BOX 2.6.1 Regional integration and spillovers: Sub-Saharan Africa

Over the past decade, regional integration in Sub-Saharan Africa (SSA) has expanded. Though still low, intraregional trade represents a growing share of the region's trade. Cross-border financing flows within Sub-Saharan Africa have increased rapidly. Nevertheless, shocks to growth in the two largest economies – Nigeria and South Africa – appear to have no measurable effects on other countries in the region.

Introduction

SSA is an open region, with diversified trade partners and sources of finance (Figure 2.6.1.1). Much of Sub-Saharan African trade takes place with countries outside the region. Advanced economies remain the largest destinations of Sub-Saharan Africa's exports. However, China and other developing countries in Asia are increasingly prominent. Intraregional trade and financial linkages within the region have expanded in recent years and look set to expand faster in the years ahead.

This box examines the extent of regional integration. In particular, it takes a closer look at linkages between SSA's two largest economies—Nigeria and South Africa—and the rest of the region to assess the potential significance of intra-regional growth spillovers. The box addresses the following questions:

- How open is Sub-Saharan Africa to global and regional trade and financial flows?
- How large are the potential intra-regional spillovers from the region's two largest economies, Nigeria and South Africa?

The region is highly open to the world economy, with a diverse group of trade and financial partners, and intra-regional ties have grown rapidly since the mid-2000s. Nevertheless, estimated growth spillovers from South Africa and Nigeria to the rest of SSA are statistically insignificant. This may reflect the globally diversified nature of SSA's global trade and financial partners. It may also reflect inadequate data for countries most closely integrated with South Africa and Nigeria.

How open is Sub-Saharan Africa to global and regional trade and financial flows?

SSA's integration into global trade networks has increased remarkably over the past three decades (UNCTAD 2013). Advanced economies remain the main trading partners for SSA. However, recent years have seen a fundamental shift in the direction of SSA trade towards China and away from the traditional advanced country markets. The export exposure of SSA countries to advanced-economies has halved over the decade ending 2014. The fall in the share of the region's exports to the United States, to about 1 percent of GDP in 2014 from its peak of 8 percent in 2005, was particularly pronounced (Figure 2.6.1.2). This reflected in part a sharp decline in Nigeria's oil exports as U.S. oil shale production expanded. More broadly, the anemic recovery in Euro Area countries and other advanced economies following the global financial crisis underpinned the decline in the share of SSA's exports to advanced economies.

China's trade with Sub-Saharan Africa has been driven by China's fast growth of investment in capital goods that require intensive inputs of primary commodities, notably oil and metals (Drummond and Liu 2013). By 2012, China had become SSA's single largest national trading partner. Angola, Democratic Republic of Congo, Equatorial Guinea, Republic of Congo, and South Africa account for about 75 percent of SSA's exports to China (oil, metals, and mineral fuels). Similarly, Angola, Benin, Ghana, Liberia, Nigeria, and South Africa account for more than 80 percent of SSA's total imports from China (mainly machinery, chemicals, and manufactured goods).

Financial linkages between SSA and the rest of the world have grown considerably in the last decade, with some shift in composition towards flows into regional capital markets and direct investment.

- The stock of private external claims on SSA represented 40 percent of the region's GDP in 2013, slightly lower than its peak of 45 percent of GDP in 2010. Although most SSA countries have limited or no access to international capital markets, portfolio investment claims on the region—originating mostly from the U.S. and Euro Area—more than doubled between 2001 and 2010. South Africa, with its highly developed financial markets, has been the main recipient of portfolio investments. Cross-border banking claims on SSA, which before the global financial crisis had risen above portfolio claims, have since moderated. European banks have deleveraged and oriented their activities toward developing countries in Asia. Cross-border bank lending flows originate mainly from U.K. and Euro Area lenders,

Note: This box was prepared by Gerard Kambou and Jesper Hanson, with contributions from Raju Huidrom.

BOX 2.6.1 Regional integration and spillovers: Sub-Saharan Africa *(continued)*

with Angola, Botswana, Mozambique, Tanzania, and Zambia among the largest recipients. Foreign direct investments are the largest capital inflows to the region. FDI liabilities represented more than 15 percent of SSA's GDP in 2013. While the Euro Area remains an important source of FDI in the region, FDI flows from China have grown rapidly in recent years, and are mostly allocated to the natural resource and infrastructure sectors (World Bank 2015a).

- Remittances and official development assistance amounted to 2 percent and 1.5 percent of GDP in 2014 and 2013, respectively, lower than their levels in 2010. Official development assistance and remittances from advanced economies have been on a declining trend in recent years, reflecting weak growth and austerity budgets in these economies.

While most economic ties of SSA are to non-SSA countries, intraregional trade, foreign direct investment, cross-border banking flows, and remittances have risen in recent years (Figure 2.6.1.3). The number of Pan-African banking groups has increased rapidly across the region, partly influenced by rising trade flows (IMF 2015l). Furthermore, trade linkages between the region's largest economies (Nigeria and South Africa) and the rest of the region have been growing and look set to deepen.

Linkages between South Africa and the rest of the region

Trade linkages: South Africa, the region's second largest economy, accounting for 21 percent of its GDP, is an important export market for its immediate neighbors (Figure 2.6.1.4). In 2011, exports to South Africa accounted for over 80 percent of trade within the South African Customs Union, or SACU (Canales-Kriljenko, Gwenhamo and Thomas et al. 2013).[1] Exports to South Africa are particularly large for Swaziland (25 percent of GDP) and Lesotho (10 percent of GDP). Exports from SACU countries consist mostly of agricultural goods; they also include some manufacturing products, chemicals and metals. South Africa is also an important export market for countries in the 15-member Southern African Development Community (SADC) region, especially Mozambique (10 percent of GDP) and Zimbabwe (5 percent of GDP). Fuels dominate Mozambique's exports to South Africa, while Zimbabwe's exports consist mainly of agricultural goods and metals. By contrast, exports to South Africa account for less than 5 percent of GDP in West African countries such as Ghana and Nigeria.

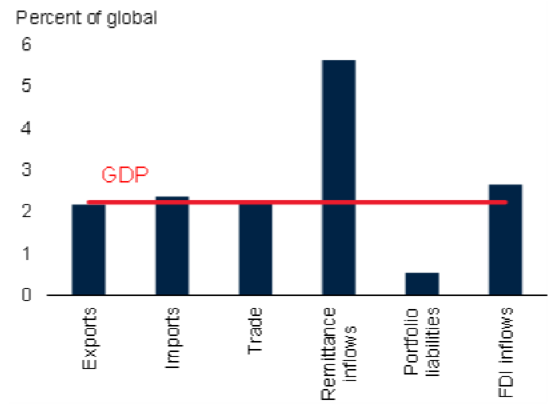
Financial linkages: South Africa is the largest source of foreign direct investment for Botswana, Lesotho, Namibia, and Swaziland (BLNS) (Figure 2.6.1.4), accounting for up to 80 percent of total inward FDI in these countries. South African firms (e.g. Massmart, Nampak, MTN Group) also have a strong presence in the SADC region

[1]SACU member countries are Botswana, Lesotho, Namibia, South Africa, and Swaziland.

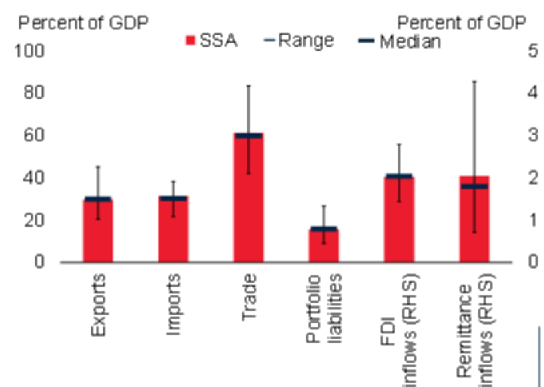
FIGURE 2.6.1.1 Cross-region comparison

The region is open to global trade and finance. It accounts for about 2 percent of global GDP and trade. In relation to GDP, the levels of external trade, investment, and remittances for the average SSA economy are similar to other developing regions.

A. SSA: Share of global activity, trade, and finance, 2014



B. SSA: Trade and finance in regional comparison, 2014



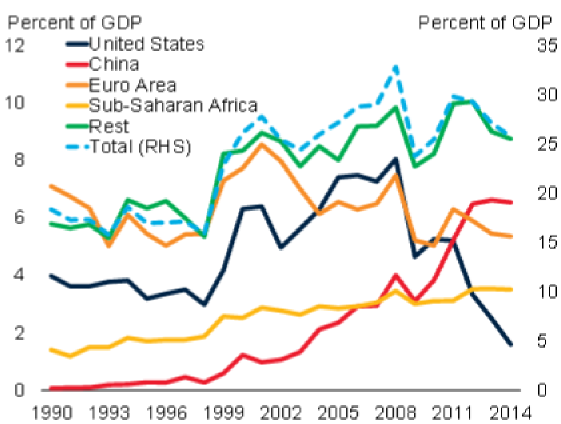
Sources: IMF October 2015 World Economic Outlook, IMF International Financial Statistics, IMF Direction of Trade Statistics, UNCTAD FDI/TNC database, World Bank Remittance and Migration Database, World Bank World Development Indicators.
B. The red bar denotes exports, imports, trade, remittance inflows, portfolio liabilities, and FDI inflows in percent of GDP on average across SSA countries. The vertical line denotes the range of averages for all six developing country regions.

BOX 2.6.1 Regional integration and spillovers: Sub-Saharan Africa *(continued)*

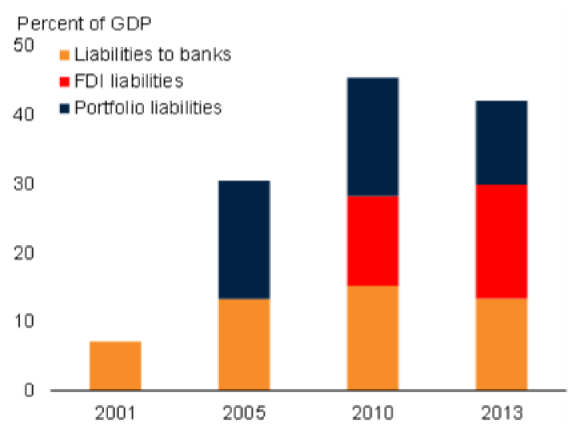
FIGURE 2.6.1.2 Linkages between Sub-Saharan Africa and the rest of the world

Countries in Sub-Saharan Africa increasingly participate in international trade. The region's trade has undergone a shift in direction towards China and away from traditional advanced country trading partners. Foreign direct investment liabilities have increased considerably, while remittances and official development assistance from advanced countries have declined. Relative to GDP, bilateral development assistance has halved over the last ten years to 1.5 percent of regional GDP.

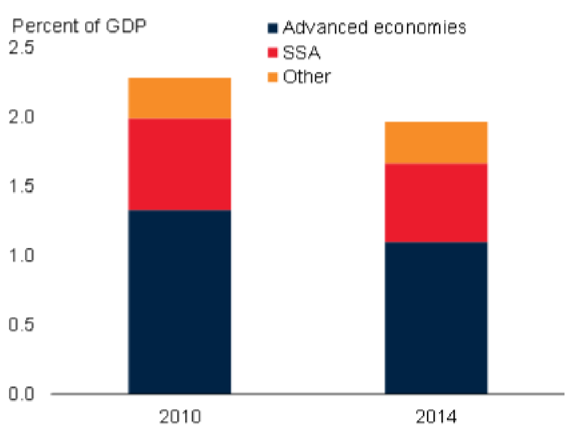
A. Exports



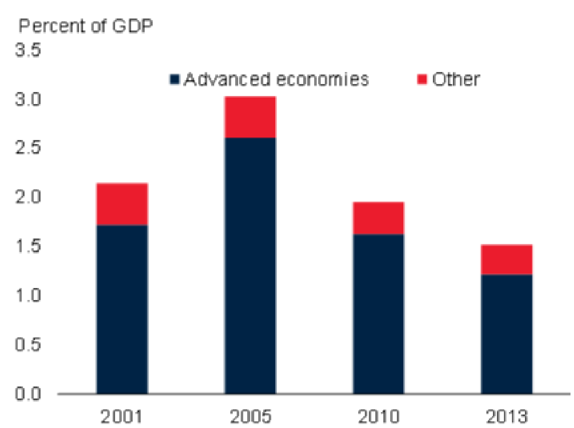
B. Financial liabilities



C. Remittances by source country



D. Bilateral official development assistance



Source: IMF Direction of Trade Statistics, Coordinated Portfolio Investment Survey, Coordinated Direct Investment Survey; Bank for International Settlements Consolidated Banking Statistics; World Bank Remittances and Migration database, OECD.
B: Coordinated Direct Investment Survey (CDIS) is not available for 2001 and 2005; Coordinated Portfolio Investment Survey (CPIS) is not available for 2001. Liabilities to banks stand for claims of BIS-reporting banks on SSA countries. BIS stands for Bank for International Settlements.

(Mozambique, Zimbabwe), East African Community (Kenya, Uganda, and Tanzania) and countries in West Africa (Nigeria, Ghana). South Africa-based banks (Standard Bank, First Rand Bank, Nedbank) and other financial institutions are active across the continent, and are systemically important in neighboring countries, as gauged by deposit shares.[2] Remittances from South Africa to neighboring countries are also significant—for Lesotho, they average more than 20 percent of GDP (2011-2014), reflecting the large number of migrant workers employed in South African mines.[3]

Institutional linkages: South Africa's monetary and exchange rate policies and the revenue sharing arrangements under SACU are significant sources of linkages.

[2]Operations are deemed systematically important if the share of their deposits in total banking system deposits exceeds 10 percent; or if their asset share exceeds 7 percent of GDP (IMF 2015l).

[3]Though still sizeable, remittances to Lesotho have steadily declined in line with the long-term decline in South Africa's gold production.

BOX 2.6.1 Regional integration and spillovers: Sub-Saharan Africa *(continued)*

- South Africa's currency, the rand, circulates freely in the Common Monetary Area (CMA) formed by South Africa, Lesotho, Namibia, and Swaziland whose currencies are pegged to the rand. Through interest rate and exchange rate movements, policy actions in South Africa immediately affect economic conditions in the CMA.

- The revenue sharing mechanism in SACU has created strong linkages between South African imports and budget revenue in BLNS. South African imports account for more than 90 percent of total SACU imports, the taxes on which are a major source of SACU customs revenue. Customs revenues across SACU are pooled and allocated to members. About 85 percent of forecast excise revenues are distributed based on the share of each country in total SACU GDP, and the remaining is distributed according to a formula that favors countries with lower per capita GDP, typically with a lag of two years. Since imports tend to be more volatile than overall economic activity, the revenue sharing mechanism contributes to significant volatility in budgetary revenue in BLNS.

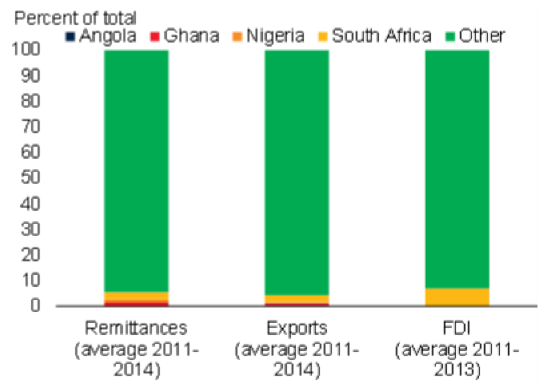
Linkages between Nigeria and the rest of the region

Trade linkages: Following the data revision of 2013, Nigeria has become SSA's largest economy, accounting for 31 percent of its GDP. It is also the region's largest oil exporter. Official data suggest that trade links exist between Nigeria and a number of West African countries, but are modest (Figure 2.6.1.5). Nigeria's share in exports to the Economic Community of West African States (ECOWAS)[4] fell from an average of 7 percent in 2001-06 to 2.3 percent in 2010, but has been recovering (Chete and Adewuyi 2012). Nigeria is an important export market for agricultural or manufacturing goods from neighboring Guinea-Bissau (6 percent of exports), Côte d'Ivoire (3 percent of exports), and Niger (2.8 percent of exports). Implementation of the ECOWAS common external tariff, which became effective in January 2015, is expected to further boost sub-regional trade, including between Nigeria and the West African Economic and Monetary Union (WAEMU) member countries.[5]

FIGURE 2.6.1.3 Intra-regional linkages

Most of the region's economic ties continue to be with non-SSA countries. The region's largest economies are among its leading sources of intraregional trade.

A. Exports, FDI inflows, remittance inflows



B. Leading sources of intra-regional trade, 2014 (millions of US$)

Exports to the Rest of Africa		Imports from the Rest of Africa	
Country	Value	Country	Value
South Africa	27,041	South Africa	12,504
Côte d'Ivoire	3,978	Botswana	5,985
Zimbabwe	2,782	Zambia	5,833
Zambia	2,170	Zimbabwe	3,388
Tanzania	2,161	Mozambique	3,121
Botswana	1,691	Côte d'Ivoire	2,954
Senegal	1,309	Cameroon	2,054
Congo, Rep.	1,247	Burkina Faso	1,873
Mozambique	1,198	Tanzania	1,496
Uganda	789	Malawi	1,153

Source: World Bank (remittances), IMF DOTS (exports), IMF CDIS (FDI), WITS.
A. Data on FDI liabilities is not available for Angola, Ghana and Nigeria.

Financial sector linkages: Cross-border activity of Nigerian-based banks in SSA has expanded substantially, in part as Nigerian banks follow up on opportunities to finance trade between Nigeria and countries across SSA. The number of subsidiaries of Nigerian banks licensed in foreign jurisdictions increased from two in 2002 to 64 in 2013, operating in more than 20 countries across SSA. The United Bank for Africa, the largest pan-African bank from Nigeria, has a widespread presence in SSA, and is systematically important in several countries, with 19

[4] The ECOWAS member states are Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Nigeria, Senegal, Sierra Leone and Togo.

[5] WAEMU countries are Benin, Burkina Faso, Côte d'Ivoire, Guinea Bissau, Mali Niger, Senegal, and Togo. They share the same currency, the CFA franc, which is pegged to the euro.

BOX 2.6.1 Regional integration and spillovers: Sub-Saharan Africa *(continued)*

FIGURE 2.6.1.4 Linkages between South Africa and the rest of Sub-Saharan Africa

South Africa is an important market destination for immediate neighboring countries, as well as for countries in the broader Southern African Development Community region. South Africa is the largest source of FDI for Botswana, Namibia, Lesotho, and Swaziland. It remains an important source of remittances for many countries in the Southern Africa region. South Africa-based banks are active across SSA and systematically important in neighboring countries.

Source: IMF Direction of Trade Statistics, Coordinated Direct Investment Survey, World Bank Migration and Remittances Database, IMF staff reports.
Note: BNLS denotes Botswana, Namibia, Lesotho, and Swaziland.
A: Chart shows countries with exports to South Africa higher than 2 percent of GDP.
B: Chart shows countries with FDI from South Africa higher than 2 percent of GDP.

subsidiaries contributing 15 percent to total assets[6]. This rapid cross-border expansion increases the potential for financial sector shocks in Nigeria to be transmitted across the region. Other potential spillover channels appear limited. In particular, remittances from Nigeria to neighboring countries are small relative to GDP; and foreign direct investment from Nigeria in the region, outside the financial sector, is negligible.

Informal sector linkages: Strong informal cross-border trade links exist between Nigeria and neighboring countries that are only partially captured in official statistics. Estimates of informal cross-border trade in West Africa show that it could represent 20 percent of GDP in

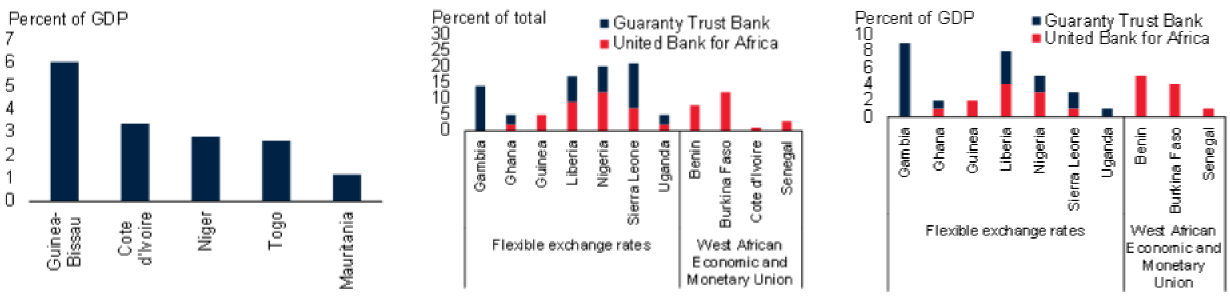
[6]Ecobank, a full service bank based in Togo, is one of the region's largest pan-Africa Banks with operations in 36 African countries.

BOX 2.6.1 Regional integration and spillovers: Sub-Saharan Africa *(continued)*

FIGURE 2.6.1.5 Linkages between Nigeria and the rest of Sub-Saharan Africa

Trade links between Nigeria and neighboring countries remain modest. Strong informal cross-border trade links exist between Nigeria and its neighbors that are only partially reflected in official trade statistics. Cross-border activity of Nigeria-based banks has expanded in recent years. United Bank for Africa and Guaranty Trust Bank, two Pan-African banks from Nigeria, have widespread presence in Sub-Saharan Africa. United Bank for Africa is systematically important in several countries.

A. Exports to Nigeria, 2011-14 **B. Selected Nigerian banks: Share of deposits by country, 2013** **C. Selected Nigerian banks: Assets by country, 2013**



Source: IMF Direction of Trade Statistics (DOTS) database; IMF staff reports.

Nigeria (Afrika and Ajumbo 2012). In particular, a significant share of trade in agriculture goods and petroleum products is unrecorded.

- Cross-border trade in grain and livestock has helped improve food availability in Benin, Cameroon, Chad, Ghana, Mali, and Niger.[7]

- Nigerian subsidies have kept fuel prices much lower than in neighboring countries, generating strong informal trade in fuel. It is estimated that three-quarters of the fuel consumed in Benin is imported through informal channels from Nigeria (World Bank 2014c). Changes in Nigeria's pricing policies for fuel products could have significant spillovers for neighboring countries.

How large are the potential intra-regional spillovers from the region's two largest economies, Nigeria and South Africa?

A Bayesian vector autoregression model is used to estimate growth spillovers from Nigeria, South Africa, and the rest of the world. Sufficient data exists for Botswana, Ghana, and Uganda, but only from 2007 Q2 to 2015 Q2. For each of these countries, the variables in the model include own growth, South African growth, Nigerian growth, the real effective exchange rate, growth in the rest of the world (as exogenous variable), and a dummy that captures the global financial crisis of 2008-09.[8] Figure 2.6.1.6 shows the estimated response of each destination country's output growth to a 1 percentage point decline in real GDP growth in Nigeria, South Africa, and the rest of the world.

The impulse responses suggest that global growth has a significant influence on growth in Sub-Saharan Africa. Growth in Nigeria or South Africa, in contrast, does not appear to have significant spillover effects on neighboring as well as geographically more distant countries. The two largest economies in SSA have insignificant spillovers to each other.[9]

These results are broadly in line with, and complement, those found by a number of previous authors. For example, using a global vector autoregression (GVAR) model, Gurara and Ncube (2013) found a significant growth spillover effect to African economies from both the Eurozone economies and BRICS. Kinfack and Bonga-Bonga (2015) employ a GVAR model and find that Africa's real GDP has a positive response to increases in GDP in the Euro Area and in China. Spillovers of growth shocks from Nigeria and South Africa to the rest of Sub-Saharan Africa were the focus of the studies by IMF

[7]Nigeria supplies about 60-70 percent of Niger's grain imports (mostly maize, millet, and sorghum), thereby contributing to food security in Niger.

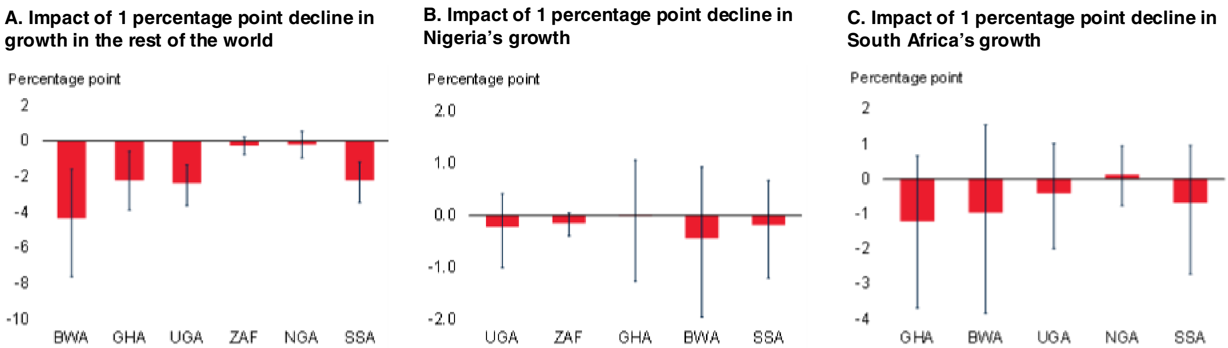
[8]Further details on the model, including the construction of the rest of the world growth variable, are provided in Annex 3.2.

[9]For a comparison of within-region spillovers across regions, see Box 3.4.

BOX 2.6.1 Regional integration and spillovers: Sub-Saharan Africa *(continued)*

FIGURE 2.6.1.6 Regional spillovers in SSA

Events that affect world growth spill over into SSA. Growth shocks in Nigeria and South Africa do not appear to have significant spillovers to neighboring countries.



Source: World Bank.

Note: The results show the cumulative change in growth after two years in response to 1 percentage point change in the rest of the world, Nigerian and South African growth based on Bayesian vector autoregression, using data for 2007Q2-2015Q2. Bars are the median estimates and the error bands represent the 33-66 percent confidence bands. SSA refers to the cross sectional median estimates across BWA, GHA, NGA, UGA, and ZAF. BWA = Botswana; GHA = Ghana; NGA = Nigeria; UGA = Uganda; ZAF = South Africa; SSA = Sub-Saharan Africa.

(2012b) and Canales-Kriljenko et al.(2013), with the latter focusing on the BLNS countries. Both studies used vector autoregression models. They find that shocks to South Africa's growth have no significant spillover effects on the BNLS countries, or the rest of the continent. Similarly, spillovers from Nigerian growth to neighboring countries were found to be insignificant, suggesting that Nigeria still has weak links with the rest of the region.

The finding that developments in Nigeria and South Africa have limited effects on growth in other countries in the region could be due to a number of factors. The first is the possibility that the economies of South Africa and those of the rest of SSA may have decoupled in the 1990s following the removal of international sanctions as apartheid ended and South Africa re-integrated into the world economy (Basdevant et al. 2014). As SSA countries integrated rapidly with the rest of the world during the 2000s, external shocks became the predominant cause of fluctuations in SSA activity (Kabundi and Loots 2007). Second, those countries that are most deeply integrated with Nigeria and South Africa—for example, Benin, Ghana, Lesotho, Namibia, Swaziland—do not have sufficiently long time series of data to estimate spillovers.

Conclusion and policy implications

While the region's main economic partners are outside the region, intraregional trade and financial links in Sub-Saharan Africa have expanded in recent years. Trade, financial, and institutional linkages between Nigeria and South Africa, the region's two largest economies, and the rest of the region have been growing. Notwithstanding this development, the quantitative analysis suggests that growth in Nigeria and South Africa has negligible spillover effects on their neighbors as well as more distant countries.

While intra-African trade has increased in recent years, it remains low. Formal barriers to trade, including tariff and quotas, inefficient customs procedures, and the inadequate state of transport infrastructure within the region are among the major reasons for low trade flows between SSA countries (World Bank 2012b). These are several areas in which policy can make a difference. Reductions in tariff, streamlining customs procedures, and investments in infrastructure—especially for landlocked countries—would raise the prospects for mutually beneficial growth spillovers.

Policy actions are also needed to stem the rise of informality in the region by facilitating the transition of firms from the informal to the formal economy. This would require intensifying ongoing efforts to improve the business climate across the region, including simplified procedures for obtaining permits for business registration, simplified tax systems, and reduced compliance costs for laws and regulations. A strengthened capacity of government agencies to administer laws and to improve the quality and efficiency of regulations would help in making such reforms effective (World Bank 2015f).