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Rwanda Economic Update

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Leveraging Regional Integration



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THE WORLD BANK

Rwanda Economic Update

Leveraging Regional Integration

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ACRONYMS

ASEAN	Association of Southeast Asian Nations
BIF	Burundian Franc
BNR	Banque Nationale du Rwanda (Central Bank of Rwanda)
DRC	Democratic Republic of Congo
EAC	East African Community
EDPRS	Economic Development and Poverty Reduction Strategy
EICV	Enquête intégrale sur les conditions de vie des ménages
EU	European Union
GDP	Gross Domestic Product
FDI	Foreign Direct Investments
FY	Fiscal Year
HHI	Herfindahl–Hirschman Index,
KCB	Kenya Commercial Bank
KES	Kenya Shilling
KRR	Key Repo Rate
MINECOFIN	Ministry of Finance and Economic Planning
MINICOM	Ministry of Trade and Industry
NISR	National Institute of Statistics of Rwanda
NPLs	Non-performing loans
NTBs	Non-Tariff Barriers
Rwf	Rwandan Franc
SACCOs	Saving and Credit Cooperatives
SSA	Sub-Saharan Africa
SEZ	Special Economic Zone
TZS	Tanzania Shilling
UGS	Uganda Shilling
UNCTAD	United Nations Conference on Trade and Development
US	United States
VFR	Visiting Friend and Relatives
WDI	World Development Indicators
WDR	World Development Report
Y-O-Y	Year-on-year

PREAMBLE

This Economic Update reports and synthesizes key economic developments in the past six months in Rwanda's economy. It places them in a medium-term and regional context, and analyzes the implications of these developments and policies for the outlook of Rwanda's economy. In this way, these reports contribute to the implementation of the Bank's Africa Strategy. The Economic Update reports cover in each edition a special feature on a selected topic. It is intended for a wide audience, including policy makers, business leaders and other market participants, and the community of analysts, engaged in Rwanda's economy.

The Rwanda Economic Update was prepared and compiled by the Poverty Reduction and Economic Management team at the World Bank Country Office in Rwanda, under the leadership of Birgit Hansl (Senior Economist), with inputs from Peace Aimee Niyibizi (Economist) on the economic developments section and with inputs from Anton Dobronogov (Senior Economist) and John Bosco Kanyangoga (Consultant) on the economic geography and regional integration section, which synthesizes findings from the two World Bank reports: Reshaping Economic Geography of East Africa: from Regional to Global Integration (2012) and Defragmenting Africa (2012).

Additional information:

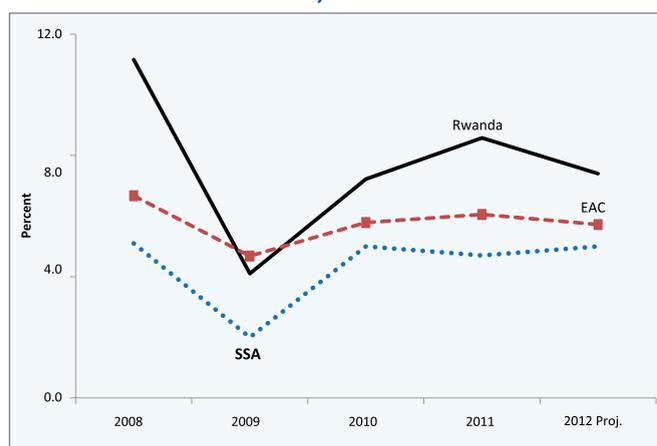
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Another Banner Year as the Fastest Growing EAC Economy

Rwanda grew at a rapid rate in the second half of 2011, exceeding 10 percent for the first time, since the 2009 global economic downturn. Overall, Rwanda achieved 8.6 percent growth in 2011, and substantially exceeded the average growth for Sub-Saharan Africa (SSA) of 5.0 percent. Rwanda also grew fastest than all the countries in the East African Community (EAC), which as a group reached 6.1 percent in 2011 (Figure 1). Robust growth continued in the first quarter of 2012, when Rwanda's economy expanded at 7.7 percent.

Figure 1: Rwanda's Growth Compared to the EAC and SSA, 2007-2012



Source: World Bank, Global Economic Prospects Report (June 2012).

This remarkable performance was achieved against the backdrop of a deteriorating global economic environment in the second half of 2011, and recently, a dramatic worsening situation in the Euro zone. Uncertainty is heightened on how markets will evolve over the medium-term, and global economic conditions are expected to remain volatile and fragile. This will require special monitoring and increased vigilance in macroeconomic management, as the country could become impacted by the weak fiscal situation in Europe, and increased risk aversion in the global financial sector.

Rwanda's stellar economic outcome in 2011 was substantially anchored by the performance of the industrial sector. Industrial growth doubled in 2011 to 17.6 percent. Construction was the largest sub-sector, contributing 8.0 percent to total GDP, or 50.7 percent of industrial output in 2011. The public sector continued to drive the high growth in construction. This was reflected by an increased share of capital expenditures, which averaged more than 40 percent of total public expenditures, since 2008. More than half are funded by aid flows, mainly for schools, roads and hospital construction, and irrigation works. Mining also made a significant contribution to Rwanda's industrial performance, as well as to overall economic growth. Overall, Rwanda's mineral exports in 2011 more than doubled the value of the previous year. Part of this growth was a one-time-gain, as mineral exporters sold off substantial stocks in early 2011, before global regulations seeking to curb smuggling of minerals from conflict areas, were enforced. Manufacturing remained a minor contributor to industrial growth and Rwanda's overall output. While the economy has expanded 8.2 percent over the recent five year period, manufacturing growth averaged only 5 percent, and its share of GDP remained at 6 percent. The services sector grew strongly at around 9 percent in 2011. Financial services led growth in services, expanding by 20.4 percent. Part of this growth can be attributed to a deepening of Rwanda's financial infrastructure, brought about by EAC-based institutions opening offices in Rwanda. Agricultural output rebounded in the second half of 2011, following good rains and a bumper second harvest.

In the first quarter of 2012, industrial shrunk dramatically to 1.1 percent, but services growth continued at a staggering 14.2 percent, compared to the same period a year ago. In 2011 mining and construction grew rapidly, but growth in these two sub-sectors collapsed in the first quarter of 2012. Strong growth in services was grounded in stellar performance in the sub-sectors of transport and communication, wholesale and retail trade, and

public expenditure-led services (education, health and public administration). The latter was a result of an 18.8 percent increase in Government consumption expenditure. Agriculture output growth stood at 3.4 percent in the first quarter of 2012 compared to a year ago on account of a significant contraction in growth for export crops.

Like all countries in the EAC, Rwanda struggled to contain inflation in 2011, although it experienced lower inflation than most. As a land-locked, fuel importer, Rwanda experienced high prices for imported petroleum products, but the Government's decision to lower the excise tax on fuel in mid-2011, dampened some of the upward pressure on prices. A review of the Rwanda Central Bank's policies on key interest rates, shows that the *Key Repo Rate* (KRR) was not as effectively used as it should have, to rein in inflation. Throughout the second part of 2011 when core inflation was on the rise, policy and deposit rates became negative in real terms, leading to a surge in private credit growth, which peaked at 31.0 percent in October 2011. This suggests that Central Bank should be vigilant, and could consider a more proactive monetary policy stance, consistent with tightening the KRR. In the first quarter of 2012, headline inflation remained persistently high, around 7.9 percent, but core inflation eased off.

Rwanda continues to manage its fiscal account prudently. It revised downward its spending commitment for capital projects under the 2011/12 budget, resulting in an overall decline in its deficit from 2.6 percent of GDP to 2.2 percent. Revenues remained robust with improved collection of taxes on goods and services. In particular, the Government received the equivalent of 0.7 percent of GDP from the sale of a new telecom license. The government is planning to increase public expenditure in 2012/2013, and is anticipating that revenues will not be sufficient to cover expenditures, resulting in a deficit of 2.9 percent of GDP, still well within global benchmarks for prudent financial management. The Government plans to finance the deficit largely with foreign financing, though it plans to tap the local capital markets, which are expected to have adequate liquidity.

Rwanda's current account deficit widened in 2011, despite higher transfers. Although exports grew strongly, they were not sufficient to offset the increased import bill. Rwanda's traditional export products (minerals, coffee and tea) increased in value by 60 percent in 2011, reflecting high international commodity prices. Another bright spot was the tourism sector, which continued to be the largest foreign exchange earner in Rwanda. Although Rwanda's exports have been increasing, they remain small as a share of GDP, especially when compared to other EAC countries. Consumer goods remained the largest import expenditure, accounting for 27.2 percent of all imports in 2011. Energy products were the fastest growing import category, increasing by more than 60 percent and accounting for 17 percent of the total import bill in 2011. Rwanda imports significantly more products from EAC countries than it exports to them. Remittances to Rwanda are still relatively insignificant, amounting to US\$166 million or 1.7 percent of GDP in 2011. Kenya and Uganda accounted for 95 percent of all remittances flowing to the EAC in 2011, while Rwanda accounted for only 3.1 percent. With increased education levels, Rwanda's stock of human capital may find attractive employment options within the EAC and beyond. Foreign Direct Investment (FDI) remains extremely low in Rwanda although it has been increasing in recent years. In the first quarter of 2012 export earnings continued to increase, but only on account of re-exported petroleum products to the Democratic Republic of Congo (DRC) while traditional export products (minerals, coffee and tea) performed less well. The import bill continued to expand in the first quarter of 2012, but now capital goods and intermediary goods overtook consumer goods as the largest import expenditure.

Rwanda's outlook for 2012 and 2013 remains positive, with the World Bank projecting growth rates of 7.4 percent and 7.7 percent respectively, with considerable downside risks. Overall, agricultural growth should continue with new Government's investments coming on stream, but remain highly dependent on good weather conditions. The mineral sub-sector will likely see a moderation in prices, as major western economies

continue to adjust, dampening the demand for raw materials. It is assumed that for 2012, ongoing public sector investments in infrastructure will keep the construction sub-sector growing. Growth in services will continue, on account of continuously high trade activity and high public and private consumption.

The major risks facing Rwanda's economic future relate to changes in the external outlook. Rwanda could experience negative impacts due to a number of factors: (i). increased inflationary pressures, which could come in form of increased global energy and food prices; (ii). reduced commodity prices, especially for minerals; (iii). lower flows of remittances and FDI; and, (iv) decline in tourism, which could be negatively impacted by a proposed increase in park fees to view Rwanda's gorillas, the main attraction of tourists visiting from outside the EAC. Yet, the most substantial risk to Rwanda would be if donor financing would diminish, given the precarious nature of the economies of many traditional donors. This would require Rwanda to scale back on capital projects and some recurrent expenditures. Offsetting this risk is Rwanda's solid management of its economy, including the effective use of donor funding, which will likely give it high priority in receiving future financing.

Leveraging Regional Integration

For Rwanda to become an emerging middle-income economy, it will need to unleash its export potential, and integrate more with its EAC neighbors. The country has a natural comparative advantage in services, including tourism, and can serve as a gateway between the Anglophone East Africa and Francophone Central Africa. But Rwanda can only develop these benefits, if it integrates with its neighbors. Until now, Africa's fragmentation has held many countries back, as it hindered countries to develop economies of scale through regional integration. This fragmentation of Africa is explored in the recent World Bank report *Defragmenting Africa* (2012).

East Africa's economic integration remains challenged by deficient regional infrastructure networks. High transport costs undermine the

region's competitiveness. Intra-regional trade is also inhibited by regulatory and administrative hurdles that inflate transport cost. There are numerous problems affecting the smooth flow of goods from ports to inland destinations, and vice versa. These include inefficient port operations, unwarranted roadblocks and check points, and weighbridges along the regional transport routes, as well as delays at border crossings. Freight costs per kilometer in the EAC are 30 percent higher than in Southern Africa. For Rwanda and the other landlocked countries, transport costs can be as high as 75 percent of the value of exports.

This report has a special focus on the EAC, and will look at pathways which Rwanda could take in order to unlock the benefits of regional integration. Currently, the EAC is a marginal player in global trade, accounting for a sliver of total activity. However, the "new EAC" is off to a good start, and is proceeding cautiously to avoid the pitfalls that led to the collapse of the previous EAC, which operated in the 1960s and early 70s. The new EAC is moving much slower than its predecessor in developing community approaches and institutions. A customs union was phased in between 2005-2010, although numerous non-tariff barriers to trade remain. Phasing in of a common market began in 2010, and talks are underway about a monetary union. Political federation is a declared objective, although it is still a long way off.

The framework of economic geography suggests that regional integration will work faster and better, if it reduces the economic distance between the EAC economy as a whole and the global core. The size of the EAC's external markets vastly exceeds that of its internal market, but jointly, EAC partner states are more likely to successfully leverage global demand. Unlike other economic communities, EAC currently has a relatively high inland economic density, and it will need to compete with coastal parts of other regions such as East Asia, which already benefit from huge agglomeration effects. The framework of economic geography is applied in this report to the East African Community, based on the World Bank report titled *Reshaping Economic Geography of East Africa: from Regional to Global Integration* (2012).

This framework was first explored in the 2009 World Development Report.

Global and regional integration are complements, not alternatives. Many European, American and Asian countries benefitted simultaneously from regional and global integration into the European Union (EU), and Association of Southeast Asian Nations (ASEAN). The EAC countries could also use regional integration as a stepping stone for competing globally. The EAC is now trading more with itself than with other regions of the World. Over the last five years, intra-EAC trade has risen sharply, more so in manufactured goods such as food products, beverages, tobacco, and cement. The greatest immediate benefits for closer EAC integration could be increased trade in agriculture products which remain too expensive in many EAC countries and which could provide opportunities for farmers in food surplus economies such as Rwanda.

Intra-EAC trade is expected to accelerate over the next years, and will generate opportunities for Rwanda and its EAC partners. As mentioned above, increased trade in agriculture would contribute to the region's food security, and provide growth opportunities for regional farmers. Increasingly, trade in basic manufactured goods and regional production chains could create employment, and promote export diversification. Intra-EAC trade in services could offer new and dynamic opportunities for exports, and enhance overall competitiveness of the EAC economies.¹

Key recommendations for EAC policies to improve regional integration include the regionalization of connective infrastructure through effective joint-EAC transit management. This would help to overcome infrastructure bottlenecks, and decrease transport costs. The East African economy could increasingly realize agglomeration benefits, with the establishment of a regionally designed economic integration zone. This could help to leverage global demand, and pilot future common institutions, while ensuring at the same time, that some benefits

are distributed as evenly as possible across partner states. Finally, increasing labor mobility would help to generate important agglomeration effects in the medium to long term, but also help to address critical skills gaps, in selected EAC countries in the short-term.

Advances in East African integration are crucial, as it has the potential for higher than usual benefits for Burundi, Rwanda and Uganda, because for them the costs of being landlocked are very high. Successful integration would transform the five countries into a strong regional economy, slashing transport and other costs. But the same fact of geography means that integration policies for coastal versus landlocked economies will have asymmetric impacts. Firms tend to concentrate in the larger economies, and often close to the coast. But given its location and size, Rwanda will lose most, if it does not integrate. However, a vibrant EAC will allow the development of “niche” markets, also in the smaller economies.

The main risk facing the EAC now is of a stalled form of integration in which a common market, although existing on paper, still allows substantial barriers to commerce in practice, an issue of particular concern for the landlocked countries. These countries depend on access to the coast through other states, and the cost of doing this depends on both immutable, natural features (distance), as well as those that can be modified by policy (quality of infrastructure, and secure right of free passage). However, precisely because the EAC is divided into multiple states, some landlocked and some coastal, coastal states do not fully internalize the benefits of policy measures that improve coastal access for others. To keep politicians (and their constituents) on board, the sequencing of policy measures has to be right. Parallel to removing some of the non-tariff barriers and unofficial obstacles, raising the quality of infrastructure and social services, and establishing a coastal economic integration zone, EAC policy makers could consider taking additional measures to enhance its outreach to global markets.

¹ World Bank 2012, *Defragmenting Africa*.

PART ONE

Recent Economic Developments

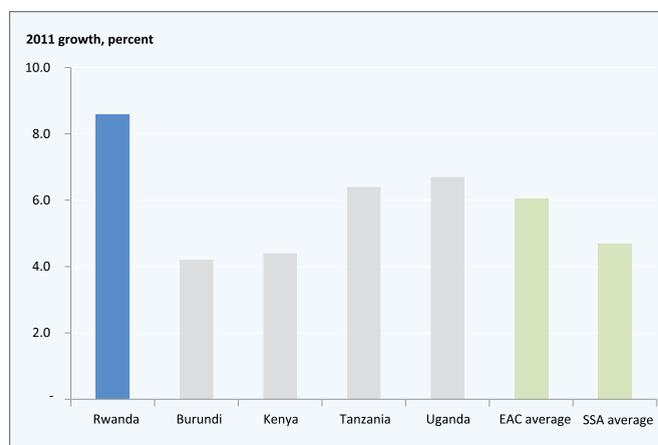
Renewed concerns over the global growth outlook and of the European debt crisis, might negatively affect Rwanda's prospects in 2012/2013, and lead to a lower growth turn-out compared to 2011. First quarter growth in 2012 remained overall robust, but showed considerable weakness in the industry sector. This was in contrast to what was observed in the second half of 2011, when industrial growth led by buoyant construction, and mining activities pushed the sector to the top, ahead of services. In the second half of 2011, Rwanda's growth momentum accelerated largely led by thriving non-tradable goods and services sectors while the manufacturing sector continued to be sluggish. The Rwandan economy expanded by 10.8 percent during the second half of 2011, but manufacturing only contributed 0.5 percentage points to this growth outcome. Agricultural output took a leap in the second half, mainly due to a very good second harvest season outcome. Overall, growth turn-out for 2011 stood at 8.6 percent, up from 7.2 percent in 2010. Inflationary pressures reappeared in tandem with high international food and fuel prices. The small policy response came with a delay, not enough to prevent core inflation reaching its highest level since mid-2009. Core inflation exceeded headline inflation for the whole second half of 2011. The current account deficit broadened in 2011. Rwanda's export performed robustly, benefiting from high international prices, but could not keep up with the increasing import bill, leading to a further deterioration in the trade balance. For 2012, Rwanda's economy is expected to continue to grow slower than it did in 2011, but at a healthy pace. The industrial sector is likely to expand less than in 2011 and growth in the services sector is expected to be more moderate, both on account of a more risky global environment.



1.1 GLOBAL ECONOMIC ENVIRONMENT

Rwanda continued to record the fastest growth rate in the EAC, increasing by 8.6 percent in 2011. Rwanda's economic growth outpaced the average growth rate for SSA of 5.6 percent and for EAC countries of 6.1 percent (Figure 2). Tanzania recorded a healthy growth above the EAC average, but was slightly lower than in the previous year, due to slower fiscal expansion and the adverse impact of an energy crisis on private activities.² The Kenyan economy faced a number of challenges in 2011, including a severe drought in the Horn of Africa, and high international commodity prices, resulting in a growth outturn lower than the EAC average.

Figure 2: Economic Growth in Rwanda was Robust in 2011



Source: World Bank, *Global Economic Prospects* (June 2012).

Despite the turbulent global economic environment in 2011, growth for SSA remained robust, notes the World Bank's *Global Economic Prospects* report of June 2012. Excluding South Africa, which accounts for over a third of the region's GDP, growth in the rest of Sub-Saharan Africa was stronger at 5.6 percent in 2011, making it one of the fastest growing developing regions. Looking ahead, high commodity prices, ongoing investments in new mineral discoveries, policy loosening in some countries, and lower inflation rates, should support robust domestic demand, with GDP growth projected at 5 percent in 2012—with a pick up expected in 2013—as the global economy rebounds.

Nonetheless, risks to these forecasts remain tilted to the downside, as the global economy remains fragile and weaker growth in China could curtail growth in the resource dependent SSA's economies.

Worldwide economic developments in 2011 have been volatile, with large swings in investor sentiment, but periods of relative calm and improving prospects. While output in the second half of 2011 was particularly weak, economic news during the first four months of 2012 was generally positive. Significant structural, fiscal and monetary policy steps in high-income Europe during the fourth quarter of 2011, and the first quarter of 2012, contributed to a significant improvement in market sentiment, and less constraining financial conditions. This combined with monetary policy easing in developing countries, was reflected in a strengthening of real-side economic activity, in both low-income and high-income countries. Annualized growth rates for industrial production, import demand and capital goods sales returned to positive territory with low-income countries leading the rebound.

Since May 2012, market tensions increased, sparked by fiscal slippage, banking downgrades, and political uncertainty in the Euro Area. The renewed market nervousness has caused the price of risk to spike upwards globally. Financial market indicators have deteriorated, with low-income and high-income country stock markets facing increased volatility. Yields on high-spread economies were also driven upwards, while those of safe-haven assets declined. Virtually all low-income economy currencies have depreciated against the US dollar, while industrial commodity prices such as oil and copper have fallen sharply. These renewed tensions will add to pre-existing headwinds to keep GDP gains in 2012 modest.

1.2 RWANDA'S REAL SECTOR TRENDS

Rwanda's growth in 2011 was led by booming non-tradable goods and services sectors. Similar to other economies with high foreign aid inflows or strong natural resource sectors, growth in

² After low 2010 rainfalls hydroelectric power generation was cut, leading to a 40 percent reduction in the national power supply. (IMF, Country Report No 12/13, January 2012).

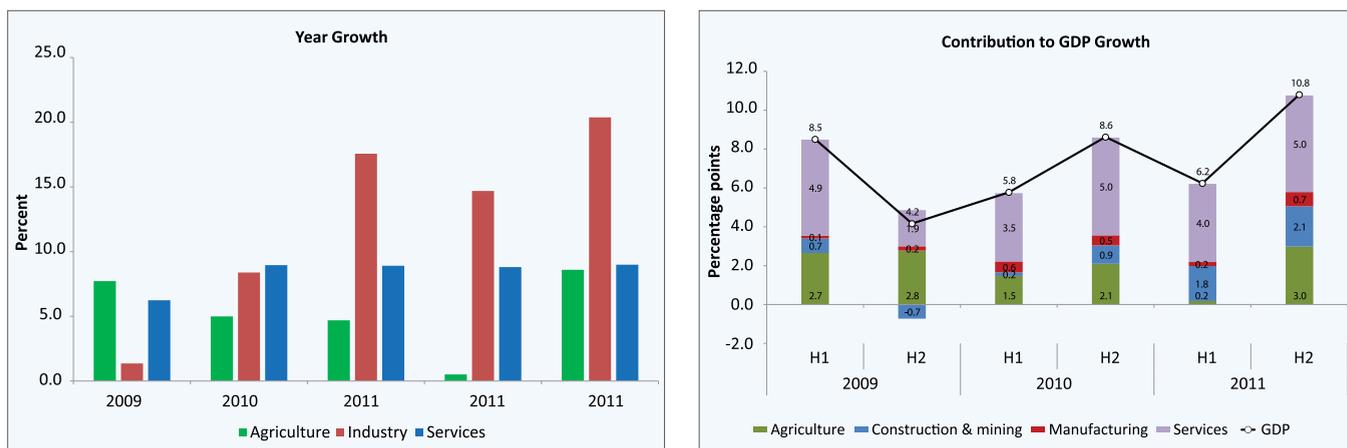
manufacturing has lagged the overall growth trend. While the economy expanded by 8.2 percent over the recent five years, manufacturing growth averaged a much lower 5 percent and its GDP share accounted for only 6.0 percent. In the second half of 2011, the Rwandan economy expanded by 10.8 percent, but manufacturing only contributed 0.5 percentage points to this growth outcome. Growth in services remained mainly fuelled by public expenditure-led services (public administrations, education, and health), as a result of continued high level donor aid being injected to the budget. On an annual basis, agriculture and services registered in 2011 similar growth as in 2010 (Figure 3).

Growth in the first quarter of 2012 remained at a healthy 7.7 percent compared to the first quarter a year ago. However, contrary to 2011, industrial growth was weak, at 1.1 percent. The two strongest growing industry sub-sectors of 2011—mining and construction—recorded a disappointing outturn of zero, and negative 0.7 percent, respectively. Growth in services stood at 14.2 percent as compared to the first quarter a year ago. The transport and communication sector grew at 19.2 percent in the first quarter as a result of an increase in mobile phone subscribers, and increased transport fares (due to high fuel prices). Other booming services sub-sectors benefited from strong private and public consumption: wholesale and retail trade grew at 14.6 percent, and public

expenditure-led services reported a strong growth of 14.2 percent (following an 18.8 percent increase in Government consumption expenditure). Agriculture sector growth suffered from a weak performance for export crops, which saw growth for this sub-category contracting by 24.1 percent.

In 2011, growth in the industrial sector surpassed growth in services due to exceptional performance of the mining and construction sub-sectors (Figure 4). Industrial growth doubled in 2011 to 17.6 percent, from 8.4 percent in 2010. After an impressive first half year growth of 14.7 percent, industrial growth accelerated in the second half of 2011 to 20.4 percent, fueled by mining and construction. Growth in the mining sub-sector was a direct result of high international prices for tin, Rwanda’s main mineral export. International prices for Rwanda’s mineral exports increased to 54.7 percent in the second half of 2011 and 49.5 percent for the entire year. Growth in the mining sector was more impressive in the first quarter of 2011 (112.5 percent) when mineral exporters were assigned a short window of time to sell off their mineral stocks in response to new international anti-smuggling regulations. On April 1, 2011, the Government’s bill prohibiting smuggling of minerals from conflict areas came into effect, in response to a similar bill passed by the US Congress, prohibiting mineral imports from conflict areas.

Figure 3: 2011 Growth Continued to be Strong due to Thriving Services, Construction and Mining



Source: National Institute of Statistics of Rwanda (NISR).

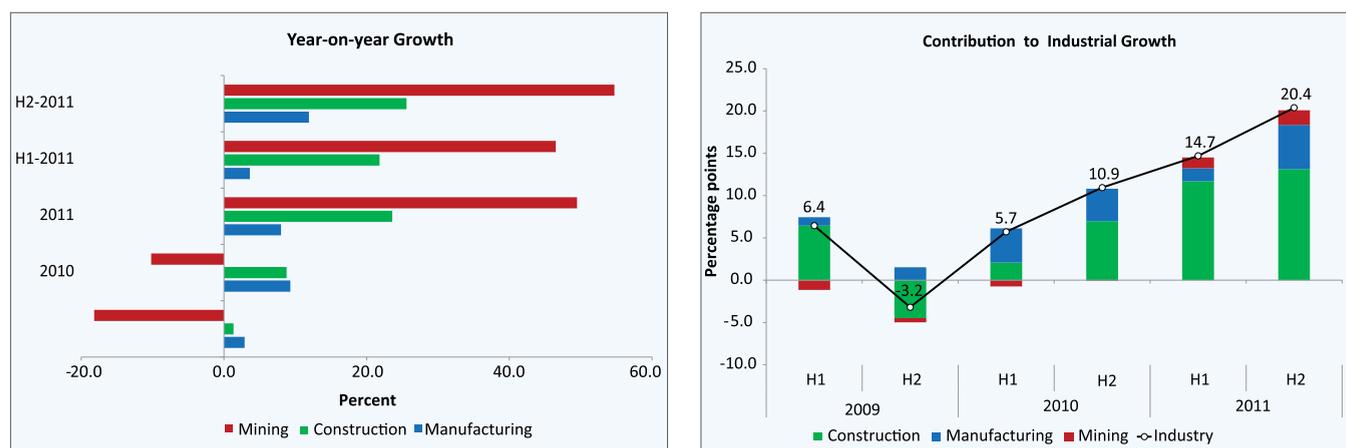
In 2011, Rwanda's construction sector growth was instrumental for achieving the high growth outturn.

Construction was the second most important driver of industrial growth (Figure 4). The construction sector grew in the second half of 2011 by 25.6 percent, and for the entire year by 23.6 percent. Construction's contribution to overall GDP growth was higher than from agriculture. Box 1 attempts to identify the drivers behind this strong sector growth and how it spurred the rest of the economy. The public sector continued to be the key force behind construction growth, reflected by high capital budget expenditures which are funded largely by aid flows. Overall, the contribution of the private sector remained minimal, compared to the volume of new private loans for construction in public capital spending. International contractors dominate the market for the large public construction projects as private domestic construction firms face size and capital constraints on their ability to compete for larger contracts. The outlook for construction of publicly financed projects remains relatively optimistic, despite the disappointing first quarter result in the sub-sector. Government capital expenditures are projected to increase in the 2012/13 budget. Construction permits for large projects continue to be issued at a similar rate, compared to a year ago. However, construction firms catering for the private market report sluggish demand, and expect to operate at a lower capacity compared to 2011.

In 2011, financial services led growth in services, expanding by 20.4 percent.

Some of this growth can be attributed to increased regional financial sector integration, partly reflected in the increased market presence of EAC banks in Rwanda (Box 2). In 2011, the growth of the financial sector was driven by both banking and insurance businesses. While both sectors' profits increased, the banking sector continues to dominate Rwanda's financial sector, and held more than 70 percent of financial assets, as of December 2011. The banking sector saw its balance sheet expanding by 24.5 percent in assets mainly due to new bank entrants into the market (one regional commercial bank, a military cooperative became a cooperative bank and two microfinance institutions upgraded to become microfinance banks),³ and the continued high growth of credit to the private sector. Profit after tax increased by 42.4 percent in 2011. Credit to private sector rose by 28.6 percent in 2011, compared to 11.1 percent in 2010, owing to a 29.2 percent increase in new loans. Loans for building and public works, registered the largest increase in the share in new loans (Table 1). Credit growth continued in 2012, and as of May 2012, credit to the private sector has expanded by 29.1 percent (y-o-y). However, new loans took off dramatically in the first quarter of 2012, increasing by 92.2 percent (y-o-y). Some productive sectors like manufacturing, mining and agriculture continued to have less access to capital for expansion.

Figure 4: Booming Mining and Construction Activities Carried Industrial Growth in 2011



Source: NISR.

³ Currently, Rwanda's banking sector is composed by nine commercial banks, one development bank which merged with the housing bank in 2011, three microfinance banks and one cooperative bank.

Box 1: Rwanda's Construction Sector

Construction was the main contributor to industrial growth in 2011 (Figure 4). Growth in the construction sub-sector accelerated to 23.6 percent in 2011, from 8.8 percent in 2010. Construction is the largest industrial sub-sector contributing 8.0 percent to total GDP or 50.7 percent of industrial output in 2011. Construction growth has large spill-over effects, and spurs other activities such as financial services growth, and imports of construction materials. In 2011, 25.4 percent of new loans to the private sector were in the construction sector (up from 17.2 percent in 2010). Trade activities of construction materials surged with imports of construction materials increasing by 24.2 percent in volume (and by 27.1 percent in value) in 2011.

The public sector continues to drive the high growth in construction. This is reflected by the increased share of capital expenditures which average more than 40 percent of total public expenditures since 2008. More than half are funded by aid flows, with these resources mostly used for schools, roads and hospital construction, and irrigation works. The contribution of the private sector remains small in comparison to construction activities undertaken by the public sector. The amount of new private loans for construction came to Rwf86.1 billion in 2011 compared with public capital expenditure estimated at Rwf447.9 billion in the same period.

The majority of the large public construction and consultancy contracts, particularly for roads and office premises, are being executed exclusively by a few international contractors. Only a small number of local contractors are able to compete or work through joint ventures with these international contractors. However, the role of the private sector is slowly increasing. Recently, private real estate developers started to develop housing estates on a commercial basis. Additionally, associations of private investors started to develop commercial and industrial areas, using private funds, encouraged by a program of the Private Sector Federation developed in 2008. The Kigali City Market, a modern shopping complex, is one of the products of these formal business investment groups.⁴

For private domestic construction businesses, a number of factors constrain their expansion. Most domestic firms are small with a limited capital base, which affects their ability to post collateral for purchasing raw materials and equipment. There is a shortage of trained personnel on the local market, which pushes businesses to hire workers from neighboring countries. Another constraint is the high cost of construction raw materials, which are largely imported, with local producers unable to satisfy the demand. A large number of small and medium enterprises associated with the construction industry disappear, shortly after they are established. Apart from larger construction projects, the segment that supports private housing construction, which could provide opportunities for smaller enterprises, remains unregulated, and owners often build without technical expertise or recourse to local contractors.

The outlook of the sector is mixed and depends on continued high levels of public capital expenditures. Larger construction firms with access to public contracts report an optimistic outlook. The size of Government capital expenditure is planned to increase in the 2012/2013 budget, and will likely continue to fuel construction growth in this market segment. The approval of construction permits continues to be high, and similar to the previous year. As of April 2012, the construction permit licensing for Kigali⁵ approved almost 40 percent of the number of construction permits cleared in 2011. However, smaller private operators expect to work at reduced capacity compared to 2011, based on the limited contracts in their books for 2012.

Improving corporate governance combined with deployment of better credit appraisal in some banks, contributed to the decrease in Non-performing Loans (NPLs) from the high levels observed in 2009. The NPLs/Gross loans ratio (NPL ratio) fell from 13.1

percent in 2009 to 8.0 percent in December 2011 (but still above the maximum target of 7 percent).

Financial services also continued to benefit from increased insurance activities, especially in the life

⁴ An association of traders was formed in 2000 with the objective of advocating for the interests of Kigali City traders. As Kigali City grew, the association mandate expanded to being part of the city's development and the Kigali Investment Company was formed.

⁵ The One Stop Center was introduced in April 2010 by the City of Kigali, in effort to provide quick and better services to its clients, especially in the construction industry. The center deals with: (i) buildings with a capacity of receiving at least 100 people per day, (ii) projects covering an area equivalent or more than 4,000m², (iii) constructions with a commercial, recreational usage and major residential developments and (iv) buildings with more than 2 floors.

Table 1: Share and Growth in New Loans

Sectors	Share of New Loans (in percent)			Annual Growth (in percent)		
	2010	2011	Q1-2012	2010	2011	Q1-2012
Agriculture	2.1	3.5	1.8	44.4	120.6	-45.0
Mining industry	0.0	0.0	0.0	-16.7	0.0	0.0
Manufacturing industry	10.2	5.5	7.5	33.4	-30.2	246.5
Energy and water	0.5	0.2	0.1	-56.2	-60.6	400.0
Public works, building industry	17.2	25.4	27.1	23.0	90.8	122.5
Commerce, restaurant & hotels	42.6	36.4	38.9	53.1	10.4	118.5
Transport, warehousing & communications	8.6	5.4	6.0	-28.9	-19.7	170.3
O.F.I, insurances & other non-financial services	3.2	5.7	0.5	13.7	125.9	-91.4
Services provided to the community	3.7	2.8	2.0	109.2	-2.3	40.2
Not classified elsewhere	11.8	15.2	16.2	75.2	66.7	129.5
Grand total	100.0	100.0	100.0	32.2	29.2	92.2

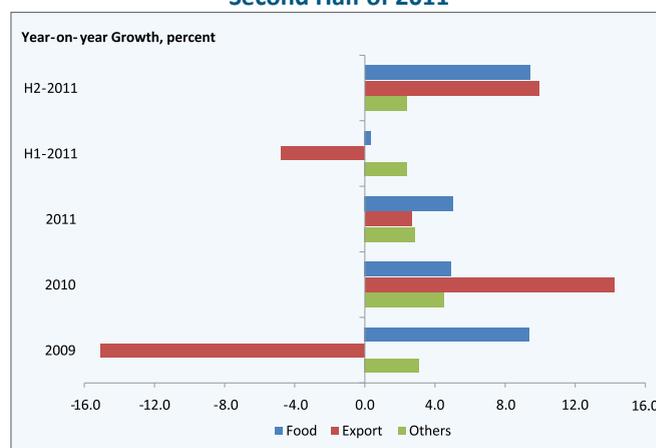
Source: Banque Nationale du Rwanda (BNR).

insurance segment. Increasing performance in the non-life insurance segment can be partly attributed to the implementation of the BNR regulation, on the separation of life and non-life insurance businesses⁶, which eliminated the ability of companies to cross-subsidize claims in non-life business, from life insurance premiums. Today, insurance businesses are separated in most companies, and are both making profit. Overall, the insurance sector's profit increased by 64.3 percent in 2011, compared to 2010.

Agriculture remains a mainstay of Rwanda's growth.

Starting from a low base in the first half of 2011, agriculture strongly rebounded in the second half of 2011 on account of a very good outcome for the harvest season B (Figure 7). The sector expanded by 8.6 percent in the second half of 2011, mainly led by food crops, which increased 9.6 percent in value. Export crops also picked up, rebounding from a 4.8 percent contraction in the first half, to increase by 9.9 percent in the second half as a result of the strong coffee harvest and robust international prices. Overall, agriculture grew by 4.7 percent in 2011, slightly lower than a 5.0 percent of 2010. For 2012 season A the volume of food crops rose only by 1.3 percent compared to the same season in 2011.⁷ In the first quarter of 2012, agriculture grew at 3.4 percent

compared to a year ago. Growth for export crops contracted significantly. Rwanda has also experienced delayed but heavy rains for season B, which are also likely to impact crop output adversely at the end of season B.

Figure 5: Agriculture Strongly Recovered in the Second Half of 2011

Source: NISR.

Note: Others stands for Livestock, Forestry and Fisheries.

Food security conditions continued to remain stable in 2011, but food prices were high.

In 2011, Rwanda's food balance sheet continued to improve, owing to good production (Table 3). Food crops increased by 10.6 percent in 2011—in volume—as a result of high

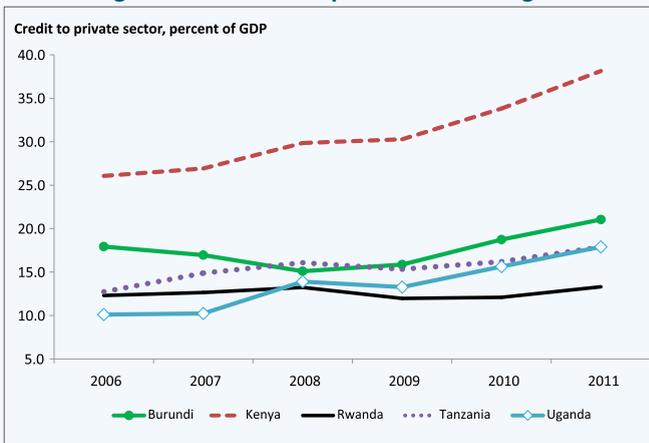
⁶ Regulations on licensing requirements and other requirements for carrying out insurance business, BNR May 2009.

⁷ Food Crop Assessment Report Season A 2012, Ministry of Agriculture.

Box 2: Rwanda’s Financial Sector as Part of the Regional Financial Market

The banking sector in the EAC region has developed, but the region remains financially excluded, with Rwanda being among the most financially excluded. The financial depth improved within the region, but to different degrees in the various countries (Figure 6). The average credit to GDP ratio for the five EAC countries rose from 17.6 percent in 2008, to 21.7 percent in 2011. Kenya remains the country with the highest ratio, on average 33.0 percent between 2008 and 2011, while Rwanda has the lowest ratio at around 12.7 percent over the same period. Large parts of the population in the region remain financially excluded, with less than a third of the population in Rwanda, Tanzanian and Uganda having access to formal financial system, and more than half of the population in Rwanda and Tanzania having no access to financial services at all. Even in countries with a high level of financial inclusion in the region, such as Kenya and Uganda, informal financial services dominate (Figure 7).

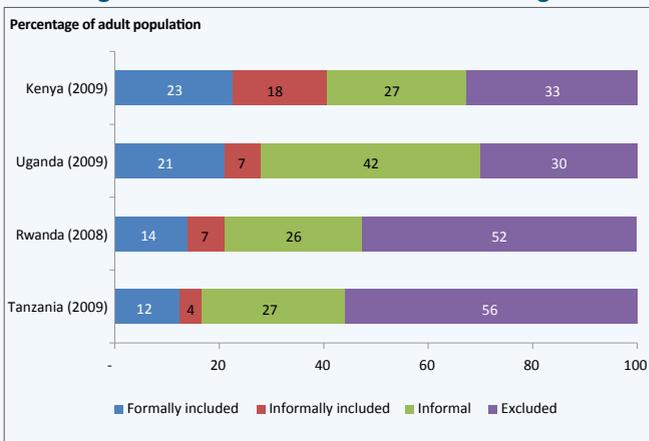
Figure 6: Financial Depth in the EAC Region



Source: World Development Indicators (WDI).

The financial services integration in Rwanda is led by Kenya-based financial institutions. As of today, three Kenyan banks have branches in Rwanda (Table 2). FINA Bank began its regional expansion into Rwanda in 2004 after acquiring BACAR. By the end of 2011, FINA Bank had ten branches. Kenya Commercial Bank (KCB) was the second Kenyan bank to expand into Rwanda in December 2008. By the end of 2011, KCB had nine branches. In 2011, another Kenyan bank entered the Rwandan market: Equity Bank and started operating in early 2012. Beside these Kenyan-based banks, Ecobank, a regional West African banking group, joined the EAC through Rwanda in July 2007, after the acquisition of a 90 percent stake of Bank of Commerce Development and Industry. By the end of 2011, EcoBank had sixteen branches in Rwanda, and operated in all EAC states. Kenyan non-banking financial institutions have also expanded into Rwanda. A Kenyan based insurance company, Phoenix of East Africa, and several Kenyan stock broking firms have opened offices in Rwanda. The integration of the EAC stock exchanges is planned, but at present only cross-listing of shares is already occurring: two Kenyan companies, KCB and National Media Group are listed on the Rwanda Stock Exchange and on other EAC stock exchanges.

Figure 7: Financial Inclusion in the EAC Region



Source: Various Countries FinAccess surveys.

Table 2: Regionalized Banking Operations in the EAC

	Rwanda	Burundi	Kenya	Tanzania	Uganda
2011					
Barclays (UK)					
Bank of Africa (Mali)					
Citigroup (USA)					
Diamond Trust (Kenya)					
Ecobank (Togo)					
Equity (Kenya)					
Fina Bank (Kenya)					
Kenya Commercial Bank (Kenya)					
Standard/Stanbic (South Africa)					

Source: Various Bank websites.

The effect of new regional entries into Rwanda’s financial system has so far been positive. The new entrance energized the banking sector in rethinking their strategies to retain market share, especially through: (i). improved communication; (ii). introducing new products; and, (iii). expanding their networks. Banks are transforming existing business models through innovation in agency and mobile banking, in order to provide services to the currently underserved population, and to reduce the cost of mobilizing retail deposits. The retail market is still largely served by Banque Populaire de Rwanda, but it is beginning to be contested as competition has led banks to expand their branch networks.

Table 3: Rwanda's Food Balance Sheet is Positive

	2010A	2010B	2011A	2011B	2012A
I. AVAILABILITY = 1+2+3+4	1,379	1,404	1,418	1,547	1,390
1. Stock	-	7	10	-	-
2. Crop production	1,529	1,467	1,564	1,707	1,687
2. Expected Crop production C	n.a.	81	n.a.	n.a.	n.a.
3. Animal production	79	81	79	95	40
4. Losses	-229	-232	-235	-256	-337
II. NEEDS = 5	1,228	1,246	1,290	1,308	1,264
5. Consumption	1,228	1,246	1,290	1,308	1,264
III. Balance/Deficit = I-II	151	158	128	239	126

Source: Ministry of Agriculture.

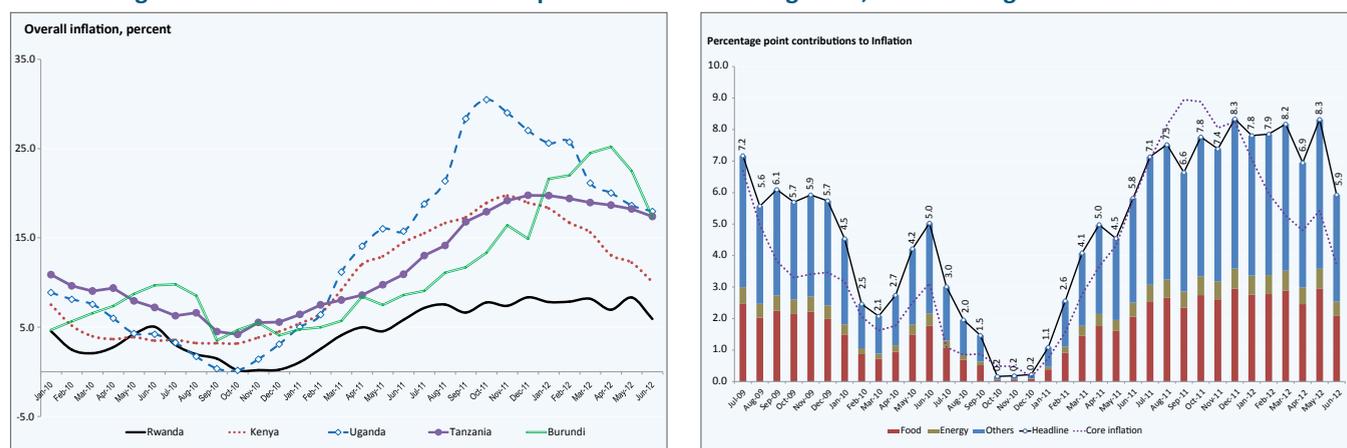
public expenditure through Government's flagship agriculture support programs, and beneficial rains especially during the second agricultural season. However, food crop prices remained high throughout 2011, especially for cereals (being 20.5 percent higher in December 2011, than December 2010). This had likely eroded households' purchasing power, particularly impacting vulnerable and low-income households, given their high reliance on food markets.

1.3 MONETARY POLICY AND INFLATION TRENDS

Inflation tended up during 2011, amid the sharp increase in global food and oil prices. In the first quarter of 2012, it remained high at an average of 7.9

percent. However, compared to other EAC countries, it is modest (Figure 8a). Overall, headline inflation climbed from 5.8 percent in June 2011 to 8.3 percent in December 2011, from historic lows in the last quarter of 2010. Average inflation also increased to 5.7 percent in 2011 compared to 2.3 percent in 2010. Inflationary pressure built up nearly uninterrupted in 2011 due to: (i) steady increases in local food prices which pushed up all food prices (ii) hikes in international fuel prices which led to increased domestic fuel prices (the latter also reflecting the pass through effect of transport-related costs, (iii) rising core inflation as Central Bank delayed the increase in its policy rate and continued to finance the fiscal deficit through monetization (Box 3).⁸ However compared to its neighbors, inflation remained low and in single digits.

Figure 8: Inflation Was Moderate Compared to Rwanda's Neighbors, But at its Highest Level Since 2009



Source: EAC Statistics Offices and BNR.

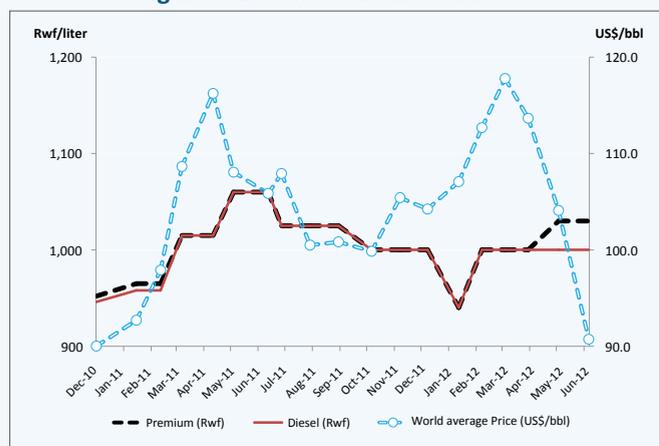
⁸ Over the first nine months of 2011, the Government had to maintain high overdraft levels at Central Bank and also sell a large amount of domestic security instruments in order to cover priority expenditures.

Box 3: Inflation Trends as a Result of Global Fuel and Food Price Trends

Domestic fuel prices have been frequently reviewed in 2011 (Figure 9). In the first half of 2011, prices were raised three times by a cumulative 11.3 percent, and 12.1 percent respectively for petrol and gasoline, in response to world market developments. In the second half, domestic fuel prices were revised downward, twice by a cumulative 5.7 percent, subsequent to the first cut of fuel excise taxes in July 2011. After the second cut, in January 2012, fuel prices were reduced by 6 percent, but this lasted only for one month. As of May 2012, fuel prices were revised upwards, twice, due to increases in international prices at the beginning of 2012.

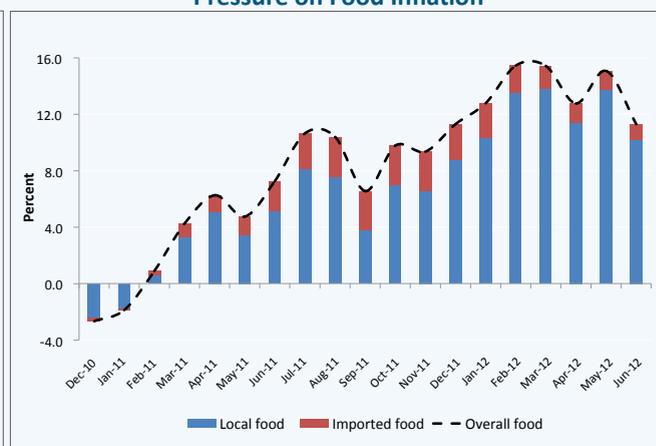
Food prices remained high in the second half of 2011, driven by local food inflation (Figure 10). This is partly due to the high weight of local food prices in the consumption basket. As at the end of 2011, food inflation stood at 11.2 percent, from negative 2.7 percent a year ago. Prices of locally produced foods were 10.4 percent higher than a year ago and prices of imported foods were up 15.9 percent. Overall, prices of cereals (mostly rice) were the major driver of food inflation in 2011. During the first three months of 2012, food prices continued to rise, and as of March, they stood at 15.4 percent, but eased off in April at 12.8 percent.

Figure 9: Domestic Retail Fuel Prices



Source: Ministry of Commerce and World Bank Development Economics Note: In 2011, the annual average exchange rate was Rwf600.29/US\$.

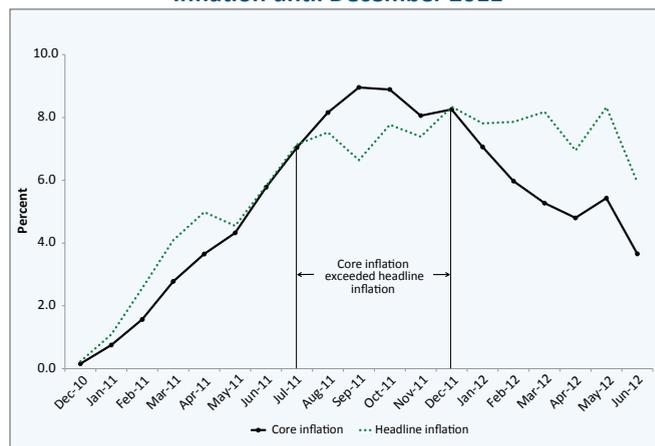
Figure 10: Prices for Locally Produced Foods Put Pressure on Food Inflation



Source: BNR.

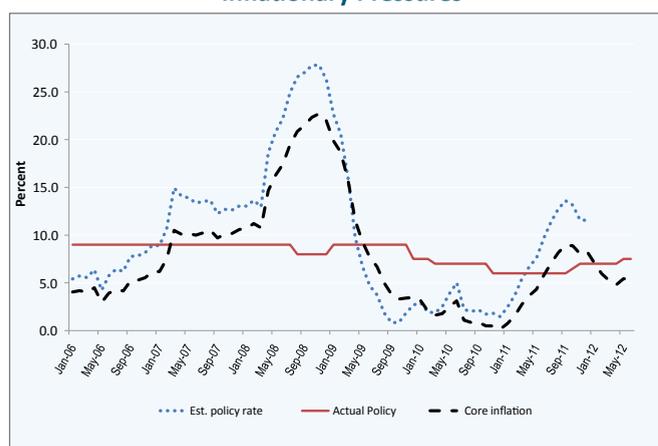
Core inflation continued to rise in the second half of 2011 (Figure 11). Core inflation, which excludes fresh products and energy prices, rose from 5.8 percent in June 2011 and peaked at 9.0 percent in September 2011 (Box 3). It exceeded headline inflation for the whole second half of 2011 (Annex 1). By end-June 2011, the margin between the policy rate, the Key Repo Rate (KRR) and core inflation was less than 0.5 percentage points and negative since July 2011 (Figure 13). By applying the Taylor Rule (Annex 2), a retrospective review shows that the Central Bank—Banque Nationale du Rwanda (BNR)—might not have exhausted its potential policy space to rein in inflation (Figure 12).

Figure 11: Core inflation Remained Above Headline Inflation until December 2011



Source: BNR.

Figure 12: Historic Monetary Response to Inflationary Pressures



Source: BNR and World Bank Staff calculations.

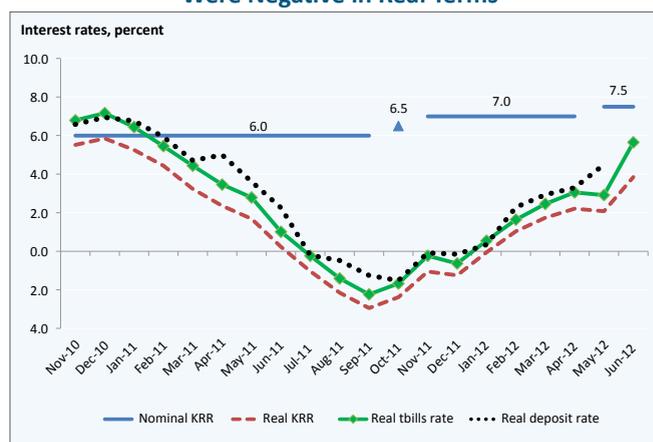
According to the Taylor rule, monetary policy in the second half of 2011 should have been more responsive, and tightened more, in order to curb rising inflation.⁹

By May 2011, the KRR became negative in real terms, but BNR only lifted it by a cumulative 100 basis points, between October and December 2011 (Figure 13). But this delayed move was also not sufficient, as the core inflation remained high, and the KRR negative. Core inflation remained high due to second-round effects of food and fuel prices hikes, and ended the year at 8.3 percent, equaling headline inflation. Going into 2012, the only policy that had a noticeable effect on core inflation was the second fuel tax cut. In January 2012, the Government reduced fuel excise taxes by Rwf50 per liter for both petrol and gasoline, (following the first reduction in July 2011), as the second phase of a total of Rwf100 excise tax reduction called for in the 2011/12 budget. Core inflation eased off to 5.3 percent in March 2012, and reached 3.7 percent in June 2012.

In the second half of 2011, monetary indicators developed signs similar to the pre-2009 liquidity crunch.

The 2009 liquidity crisis occurred after a prolonged period of loose credit conditions, combined with double digit core inflation. This was exacerbated by the withdrawal of bank deposits by large depositors in mid-2008, leading to a mismatch between credit and deposit growth (Annex 3). During

Figure 13: Deposit Rates and Short-term Interest Rates Were Negative in Real Terms



Source: BNR.

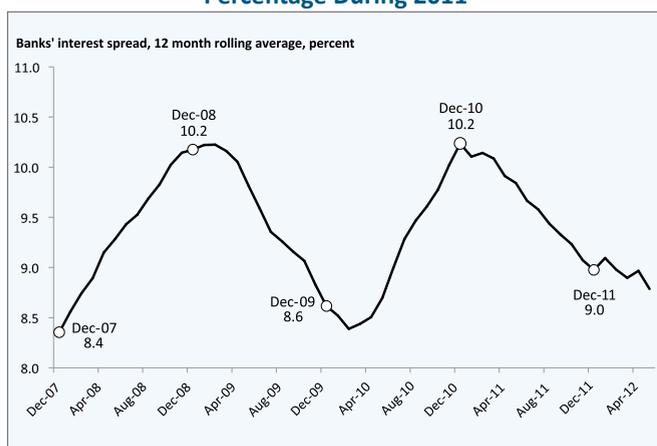
this period (February 2007 to May 2009) the policy rate was consistently lower than suggested by the Taylor rule. This might also explain the reason for a long period (26 months) of core inflation in double digits. Similarly, throughout the second part of 2011, when core inflation was on the rise, policy and deposit rates became negative in real terms. Private credit expanded sharply, and credit growth peaked at 31.0 percent in October 2011. BNR also intensified money market operations (such as repos and treasury bills sales), to withdraw the excess liquidity from the banking system, but credit to the private sector continued to rise. To avoid a similar situation as experienced in 2008-2009, BNR should be vigilant and consider a proactive monetary policy stance.

In 2011, interest rate spreads remained high, indicating robust profitability for commercial banks.

The level of banks' interest rate spreads was persistently high in 2011, and only retracted slightly during the course of the year (Figure 14). The average spread by the end of 2011 was 9.0 percent, compared to 10.2 percent a year ago. Behind this small decrease lay increased competition among commercial banks for loans. In addition, it reflected the behavior of institutional depositors, who were pushing commercial banks for higher returns on their deposits citing rising inflation and the increased KRR.

⁹ This was the case between May-December 2011 when the policy rate was consistently lower than the rate that would have been suggested by the Taylor rule as appropriate to curb inflationary pressures.

Figure 14: Interest Rate Spreads Only Varied by a Small Percentage During 2011

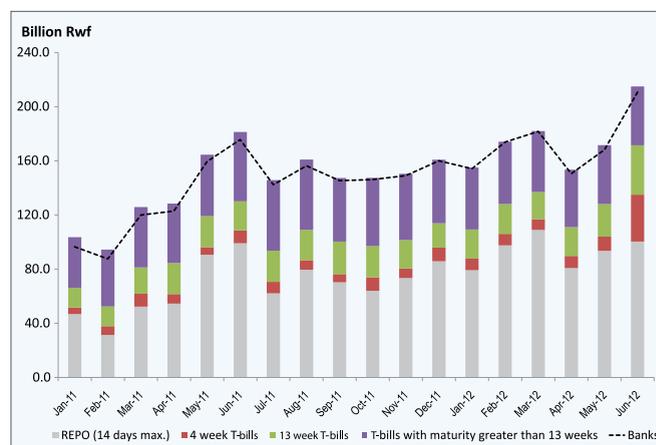


Source: BNR.

The persistent dominance of commercial banks in money market securities also supports the notion of more room for monetary policy (Figure 15). The share of money market securities held by commercial banks increased to 98.8 percent as of December 2011 (from 88.3 percent a year ago). At the same time, the share of securities with maturity greater than three months increased too. In the second half, treasury bills with greater than three months maturity averaged 32.7 percent, of total outstanding money market operations, compared to 25.1 percent in 2010. Overall, the stock of money market securities stood at Rwf160.9 billion in December 2011, 18.9 percent higher than a year ago. This hints to ample domestic liquidity in the financial sector which allowed banks to invest in longer term securities in addition to the large increase in new private credits. New loans increased by 29.2 percent to Rwf339.0 billion in 2011. In the first half of 2012, the financial sector continued to experience plentiful domestic liquidity. As of June 2012, the stock of money market securities was 33.6

percent higher than the level of December 2011, and 18.6 percent higher than a year ago. New loans disbursed in the first quarter of 2012, almost doubled to Rwf117.1 billion compared to Rwf60.9 billion during the same period a year ago.

Figure 15: Money Market Operations



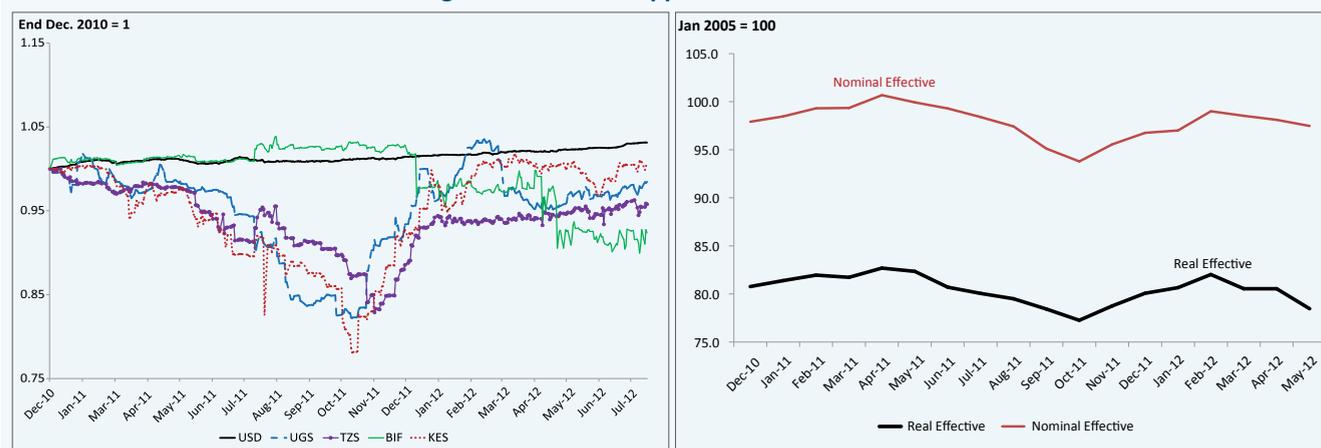
Source: BNR.

Looking forward, it would be critical for BNR to be proactive in mitigating inflationary risks which could arise from high increases in international commodity prices, such as food and fuel prices. As of now, there is limited room for a fiscal policy response—as part of the 2012/2013 budget—since the Government has already given up almost 0.7 percent of GDP in revenue collection, due to fuel tax reduction measures taken to lower inflationary pressures in 2011/2012. In early May 2012, BNR raised the policy rate by 50 basis points, in view of continued high food and oil prices, declining prices for Rwanda’s main export products, and weak performances of domestic food production in Season A, following adverse weather conditions.

Box 4: Exchange Rate Trends

A fairly stable nominal exchange rate against the US dollar and rising inflation, led to a real appreciation of the Rwanda Franc in the second half of 2011 (Figure 16). The Rwandan franc (Rwf) remained reasonably stable against the US dollar in the second half of 2011, depreciating by only 0.3 percent. The Rwf continued to appreciate against other EAC currencies, except for the Burundian Franc, early in the second half of 2011, but the trend had reversed over the last two months of 2011. The Rwf started depreciating against all EAC currencies as inflationary pressures were easing off in these countries. However, the Rwf appreciated against other currencies of trading partners used in the computation of the real effective exchange rate. By December 2011, the weighted nominal bilateral exchange rate of ten major trading partners had slightly appreciated by 2.2 percent. Overall this resulted in an appreciated Rwf in real terms in the second half of 2011. In 2012, the Rwf continued to be stable against the US dollar and it depreciated slightly by 1.5 percent as of mid-July, 2012. Compared to other EAC currencies, the Rwf depreciated, except for the Burundian Franc.

Figure 16: The Rwf Appreciated in Real Terms



Source: BNR and World Bank staff calculations.

1.4 FISCAL TRENDS

The fiscal deficit of the fiscal year 2011/12 which concluded on June 30, 2012 was revised downward by 0.4 percentage points of GDP during the mid-term budget review. The revised budget was approved by Parliament in December 2011. The overall expenditure envelope was revised downward. Total expenditures were projected to decline to 26.9 percent of GDP, due to a delay in the execution of capital expenditures. On the revenue side, the loss resulting from the fuel tax reduction is projected to be more than offset by one-off non-tax receipts from the sale of Government assets.

The fiscal deficit is expected to widen in 2012/13 on account of increased capital expenditure (Table 4). Total expenditures including net lending are projected to increase by 1.2 percentage points of GDP to 28.1 percent of GDP. A major increase in projects funded by foreign capital is planned, pushing capital

expenditure to 48.4 percent of the 2012/13 budget from 46.0 percent in 2011/12. The domestically financed component of the capital budget is expected to decline. Recurrent expenditures are projected to remain at almost the same level as in 2011/12, but with some changes within the envelope. Following approval of the Government's Pay and Retention Policy in January 2012, wages and salaries are planned to increase by 0.7 percent of GDP, while the cost of goods and services is projected to decline by 1.0 percent of GDP.

The Government is planning on financing the fiscal deficit by increasing domestic borrowing following a permanent loss in non-tax revenues. Domestic revenue collection is projected to increase with improved collection of taxes on goods and services. Non-tax Revenues are projected to decrease with the permanent loss of dividends from Government assets sold in the previous fiscal year. Exceptionally high levels of non-tax revenues during 2011/2012

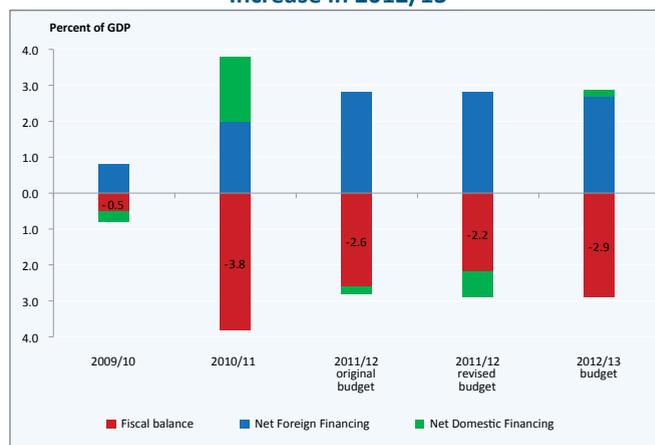
Table 4: Government Budget 2009/10 – 2012/13 (Percent of GDP)

	2009/10	2010/11	2011/12 budget		2012/13
			Original	Revised	Budget
Revenue & Grants	25.1	25.0	25.0	25.1	25.4
Domestic Revenue	12.6	14.0	13.6	13.8	14.0
Tax revenue	12.1	13.4	12.9	12.7	13.5
Direct taxes	4.8	5.2	5.4	5.0	5.4
Taxes on goods and services	6.3	7.1	6.4	6.6	7.1
Taxes on international trade	1.0	1.1	1.2	1.0	0.9
Nontax revenue	0.5	0.6	0.7	1.1	0.5
Grants	13.2	11.0	11.4	11.3	11.4
Budgetary grants	9.1	6.2	6.7	6.8	6.2
Capital/Projects grants	4.1	4.7	4.7	4.5	5.1
Total expenditure	25.9	27.9	27.1	26.9	28.1
Current expenditure	14.8	14.9	14.6	14.5	14.3
Wages and salaries	3.4	3.5	3.3	3.2	3.8
Purchase of goods and services	3.4	3.5	3.6	3.6	2.7
Interest payments	0.5	0.4	0.4	0.4	0.4
Transfers	5.8	5.6	5.6	5.5	5.6
Exceptional expenditures	1.7	1.9	1.7	1.9	1.8
Capital expenditure	10.2	12.4	12.6	12.4	13.6
Domestic	5.1	6.2	6.1	6.1	5.8
Foreign	5.1	6.2	6.5	6.3	7.8
Net Lending	0.9	0.5	0.0	0.0	0.2
Change in arrears	-0.4	-0.3	-0.2	-0.3	-0.2
Overall deficit	-0.5	-3.2	-2.6	-2.2	-2.9

Note: Fiscal data presented in this table differs from the Government budget posting on the MINECOFIN website (<http://minecofin.gov.rw/library/budgetfinalversion/>) in the following ways: starting 2012/13 the budget law proposes to reclassify receipts from the UN Peace Keeping Operations as non-tax revenues, compared to donor grants previously. This reclassification would lead to a projected increase in domestic revenues to 15.2 percent in 2012/13. Grants would be projected to decrease to 10.4 percent of GDP in 2012/13.

Source: Rwandan Authorities and IMF staff estimates.

were the result of one-off non-tax receipts from the sale of Government assets (including a new telecom license which brought in the equivalent of 0.7 percent of GDP). Grants are projected to remain at the same levels as in 2011/12. However, there are some shifts planned in the composition: an increase equivalent to 0.6 percent of GDP is expected in capital/project grants, while budgetary grants are projected to decline by roughly the same amount in 2012/2013. The planned increase in total revenues will not be enough to cover the expansion of public expenditure, thus widening the fiscal deficit from 2.2 percent of GDP to 2.9 percent in 2012/2013 (Figure 17).

Figure 17: The Fiscal Deficit (incl. Grants) is Expected to Increase in 2012/13

Source: Ministry of Finance and Economic Planning (MINECOFIN).

In order to sustain the level of capital spending needed for supporting economic growth, the Government will need to raise higher domestic revenues and carefully plan recurrent expenditure, including the roll-out of the Pay and Retention Policy. As a result of the introduction of EAC Common External Tariff in 2009, an increasing share of Rwanda's imports, especially of consumer goods, is coming from EAC countries. This led to a decline in international trade taxes to about 0.9 of GDP. Which means that other tax sources have to be developed to make up for this permanent loss in trade taxes. For 2012/2013, the Government is planning the implementation of a number of new tax policy measures: (i). introduce a gaming tax; (ii). increase tax rates for imported construction materials by five percent on average import duties, VAT and excise duties; and, (iii). streamline exemptions under the investment code. As a result of the increase in public sector wages and salaries, income tax revenues are also expected to increase. Revenue administration measures (i.e. introducing electronic sales registers to limit VAT evasion) are also expected to increase tax revenues. These are expected to bolster domestic revenue by some 0.2 percent points of GDP, to around 14 percent of GDP. In 2012/2013, there will also be a new tax regime for small and medium enterprises, which is expected to be revenue neutral.¹⁰ Other medium-term tax policy plans include the broadening of the tax base and introducing a flat personal and corporate income tax.

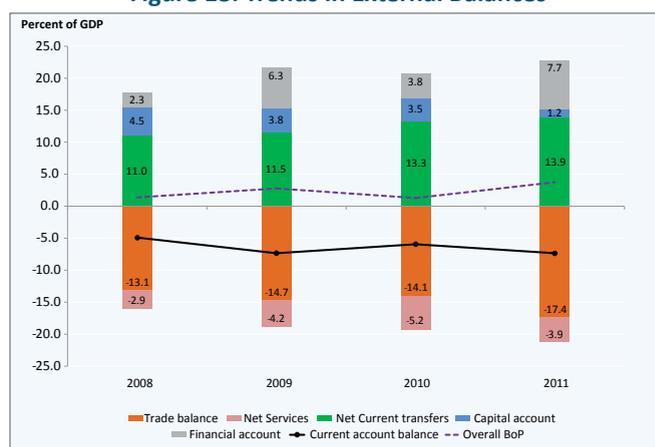
The 2012/2013 budget and the medium-term macroeconomic framework are adequate to support the Government's development program. Overall, the 2012/2013 budget follows a prudent fiscal strategy, carefully balancing the need for capital investment with increased efforts in revenue mobilization. The current 2012/13 budget was approved by Parliament on June 27, 2012 and was promptly published on the web-page of the Ministry of Finance.¹¹

1.5 EXTERNAL SECTOR PERFORMANCE WITH A REGIONAL PERSPECTIVE

1.5.1 OVERALL TRENDS

The current account deficit broadened in 2011, despite higher transfers and strong growth in exports (Figure 18). Strong growth in exports was not enough to cover an increase in the import bill, leading to a deteriorating trade balance of 17.4 percent in 2011 from 14.1 percent in 2010. Due to rising tourism receipts and a large one-off license fee payment for a new mobile operator, net services and income decreased to negative 3.9 percent in 2011. The current account deficit was largely financed by net transfers in the amount of US\$880.6 million. However, these higher transfers were not sufficient and the current account deficit, after transfers, widened to 7.3 percent in 2011, from 5.9 percent of GDP in 2010.

Figure 18: Trends in External Balances



Source: BNR.

Rwanda's Balance of Payments surplus slightly increased in 2011 (Figure 18). The surplus is estimated to have reached 3.8 percent of GDP (from 1.3 percent in 2010) on account of higher net current transfers, due to increased budgetary grants from donors and long term borrowing. Budgetary grants represent 84.1 percent of net transfers, or 9.9 percent of GDP.

¹⁰ The new policy groups all SMEs into two categories and applies new rates as follows: (i) a flat tax rate of 3 percent for SMEs with a turnover of Rwf12 to 50million and (ii) annual flat amount for SMEs with a turnover of lesser than Rwf12 million (classified into four bands).

¹¹ The Executive Budget Proposal is presented to Parliament (after Cabinet approval) as part of the Budget Framework Paper, drafts of which are discussed before with Development Partners that provide budget support. The legislative approval and enactment period for both documents is in June. Gazetting as well as web-posting happens on the Ministry of Finance's external website before the start of the new fiscal year, on July 1.

Overall, net current transfers are estimated to have reached 13.9 percent of GDP in 2011, about 1.5 percent higher than the average of the past five years. Net remittances recovered from the low levels of 2009 and expanded by 69.2 percent to US\$110.2 million in 2011, from US\$65.1 million in 2010. Nevertheless, the overall contribution of net remittances remains low, about 1.7 percent of GDP in 2011.

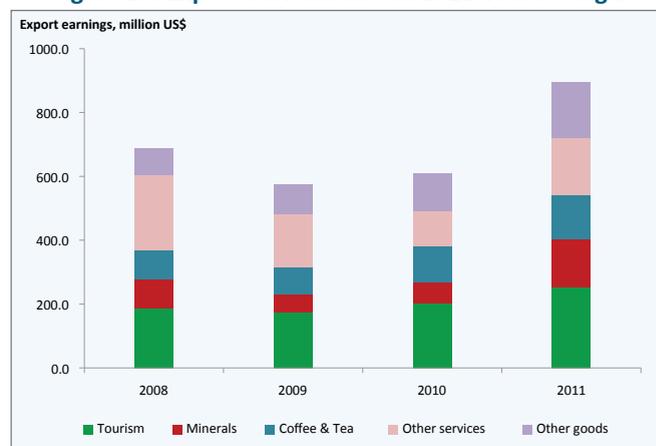
Export earnings in the first quarter of 2012 increased by almost 30 percent compared to the same period in 2011, but traditional export products (minerals, coffee and tea) performed less well.

Their export value decreased by 1.2 percent compared to the same period a year ago. Although global coffee prices declined in the first quarter of 2012, Rwandan coffee featured higher prices compared to the same period in 2011. This pushed coffee export values up by more than 50 percent while, at the same time, exported volume increased only by 3.7 percent. Tin mineral export values dropped off by 25.1 percent due to lower global tin prices compared to the same period in 2011. Mineral export earnings declined by 3.5 percent in the first quarter of 2012 as compared to Q1 2011. Tea export values decreased by 6.7 percent compared to the same period in 2011 as a result of lower prices at the Mombasa Auctions and lower exported volume in the first quarter of 2012. Overall export earnings increased on account of re-exported petroleum products to the DRC. Earnings from re-exported products accounted for 17.1 percent of the value of good exports in the first quarter of 2012; its share was 1.7 percent in the same period a year ago.

Driven by energy products Rwanda’s import bill expanded by nearly 50 percent in 2011 (Figure 20). Consumer goods remained the largest import expenditure with 27.1 percent in 2011, albeit declining from 2010. Intermediary goods and capital goods continued to be the next largest import categories by value, with 25.9 and 22.9 percent of total goods imports respectively. But the fastest growing import category was energy products, which increased by 66.2 percent and accounted for 17 percent of

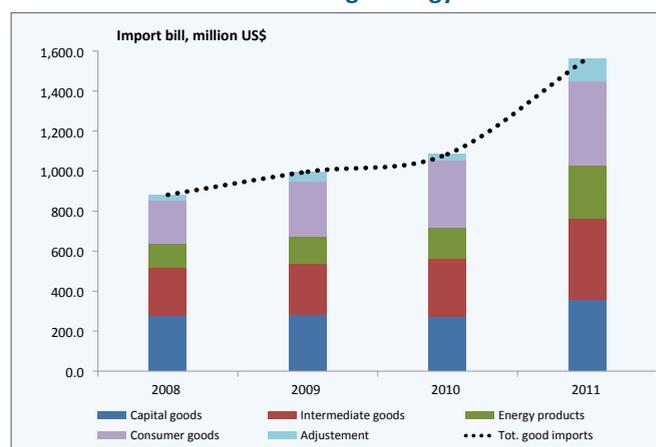
total import bill in 2011. The costs of freight and transportation services further increased, and as a result, Rwanda remained a net service importer. The overall import bill was equivalent to 34.5 percent of GDP. The import bill continued to expand in the first quarter of 2012, with an increase of 30.5 percent, compared to the same period a year ago. Contrary to 2011, in the first quarter of 2012 capital goods were the largest import type (32.2 percent), followed by intermediary goods (28.1 percent) while the share of consumer goods declined from 32.0 percent to nearly 23 percent. Energy goods remained at around 17 percent of total imports.

Figure 19: Export Performance in 2011 Was Strong...



Source: BNR.

Figure 20: ... But Imports Continued to Outpace Export Growth Due to High Energy Prices



Source: BNR.

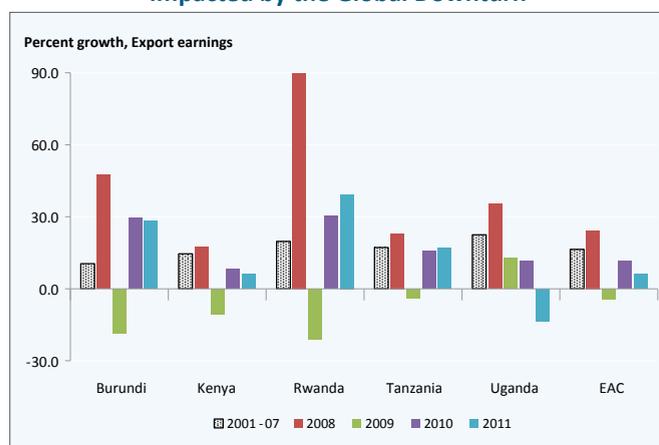
1.5.2 REGIONAL EXPORTS PERFORMANCE SINCE THE 2009 CRISIS

Export earnings in the EAC region have been on the rise over the last decade, but were deeply impacted by the 2009 global crisis. After registering record increases in export earnings in 2008, all EAC states, apart from Uganda, saw their export growth slip into negative territory during 2009 (Figure 21). On average, the total export earnings declined by 6.9 percent, with Rwanda taking the second place (after Burundi) with a 20.4 percent decline. Since 2010, exports have rebounded and increased by 12.8 percent as a result of high international prices for key export products, such as minerals and certain

export crops, and the recovery in tourism, which was adversely impacted by the global downturn. In 2010 and 2011, Rwanda registered an average increase of 26.6 percent in exports earnings, compared to 15.7 percent for the whole EAC region.

The value of Rwanda's exports increased substantially following the 2009 crisis, but remained small as a share of GDP, especially when compared to other EAC countries. Rwanda's exports rose by 29.5 percent from 2008 to 2011, sustained by high demand and high commodity prices for its key export products (Figure 22). However, the percentage of GDP exports remain one of the lowest levels in the EAC region (Figure 23).

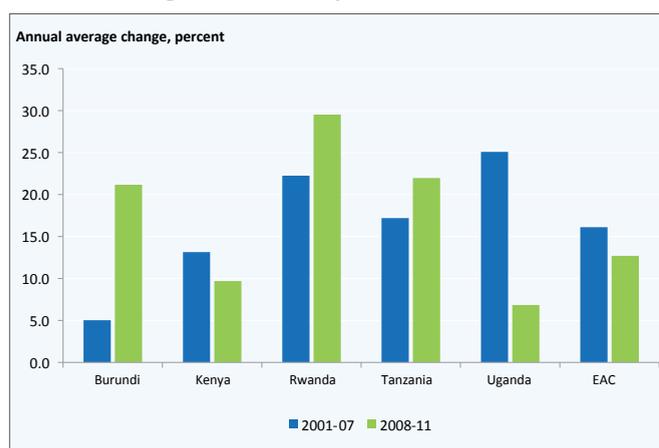
Figure 21: EAC Exports Rebounded After Being Deeply Impacted by the Global Downturn



Source: United Nations Conference on Trade and Development (UNCTAD).

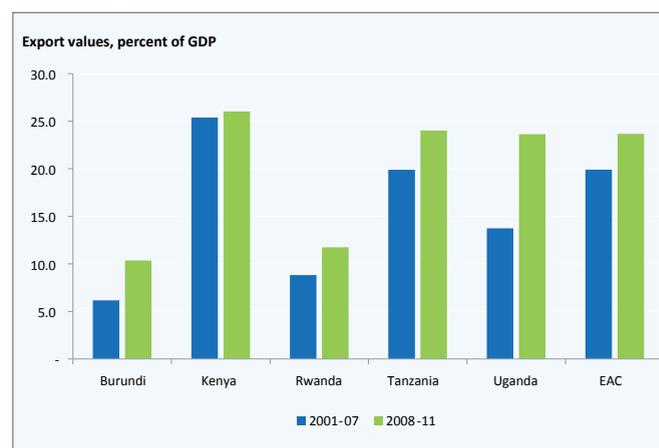
The tourism sector is an important source of foreign exchange earnings in the EAC region, and of growing importance for Rwanda (Figure 24). In 2011, the EAC tourism sector generated almost US\$3.5 billion, contributing to more than 15 percent of EAC's total export earnings. Rwanda's contribution of 29.8 percent was the highest, followed by Uganda (23.4 percent) and Tanzania (20.1 percent). In Kenya, the tourism sector generated around 9 percent of total exports, while transport remained the main service earner (about 15 percent of total export values). In Burundi the tourism sector's contribution to total exports is still low at around 1 percent in 2011. But compared to its neighbors in the region, Rwanda's share of EAC tourism receipts is modest (Box 5).

Figure 22: EAC Export Value Trends



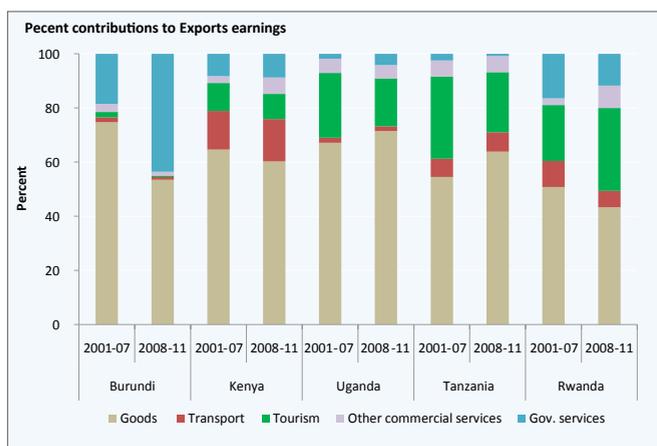
Source: UNCTAD.

Figure 23: EAC Exports as Percentage of GDP



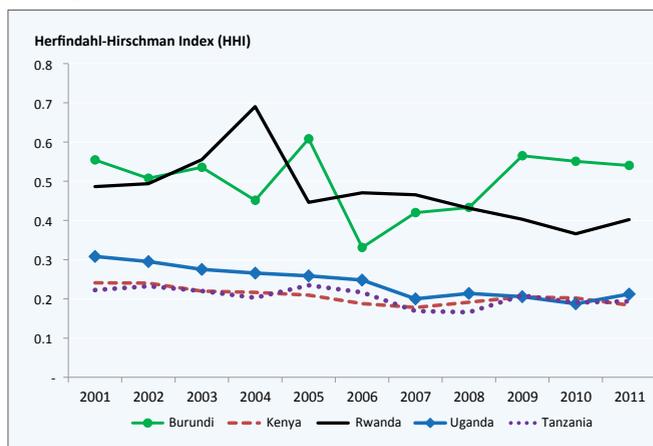
Source: UNCTAD

Figure 24: Tourism is Becoming an Important Source of Export Earnings for Rwanda



Source: UNCTAD.

Figure 25: Exports' Basket Concentration in the EAC



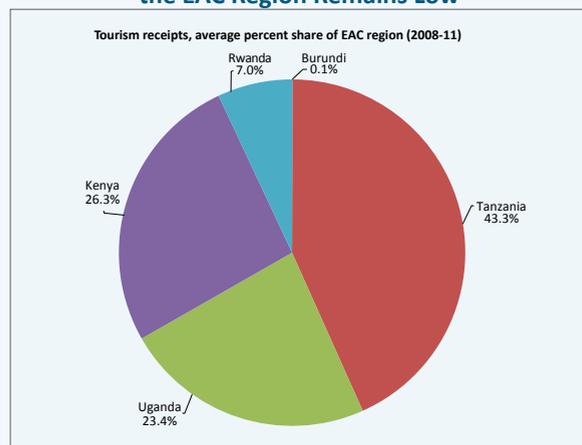
Source: UNCTAD.

Box 5: Rwanda's Tourism Sector

The tourism sector in Rwanda continued to be the leading export earner in 2011 (Figure 19). Tourism receipts increased in 2011 by 24.9 percent to US\$251.8 million, mainly on account of large (18.1 percent) growth in the leisure segment. In 2011, the second export earner was other services, with almost 20 percent of total export value, as a result of the license fee of a new mobile operator, *Bharti airtel*.

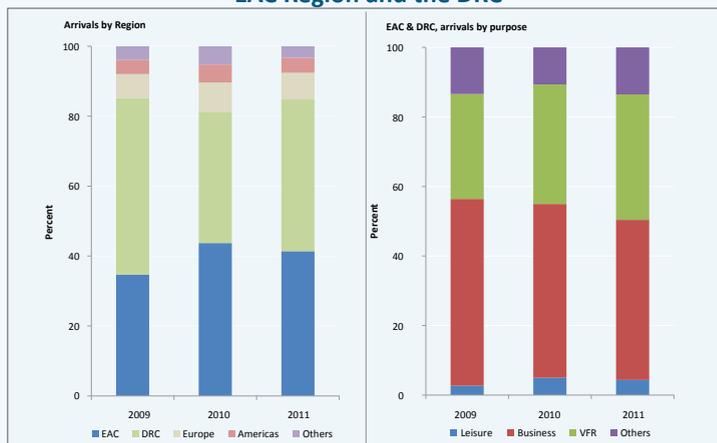
The introduction of a single tourism visa within the EAC region could provide Rwanda with a significant increase in leisure tourism. Between 2008 and 2011, Rwanda's share of EAC region tourism receipts was 7.0 percent, while hosting 18.0 percent of tourism arrivals in the EAC region (Figure 26). Tanzania accounts for the lion share of EAC tourism receipts, 43.3 percent, followed by Kenya and Uganda. Most tourist arrivals in Rwanda originate from the EAC region (38.8 percent) and the DRC (42.7 percent) and come primarily for the purpose of business or visiting friends and relatives (VFR) (Figure 27). Only 4.5 percent of arrivals from the EAC region and the DRC come for leisure. At the same time, leisure tourists generated more than 45 percent of tourism receipts in Rwanda.

Figure 26: Rwanda's Share of Tourism Receipts in the EAC Region Remains Low



Source: BNR and EAC website.

Figure 27: Rwanda's Tourist Arrivals Originate Mainly from the EAC Region and the DRC



Source: Rwanda Development Board (RDB).

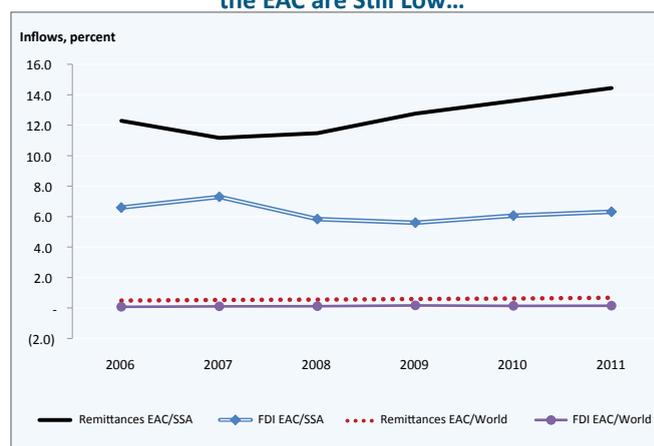
Rwanda has one of the highest concentrations of its export (goods) basket in the EAC region. Measuring Rwanda's export basket concentration with the Herfindahl-Hirschmann Index (HHI)¹² shows that it has averaged 0.4 between 2008 and 2011 (Figure 25). Rwanda's export basket is dominated by traditional exports crops (coffee and tea), and minerals (tin, coltan and wolfram). The category of other goods became a significant export earner in 2011, generating 19.5 percent of the value of total exports, comprising mainly of informal cross border trade and re-exported products (Box 9).¹³ In total, informal cross border trade accounted for 41.0 percent of other exported goods and 8 percent of total exports by value in 2011.

1.5.3 ROLE OF PRIVATE INFLOWS TO THE EAC

Remittances and Foreign Direct Investment (FDI) are still relatively low in the EAC region (Figure 28). In 2008-2011, remittances flowing to the EAC region averaged 13.1 percent of total remittances flowing to SSA, and constituted less than 1.0 percent of world-wide remittances. Over the same period, FDI to the EAC averaged almost 6 percent of total FDI inflows to SSA, and less than 1 percent of the world-wide FDI. Uganda and Tanzania were the main destinations for FDI in the EAC region, averaging more than 85 percent of the EAC total. Kenya and Uganda

were the main destination countries for remittances within the EAC, averaging more than 95 percent of total inflows. Rwanda accounted for only 3.2 percent in total EAC remittances, and 4.4 percent of total FDI in the region. It is noteworthy that by 2011, the level of FDI to the EAC exceeded the pre-2008 global crisis level (6.6 percent higher than 2007 levels).

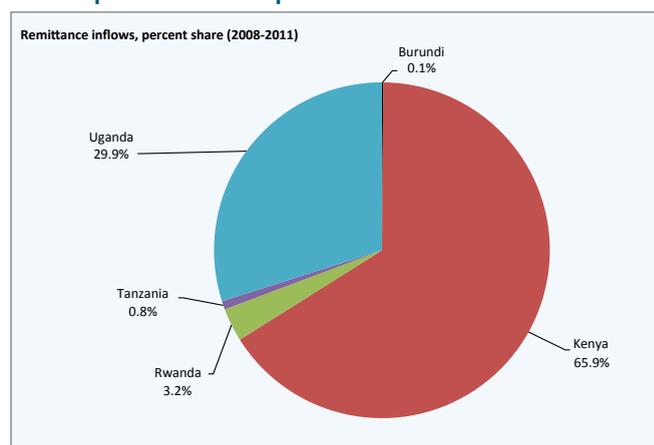
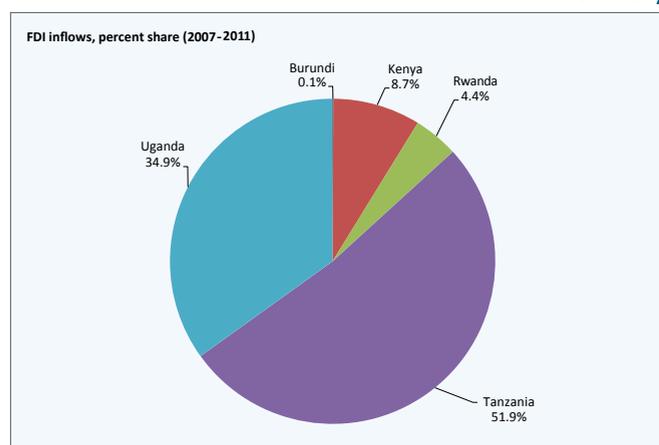
Figure 28: Overall, Remittances and FDI Inflows to the EAC are Still Low...



Source: UNCTAD.

FDI levels in Rwanda are extremely low compared to other EAC countries, although they are an increasing source of investment. From 2006 to 2009, FDI inflows increased by more than 70 percent per annum, from

Figure 29: Remittances and FDI to the EAC Region ... and Rwanda's share is very small compared to its EAC peers



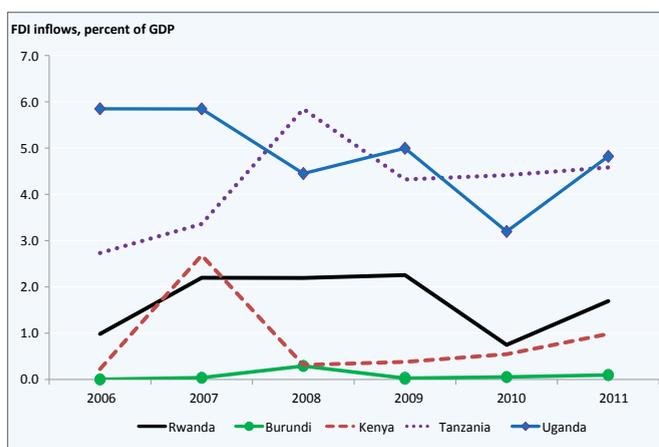
Source: UNCTAD.

¹² The HHI is calculated by taking the square of export shares of all categories in the market: $HHI = \sum S_i^2$; $i = 1, 2, \dots, n$. This index gives greater weight to the larger export categories and reaches a value of unity when the country exports only one commodity or service.

¹³ Since 2009, the Ministry of Commerce, Central Bank and NISR have been conducting surveys on informal cross border trading. With these survey results, new export products have emerged, such as beans, wheat flour, malt beers, mineral water and livestock.

US\$30.6 million in 2006 to US\$118.7 million in 2009. In 2010 FDI slumped back to US\$42.3 million as a result of the global economic uncertainty, following the 2009 crisis. In 2011, FDI recovered from the low level of 2010, by more than doubling to US\$106.2 million. Over the recent five years, FDI inflows to Rwanda averaged 1.9 percent of GDP, with the highest level of 2.3 percent of GDP in 2009 (Figure 30). Measured as a share of Gross Fixed Capital Formation, Rwanda is the only EAC country where inflows increased from 2008 to 2010 (Figure 31).

Figure 30: Trends in EAC FDI Inflows



Source: UNCTAD.

Figure 31: FDI Inflows to Rwanda Rose Much in Recent Years



Source: UNCTAD and WDI.

1.6 OUTLOOK AND RISKS

1.6.1 GLOBAL OUTLOOK

The World Bank's *Global Economic Prospects report of June 2012* projects global GDP to increase 2.5 percent in 2012, with growth accelerating to 3.0 percent in 2013. Output in the Euro Area is projected to contract in 2012, reflecting both weak carry over and increased precautionary saving by firms and households, in response to renewed uncertainty. Overall, high-income GDP is expected to expand by only 1.4 percent this year, weighed down by the banking-sector deleveraging, and ongoing fiscal consolidation. As these pressures ease in 2013, high-income country GDP growth is projected to firm to what will still be a modest 1.9 in 2013. GDP in low-income countries is projected to expand by 5.3 percent in 2012. These drags on growth are expected to ease as global growth strengthens in 2013. However, both low-income countries' and high-income countries' GDP will grow less compared to the pre-crisis years of this century.

In the immediate term, tensions emanating from the Euro Area are the most serious potential risk. Assuming that conditions in high-income Europe do not deteriorate significantly, the increase in tensions is going to mainly affect growth in the Euro Area in 2012. The direct effect on low-income country growth will be minor (in part because there has been less contagion), but increased market uncertainty, reduced capital inflows, high-income fiscal and banking-sector consolidation are expected to keep growth weak in 2012. If conditions in high-income Europe deteriorate sharply such that one or more countries find themselves frozen out of financial markets, growth prospects in low-income countries would be dampened. In a relatively orderly crisis that is limited to a few small Euro Area economies, the impact on GDP growth in low-income countries would be relatively contained, but were there to be a disorderly crisis that extended to several Euro Area countries then the deceleration in low-income country GDP growth would be stronger.

A second downside risk is low commodity prices; with potentially serious consequences for exporting countries which depend on revenues to finance a large share of their imports and government expenditures. The recent decline in commodity prices (oil and metals are down to 8.4 percent and 4.7 percent in the last month) attests to the possibility that commodity prices could come down sharply in the near future. Such a decline in commodity prices could raise trade deficits and increase Balance of Payments imbalances, which could dampen growth in respective countries.

Should global conditions deteriorate, low-income countries would be hit—making the replenishment of depleted macroeconomic cushions a priority. The resurgence of tensions in high-income countries is a reminder that the after effects of the 2008/2009 crisis have not yet played themselves out fully. Although the resolution of tensions is still the most likely outcome, a sharp deterioration of conditions cannot be ruled out. While the precise nature of such a scenario is not known in advance, low-income countries could be expected to take a large hit. Low-income countries with strong reliance on commodities, tourism, remittances, or with high levels of short-term debt or medium term financing requirements, are likely to be the hardest hit.

A return to more neutral macroeconomic policies would help low-income countries to reduce their vulnerabilities to external shocks, by rebuilding fiscal space, reducing short-term debt exposures, and recreating the kinds of buffers that allowed them to react so resiliently to the 2008/09 crisis. Currently, low-income country fiscal deficits are on average 2.5 percent of GDP higher than in 2007, and current account deficits 2.8 percent of GDP higher. And short-term debt exceeds 50 percent of currency reserves in 11 low-income countries.

1.6.2 RWANDA'S OUTLOOK

Rwanda's outlook for 2012 and 2013 remains promising: the World Bank projects a growth rate of 7.4 percent in 2012 and 7.7 percent in 2013 (Table 5). The main assumptions for the World Bank growth forecast are summarized in Box 6. The outlook for agricultural growth remains positive, due to ongoing prioritized public investments, which allow for continued realization of higher productivity in the sector. The outlook for the industrial sector is more cautious, as sustaining the growth of the past year requires continued high mineral export prices, an unlikely event, given the growth forecasts in industrialized economies. On the other hand, ongoing

Table 5: Growth Indicators, 2008-2013 (Percent)

	2008	2009	2010	2011	2012*	2013*
GDP	11.1	6.2	7.2	8.6	7.4	7.7
Agriculture	6.4	7.7	5.0	4.7	3.7	4.5
Food crops	6.2	9.4	4.9	5.0	3.3	4.8
Export crops	28.9	-15.1	14.2	2.7	20.1	1.5
Industry	15.1	1.3	8.4	17.6	12.4	11.4
Manufacturing	5.6	2.9	9.3	8.0	6.3	6.3
Construction	28.1	1.4	8.8	23.6	16.8	14.5
Services	13.8	6.3	9.0	8.9	8.5	8.8
Public expenditure led services	6.6	11.8	12.1	14.4	10.3	11.0
Other services	16.2	4.5	7.9	7.0	7.8	8.0

*Projections

Source: NISR and World Bank Staff calculations for 2012 and 2013.

public investments in roads and other construction activities are expected to continue to contribute positively to growth in construction. Services growth is expected to be slightly lower than it was in 2011, as public expenditure-led services are anticipated to experience moderate growth. Financial sector services are also expected to grow at a slightly slower pace, after experiencing dramatic expansion in the previous year. Growth in trade and retail services is expected to be more buoyant in 2012 and 2013, on account of higher consumption, resulting from increased wages and salaries for public servants projected for the current and the following budget years.

Inflation prospects for 2012 continue to be moderate.

However, the Central Bank needs to be more proactive in mitigating inflation trends, and tightening monetary policy if needed. Although Rwanda was not directly affected by the drought in the Horn of Africa in 2011, food inflation will need to be carefully monitored as inflationary pressures in 2011 were mostly driven by domestic food prices.

The external outlook is becoming more uncertain.

Rwanda's experience with the past crisis showed that it is impacted by global trends through the following channels: (i) increased inflationary pressures; (ii) a trade shock, due to declining external

demand for Rwandan goods and services (mainly for tourism, coffee and mineral exports) and a slump in commodity prices, particularly for minerals; and (iii) lower financial inflows in the form of Foreign Direct Investment (FDI) and remittances. According to the recent *World Bank's Commodity Markets Review* (June 11, 2012), the prices of Rwanda's main export products (tin, coffee and tea) have shown a downward trend in the first quarter of 2012 while oil and food prices increased. Furthermore, with regard to tourism receipts, the planned 50 percent increase in gorilla park fees effective from June 1, 2012, could jeopardize revenues in this sector.¹⁴

The most substantial risk for Rwanda is that its budget is still heavily reliant on grant financing.

While in the previous crisis donors came around to provide extra budget support, this is unlikely to happen in the current crisis, as many donor countries face fiscal tightening. This would leave the country with limited and sub-optimal alternative financing options. It could be argued that high aid flows, as Rwanda has experienced to date, could have an adverse impact on macroeconomic outcomes and inhibit export growth, especially if it leads to currency overvaluation. In the past, Rwanda has managed aid flows well by channeling it to productive public investment and public services, thus mitigating the risks.

¹⁴ Charges for foreign non-residents will increase to US\$750 from US\$50, whereas foreigners residing in Rwanda will be charged US\$375 instead of US\$250 to trek the gorillas. Rwandan nationals will be charged US\$50 up from US\$33.

Box 6: Key Assumptions for the World Bank Growth Forecast for Rwanda

The World Bank Rwanda country forecast is based on a sectoral bottom-up approach of projecting growth for 2012 and 2013. This approach differs from the approach used for the joint macro-framework the Government, International Monetary Fund and the Bank discuss and agree on periodically. Information in Annex 4 provides a brief description of the forecasting approach.

Agriculture growth is expected to be positive and follow in 2012 and 2013 the trends of previous years. Agriculture is rain fed and Rwanda has experienced delayed but abnormal heavy rains and floods between January and May 2012 which will likely impact crop output adversely at the end of season B. However, substantial past and ongoing public investments in the sector, including in irrigation improvements and productivity increases, are expected to continue to positively impact the growth path. High Government expenditures in the sector are expected to be sustained through continued donor financing of several successful sector projects. Based on these assumptions, an overall positive, but lower than 2011 sector outcome, is projected which would also help ease pressure on domestic food prices. For export crops, it is forecasted that growth will be slowing down, mainly reflecting on the natural two-year coffee cycle and also the likelihood that global commodity prices will retreat from their current record levels, as the global economic environment cools down.

Industrial growth is forecasted to remain relatively strong in 2012 and 2013, but with a slightly more cautious outlook. A projected slight slowdown is based on the assumption of retreating mineral prices as global economic activities cool off. It is expected that construction activities for 2012 will remain substantial due to still large ongoing public infrastructure investments, but declining slightly in 2013. Manufacturing is projected to slow down in 2012 due to the impact of high energy and input prices, before starting to benefit from improved global conditions in 2013 and internal infrastructure improvements. As an influencing factor of industrial activity, it is also expected that credit growth will decelerate in 2012 and 2013, which started in the last quarter of 2011, as further tightening of monetary policy is expected to rein in inflation.

Growth in the services sector is projected to slightly slow down to more moderate levels in 2012 and 2013. Growth is expected to slightly slow down as public expenditure-led services, which positively impacted economic growth in previous years, are expected to grow at a lower pace. Transport services are likely to be adversely impacted if global fuel prices continue to remain high or increase again. Trade and wholesale services are expected to continue to grow at similar levels as observed in the second half of 2011, when higher income from a good agriculture outturn positively affected growth in this sub-sector. This assumption is based on the implementation of plans for an overall increase in wages and salaries for public servants, (adopted in January 2012) that is likely to impact 2012 and 2013 the most. Previous high growth in the financial sector is expected to slightly slow down, as the sector expanded substantially in recent years and might head for consolidation.

PART TWO

MAKING THE MOST OF REGIONAL INTEGRATION FOR RWANDA

Regional integration can bring about substantive benefits to EAC countries. But will progress on the regional integration front affect all countries in a similar fashion? For example, will integration create the same opportunities and challenges for member countries? It seems like the answer to these questions is no, taking into account the differences among the EAC countries. Three countries are landlocked (Burundi, Rwanda, and Uganda), and two are coastal (Kenya and Tanzania), which in turn impacts the cost of accessing international markets. Size-wise, Kenya's GDP (Purchasing Power Parity) is similar to Tanzania's, but is five times that of Rwanda, and almost twenty times that of Burundi. Tanzania has a population density of around 50 people per sq. km, while Burundi's and Rwanda's are 325 and 430 respectively. Some countries have important oil (Uganda), and gas reserves (Tanzania), while others are mainly importers (Rwanda). Given these scenarios, it is obvious that the challenges and opportunities created by the regional integration process are diverse for the member countries. Asymmetric benefits will imply that the complementary agenda that countries should follow to maximize the impact of those opportunities, and minimize the challenges of the integration process, should also be different. This part of the Rwanda Economic Update looks into these issues, and gives a focus on how Rwanda can lean on the EAC in order to unlock the benefits of increased regional integration, and perhaps, globalization. It draws on the two World Bank's reports of *Reshaping Economic Geography of East Africa: from Regional to Global Integration (2012)* and *Defragmenting Africa (2012)*.



2.1 OPPORTUNITIES AND CHALLENGES OF INCREASED EAST AFRICAN ECONOMIC INTEGRATION

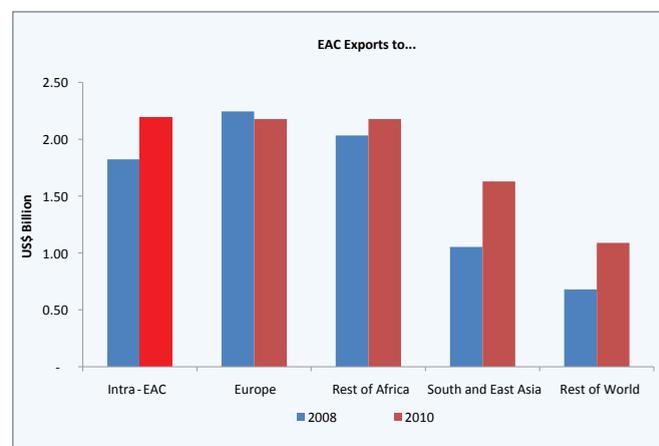
The EAC is the fastest growing economic community in the world. It has grown faster than any other economic community in the last decade, closely followed by the Association of Southeast Asian Nations (ASEAN). The EAC grew at an average of 5.9 percent per year over the last decade, with each member country more than doubling its own GDP. The EAC also experienced unprecedented population growth – the region grew by 25 percent from 110 million people in 2002 to 138 million people in 2010, and will reach 200 million people by 2030. The region’s high population growth has been close to 3 percent per year over the last two decades, compared with Sub-Saharan Africa’s average of 2.6 percent. However, significant intra-regional country variations exist.

Within the EAC, growth has been unevenly distributed with Tanzania, Uganda and Rwanda growing at an average of over 7 percent per year between 2002 and 2010, compared to Kenya and Burundi’s 3 and 4 percent respectively. Kenya is the largest economy with a GDP of approximately US\$ 32 billion in 2010, followed by Tanzania, Uganda and Rwanda, and finally Burundi with a GDP of only US\$ 1.6 billion in 2010.

Total EAC exports are increasing, and so are intra-regional exports as a proportion of total exports. Total exports from EAC partner states grew at an average of 16 percent annually, from US\$ 6 billion in 2002 to US\$ 20 billion in 2010. Kenya, Tanzania, and Uganda (the founding members of the EAC) are the main sources of such growth, in intra-regional exports. However, the next three years are expected to also witness an acceleration of Rwanda and Burundi export growth in the EAC (albeit from relatively low levels), and both countries are expected to see export growth exceed import growth from 2015 onwards (East Africa Corridor Diagnostic Study, 2011). Intra-EAC trade (about US\$2.2 billion) is currently higher than trade

to Europe, the rest of Africa, or the combination of East Asia, South Asia and China (Figure 32).

Figure 32: EAC Trade by Destination



Source: WDI 2012.

An expansion of intra-EAC trade would generate notable opportunities for the EAC partners:¹⁵

- **Intra-EAC trade in agriculture would contribute to the region’s food security.** The production of food staples for growing urban markets and food deficit rural areas represents the largest growth opportunity for regional farmers. Given population growth and increased urbanization, Africa’s demand for food staples will grow dramatically in the coming decade. Indeed, demand in Africa is expected to double by 2020, primarily in cities. But agricultural resources are not allocated equally across EAC countries, or even within them, so borders often artificially demarcate food surplus areas from food deficit ones. Regional trade integration can have a substantial impact by better linking farmers to consumers across borders, and in ameliorating the effects of periodic national food shortages and increasing global food prices. At this stage, however, regional trade in food staples remains far from free, despite efforts for policy and regulatory harmonization. The arbitrary and erratic imposition of barriers (undermines private sector confidence to invest and distorts incentives towards cash crop production away from food staples.

¹⁵ World Bank 2012, *Defragmenting Africa*.

- **Intra-EAC trade in basic *manufactured goods* and regional production chains would reduce unemployment.** Trade in basic manufactured goods such as plastics, chemicals, paints and cosmetics, construction materials and pharmaceuticals is beginning to materialize in East Africa, but high transport costs and non-tariff barriers are currently limiting such opportunities. Similarly, prospects for regional production chains driven by trade in parts and components (“trade in tasks”) remain limited due to trade and regulatory barriers that raise transaction costs and increase uncertainty. The removal of such barriers would encourage vertical specialization, and the emergence of regional production chains that create employment and promote export diversification.
- **Intra-EAC trade in *services* could have significant economy-wide benefits for all EAC countries.** Despite significant measurement problems, opportunities for expanding trade in services in East Africa are becoming increasingly apparent. For example, Kenyan firms have become successful exporters of business, financial and distribution services to the region, and Uganda is exporting education services to East Africa and beyond. Services offer new and dynamic opportunities for exports. Services are also important for the competitiveness of all sectors including agriculture and manufacturing given that they provide critical inputs for most economic activities. Policy makers are beginning to realize the limitations of their services sectors, and the need to open them up to imports and foreign direct investment, in order to increase competition and efficiency. Deeper regional integration cannot be achieved without services liberalization and reform.

But East Africa is still facing challenges to economic integration, especially due to high transport costs.

Regional connectivity is being hampered by ports with high berth and yard congestion, slow customs clearance, and excessive dwell times for ships; limited compatibility of rail systems, poor service reliability (especially at transfer and locomotive exchange points), and low operating efficiency; and

too many graveled roads that are poorly maintained, overloaded, and badly managed. Years of very weak operating performance due to poor governance, organizational deficiencies, revenue inadequacy, and underinvestment have led to deficient and in some cases what are, in effect, decapitalized regional infrastructure networks. Such deficiencies seriously undermine the region’s competitiveness. Freight costs per kilometer are estimated to be 60–70 percent higher than in the United States and Europe, and 30 percent higher than in Southern Africa. For the landlocked countries, transport costs can be as high as 75 percent of the value of exports.

Intraregional trade is also inhibited by regulatory and administrative hurdles that inflate transport cost, causing long delays for freight movements along the region’s transport corridors. Such movements suffer from serious delays due to informal stops and checkpoints—formal or informal. Trucks are forced to go over weighbridges, either mobile or grounded, to ensure their compliance with regional axle load and gross vehicle weight standards. The lack of proper equipment and design problems in weighbridges causes congestion and delays. Most often, trucks are stuck in long lines. Weighbridges should normally require three minutes for transit. However, according to the East Africa Business Climate Index 2008 survey of the East African Business Council, trucks on average spend 92 minutes, and some weighbridges occupy trucks for up to five hours.

High transport costs make East Africa also more distant to the world’s major markets, or “global core,” but such distance is not insurmountable as the experience of East Asia’s export success shows. Over the last few years, East Africa has made progress in reshaping its economic geography. The EAC is at the moment one of the most dynamic and advanced regional integration communities in Sub-Saharan Africa (Box 7). The EAC was reestablished¹⁶ by Kenya, Tanzania, and Uganda in 1999 following a gradual institutional convergence that was helped by global economic and political trends. Burundi and Rwanda joined in 2007. Rwanda considers regional integration as a crucial pillar in its vision 2020, viewing EAC as an opportunity to ease access to the sea in its efforts to

¹⁶ A predecessor collapsed in the 1970s, as the partner states diverged in their political and economic paths.

Box 7: Overview of the EAC

Kenya, Tanzania and Uganda have a long history of successive regional integration arrangements:

- 1927: Customs Union between Kenya, Tanzania and Uganda
- 1948-1961: East African High Commission
- 1961-1967: East African Common Services Organization
- 1967-1977: East African Community
- 1993-2000: East African Co-operation
- 1993: East African Co-operation
- 2000: East African Community

The Treaty for establishment of the EAC was signed on 30 November 1999 and entered into force on 7 July 2000 following its ratification by the original three partner states – Kenya, Uganda and Tanzania. Rwanda and Burundi acceded to the EAC Treaty on 18 June 2007, and became full members of the EAC from 1 July 2007. The EAC today is a regional intergovernmental organization of Kenya, Uganda, Tanzania, Rwanda and Burundi with headquarters, and a Secretariat, in Arusha, Tanzania. South Sudan has made an application to join the EAC which is ongoing.

The collapse of the EAC in 1977 can be attributed to a number of reasons; including governance challenges, economic imbalances (in part arising from the socialist system in Tanzania and capitalist system in Kenya), political disagreements and an extremely limited dissemination of information. Two reasons stand out, first, the relatively low engagement of stakeholders in civil society, the private sector and amongst EAC citizens in the decision-making and management processes of community integration. And, second, a lack of a dispute resolution process for sharing the costs and benefits arising out of EAC integration. Since 1977, steps have been taken to address some of these problems, including a Mediation Agreement (1984) for determining and dividing EAC assets and liabilities, and the agreement for the establishment of the Permanent Tripartite Commission for East African Cooperation (1993). Nonetheless, a number of the above problems remain, and citizen engagement, knowledge sharing, consensus building and economic integration are and will continue to be key components for the success of the EAC today.

The EAC, the smallest economic community in Africa, has already made progress. Out of the four planned stages of EAC integration – customs union, common market, monetary union and political federation—the EAC has successfully reduced tariffs on intraregional trade, enlarged to five members and established the customs union with a common external tariff. The common market commenced in July 2010 and will ultimately allow all factors of production to move freely within the region. All five partner states have made commitments to open up and create regional markets in several services sectors and have accepted to remove restrictions on the free movement of workers and on the right of establishment, and to pursue mutual recognition of academic and professional qualifications. An ambitious objective has been set of agreeing a protocol on monetary union in 2012 and a common currency in 2015.

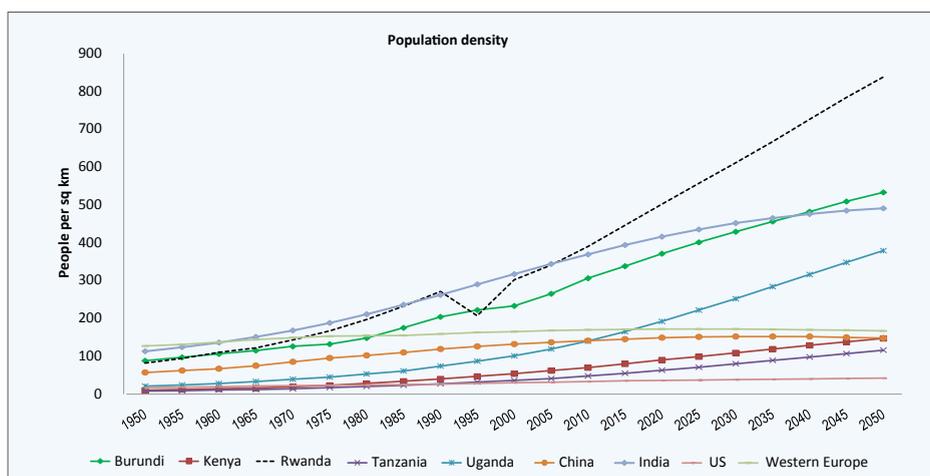
Source: EAC Integration Process & Enabling Peace and Security Architecture, Hon. Beatrice B. Kiraso (2009); EAC Secretariat, World Bank (2011)

cut transport costs for both exports and imports, and to reduce high transport costs which impinge on the Rwandan competitiveness.

The region has advanced the regional integration agenda and is trying to address existing bottlenecks such as: (i). the existence of important non-tariff barriers; (ii). the region's underdeveloped infrastructure; (iii). the lack of harmonized regulations; and, (iv). the limits to labor mobility in the region.

Yet, the EAC is a very heterogeneous group and integration will have asymmetric effects. Several economic and social indicators vary substantially within the EAC, for example, the three landlocked countries of the EAC (Burundi, Rwanda, Uganda) are much more densely populated than the coastal ones (Figure 33). The next section reflects on these asymmetries and what they imply to Rwanda, in terms of development policies.

Figure 33: Population Density in the EAC and Selected Comparator Countries, 1950–2050



Source: UN 2011 (medium fertility scenario for 2010–2050).

2.2 RWANDA’S ECONOMIC GEOGRAPHY AND REGIONAL INTEGRATION

Economic geography is the branch of economics which focuses on the location, distribution and spatial organization of economic activities, and was the focus of the Bank’s World Development Report (WDR) 2009. In the context of asymmetric regional integration processes, the 2009 WDR analytical framework appears particularly appealing as country differences may affect the geography of economic activity in an integrated supranational entity. For example, some places like cities, coastal areas, and connected countries—are favored by producers. Thus to the extent that economic integration contributes to transforming a set of more or less isolated economies into a single economic unit may have dramatic implications.

Consider the case of a Rwandan entrepreneur who wants to start a company which aims to satisfy the EAC market and imagine that borders are not an issue. Where would the person locate? In Rwanda, where the World Bank’s Doing Business indicators suggests that opening and running a firm is relatively easier than in other EAC countries? Or rather, should the person consider locating closer to Nairobi (one of the biggest markets in the EAC) and from there export to the rest of the EAC including Rwanda? Perhaps more dramatically, consider the case of another entrepreneur who aims to export to global markets?

Taking into account that logistic costs can represent in some cases even 50 percent of the shelf price of the products, would the person set-up business in Rwanda, a landlocked country, or settle close to Mombasa (the main port of the EAC) to minimize costs and hence be globally competitive? Clearly, the answer to these questions depends on the type of products that the person has in mind (e.g. how important are transport costs relative to the ease of doing business?), but it should not be a surprise that in an integrated EAC, firm location dynamics differ from what can be expected in a fragmented EAC. To a large extent market access is affected by the integration process.

According to the WDR market access across geographic scales (international, national, and local) will determine where economic activity can thrive and thus where firms will locate and generate spatial transformation. Going one step forward the WDR emphasized three dimensions of markets access *division, distance, and density* (Box 8).

Following this framework, policies within the EAC should consider three elements:

- regionalizing connective infrastructure may help to reduce economic divisions within the region if it helps the EAC countries to allocate costs and benefits of connectivity more equitably among themselves;

Box 8: The Three Dimensions of Spatial Transformation

Division is the most important dimension internationally. Given the relatively small size of internal markets in many African countries (such as Rwanda), economic integration is critical for achieving economies of scale and generating the agglomeration effects that the continent's firms need to leverage global demand. Economic production is concentrated in a few world regions—North America, Northeast Asia, and Western Europe—that are also the most integrated. Other regions, by contrast, are divided. Divisions associated with the impermeability of borders and differences in institutions, regulations, and currencies are major constraints to economic activity.

Distance matters internationally the most for access to world markets. Distance between areas where economic activity is concentrated and areas that lag is important too. The policy challenge is helping firms and workers reduce their distance from density. The main mechanisms are the mobility of labor and the reduction of transport costs through infrastructure investments. A large and dynamic economy in the neighborhood can help smaller countries, especially in regions distant from major world markets, by reducing their distance to markets.

Density of economic activity has been increasing worldwide not only at local and national, but also at international level. There is no good reason to expect economic growth to spread smoothly across space. The experience of successful developers shows that production becomes more concentrated spatially. Similar concentration of economic mass has occurred internationally. Today, a quarter of the world's GDP can fit into an area the size of Cameroon, and half into the size of Algeria. The policy challenge is getting density right—harnessing market forces to encourage concentration and promote convergence in living standards.

Source: WDR 2009.

- developing joint targeted interventions, such as establishing economic integration zones (e.g. in coastal areas) may help the East African economy to leverage global demand, and to pilot future common institutions in places where they have a high chance of success.
 - increasing labor mobility would help to generate important agglomeration effects in the medium to long-term, but also help address critical skill gaps in selected EAC countries in the short-term;
- Kenya and Uganda), the rest of the bilateral borders have potential to become more accessible. But it is important to keep in mind that thinner borders

Figure 34: Trade Restrictions as a Barrier to Market Access



Source: WDR 2009.

2.2.1 DIVISION AND THE NEED FOR THINNER BORDERS

Division refers to market opportunities related to size. To the extent that regional integration is used to start exploiting economies of scale and become more efficient, it can also be used as a bridge to access even bigger markets. Today, there are few very integrated regions with high economic production. But many regions, including in Africa, remain divided. For example, Figure 34 presents a map where the thickness of the borders between countries represents the trade restrictions between these two countries, and while it is apparent that some of the EAC countries have relatively thin borders (e.g.

operate in two directions. Trade facilitation measures that create opportunities for domestic firms to gain access to other markets and increase exports, tend to be accompanied by opportunities created for foreign firms to compete in the local market and in some cases (particularly when foreign firms are more efficient) displace local firms. While in a spatial context efficiency needs to be seen not only as productive efficiency but also as logistical efficiency, it may be worth considering where firms may have incentives to locate.

The EAC customs union has removed obstacles to moving goods within the the region, but non-tariff barriers (NTBs) remain, such as discrimination against landlocked countries' exports and imports in the ports, and police roadblocks on the main land—from land locked countries to the ports. Tariffs in the EAC have been reduced dramatically, and the tariffs currently in force amongst partner states are set out in the Common External Tariff 2007. For effective regional integration, policy makers must address the border barriers. The EAC countries have made progress on reducing NTBs such as quotas or restrictive import licensing requirements, but other categories of NTBs remain. EAC countries need to increase collaboration on minimizing the trade restrictiveness of specific non-tariff measures, such as sanitary and phytosanitary measures that address safety and health concerns, and advance the harmonization of standards, as these measures continue to constrain the daily operations of ordinary producers and traders.

NTBs are one of the main obstacles to effective regional integration. Regional efforts would need to create incentives for the removal of (selected) NTBs, which in turn would not only encourage the emergence of regional production chains and productive infrastructure in landlocked countries but would also facilitate access to the coast, and thus global markets.

As a landlocked country of modest size, Rwanda needs to rely on regional integration to start to exploit economies of scale and potentially benefit

from the possibility of specialization. Regional integration can bring about challenges. Take into account the diverse economic geography of the EAC, which perhaps is not very favorable for Rwanda. But at the same time, autarky for a country like Rwanda is not an option not only because of the need to rely on imports for a significant share of the country's consumed and invested goods, but also because without economies of scale is very difficult become efficient. Regional markets play an important role in supporting export diversification—one of Rwanda's key trade policy objectives. Unlike EAC exports outside the region, which are mainly commodities, the bulk of intra-regional exports are manufactured goods (food products, beverages, cement, etc.)—and some of these could be good candidates for Rwanda's export diversification.

Rwanda's beneficial climate conditions and recent success in increasing agriculture productivity provides it with a good opportunity to become a regional food exporter. To date, informal cross-border trade is dominated by agricultural products (Box 9). A vibrant informal cross-border trade indicates opportunities for Rwanda, and potential benefits which could be multiplied with intensified attempts to facilitate trade by making borders thinner.

However, a more globalized vision of the world would dwarf the economic weight of the EAC and bring a different perspective on the importance of size. Figure 36 borrows from the WDR 2009 to show how markets view the World.¹⁷ The map suggests that Africa, perhaps with the exception of South Africa, currently appears as a very small player, and what can make a difference in developing an economy is tapping access in to the big European, US or Asian markets. Indeed to the extent that the global and regional integrations are seen as complements, not alternatives, many of the location forces could be mitigated. Many European, American and Asian countries benefitted simultaneously from regional and global integration into the EU and ASEAN. Thus the EAC countries can also use regional integration as a stepping stone for competing globally.

¹⁷ The cartogram was developed using a method developed by Gastner and Newman (2004). The map shows the countries that have the most wealth when GDP is compared using currency exchange rate. This indicates international purchasing power—what someone's money is worth if spent in another country.

Box 9: Rwanda’s Vibrant Informal Cross-Border Trade

Informal cross-border trade constitutes a major component of Rwanda’s export base. In 2009, the Government of Rwanda initiated a survey of informal cross border trade at 53 formal and informal border crossings. On monthly basis, the survey takes place led by the BNR. The surveys indicate that informal cross border trade is a significant and growing component of Rwanda’s export base. In 2011, informal cross border exports accounted for 15 percent of total exports, higher than tea exports (Rwanda’s third largest export).

Informal cross-border trade makes an important contribution to reducing Rwanda’s trade deficit. While Rwanda ran a formal trade deficit with its four neighbors (DRC, Burundi, Uganda and Tanzania) in both 2010 and 2011, informal trade Rwanda ran a trade surplus in 2010 and in 2011 (Table 6) and combining formal trade with informal cross-border trade shows a reduction in the trade deficit for 2011. Over 50 percent of total informal cross border exports are traded with the DRC because of big bordering urban cities (Goma and Bukavu) with over 800,000 people living in each city and nearest to Rwanda.

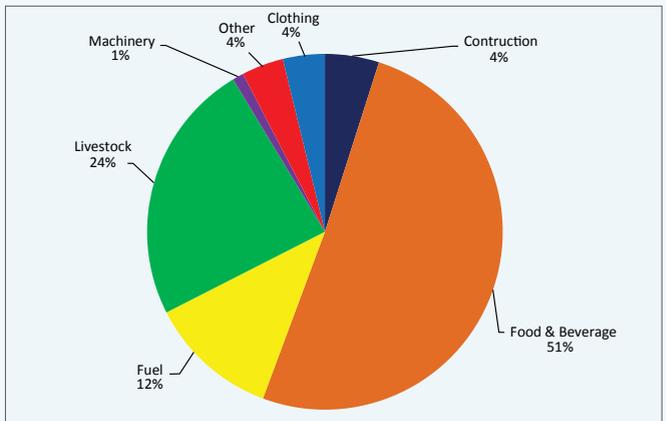
Agricultural products represent the large share of Rwanda’s informal cross border exports (Figure 35). Agricultural products account 51 percent, followed by livestock (24 percent) and re-exports of paraffin (11 percent). Locally produced foods and beverage are mostly traded goods with the DRC, Burundi and Uganda, predominately composed of agricultural products.

Table 6: Rwanda Trade Balance with Neighboring Countries (billion Rwf)

Year	Type	Exports	Imports	Trade Balance
2010	Formal	14.5	133.0	-118.5
	Informal	28.0	25.0	3.0
	Total 2010	42.5	158.0	-115.5
2011	Formal	31.6	162.0	-130.4
	Informal	33.0	11.5	21.5
	Total 2011	64.6	173.5	-108.9

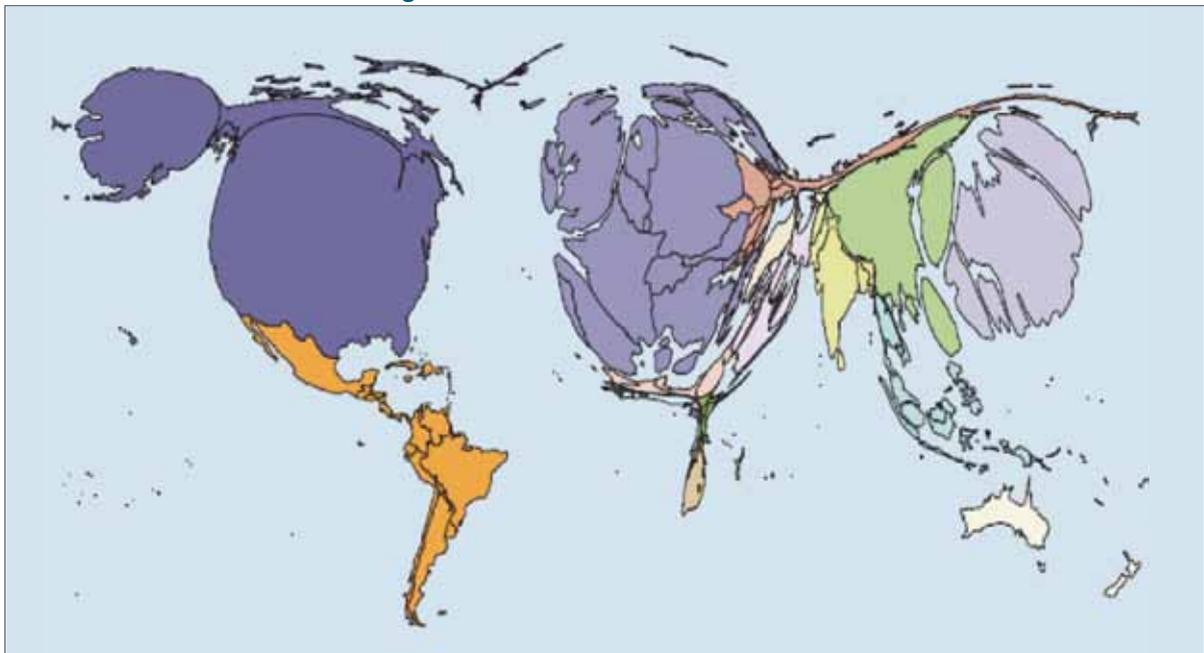
Source: MINICOM, Draft Cross-Border Trade Strategy.

Figure 35: Types of Informal Cross Border Exports



Source: MINICOM, Draft Cross-Border Trade Strategy.

Figure 36: How Markets View the World

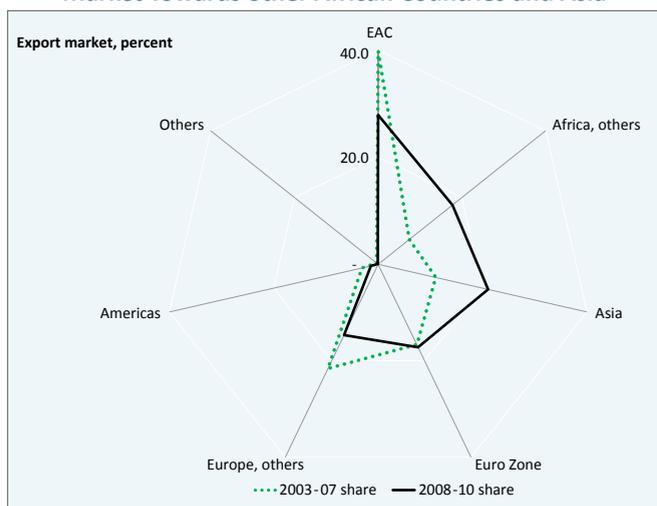


Source: WDR 2009.

It might seem that if the EAC is considered as an isolated entity, the division dimension of economic transformation may not play to the advantages of Rwanda. Yet, a broader view of development forces which put the EAC in a global context may qualify the previous assertion, particularly for firms with a global vocation. Moreover, the possibilities of thriving in isolation for a small land locked economy appears to be very limited.

Indeed, Rwanda is already diversifying its export market away from the EAC region and traditional European markets (Figure 37). In 2001-2007 about 40 percent of Rwanda’s exports were destined to the EAC region, but by 2008-2010, exports to the EAC accounted for only 25 percent. The proportion of exports to the EAC market has been declining with the expansion into other markets, such as Asia and other African countries. However, Kenya remains the main destination for Rwanda’s exports, due to the fact that one of Rwanda’s main export crops, tea, is sold at the Mombasa Auctions. Tea export earnings averaged almost 20 percent of Rwanda export values in 2008-2011. On the import side, the EAC region continues to constitute a large source of Rwanda’s imports. Since 2007, imports (in value) from the EAC region have been steadily increasing, and are now second to imports from Asia. While Rwanda’s imports from Burundi and Tanzania are mainly food and live animals, Rwanda’s imports from Kenya and Uganda are dominated by manufactured products.

Figure 37: Rwanda is Increasingly Diversifying its Export Market Towards other African Countries and Asia



Source: UN COMTRADE and World Bank staff calculations.

2.2.2 REDUCING DISTANCE TO MARKETS AS A WAY OF IMPROVING ACCESS

Distance, understood in economic terms as the cost of moving goods and services, complements the discussion on division in the previous section. For example, it costs US\$4,800 to transport a container from Mombasa to Kigali by road (East Africa Corridor Diagnostic Study, 2011), compared to the US\$ 1,000 which is the cost of transporting the original container from Japan to Mombasa. Thus regardless of the kilometric distance between Kenya and Japan, and Kenya and Burundi, in economic terms Kenya is closer to the Asian country than to the EAC partner. Not surprising, a key policy challenge for the EAC is to help firms to reduce their distances to markets, and this would call for a reduction of transport costs through infrastructure investments, in particular, along the two main transport corridors to the ports of Mombasa and Dar-se-Salam (Box 10). However, better infrastructure and regional interconnectivity is unlikely to benefit all EAC partners in a similar fashion, nor will it resolve all NTBs’ challenges (see previous section). For Rwanda, good infrastructure and connectivity alone may not necessarily attract major manufacturing industries, but the country could greatly benefit from cheaper imported goods for consumers and inputs for potentially smaller supplier industries.

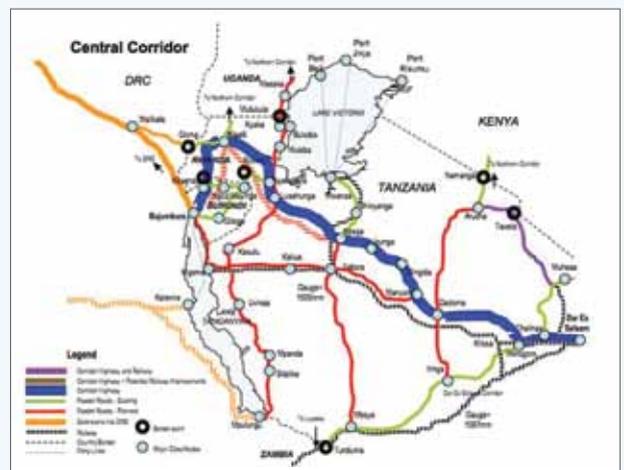
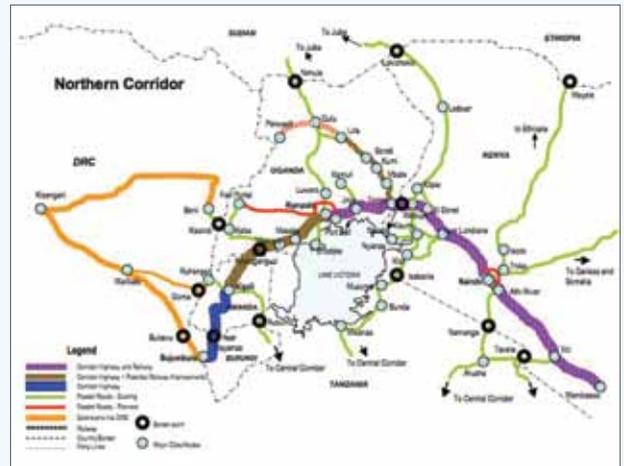
Infrastructure connectivity is particularly critical for the landlocked countries of the EAC, as both trade flows within the EAC and with external markets are affected. Rwanda has a much greater economic distance compared to the coastal countries to major global markets, because transport by sea is much less expensive than by land or air. The coastal countries are responsible for investments in infrastructure facilities used by firms in landlocked countries, which partly explains why, despite recent improvements, there is underinvestment and poor physical quality of connective, or cross-border, infrastructure. One reason which partner states do not always honor their obligations, is that officials have few incentives to delegate responsibilities to the EAC, even when it is in the common interests of all the states. No regional entities have the authority to compel officials: these

Box 10: Northern and Central Transport Corridors of East Africa

There are two main transport corridors in East Africa which link the main land and the two major ports at the Indian Ocean. The Northern Corridor (anchored by the port of Mombasa in Kenya) and the Central Corridor (anchored by the port of Dar-es-Salaam in Tanzania) are the principal transport routes for national, regional and international trade for the EAC.

The Northern Corridor is the busiest and most important transport route, providing a link through Kenya to the landlocked economies of Uganda, Rwanda, Burundi and DRC. An alternative transport network serving the landlocked Great Lakes Region is the Central Corridor through Tanzania. The 1,400 km-long corridor uses lake transport on the Lake Tanganyika to Kigoma in Tanzania, and then road or rail to Dar-Es-Salaam. A third option - through the DRC from the Angola port of Lobito is currently non operational. Another option is the Deep South route, through Zambia, Zimbabwe and South Africa. This corridor uses lake transport on the Lake Tanganyika to Mpulungu in Zambia, and then road transport, or a mix of rail and road transport, to Durban in South Africa. This option is too far from the Great Lakes countries.

The EAC has corridor authorities, one for the Northern and another for the Central corridor, to address issues on transport regulation and policy harmonization, but they are not fully effective. Transport corridor operations in East Africa are still characterized by long transit times and high costs, making transport cost a high share of the value of exports. Modernization of transport infrastructure and removal of non-tariff barriers along these corridors is critical for trade expansion, economic growth, increased regional integration in East Africa, but also better connectivity between East Africa and the rest of the World.



Source: www.eastafricancorridors.org

bodies are weak, without enforcement mechanisms. In addition, institutional capacity in partner states is below the global average (according to the World Bank’s Governance Indicators), though it has generally improved over the last decade. This makes it difficult to remove critical economic divisions discussed in the previous section.

Infrastructure networks exhibit significant economies of scale and scope. Such economies could be more fully exploited if the market boundaries of these industries were expanded beyond national borders. But in the face of global financial instability and retrenchment, many multinational utilities are rationalizing their operations, and are leaving countries with small infrastructure markets that are

noncore to their global activities. Individual countries in East Africa may well be below this threshold size, for attracting the interest of foreign utilities and other investors.

The region’s infrastructure as a whole may help to overcome the national size disadvantage. Cross-border infrastructure may therefore yield investment benefits which go beyond exploiting economies of scale and scope in production. Every strategy for addressing the issue of infrastructure bottlenecks should consider the region a single entity, and seek to facilitate investments on regional rather than national lines. Yet benefits from better connectivity through cross-border infrastructure tend to be indirect and long term, as well as asymmetric across countries.

Costs, though, tend to be incurred immediately. This mismatch makes it hard for countries to agree on the appropriate allocation of costs, especially for large projects. Consequently, there is a tendency for individual governments to under-invest in such an infrastructure. In addition, because cross-border infrastructure typically extends over several countries, it also gives rise to potentially important coordination problems. (In fact, “missing links” in major cross-border roads are common). Such problems are exacerbated if the project has asymmetric country effects.

Effective joint-EAC transit management, including for cross-border infrastructure will be important, given the inadequacy of infrastructure networks designed for national markets in the face of growing integration, potential underinvestment due to spillovers, and

the risk of coordination failures (Box 11). The role of supranational institutions is especially important when the distribution of the investment burden differs substantially from the distribution of expected benefits. Regional institutions can analyze economic and financial feasibility, as well as the distributional consequences of cross-border infrastructure projects, in a non-partisan manner. Thus they could facilitate regional agreements and compensation schemes. Regionalizing regulation may therefore help to enhance policy credibility and commitment, and to overcome constraints in technical capacity.

Regional special economic zones (SEZ) located along the coast would facilitate the partner states to maximize their potential comparative and competitive advantages. In particular, coastal SEZs with an objective of making manufacturing more

Box 11: Cross-border Infrastructure Challenges

Lack of policy harmonization holds back cross-border infrastructure in promoting intraregional trade. Cross-border infrastructure helps to promote intraregional trade only when supported by harmonized regulatory frameworks and administrative procedures—still a work in process in East Africa. Regulations on vehicle dimensions, axle-load limits, road transit charges, highway codes have yet to be harmonized. Even common definitions of road classes and route numbers are missing. Similarly, rail connectivity is gummed up with minimal integration of national technical standards, such as those for building and maintaining railway facilities. Shipping on inland waterways and lakes needs a set of common regulations on ship registration as well as safety standards, including those pertaining to periodic ship surveys, staffing requirements, and aids to navigation and radio communication.



Many border crossings have antiquated infrastructure, inadequate coordination between the countries, and congestion. The key problems that plague border crossings have been extensively documented and include excessive documentary requirements and anachronistic official procedures; insufficient use of information and communications technology systems; questionable due process—lack of transparency, predictability, and consistency in customs activities and determinations; unclear demarcation of responsibilities; and lack of efficient cooperation among a country’s customs and other governmental agencies.

There are also frequent unwarranted roadblocks and checkpoints. Inspections are notorious for their lack of procedural transparency. Officials regularly deviate from agreed inspection procedures and subject drivers to administrative harassment and extortion. According to the 2008 EAC Business Climate Index Survey, 172,236 days are lost each year as a result of delays at weighbridges, roadblocks, and customs offices, and US\$9.8 million is paid in bribes.¹⁸

¹⁸ The survey comprised interviews with 240 business leaders: Uganda (25 percent), Kenya (21 percent), Tanzania (20 percent), Rwanda (18 percent) and Burundi (15 percent); 140 truck drivers through self completion diaries (collected at the point of exit from the country of departure) and 187 Clearing and Forwarding Agents.

competitive globally, would be helpful for landlocked partner states like Rwanda to help to reduce their high costs of production and transport, and with relevant incentives, could in turn attract more investors. This coastal economic integration zone—on or near the coast, with a port, governed and taxed jointly by the EAC partner states, and with some functions privately run—could offer prospects of improving the EAC’s business climate and infrastructure. For example, a large fiscal gap faced by Rwanda (and currently covered by donors) is in part due to the fact that it is difficult to attract industries exhibiting substantial economies of scale (and potentially producing large tax revenues) to a land-locked country. This is because such industries achieve scale by serving large markets, and this is much easier to do from the coast.

A commercially focused, regionally designed SEZ could help to ensure that some of the benefits of agglomeration are distributed as evenly as possible across partner states. This regional and coastal SEZ could be designed in line with the “wide area” SEZs which generally occupy a surface area greater than 10,000 hectares, with mixed-use developments (including industrial, commercial, and real estate), and normally with a resident population. It would function as a new city or municipality. The SEZ would have similarities to two recent economic policy concepts—charter cities¹⁹ and early reform zones.

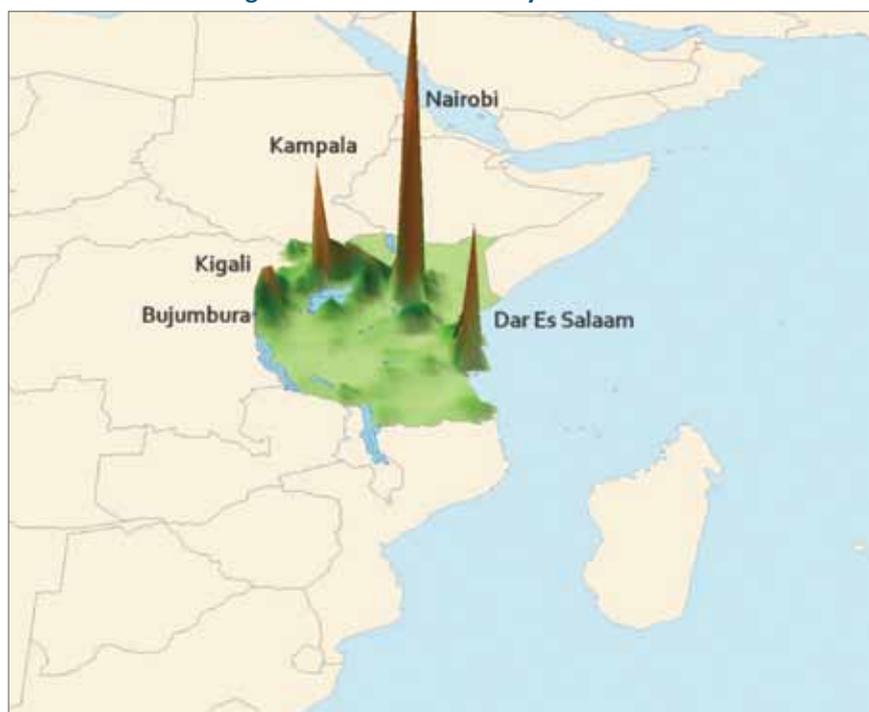
The creation of a regional SEZ would help to concentrate many firms in one area. Benefits for the firms would include cutting down transport costs, inter-linkages, providing each other with industrial inputs, leveraging and sharing technology, infrastructure and utilities among others. The key benefit for the EAC partner states is that coastal SEZ would help them to jointly leverage global demand,

offering the EAC an opportunity to implement basic principles it can learn from the regional integration successes in other parts of the world (such as the European Union or the East Asian countries) in ways which fits the local context.

2.2.3 DENSITY AND THE FORCES OF AGGLOMERATION

Density of economic activity has been increasing worldwide. There is a long tradition in the economic literature going back to Adam Smith and Alfred Marshall which recognizes that areas with a high density of firms and workers tend to be more productive. There are several possible arguments that may explain this observation: (i) sharing facilities: once for example specific infrastructure has been provisioned there may be a tendency for firms relying on this infrastructure to create density in a specific point; (ii) sharing suppliers: final producers may benefit from sharing a large common base of suppliers; (iii) sharing the gains from individual specialization: larger markets could contribute to worker specialization and

Figure 38: Economic Density in the EAC



Source: World Bank staff estimates.

¹⁹ Charter cities aim to use unoccupied land to establish a new city that operates outside the existing arrangements of the country, establishing their own tax regimes and legal structures. In this concept, countries can act as host, source, or guarantor: the host country provides the land, source countries provide the residents, and guarantor countries ensure that the charter is enforced. Honduras, for example, recently amended its constitution to allow for charter cities.

productivity; (iv) sharing a labor pool: larger markets may make easier to fill vacancies including through better matching of employers and employees; (v) sharing customers: tapping a bigger customer base that a single firm could face; and (vi) learning: higher densities can increase the possibilities to exchange ideas. Economic density in the EAC tends to concentrate around the Nairobi and Dar Es Salaam areas and to a lesser extent Kampala. Figure 38 shows where economic activity is located in the EAC. The map also indicates that economic density in Rwanda is quite low (though population density is quite high). In this context, and to the extent that density complements the forces which division and distance creates on a firm's location, Rwanda may be facing an additional challenge of attracting firms, since they have a tendency of locating to high density areas.

Economic density can be viewed as economic opportunity, and to the extent that individuals want to get a part of the wealth, they will be ready to migrate closer to it. At the same time, high economic density areas will also act as attractors of the labor force, to further exploit the benefits of agglomeration. It is likely that the EAC will experience in the future, important migration flows, between areas of varying economic and population density.

International labor mobility partly depends on formal agreements among countries and on the number of borders within a region, but even to a greater extent, on economic incentives and endowments. Internationally mobile workers go typically to richer, larger, better educated countries. Educated people are more mobile and more employable, allowing all countries in the medium to long term, to benefit from lower spatial disparities in provision of education and other social services, as well as in human development outcomes. This suggests that governments should facilitate labor mobility, and encourage remittances. In parallel, efforts should also been undertaken to promote the development of selected activities, where agglomeration effects (and hence the pull factor behind economic density forces) are not that important. For example, a recent study of

firm location in the US state of Maine established that industry agglomeration encourages business location in 17 out of 54 industries analyzed.²⁰

Increasing labor mobility to support agglomeration effects and to address skills gaps is of particular importance, when considering East Africa's aspiration to become a leader in the services industry. Services offer not only new and dynamic opportunities for exports, but they are also important for the competitiveness of all sectors of economic activities, to which they provide critical inputs. Services have the potential to become an important source of future growth and agglomeration for land-locked countries, as they are less impacted by other infrastructure constraints which contribute to distance and division. Over the past decade, exports of services from non-oil exporting land-locked countries in Africa have increased, at a rate of more than three times their exports of goods.

Presently, Rwanda is an important migrant-receiving country to develop its rapidly growing services sector (for example, Ugandan health professionals, or Kenyan and Ugandan financial specialists, engineers and accountants). These inflow of highly skilled EAC professionals, currently addresses important skills shortages and skills mismatches in Rwanda. In the long-run, Rwanda is likely to be an important source of migrants, and would benefit from higher labor mobility in form of reduced labor-market pressures at home, suggesting higher wages and lower unemployment (or both), as well as greater remittances.

Remittances of Rwandan migrants abroad are already becoming a significant source of household income in Rwanda. According to preliminary results of the recent Households Living Conditions Survey (EICV3), the share of private transfers has grown by 1.9 percentage points from 4.4 percent in 2005/06 to 6.3 percent in 2010/11. Among these private transfers are remittances from households who have relatives living abroad. In 2011, inward remittances to Rwanda stood at US\$166.2 million, representing 1.8 percent of GDP. Over the past five years, remittance inflows

²⁰ See http://nercrd.psu.edu/Industry_Targeting/ResearchPapersandSlides/IndCluster.Gabe.pdf

increased by more than 70 percent per annum from US\$25 million in 2006 to US\$166.2 million in 2011.

The EAC region is the top source of remittances to Rwanda. According to the *World Bank, Migration and Remittances Factbook 2011*, the largest share (46.3 percent) of remittance inflows in 2010 came from the EAC region, followed by Europe and North America (Figure 39). This corresponds with the fact that most Rwandan emigrants live in EAC countries. By 2010, an estimated of 263,641 Rwandans were living out of the country, representing around 2.6 percent of the Rwandan population (World Bank, 2010). The top destination countries in Africa for Rwandan emigrants were Uganda, Tanzania and Burundi, which accounted for nearly 80 percent of all Rwandan emigrants. The main destinations outside Africa were Belgium, Canada, France, the United Kingdom, and the United States.

The EAC could increasingly provide institutional support and leadership, to enable labor mobility and to facilitate services liberalization, reform and trade. One sign of increased regional integration is the example of Rwanda and Kenya, which have removed work visa restrictions under the Common Market Protocol. Yet despite signs of progress, the movement of skilled labor and open international competition, remains politically sensitive.

2.3 MAIN RECOMMENDATIONS

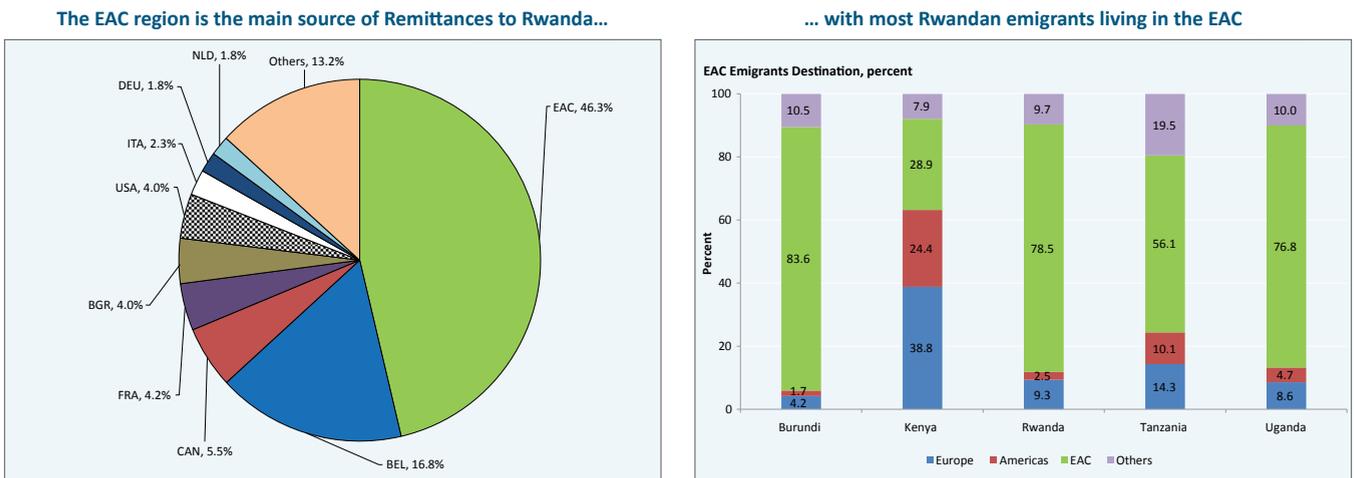
Using the framework of economic geography, this section presents key recommendations for EAC policies for improved regional integration to address challenges with the region’s underdeveloped infrastructure, persisting non-tariff barriers, and the lack of harmonized regulations. It also suggests potential benefits to increased labor mobility in the region.

First, regionalizing connective infrastructure may help to reduce economic divisions within the region, as it contributes to a more equitably allocation of costs and benefits of connectivity among EAC countries. Regionalizing infrastructure should include two strategic pillars:

- (i) eliminating cross-border infrastructure bottlenecks; and,
- (ii) promoting regional policy harmonization (alongside institutional capacity building).

Obtaining consensus from all governments in East Africa for a regional infrastructure policy and regulation, might be problematic due to different attitudes and commitments toward reform, as well as concerns about national sovereignty. It will require more cooperation and trust between countries. Initially, regionalization efforts could

Figure 39: Remittances to Rwanda



Source: World Bank, Migration and Remittances Factbook 2011.

focus on promoting regional regulatory cooperation, as a more realistic option for alleviating scarce country regulatory expertise and resources. At the start, regional regulatory entities in roads, rail, and energy could be established, to facilitate information exchange and offer non-binding advice on technical matters. Consensus for regional regulatory agencies could then increase as more countries reform, as gains from regional policy coordination and trade become more apparent, and as countries confront the costs and staffing challenges of creating and maintaining national regulators. Further, both returns and political feasibility of regional infrastructure projects might be improved, if these projects help the coastal economies to improve their access to markets and natural resources of inland countries, beyond the EAC such as the DRC or Southern Sudan.

Second, developing joint targeted interventions, such as establishing economic integration zones in coastal areas may help the East African economy to leverage global demand, and to pilot future common institutions in a place where they have a high chance of success. The report supports a coastal SEZ which would allow all partner states to benefit from concentrated economic activity, even outside their territory. Unlike the EAC, countries or regions that leverage global demand for goods generally use coastal areas for production, because they are less economically distant from the global core, given the much lower costs of water transport. But there are some risks associated with a transnational SEZ. A big challenge is in maintaining the commitment of the host government(s) and other partners over the long term. This is the challenge of managing the investment risk—the issue of credible commitment. A government could, for example, reclaim sovereignty over the zone or put up barriers to the interaction between the zone and the national economy. This could be triggered by political, social, or economic issues in the host country, including fiscal crisis, economic or political nationalism, and elections and subsequent policy instability. Potential approaches to overcoming the commitment challenge for the regional SEZ, given the likely asymmetric distribution of gains, fall into three

broad categories. First, commercial and financial mechanisms can establish an effective incentive system from the outset, enabling trust. Second, formal institutional approaches to ensure commitment are largely related to legal constraints, and enforcement mechanisms through which to bind parties to commitments. Finally, there are informal approaches to align the mutual interests of stakeholders. These approaches are by no means mutually exclusive—indeed, overcoming the commitment challenge likely relies on using all three.

Finally, increasing labor mobility would help to generate important agglomeration effects in the medium to long term, but also help to address critical skills gaps in selected EAC countries in the short term. As noted in the 2009 WDR, the ability of people to move is a good gauge of their economic potential, and the willingness to migrate appears to be a measure of their desire for advancement. While the government should support labor mobility and remittances, this should not be taken as an excuse to not facilitate the country's industrialization. The facilitation of development of activities would need to follow a selective approach to the types of industries whose development may have important payoffs in countries with low economic density, and where for a number of reasons, the economic geography is not favorable. Policy makers should take into account that not all industries appear to react in the same way to agglomeration effects. For example, Rwanda appears to have a natural comparative advantage in services, including tourism, and can serve as a gateway between the Anglophone East Africa and Francophone Central Africa. But in order to use this opportunity to become a more service-oriented economy, Rwanda would need to develop over time, the right skills mix in its population, and support agglomeration of services in Rwanda. In the short-run, Rwanda can gain much from better movement of labor, through the import of service sector skills from the EAC. In the medium and long term, once education and human capital constraints are better addressed, it could become an important source of qualified labor migration for the EAC.

2.4 CONCLUSIONS

For Rwanda to make the best of regional integration, it will be important to take into account how division, distance, and density can influence firm location within the EAC. As a small, high density, landlocked country, Rwanda has all the incentives to favor an aggressive regional integration process to exploit the opportunities of economies of scale, and specialization that can be created by a significantly larger market than the Rwandan. Yet there are also challenges in this strategy, as regional integration may lead to a concentration of economic activity in the EAC coastal states. In this regard, Rwanda may need to focus on sectors such as services, where infrastructure plays a less important role in the assessment of distance, especially for industries where agglomeration effects are not that relevant.

The EAC governments will want to choose integration policies that are implementable with their national (and regional) institutions, and gradually scale up as capacity and confidence improve. The first embodiment of the EAC collapsed partly because it was too ambitious.²¹ More recently, launching the customs union before national and regional bodies were ready to remove non-tariff barriers has proven to be difficult. If integration helps to gradually increase the institutional capacity of the EAC, it would make the next steps easier.

Getting sequencing right will be key for success, but also a challenge, because international experience does not offer any blueprints on regional economic integration for the EAC's circumstances. Limited capacity in public institutions makes it hard to follow the European model, and the asymmetry of coastal and landlocked partner states dims the allure of the East Asian model. Optimal sequencing of economic integration, and design of the safeguards ensuring the sequencing's political sustainability, depend not only on the substance of the integration policies, but also on the risks that the overall process faces. At this stage of integration, risks of the EAC collapsing are limited

for three reasons—(i). convergence in economic policies and institutions; (ii). outward orientation of economic policies of the landlocked partner states; and, (iii). common security interests—but risks of its integration stalling are greater.

Convergence in economic (and political) institutions was among the factors helping to re-establish the EAC. It is also helping to sustain it: having common institutions and more deeply integrated economies, may help to further promote institutional convergence, which in turn cements the Community. After Kenya, Tanzania, and Uganda attained their political independence, the perception that Kenya was benefiting disproportionately from the regional trade arrangements became a major stumbling block. Today, an outward shift in priorities toward the greater importance of global markets makes a difference. For the three landlocked countries, access to international markets depends on transit via Kenya and (less so) Tanzania. Under these conditions, even if a future Ugandan government, for example, thought that Kenya was benefiting too much from the trade arrangements, the idea of going it alone would become much less appealing.

Risks of stalled integration are higher because of asymmetric impacts of integration policies. Economic concentration in the coastal states, and the consequent reforms to level the playing field in the landlocked partners have asymmetric—and sometimes opposite—impacts. The same issues which led to the EAC's collapse in the 1970s—including failure to agree to larger redistributive transfers—can slow integration, even if they are unlikely to cause the current Community to disintegrate. The main risk now is of a stalled form of integration in which a common market, although existing on paper, still allows substantial barriers to commerce in practice, an issue of particular concern for the landlocked countries. These countries depend on access to the coast through other states, and the cost of this access depends on both immutable, natural features (distance), as well as those that can be modified by

²¹ It was predominantly government-driven, while the new EAC expressly confirmed the crucial role of the private sector and civil society: the principles that govern the objectives of the community shall be "people-centred and market-driven" (Article 7 of the EAC Treaty).

policy (quality of infrastructure, and secure right of free passage). However, because African regions are divided into multiple states, some landlocked and some coastal, coastal states do not fully internalize the benefits of policy measures, that improve coastal access for others. To address this problem, the EAC must chart its own course.

Development Partners may play a role mitigating some of the asymmetries through some fiscal compensation. Potentially, the World Bank (and others) can facilitate integration, and make it more politically sustainable by emulating and encouraging fiscal pooling in their lending practices. It can do this through policy lending and investment lending.

- *Policy lending to implement the integration policies with asymmetric impact on partner states.* Potentially, any policy removing economic divisions between the EAC partner states, such as removing obstacles to labor mobility, regionalizing cross-border infrastructure, establishing one-stop border posts, or establishing regional payment systems, may qualify. This would partially substitute for fiscal pooling and help to achieve some of its objectives.
- *Investment lending for connective and productive infrastructure of landlocked countries.* While

activities exhibiting increasing returns to scale, such as high-end manufacturing, are unlikely to concentrate in the landlocked countries, some others, such as agricultural processing, certainly can—and demand for their output is likely to increase, if the coastal economies grow faster. To facilitate their development, donors—and eventually the EAC itself—can help to invest in connective and productive infrastructure. Investment in the infrastructure helping agricultural processing in Rwanda and other landlocked EAC partner states, should be complemented by enhancing regional specialization in agricultural research, enhancing collaboration in agriculture training and technology dissemination and facilitating increased transfer of agricultural technology, information, and knowledge across national boundaries.

- *Investment lending for provision of social services.* Incomes per capita and demographic dynamics of the landlocked countries, and reducing disparities in provision of social services would mean greater investments in landlocked countries. Since a fiscal pool large enough to reduce disparities in human capital investment per student is unlikely in the short to medium term, development partners may need to step up their support.

ANNEXES

Annex 1: Consumer Price Index in Rwanda

Methodology: The Consumer Price Index (Headline CPI) and the core consumer price (core CPI) are published by the National Institute of Statistics of Rwanda (NISR) and of the Central Bank of Rwanda (BNR) on monthly basis, and are usually released every month by the fifteenth. The core CPI is defined as the CPI excluding fresh food and energy prices.

The CPI uses a Modified Laspeyres formula to calculate the index. The reference population for the CPI consists of all households, urban and rural, living in Rwanda. The index reference, or base, for the CPI is February 2009.

The household basket includes 1,136 products observed in many places spread all over the administrative centers of all provinces in Rwanda. All kinds of places of observation are selected: shops, markets, services etc. More than 29,200 prices are collected every month, by enumerators of the National Institute of Statistics of Rwanda and of the National Bank of Rwanda. The weights used for the index are the result of the Household Living Conditions Survey (EICV II) conducted in 2005-2006 with a sample of 6,900 households.

Table A 1: Disaggregated components in the CPI and the core CPI

Components	Weights (percent)	
	CPI	Core
1. Food and non-alcoholic beverages	35.38	
2. Alcoholic beverages and tobacco	2.40	
3. Clothing and footwear	3.77	
4. Housing, water, electricity, gas and other fuels	22.04	
5. Furnishing, household equipment and routine household maintenance	4.57	
6. Health	1.63	
7. Transport	11.89	
8. Communication	2.88	
9. Recreation and culture	2.56	
10. Education	3.31	
11. Restaurants and hotels	5.58	
12. Miscellaneous goods and services	4.00	
Total	100.00	78.29

The overall CPI basket can also be classified into three categories: fresh food, energy items and core CPI with the weights of 14.03 percent, 7.67 percent and 78.29 percent respectively. Fresh food category consist of: cereals not transformed and flour, fresh or frozen fish, banana (for fruits, cooking and for beer), bean, fruits and vegetables, potatoes, cassava, tarot, salt, spices and culinary herbs. Energy includes: electricity, gas, liquid and solid fuels and lubricants.

Annex 2: The Taylor Rule

Being proposed as a monetary policy for the USA by John Taylor, the Taylor rule exhibits how a central bank should systematically arrange the interest rate as a policy instrument within its macroeconomic activities and during the development of inflation. The rule systematizes the reaction of the monetary policy against prevailing trends of inflation and economic conditions, by using the money market short interest rates as a monetary policy instrument. The Taylor rule calls for a higher setting of the policy rate when inflation is (or is expected to be) high and/or the output is high relative to capacity. Theoretically, the increase/decrease in the policy rate is generally thought of as representing a move toward more restrictive/loosening policy stance, one that tends to reduce/increase aggregate demand.

Taylor rule proposes a simple model that provides the key instrument to the central banks to focus on.

$$i_t = r_t^* + \pi_{t-1} + \alpha(\pi_t - \pi_t^*) + \beta(y_t - y_t^*)$$

In this equation, while

- i_t : is the nominal federal funds rate (the policy rate),
- r_t^* : stands for the real interest rate (2 percent)
- π_t the inflation rate,
- π_t^* is the targeted inflation rate,
- y_t the real gross domestic product (real gdp) y_t^* is the potential GDP growth.
- α and β stands for the responses importance that a central bank gives respectively to inflation and economic conditions while setting the policy rate. Taylor took both as equal (0.5).

The sources of Data used for this exercise are: (i) IMF country report for targeted inflation proxied by the period average consumer prices (Selected Economic indicators); (ii) BNR website: monthly inflation and policy rate and (iii) National Institute of Statistics for the GDP growth. The GDP trend was estimated based on the actual GDP.

Annex 3: The 2009 Credit Crunch

Beginning 2005, the banking sector in Rwanda experienced an excess liquidity position, following the recapitalization of two banks, which were in financial difficulties, and the reduction of the Government's financing of the budget, through overdraft and commercial bank borrowing (because of higher external funding support since 2004). Banks also still limited lending to the private sector, as they preferred lending to the Government, which led to a limited absorption of prevailing liquidity. As a result BNR had to intervene massively on the money market, with money market and Treasury bill rates decreasing to historic low levels in the first quarter of 2005. In August 2005, BNR introduced the reference rate for money market operations, set at 9 percent and replaced it in August 2008 with the KRR. In August 2005, growth of credit to the private sector was above 30 percent year-on-year and the core inflation was still in single digits. By March 2006, the policy rate had become negative in real terms as core inflation was rising, but high growth in credit to the private sector was continuing. In July 2008 growth of bank deposits declined sharply after the withdrawal of around Rwf8 billion by large depositors in an attempt to diversify their asset portfolio (from savings deposits to more attractive investment outlets such as real estate, government bonds, etc.). Prior to this, a large domestic cooperative network graduated to a commercial bank status in early 2008, and withdrew about Rwf6 billion as deposits from other commercial banks. Growth in credit to the private sector peaked at 37.1 percent year-on-year in November 2008, when the core inflation was at its historic highs, at 22.7 percent. At the same time BNR kept the KRR constant (Figure 12). As a result of the deposit to credit mismatch, deposit rates increased and the market for credit dried up.

Annex 4: Forecasting Sectoral Growth

This annex describes the methodology used by the World Bank's country economic team in Kigali in making a GDP forecast for Rwanda for the next few years. Three important elements were crucial for putting together the GDP forecast. First, a fairly comprehensive database was assembled from available information from the National Institute of Statistics of Rwanda. Second, a large number of indicators relevant in explaining sectoral growth were also compiled. Third, attempts were made to select a set of behavioral relations, that would facilitate forecasting in the short-run.

The forecast is based on the national accounts data published by the National Institute of Statistics of Rwanda for past years, which is traditionally presented for a substantial breakdown by sub-sectors. For example, the Rwanda national accounts show five different sub-sectors for agriculture, four sub-sectors for industry, and nine sub-sectors for services. It should also be noted that under industry, manufacturing is further sub-divided into seven sub-sectors. The aggregate national accounts data for the country thus shows nineteen sub-sectors in the published tables.

In consideration of the volume of work involved in incorporating forecasts for all these nineteen sub-sectors, it was decided to focus attention on the most important sub-set. Thus, taking into account the weight of each sub-sector in the overall GDP, it was decided to limit the analysis to the following ten sub-sectors: food crops, export crops, manufacturing and construction, wholesale and retail trade, transport, storage and communications, real estate and business services, public administration, education, and other personal services.

An important element of the exercise had been to assemble appropriate databases to determine any empirical regularities that can be discovered in each of the ten sectors under study. Thus, a considerable volume of data had been gathered on various indicators closely correlated with developments in a given sector. This body of data can be considered as "leading indicators" of the sectors in question.

The other key methodological element in the current exercise had been to capture as far as possible, what may be considered as important regularities in the behavior of the selected sectors of the economy. These regularities (which are largely historical because of the use of time series for the recent past) are assumed to be informative about the future, especially in the short run. However, things could turn out to be quite different from prior expectations. Thus, the methodology relies on a probabilistic approach. While it would have been appropriate and useful to present the forecasts with confidence intervals, the results of the exercise are presented as point estimates purely from the perspective of convenience.

The estimation of a number of relationships explaining the behavior of value added in each of the selected sectors was performed. These estimates have to be treated as indicative for several reasons. First, it has not been possible to assemble reliable time series on several key variables. Second, the quality of the assembled data still needs improvement. Third, it has not been possible to conduct the usual tests of the time series properties of the data. Fourth, due consideration has to be taken of technical issues such as omitted variables bias in the estimated equations, and the issue of simultaneity in the system as a whole. The team hopes nevertheless, that a foundation for future work has been laid with the approach taken in the current exercise.

Forecasting is rather complex because the future is largely unpredictable. This is more so in the current uncertain global environment brought about by the economic crisis in the major developed countries since 2008, including the US and the Euro zone. As more experience is gained in building information about "leading indicators" for Rwanda and estimation and use of empirical relationships, it is hoped that the present exercise could be improved in the next rounds.

1. Agriculture

Food Crops projection: The methodology is based on a two-step procedure, from estimates of volumes of crop production to sector GDP. First, volumes of crop production have been estimated. Agriculture is rain fed and in the first half of 2012, Rwanda has experienced delayed but abnormal heavy rains and floods, and this has likely impacted crop output adversely at the end of season B. However, given substantial past and ongoing public investments in the sector, it was estimated that the production will not be too much affected. Therefore, the production of the season B was estimated by using trend extrapolations. For the year 2013, volumes of production were also estimated by using trend extrapolations. With the volume of crops issue sorted out, the next step was to link that to GDP in the crops sector. In contrast, lumping together crops production data for the two agricultural seasons may not make sense as it creates a methodological issue for the projections part of the exercise. The reason is that the two seasons may be influenced by different factors. The degree of disaggregation to be considered has been an important issue in view of data and other considerations. A manageable number of sub-sectors was considered to be around five, at best. This means only five types of crops: cereals, pulses, bananas, tubers and vegetables were used. While a great deal of details are available for the above five sub-sectors, it has been found convenient to limit the analysis to one “food crops” sector. A more detailed sub-sector classification should be considered only for the next round.

Export Crops: The methodology is based on first estimating the volume of exports and then using that to arrive at value added in export crops production. An estimate of world commodity price movements in the near future was obtained. The nuance of the method is to avoid judgments about the volume movements (either from trends or other means). Rwanda’s key export crops are tea and coffee. According to past trend production, especially for coffee, one year with low production is followed by one year with high production (the natural coffee cycle). 2011 was a year with a low production, and 2012 is expected to be a year with higher production. For tea, every three years of increasing production are followed by a decrease in tea production. This leads us to project a decline in production of tea in 2012. Furthermore, the experience in the past years showed that with an increased coffee production, overall export values are expected also to increase. Although the global price of coffee is projected to decline on international markets, it was expected that this will be balanced by a high coffee production in 2012.

2. Industry

The most important industries in Rwanda are mining, manufacturing, electricity and water, and construction sectors. Of these, manufacturing and construction account for 95 percent of industrial activities. In the manufacturing sector, well over 65 percent of the output can be attributed to food processing and beverages and tobacco processing. Thus, it has been attempted to capture the growth of manufacturing (with emphasis on food processing), and construction sub-sectors. For construction sub-sector, the main assumption was based on large ongoing public infrastructure investments, but at a slower pace. For the other sub-sectors, trend extrapolations for projections have been used.

3. Services

An attempt was made to explicitly account for all the major services sub-sectors in the Rwandan economy. Particular attention was devoted to the following sub-sectors: wholesale and retail trade, transport and communications, real estate and business services, public administration and education. In the current analysis the following sub-sectors have been grouped into “other services”: hotels and restaurants, finance and insurance, and health and other personal services. It has to be noted that this aggregation is somewhat arbitrary, and any of the above sub-sectors can be separately highlighted as there are separate value added figures available for each of those sectors in the national accounts.

Wholesale and Retail Trade: The volume of wholesale and retail trade is closely related to the volume of imports and the domestic transactions in the non-traded sectors. The latter variable however could pose a problem since one of the key aspects of the whole exercise is also to get a forecast of the domestic economy. For simplicity, only the volume of imports variable has been used in the analysis.

Transport and Communications: Transport and communications are closely related to what happens in the wholesale and retail trade. Thus, in explaining the behavior of value added in this sector, two key proxy variables that have been used are, the volume of imports and exports. The estimated equation has a reasonably good fit for quarterly data.

Real Estate, Business Services: Real estate and business services cover a wide variety of services, which makes it not always easy to identify few explanatory variables. However, it has been conjectured that perhaps the degree of urbanization may be a relevant variable to capture the behavior of the sector. Indeed the simple regression of value added in this sector on the degree of urbanization (represented by the share of urban population to total) shows that 86 percent of the variations in value added in the sector can be explained by the urbanization variable.

Public Administration: Perhaps the most relevant explanatory variable for value added in public administration is the total expenditure of government in a given year. The simple regression estimated shows that 94 percent of the variations in value added in public administration can be explained by the variations in total public expenditures. The latter explanatory variable turns out to be highly significant.

Education: Enrolments in primary and secondary education are assumed to be reasonably good indicators of the volume of transactions in the education sector. The regression results show that almost 98 percent of the variations in the value added in the education sector can be explained by the two enrolment variables. The elasticity of value added in education with respect to primary enrolment is estimated to be around 0.9 while for secondary enrolments it is around 0.7. Both estimated coefficients are significant, as indicated by the t-ratios.

Other services (incl. health, other personal services, hotels and restaurants): Several sub-sectors are included in this category of “other services”. These are: hotels and restaurants, health and other personal services). The projections for these sectors are largely based on recent trends.

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