority, some data is extended on the basis of available academic literature.

2. Description of general social indicators

2.1. Population size and distribution

9. According to the 2011 National Census, 7.8 percent of people living in Uruguay declared "Afro or Black" descent, while 4.9 percent reported having "Indigenous" ancestry. Ethnic backgrounds indicators are collected through self-declaration items, and the items are elicited in the same way in the Census and the ECH, via responses to the following questions:

- ¿Cree tener ascendencia ...? (Opciones: Afro o Negra/ Asiática o Amarilla/ Blanca/ Indígena/ Otra)
- ¿Cuál considera principal de las declaradas?

10. Thus, a person can declare one or more ancestries, and in cases of multiple descents a person may declare a principal one. This analysis is based on people who have declared African or Indian descent as their main or only descent.[41] Following this approach, the size of the ethnic groups in Uruguay is shown Table A3.1, which also includes data from 2012 ECH.

[39] For references on Afro-decendant cultural movements, see Machado, 2007.

[40] For instance, CONACHA (Consejo de la Nación Charrúa), which participated in the 2015 meeting of the regional Cátedra Indígena Intercultural (CII), supported by the Uruguayan Ministry of Foreign Affairs.

[41] Even though some scholars consider that the use of aggregate categories 'Main descent' + 'Secondary descent' raises visibility for excluded minorities, the use of 'Main descent' only is more helpful in indicating inequalities among groups, as the main category "refleja con mayor fidelidad la apariencia física desde el punto de vista racial. En la

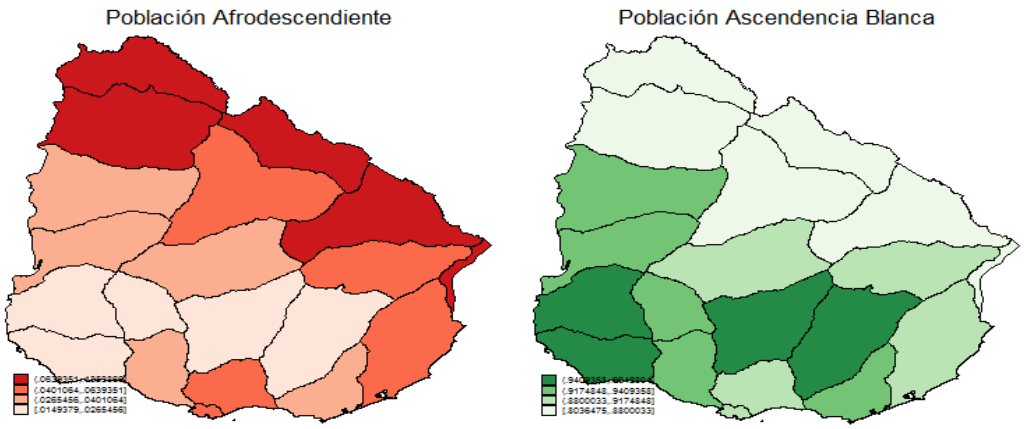
Table A3.1 Population by Ethnic Descent %

	White	Indigenous	Afro	Other	Total
General Population 201 Census	90.7	2.4	4.8	2.1	100
General Population ECH 2012	94.4	1.4	4.1	0.1	100
Head of Household ECH 2012	94.1	1.8	4	0.01	100

11. Additionally, it should be noted that both in the census and household survey measures there is only one respondent by household, and that informant assigns descents to the rest of the household members (and thus the concept of self-identification is not that strict).

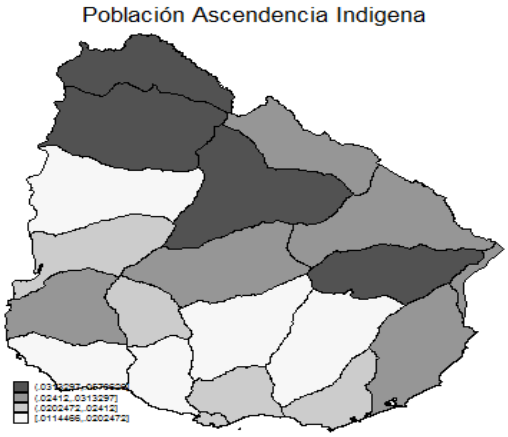
12. The geographical distribution of households of African descent is heterogeneous (see Map 3.1). The proportion of Afro-descendant population is larger in the departments of the northern Brazilian border (17.1 percent in Artigas and 17.3 percent in Rivera). There are also significant Afro-descendant minorities in Cerro Largo (10.9 percent), Tacuarembó and Salto (both 9.9 percent), and Montevideo (9.1 percent).[42]

Map A3.1 Population of Departments, by Ethnicity



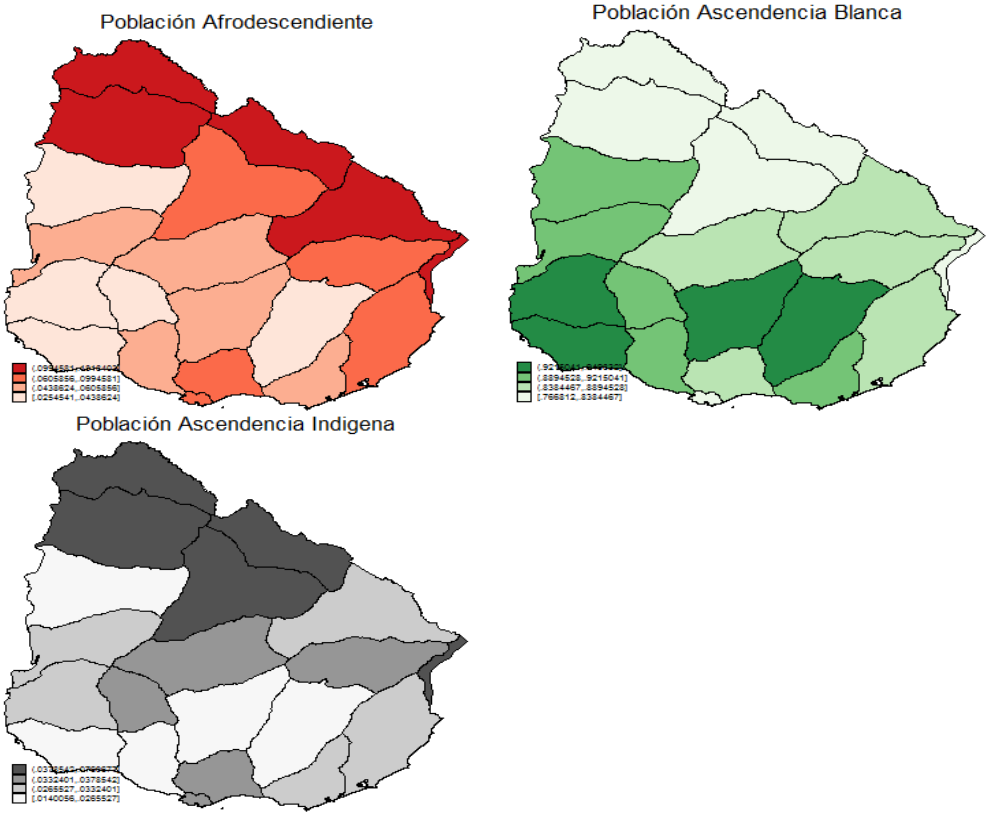
medida que la discriminación se ejerce sobre la construcción de estereotipos sociales basados en la estigmatización de determinados rasgos fenotípicos, los análisis basados en la ascendencia principal permiten visibilizar mejor los mecanismos de la discriminación y sus resultados en términos de desigualdad racial" (Cabella et al., 2013, p. 13).

[42] It has been argued that in the departments of Artigas, Rivera, Cerro Largo, Salto and Tacuarembó the strong influence of the Uruguay-Brazil border culture, together with the larger size of the Afro-descendant population, may explain a greater willingness of people to recognize and declare that descent (Cabella et al., 2013, p.20).

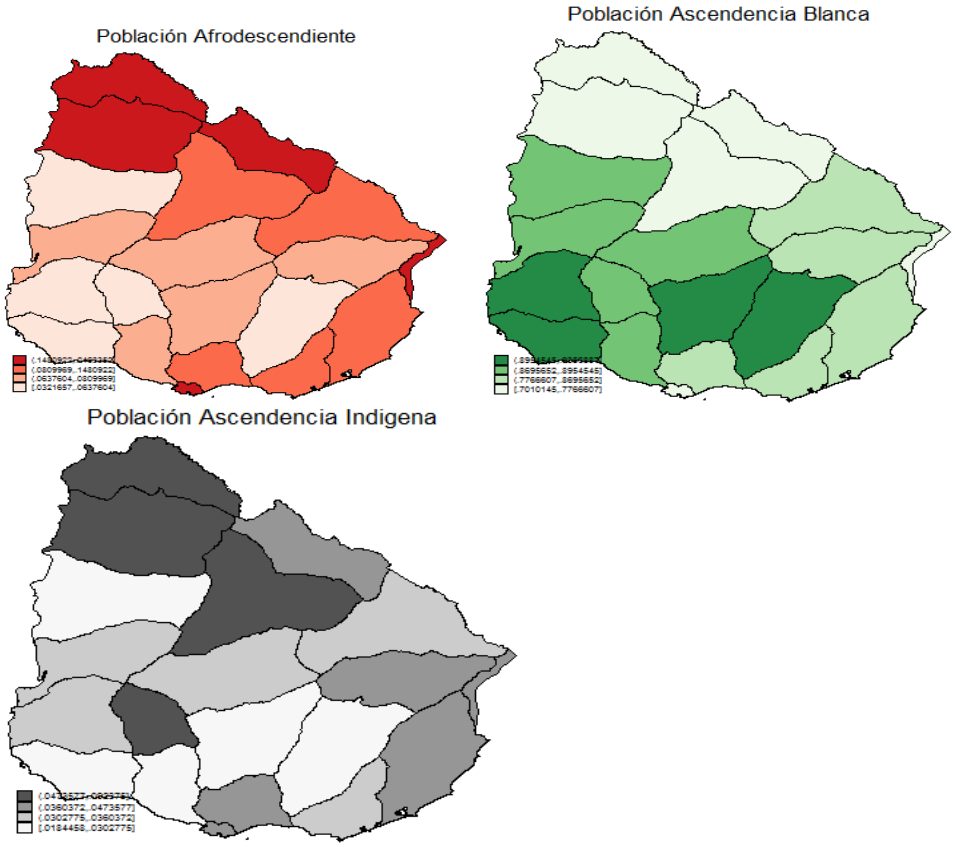


13. In turn, in Montevideo, the capital city that concentrates around 40 percent of the total population of the country, the distribution of Afro-descendants is concentrated in the most vulnerable neighborhoods of the urban periphery. Whereas the Afro-descendant population is less than 5 percent in the coastal districts, where the medium- and high-income population lives, it is around 20 percent in the "poverty belt" districts of the capital, suggesting problems of residential segregation and, plausibly, disadvantages in access to urban services.

Map A3.2 Distribution of Population with at Least One Unsatisfied Basic Need, by Ethnicity



Map A3.3 Distribution of Population with at Least Three Unsatisfied Basic Needs, by Ethnicity



2.2. Population pyramids and fertility

14. The population pyramid of Afro-descendants has a visibly younger structure than that of the general population. It does not reflect the typical rectangular shape of the aging general population: the population aged 65 years or more represents 14.4 percent within the non-Afro-descendant population and 8.1 percent within the Afro-descendant population, according to Census 2011, while the group aged 0 to14 years-old represents, for the same sub-populations, 21.6 percent and 25.2 percent, respectively. The evolution of population pyramids by descent has been compared (Cabella and Bucheli, 2007; Cabella, 2008), and it has been shown that their shapes remained relatively stable between the first measures collected 1996-1997 and the mid-2000 ECH data.

15. Whereas overall fertility rate in Uruguay is low in all segments of the population, there are evident disparities in this indicator. Economic status, educational attainment, and region of residence impact on the age of onset of fertility and on the number of children per woman (Varela et al., 2008; Amarante and Perazzo, 2008). Among the Afro-descendant population, as Cabella et al. (2013) pointed out Afro-descendant women have an earlier entry into reproductive life, "*registrándose concentración de la edad al primer hijo entre los 15 y 19 años y una fecundidad más elevada que la de las mujeres blancas, acumulando al final de su vida fértil un hijo más en promedio"* (Bucheli and Cabella, 2007). From the age group of 30s, the disparity in fertility declines, and there is a similar number of mothers among women from different ethnic backgrounds. As suggested by Vigorito et al. (UNDP, 2010, pp.98-100), there are cost differentials between women and men with regard to family formation: while the initiation of the parenthood cycle does not substantially alter the potential income for men, it does so in the case of women,

generating relatively higher costs in terms of their present and future economic autonomy.[43] Thus, the early fertility of Afro-descendant women implicates employment and education disparities, in the sense that it might be the origin of gender inequalities that overlap with ethnic ones.

16. The Census 2011 data also reveals a decline in the number of younger children (0-4 years old) within the general population. However, the decline was more marked among the Afro-descendant population. The reasons for this difference have been discussed, since it is not consistent with the reported higher fertility rate among Afro-descendant women. It has been hypothesized that the ethnic origins of children might be underreported, but more research is needed on this issue (see Cabella 2013, pp. 26 and 27).

17. Table A3.2 displays some characteristics of households whose head of household (main income earner) declares his or her White, Afro, or Indigenous main descent. The comparison shows some significant disparities, revealing the greater weight of children and dependents among households composed of those of African descent in particular.

Table A3.2 Characteristics of Household by Ethnic Descent (population = heads of households)

	White	Indigenous	Afro
Average household size	2.9	3.2	3.5
N Children	0.8	1.0	1.3
One-person household	20.2	17.3	15.0
One-parent household	16.5	22.2	24.1
Nuclear family household	40.0	40.3	46.1

Source: ECH, 2012

2.3. Poverty

18. Poverty and destitution rates are higher among the Afro-descendant population. This is mainly explained by the insertion in the labor market of Afro-descendants of both genders through low- income jobs, because of lower education levels. Additionally, it might be possible to explain disparities on the basis of racial segregation (Bucheli et al., 2008 and 2010).

19. Table A3.3 shows the distribution of population by deciles of per capita household income by ethnic group. The greater participation of Afro-descendants (and to a lesser extent indigenous people) in the lower deciles of income is evident: income deciles 1-4 comprise two-thirds of the Afro-Uruguayan population, revealing important degrees of vulnerability. Table A3.4 shows the proportions of households whose head of household is below the official poverty line, by ethnicity and gender, showing once again the greater vulnerability of the Afro-descendant population.

[43] According to the study by Vigorito and colleagues on the youth of the Southern Cone, these disadvantages for young women are a result of a lower probability of getting a job, as well as the adverse impact on the earnings of the presence of children, suggesting that young mothers who work are located in the lower strata of the labor market and earn lower wages, because of lower availability and lack of flexible schedule.

Table A3.3 Population by Per Capita Household Income Deciles, by Ethnic Descent

Income Deciles	Afro	Indigenous	White
1	22.6	16.4	9.6
2	18.3	15.2	9.7
3	14.2	10.9	9.9
4	11.5	11.0	10.1
5	9.5	9.0	10.1
6	6.9	8.9	10.1
7	5.8	10.4	10.3
8	5.6	7.8	10.3
9	3.7	7.0	10.3
10	2.0	3.4	9.5

Source: ECH, 2012.

Table A3.4 Percentage of Household Where Head of Household is below the Poverty Line, by Ethnic Descent and Gender

Afro		Indigenous		White	
Male	Female	Male	Female	Male	Female
28.8	19.5	22.3	14.9	8.9	6.8

Source: ECH, 2012.

20. It is logical to hypothesize that such over-representation of ethnic minorities (in particular those of main Afro descent) within vulnerable segments of society correlates to many of the observable disparities in assets other than income (e.g., lower educational capital or lower access to housing and urban services). But the relative scarcity of specific quantitative research on these minorities, beyond the officially available data, hinders the deepening of suitable and robust explanations. Empirical exercises such as the construction of specific multidimensional poverty indexes for the Afro-descendant population, or the estimation of human development indices disaggregated by ethnicity, could contribute to a better understanding of the ways ethnic discrimination works in Uruguay.

2.4. Housing

21. Consistent with higher vulnerability to poverty, the housing conditions of people of African descent are systematically less advantageous than those of the non-Afro-descendant population. Although the proportion of the population living in slums in Uruguay (about 5 percent) is lower than in neighboring countries such as Argentina or Brazil (Amarante and Caffera, 2003), the Afro-descendant population who live in slums is three times that of the White population (12.7 percent vs. 4.2 percent), indicating residential segregation linked to poverty and destitution.

22. The Afro-descendant population also has a lower proportion of homeowners (53.2 percent of Afro-descendant households own their homes, versus 59.2 percent of the White population, according to 20102 ECH data). A 2013 study conducted by UNDP analyzes the type of housing in which the Uruguayan population lives, dividing them into four quality categories determined by the type of building materials. The study showed that 41.1 percent of the Afro-descendant population lived in dwellings of good quality, versus 56.6 percent of non-Afro-descendant population; for housing of fair quality, the percentages found reported 58.5 percent and 43.2 percent, respectively. The percentages of people living in poor or very poor quality housing were very low for all ethnicities.

23. Some qualitative studies have shown interesting issues related to the Afro-descendant cultural identity and urban distribution in Uruguay. While peripheral neighborhoods in departments other than Montevideo tend to stress the exclusion of vulnerable ethnic groups, interviews in Montevideo declared that, sometimes, the predominantly Afro-descendant neighborhood becomes a space of belonging and of own cultural strengthening: "for some of the participants, attending events like the *llamadas* or moving to Palermo neighborhood meant to discover that there were many more peers; they generated excitement, surprise and curiosity. In contrast, other participants see this 'living among equals' as natural, being born and being raised in a neighborhood with a high proportion of population of the same descent" (Rudolf et al., 2008, pp. 115-6). It would be interesting to further research linkages between neighborhoods with preponderant ethnic minorities, and the tensions between residential segregation (expressed in informal barriers to renting in certain neighborhoods, for example) and cultural and political processes where neighbors of similar ethnic descent facilitate visibility and increase opportunities for individual and collective demands.

2.5. Indicators with insufficient information available

24. Although stated in news stories or mentioned by ethnic minority informants in qualitative studies (Rudolf et al., 2008; PNUD, 2010), institutional violence against the Afro-descendant segment is not clearly quantified. The information available from the National Census of Prisoners of 2010 does not include data on ethnic descent.

25. Another indicator for which there has been little in-depth research is on ethnic inequalities in access to health care. Consistent with a higher proportion of low-income households, Afro-Uruguayans household use public health services to a greater extent than the rest of the population, as shown in Table A3.5. The Table also show data for lack of access to formal social security, related in turn to less probability of accessing improved health services such as *mutualistas* or private health insurance.

Table A3.5 Informality (no access to social security) and Public Health Care (no access to *mutualistas* or private health services)

	White	Indigenous	Afro
Informality	10.8	14.7	18.1
Public Heath care	35.7	52.3	60.4

Source: ECH, 2012.

26. The qualitative study on perceptions of discrimination conducted by Rudolf et al. colleagues (2008) notes that the respondents highlight health as an area in which they are not usually victims of discrimination. However, it would be necessary to deepen the inquiries in this area to gain a better understanding of the relations of ethnic minorities and health systems.

3. *Persistent disparities in education and employment*

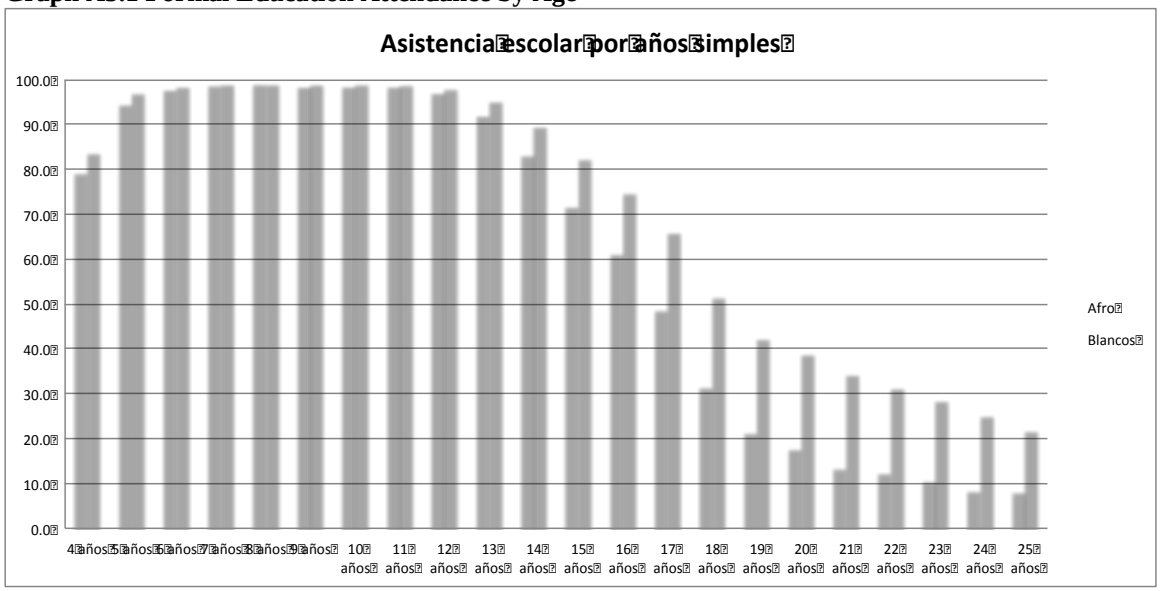
3.1. Disparities in education

27. The main available studies on ethnic minorities in Uruguay (mostly focused on the Afro-descendant minority, as already noted) agree that inequalities in educational indicators and

integration into the labor market are the main factors that explain the relatively higher vulnerability of this segment of the population.

28. The Afro-descendant population shows worse educational indicators than the non-Afro-descendant population, especially in the age group that should attend secondary education. While access to basic primary education is virtually universal in the country, and public schools cover the entire territory, children and adolescents of Afro descent have lower levels of school retention in the upper grades of elementary school, and lower levels of access and higher dropout rates in the basic cycle of secondary education. Of course, this causes weaker Afro youth presence in the tertiary and university studies. Graph A3.1 shows attendance at formal educational institutions by age, for the population up to 25 years. The Graph is telling with respect to the low capacity of middle schools to retain adolescents in general, but especially regarding the Afro-descendant population, as well as the very poor Afro-descendant participation in higher education.

Graph A3.1 Formal Education Attendance by Age



Source: National Census 2011.

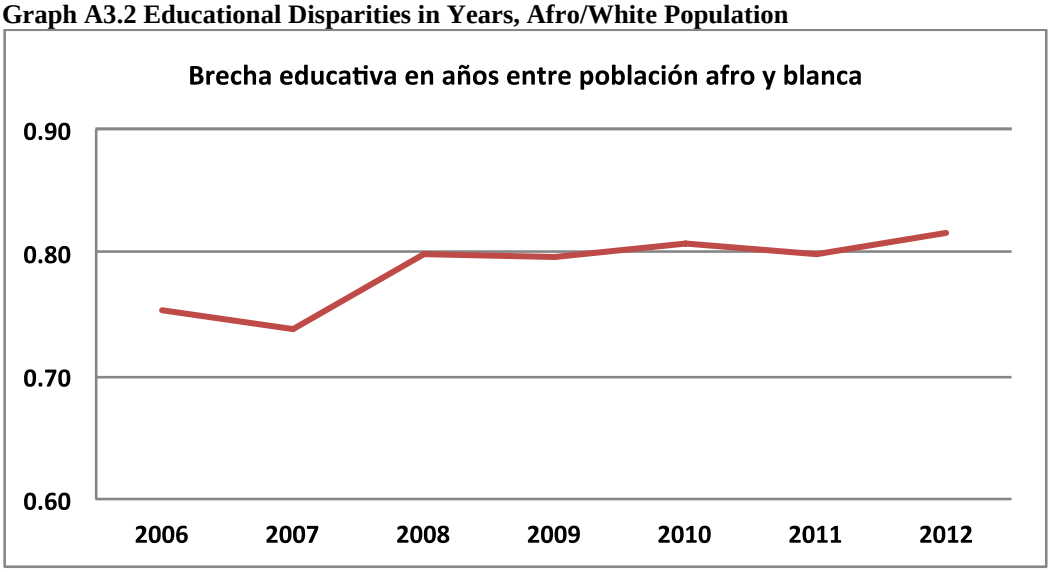
29. It should be noted that the disparities in early childhood education are mainly related to regional inequalities, as the lack of public (and therefore free) early education schools in peripheral and remote areas limits access of the lower income deciles disproportionately.

30. Primary level is the maximum educational achievement for more than half of adult Afro-descendants, while that rate drops to 4 in 10 among the non-Afro-descendant population, according to Census data 2011.[44] This may result in reducing the educational aspirations of the younger members of disadvantaged households. As suggested by Lopez-Calva et al. (2009), there is a significant relationship between educational attainment by parents and educational aspirations that parents have for their children and, as well as between the educational aspirations of young people and their social interaction with people who have high levels of education. Thus, incentives for better educational performance are potentially weakened in poor educational environments and in situations of residential segregation.

[44] Additionally, illiteracy rates are higher among the Afro-descendant population, but that condition is fundamentally linked to the people in the older age ranges.

31. Lower school retention of children and youth of African descent fosters persistent disparities in the number of years of education—which in turn has a direct impact on the ability of individuals to generate income and achieve autonomy. Graph A3.2 shows the disparity in the number of years of study among Afro and Whites between 2006 and 2012, reflecting the persistence of educational advantage for the latter group, even during years of economic expansion and decline in poverty and inequality rates in Uruguay.

Graph A3.2 Educational Disparities in Years, Afro/White Population



Source: ECH.

32. Considering only the population between the ages of 7 and 18, the disparity in educational shown by the ECH 2012 data is 0.93 years, while considering the adult population aged 18-45, the disparity is 0.81 years, suggesting causes for the persistence of adverse effects of lower educational returns directly attributable to formal qualification.

33. Specific educational indicators such as limited education of Afro-descendant children also show disadvantages for this ethnic minority. Table A3.6 shows the percentage of children with educational lags in different age ranges. Data show that the lag among Afro children is higher, even among children from households above the poverty line, suggesting they have problems in access to quality education beyond the net effect of income vulnerability. The magnitude of the lags, as expected, increases among children who reach secondary school ages, indicating a major bottleneck in the equality of opportunities offered by the education system.

Table A3.6 Educational lags (lagging by 2 or more years relative to age)

Children 7 to 11 years old		
	White	Afro
Poor	9.1	8.2
Not poor	3.3	3.7
Children 12-15 years old		
	White	Afro
Poor	37.9	47.0
Not poor	16.0	30.7

Source: ECH 2012.

Note: One of the consequences of poor retention of an education system is the existence of a significant segment of the population of young people who neither work nor study. The percentages of Afro-descent youth who neither work nor study exceeds that of non-African descent: 18.3% versus

13.5% of young people between 14 and 24 years in both groups do not study, do not work, and are not looking for a job. Considering those who do not study and do not work but who are looking for work, the percentages rise to 25.6% for Afro youth and 18.7% for non-Afro youth, according to data collected in the ECH.

34. As previously noted, there is greater ethnic inclusiveness in the education system in the early years of schooling; however, this is also the age and venue where children of Afro descent typically first experience discrimination (UNDP, 2008). As children progress through the education system, meeting fewer peers of African descent can accentuate feelings of isolation and low self-esteem, which in turn might reinforce learning difficulties and thus encourage school failure and dropout.

3.2. Disparities in employment

35. The participation of the Afro-descendants in the labor market is disadvantageous in terms of the low qualifications required for the jobs they occupy, the lower level of social protection, and higher level of informality—all of which implicate the consequent lower incomes. Table A3.7 shows some features of the labor market by ethnic origin.

Table A3.7 Labor Market by Ethnic Descent

	White	Indigenous	Afro
Unemployed	10.7	13.4	13.9
Economically active population	61.9	68.3	67.5
Informality	21.5	26.3	32.8
Public sector	15.6	14.7	13.2
Employees	70.3	70.0	72.9

Source: ECH, 2012.

36. Several studies on occupational segregation in Uruguay explore the differences in income between the workforce of Afro descent and non-Afro descent. Studies show that returns to education are markedly lower among the black population, especially among men (Bucheli et al., 2008, and Bucheli et al., 2010). According to the authors, Afro-descendants are paid less in all positions of the wage distribution, and the disparity increases from the median onward. The analysis shows that the profitability of one additional year of schooling is lower for Afro-descendants, particularly in higher levels of education, reinforcing the incentives for leaving the formal education system.

37. In their detailed study about Racial Inequality in the Uruguayan Labor Market (2008), Bucheli and Porcecanski outline five relevant conclusions based on empirical analysis of ECH data:
(i). Discrimination seems to be a plausible explanation of the racial wage disparity in Uruguay.
(ii). The control for job characteristics such as occupation and industry reveal occupational segregation (that is, Afro-descendants tend to be in lower paid occupations).
(iii) Racial discrimination seems to be stronger for men than women.
(iv) Conditional expected wages for men of African descent only ("blacks") is lower than that of "mixed" Afro-descendants. This suggests that darker skin may result in more acute discrimination in the labor market—however, this is not observed for female workers.
(v). Differences in education are the most powerful explanation for the ethnic disparity, suggesting that Uruguay is in urgent need of policies of equal opportunities for access to quality education.

However, if returns to education are in effect lower for Afro-descendants, non-discrimination measures need to be taken in the labor market specifically.

Annex IV. Ethnic Minorities and Labor Markets in Uruguay

1. Previous analyses have found statistically significant and economically meaningful differences between white and Afro-descendent Uruguayan workers (Beltrami 1998; Bucheli and Cabella 2007, based on the Household Surveys of 1996-97 and 2006; and Foster 2001, which further analyzes the 1996-97 survey).

2. Wage differentials between Afro-descendent and white workers in Uruguay are large. In particular, the ratio of Afro-descendant to white mean hourly wages is 0.72 and 0.78 for men and women, respectively, and these differences are statistically significant at the 0.001 percent level[45] (Bucheli and Porzecanski, 2011). In fact, Afro-descendants have been historically unable to fully climb the social ladder, and slavery may have had enduring social effects that are still in place (Frega et al. 2008).

3. Bucheli and Porzecanski (2011) further examine these differences using econometric methods. Data from pooled samples of white and Afro-descendants collected in Household Surveys from 2006 allow the authors to estimate Ordinary Least Squares (OLS) wage equations separately for genders of workers. The authors find that the wage disparity between white and Afro-descendants is partly explained by ethnicity, but the importance of ethnicity declines as job occupation and industry are accounted for. This result would suggest that ethnicity and industry sorting may be correlated. Interestingly, the wage disparity is the largest for workers at the bottom of the wage distribution, that is, ethnicity matters most for poorer and less educated workers than for those at the top of the wage distribution.

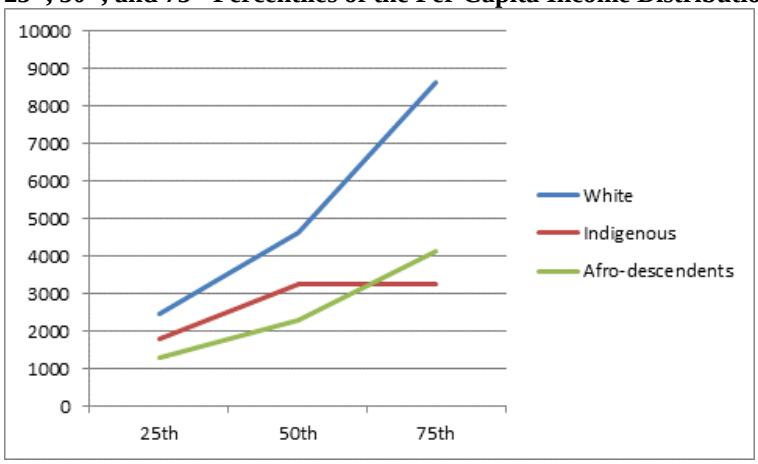
4. When only full time urban male workers aged 25-59 surveyed during 2006 to 2009 are included in the analysis, Bucheli and Sanroman (2010) find that Afro-descendant workers are younger on average and less educated than their white counterparts. The mean difference in educational attainment is more than one year. This disparity in educational attainment also varies with the distribution of wages: among poorer workers, the disparity in education is smaller (whites and non-whites are similarly educated) whereas among richer workers, the disparity is larger (whites and non-whites exhibit a disparity in education of four years on average). The authors thus conclude, based on their econometric estimations, that Afro-descendant workers are paid less across all the wage distribution than white workers. The authors find that education explains between 40-60 percent of this disparity.

[45] This disparity is, however, narrower than for other Latin American countries (Busso et al. 2005). However, Uruguay is the country with lowest levels of inequality and lowest poverty rates (Bucheli and Porzecanski, 2011).

II. Data Analysis Using Household Surveys, 2006-2013

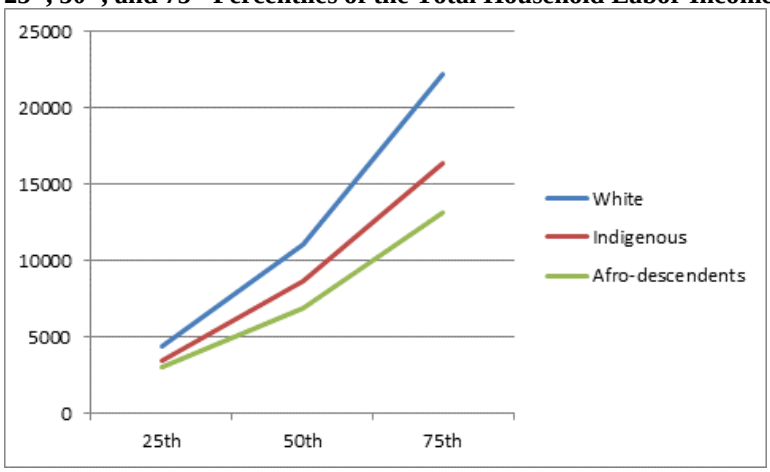
Inequality

25th, 50th, and 75th Percentiles of the Per Capita Income Distribution by Ethnicity



5. Both total household labor income and number of household members explain differences in income at different levels of the per capita income distribution.

25th, 50th, and 75th Percentiles of the Total Household Labor Income Distribution by Ethnicity



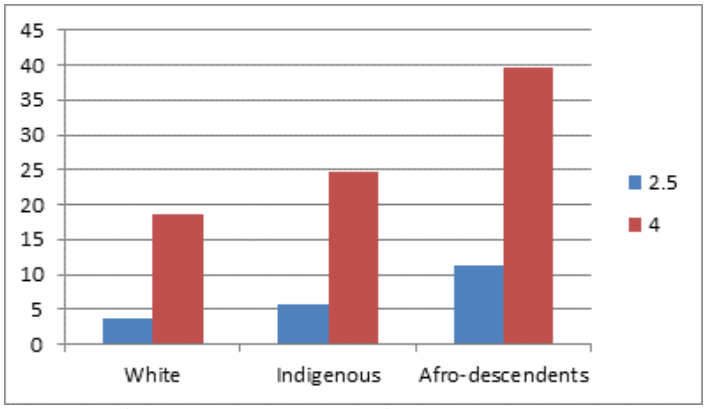
Other Indicators of Welfare by Ethnicity (percentages)

Indicator	White	Indigenous	Afro-descendent
Owns dwelling	42.17	49.22	41.46
Number of exclusive rooms in dwelling the household can use is more than 1	95.44	92.84	90.66
Water connection	96.73	95.15	92.91
Toilet	90.58	84.42	77.99
Electricity	98.50	96.91	96.12
Owns refrigerator	94.83	90.72	87.01
Dedicated place to wash clothes in dwelling	64.27	54.30	44.10
Owns computer	40.10	32.61	24.65

Poverty Lines by Ethnicity

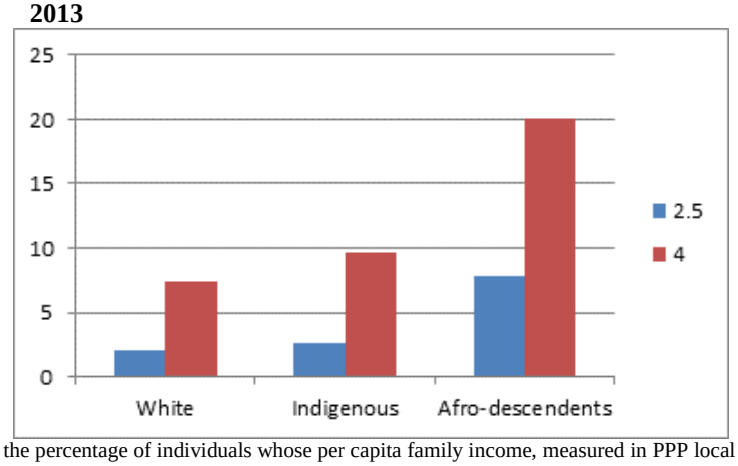
Poverty rate measured by per capita income below $2.5 and $4 dollars/day (PPP) by ethnicity (%)

2006



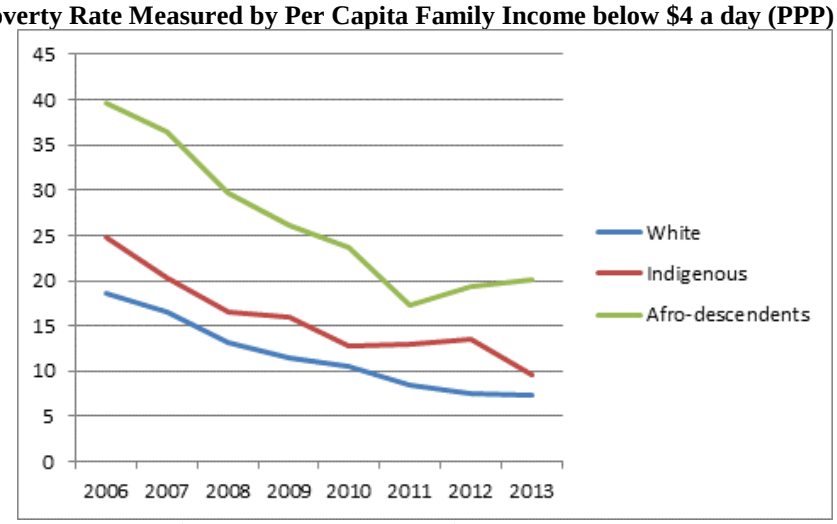
Note: Each column measures the percentage of individuals whose per capita family income, measured in PPP local currency, is below the $2.5/day threshold (red line), and below the $4/day threshold (blue line), out of all individuals of the same ethnicity. Per capita family income is constant across household (hogar) members. Data have been weighted according to survey sampling.

2013



Note: Each column measures the percentage of individuals whose per capita family income, measured in PPP local currency, is below the $2/day threshold (red line), and below the $4/day threshold (blue line), out of all individuals of the same ethnicity. Per capita family income is constant across household (hogar) members. Data have been weighted according to survey sampling.

Time Trend of Poverty Rate Measured by Per Capita Family Income below $4 a day (PPP) by Ethnicity (%)



Note: Each line measures the percentage of individuals whose per capita family income, measured in PPP local currency is below the $4/day threshold, out of all individuals of the same ethnicity. Per capita family income is constant across household (hogar) members. Data have been weighted according to survey sampling.

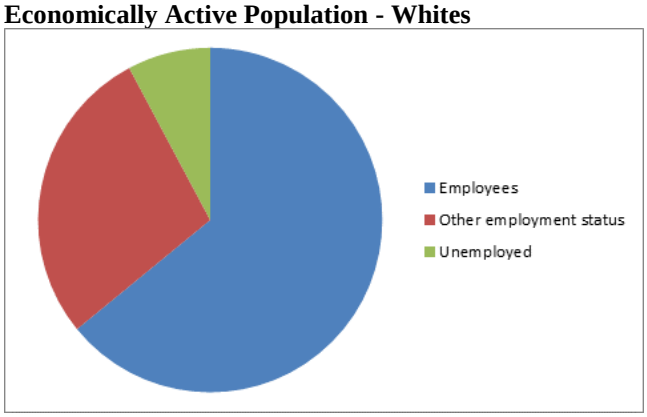
Number of Children Younger than 18 Living in Household by Ethnicity (Total Number of Households)

	Whites		Indigenous		Afro-descendants	
	No.	**Percent**	**No.**	**Percent**	**No.**	**Percent**
0	419,494	57.56	8,433	51.41	18,512	43.94
1	138,672	19.03	3,405	20.76	8,606	20.43
2	106,920	14.67	2,646	16.13	7,471	17.73
3	40,710	5.59	1,105	6.74	3,913	9.29
4	13,808	1.89	460	2.8	2,039	4.84
5	5,524	0.76	190	1.16	838	1.99
6	2,159	0.3	91	0.55	424	1.01
7	903	0.12	42	0.26	197	0.47
8	446	0.06	18	0.11	84	0.2
9 or more	214	0.02	14	0.09	45	0.1
Total	**728,850**	**100**	**16,404**	**100**	**42,129**	**100**

II.2 Labor Market Analysis

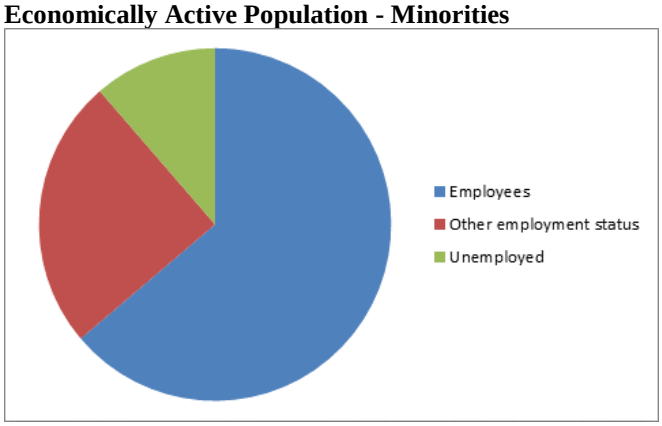
6. A first point to examine is the distribution of the labor force, or Economically Active Population (EAP). A first look at the EAP by ethnicity shows that there are differences in employment status across ethnicities in Uruguay. In particular, employees represent a larger proportion of the labor force among white individuals than among ethnic minorities. Looking at employees is a proxy for better employment conditions and therefore it is the first evidence that white individuals may enjoy overall better employment conditions than their counterparts who identify themselves as indigenous or black, although the causal relationships behind this cannot be ascertained without further analysis.[46]

Economically Active Population - Whites



[46] In this document, non-white means either indigenous or Afro-descendant as self-reported in Household Surveys.

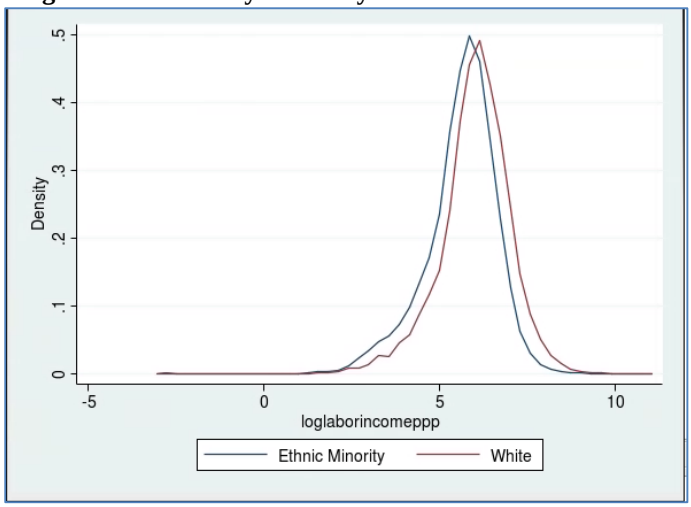
Economically Active Population - Minorities



Note: Sample only includes Economically Active Population. N Whites=641,849; N non-Whites=58,772. Employees + other employment status = Employed. Employed + unemployed = Economically Active Population. Non-whites correspond to categories self-reported as "Indigenous," "Afro-descendent," or "Other."

7. There are differences in labor income across ethnicities, too. The wage of white workers (those who derive positive income) is larger than the wage of their non-white counterparts, and the wage distribution of wages for white individuals is shifted to the right of the wage distribution of the individuals who are non-white. Therefore, at lower levels of wages, there are more non-whites but at the highest levels of the distribution (higher wages), the proportion of whites is larger.

Wages Distribution by Ethnicity



Note: Sample only includes "Employed" individuals.

Labor Market Outcomes and Socioeconomic Determinants of Labor Market Outcomes by Ethnicity (means)

Variable	White	Indigenous	Afro-descendant
Hours worked	41.86	40.71	40.81
Length of tenure in current job	9.32	8.15	6.80
Recent migrant (%)	12.25	12.24	12.82
Maximum level of education			
Elementary (%)	21.41	22.01	29.84

High school (%)	9.90	6.98	4.57
College (%)	9.69	6.36	2.18

Note: Sample only includes Economically Active Population.

Occupation by Ethnicity

ISIC Rev. 3.1	Whites		Indigenous		Afro-descendents	
	No.	**Percent**	**No.**	**Percent**	**No.**	**Percent**
Agriculture, hunting, and forestry	82,622	13.99	1,865	13.56	5,079	13.49
Fishing	1,387	0.23	48	0.35	156	0.41
Mining and quarrying	1,074	0.18	47	0.34	121	0.32
Manufacturing	75,103	12.71	1,757	12.78	4,786	12.71
Electricity, gas, and water supply	5,408	0.92	109	0.79	281	0.75
Construction	37,014	6.27	1,105	8.04	3,546	9.42
Retail	108,111	18.3	2,321	16.88	6,652	17.66
Hotels and restaurants	16,296	2.76	403	2.93	990	2.63
Transport, storage	31,615	5.35	551	4.01	1,576	4.18
Financial intermediation	8,984	1.52	133	0.97	237	0.63
Real estate	35,732	6.05	676	4.92	1,524	4.05
Public administration	37,627	6.37	857	6.23	2,608	6.92
Education	33,766	5.72	776	5.64	1,165	3.09
Health and social work	39,886	6.75	920	6.69	1,922	5.1
Other service activities	27,487	4.65	694	5.05	1,881	4.99
Private households as employers	48,202	8.16	1,477	10.74	5,126	13.61
Extraterritorial organizations	438	0.07	11	0.08	11	0.03
Total	**590,752**	**100**	**13,750**	**100**	**37,661**	**100**

Mean Labor Income by Ethnicity and Maximum Degree Attained (PPP $)

	White	**Indigenous**	**Afro-descendant**
Elementary	390.1537	326.5133	303.4437
High School	733.3662	580.9837	523.1283
College	1351.839	1021.05	1058.204

Note: Sample includes only employed individuals.

To dig deeper into differences in employment conditions, it is possible to examine whether there are statistically significant differences between white and non-white employed individuals.

Labor Market Outcomes of Employed Individuals by Ethnicity

Outcome variable	White Employed Mean (se)	Non-White Employed Mean (se)	p-statistic
Total labor income (PPP dollars)	604.397 (1.981)	397.042 (4.384)	0.000
Worker has right to retirement	0.685 (0.000)	0.553 (0.002)	0.000
Health insurance provided through job	0.650 (0.000)	0.544 (0.002)	0.000

Determinants of Labor Market Outcomes of Employed Individuals by Ethnicity

Variable	White Employed Mean (se)	Non-White Employed Mean (se)	p-statistic
Educational attainment (years)	9.580 (0.005)	8.030 (0.014)	0.000
Age	41.255 (0.018)	39.602 (0.060)	0.000
Male	0.561 (0.000)	0.585 (0.002)	0.000

Effect of Ethnicity and Other Socio-Economic Characteristics on (Log) Hourly Wage (Ordinary Least Squares Regression)

Dep. Variable: Log Hourly Wage	**Males**	**Females**
Educational attainment (years)	0.101 (0.003)***	0.098 (0.001)***
White [see Table Note below]	*0.315 (0.045)****	0.218 (0.034)***
Age	0.09 (0.002)***	0.093 (0.004)***
Age squared	-0.000 (0.000)***	-0.000 (0.000)***
Married	0.092 (0.010)***	0.035 (0.008)**
Mean of dep. variable	3.923	3.838
R2	0.9688	0.9678
N	345,231	261,697

Note: Standard errors clustered at the region level in parentheses. Sample only includes Employed individuals. Industry of occupation, region, and survey year indicators included but not shown. White is a dummy variable that takes on a value of 1 if individual self-reports being white; and 0 if indigenous or afro-descendent. * indicates 10% statistical significance; ** indicates 5% statistical significance, *** indicates 1% statistical significance. Consistent with previous evidence, there are wage differentials between white and non-white workers in Uruguay. The "white premium" is statistically significant and economically important. Male white workers earn 31% more per hour worked, holding constant their age, marital status, industry of occupation, and educational attainment. Even though the mean hourly wage per hour is lower for females compared to males, the "white premium" is lower for women (21%), and is also significant at all statistical levels.

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Annex V. Broad Fiscal Implications of an Aging Population in Uruguay

1. **Uruguay is well advanced in the process of demographic change.** As economies transition from high fertility rates and short life expectancies to low fertility and mortality rates, the age structure of their population changes. The share of elderly population increases while the working-age population declines, increasing the median age of the population. In Uruguay, this process of demographic transformation began early in the 20th century. As fertility rates declined and life expectancies increased, the median age of the population increased to 33.7 years in 2010 (see Figure A5.1), the highest in Latin America. The process has been longer and smoother in Uruguay than in many other Latin American countries, and is more similar to those observed in the advanced European economies.

Figure A5.1 Median Age, 1950-2100

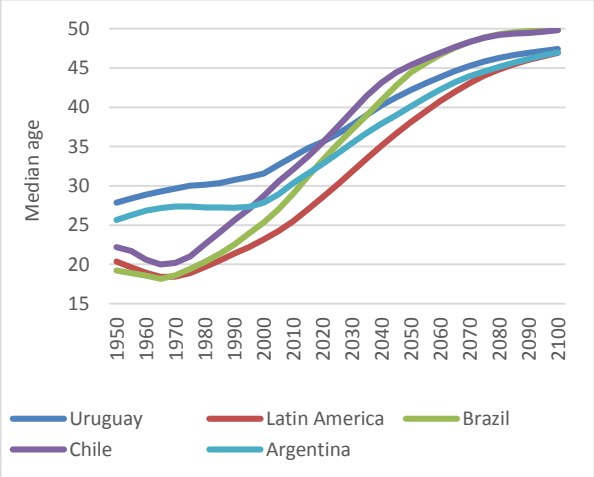


Figure A5.2 Total Fertility Rate, 1950-2100

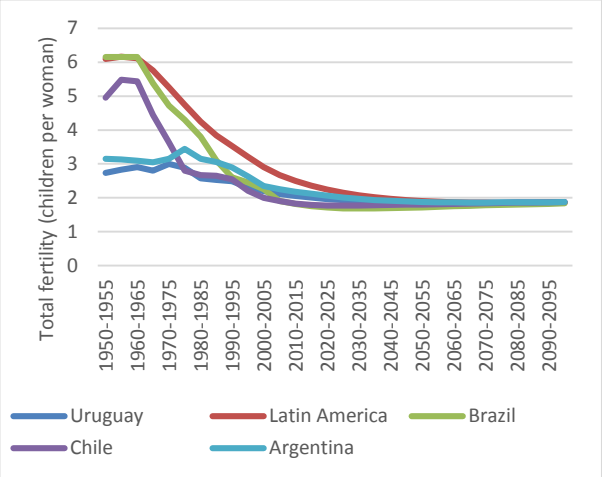


Figure A5.3 Life Expectancy at Age 15, 1950-2100

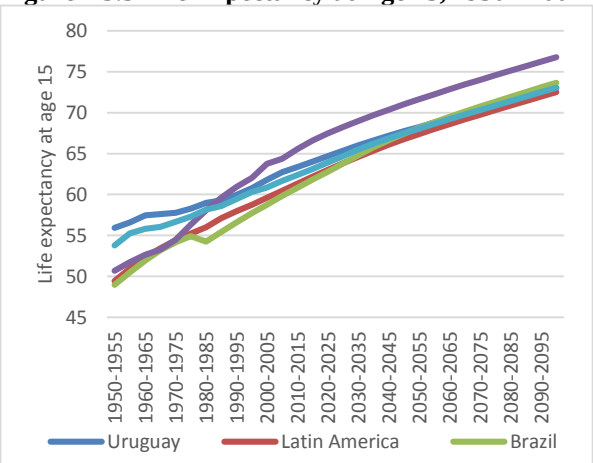
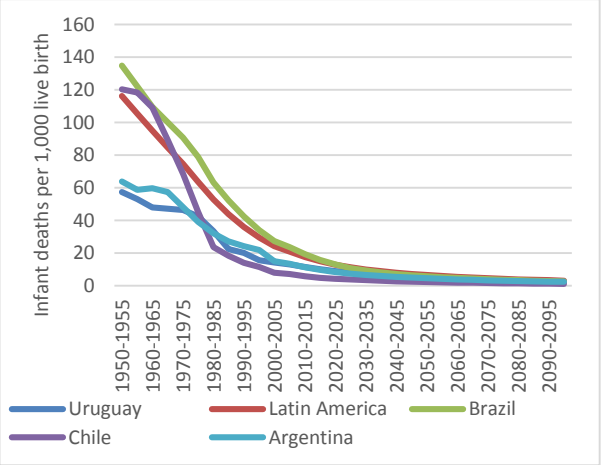


Figure A5.4 Infant Mortality, 1950-2100



Source: UN World Population Prospects 2012 Revision.

2. **Uruguay's demographic transformation is not yet complete and has lingering macro-fiscal implications.** Declining fertility and mortality rates (see figures A5.2-4) had already reduced the share of the working-age population in Uruguay to 62.7 percent of the total population in 2000 (see Figure A5.5) After a brief period of growth, the share of working-age population is projected to further decline as life expectancies increase, from 64.4 percent in 2020 to 61.5 percent in 2050

and 55.4 percent in 2100 (see Figure A5.5). This will have substantial implications on economic for economic growth and public finances.

Figure A5.5 Working-age Population, 1950-2100

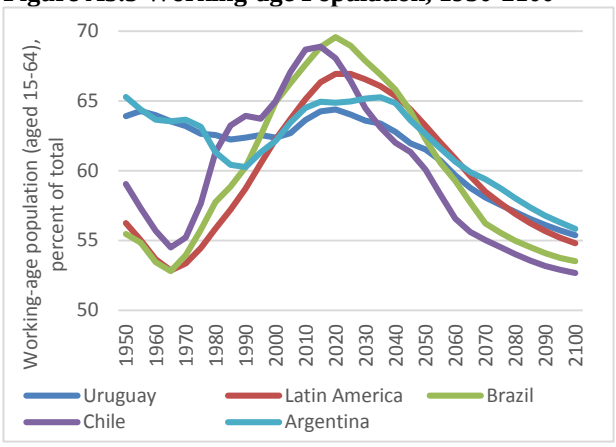
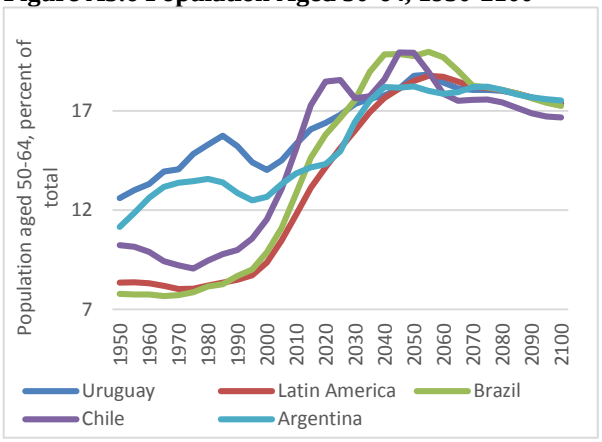


Figure A5.6 Population Aged 50-64, 1950-2100



Source: UN Population Prospects 2012 Revision.

3. **Demographic change is highly likely to affect labor productivity.** However, the effects are ambiguous. Typically, an older labor supply is associated with lower physical and cognitive productivity but higher productivity in the jobs that require advanced management, communication, and conflict resolution skills. Aging may also generate behavioral responses in the form of increased savings to provide for old age; this phenomenon is commonly referred to as the "second demographic dividend" and is typically associated with an increase in the share of the population aged 50-64. This age cohort has been increasing in Uruguay since 2000 and this trend is expected to continue until 2050 (see Figure A5.6).

4. **An aging population will put pressure on public finances.** A rising share of the elderly increases demand for public services such as pensions, health, and long-term care. Per capita health care expenditures, for instance, are broadly U-shaped with respect to age groups, with spending on the youngest and oldest significantly higher than the rest. Pension expenditures rise almost linearly with the share of the elderly, while revenues decline as the labor force shrinks. By contrast, both per capita and aggregate education expenditures typically decline as the population ages. The effects on fiscal revenues are more ambiguous. A shrinking working-age population implies a narrower tax base, and hence reduced revenues from income taxes. On the other hand, revenues from consumption taxes may increase as the elderly consume a higher share of their income.

5. **A simple model can integrate these different transmission channels to demonstrate the broad fiscal implications of an aging population in Uruguay.** More specifically, the model examines effects of the expected demographic change over the 2010-50 period on output, fiscal expenditures, and public debt trajectory under three demographic scenarios. The baseline scenario is the medium variant from the UN population projections. Two alternative demographic scenarios are a more "pessimistic" low fertility scenario and a more "optimistic" high fertility scenario, again from the UN Population projections. The share of population aged 65 and over is expected increase from 13.9 percent of total population in 2010 to 21.5 percent in 2050, a 7.6 percentage point increase, under the baseline scenario. The more "pessimistic" low-fertility scenario projects a larger increase, by 11 percentage points, while the more "optimistic" high-fertility scenario anticipates a smaller increase over the same period, by only 4.8 percentage points. By contrast, the

largest projected decline in the share of *working-age population* is under the high-fertility scenario over the 2010-50 horizon (see Figures A5.7-8).

Figure A5.7 Old-Age Population, 2010-50

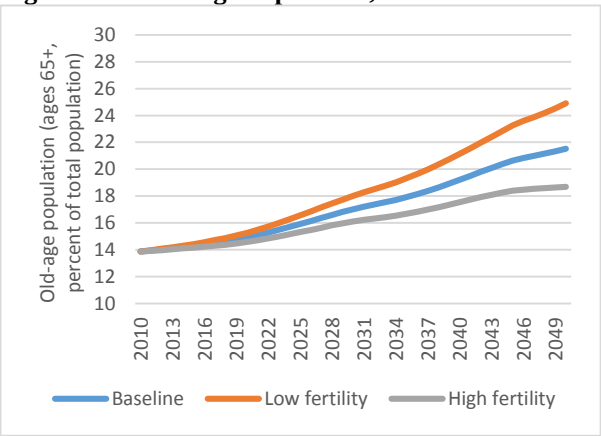
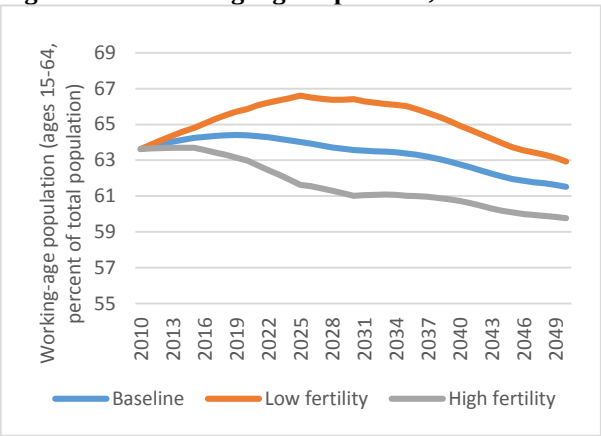


Figure A5.8 Working-Age Population, 2010-50



Source: UN Population Prospects 2012 Revision.

Output Implications of an Aging Population in Uruguay

6. **An aging population is assumed to affect the growth of the Uruguay economy mainly through reduced employment.** A shrinking working-age population would translate into a declining labor force under two assumptions (see Figure A5.9): (a) labor force participation rates are lower for the older-age workers than for the rest; and (b) labor force participation rates remain constant throughout the projection period by broad age groups and gender. The second assumption reflects the ILO's constant labor force participation assumption. To derive employment projections from the labor force, the unemployment rate is assumed to increase gradually from 6.5 percent in 2014 to 7.2 percent in 2018 and remain at this level. Historical unemployment rates are used for 2010-14. Calculated as such, employment is projected to increase until 2037 and decline slightly afterwards under the baseline demographic scenario. Under the low fertility scenario, employment increases until 2030, whereas employment continues to increase throughout the projection period according to the high fertility scenario. Employment levels under the two alternative demographic scenarios are ± 10 percent of that under the baseline scenario (see Figure A5.10).

7. **Labor productivity growth is assumed to continue to increase until 2020 and then decelerate only slightly.** In the absence of a thorough analysis of the determinants of productivity, the trend growth in total factor productivity (TFP) between 1970 and 2010 is assumed to continue until 2020 and then level off at the US TFP growth over the same period. Since the analysis is concerned with the long run, labor productivity growth is assumed to be driven by TFP growth and growth of human capital per worker. The latter is assumed to slow over the projection horizon, which would lead to a slight deceleration in labor productivity growth (see Figure A5.11). Historical total factor productivity, human capital per worker, and labor share of income data are from the Penn World Table, version 8.0.

Figure A5.9 Labor Force, 2010-50

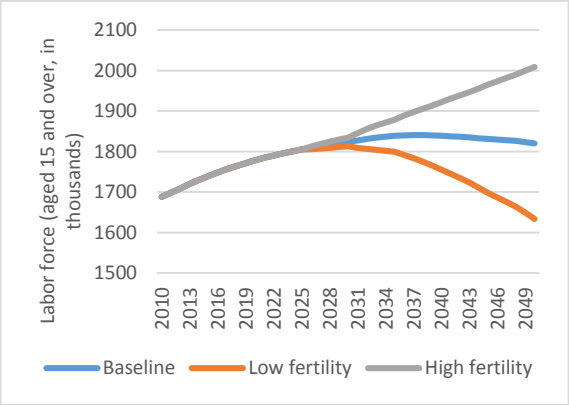
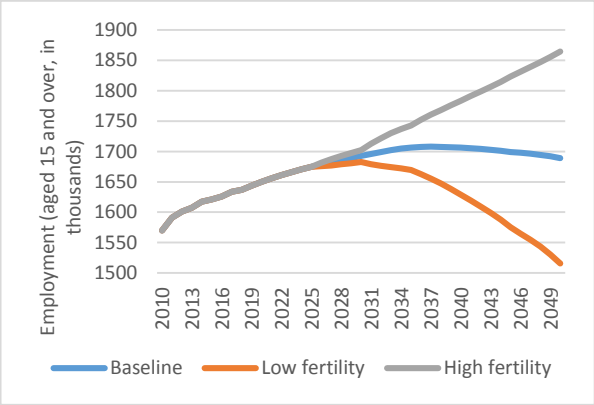


Figure A5.10 Employment, 2010-50



Source: World Bank calculations based on UN Population Prospects 2012 Revision and ILO.

Figure A5.11 Labor Productivity Growth, 2012-50

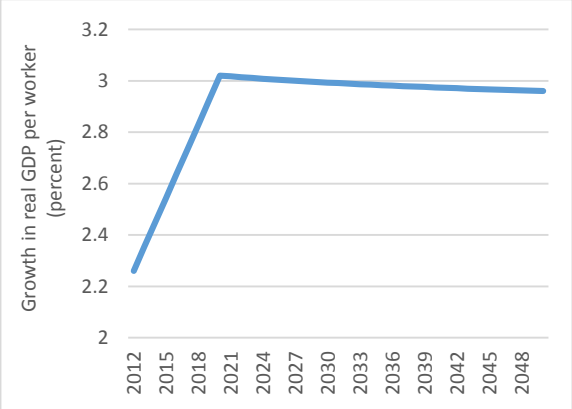
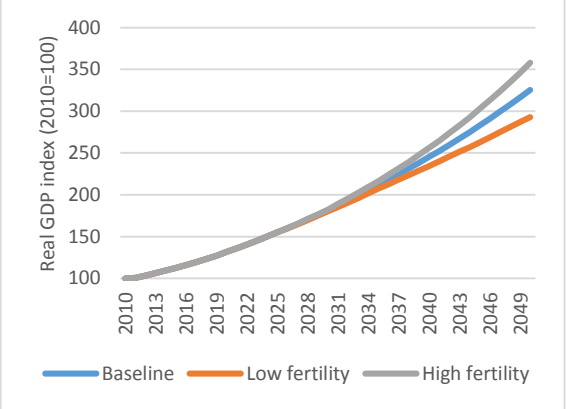


Figure A5.12 Real GDP Index, 2010-50



Source: World Bank calculations based on Penn World Table, version 8.0; UN Population Prospects 2012 Revision; and ILO.

8. **Output under the two alternative scenarios is expected to be ±10 percent of that under the baseline scenario.** Output growth can be decomposed into contributions from labor productivity growth, change in the employment rate, and population growth as described in Box 1 (see Figures A5.13-16). The changing demographic structure in Uruguay, under the baseline scenario, is expected to reduce the overall employment rate throughout the projection period, with adverse effect on growth. This effect is more pronounced under the low fertility scenario. By contrast, under the high fertility scenario, the adverse effect on growth declines over time as younger cohorts enter the labor force. Under the baseline scenario, population growth is expected to have a positive but declining contribution over the 2010-50 period. The adverse effects of population growth on overall economic growth is observed significantly earlier under the low fertility scenario, whereas the effects are positive under the high fertility scenario over the projection horizon. Under all three demographic scenarios, labor productivity growth is assumed to have a positive and significant contribution to growth.

Figure A5.13 Real GDP Growth, 2011-50

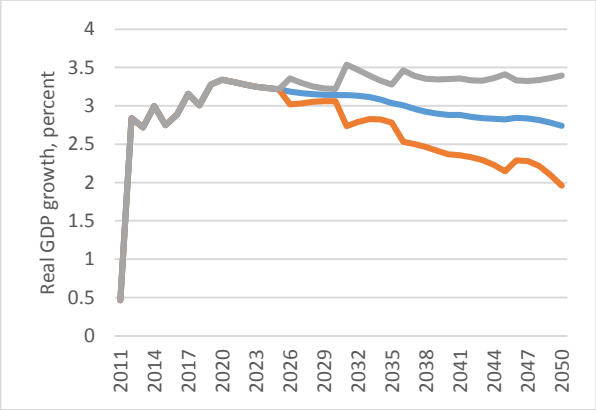


Figure A5.14 Contribution to Real GDP Growth (Baseline), 2011-50

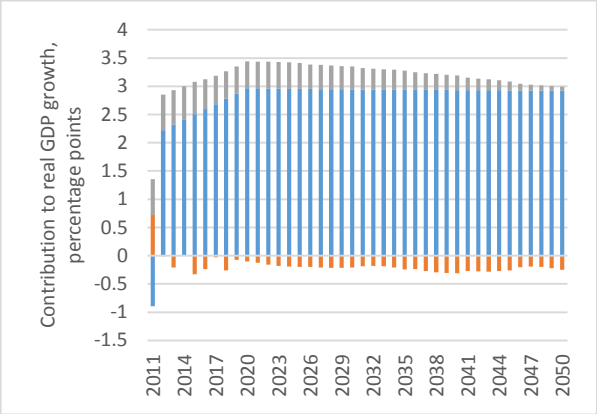


Figure A5.15 Contribution to Real GDP Growth (Low Fertility), 2011-50

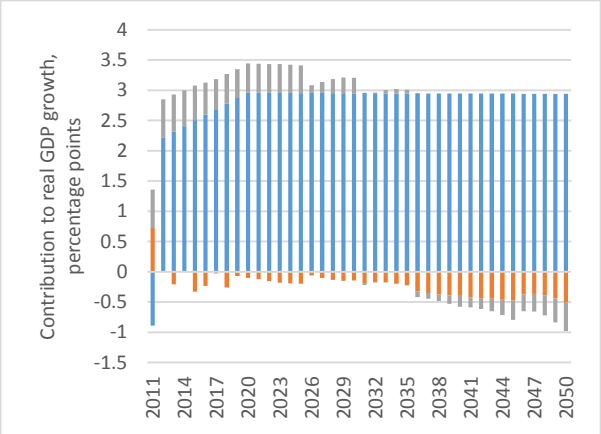
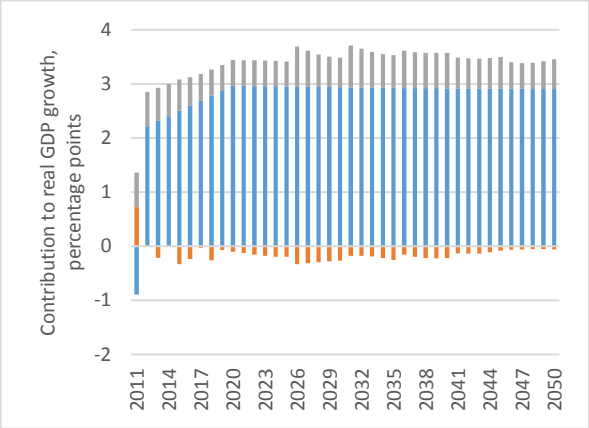


Figure A5.16 Contribution to Real GDP Growth (High Fertility), 2011-50



Source: World Bank calculations based on Penn World Table, version 8.0; UN Population Prospects 2012 Revision; and ILO.

Box 1. Growth Decomposition

Output can be written as:

$$Y_t = (\frac{Y_t}{L_t}) * (\frac{L_t}{P_t}) * P_t$$

where, Y_t is real GDP measured in constant local currency units, P_t refers to population aged 15 and over, and L_t shows employment among population aged 15 and over, all in year t. The log transformation of the above identity becomes:

$$\ln(Y_t) = \ln(Y_t/L_t) + \ln(L_t/P_t) + \ln(P_t)$$

The first difference gives output growth:

$$g_{t+1} \equiv \ln(Y_{t+1}) - \ln(Y_t) = \left[\ln\left(\frac{Y_{t+1}}{L_{t+1}}\right) - \ln\left(\frac{Y_t}{L_t}\right)\right] + \left[\ln\left(\frac{L_{t+1}}{P_{t+1}}\right) - \ln\left(\frac{L_t}{P_t}\right)\right] + [\ln(P_{t+1}) - \ln(P_t)]$$

The first term on the right-hand side shows labor productivity growth. The second term shows the change in employment rate, and the third term indicates population growth.

Fiscal Implications of an Aging Population in Uruguay

9. **Non-interest fiscal revenues are assumed to remain constant as a share of GDP after 2014.** Between 2010 and 2014, historical data are used. Inherent to the constant revenue assumption is the assumption of unitary elasticity of revenues with respect to income. This assumption might be relaxed in a subsequent analysis, depending on the type of tax systems. In the case progressive income taxes, for instance, tax revenues are elastic with respect to income. The effects of a changing demographic structure on the tax base is not considered.

10. **Three types of fiscal expenditures are assumed to have an age profile: health expenditures, pension outlays, and education expenditures.** For each of these expenditure categories, an age profile is derived in the form of public expenditures as a share GDP by broad age groups. These age profiles are assumed to remain the same throughout the projection period. As a result, changes at the aggregate levels reflected a changing demographic structure. The age-related fiscal expenditure projections are also based on the implicit assumption that they have unitary elasticity with respect to income. Boxes 2 through 4 provide the details for age-related expenditure projections. The rest of the expenditures are assumed to remain constant as a share of GDP.

11. Public health and pension expenditures are expected increase as a result of an aging population in Uruguay. Declining education expenditures are expected to fall short of compensating for this increase.

12. **As a result, the primary fiscal deficit is projected to increase by 1.8 percentage points of GDP between 2014 and 2050, from 0.4 to 2.2 percent under the baseline assumptions.** Interestingly, the widening of the deficit is expected to be even larger under the more "optimistic" high fertility scenario, by 3.5 percentage points of GDP, over the projection horizon. This is a

consequence of significantly higher public health care spending for infants, in per capita terms, and increasing education expenditures. In the low fertility scenario, the primary deficit is projected to increase by 0.9 percentage points of GDP. An increasing fiscal deficit, together with a slowdown in GDP growth, would implicate the debt-to-GDP ratio, controlling for valuation effects.

Figure A5.17 Primary Fiscal Deficit, 2010-50

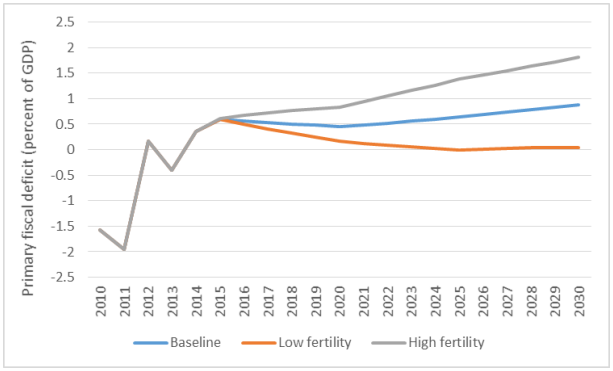
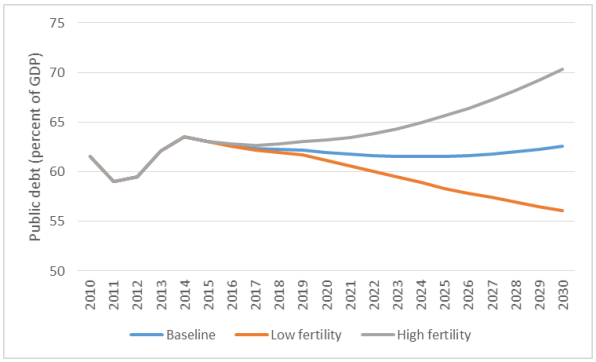


Figure A5.18 Public Debt, 2010-50



Source: World Bank calculations based on IMF (2015).

Box 2. Public Health Spending

The core data is insurance per capita spending projections for the IAMC by gender and age groups in 2012 (Figure 8). The data is assumed to be representative of the overall public health spending per capita by gender and age groups.

Figure 1: Insurance Per Capita Spending, 2012

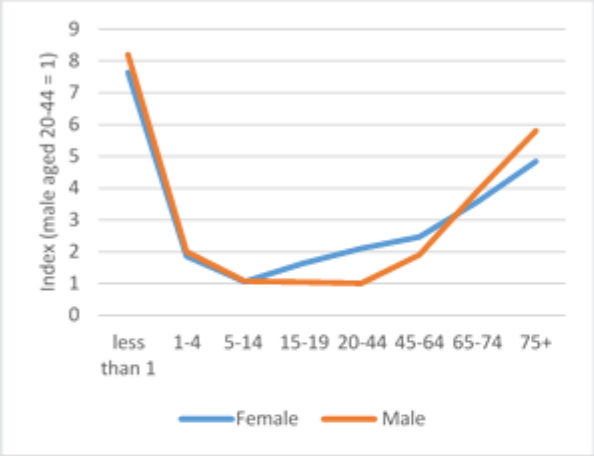
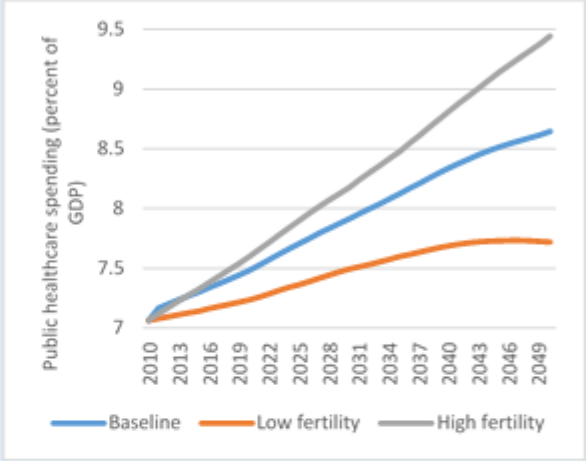


Figure 2: Public Health Spending, 2010-50



Source: World Bank calculations based on IAMC insurance per capita (2012).

Total public health spending as a share of GDP in 2012 is used to compute public health spending per capita as a share of GDP by gender and age groups. These ratios are assumed to remain constant throughout the projection period. Then, the UN annually interpolated population projections are used to demonstrate the effects of demographic change on total public healthcare spending through 2050. 2010 and 11 are extrapolated from the 2012 and rebased across three scenarios.

For the low fertility and high fertility scenarios, population projections are available for only by five year intervals by gender. Annual interpolation was performed through interpolation coefficients calculated under the baseline scenario.

Under the baseline scenario, public health spending is projected to increase by 1.6 percent of GDP between 2010 and 2050. The increase is less under the more pessimistic low fertility scenario, only 0.7 percent. Under the more optimistic high fertility scenario, total public health spending is projected to increase by 2.4 percent of GDP between 2010 and 2050.

Box 3. Public Pension Spending

Revenue and expenditure projections for the PAYG scheme is available from the World Bank Public Finance Review (2013). These projections are based on a set of baseline demographic projections from the BPS, and are found to be "credible". Based on this assessment, we assume that the divergence from the UN baseline projections is minimal and calculate coefficients of correlation between pension expenditures and revenues and the shares of old-age and working-age populations. Using these coefficients, we adopt the baseline projections to alternative demographic scenarios.

Figure 1: PAYG Contributions, 2010-50

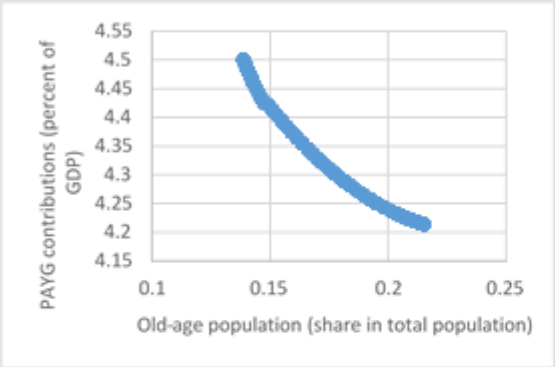
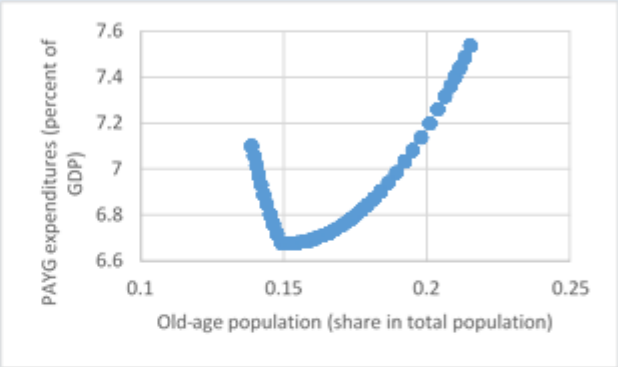


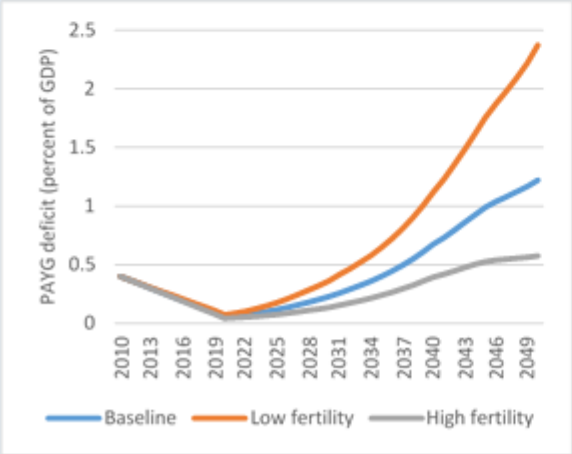
Figure 2: PAYG Expenditures, 2010-50



Source: World Bank calculations based on World Bank Public Finance Review (2014).

The Uruguay PAYG system was recently reformed, leading to improvements in the finances. The effects are expected to persist until 2020. After 2020, the deficit is expected to increase by 1.2 percent of GDP through 2050 under the baseline scenario. PAYG deficit is expected to increase by 2.3 percent of GDP between 2020 and 2050 under the more pessimistic low-fertility scenario and by only 0.5 percent under the high-fertility scenario.

Figure 3: PAYG Deficit, 2010-50



Source: World Bank calculations based on World Bank Public Finance Review (2014).

Box 4. Public Education Spending

World Bank (2015) provides enrollment ratios in 2012 for pre-primary (ages 3-5), primary (ages 6-11), secondary (ages 12-17), and tertiary (ages 18-22) education. These ratios are assumed to remain constant throughout the projection period. Given the population projections under three different scenarios (annual interpolation is described in Box 2), total enrollment is computed for different education levels. World Bank (2015) also provides public education spending as a share of GDP in 2012 for different levels of education. We then used this and enrollment data to calculate public education spending as a share of GDP per student for each education level (or corresponding age group). Assuming these rate remain constant throughout the projection period, we were able to capture the effects of demographic change on total education spending.

Figure 1: Public Education Spending Per Student, 2012

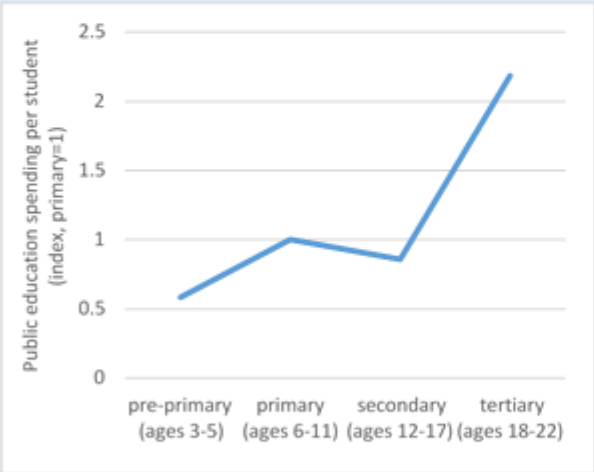
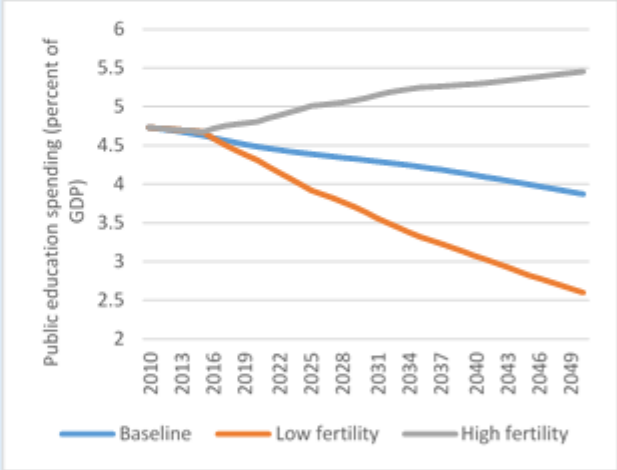


Figure 2: Public Education Spending, 2010-50



Source: World Bank calculations based on World Bank (2015).

Under the baseline scenario, public education spending is projected to decrease by 0.9 percent of GDP between 2010 and 2050. The decrease is much pronounced under the more pessimistic low fertility scenario, 2.1 percent. Under the more optimistic high fertility scenario, total public education spending is projected to increase by 0.7 percent of GDP between 2010 and 2050.