

Senegal

**Achieving High and Inclusive Growth
While Preserving Fiscal Sustainability**



Salifou Issoufou, Andrew Jewell,
Alexei Kireyev, and Gaston Mpatswe

Senegal

**Achieving High and Inclusive Growth
While Preserving Fiscal Sustainability**



Salifou Issoufou, Andrew Jewell,
Alexei Kireyev, and Gaston Mpatswe

©2013 International Monetary Fund

Cataloging-in-Publication Data

Joint Bank-Fund Library

Senegal : achieving high and inclusive growth while preserving fiscal sustainability / Salifou Issoufou . . . [et al.].—Washington, D.C. : International Monetary Fund, c2013.

p. : col. ill. ; cm.

Series: African departmental paper

Includes bibliographical references.

1. Economic development—Senegal. 2. Income distribution—Senegal.
 3. Debts, Public—Senegal. 4. Government spending policy—Senegal.
 5. Poverty—Senegal. 6. Power resources—Senegal. I. Issoufou, Salifou.
- II. International Monetary Fund.

HC1045.S46 2013

ISBN: 978-1-48437-966-0

Disclaimer: The views expressed in this book are those of the authors and should not be reported as or attributed to the International Monetary Fund, its Executive Board, or the governments of any of its member countries.

Please send orders to:

International Monetary Fund, Publication Services

P.O. Box 92780, Washington, DC 20090, U.S.A.

Tel.: (202) 623-7430 Fax: (202) 623-7201

E-mail: publications@imf.org

Internet: www.elibrary.imf.org

www.imfbookstore.org

Contents

Introduction	v
1. Growth Performance, Outlook, and Challenges	1
Growth Performance Over the Past Twenty Years	1
Medium-Term Growth Outlook and Challenges	4
2. Growth Inclusiveness in Senegal	9
Poverty in Time and Regional Perspectives	9
Growth and Inequality in Senegal	11
Are Senegal's Public Policies Supportive of Inclusive Growth?	11
Policies to Increase Inclusiveness of Growth	14
References	17
Figures	
1. Senegal: Real GDP Growth, 1990–2011 (in percent)	2
2. Number of Tourist Arrivals (Thousand), 2003 and 2006	7
3. Average Receipts per Tourist Arrival (US\$ Current), 2003 and 2006	7
4. Electric Power Transmission and Distribution Losses (% of output), 1990–2006	7
5. Cost of Registering Property (% of property value)	8
6. Change in Poverty Rate	10
7. Sensitivity of Poverty Reduction to Growth in the WAEMU	10
8. Growth in Real Household Expenditure by Decile per Capita	12
9. Senegal: Health and Education Expenditure (2006–10)	13
10. Senegal: Who Benefits from Public Expenditure?	13
Tables	
1. Senegal's Growth Performances vis-à-vis Comparators, 1990–2011	2
2. Senegal: Sectoral Contributions to GDP, 1991–2011	3
3. Senegal: Consumption, Investment, and National Savings, 1991–2011	3
4. Senegal's Growth Rate Accounting, 1991–2011	4

5. Senegal’s Growth Rate Accounting, 2012–17	<u>5</u>
6. Cereal’s Average Yield (100 kg per hectare), 1994–2008	<u>6</u>
A.1 Fiscal Costs of Electricity Subsidies	<u>19</u>
Power Sector: Current Challenges	<u>19</u>
Tariff Gap and Quasi-Fiscal Costs	<u>19</u>
Distributional Effects of Electricity Subsidies	<u>22</u>
A.2 Implications of Public Investment Scaling Up	<u>25</u>
Introduction	<u>25</u>
Model Calibration	<u>25</u>
Baseline Scenario	<u>27</u>
Alternative Scenarios	<u>28</u>
Conclusion	<u>31</u>
References	<u>32</u>
Figures	
A.1. Quasi-fiscal Costs as Percent of GDP, 2005–11	<u>22</u>
A.2. Quasi-fiscal Costs as Percent of SENELEC Sale Receipts, 2005–11	<u>22</u>
A.3. Transfers to SENELEC, Capital Spending in Health and Education Sectors, 2005–11	<u>24</u>
A.4. External and Domestic Borrowing	<u>28</u>
A.5. Fiscal Adjustment Only	<u>29</u>
A.6. Concessional Borrowing Only	<u>30</u>
A.7. Nonconcessional Borrowing Only	<u>31</u>
Tables	
A.1. Electric Power Supply, Sales and Costs, 2005–11	<u>20</u>
A.2. Power Sector Quasi-fiscal Costs and Subsidies, 2003–11	<u>21</u>
A.3. Calibration of Main Parameters	<u>26</u>

Introduction

Senegal's growth has been sluggish in recent years, with implications for poverty reduction. Average growth was relatively strong in 1995–2005 and accompanied by a large drop in poverty incidence. Due partly to a series of exogenous shocks, growth decreased to an average of 3.3 percent in 2006–11. As a result, per capita income increased only modestly and poverty incidence barely decreased during this period and remains high. Wide disparities exist between rural areas, where poverty incidence is higher than the national average, and urban areas.

At the same time, fiscal deficits have increased, reducing fiscal space, and debt ratios have increased, raising debt sustainability concerns. The fiscal deficit, which was below 4 percent of GDP in 2007, came close to 7 percent of GDP in 2011. Higher deficits were justified to a large extent by the response to successive shocks. Meanwhile, the public debt-to-GDP ratio has increased continuously. As a result of these developments, fiscal space has decreased, and this limits the authorities' ability to conduct countercyclical policies. In addition, the financing of deficits at the current level is challenging. Debt sustainability analysis shows that such fiscal deficit levels are incompatible with long-term sustainability.

The main medium-term challenge for Senegal is therefore to achieve high and inclusive growth while preserving fiscal sustainability. There is a relatively broad consensus that growth in Senegal is not hampered by one single, major obstacle, but rather by a range of issues including infrastructure gaps; access to land and financing, and protection of property rights; and inefficiencies in government operations. The government has an important role to play in raising the growth potential—for instance, through the provision of critical infrastructure and reforms to improve the business environment. Reconciling the satisfaction of the country's social and development needs with fiscal sustainability will require a significant improvement in public spending efficiency.

This paper analyzes some of these issues in more detail and suggests possible reforms. Chapter 1 focuses on Senegal's growth performance, outlook, and challenges. It shows that a number of structural obstacles will need to be addressed to put Senegal back on a higher and sustainable growth path. Chapter 2 looks at Senegal's recent growth performance from the perspective of its poverty-reducing and distributional characteristics. It concludes that further poverty reduction will first and foremost require sustained high growth. Public policies also have a role to play in the reduction of poverty and inequalities. Better targeted policies would be more effective and less

costly in reducing poverty. Chapter A.1 focuses on electricity subsidies, a key issue impeding fiscal sustainability but also reflecting large inefficiencies in a sector critical for growth. Quasi-fiscal costs related to the power sector are very large and not well targeted, with only a limited share of the subsidies benefitting the most vulnerable and poor people. With high international oil prices and under current policies, the subsidies are expected to remain high until less costly technologies are introduced. Finally, Chapter A.2 explores the trade-offs between higher public investment, growth, and debt sustainability. It highlights the importance of the quality of investment and of financing it on appropriate terms.

Growth Performance, Outlook, and Challenges¹

Senegal's growth was relatively strong during 1995–2005, but the more recent growth performance has been disappointing. A number of structural obstacles will need to be addressed to put Senegal back on a higher and sustainable growth path.

Growth Performance Over the Past Twenty Years

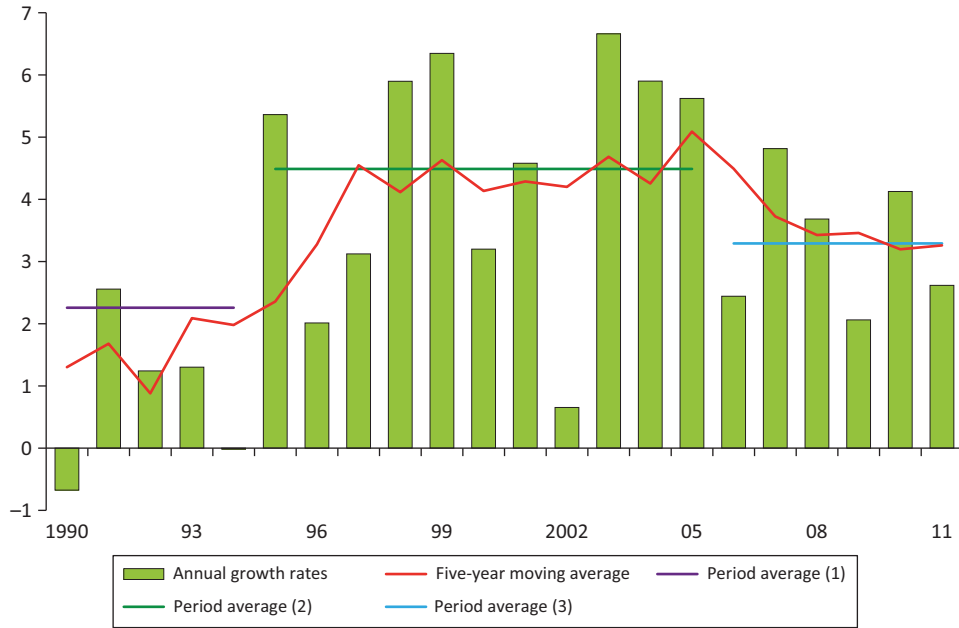
Three growth periods can be identified over the past twenty years. Economic performance was poor in the early 1990s, before the 1994 CFA franc devaluation. Senegal then recorded a period of strong growth in 1995–2005, with growth averaging 4.5 percent (Figure 1). This average masks relatively large fluctuations (although less than during the previous decades) reflecting volatility in agriculture output, with growth approaching or exceeding 6 percent certain years or dropping below 3 percent. Due to a series of exogenous shocks starting in 2006 (i.e., food and fuel global prices, global financial and economic crisis, and, more recently, the electricity sector crisis and drought in the Sahel), growth decreased to an average of 3.3 percent in 2006–11.

Senegal's growth was less favorable than that of fast-growing sub-Saharan Africa (SSA) countries. Although growth in Senegal since the mid-1990s has been better than in a number of West African Economic and Monetary Union (WAEMU) countries and strong enough to ensure an increase in per capita income, it has fallen short of the authorities' target under successive poverty reduction strategies and has been much lower than that of fast-growing SSA economies such as Cape Verde, Ethiopia, Rwanda, Tanzania, and Uganda (Table 1).

Activity has increased faster in the tertiary sector. This has been particularly the case in transport and telecommunication, which together have contributed

¹ The author of this chapter is Gaston Mpatswe.

Figure 1. Senegal: Real GDP Growth, 1990–2011
(in percent)



Source: IMF staff estimates.

Table 1. Senegal's Growth Performances vis-à-vis Comparators, 1990–2011

	Average growth rates				Average per capita growth			
	1990–94	1995–2005	2006–08	2009–11	1990–94	1995–2005	2006–08	2009–11
Benin	4.0	4.6	4.6	3.3	0.5	1.5	1.5	0.4
Burkina Faso	2.7	6.6	5.4	5.0	-0.1	3.6	2.3	1.9
Cape Verde	3.9	7.0	8.3	4.7	1.5	5.0	7.2	3.7
Ethiopia	0.6	5.7	11.0	8.7	-2.7	2.9	8.6	6.4
Ghana	4.1	4.6	7.1	8.8	1.3	2.1	4.5	6.3
Mauritius	5.4	4.4	5.1	3.8	4.2	3.4	4.4	3.3
Rwanda	-11.5	11.3	8.6	6.6	-7.4	6.7	5.6	3.5
Senegal	0.9	4.5	3.7	3.0	-2.0	1.8	0.9	0.2
Tanzania	2.5	5.5	7.1	6.5	-0.8	2.8	4.1	3.4
Uganda	6.0	6.8	9.3	6.6	2.6	3.6	5.8	3.2
Sub-Saharan Africa, excl. South Africa	1.0	4.5	6.7	...	-1.8	1.7	4.1	...

Sources: World Bank database and IMF staff estimates.

by about one percentage point to GDP growth (Table 2). Whereas the share of the tertiary sector in GDP has increased significantly, the share of the secondary sector has remained about constant and that of the primary sector (including agriculture) has decreased. The observed productivity increase in

agriculture and the structural shift toward the services sector suggest that Senegal has experienced a pattern of economic transformation quite typical in developing countries.

Growth has been driven mainly by public investment and remittances-fueled private consumption (Table 3). Remittances grew by more than 20 percent per year between 1995 and 2005 and have become a major source of external financing for the economy. Public investment also grew substantially between

Table 2. Senegal: Sectoral Contributions to GDP, 1991–2011

	Sectors real growth rates ¹			Contribution to real growth ¹			Shares of GDP ²		
	1991–94	1995–2005	2006–11	1991–94	1995–2005	2006–11	1990–94	1995–2005	2006–11
Primary sector	1.9	2.9	1.8	0.3	0.4	0.2	17.7	16.2	13.8
Agriculture	0.6	4.3	1.6	0.0	0.2	–0.1	10.3	8.9	7.1
Secondary	2.8	4.6	3.7	0.5	1.0	0.8	21.2	21.3	20.7
Industries	2.2	3.8	3.2	0.3	0.5	0.4	13.9	14.0	12.3
Public works and housing	6.6	8.7	4.8	0.2	0.3	0.2	3.1	3.7	4.3
Tertiary	0.7	5.4	4.2	0.3	2.4	2.0	42.9	44.0	46.4
Trade	1.2	4.1	2.2	0.2	0.7	0.4	17.1	17.3	15.9
Transport and telecom	–2.0	9.8	8.2	–0.2	0.8	1.0	6.9	7.4	10.6
Public services	0.7	4.0	2.2	0.1	0.8	0.4	18.3	18.5	19.1
GDP	1.3	4.5	3.3	1.3	4.5	3.3	100	100	100
Non-agriculture GDP	1.4	4.6	3.6	1.3	4.2	3.3	90	91	93

Sources: Authorities and staff estimates.

¹ Percentage change.

² In percent.

Table 3. Senegal: Consumption, Investment, and National Savings, 1991–2011

	Annual growth rates ¹			Share of GDP ²		
	1991–94	1995–2005	2006–11	1990–94	1995–2005	2006–11
Consumption	2.1	3.1	4.4	94.3	88.7	88.5
Private	2.8	2.9	4.2	81.1	77.4	72.6
Public	–1.6	5.4	6.2	13.3	11.3	15.9
Investment	0.4	7.6	4.6	12.3	20.2	30.6
Public	–9.9	14.8	6.8	5.6	7.3	10.5
Private	4.6	5.4	3.8	6.7	12.9	20.1
National savings³	6.4	23.4	10.0	6.4	13.6	21.9
Remittances ³	30.4	20.6	15.8	2.4	4.6	12.6

Sources: Country authorities and IMF staff estimates.

¹ Annual percentage change.

² In percent.

³ Nominal growth rates.

Table 4. Senegal's Growth Rate Accounting, 1991–11

	1991–94	1995–2005	2006–11
Output and productivity growth			
Real GDP growth	1.3	4.5	3.3
Real per capita growth	-1.5	1.8	0.6
GDP per person employed ¹	-1.7	1.4	0.2
Agriculture output per worker ²	-0.6	0.6	1.7
Growth accounting			
Labor force	2.1	2.2	2.2
Capital	0.8	1.7	2.8
TFP	-1.7	0.6	-1.7
Growth accounting			
Active population	1.4	1.7	1.7
Capital	0.8	1.7	2.8
TFP	-1.0	1.1	-1.2

Sources: Country authorities and IMF staff estimates.

¹ Percent change in GDP per person employed (constant 1,990 PPP\$).

² Percent change in agriculture value added per worker (constant 2,000 US\$).

2000 and 2005. The export sector, however, performed relatively poorly (see the note on external stability).

Growth has been factor-intensive. A growth accounting exercise suggests that growth is mostly explained by factor accumulation (Table 4).² Total factor productivity (TFP) actually declined before the mid-1990s, and again since 2006. It grew only modestly during the decade of robust growth (1995–2005). A number of factors could explain this poor productivity performance. First, the TFP decline in the past five years coincides with the deterioration of Senegal's doing business and governance indicators, which could have affected the productivity of both public and private investment. Second, large and increasing remittances might have been invested in sectors less likely to spur growth (such as housing and informal trade).

Medium-Term Growth Outlook and Challenges

The medium-term growth projections in the program assume a return to positive TFP growth. Growth is projected at 3.7 percent in 2012, 4.3 percent in 2013, and an average 5 percent per year over 2014–17. Given the

² The growth accounting exercise uses a standard Cobb-Douglas production function, with an elasticity of output with respect to capital of 0.3 and an annual depreciation rate of the capital stock of 6 percent. The economically active population and labor force (from World Bank database) are used as proxies for labor input.

demographic trends and the assumptions made on investment, such a growth path implicitly assumes that ongoing and planned reforms will improve economic efficiency and restore TFP growth to levels comparable to those observed in 1995–2005 (Table 5).³

Obstacles to higher and sustainable growth have been identified. The authorities are finalizing their new growth strategy, which was not available at this writing. The previous one (the Accelerated Growth Strategy) focused on five priority sectors: agriculture and agribusiness, fisheries, tourism, clothing and textiles, and telecommunication and information and communication-enabled services. Some of these sectors, such as agriculture and tourism, are likely to remain the focus of the new strategy given their strong development potential:

- **Agriculture and agribusiness.** The authorities and World Bank staff see important opportunities for growth in horticulture for exports, and in rice and other cash crop production and livestock development, primarily for the domestic market. A favorable climate for year-round fresh vegetables and fruit and a relatively short distance to the European market put Senegal in a very good position. The potential for efficiency gains in the agriculture sector is large, as illustrated by the relatively low cereal yields (Table 6).

Table 5. Senegal's Growth Rate Accounting, 2012–17

	2012	2013	2014–17
Output growth			
Real GDP growth	3.7	4.3	5.0
Real per capita growth	1.0	1.6	2.3
Growth accounting			
Labor force	2.1	2.1	2.1
Capital	2.1	2.0	2.0
Total factor productivity	–0.5	0.1	0.9
Growth accounting			
Active population	1.7	1.7	1.7
Capital	2.1	2.0	2.0
Total factor productivity	–0.1	0.6	1.3

Source: IMF staff estimates.

³ This assumption is critical to medium-term growth prospects; without it, per capita income would continue to increase only very slowly.

Table 6. Cereal's Average Yield (100 kg per hectare), 1994–2008

	1991–95	1995–2000	2001–05	2006–08
Benin	9.7	10.9	10.9	11.9
Burkina Faso	8.6	8.6	9.9	11.3
Cape Verde	2.9	5.1	3.6	5.8
Côte d'Ivoire	9.0	14.1	18.0	17.4
Ethiopia	11.2	11.7	12.4	16.5
Ghana	12.7	13.3	13.5	13.3
Rwanda	11.5	10.1	10.1	10.8
Senegal	8.1	7.6	9.6	8.5
Tanzania	12.9	10.0	11.1	11.9
Uganda	15.3	14.2	15.9	15.2
Sub-Saharan Africa, excl. South Africa	9.4	9.9	10.5	11.8

Sources: World Bank Database and IMF staff estimates.

However, this will require modernizing the sector, which is primarily composed of small, family farming, and relies heavily on rainfall and the use of traditional production techniques. Obstacles to access to land and credit, which limit potential involvement of private businesses, will need to be addressed too.

- **Tourism.** Given its natural endowment and cultural heritage, as well as its proximity to Europe, the potential for the development of business and cultural tourism is substantial. Senegal scores fairly well in terms of the number of tourist arrivals (Figure 2), but poorly regarding receipts per tourist (Figure 3). The sector has lost substantial market share in Africa over the last 15 years. This trend can probably be reversed, but it will take a range of measures to improve the offer and market the destination.

Improving energy and transport infrastructure is critical for growth prospects. Significant progress has already been achieved in upgrading Senegal's infrastructure, particularly in information and communication technology, but substantial challenges remain in transport and energy. The latter are expected to be addressed in the coming years through a number of large projects. These include the Blaise Diagne International Airport, the Dakar–Blaise Diagne International Airport highway (with possible extensions to Mbour and Thiès), and the Diamniadio Economic Special Integrated Zone. These projects will help deal with the excessive concentration of economic activity in the Dakar area, which makes up more than half of the Senegalese economy in less than 1 percent of the national territory. Large investments to restore power supply and increase generation capacity with more cost-effective technologies should also help lower the cost of doing business, especially in manufacturing; the cost of electricity in Senegal is indeed among the highest in SSA (Figure 4).

Figure 2. Number of Tourist Arrivals (Thousand), 2003 and 2006

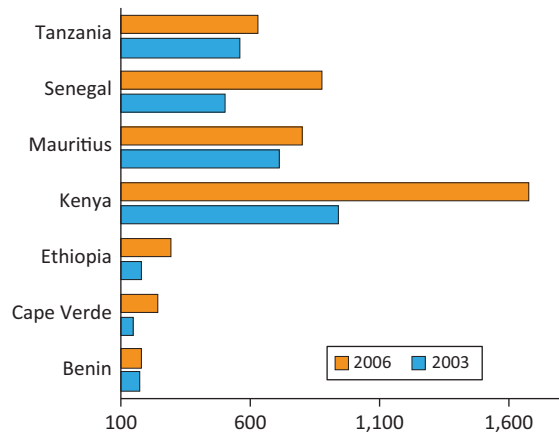


Figure 3. Average Receipts per Tourist Arrival (US\$ Current), 2003 and 2006

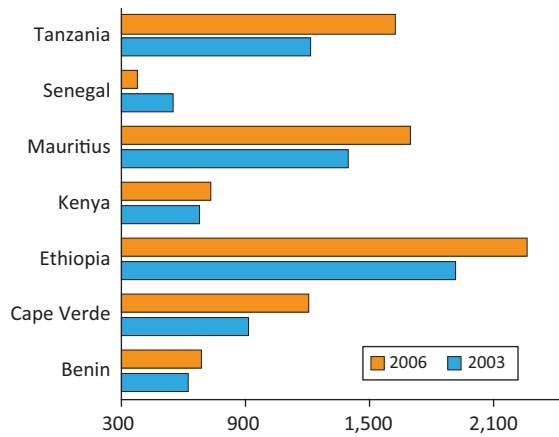


Figure 4. Electric Power Transmission and Distribution Losses (% of output), 1990–2006

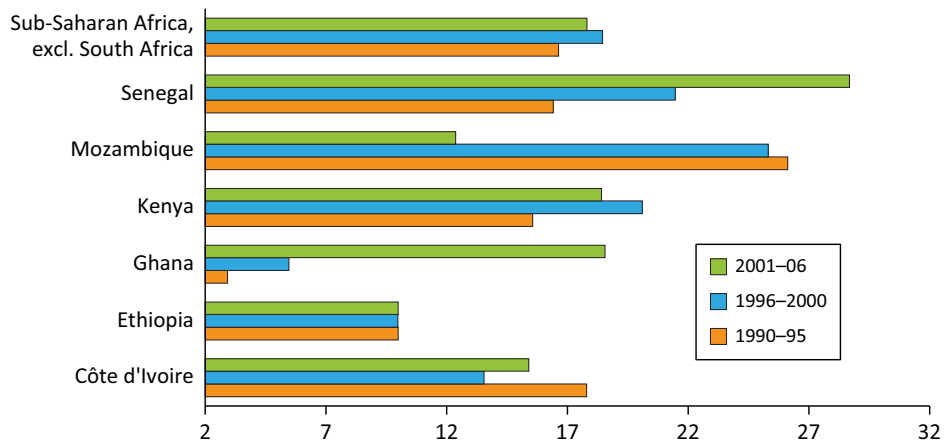
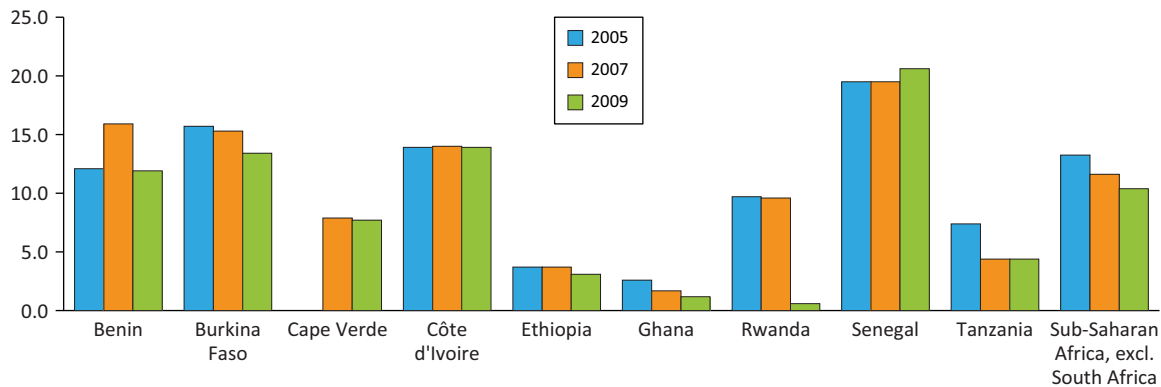


Figure 5. Cost of Registering Property (% of property value)



More generally, there is significant scope for further improvement in the business climate. The development of a dynamic private sector in Senegal is still hampered by a range of issues. Despite the progress made in a number of areas (e.g., creation of a one-stop shop for business registration, easing of administration procedures for exports and imports), Senegal still ranks only 154th out of 183 countries surveyed for the 2012 *Doing Business* report. Reform efforts are especially needed in the areas where Senegal still lags well behind comparator countries, such as paying taxes, registering properties (Figure 5), protecting investors, enforcing contracts, and dealing with construction permits. More generally, a more effective provision of business-friendly public services would contribute to private sector development.

Growth Inclusiveness in Senegal⁴

Senegal's recent growth performance from the perspective of its poverty-reducing and distributional characteristics has been mixed. Poverty has fallen in the last two decades, although poverty reduction has slowed significantly in recent years. Senegal has performed better than many regional peers in terms of poverty reduction. Further poverty reduction will first and foremost require sustained high growth. Public policies also have a role to play in the reduction of poverty and inequalities. Better targeted policies would be more effective and less costly in reducing poverty. More attention to the regional distribution of public expenditure also seems desirable.

Poverty in Time and Regional Perspectives

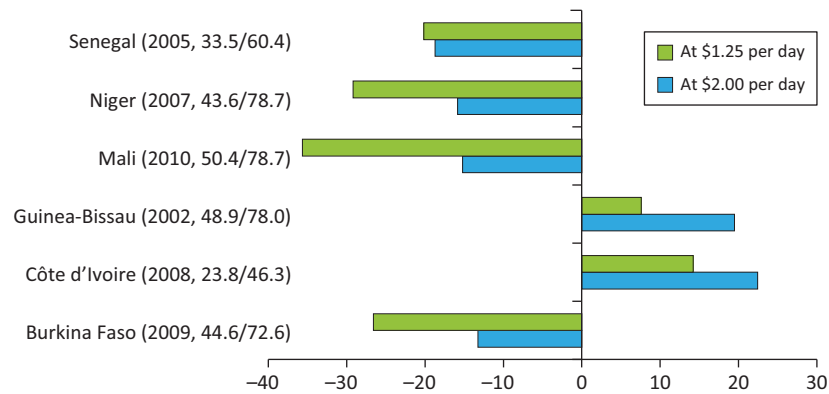
Poverty reduction in Senegal has slowed in recent years. Household surveys conducted in 1994–95, 2001–02, and 2005–06 show that the number of people living below Senegal's poverty line (the poverty rate) declined from 68 percent in 1994–95 to 48 percent in 2005–06. This drop coincided with a period of robust growth (4.5 percent on average). However, a 2011 household survey indicates that poverty decreased only modestly between 2006 and 2011, a period of slower growth (3.3 percent on average). Poverty incidence therefore remains high in 2011, affecting about 47 percent of the population. In addition, there are wide disparities between rural areas, where poverty incidence is higher than the national average (at 57 percent), and urban areas, where the poverty rate is 33 percent.

Progress achieved in poverty reduction has been more pronounced in Senegal than in some regional peers. In 1994–2005, the share of the population living on less than US\$1.25 a day declined by about 20 percentage points, and by about the same for people living on less than US\$2 a day (Figure 6). By the latter metric, Senegal appears to be one of the West African Economic and Monetary Union's (WAEMU's) best performers over that period.

⁴ The author of this chapter is Alexei Kireyev.

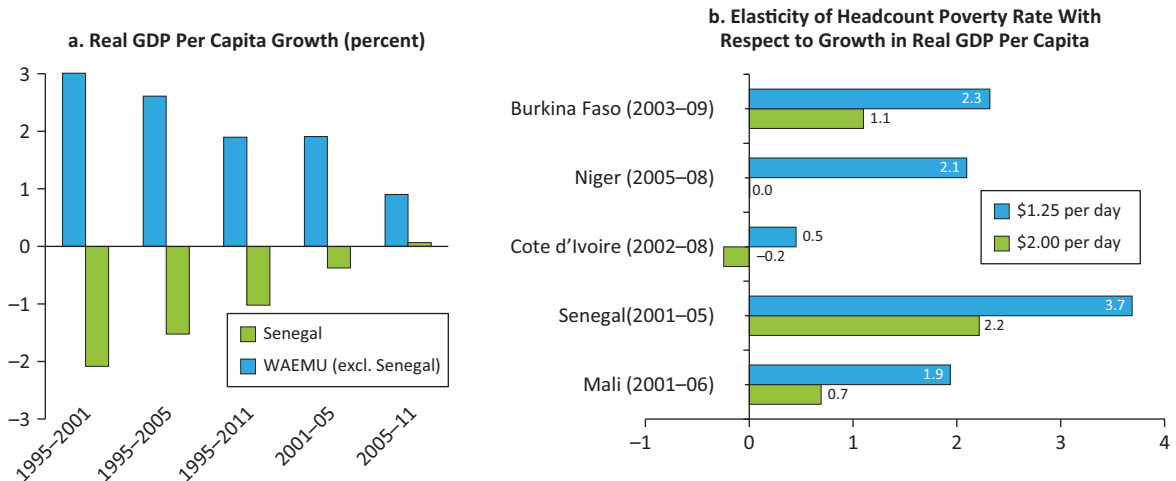
This outcome reflects higher growth and a higher sensitivity to growth of poverty reduction in Senegal. Unlike a number of countries in the WAEMU, particularly those affected by internal conflicts or crises (e.g., Guinea-Bissau and Côte d'Ivoire in the 2000s), real per capita GDP growth in Senegal was always positive in 1995–2011 and in some years quite significant (Figure 7a). In addition, the elasticity of poverty reduction to per capita income growth has been significant in Senegal in regional comparisons. In 2001–2011, this elasticity was about -1.3 in Senegal, above that of some other fast-growing WAEMU countries (e.g., Burkina Faso) (Figure 7b).

Figure 6. Change in Poverty Rate



Source: PovcalNet, World Bank, 2012, <http://iresearch.worldbank.org/PovcalNet>.

Figure 7. Sensitivity of Poverty Reduction to Growth in the WAEMU



Source: WEO and IMF staff estimates.

Note: WAEMU = West African Economic and Monetary Union.

Growth and Inequality in Senegal

Dynamics of inequality can be analyzed using growth incidence curves. Growth incidence curves identify the extent to which each decile of households ranged by their income level benefits from growth. The part of the curve above zero points at the deciles whose consumption increased with growth, and the part below zero points at the deciles whose consumption decreased with growth. A positively sloped growth incidence curve indicates that consumption of relatively richer deciles of population increases faster than consumption of poorer deciles, which leads to higher inequality. A negatively sloped incidence curve suggests that inequality declines as consumption of poorer households grows faster than consumption of richer households.

The growth incidence curve for Senegal between 2001 and 2005 suggests an increase in inequality (Figure 8, top chart). Consumption increased for the groups of population from the third to the eighth decile because the growth incidence curve is above zero, but somewhat faster in the middle of the distribution. Therefore, the poorest three deciles of the population became poorer in relative terms (and the poorest decile in absolute terms too) and the richest three deciles also lost relative ground. The middle class improved their relative position.

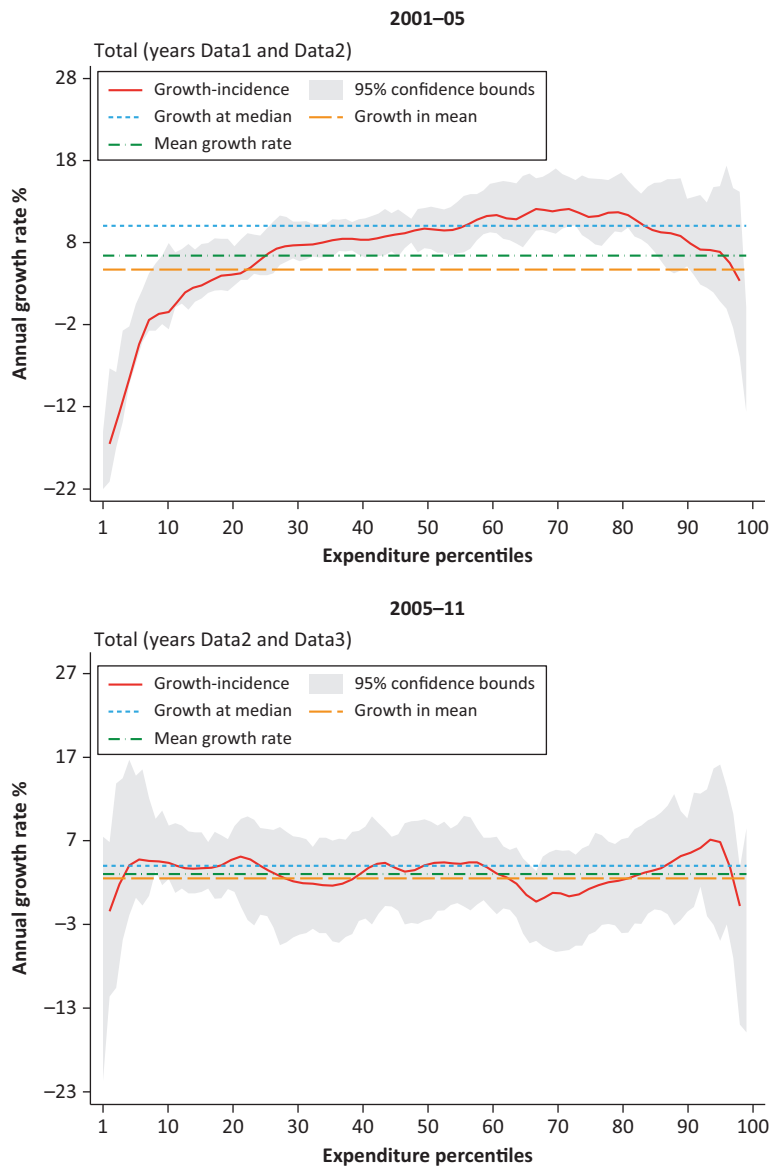
Preliminary results of the 2011 household survey do not allow identification of a clear trend in inequality in recent years (Figure 8, bottom chart). The overall growth incidence curve is above zero but broadly flat, suggesting no clear trend in inequality between 2005 and 2011, and that any trend would be probably barely statistically significant. This overall result, however, may mask significant differences between rural and urban areas.

Are Senegal's Public Policies Supportive of Inclusive Growth?

Public policies may be considered supportive of inclusive growth if they help promote growth and reduce poverty and inequality. Possible indicators include (i) the overall level of social spending, because cross-country experience suggests that countries with relatively higher spending on human capital, health care, pensions, and other aspects of the social safety net tend to have more inclusive growth (World Bank, 2012); (ii) measures specifically targeted at raising incomes of people in the bottom deciles of income distribution relative to the average income; (iii) development of social safety nets for the population in general and programs aimed at its poorest segments; and (iv) the design of the tax system.

The aggregate level of health and education expenditure in Senegal is comparable to that of WAEMU countries, but the composition is different.

Figure 8. Growth in Real Household Expenditure by Decile per Capita



Sources: World Bank, ESAM2001, ESAM2005, ESAM2011 databases processed using ADePT 5.1 platform for automated economic analysis, and World Bank 2012.

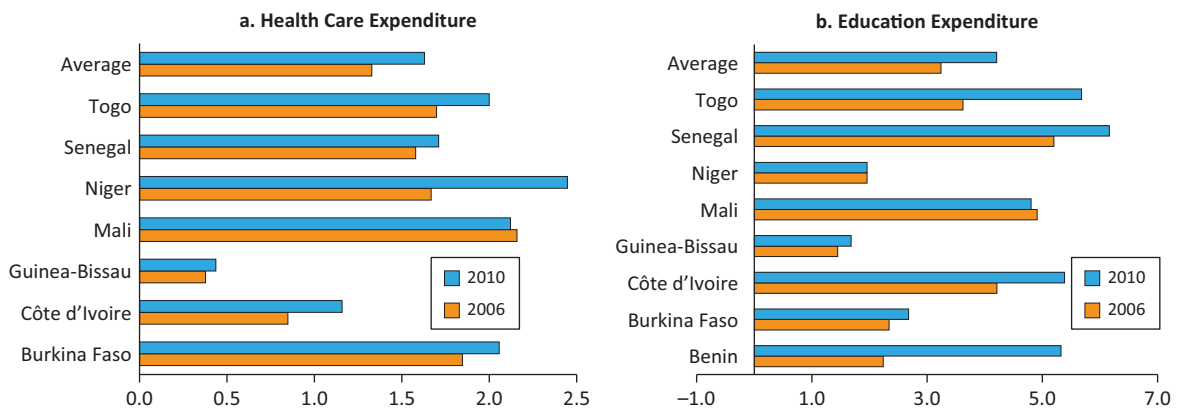
Expenditure on education was higher in Senegal than the WAEMU average, whereas the reverse is true for expenditure on health care, where Senegal has lost ground since 2006 (Figure 9).

Public expenditure, including in the social sectors, is concentrated on Dakar, which absorbs over a half of public resources. Other regions have lower

access to public resources, including in such critical areas as health care and education, which may also contribute to inequality (Figure 10, based on World Bank analysis).

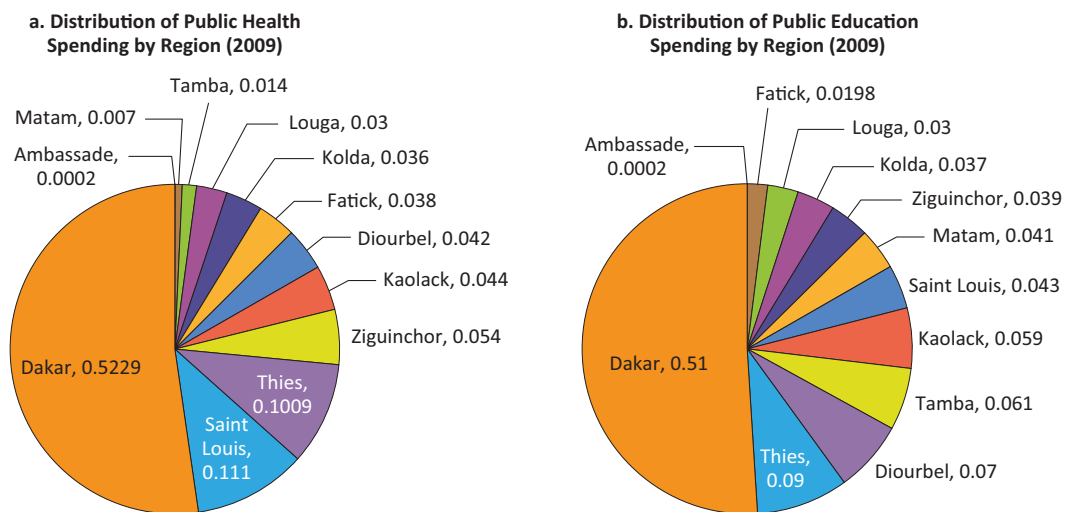
Senegal has used ad hoc and untargeted measures to address the impact of shocks in the recent past. During the 2007–08 food and fuel crisis, the authorities took several measures to limit price increases on food and oil. They temporarily reduced the VAT and introduced excise tax exemptions and subsidies for butane for all consumers. The fiscal cost of these measures

Figure 9. Senegal: Health and Education Expenditure (2006–10)



Source: WEO and IMF staff estimates.

Figure 10. Senegal: Who Benefits from Public Expenditure?



Source: World Bank, Public Expenditure Review, 2012.

amounted to about 4.5 percent of GDP during the two-year period, with about a third stemming from a loss in revenue. The 2008 poverty and social impact analysis revealed that ad hoc measures were in general poorly targeted, because almost 55 percent of the benefits accrued to households in the top 40 percent of the welfare distribution. In February 2011, the government froze retail prices for six key food items and temporarily limited price increases for petroleum products at the pump by reducing the VAT base. Some of these measures were reversed later in the year. In early 2012, the authorities introduced implicit subsidies for petroleum products.

The scope and coverage of the existing social safety nets in Senegal are limited, and most interventions are small and temporary. Senegal has two conditional cash transfer programs: for orphaned children and those affected by HIV, and children in the poorest households. Also, Senegal has a noncontributory old-age pension, which in practice reaches only a very small and rapidly declining number of beneficiaries.

Policies to Increase Inclusiveness of Growth

Sustained overall economic growth is a precondition for further poverty reduction. A number of studies confirm that sustained growth is a key factor in enhancing inclusiveness. Berg and Ostry (2011) argue that longer growth spells are robustly associated with more equality in income distribution. Affandi and Peiris (2012) showed that growth is in general pro-poor as it leads to significant declines in poverty across economies and time periods. Senegal's experience seems consistent with this cross-country evidence.

Special attention needs to be paid to the distributional dimension of growth. An increase in inequality may offset and even exceed the beneficial impact on poverty reduction of an increase in income. Attention to inclusiveness when designing a growth strategy is therefore critical. For instance, increasing farm productivity and broadening rural job opportunities are important to address rural poverty.

Well-designed public policies are also important for promoting inclusiveness. In this regard, the recommendations of the 2008 Poverty and Social Impact Analysis for Senegal remain broadly valid. Poorer households could be protected against food and fuel price increases in the short term at a lower budgetary cost and more effectively by redirecting resources to better-targeted measures, including targeting poor groups through measures such as school lunches and public works programs, and better targeting tariffs for small quantities of electricity to protect some of the urban poor. In the medium term, a well-targeted and conditional cash transfer system is the best option for assistance for the poorest. Experience of other countries in the region

suggests that a minimum social safety net can be provided more effectively at a relatively low cost. For example, in Burkina Faso, the World Bank estimates that a basic social safety net could be set up at a cost of around 1.5 percent of GDP.

Improving access to financial services would also increase growth inclusiveness in Senegal. A number of studies found that financial development generally increases incomes of the poorest households (Claessens, 2005), whereas unequal access to financial markets can reduce it by impeding investments in human and physical capital.

This page intentionally left blank

References

- Affandi, Y., and S. Peiris, 2012, “Building Inclusive Growth in the Philippines.” IMF Country Report No. 12/50 (Washington: International Monetary Fund).
- Berg, A., and J. Ostry, 2011, “Inequality and Unsustainable Growth,” IMF Staff Discussion Note, April 8, SDN/11/08 (Washington: International Monetary Fund).
- Claessens, S., 2005, “Access to Financial Services: A Review of the Issues and Public Policy Objectives,” Policy Research Working Paper Series 3589 (Washington: World Bank).
- Enquête Suivi de la Pauvreté au Sénégal (ESPS-II 2010–2011). Dakar, Agence Nationale de la Statistique et de la Démographie.
- International Monetary Fund, 2011, “How Inclusive Has Africa’s Recent High-Growth Episode Been?” *Regional Economic Outlook: Sub-Saharan Africa* (Washington, October).
- Ravallion, M., and S. Chen, 2003, “Measuring Pro-Poor Growth,” *Economics Letters*, Vol. 78, pp. 93–99.
- World Bank, 2005, *Pro-Poor Growth in the 1990s* (Washington: World Bank).
- World Bank, 2012, *Public Expenditure Review* (Washington: World Bank).

This page intentionally left blank

A.1 Fiscal Costs of Electricity Subsidies⁵

Quasi-fiscal costs related to the power sector in Senegal are significant. Electricity tariff subsidies are well targeted and generally do not benefit the poor. With high international oil prices and under current policies, the subsidies are expected to remain high until less costly technologies are introduced.

Power Sector: Current Challenges

The Senegalese power sector faces tremendous challenges. The sector relies heavily on oil imports for power generation; only about 10 percent of available electricity supply is purchased from regional hydropower. Primarily as a result of increasing oil prices, tariffs set at levels well below full cost recovery, lack of proper maintenance, and delays in making investments in capacity to match an increasing power demand, the supply of electricity has become insufficient and unreliable, and the financial situation of the national utility company (SENELEC) has weakened significantly over time. SENELEC has had a large structural operating deficit over recent years; despite significant budgetary transfers, its net income has been negative since 2005 (except in 2009). This situation culminated in a major power crisis in 2010–11, with regular power outages affecting the well-being of the population and economic activity. An emergency plan (“Takkal”) was put in place in 2011 to address the situation.

Tariff Gap and Quasi-Fiscal Costs

The setting of the tariff follows a well-defined regulatory process. SENELEC’s customers are billed based on the amount of kWh of electricity they consume. Prices are differentiated by voltage, with users of higher voltages billed at higher prices. A price differential also applies within the same voltage band, with higher consumption priced at a higher tariff. Under the current regulatory framework, changes in tariff levels and/or schedule must be authorized by the Power Sector Regulatory Commission (CRSE in French) before taking effect. The regulatory framework includes mainly four elements: (i) a formula to determine, under baseline tariff and economic conditions, the maximum revenue the utility is allowed to collect to cover its operating and capital costs and make reasonable profits; (ii) conditions

⁵ The author of this chapter is Gaston Mpatswe.

that could trigger a tariff adjustment; (iii) a compensation mechanism from the budget when tariff adjustments are not allowed by the government; and (iv) periods for revising the formula and the tariff conditions and for paying tariff compensation if any.

The tariff, in practice, has not been set to allow cost recovery; this has required substantial compensation from the budget. Some tariff adjustments were authorized between 2007 and 2009, though not high enough to reduce the large spread between the average price and the average cost per billed kWh.⁶ Because of a flawed compensation mechanism that relied on overly optimistic assumptions about the future (e.g., when cost-effective technologies would become available), the tariff compensation received by SENELEC was insufficient and led to losses. In July 2011, the tariff

Table A.1. Electric Power Supply, Sales and Costs, 2005–11

	2005	2006	2007	2008	2009	2010	2011
Total power supply (GWh)	2,171	2,192	2,306	2,400	2,489	2,618	2,559
Power supply (percent)							
SENELEC	67	66	69	64	76	69	53
Power purchase	33	34	31	36	24	31	47
<i>Of which:</i> Regional hydropower	12	11	8	10	10	10	10
Power sales and losses (percent of supply)							
Sales	79	79	77	78	79	79	80
Losses	21	21	23	22	21	21	20
Historic sale prices and costs (CFAF/kWh)							
Average tariff ¹	79	90	101	112	113	118	119
Average tariff (Comp. incl.) ²	94	109	122	144	133	132	169
Average operating cost ³	97	129	112	126	110	130	147
Average cost ³	113	148	127	141	127	148	166
Fuel costs (SENELEC only)	49	77	67	105	71	111	163
SENELEC results (CFAF billion)							
Operating subsidies received	26	33	37	60	40	28	103
Operating results (comp & subsidies excl.)	-33	-56	-40	-61	-27	-80	-100
Operating results (with subsidies)	-7	-23	-3	-1	13	-52	4
Net results	-4	-34	-6	-7	6	-55	-13

Sources: Country authorities, World Bank, and IMF staff estimates.

¹ Sales receipts per kWh.

² Sale receipts plus tariff compensations, per kWh.

³ Costs per kWh generated and available after normative losses.

⁶ Recent tariff adjustments: (i) a 6 percent increase in October 2007; (ii) a 17 percent increase and a new tariff structure in August 2008; (iii) a 12 percent reduction in January 2009; followed by (iv) an increase of 8 percent in July 2009.

formula was revised and became more realistic. This led to a substantial upward revision of the 2011 tariff compensation (from an initial estimate of CFAF 45 billion to about CFAF 96 billion). The tariff in 2011 was on average about 40 percent below the level suggested by the CRSE formula. Despite this large tariff gap, electricity remains very costly in international comparison.

The new tariff compensation system, although a major improvement, may not provide a full picture of the losses in the electricity sector. This reflects a number of issues, such as assumptions concerning the cost structure, which are fixed for three years, or the existence of technical and nontechnical losses not entirely compensated for by the formula. Although the collection of billed electricity units has reportedly been close to 100 percent, the losses between production and billing have been about 20 percent. This is way above usual technical losses (e.g., related to transportation and transformation), which in efficient systems are contained below 10 percent. Total losses, measured as the difference between the cost of units actually supplied to the power grid and the amounts recovered, amounted in 2011 to an estimated CFAF 141 billion (2.1 percent of GDP). The tariff gap, as measured by the formula, made up about two-thirds of this amount. The rest corresponds to “unaccounted” losses, basically reflecting SENELEC’s inefficiencies. What matters from a public finance perspective is obviously total losses, given that SENELEC is government-owned. The losses not compensated through the formula eventually have to be borne by the taxpayer one way or another.

Table A.2. Power Sector Quasi-fiscal Costs and Subsidies, 2003–11

	2005	2006	2007	2008	2009	2010	2011
	(In CFAF billion)						
Total quasi-fiscal costs	85	133	83	95	67	106	141
Unaccounted losses	25	34	37	42	39	45	45
Underpricing (estimated tariff gaps)	59	100	46	53	28	61	97
Subsidies transfers/received	26	86	37	60	40	28	96
SENELEC liabilities (stock)	149	248	252	312	336	402	385
Financial liabilities	87	110	121	141	149	164	128
Liabilities to suppliers	62	138	131	171	187	239	257
	(In percent of GDP)						
Total quasi-fiscal costs	1.8	2.7	1.5	1.6	1.1	1.7	2.1
Unaccounted losses	0.6	0.7	0.7	0.7	0.6	0.7	0.7
Underpricing (estimated tariff gaps)	1.3	2.0	0.9	0.9	0.5	1.0	1.4
Subsidies transfers/received	0.6	1.8	0.7	1.0	0.7	0.4	1.4
SENELEC liabilities (stock)	3.5	5.4	5.1	5.8	5.6	6.7	6.0
Financial liabilities	1.9	2.2	2.2	2.4	2.5	2.6	1.9
Liabilities to suppliers	1.3	2.8	2.4	2.9	3.1	3.7	3.8

Sources: Country authorities, World Bank, and IMF staff estimates.

Figure A.1. Quasi-fiscal Costs as Percent of GDP, 2005–11

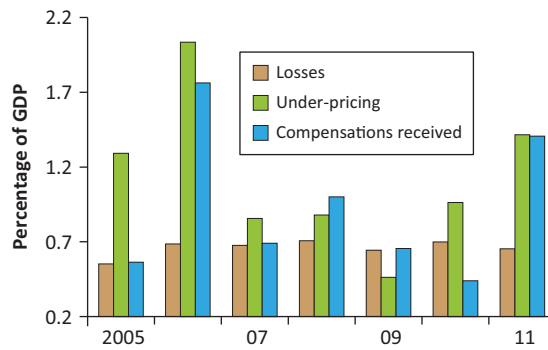
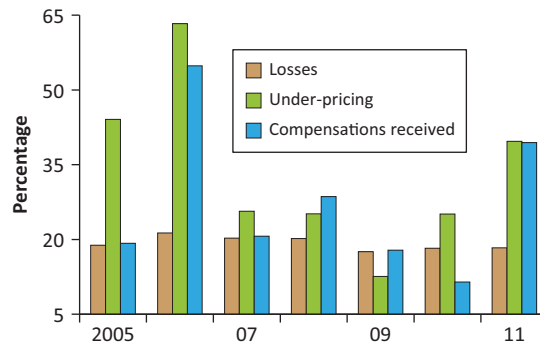


Figure A.2. Quasi-fiscal Costs as Percent of SENELEC Sale Receipts, 2005–11



If oil prices remain high, electricity subsidies will remain large in 2012 and decline only gradually. Absent any changes in the tariff and efficiency gains at SENELEC, the other main factors affecting electricity subsidies are the level of international oil prices, electricity consumption, and technology. With oil prices expected to remain high in the medium term and power consumption likely to increase, only the introduction of more efficient production units (such as natural gas, hydropower, or coal-fired plants, as envisaged by the authorities) could lead to a significant reduction of electricity subsidies. It therefore makes it critical to finalize the energy sector strategy and to implement expeditiously these investments in new production units, as it will take a few years before they come onstream and contribute to much lower electricity costs.

Distributional Effects of Electricity Subsidies

Beyond being a drain on the budget, electricity subsidies are poorly targeted. Subsidies are typically justified by the need to make power services affordable to low-income and vulnerable households. However, empirical evidence on

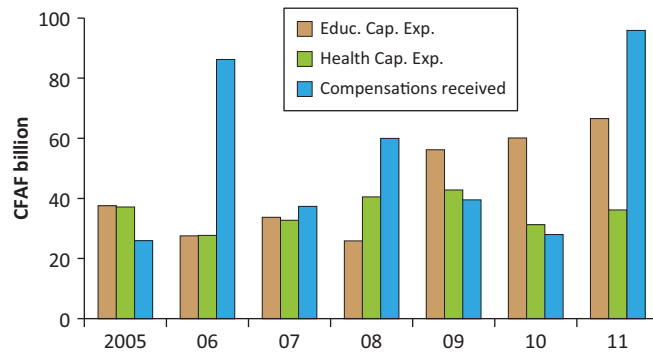
Senegal (and elsewhere) from the mid-2000s suggests the following about tariff subsidies⁷:

- They are not necessarily benefiting the poor, primarily because most of them are not connected to the power grid. This access factor reflects not only the unavailability of electricity in the areas where poor households tend to live but also poor households' choice not to connect to the power grid even when they can. Based on data from 2005–06, a World Bank report shows that all indicators on electricity consumption increase with household income. Households with lower income are less connected and have less access, and even when they have access they are less likely to connect to the power grid because of connection fees. Connection and access rates in rural areas were estimated at 15 percent and 39 percent, respectively.
- Even if they were benefiting the poor in absolute terms, their distributional effects have been regressive because electricity consumption is unevenly distributed across regions and income groups. Using a simple measure of targeting, the World Bank's analysis suggests that only 12.5 percent of the subsidies implicit to the tariff structure benefited the poor. Similarly, Fund analysis concluded that the increase in tariff (22 percent) during 2005–07 had a very limited effect on the welfare of poor households in rural areas.⁸
- Tariff subsidies distort prices, and as such constitute an inefficient way of allocating resources within the economy. A lower tariff gives an incentive to electricity customers (households and businesses) to consume more electricity than they would otherwise do and thereby exacerbates the burden on public finances.
- Tariff subsidies divert important resources needed to finance pro-poor and priority spending. Although most of the benefits go to individuals or businesses that do not need subsidization, their costs are very large and crowd out government spending in other areas, including the electricity sector itself. For instance, the cumulative transfers received by SENELEC over the last five years amounted to about CFAF 400 billion, which is nearly equivalent to resources needed for the construction of coal-fired plants that would increase production capacity by more than 50 percent. Similarly, annual transfers to SENELEC were comparable to, or higher than, the resources allocated for capital spending in the health or education sector (Figure A.3).

⁷ World Bank, "Senegal—Poverty Diagnosis," 2008, pp. 83–88; IMF, "Senegal: Selected Issues," 2008.

⁸ Senegal. "Selected Issues." IMF Country Report 08/221.

Figure A.3. Transfers to SENELEC, Capital Spending in Health and Education Sectors, 2005-11



A.2 Implications of Public Investment Scaling Up⁹

Higher debt-financed public investment may have substantial impact on growth and debt sustainability. Using an open-economy dynamic general equilibrium model, several scenarios are constructed by altering assumptions about the composition of financing. The results of the model suggest that increased public investment would have a positive impact on growth, but could lead to debt sustainability problems if financed mainly by nonconcessional borrowing.¹⁰

Introduction

An ambitious investment policy has been central to Senegal's development strategy. Public investment as a share of GDP has doubled since 2000, rising from 5.5 percent to nearly 11 percent in 2011. With the support of donors, the authorities have focused investment spending on expanding and modernizing transport infrastructure to facilitate access to markets. Major infrastructure projects include the Blaise Diagne International Airport, the Dakar-Diamniadio toll road, other road projects, and the modernization of the port of Dakar. These projects are intended to spur private sector development, diversify economic activity away from Dakar, and support poverty reduction.

This section explores the impact of a higher public investment path in the next few years. The public investment ratio is expected to remain relatively high in the program's macroeconomic framework for 2012–17. This note assumes a further scaling up of public investment to 15 percent of GDP in 2013 and a subsequent gradual decrease back to levels assumed in the program. The spike in the next few years, although not the program's central scenario, is based on the pipeline of current and future investment projects maintained by the authorities; it is therefore plausible, and implicitly corresponds to an early implementation of major investments in the energy and transport sectors.

Model Calibration

The model's parameters were calibrated to match data for the Senegalese economy. Table A.3 summarizes the calibration of the main parameters. In those instances where Senegal-specific estimates were not available, the parameters were set to fit a "generic" low-income country, as described by

⁹ The authors of this chapter are Salifou Issoufou and Andrew Jewell.

¹⁰ In collaboration with Senegal's Ministry of Economy and Finance, Direction de la Prévision et des Etudes Economiques.

Table A.3. Calibration of Main Parameters

Parameter	Value	Source
Absorptive capacity parameter	11	IMF staff
Initial return on infrastructure investment	0.313	Dessus and Herrera (1996)
Efficiency of public investment	0.70	Briceño-Garmendia et al. (2011)
User fees for infrastructure services (% of recurrent costs)	0.83	IMF staff
Value added in nontraded sector	0.450	Country authorities
Capital's share in value added in the traded sector	0.400	Country authorities
Capital's share in value added in the nontraded sector	0.550	Country authorities
Cost share of nontraded inputs in the production of capital	0.500	Country authorities
Depreciation rate	0.10	Country authorities
Trend per capita growth rate	0.017	Country authorities
Initial real interest rate on domestic debt	0.035	IMF staff
Initial real interest rate on private external debt	0.035	IMF staff
Real interest rate on concessional loans	0.000	IMF staff
Initial real interest rate on public commercial loans	0.065	IMF staff
Initial public domestic debt-to-GDP ratio	0.10	IMF staff
Initial public external concessional debt-to-GDP ratio	0.192	IMF staff
Initial public external commercial debt-to-GDP ratio	0.103	IMF staff
Initial private external debt-to-GDP ratio	0.200	IMF staff
Grants-to-GDP ratio	0.026	Country authorities
Remittances-to-GDP ratio	0.094	Country authorities
Initial ratio of infrastructure investment to GDP	0.105	IMF staff
Initial consumption VAT	0.18	Country authorities and IMF staff
Labor ratio of nonsavers to savers	4.3	Country authorities and IMF staff

Buffie et al. (2011). Key parameters affecting debt dynamics are absorptive capacity, the return on infrastructure investment, investment efficiency, and user fees.

Absorptive capacity constraints are significant in Senegal. When absorptive capacity is limited, high investment rates lead to large cost overruns, usually due to coordination problems or supply bottlenecks during the implementation phase of public investment projects. The assumption for Senegal is that, on average, public investment projects incur costs overruns equal to 74 percent of the size of the initial investment. This estimate is based on data provided by the authorities on initial estimates and final costs of large infrastructure projects in Senegal. To arrive at costs overruns equal to 74 percent of initial investment, taking into account the projected path of investment, the parameter that controls absorptive capacity constraints was set to 11.

The gross return on infrastructure investment is assumed to be 31.3 percent. Estimates of the return on infrastructure investment vary significantly. Foster

and Briceño-Garmendia (2010) found returns ranging from 17 to 24 percent on electricity, water and sanitation, irrigation, and road projects. Estimates by Dalgaard and Hansen (2005) cluster between 15 percent and 30 percent. Buffie et al. (2011) assume a 30 percent return on infrastructure investment for a generic low-income country. The assumption of a 31.3 percent return in Senegal is taken from work by Dessus and Herrera (1996) on the impact of public investment on growth in developing countries.

Not all investment spending is assumed to contribute to capital accumulation. The investment efficiency parameter captures the idea that some investment spending may be wasted or spent on poor projects. The assumption here is that each dollar of public investment in Senegal increases the stock of productive infrastructure by 70 cents. This assumption is based on Briceño-Garmendia et al. (2011) and compares with a benchmark value of 0.60 used by Buffie et al. (2011) for sub-Saharan Africa.¹¹

User fees allow governments to recoup a significant share of recurrent costs associated with the use of public capital. Even if investment has a high rate of return, it may not pay for itself from a fiscal perspective if user fees are low and the benefits of investment accrue mainly to the private sector. The estimate of 0.83 for Senegal is based on Briceño-Garmendia et al. (2011) and IMF staff estimates. According to Briceño-Garmendia et al. (2011), tariffs in the power and water sectors cover 72 percent and 91 percent of recurrent costs, respectively. Estimates of tolls collected on the Dakar-Diamniadio toll road point to 85 percent of recurrent costs covered by the collection of user fees. The estimate of 83 percent for Senegal compares to a sub-Saharan African benchmark value of 0.50 used by Buffie et al. (2011).

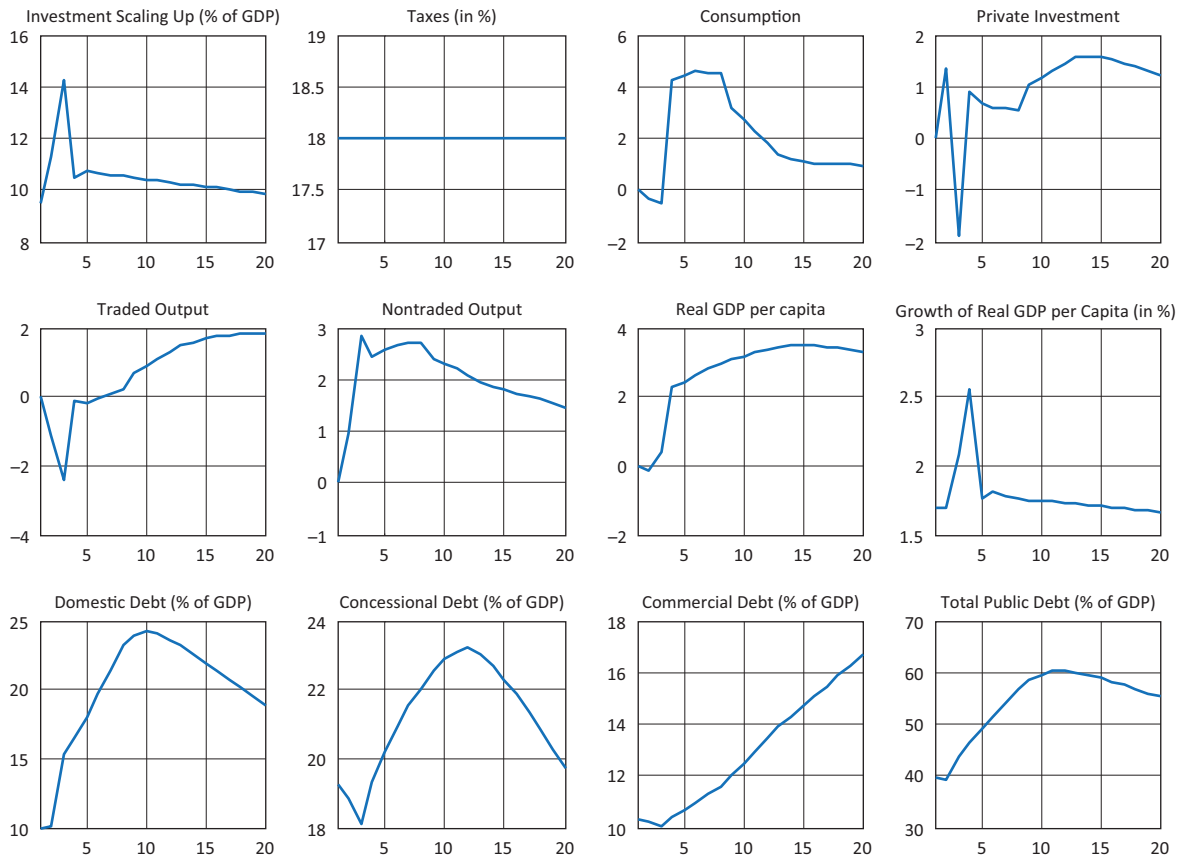
Steady-state ratios and other parameters were set to either their average over the past 10 years or the level at end-2011. The model generates results by comparing the projected values of certain variables with their steady-state values. For example, the steady-state value for investment spending was set to 9.5 percent of GDP, equal to the average level of public investment to GDP over the last 10 years. The model then assesses the impact of a projected increase in investment spending from the steady-state level.

Baseline Scenario

Higher public investment, financed through a combination of concessional and nonconcessional external borrowing and domestic borrowing, would increase per capita income permanently but also significantly raise the debt

¹¹ According to Briceño-Garmendia et al. (2011), 70 percent of public investment spending goes to capital expenditures and the rest goes to operations and maintenance. Based on the concept of efficiency of public investment in the model, this translates into a value of 0.70 for the efficiency parameter.

Figure A.4. External and Domestic Borrowing



ratio over the medium term. This scenario most closely resembles the current financing mix in Senegal, where the government finances public investment through a combination of external and domestic sources.¹² The supply of concessional financing is assumed here to be finite and decreasing over time, whereas nonconcessional financing gradually increases (both variables are exogenous). Domestic financing is generated endogenously by the model to cover the remaining gap. Public debt rises to 60 percent by the 10th year of the projection period before starting to decline (Figure A.4). The impact on growth is positive but limited by some crowding out of private investment from domestic borrowing.

Alternative Scenarios

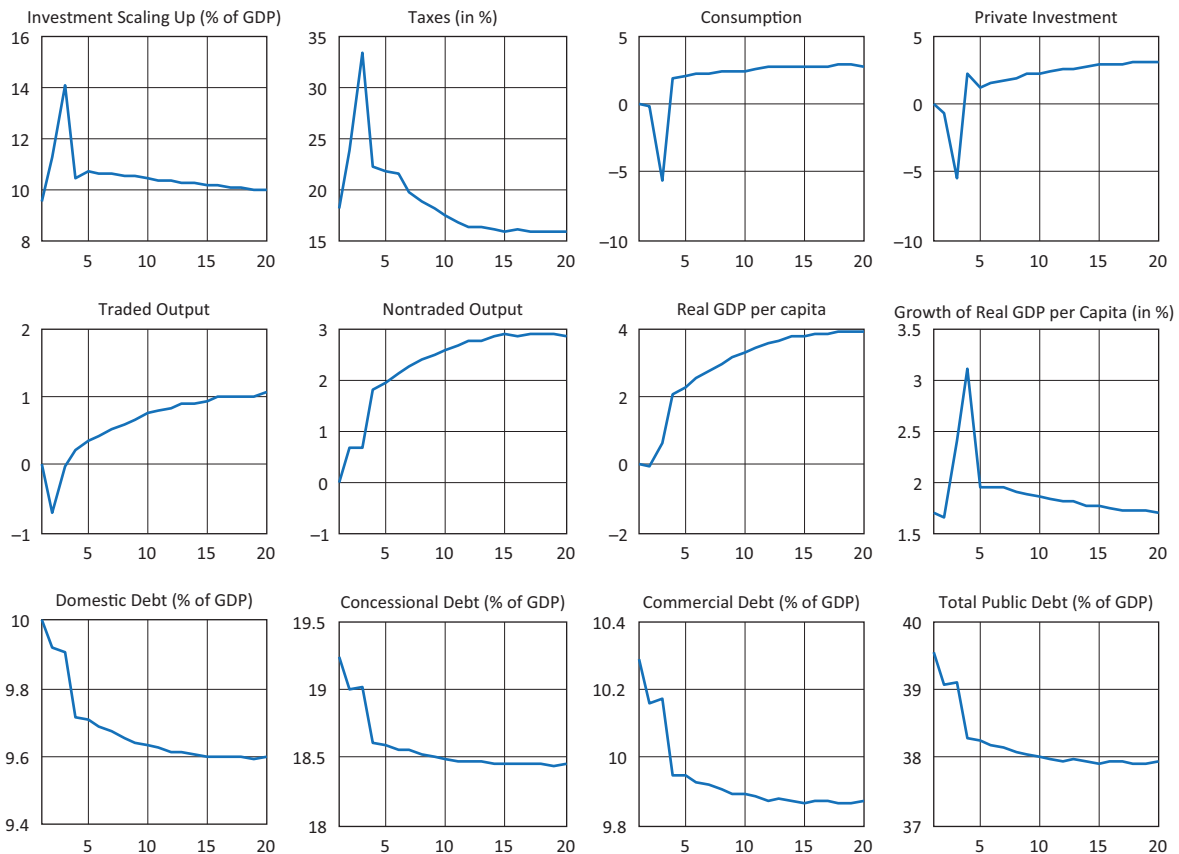
Relying exclusively on fiscal adjustment to finance higher public investment looks unrealistic. In this first alternative scenario, the government is assumed

¹² Domestic borrowing in this case also includes borrowing from investors in the West African Economic and Monetary Union area.

to finance public investment by increasing consumption taxes as necessary while avoiding any recourse to borrowing. The results suggest that economic growth would accelerate and the ratio of public debt to GDP would decrease marginally, but the consumption tax rate would need to jump from 18 percent to 33 percent and remain at elevated levels over the medium term, which does not seem feasible (Figure A.5).

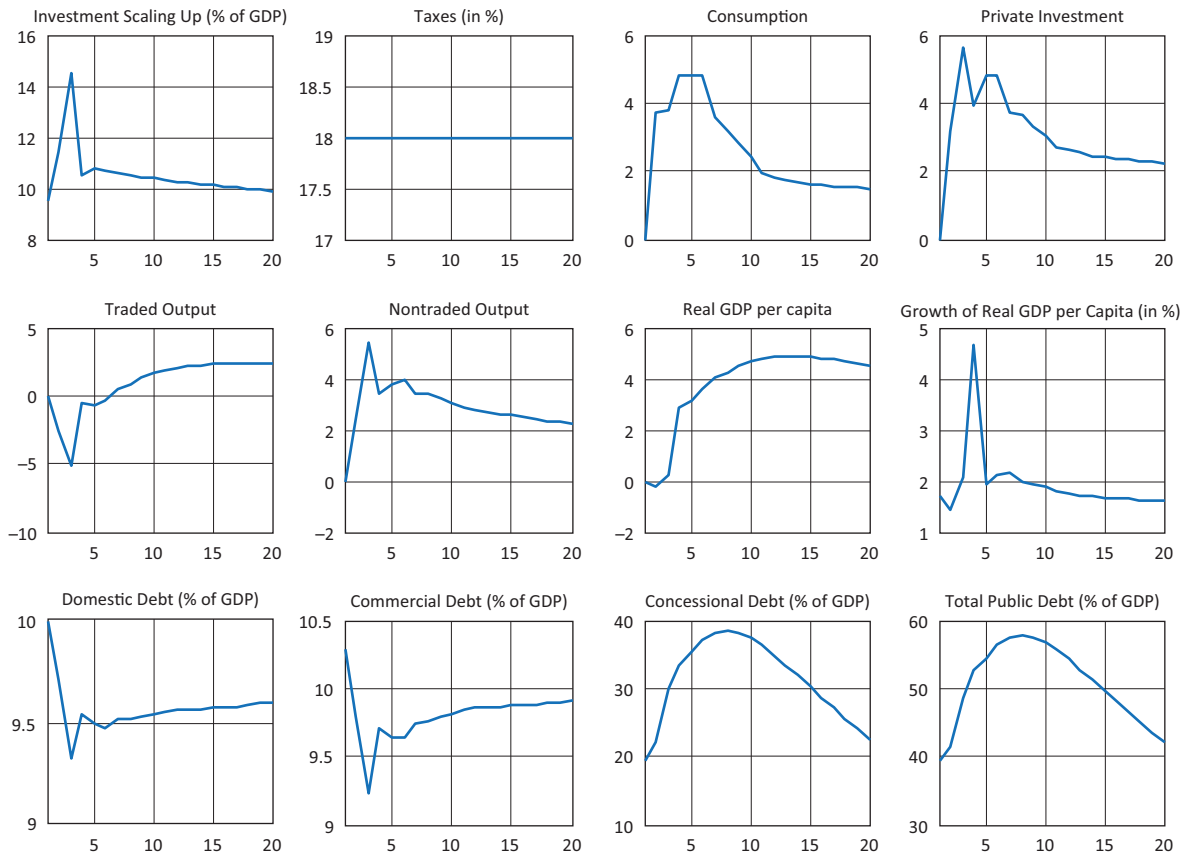
Financing higher public investment with concessional borrowing, without any fiscal adjustment, appears to be the best option from a growth and debt sustainability perspective. If the government is assumed to have unlimited access to external concessional financing to cover all planned investment spending, the results would be generally favorable. Public debt to GDP would initially rise, reaching 57 percent by the eighth year of the projection period, but trend downward thereafter (Figure A.6). The boost to growth would be even greater than in the fiscal adjustment and baseline scenarios, as consumption and private investment would not be impacted by higher taxes or domestic borrowing. The question, though, is whether unlimited

Figure A.5. Fiscal Adjustment Only



Source: Senegalese authorities and IMF staff estimates.

Figure A.6. Concessional Borrowing Only



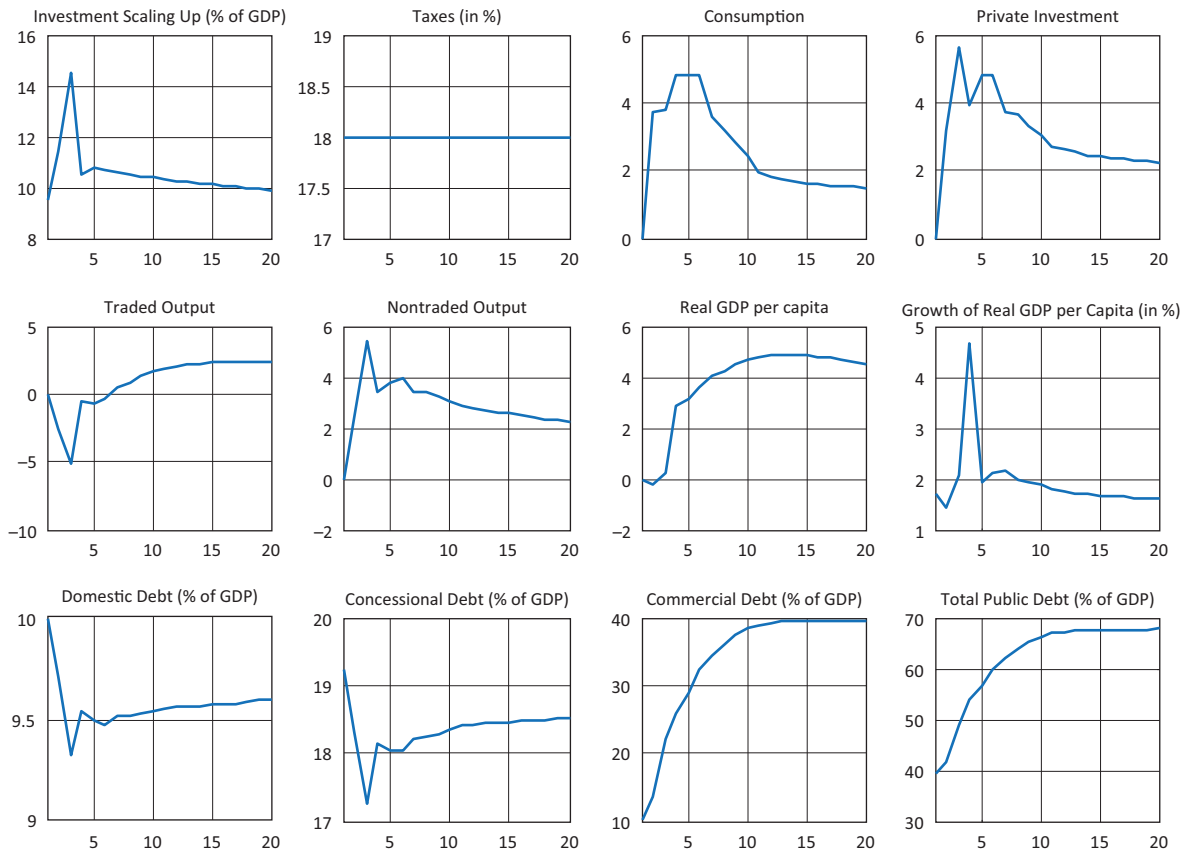
Source: Senegalese authorities and IMF staff estimates.

access to external concessional financing is a realistic assumption. Recent history suggests that concessional resources are limited and will need to be supplemented by other types of financing.

Relying exclusively on nonconcessional external borrowing would lead to a permanently higher debt ratio, raising debt sustainability concerns. Similar to the previous scenario, external borrowing without any fiscal adjustment would have a positive impact on growth, due to higher levels of public investment, private investment, and consumption (Figure A.7). However, the higher cost of borrowing would result in a rapid and continuous increase in the debt, with the ratio of public debt to GDP reaching 68 percent by the end of the projection period.¹³

¹³ Nonconcessional borrowing is assumed to carry a real interest rate of 6.5 percent, equal to a nominal rate of 9 percent (close to the initial yield on the 2011 Eurobond) minus a 2.5 percent world inflation rate.

Figure A.7. Nonconcessional Borrowing Only



Source: Senegalese authorities and IMF staff estimates.

Conclusion

The results of the model suggest that a modest scaling up of public investment would benefit growth without jeopardizing debt sustainability, provided it was not financed exclusively through nonconcessional borrowing. Financing public investment through concessional borrowing would yield even more favorable results, assuming such financing was available. It should be noted that the outcome depends critically on key structural conditions, such as absorptive capacity, the return on infrastructure investment, investment efficiency, and user fees. By improving the structural environment for public investment, Senegal could arguably pursue a more ambitious investment program without threatening debt sustainability. Conversely, a worsening of the structural environment would call for a more cautious approach.

References

- Briceño-Garmendia, C. M., C. Dominguez, and C. Torres, 2011, “Senegal’s Infrastructure: A Continental Perspective,” World Bank Policy Research Working Paper 5817 (Washington: World Bank).
- Buffie, E., A. Berg, C. Patillo, R. Portillo, and F. Zanna, 2011, “Public Investment, Growth and Debt Sustainability: Putting Together the Pieces,” IMF Working Paper WP/12/xx (Washington: International Monetary Fund).
- Dalgaard, C., and H. Hansen, 2005, “The Return to Foreign Aid,” Discussion Paper no. 05–04 (Copenhagen: Institute of Economics, University of Copenhagen).
- Dessus, S., and R. Herrera, 1996, “Le Rôle du Capital Public dans la Croissance des Pays en Développement au cours des Années 80,” Documents Techniques de l’OCDE 115 (Paris: Organization for Economic Cooperation and Development).
- Foster, V., and C. Briceño-Garmendia, 2010, “Africa’s Infrastructure: A Time for Transformation” (Washington: Agence Française de Développement and the World Bank).