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SELECTED ISSUES

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INVESTMENT STRATEGY TO FOSTER STRUCTURAL TRANSFORMATION IN RWANDA[1]

Over the past 15 years, Rwanda has transformed its economy by moving workers out of agriculture into mostly services and some industry. This has been accomplished through strong public investment flows and efficient public investment management. Going forward, the challenge is whether the private sector can complement the infrastructure assets put in place by the public sector and maintain economic momentum. It will also require continued effort by the government in raising education standards, better matching qualifications offered to students to those most in demand by employers, and lowering electricity and transportation costs. If these challenges are met, Rwanda stands a good chance of maintaining its historically high growth rate and attain middle income status within 20 years.

A. Introduction

1. **Experience has shown that growth in economic output alone is not enough to improve the welfare of the population.** Transformation of the economy from fundamentally wide scale subsistence agriculture to a more urbanized, integrated, and enterprise-dominated economy is the essence of modern economic development, and what sustains improvements in economic welfare. This has been the experience throughout the industrial world, as documented by Duarte and Rusticcia (2010).

2. **Economic development is closely linked with this process of "structural transformation**" where the agriculture sector becomes more productive, thereby releasing labor to the manufacturing/industry and services sectors. This process raises the growth rate of the economy both because of improvements in agricultural productivity (more output per any given input) as well as a shift toward more production of and employment in higher value added activities.

3. **Sub-Saharan Africa (SSA) has just completed one of its best decades of growth, partly facilitated through structural transformation and investment**. Transformation of output has occurred as agriculture, the lowest productivity sector, declined as a share of GDP across the continent, while the share of higher productivity sectors increased. The process of structural transformation was facilitated through increases in capital in all sectors.

4. **This paper documents the role of investment in the process of structural transformation in Rwanda**. The second section discusses the current state of structural transformation in Rwanda. The third section discusses the role of investment in the process and the continued bottlenecks that remain in the economy. The fourth section provides a cross country comparison of the quality of investment management and investment outcomes in Rwanda and

[1] Paper prepared by Alun Thomas and John Kayemba.

steps that are being taken to improve the process. Section V concludes with a discussion of the potential for the private sector to drive the development process forward.

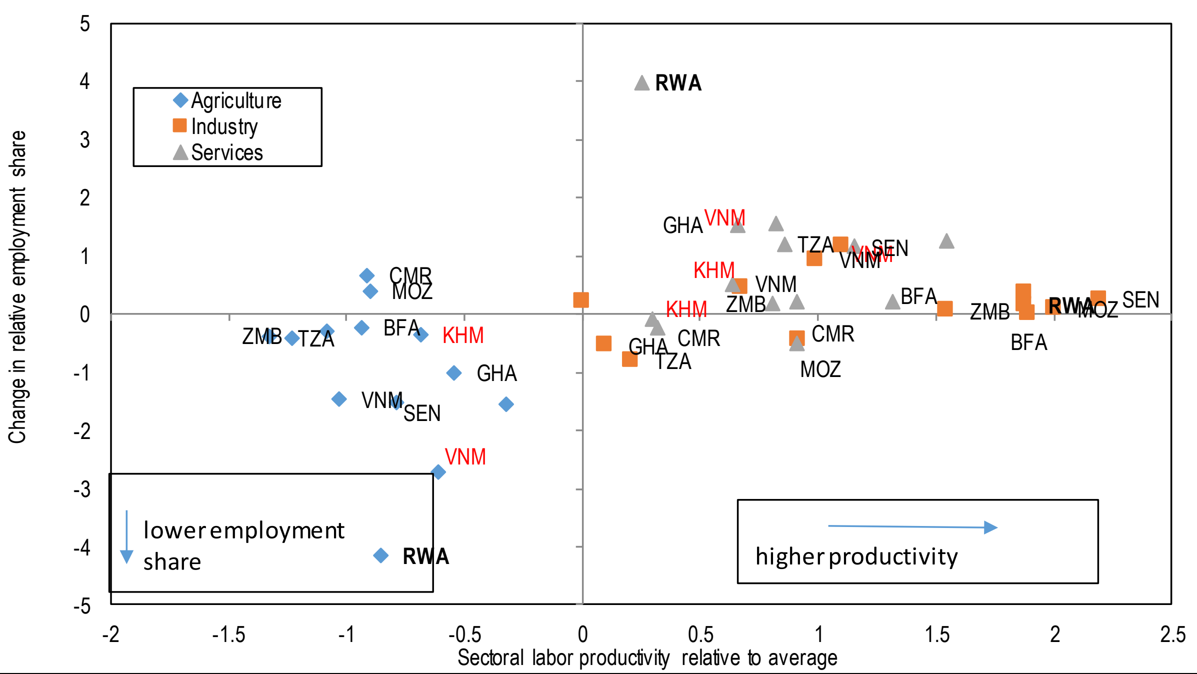
B. State of Structural Transformation in Rwanda

Sector Analysis

5. In SSA countries, over the 2000-10 decade, workers moved out of agriculture, where relative productivity levels are low, into the services and manufacturing sectors. This picture documented by Fox et al. (2013) reverses McMillan and Rodrik (2011) who analyzed developments in SSA during an earlier period (up to 2000) and found workers moving into lower-productivity sectors. The updated labor productivity calculations were based on combining sectoral output levels with corresponding trends in sectoral employment levels based on household survey data. Figure 1 plots average annual changes in employment shares over the 2000–10 period against relative productivity levels for agriculture, industry, and the services sector in 2000. During this decade of high growth, almost all SSA countries showed a pronounced shift in employment toward higher value added sectors. The only sub-Saharan African countries that did not, due to increases in the share of employment in agriculture, were Cote d'Ivoire and Mozambique.

Figure 1. Selected Countries: Labor Productivity and Changes in Employment Shares: 2000–10

(Percent)



6. For Rwanda, the shift of employment toward higher value-added sectors has been comparatively rapid. In a cross-country comparison, through 2010, Rwanda experienced a large shift in the share of employment from agriculture to services. Interestingly, over the most recent three-year period, 2011–14, while the annual decline in the share of employment in agriculture remained about 1 percent per annum, more of the jobs created over this period occurred in industry (0.66 percent) rather than services (0.33 percent). In Rwanda, as elsewhere, industry/manufacturing output has the highest value added.[2]

7. Industry, and more particularly manufacturing, plays a smaller role in the Rwanda economy than elsewhere in Sub-Saharan Africa. Manufacturing is considerably below other East African countries although its importance is closing in on the average LIC (Table 1). There is a general recognition of the difficulty in stimulating manufacturing in a landlocked country such as Rwanda which is why the focus of its investment strategy has been on agriculture and services.

Table 1. Employment and Output Shares
(2010 except where stated)

	Employment Share	Output share	
	Industry	Industry	Manufacturing
Rwanda (2016)	7.4	17.0	6.0
Kenya [1]	8.4	13.5	9.9
Uganda [1]	5.8	24.1	7.5
Tanzania [1]	6.9	18.9	9.5
LIC average [1]	7.1	14.8	7.7
Laos	5.4	40.0	11.0
Bangladesh	10.8	28.2	17.6
Cambodia	11.1	29.4	17.0
Vietnam	14.3	33.3	13.7

Notes:
[1] Employment data refers to a 2015 projection from Fox et al.(2013)

[2] The increase in the industry share is supported by data from the establishment surveys. Of course, these surveys cover a much smaller fraction of workers than the household surveys.

Total Factor Productivity Analysis

8. An alternative way of looking at economic transformation is through "total factor productivity." Looking at the whole economy, this analysis estimates the contribution to growth from increases in productivity (i.e. more output per input via, e.g. more sophisticated machines, use of information technology) vs. increases in inputs (e.g. more labor, machines). In the figures below the standard analysis is presented using the number of workers and combining the number of workers with a measure of educational attainment (average number of years of education) to give a quality-adjusted labor series.[3]

9. In considering a few high-growth, non-resource-rich economies, the data suggests that growth has been largely dependent upon increases in inputs rather than increases in productivity, especially during the most recent five-year period. While growth has averaged between 5–7 percent over the 2010–14 period, growth in productivity was low in most cases (Table 2). The exception is Kenya, which had higher productivity growth. This may relate to the size and greater sophistication of its economy, with mobile banking providing access to capital to a much wider population. For Rwanda, despite a relatively constant growth rate over the period, growth in productivity contributed far more in the earlier 2000–10 period than in the last five years. A challenge going forward will be to maintain the momentum for productivity growth.

Table 2. Output Growth Decomposition

(Contribution to annual growth rates)

		Real GDP	Capital stock	Labor	TFP	Adjusted labor	Education	Adjusted TFP
Burkina Faso	2000-2014	5.5	2.7	1.5	1.4	2.0	0.1	0.7
	2010-2014	6.3	4.0	2.0	0.4	2.6	0.1	-0.4
Ethiopia	2000-2014	8.6	2.8	2.1	3.7	2.6	0.1	3.1
	2010-2014	10.4	5.4	2.3	2.7	3.0	0.1	1.9
Kenya	2000-2014	4.3	1.8	1.6	0.9	2.3	0.1	0.1
	2010-2014	5.8	2.3	1.7	1.8	2.3	0.1	1.1
Rwanda	2000-2014	7.6	3.2	1.8	2.7	2.8	0.1	1.5
	2010-2014	6.9	4.2	1.6	1.1	2.8	0.1	-0.3
Uganda	2000-2014	6.6	3.8	2.0	0.8	3.1	0.1	-0.4
	2010-2014	5.1	4.0	3.2	-2.1	4.6	0.1	-3.6
Tanzania	2000-2014	6.3	2.4	2.1	1.9	2.5	0.1	1.4
	2010-2014	6.5	3.4	2.2	1.0	2.7	0.1	0.4

Source: Penn World Tables

[3] The methodology used for the analysis is described in more detail in IMF SSA REO October 2013

C. Role of Investment in Rwanda to Foster Structural Transformation

10. Rwanda is a small landlocked country far from the sea, and it is extremely difficult to achieve economies of scale from the industrial sector. The country is therefore focusing on the development of services through establishing itself as a business tourism hub and improving agricultural productivity. Rwanda's attractiveness is based on its cleanliness, security, good transportation and IT infrastructure and tourism opportunities. The authorities also recognize that some industry is needed to supplement export earnings and is focusing on light manufacturing (garments, shoes) and mining. It is also developing a policy of import substitution to conserve on foreign exchange needs and has identified cement, basic clothing, rice and sugar as products with the most potential of displacing imports.

11. Rwanda's economic plan is contained in the most recent poverty reduction strategy plan (EDPRS2) covering the period 2013–18. True to the country's comparative advantage, the plan focuses on improving agricultural productivity through increased irrigation, seed and fertilizer investment and promotion of services exports through large infrastructure investment. The plan aims to reduce poverty to 20 percent or below by 2020, and to increase foreign exchange earnings to place external balances on a sustainable basis, as external donor assistance is forecast to decline gradually in the future.

Agricultural Productivity

12. The government's investment program in agriculture focuses on increasing productivity and diversifying output to promote regional exports. This strategy will improve rural livelihoods where most the population lives and help to generate needed foreign earnings. Productivity is being emphasized through expanded irrigation and fertilizer use, improved seeds, and consolidation of land used for larger-scale agriculture. Irrigation has the potential to triple crop production compared to rain-fed agriculture and reduce the vulnerability to weather events. Irrigation also prolongs the effective growing periods allowing for multiple cropping (two to four crops a year). Up to mid-2016, almost half of the targeted amount of acreage under irrigation was met, with delays associated with the difficult topography of the country.

13. The promotion of inputs remains challenging because many farmers still do not use fertilizer, and application and distribution practices could be more efficient. The crop intensification program was initiated in 2008 and has helped to improve seed availability, the use of extension advisory services, mechanization and post-harvest handling. Some targets have not been met. For seeds, the EDPRS2 target was 70 percent of agriculture land coverage by end 2018, but only about 12 percent of land was cultivated with improved seeds as of mid-2016. On the other hand, the provision of 45 kg per hectare of fertilizer targeted by end 2018 is achievable.

14. While agriculture investments have improved crop yields, there remains room for improvement. Table 3 shows crop yields in terms of kgs per hectare for a variety of staple crops consumed in the East Africa region. While yields have improved considerably in Rwanda for maize and sorghum, they have fallen for cassava (because of disease) and have remained flat for beans.

Moreover, except for sorghum, the yields remain far below the most productive country in the region (Ethiopia in most cases).

Table 3. Agriculture Yields

(Kg per hectare in 2014, except where noted)

	Maize		Sorghum		Cassava		Pulses	
	Annual change 2000 - 14	Level 2014	Annual change 2000 - 14	Level 2014	Annual change 2000 - 14	Level 2014	Annual change 2000 - 14	Level 2014
Burkina Faso	0.6	1911	2.4	1103	-2.3	1297	0.1	1016
Ethiopia	7.9	3421	7.2	2365	12 [1]	20441 [1]	10.4	1634
Kenya	1.1	1660	1.8	832	6.7	13471	-1.4	272
Malawi	2.3	2311	3.4	989	3.7	23361	5.5 [2]	890 [2]
Mozambique	-1.1	797	-0.7	525	0.1	5877	2.0	638
Rwanda (2016) [3]	7.8	1575	0.7	898	-4.7	1644	-	797
Tanzania	-1.2	1604	2.1	1050	-1.4	5285	1.3	962
Uganda	3.1	2501	-2.7	802	-5.2	3301	1.3 [4]	689 [4]

[1] Data from Central Statistics Office, Ethiopia, 2011

[2] Pauw *et al. Year 2011*

[3] Data for 2015 & 2016 are from National Institute of Statistics Rwanda (NISR)

[4] Data from Uganda Bureau of Statistics (UBOS), 2011.

Source: Food & Agriculture Organization (FAO) except where noted

Export products have become more diversified in recent years which will help to relieve the forex constraint going forward. Indeed, hides and skins, meat, dairy and cereals exports amounted to almost US$100 million in 2016 and new crops are being introduced to help diversify production and limit climate change risks.

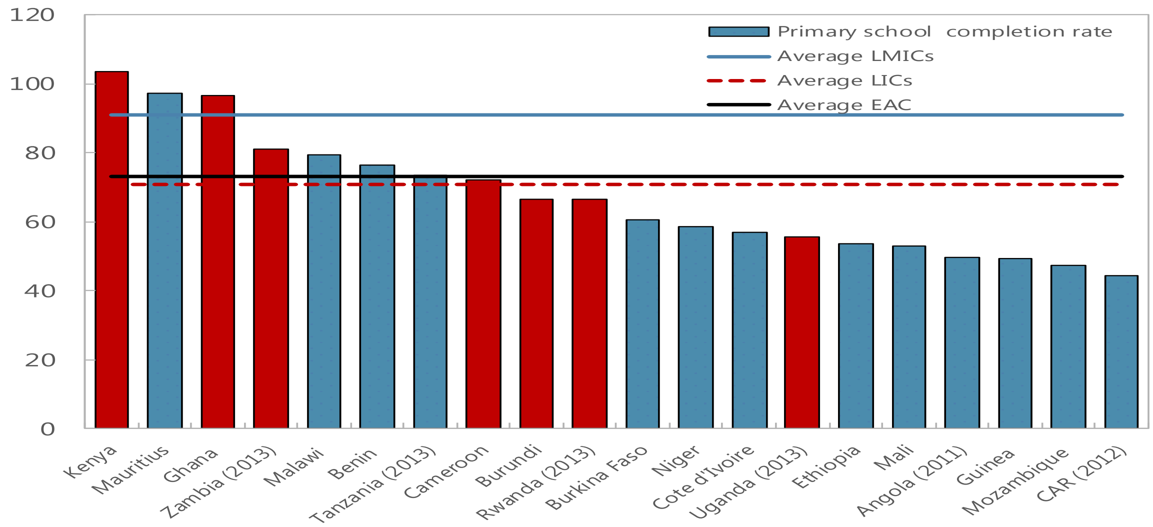
Services

15. Rwanda's objectives in the service sector are enshrined around increasing the external connectivity of Rwanda's economy and boosting exports. The government has committed large resources in expanding RwandAir, and developing the Meetings, Incentives, Conferences, and Exhibitions (MICE) strategy and is in the process of securing financing for a new airport. Large new infrastructure has been set up in Kigali, including a new convention center and three new large hotels (Marriot, Radisson and Zinc).

16. For the strategy to be successful, services skills in the Rwandan work force need continuous upgrading. Improvements have gradually been made to the average level of education in the economy but this takes time. The graduation rate at the end of primary is below the SSA LIC average of 70 percent of the population (EAC countries are highlighted in red) and the dropout rate is higher than desired (Figure 2). The lower secondary school enrollment rate is also lower than the LIC average of 39.6 percent, and far below the leaders in SSA such as Kenya and Mauritius (mid 80s) where investment in high-quality education has been a strong objective of successive governments for decades (Figure 3). The repetition rate at secondary level is also higher than desired at about

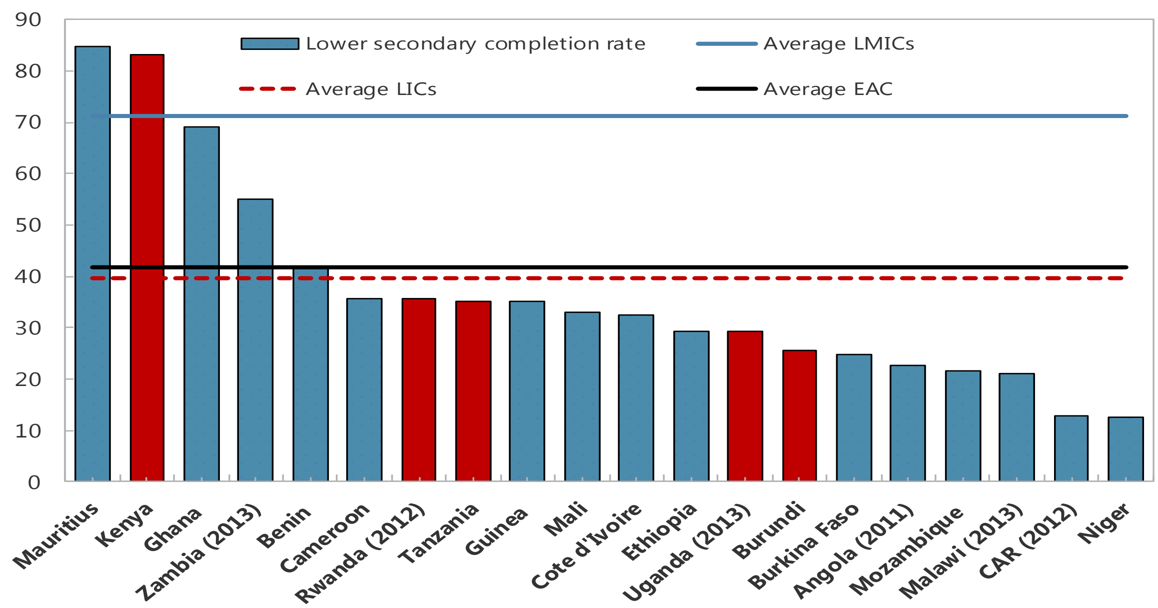
11 percent of pupils. The authorities are addressing the lack of skills in Rwanda's workforce by allowing the free flow of labor to Rwanda from other EAC countries, in particular, Kenya and Uganda.

Figure 2. Primary School Completion Rate
(2014 except where stated)



Sources: The United Nations Educational, Scientific and Cultural Organization (UNESCO)

Figure 3. Lower Secondary School Completion Rate
(2014 except where stated)



Sources: The United Nations Educational, Scientific and Cultural Organization (UNESCO)

17. There is a strong push to improve the quality of training in Rwanda because of a mismatch between skills provided through the Rwandan education system and the needs of employers. At the upper end of the education spectrum, Rwanda is attracting new college level education establishments. A World Bank grant is helping to establish in Kigali the Africa Center for Excellence in data science and the Africa Center for Excellence in Innovative Teaching and learning Mathematics and Science. Moreover, Rwanda's Technical and Vocational Education Training (TVET) system has been given a recent impetus with strong financial support from the German and Swiss development agencies. However, challenges remain. A significant number of trainers need to have their own skills and experience upgraded to ensure that their students develop "employable skills". At the lower end of the education spectrum, the government is offering laptops to primary school students through the one laptop per child program. Through April 2016, about 11 percent of primary aged children have been covered. The government is also partnering with Microsoft to offer digital solutions to the delivery of education. Of course, the success of these initiatives depends on availability of internet access and electricity which remains an issue (see below).

18. The increased focus on leisure and business tourism is already bearing fruit in Rwanda but foreign financing needs are growing. International passenger arrivals have doubled over 2010–15 to over 1.3 million visitors. Moreover, tourist revenue has increased each year from US$202 million in 2010 to over US$400 million in 2016. However, more action needs to be done to cover an ever-growing trade deficit estimated at US$1.3 billion in 2016.

Industry

19. While the overwhelming focus of the government's economic strategy is on agriculture and services, there is a growing recognition of the need to stimulate exports on all fronts, including industry. To foster industrial exports, government investments have been made both in setting up special economic zones and in reformulating investment incentives to stimulate activities geared for exports.

20. The New Investment Code prioritises sectors in exports, manufacturing, energy, ICT, financial services, and construction with the previous VAT exemption being replaced by corporate income tax reductions. Investments of US$10 million can exempt a company from corporate income taxes, with a US$50 million investment unlocking a seven-year tax holiday. Some of the tensions in the new investment code is that the lower corporate tax provisions relate to all exports including traditional goods while all investments can also unlock generous tax holidays.

21. To further boost exports, a company in the Special Economic Zone can opt to be a part of the Economic Processing Zone, exempting it from VAT, import duties, and corporate tax. To qualify, the company is obliged to export a minimum of 80 percent of its production. The removal of tax liabilities for an exporting firm compensates for higher transportation costs.

Sectoral Bottlenecks

22. Notwithstanding tremendous improvement in economic activity in Rwanda over the past two decades, major bottlenecks remain in the economy, some of which affect all sectors. In agriculture, the level of irrigation, fertilizer use and availability of quality seed remain low with notable problems of administration as documented by the Office of the Accountant General (annual report 2015).

23. In services and industry, availability and cost of electricity remains a severe constraint although the government is putting tremendous effort in improving the situation. Recent estimates put the cost of electricity per kW hour at about 30 cents in Rwanda, considerably above its neighbors Uganda (16), Tanzania (17) and Kenya (22), although the industrial price at 15 cents per kW hour is closer to that of its neighbors. On top of this, the high cost of transportation adds another layer to the cost of imported inputs. The 2016 trade logistics component of the 2016 World Bank's doing business indicators shows that Rwanda is ranked 156, below the Sub Saharan average, with the cost and time it takes to import goods a major trade deterrent.[4]

24. The government is addressing these issues in various ways. On energy, the country is trying to supplement concessional finance of projects with PPPs. Some success has been achieved through the Kivuwatt methane gas project and greater solar power provision. However, matching electricity generation with the transmission of electricity to the end user remains an issue. On transportation, serious effort has been placed in improving the road network and lowering non-tariff barriers with neighboring countries but these changes take time. Reports suggest that the number of days it takes to deliver a container from Dar es Salaam to Kigali is down from 22 days one year ago to 6 days currently and delays at the starting point of the transportation of goods (Dar es Salaam) are falling.

D. Role of Public Investment in Rwanda Compared to other Countries

Investment Outcomes

25. To assess the quality of investment it is necessary to monitor assessments of actual investment outcomes. Availability of investment outcome rankings is limited but one frequently cited source is the World Economic Forum (WEF) ranking of quality of infrastructure across developing countries.[5]

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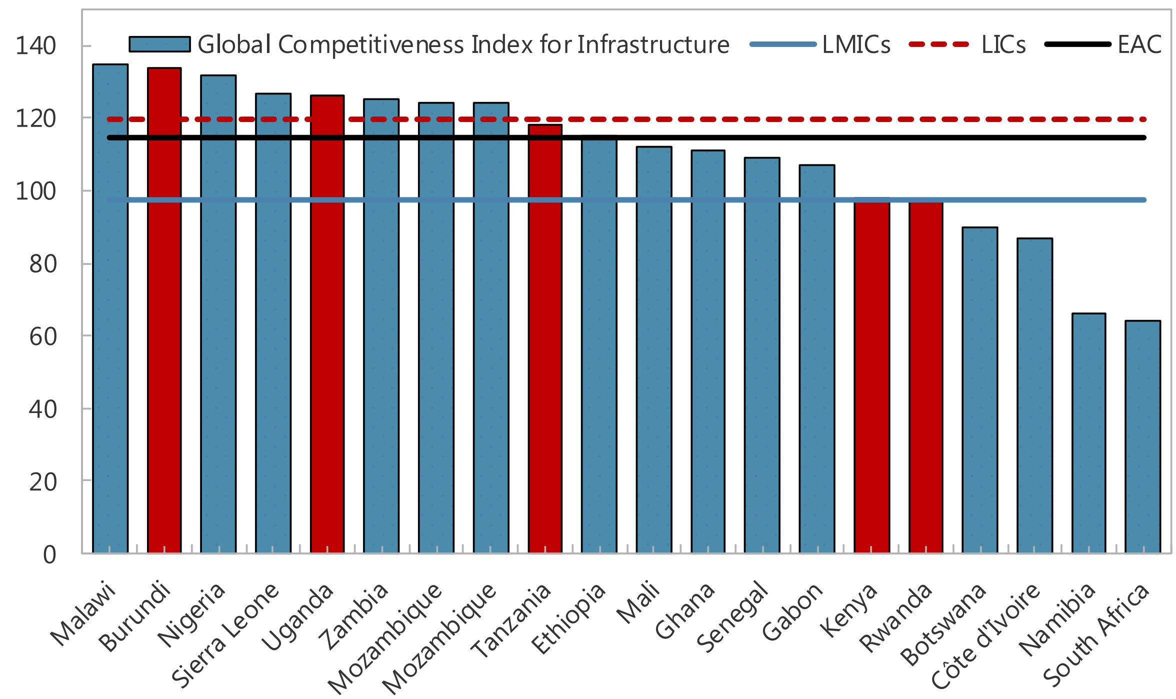
[4] On doing business overall, Rwanda ranks 62.

[5] The infrastructure outcome ranking is based on a subjective assessment by business leaders. However, the index has been shown to be strongly correlated with a ranking of outputs of transport, ICT, energy, and financial infrastructure (see Donaubauer, Meyer and Nunnenkamp (2014)).

26. **Based on this database, in 2016, Rwanda holds the second spot to Cote d'Ivoire among SSA LICs and LMICs.** In Figure 4, the ranking is expressed in reverse order so the weakest performers are on the left side of the x-axis. South Africa and Namibia are the leading performers and far outrank the LMIC average

Figure 4. Global Competitiveness WEF Index for Infrastructure 2014

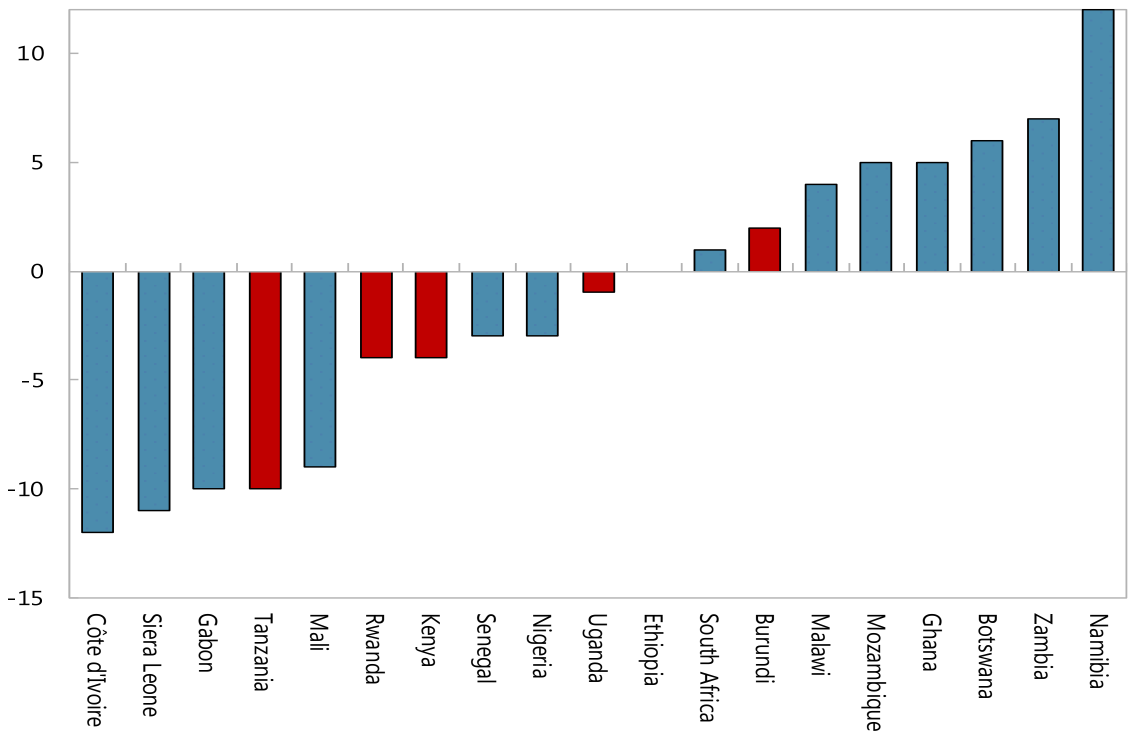
(Ranking in descending order)



Sources: World Economic Forum.

27. **Cross-country changes in the quality of infrastructure are slow but some countries have made significant improvements over the past 5 years, including Rwanda**. Over the period 2010–16 countries which have made the most progress in the assessment of infrastructure quality are mainly from Eastern Europe with many improving in ranking by double digits. Among African LICs, Cote d'Ivoire, Tanzania, Mali, Rwanda and Sierra Leone have registered improved performances (Figure 5).

Figure 5. Global Competitiveness Index for Infrastructure
(Change in rank between 2010 and 2016)



Sources: World Economic Forum

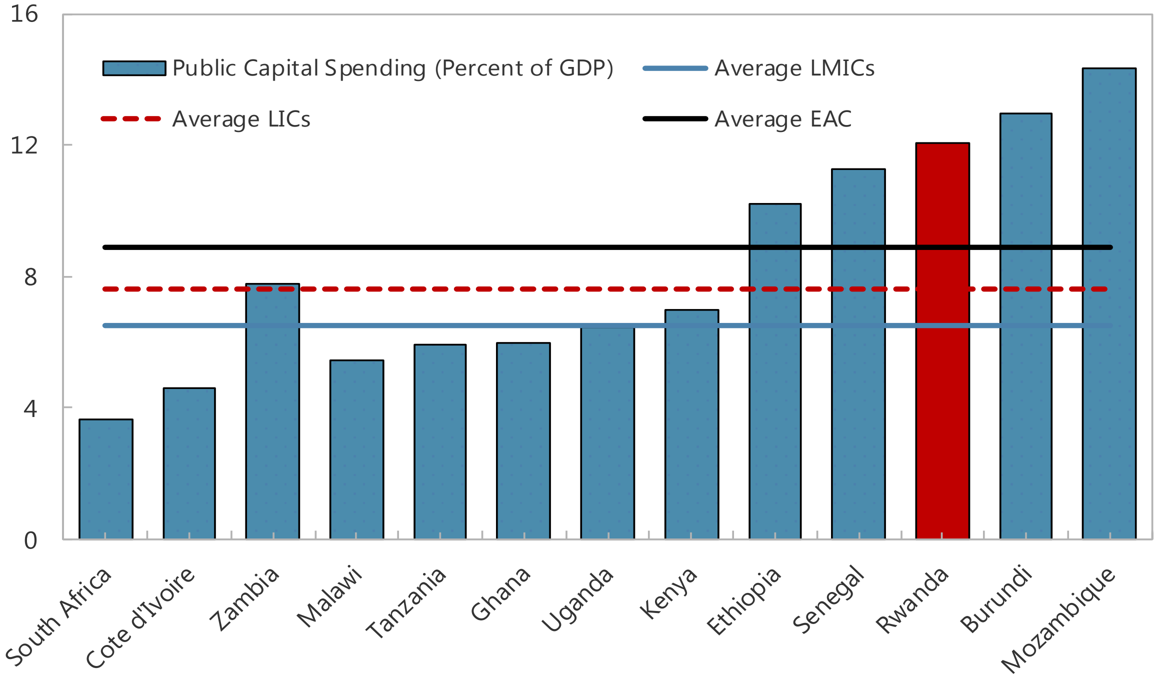
Public Investment Spending

28. How have these improvements in investment provision and quality come about? The public sector has played a key role. Rwanda has been particularly astute in channeling scarce foreign resources into productive investments. While the general view among academics is that foreign aid has not been particularly beneficial to countries, recent research at the IMF on SSA low income non-resource countries has shown that it has been a major driver of growth in these economies. In a growth regression for the six fast non-resource growing countries in SSA over the 1999-2010 period, the aid ratio was found to be highly significant and contributed ½ percent to per capita growth in Rwanda. [6]

29. Among a sample of countries, Rwanda spends more resources on investment than most. Figure 6 reveals that over 2010-14, the public investment ratio in Rwanda averaged 12 percent, considerably higher than Kenya and Uganda and comparable to Mozambique (another country with large amounts of ODA).

[6] REO October 2013.

Figure 6. Public Capital Spending, 2010–2014
(Percent of GDP)

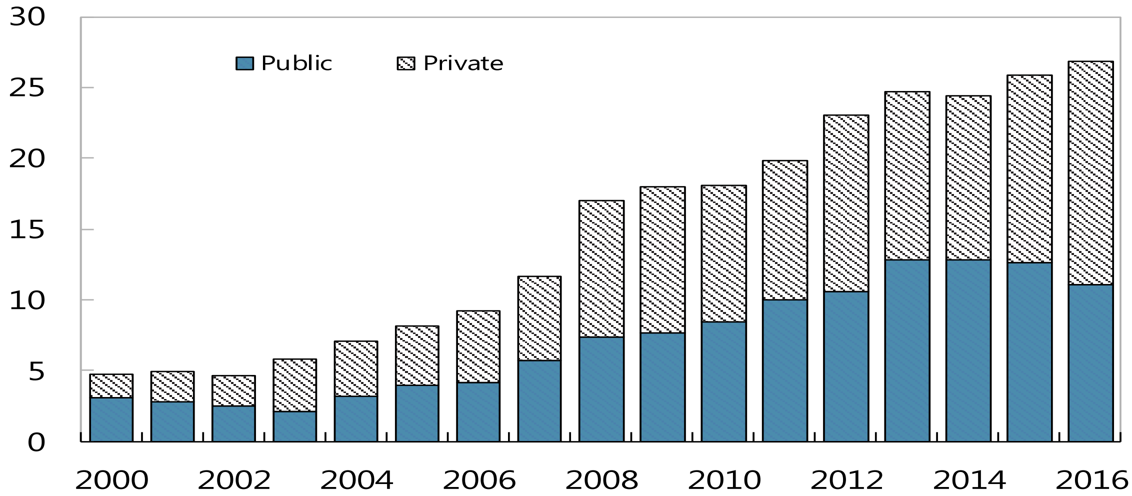


Sources: IMF African Department Database

30. The importance of public investment in Rwanda has gradually grown over time while private investment was fairly constant in relation to GDP until 2014. In 2008, public investment accounted for about 7 percent of GDP and by 2016 it had risen to 11 percent of GDP (Figure 7). These investments have helped to fuel the strong economy wide growth rate which has averaged about 7 ½ percent per annum over the 2010-15 period. The private investment rate remained fairly flat through 2014 but has surged subsequently with large investment outside the central government.[7]

[7] Public investment is derived from the central government financial statistics and therefore misses out a portion of SOE investment financing

Figure 7. Public and Private Investment

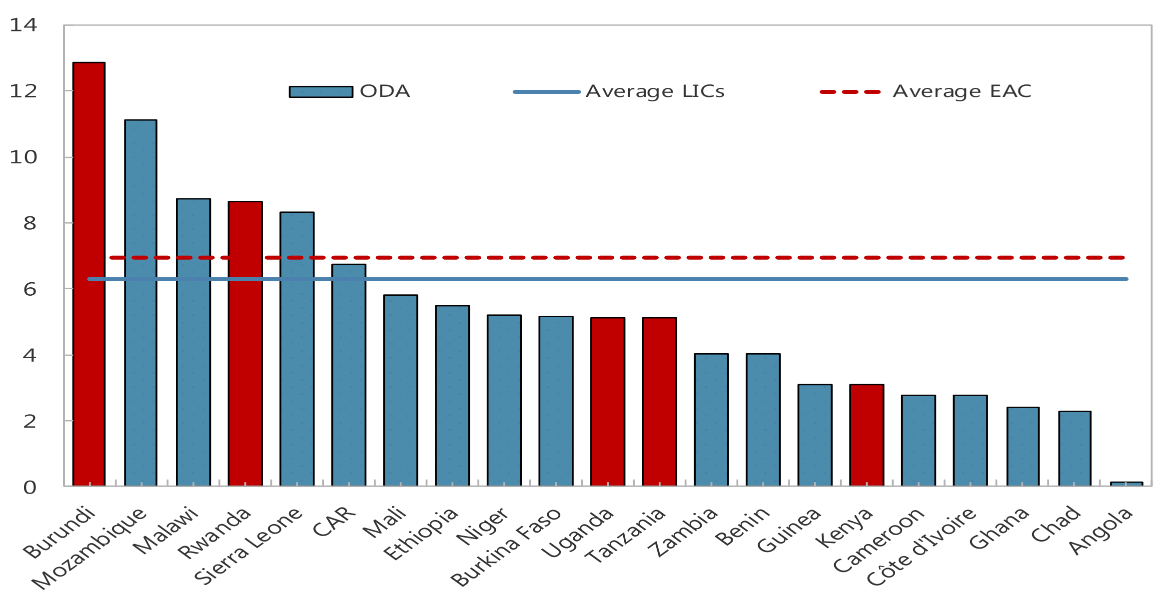


Sources: National Institute of Statistics Rwanda (NISR)

31. **Foreign aid has made an important contribution to the financing of Rwanda's investment.** To benchmark the amount of foreign support received by Rwanda, official development assistance is presented as a ratio of GDP for a sample of SSA LICs. Figure 8 shows that Rwanda has received one of the highest amounts of foreign financial support among the sample of countries over the past decade at almost 9 percent of GDP per annum.

Figure 8. ODA Received by SSA LICs

(Percent of GDP, 2010–14 average)



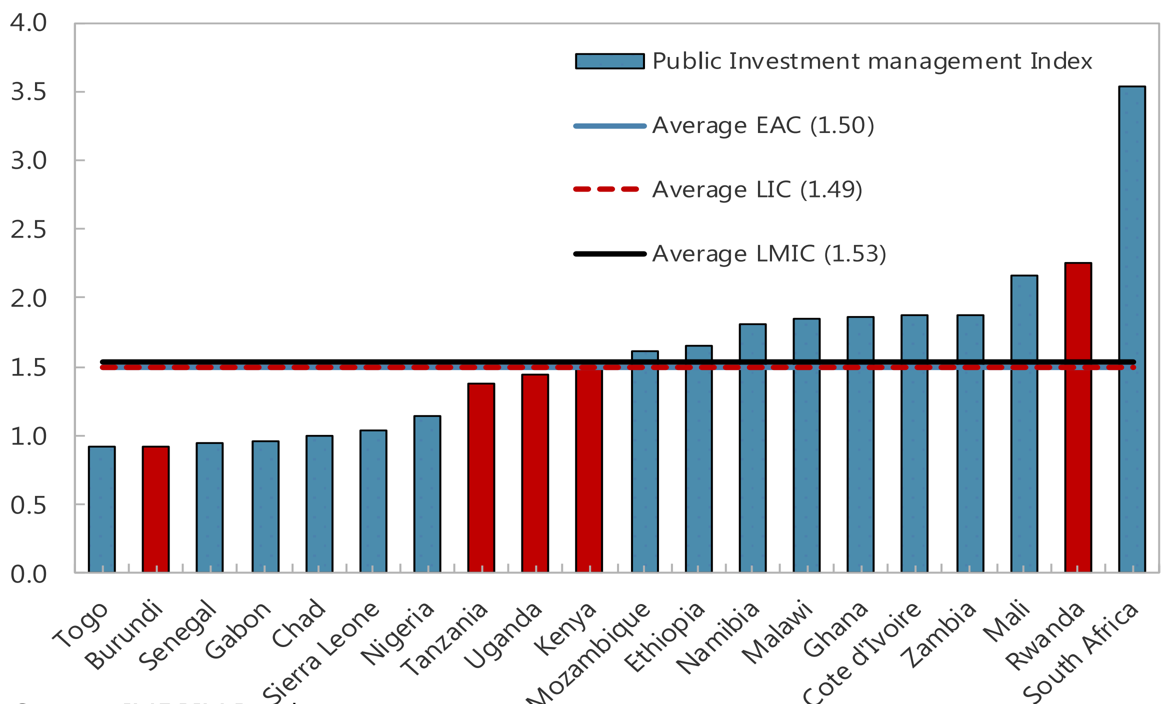
Sources: IMF African Department Database

Effectiveness of Investment Spending

32. Providing financing for public investment is a necessary but not sufficient condition for success. It also depends on the effectiveness of investment spending. While the concept of investment effectiveness is extremely important, up to now only a few indicators have been developed to try to capture it. One indicator that assesses public investment management (a key input into investment effectiveness) has been developed by Dabla-Norris et al. (2011). Their indicator is based on four stages of the public investment management cycle: project appraisal, project selection, project implementation and project evaluation. Each stage of the investment process has equal weight in the index and the index varies between 0–4.

33. Dabla Norris et al. have documented that Rwanda ranks high on Public Investment Management practices among developing countries for the year 2011 (Figure 9). Among the countries sampled, South Africa has the highest score while Rwanda is ranked above all other LICs. The other SSA low and low-middle income countries ranked closest to Rwanda are Zambia and Ghana; the other EAC countries (Kenya, Tanzania and Uganda) are far down the list. Cote d'Ivoire and Mali perform well on this index and they have recorded some of the fastest improvements in the quality of infrastructure over the past five years.

Figure 9. Public Investment Management Index
(Varies between 0–4)



Sources: IMF PIM Database

34. While the ranking of SSA countries in terms of infrastructure outcomes is much more bunched than for the PIM indexes, there exists an empirical relationship between the two indexes. To support this point, we correlate the rankings for the effectiveness of public investment management with the indicator of investment outcomes (quality of infrastructure) for the same group of countries in the same year. The results reveal a correlation coefficient of -0.38 which is significant at the 99 percent level of confidence. It could be argued that it takes time to translate improvements in public investment management into improvements in investment outcomes. However, since the investment outcomes as documented by the global competitiveness index for infrastructure are highly correlated over time, the correlation between the PIM index in 2011 and the global competitiveness index in 2015 changes very little compared to the contemporaneous correlation.

Recent Policy Interventions

35. The Rwanda government has introduced a comprehensive system for monitoring and evaluating public investment projects above US$1 million. A detailed feasibility study is conducted for each project and is reviewed by the investment committee on a monthly basis[8]. The committee also discusses ways in which the project can be financed: internal financing, mixed sources such as PPPs and purely foreign sources (concessional, non-concessional funding, FDI). The investment committee has now been operational for 3 years (with local government projects added to the appraisal list in FY15/16 but appraised by a new District Investment Advisory Committee). Recently, the investment committee has been empowered to approve PPPs and Joint Ventures.

36. The National Investment Policy currently before Cabinet creates a more robust framework for oversight and implementation of projects with clear roles and responsibilities of stakeholders. The local authority ministry has been assigned the role of monitoring and evaluation of local government projects. A new autonomous government investment body has been set up to manage the portfolio of public shareholdings. The Project monitoring unit in MINECOFIN has been transferred from the budget unit to the responsibility of the Minister of State in charge of Economic Planning. These actions are expected to improve monitoring of financial and non-financial performance and create feedback loops into the prioritization process.

37. Rwanda is being recognized by other countries in Sub-Saharan Africa as a country at the forefront of project evaluation. Peer-learning is taking place between national planning institutions. Recently, staff from the Senegal Ministry of Finance spent time in Kigali learning about the processes that Rwanda has set up to better choose projects with the highest economic and financial return.

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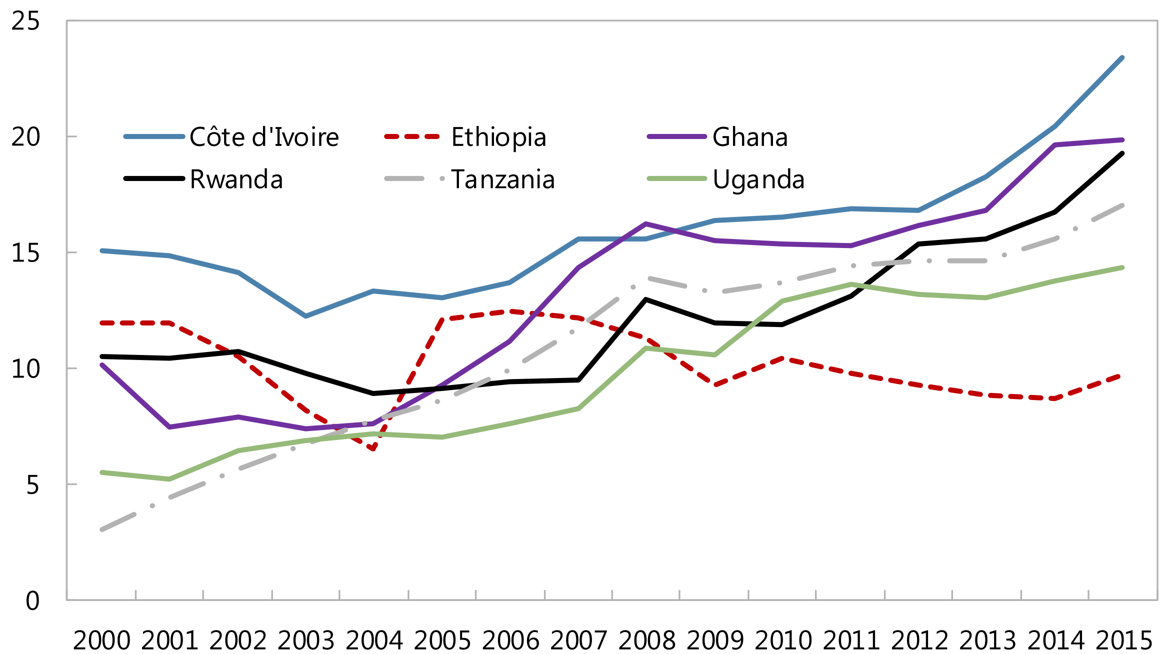
[8] The Investment Committee comprises the Permanent Secretary of the Ministry of Finance (chair), Deputy General planning and national budget, the Chief Economist, the Director of external finance and the Director of macroeconomic analysis

E. What can Realistically be Achieved over the Next 10 Years

38. Up to now, the investments needed to stimulate the process of structural transformation have mainly taken place through the public domain. Most of the financing of agriculture and services has come through the public pocket. This has led to a sharp rise in the public debt level from 18 percent of GDP in 2012 to a projection of 47.1 percent of GDP by 2018 and this implies that the room for further government borrowing is limited.

39. The government has put in place a plethora of infrastructure assets and, now, it is up to the private sector to make use of these assets to stimulate the economy further. Over the past decade private sector credit has doubled in Rwanda to reach 19 percent of GDP in 2015 (Figure 10). While this ratio remains below that of Kenya, Cote d'Ivoire and especially South Africa and Mauritius, it has risen above Tanzania and Uganda over the past 5 years (Figure 11).

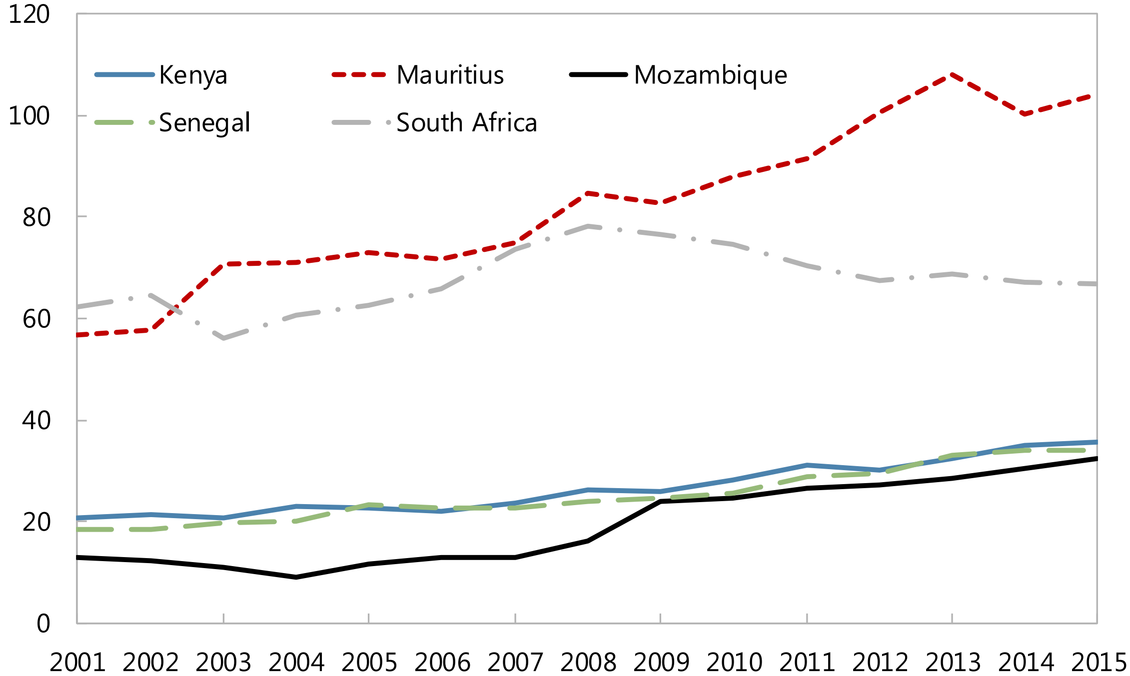
Figure 10. Private Sector Credit for LICs
(Percent of GDP)



Sources: IMF African Department Database.

40. Stimulating private investment in Rwanda is difficult because of the size of the economy and its land-locked status but the government is trying to address this through regional integration. The EAC trade block can help diminish the drawback of being landlocked by lowering the cost of imports and improving connectivity in terms of transportation. It has been successful in lowering non-tariff barriers and Rwanda is in the process of establishing a dry port in Kigali to ease in traffic transit through Kigali to Democratic Republic of Congo (DRC).

Figure 11. Private Sector Credit for LMICs and MICs
(Percent of GDP)



Sources: IMF African Department Database

41. Realistically, Rwanda needs to look west as a destination for its exports because, up to now at least, it has been unable to compete with countries closer to the sea. Over the past 15 years, while Rwanda goods imports from Uganda have risen by almost 15 percentage points to 18 percent of the total, it has been unable to penetrate Uganda with its exports. On the other hand, it has been successful in exporting to Congo. The share of Rwanda exports to Congo (mainly re-exports) has doubled over the past 5 years and now represents 26 percent of the total ($172 million). Many of these are low value-added products because only limited transformation occurs in Rwanda (petroleum and used vehicles originating from outside of the continent). A typical product exported to Congo with some value addition is wheat flour but currently the wheat required to be converted into flour is imported from overseas because of the competitive price and quality of the import.

42. Infrastructure is being developed at the DRC border to speed up the movement of goods. A one stop border post is being finalized in Rubavu that will require only one inspection of goods between Rwanda and DRC. Moreover, development partners have helped finance a program to support traders at the border and bilateral trade meetings between the Rwanda and DRC presidents have started. This strategy has strong potential because the north Kivu region has population base of over 14 million within 100 miles of the Rwandan border.

F. Conclusion

43. **Public investment has been instrumental in improving infrastructure in Rwanda over the past decade - but there remains an unfinished agenda.** Because of the sharp build-up of public debt over the past few years, the room for maneuver of future public borrowing is limited. The government must focus its energies on choosing the highest value infrastructure projects in terms of economic return and make optimal use of scarce foreign exchange. In this respect, more use could be made of the business enterprise surveys to identify the sectors that are making progress in terms of productivity and turnover and assess the role of company taxation.

44. **High returns exist from investing in education in Rwanda because of the current low education base, but the investment must be done carefully to ensure that the qualifications offered to students are those most in demand by employers**. It is hoped that the new specialist universities being set up in Kigali will have this objective in mind. The investment in education can also help the government's current business tourism strategy which is highly reliant on a labor force that can offer the quality of service demanded by consumers.

45. **Notwithstanding a sharp rise in FDI in recent years, coordination problems remain between various Ministries.** This has delayed and discouraged some investments, especially in manufacturing. More efforts are needed to find ways to ease the concerns of potential investors in investing in such a small country. A potential avenue is to match up potential private investors with private sector agents to help overcome financial constraints and achieve synergies.

46. **Finally, because of Rwanda's landlocked status and small size, continued efforts to gain stronger access to EAC markets and beyond is imperative and well understood by the authorities.** Lower transportation costs will stimulate trade which, for Rwanda, is most likely to occur along its Western border.

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STAYING THE ROLE MODEL: ADVANCING GENDER EQUALITY IN RWANDA[1]

A strong political will to mainstream gender into government programs, underpinned by institutional and policy reforms, has been key to Rwanda's progress in addressing gender inequality. Over the past two decades, socio-economic outcomes have improved significantly, with Rwanda emerging as a regional leader in advancing gender equality. Further advancing women's economic opportunities and endowments could yield a significant growth dividend.

A. Introduction

1. Globally, the economic and social benefits of reducing gender inequality are substantial. Greater gender equality can enhance economic efficiency, delivering productivity gains and higher growth (Figure 1) (Cuberes and Teignier 2016). Development outcomes could also be improved by raising prospects for the next generation, and more representative decision-making (World Bank 2012). Stronger economic growth, in turn, can create economic opportunities for women (Stotsky 2006), opening a virtuous cycle.

Figure 1. UN Gender Inequality Index and GDP per Capita Growth not Explained by the Level of Development, 1990–2010

Sources: UNDP Human Development Report; World Bank, World Development Indicators; and IMF staff estimates.
Note: Countries showing growth above zero are growing faster than can be explained by their per capita income, and those that exhibit growth lower than zero are growing more slowly.

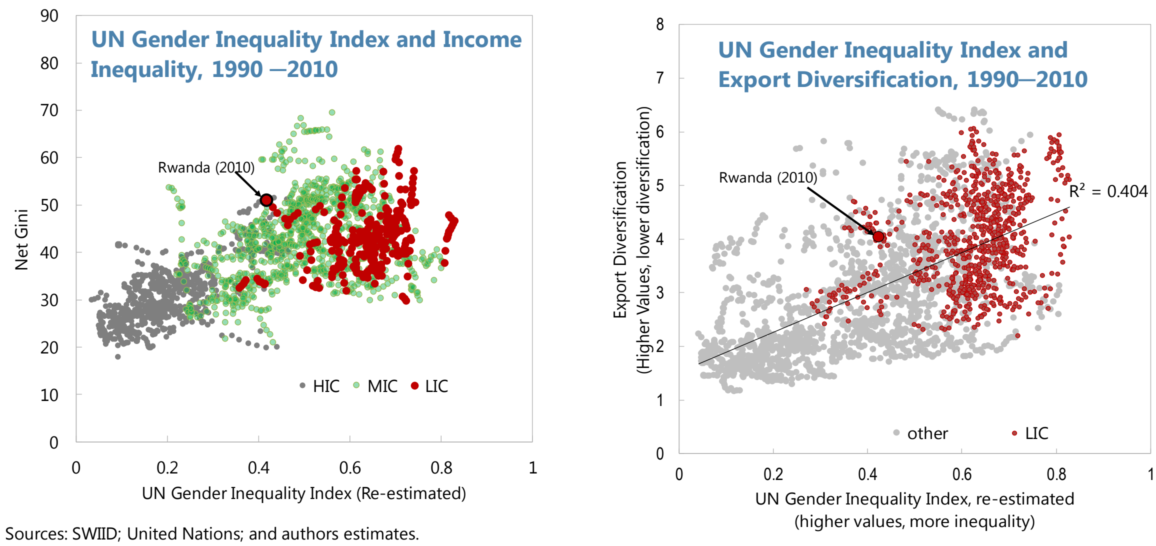
2. Overall, the gains from more gender equality could be large. For instance, reducing gender inequality—in the labor market but also in opportunities—in sub-Saharan Africa's low income countries—to the levels observed in five fast-growing East Asian countries[2] could boost per capita growth by two-thirds of a percentage point (IMF 2015); eliminating gender inequality in labor force participation could add up to 11 percent of sub-Saharan Africa's GDP by 2025 (McKinsey Global

[1] Prepared by Samson Kwalingana, Monique Newiak, Caroline Ntumwa, and Francine Nyankiye. This draft has benefited from extensive comments from Rwanda's Ministry of Gender and Family Promotion, the Gender Monitoring Office, the National Women Council, the Forum for Women Parliamentarians, and the National Institute of Statistics Rwanda. Discussion and comments from civil society and international partners, such as UN Women, the World Bank, the International Labor Organization, and Oxfam have also contributed to this paper.

[2] Indonesia, Malaysia, the Philippines, Thailand, and Vietnam (ASEAN 5).

Institute 2015); and gender inequality in the labor market alone cost the sub-Saharan Africa region some 6 percent of GDP annually between 2010 and 2014 (UNDP 2016). Further, financial inclusion for women would increase the growth-promoting potential of financial services, and lower financial stability risks (Sahay and others 2015). Gender inequality is also related to higher income inequality, and lower export and output diversification (Gonzales and others 2015; Kazandjian and others 2016, Figure 2).

Figure 2. Global Gender Inequality Indicators



Sources: SWIID; United Nations; and authors estimates.
Note: HIC = High-income countries; LIC = Low-income countries; MIC = Middle- income countries.

Sources: World Bank World Development Indicators, United Nations, IMF (2014), and IMF staff calculations.

3. Rwanda has been one of the fastest growing economies in sub-Saharan Africa, and emerged as a global leader in promoting gender equality.

- Over the past ten years, economic growth has averaged 7.7 percent, with per capita income close to doubling to $729 in 2016. Between 2004 and 2014, the poverty rate declined by almost 18 percentage points to 39 percent while extreme poverty declined to 16 percent
- Rwanda's advances in gender equality emerged, in part, as a necessary component of the rebuilding and development strategy from the mid-1990s, with women taking on new roles as major actors in society and heads of households. Today, the role of Rwandan Women is celebrated, as evident in many aspects elaborated further in this paper.

- gender equality as an integral component of its development agenda—with advocacy at the highest level,
- constant engagement in programs to enhance economic opportunities for women, home-grown solutions to address gender inequality, an enabling legal framework and supporting institutions—such as a dedicated gender "machinery": the Ministry of Gender and Family Promotion, the Gender Monitoring Office, the National Women Council, and the Forum for Women Parliamentarians. The provision of gender disaggregated data has increased (NISR 2016: National Gender Statistics Report), and allows a timely assessment of the main indicators.

Figure 3. Pillars to Support Gender Equality

Sources: Gender Monitoring Office, *Gender Dividend Report, 2016*; and IMF staff.

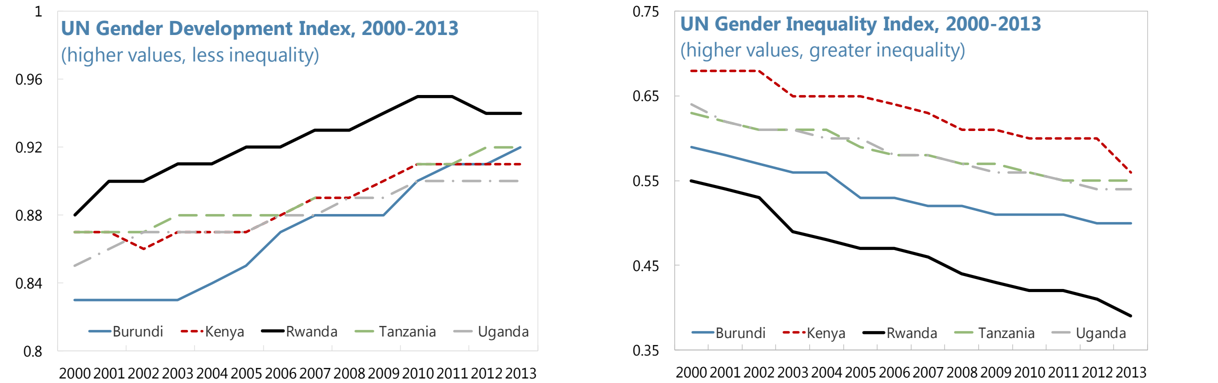
- In parallel, indicators of gender equality have improved significantly (Figure 4), and the World Economic Forum's 2016 Gender Gap Index[3] ranks Rwanda number 1 among all low-and-middle-income countries in closing the gender gap. Rwanda also positioned itself as number 5 worldwide, and one of only five countries to have ever reached a score of more than 80 out 100. Globally, Rwanda also ranks second in the UN's 2015 Gender Development Index and has the lowest level of gender inequality, as measured by the Gender Inequality Index[4] in sub-Saharan Africa.

4. **This paper** showcases initiatives that Rwanda has undertaken to substantially reduce gender gaps, benchmarks gender-related indicators against outcomes in other countries, and underlines past and potential growth impacts from advancing gender equality further.

[3] The Gender Gap Index benchmarks national gender gaps on economic, education, health and political criteria, and provides country rankings that allow for effective comparisons across regions and income groups

[4] The Gender Development Index is based on the sex-disaggregated Human Development Index and is defined as a ratio of the female to the male HDI. It measures differences between male and female achievements in health, education, and equitable command over economic resources. The Gender Inequality Index, on the other hand, measures gender-based inequalities in three dimensions – reproductive health, empowerment, and economic activity. Thus, the GII can be interpreted as the loss in human development due to inequality between female and male achievements in the three given dimensions.

Figure 4. EAC Gender Inequality Indicators



Source: UNDP, *Africa Human Development Report 2016.*

Source: UNDP, *Africa Human Development Report 2016*

B. Progress in Gender Equality: Where does Rwanda Stand?

This section compares Rwanda's performance against its peers across three broad categories: economic participation and opportunity; human and physical endowments; and political empowerment.

Economic Participation and Opportunity[5]:

5. **Rwanda outperforms most of its peers in terms of women's economic participation and opportunity**. The World Economic Forum's 2016 Gender Gap Report ranks Rwanda at number 14 globally on women's economic participation, and number 1 in labor force participation and wage equality for similar work.

Labor Force Participation

6. **Worldwide, gender inequality in economic participation manifests itself most clearly in the amount and type of employment**. In almost all countries, women are more likely than men to engage in low-productivity activities. They are also more likely to be in low-wage or unpaid employment or work in the informal wage sector. In agriculture, especially in Africa, women operate smaller plots of land and farm less profitable crops. As entrepreneurs, they tend to manage smaller firms in less-profitable sectors, while in formal employment, they concentrate in "female" occupations and sectors such as teaching, nursing and clerical jobs (World Bank, 2011).

7. **In Rwanda, female labor force participation is broadly equal to that of men but there are differences in participation rates across sectors**. At about 85.5 percent, the share of females participating in the labor force is similar to that of men (86 percent/EICV4 Thematic Economic Activities), and rates observed in the EAC. However, most women work in agriculture, mostly as independent farmers, compared to about two-fifths of men (Figure 5)—similar to many sub-Saharan

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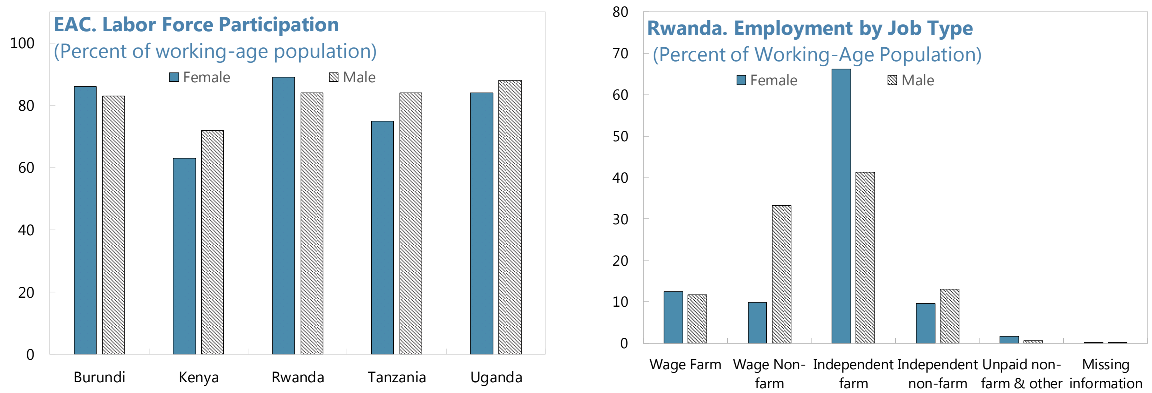
[5]Economic participation and opportunity measures differences between females and males in labor force participation, wage equality, estimated earned income, legislators, senior officials and managers, and professional and technical workers

African countries and low-income countries. With the agricultural sector's employment share tending to decrease with higher education levels, improved access to quality education, combined with other measures (e.g. changing social norms regarding household and care responsibilities), could help women to escape agricultural feminization.

Figure 5. Economic Participation



Source: World Economic Forum, *The Global Gender Report 2016.*

Source: Rwandan authorities, *Integrated Household Living Conditions Survey 2013/14.*

Wage and Earnings Gaps

8. Across countries, gender wage gaps generally reflect several interrelated factors, including occupational segregation, weak labor laws, social norms, implicit bias, and discrimination. Occupational segregation has an indirect implication in that women will tend to be over-represented in particular occupations. In sub-Saharan Africa, for example, gender pay gaps are broadly associated with the high share of female employment in agriculture and informal sectors, the time women spend on unpaid household work and care, high fertility rates and discriminatory social norms (UN 2016). Direct discrimination, on the other hand, manifests itself where women with the same capability and experience are treated differently.

9. Gender gaps in wages and earnings in Rwanda remain significant, reflecting both direct and indirect discrimination. Rwanda ranks at position 1 for wage equality in the 2016 Global Gender Gap, but slips to position 8 with respect to estimated earned income. This may reflect the fact that women are underrepresented in the non-farm wage sector (Figure 7) but overrepresented in independent agriculture (Gender Monitoring office, 2017b). In particular, they are often involved in lower-valued subsistence agriculture, while men are more involved in cash crop production and marketing.

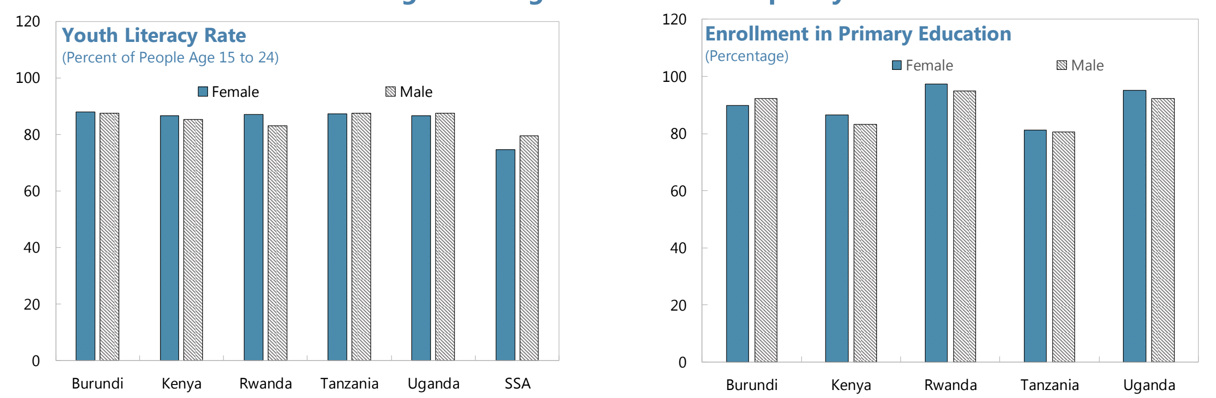
Human and Physical Endowments:

Education

10. Rwanda outperforms the average sub-Saharan African country on educational equality. Literacy rates among women were at above 65 percent in 2015, up some 16 percentage from 2000 levels, and compared to 76 percent for men (2013/14 and Integrated Household Living

Conditions Survey; EICV 4, EICV/2000). The growth in women's literacy rates has therefore outpaced that of men over the past decade, and compares favorably vis-à-vis the sub-Saharan African average (59 percent in 2011). However, most EAC countries, like Burundi, Tanzania and Kenya still show higher literacy rates for women. Nevertheless, Rwanda performs strongly with respect to youth literacy rates (85 percent for females compared to 88 percent for males in 2015) (Figure 6), and primary education is virtually the same for boys and girls, suggesting that Rwanda will catch up to its peers (Education statistical yearbook 2015; Figure 6).

Figure 6. Regional Education Equality



Source: World Bank, *World Development Indicators*.

Source: World Bank, *World Development Indicators*.

11. The Rwandan government has implemented specific policies to improve education opportunities for girls. These include, led by the Ministry of Education, the *Girls' Education Policy*, which specifically aims at the progressive elimination of gender disparities in education and training as well as in management structures (Government of Rwanda 2008: Girls' Education Policy), and the universal twelve-year basic education and *Technical Vocational Education Training* (TVET) programs[6] which also have specific goals and measures to reduce gender imbalance in access and enrollment. In 2014, net enrollment of girls in primary school almost equaled that of boys (Figure 6) and, in 2015, girls' attendance exceeded that of boys at the primary and secondary level (Government of Rwanda 2016: *National Gender Statistics*). ICT has supported the process of closing the gender gap, e.g. through the e-learning systems, and Rwanda is also a signatory of the 2017 *Kigali Declaration* which targets to close the gender gap in science and technology. However, a gender gap remans in technical and vocational education and training, with female enrollment at almost 42 percent in 2015, while significantly increased, still some 16 percentage points lower than male enrollment.

Health

12. Government interventions have improved health indicators for and relating to women. Maternal mortality has been reduced from more than one thousand deaths per 100,000 births in 2000, to 210 in 2015, better than the sub-Saharan Africa average and EAC peers. Adolescent fertility

[6] Rwanda's TVET policy provides for special programs to "*enable women to update their knowledge and professional skills for entering the workforce, executing income generating activities or occupying better position*" (Government of Rwanda, 2014)

(births per 1,000 women aged 15–19) have been halved from 49 in 2000 to 26 percent in 2015 (compared to 100 in sub-Saharan Africa). One of the keys to this success has been the community-based health insurance scheme (*Mutuelle de Santé*), that has helped to provide quality health care to the poor, especially women, at affordable rates. In addition, home grown solutions have improved the health status of women and children in Rwanda. These include community health workers (*abajyanamab'ubuzima*), kitchen gardens (*akarimak'igikoni*), community kitchens to demonstrate the preparation of a balanced diet, and the *Shisha Kibondo* program (where pregnant and lactating mothers and children receive fortified blended food supplements).

Access to Physical Assets

13. Rwanda recently introduced laws to remove constraints for women access to physical assets, enhance their economic opportunities, and correct legal discrimination (Government of Rwanda 2016: From Victims to Leading Actors):

- *A law governing land management and guarantees equal rights on land access, ownership and utilization* (N° 43/2013 of 16/06/2013). Women's land ownership is at 26 percent compared to 18 percent for men, and 54 percent by both spouses. And, with women now being able to use land as an economic resource to secure loans and run business, their financial exclusion has halved.
- *A law that prohibits any form of discrimination based on gender, sex, race, and religion in political parties (N° 10/20/2013/OL).*
- *A law instituting gender responsive budgeting (N° 12/2013),* that enforces accountability measures for gender sensitive resource allocation across sectors.
- *A law governing matrimonial regimes, donations granted or received within a family and successions (N°27/2016 of 08/07/2016),* ensuring equal inheritance rights and contributing to women's equal share on family properties including land.
- *A law regulating labor in Rwanda, providing for equal opportunities and equal pay for, and prohibiting sexual harassment in the workplace (N° 13/2009 of 27/05/2009).*
- *A law establishing and governing maternity leave benefits scheme (N°003/2016 of 30/03/2016),* allowing a mother to take 3 months fully paid maternity leave, up to 1 hour out of official working hours for a period of 12 months to spend time with her child, and 4 days leave for fathers during the wife's maternity leave.

14. The changes in laws have resulted in a more level playing field. Women are now more likely to own property and provide loan collateral than women in neighboring countries (UN 2016), thereby enhancing their productive and financial access capabilities. The 2013/14 household survey showed minimal differences in land ownership between male-headed and female-headed households (89.5 percent and 88.5 percent, respectively). A more equal distribution of property has relaxed collateral constraints, therefore advancing financial inclusion, as discussed in the following.

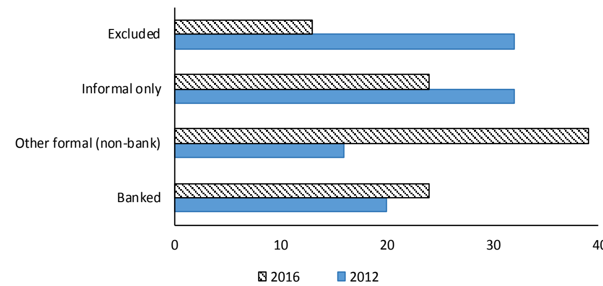
Financial Inclusion[7]

15. Worldwide, lack of access to formal financial services by women can impede entrepreneurship and full participation in the formal economy (Aterido and others, 2013). Female entrepreneurs are more likely than men to face barriers in financial access, with an estimated 70 percent of female-owned small and medium-size enterprises under-served in developing economies. On the supply side, women often face more restrictive collateral requirements, shorter maturity of loans, and higher interest rates. They are more likely to face illiteracy, lack control over household's financial resources, and work on household activities—making market activity more difficult, therefore lowering the demand for financial services.

16. In Rwanda, women's access to financial services has increased significantly in the past years. Between 2012 and 2016, gender-focused interventions increased the share of women served by formal financial services by 27 percentage points, while the share of women relying on informal mechanisms for financing their activities decreased by 25 percentage points (FinScope 2016; Figure 7). Compared to the EAC, Rwandan women are more likely to save at a financial institution (Figure 8).

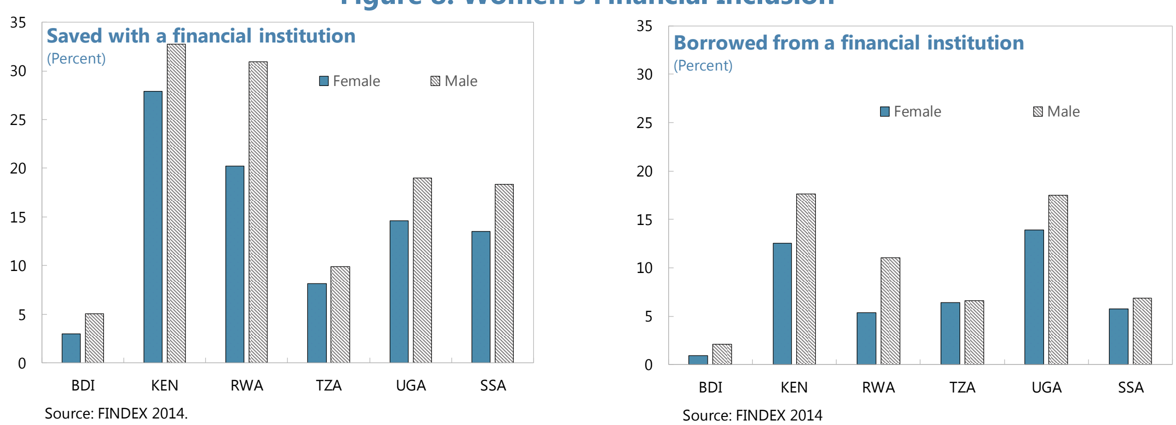
Figure 7. Female Access to Financial Services

(Percent)



Source: FinScope (2016)

Figure 8. Women's Financial Inclusion

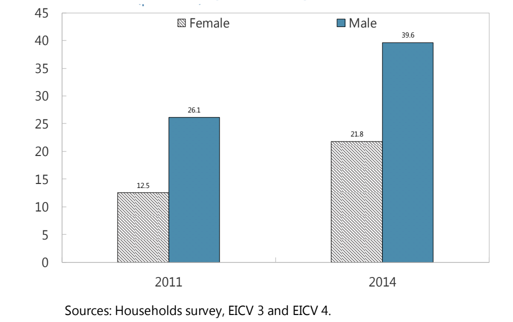


[7] Financial inclusion also refers to how easily individuals can access available financial services and products from formal institutions.

17. However, a gender gap in access to financial services remains (Gender Monitoring Office 2017a; FinScope 2016; Figure 9). While the share of men and women saving are broadly alike, men are much more likely to save using formal mechanisms. Similarly, almost three-fifths of women continue to rely on informal sources of borrowing, because of lower collateral requirements (Gender Monitoring Office, 2017a). Strikingly, while women constitute the majority share of agricultural workers, almost three-quarters of agricultural credit was extended to men in 2015 (Gender Monitoring Office, 2017a).

Figure 9. Individuals (18+) with Access to Savings Facilities

(Percent)



Sources: Household survey, EICV 3 and EICV 4.

18. A closer examination of access indicators reveals a gender gap in access to deposits and mobile banking (Table 1). The number of microfinance accounts held by women remained at around 39 percent between 2012 and 2016, compared to around53 percent for men. Mobile banking use has grown exponentially since it was first introduced in 2010, improving financial inclusion. However, a 2014/2015 national survey on the access to financial services in Rwanda found that less than 40 percent of the users were female.

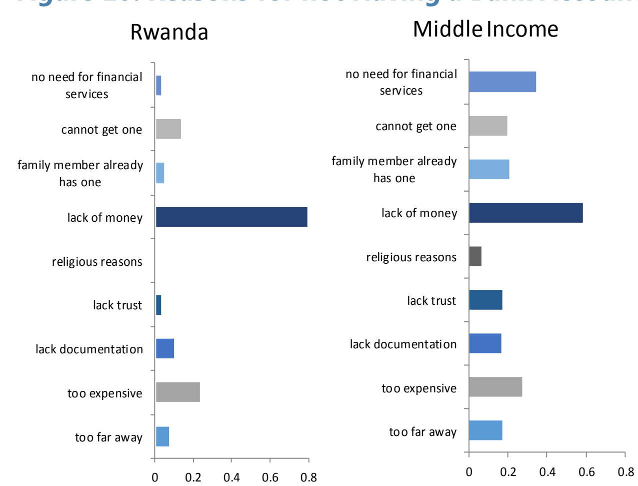
Table 1. Composition of Client Accounts

Sector (percent)	***2012***	***2015***	***2016***
Banking	56.2	45.7	42.6
Microfinance	43.8	54.3	57.4
o/w Females	*39.5*	*38.7*	*39.3*
Males	*54.2*	*52.4*	*52.3*
Mix/Groups	*6.3*	*8.9*	*8.4*

Source: BNR and IMF staff calculations.

19. Several reasons explain the gender gap in access to formal financial services in Rwanda. The main reasons given by women for not opening accounts are the lack of means to do so, followed by the cost of opening/maintaining an account, and lack of documentation (Figure 10).

Figure 10. Reasons for not Having a Bank Account



Source: Findex 2014.

20. The Rwandan government has put in place several initiatives to support financial inclusion, especially for women and youth. The government's *Financial Sector Development Strategy* aims to increase overall financial inclusion among the Rwandan population to 80 percent by 2017, and to 90 percent by 2020, with a special emphasis on women and youth. The *Women*

Guarantee Fund, established in 2009, aims to increase women's' access to micro-credit, empowering more entrepreneurial activities, and closing the poverty gap. The Ministry of Gender and Family Promotion's "*Access to Finance Strategy for Women and Youth,*" approved in 2012, aims to facilitate access for women by guaranteeing up to 75 percent of loan value through the Business Development Fund and the decentralized Credit and Savings Cooperatives.

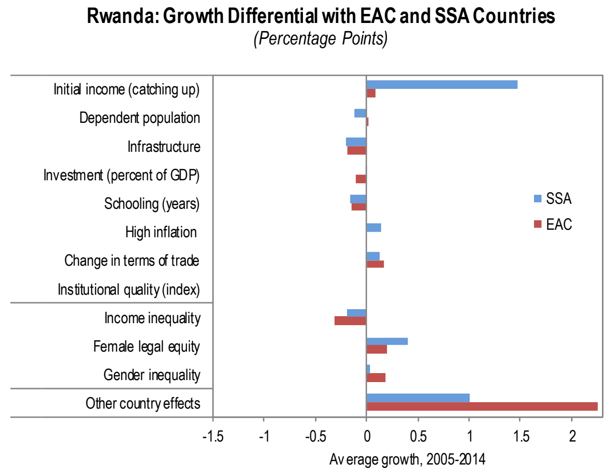
Political Empowerment:

21. Rwanda has made progress in promoting political inclusion of women. The constitution provides for quotas of a share of at least 30 percent for women in decision-making positions, resulting in women holding decision-making positions at all levels. For example, in 2015, when the global average was 21 percent, women held 64 percent of Rwanda's parliamentary seats. Women comprise half of the judiciary and provincial governors, 40 percent of the Cabinet, 32 percent of ambassadors, and 44 percent of district advisory council members.

C. Gender Inequality and Growth

22. The above described developments in gender-related indicators raise the question of the impact on economic growth. A decomposition exercise using the estimates of the determinants of growth in a panel of 115 advanced, emerging market, and developing economies (IMF, 2015), helps attribute differences in average real GDP per capita growth rates in Rwanda vis-a-vis regional and non-regional benchmarks to macroeconomic fundamentals and policies.

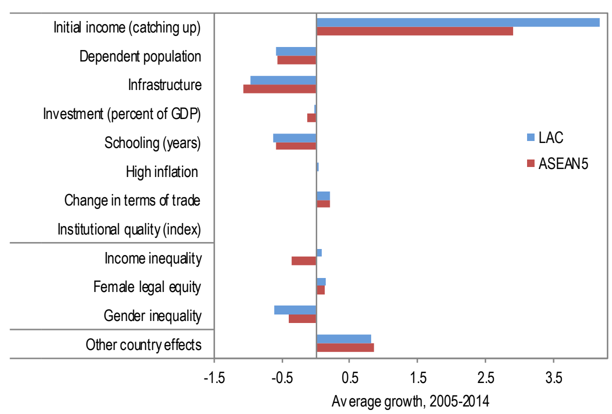
Figure 11. Growth Differential with EAC and



(Percentage)

Figure 12. Growth Differential with ASEAN and LAC

(Percentage)



Sources: IMF, World Economic Outlook database; PRS Group; World Bank, World Development Indicators database; and IMF staff estimates.

Note: The estimated regression coefficients of model are applied to the differences between the average values of the factors associated with growth for the last 10 years for Rwanda and the comparator countries. A bar with a negative value denotes what share of the growth shortfall in Rwanda is explained by a particular variable.

23. The results suggest that greater gender equality has contributed to higher growth compared to regional peers, and gains from further reducing inequality are significant.

- Rwanda's GDP growth rate has averaged about 2.2 percentage points above the EAC and the sub-Saharan African average over 2005-14. The results highlight that both female legal equity and gender equality in opportunities and the labor market have contributed ½ percentage points to this growth differential (Figure 11).
- Growth gains from further lowering gender inequality could also be significant. Specifically, reducing gender inequality in Rwanda to levels observed in benchmark countries in Latin America and ASEAN could boost per capita GDP by nearly ½ percentage point, highlighting another avenue for development in addition to improving infrastructure and human capital accumulation (Figure 12).

D. Gender Equality in Rwanda: Institutional and Policy Framework

24. This section highlights the policy and institutional reforms that have driven the trends in gender equality observed in Rwanda. The interactions between households, markets and institutions shape the relationship between economic development and gender equality. In doing so, they ultimately determine gender outcomes (World Bank, 2012). Thus, effectively addressing gender gaps (e.g. in the labor market) often requires changes in how markets work, in the laws and regulations (formal institutions), and in the societal beliefs and norms (informal institutions). In this context, public policy becomes an important lever through which market and institutional constraints are addressed to support gender equality. Rwanda's framework for advancing gender equality has included various institutional and policy reforms, underpinned by high-level political commitment.

Institutional Framework:

25. Rwanda's legal framework provides for equal treatment of women, and lays out concrete goals for achieving this. The 2003 Constitution as revised in 2015 enshrines the fundamental principles of gender equality and provides a platform for gender mainstreaming in all sectors. It sets out to operationalize these principles by establishing 30 percent quotas for female representation in all decision-making structures. Similarly, there are several supporting provisions in the legal framework, including ensuring equality for women in terms of land ownership and inheritance (2013 land law), and equal access and pay for employment (2009 labor law). Additionally, several bodies have been set up at national and decentralized levels of government to advance gender issues (Box 1):

Public Policy Framework:

26. The National Gender Policy is the guiding framework for promoting gender equality in Rwanda, and is embedded in the country's development strategies. The policy outlines principal guidelines upon which sectoral policies and programs are based "to integrate gender issues in their respective social, cultural, economic and political planning and programming" (Government of

Rwanda, 2010). The policy informs and is operationalized in the government's development frameworks, i.e. Vision 2020 and the Economic Development and Poverty Reduction Strategies (EDPRS). The Vision 2020 is Rwanda's longer-term framework that seeks to transform Rwanda into a middle-income country by 2020[8], while the EDPRS operationalizes this through medium-term (seven-year) goals and strategies. In both frameworks, gender equality and women's empowerment has been mainstreamed as a cross-cutting issue. In addition, women's empowerment is a critical component of the 7-Year Government Program. In line with this commitment, the government anticipates to increase the number of active women in cooperatives, to expand their use of loans from financial institutions, and targets a share of at least 50 percent loans from UMURENGE SACCOs, micro finance institutions and banks be used by women.

Box 1. Institutional Set-Up for Gender Equality and Women Advancement

- The Ministry for Gender and Family Promotion is the central government institution mandated to ensure strategic coordination of policy implementation of gender, family, women's empowerment and children's issues. It plays a leading role in implementing the gender agenda.
- The Gender Monitoring Office's mandate is to effectively monitor gender mainstreaming and trends in gender-based violence in public, private, civil society and religious institutions.
- The National Women's Council represents the interests of women at all levels of government, disseminates information on laws, policies and programs to promote gender equality, and builds capacity for gender advocacy.
- The National Gender Cluster is a forum where the Government of Rwanda, development partners, private sector and civil society meet and discuss planning, coordination and prioritization of gender policies.
- The Forum for Rwandan women parliamentarians (FFRP), oversees and advocates for the enactment of gender sensitive laws.
- Within Rwanda's Ministry of Defense, National Police, National Public Prosecution Authority and the Gender Monitoring Office, "gender desks" have been established. In Local Government Organizational Structures, a there is a Gender and Family Promotion Officer, while at central government ministries and Agencies, Directors of Planning have been designated as "gender focal points."

27. **At an operational level, gender budgeting has emerged as one of Rwanda's key policy tools.** Gender budgeting—an approach to budgeting that uses fiscal policy and administration to promote gender equality, and girls' and women's development—helps to evaluate how fiscal policies may affect men and women differently. Rwanda's gender budgeting initiative started in the early 2000's in the context of government's new emphasis gender mainstreaming in government policies and programs, and has since evolved to be an integral part of the budgeting process (Box 2).

[8]Government is currently in the process of consultations to replace Vision 2020 with a new long-term development framework, Vision 2050, by the end of 2017.

Box 2. Gender Budgeting in Rwanda[1/]

Rwanda has been implementing a gender budgeting framework since 2002. The first gender budgeting initiative was implemented in 2002 as part of a broader gender mainstreaming program supported by DFID within the Ministry of Gender and Promotion of Family. The initiative built on the Medium-Term Expenditure Framework (MTEF) being introduced at that time, with close collaboration from the Ministry of Finance and Economic Planning (MINECOFIN). Five ministries were chosen as pilots, where officials received training followed by hands-on assistance. Each ministry was required to analyze the six largest budget expenditures and develop a budget statement with specific gender targets. After this experience, to build local capacity, MINECOFIN took the lead of the process, with less reliance on outside experts.

The current process, launched in 2008, was part of reforms to move Rwanda's budget planning process from an "accounting" to a "program budgeting" exercise. The budgeting exercise is premised on the view that every ministry is responsible for ensuring that women's needs are integrated into its areas of responsibility and budget request. MINECOFIN takes the lead in directing the process and ensuring accountability, while Ministry of Gender and Family Promotion and the Gender Monitoring Office are responsible for oversight and support. The 2010 National Gender Policy imbeds gender budgeting as a necessary condition for the success of its implementation. An organic Law on State Finances and Property, enacted in 2013, institutionalized gender budgeting as part of the government's budgeting framework, including accountability measures for gender-sensitive resource allocation across sectors, programs and projects through mandatory "Gender Budget Statements."

Rwanda's experience with gender budgeting is considered a success, underpinned by several factors. First, MINECOFIN's leadership role and its defining the annual targets ensure emphasis and visibility on gender issues in the annual and multi-year budgetary processes. Second, the discretion offered to line ministries and government agencies helps them to consider their relevant gaps and effective ways to address them in the annual budget. The line ministries are expected to report on their achievements at the end of the fiscal year. Lastly, the establishment of the Gender Monitoring Office, which ensures that gender budgeting is operationalized as intended, helped strengthen the monitoring and accountability framework.

[1/] See Stotsky and others (2016) for a comprehensive review of gender budgeting in sub-Saharan Africa, which includes a section on Rwanda

28. **Rwanda's social protection programs also have an embedded role in tackling gender inequalities.** The overall objective of the Rwandan government's social protection strategy is to build a system that reduces poverty and inequality and vulnerability from shocks. Evidence from countries with well-established safety net programs reveals that effective and properly targeted social safety nets can play a powerful role in combating poverty and inequality. In Rwanda, as in most countries, female-headed households are more likely to be poor than male-headed households (44 vs. 37 percent) and more likely to be extremely poor (20 vs. 15 percent) (EICV4, Gender report).

The Role of Informal Institutions

29. The success of gender equality initiatives generally depends on the culture and political economy in which they are implemented. Gender relations are often deeply rooted in a society's economic and cultural norms and practices, which in turn shape women's economic opportunities (e.g. type of education and nature of jobs that a man/woman can do) and/or how endowments are distributed between men and women. On a macro level, these norms can influence the way economic, political and legal/regulatory systems are designed and implemented, sometimes to the detriment of women.

30. In the case of Rwanda, some studies reveal that certain socio-economic and cultural norms could impact the success of gender reforms. Debusscher and Ansoms (2013) highlight that, Rwandan women, as in many countries, disproportionately contribute to significant but largely undervalued care work e.g. household tasks, reproduction, and care of the family and community). The International Development Law Organization (2013) also finds that, in rural Rwanda, while the statutory reforms have strengthened women's rights to land through marriage, inheritance, or on death of a spouse, their actual ownership and rights to the land are more symbolic in nature and less strictly enforced under customary law and practice.

E. Conclusion

31. Rwanda has made important advances in promoting gender equality through various policy and institutional initiatives, and strong political will. The gains in institutional and policy reforms for gender equality have placed the country among the global leaders in advancing gender equality. The increased emphasis on gender-responsive budgeting, higher access to finance including through microfinance schemes, and improvements in access to health and education services, provide a good base for enhancing the productivity of women in the economy and eliminating gender-related income inequalities. Various legal reforms have also granted women opportunities to fully participate in economic activities and improve their representation in decision-making positions.

32. **Several opportunities exist to consolidate these gains in making gender equality an integral part of inclusive growth**. Female labor force participation beyond the agricultural sector could be enhanced through further advancement of women's access to quality health and education services. In this respect, improving women's access to technical and vocational training could improve economic participation and opportunities beyond agriculture and informal activities. There is also room to close the gap in access to credit in the formal banking sector, which provides over 80 percent of credit to the economy, but only about 22 percent of which goes to women. Increased access to credit in the banking sector would support efforts to advance women's entrepreneurship. Recent initiatives by the authorities to collect sex-disaggregated financial data will help in further understanding the gender dimensions of access to financial services, which should help in designing targeted policies. Underlying all these opportunities is the importance of ensuring that reforms in the formal institutional landscape are commensurate with informal institutional changes (legal, social or cultural) to enable women to exploit their full economic potential.

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MACROFINANCIAL DIMENSIONS IN RWANDA: STABILITY, INCLUSION, AND DEVELOPMENT[1]

Rwanda's financial development may have been just as impressive as its economic growth plane over the past decade. But many experts and practitioners are skeptical about "financial growth success stories" in a low-income country context—more often than not have such episodes benefited only a narrow share of the population, while ending in tears for the country (and shattered public finances). Hence, did Rwanda's financial growth coincide with actual improvements in the population's access to financial services? Did financial stability suffer from the extraordinary growth of the past years? How can the public sector strike the appropriate balance between encouraging financial innovation and maintaining safeguards through proper regulation and supervision? These questions cannot be conclusively answered in this paper, but we wish to support their public discussion by providing a few facts and observations on Rwanda's financial sector.

A. Overview of the Financial Sector

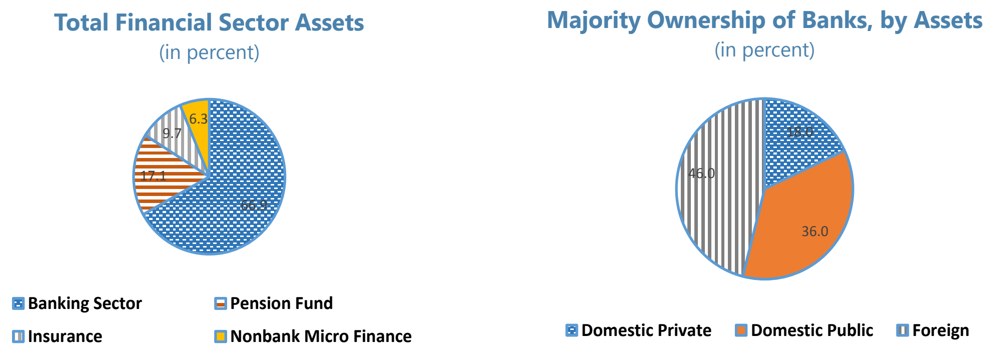
1. **Despite significant growth in the past eight years, and notable progress on inclusion, the Rwandan financial sector is still fairly simple structured.** Total assets of the system increased from 31 to 54 percent of GDP in December 2016, in the face of strong economic growth that averaged 7.8 percent per year over the same period. The financial sector is dominated by commercial banks, which hold two thirds of financial assets, followed by the pension fund, insurance, and microfinance (figure 1).[2]

2. **Rwanda's banking system is quite concentrated and dominated by foreign-owned banks.** The three largest of Rwanda's 17 commercial banks hold nearly half of total bank assets, the share of assets held by majority foreign-owned banks is equally high. But despite the large degree of foreign ownership, funding of banks is overwhelmingly domestic and comes mainly from deposits, limiting upstream vulnerability from exposure to cross-border financing shocks.

[1] Prepared by Tobias Roy and Samson Kwalingana.

[2] Rwanda's financial sector is composed of a total of a total of 504 supervised financial institutions, of which 16 are banks (11 commercial banks, 3 micro-finance banks, 1 development bank and 1 cooperative bank); 472 micro-finance institutions (17 limited liability companies and 455 cooperatives of which 416 are Umurenge SACCOs and 39 non-Umurenge SACCOS); 15 insurers (13 private and 2 public); and 1 public pension scheme.

Figure 1. Financial Sector Structure and Bank Ownership



3. **Commercial banks are systemically important for nonbank financial institutions, but not vice versa.** The two parts of the financial sector are interconnected mainly through bank liabilities, but even the biggest nonbank institution—the pension fund—does not appear to pose a risk to the banking system. For illustration, 33 percent of the pension fund's assets are comprised of bank deposits (24 percent) and bank equity (9 percent). Conversely, the pension fund contributes about 10 percent to banks' deposit funding. Given these orders of magnitude, systemic risk will likely be channeled through the banking system rather than nonbank institutions.

4. **Capital markets remain relatively undeveloped.** Established in 2005, the Rwanda Stock Exchange has provided a platform for transactions of domestic and foreign shares, as well as government and a few corporate bonds. Stock market capitalization is estimated at about 26 percent of GDP as of end-2016. Currently, there are seven listed companies, including four local companies and three cross-listings. The bond market, introduced in 2008, is shallow. While the size of the government primary market has increased, corporate sector participation remains depressed, with only two issuances in 2016. The market also lacks intermediaries (primary dealers) and is illiquid, as most investors hold securities to maturity, so there is next to no secondary market. To deepen the bond market, the authorities are implementing a seven-year capital markets plan. It includes an improved and more regular sovereign bond issuance program; measures that encourage retail and foreign investors; and professional capacity building.

Table 1. Size and Structure of the Financial System

(Billions of Rwandan francs, unless otherwise indicated)

	December-08				December-13				December-16			
			In percent of				In percent of				In percent of	
	Number	Total assets	Financial system Assets	GDP	Number	Total assets	Financial system Assets	GDP	Number	Total assets	Financial system Assets	GDP
Banks		**511**	**64.7**	**20.0**	**11**	**1,510**	**65.9**	**46.3**	**17**	**2,378**	**66.9**	**35.9**
Domestic Private		...	...	...	...	...	...	...	3	428	12.0	6.5
Domestic Public		...	...	...	...	...	...	...	1	856	24.1	12.9
Foreign		...	...	...	...	...	...	...	13	1,094	30.8	16.5
Assets of Three Largest Banks		...	...	...	...	...	...	...	3	1,132	31.8	17.1
Other Nonbank Institutions		**279**	**35.3**	**10.9**	**...**	**780**	**34.1**	**11.8**	**488**	**1,177**	**33.1**	**17.8**
Insurance		80	10.1	3.1	...	233	10.2	3.5	15	345	9.7	5.2
Pension Fund		139	17.5	5.4	...	418	18.3	6.3	1	608	17.1	9.2
Microfinance Institutions		60	7.6	2.4	...	129	5.6	1.9	472	224	6.3	3.4
Total Financial System		**790**	**100**	**30.9**		**2,290**	**100**	**58.1**	**505**	**3,555**	**100**	**53.7**

Source: IMF Staff estimates and BNR

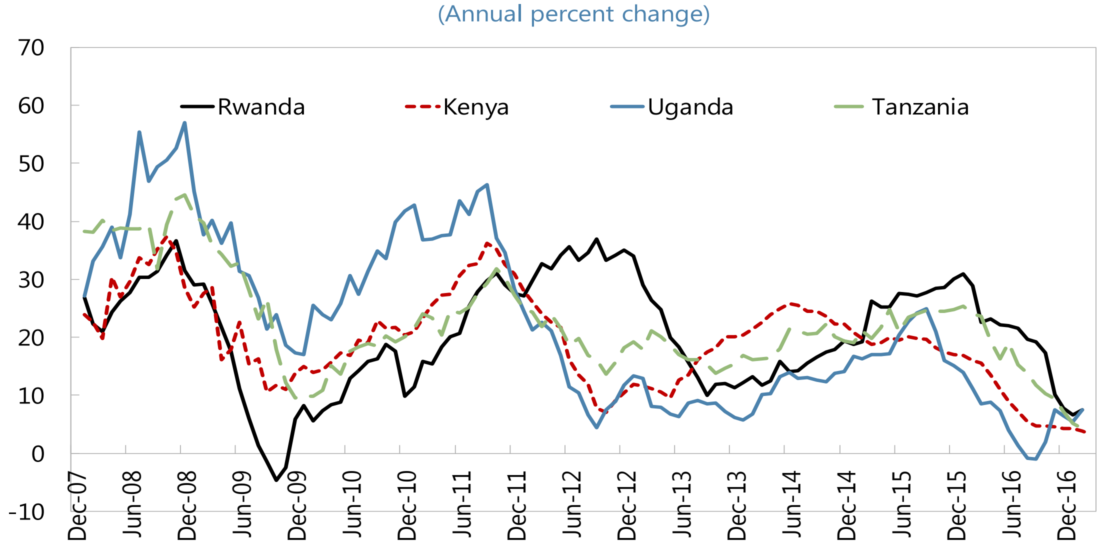
B. Financial Stability

The Financial Cycle

5. **The financial cycle has been buoyant in the past seven years.** Bank credit to the private sector grew by an annual average of 13 percent in real terms. In fact, over the past two years, credit to the private sector in Rwanda increased at a more rapid pace than in any of its peers in the East African region (figure 2).

Figure 2. Private Sector Credit in the EAC

(Annual percent change)

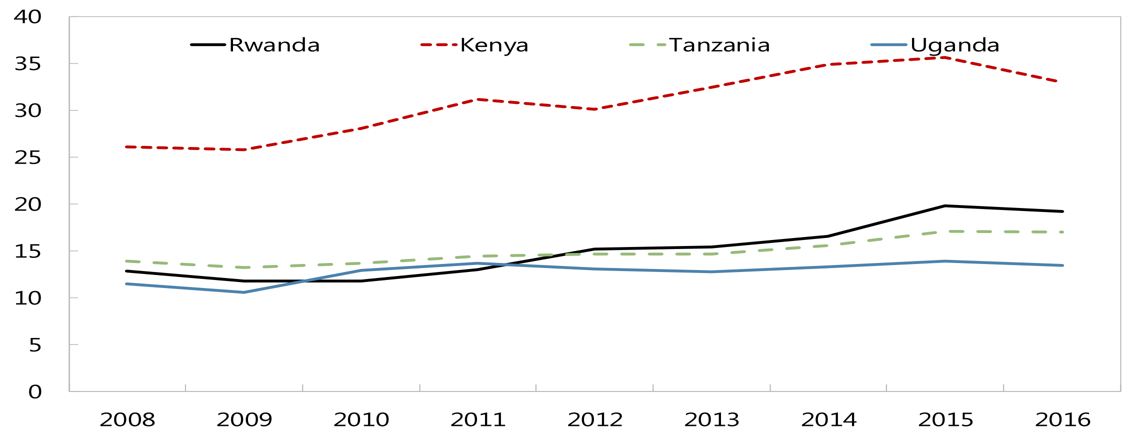


Sources: Country authorities; and IMF staff calculations.

6. Credit deepening suggests an increasingly important role of the private sector for income generation and growth. Rwanda's credit growth exceeded nominal GDP growth, lifting credit from 11.8 percent of GDP in 2009 to 19.2 percent in 2016, the second highest in the EAC, after Kenya (figure 3). Besides other benefits, this will amplify the impact of monetary policy, but it also raises the stakes for maintaining financial stability. Recognizing this challenge, the authorities are in the process of adapting and extending the set of macroprudential tools that are appropriate for Rwanda's financial landscape, with a view towards implementing a full-fledged macroprudential framework.[3]

Figure 3. Credit Depth in the EAC

(In percent of GDP)



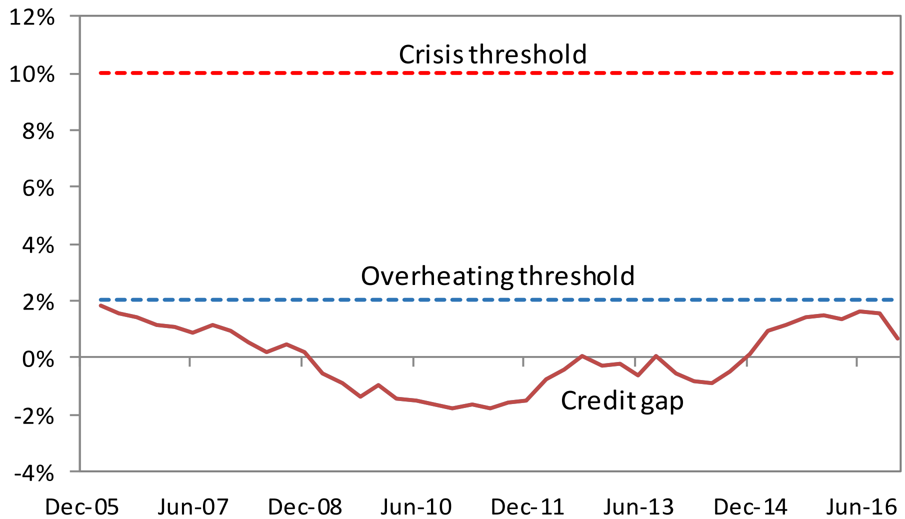
Sources: Country authorities; and IMF staff calculations.

7. The credit gap suggests that most of the credit expansion of the past decade can be attributed to financial deepening. Mortgage, commercial lending, and loans to the hotel sector dominate bank lending, constituting 68 percent of their loan portfolio with the private sector. Unfortunately, the lack of historical data on house prices limits the scope for identifying eventual asset price bubbles that would be indicative of financial overheating. However, the financial cycle can still be assessed through the overall credit gap (figure 4). Despite high nominal credit growth that would normally raise red flags, the evolution of the credit gap over the past ten years does not show signs of credit-fueled financial exuberance. Even in the buoyant past two years, the credit gap remained below the two-percent threshold that commonly triggers concerns about a developing financial bubble. And with the recent cooling of regional financial conditions, which is reflected in lower credit growth across the EAC, Rwanda's credit gap appears to be closing. Credit growth is returning to its long-term structural trajectory, characterized by gradual financial deepening.

[3] The Rwandan authorities are in the process of creating a Financial Sector Coordination Committee. The new committee, which includes representatives of all financial regulatory agencies under the lead of the BNR, will be tasked with macroprudential supervision and planning for crisis resolution scenarios.

Figure 4. The Credit Gap

(In percentage points of GDP)



Source: IMF staff estimates.

Banking Sector Performance

8. Rwanda's financial sector vulnerability risk appears well-contained and manageable. In the financial soundness indicator map (table 2a), the overall rating moved from low to medium during 2016, mainly on behalf of nonperforming loans (NPLs) whose ratio to total credit expanded at a rate faster than 25 percent annually. This increase of the NPL-to-credit ratio is very consistent with the observed softening of the financial cycle, as it takes time for loan performance problems to manifest themselves, causing NPLs to rise with past periods' credit growth rates rather than the current growth rates, which mechanically bumps up the NPL ratio. In its most recent financial stability report, the BNR also notes that the "slowdown of economic activities in the first half of 2016… subsequently affected the debt servicing capacity of some borrowers".[4] However, while the increase of the NPL ratio appears high in percentage terms, it should be noted that the increase applies to a remarkably low level achieved in 2014 and 2015, which probably had overstated the quality of the loan portfolio due to high credit growth during that period. Also, even after the recent increase Rwanda's NPL ratio is still the lowest of all EAC countries (table 2b).

[4] BNR: *Annual Financial Stability Report (June 2015 – June 2016)*, p. 17.

Table 2a. Banking Sector Soundness Indicator Map

Rwanda	2014Q3	2014Q4	2015Q1	2015Q2	2015Q3	2015Q4	2016Q1	2016Q2	2016Q3	2016Q4	2017Q1	Latest
Overall Financial Sector Rating	L	L	L	L	L	L	L	M	M	L	M	M
Credit cycle	L	L	L	L	L	L	L	L	L	L	L	L
Change in credit / GDP ratio (pp, annual)	0.3	1.5	2.6	2.8	2.7	2.2	1.2	1.3	0.9	-0.1	-0.3	-0.3
Growth of credit / GDP (%, annual)	1.7	10.3	17.7	19.0	17.2	13.2	6.9	7.1	5.1	-0.4	-1.7	-1.7
Credit-to-GDP gap (st. dev)	-1.1	-0.4	0.6	0.4	0.2	-0.1	-0.7	-0.4	-0.8	-2.2	-2.1	-2.1
Balance Sheet Soundness	L	L	L	L	L	L	L	M	M	L	M	M
Balance Sheet Structural Risk	L	L	L	L	L	L	L	L	M	L	L	L
Deposit-to-loan ratio	125.4	117.4	115.4	118.8	115.0	111.7	108.5	110.0	99.5	105.0	103.1	103.1
FX liabilities % (of total liabilities)	26.0	30.2	23.7	23.3	28.5	23.5	23.2	25.0	27.0	28.3	28.5	28.5
FX loans % (of total loans)	3.6	7.2	5.4	6.2	6.7	9.0	11.2	12.4	10.6	10.2	11.5	11.5
Balance Sheet Buffers	L	L	L	L	L	L	L	M	M	L	M	M
Leverage	L	L	L	L	L	L	L	L	L	L	L	L
Leverage ratio (%)	13.4	13.7	15.4	14.2	14.1	14.1	15.6	14.7	15.2	14.4	14.3	14.3
Profitability	L	L	L	L	L	L	L	L	L	L	L	L
ROA	2.8	2.8	3.3	3.3	3.0	2.9	2.8	2.6	2.8	2.5	2.7	2.7
ROE	15.2	15.3	17.6	17.7	16.2	15.7	14.7	14.0	14.4	13.6	14.9	14.9
Asset quality	L	L	L	L	M	M	M	H	H	M	H	H
NPL ratio	5.3	5.2	5.7	5.5	5.8	5.9	6.0	7.0	7.4	7.1	7.7	7.7
NPL ratio change (%, annual)	-11.2	-12.0	-2.8	4.5	10.2	13.1	6.3	27.6	27.5	19.9	28.6	28.6

Table 2b. Financial Soundness Indicator Map in the EAC

	Kenya	Rwanda	Tanzania	Uganda
Overall Financial Sector Rating	M	M	M	M
Credit cycle	L	L	n.a.	L
Change in credit / GDP ratio (pp, annual)	-1.0	-0.3	n.a.	-0.5
Growth of credit / GDP (%, annual)	-2.9	-1.7	n.a.	-3.3
Credit-to-GDP gap (st. dev)	-1.5	-2.1	n.a.	0.2
Balance Sheet Soundness	M	M	M	M
Balance Sheet Structural Risk	L	L	M	M
Deposit-to-loan ratio	110.5	103.1	120.0	141.3
FX liabilities % (of total liabilities)	23.6	28.5	38.4	42.4
FX loans % (of total loans)	26.4	11.5	33.4	44.1
Balance Sheet Buffers	M	M	M	M
Leverage	L	L	L	L
Leverage ratio (%)	14.3	14.3	12.2	11.7
Profitability	L	L	L	L
ROA	4.0	2.7	1.7	2.4
ROE	25.9	14.9	12.2	14.7
Asset quality	H	H	H	H
NPL ratio	11.7	7.7	8.2	10.4

Source: IMF staff estimates.
Reflects latest data available between 2016Q3 and 2017Q1

9. **Most banking sector balance sheet and earnings indicators are strong, and stress tests suggest that capital buffers are robust.** Since 2016, the BNR has been using the Cihak model for regular stress testing exercises, applying shock scenarios to test for credit, exchange rate, and liquidity risks. The most recent round of stress-testing[5] found that, even after applying consecutive

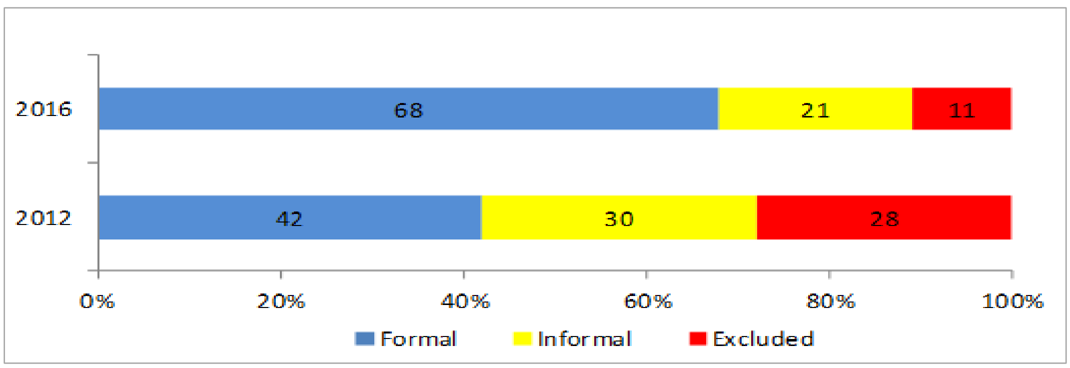
[5] BNR (2016): *Annual Financial Stability Report*, p. 22.

credit default shocks, the large majority of banks would remain safely above the regulatory minimum (risk-weighted) CAR requirement of 15 percent. The system also displayed satisfactory resilience to liquidity and exchange rate shocks. As of March 2017, capital was well above regulatory requirements, and balance sheet vulnerabilities from liabilities denominated in foreign currency were low.[6]

C. Financial Inclusion and Innovation in Rwanda

10. Sustained growth in microfinance and mobile financial services have contributed to more financial inclusion in Rwanda. Total assets of microfinance institutions almost doubled from end-2013 to 2016, while deposits increased by 65 percent over the same period. The rapid increase in microfinance activities, in particular through Umurenge SACCOs, has been one of the drivers of financial inclusion in Rwanda. The 2016 FINSCOPE survey indicates a significant overall increase in financial access of the adult population over the past four years, overwhelmingly on behalf of access to formal financial services (which includes microfinance) (figure 5).

Figure 5. Access to Financial Services, 2012–16



Source: Finscope 2016

11. There has also been a significant diffusion of mobile financial services in recent years, with Rwanda following a similar trend as its EAC peers. As of end 2016, more than 9.7 million users had subscribed to mobile payment systems, and nearly one million users had subscribed for mobile banking services, and the value of total e-payments rose to more than 30 percent of GDP within five years (table 3).[7] Financial services innovation is an important driver of financial inclusion, and the rapid diffusion of money mobile transactions, pioneered by Kenya over the past decade, has caught on across the EAC (figure 6).

[6] Per BNR's regulations, each bank's foreign exchange net open position may not exceed 20 percent of tier 1 core capital. The system's net exposure stood at -4.4 percent of core capital as of March 2017.

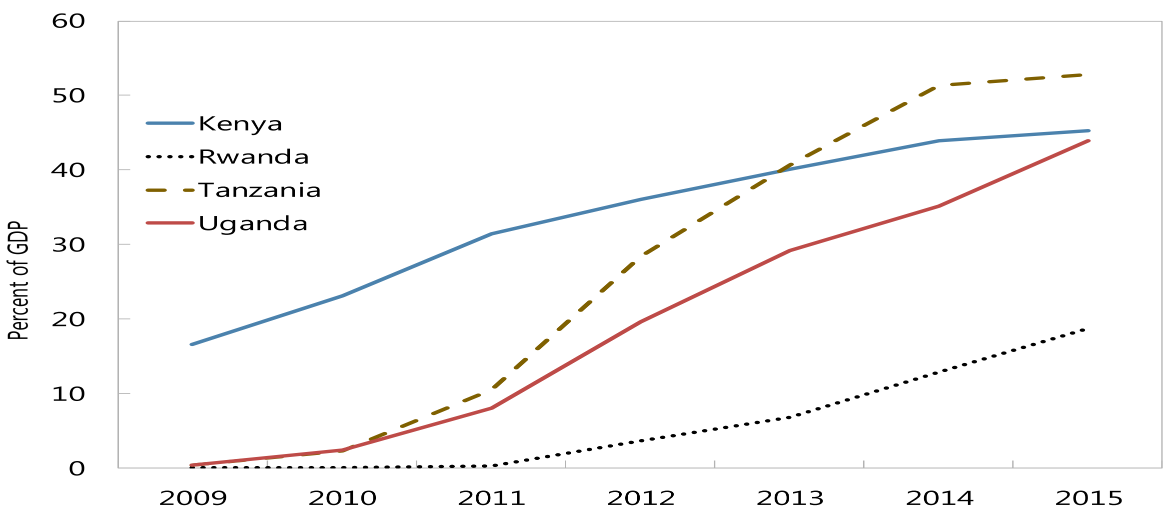
[7] Part of this increase has come from improved national communication infrastructure (telecommunication and the internet), while regional (EAC) harmonization of mobile money transactions has also helped increase financial access for cross-border transactions.

Table 3. Evolution in Financial Innovation

	2011		2012		2013		2014		2015		2016	
	Value (billion)	% of GDP	Value (billion)	% of GDP	Value (billion)	% of GDP	Value (billion)	% of GDP	Value (billion)	% of GDP	Value (billion)	% of GDP
POS Transactions	**6.4**	0.2	9.0	0.2	14.7	0.3	19.2	0.4	26.6	0.4	41.5	0.6
Mobile banking	5.2	0.1	3.9	0.1	17.5	0.4	41.3	0.8	48.3	0.8	37.2	0.6
Internet banking	**0.7**	0.0	12.8	0.3	117.2	2.4	333.0	6.1	581.2	9.8	1,017.1	15.4
Mobile payments (transfers and payment services)	51.0	1.3	161.8	3.6	330.4	6.7	691.5	12.7	1,093.5	18.4	1,040.5	15.7
Total e-payment	**63.4**	**1.6**	**187.5**	**4.2**	**479.7**	**9.7**	**1,084.9**	**19.8**	**1,749.6**	**29.4**	**2,136.2**	**32.3**

Source: BNR

Figure 6. Evolution of Mobile Banking



Sources: IMF Financial Access Survey.

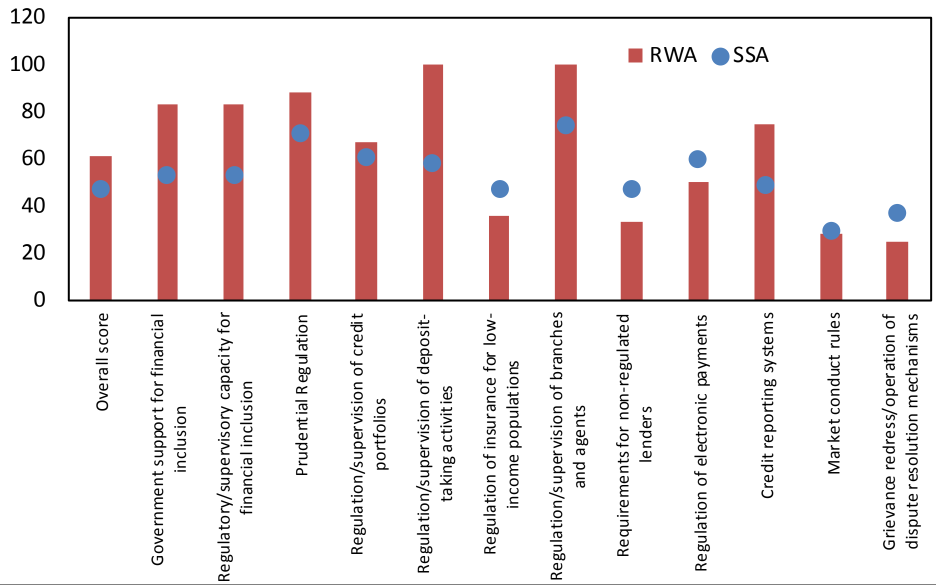
12. **The emergence of new alternative financing models could become the next frontier of financial innovation, with potential to further enhance financial inclusion in Rwanda.** A recent report by the University of Cambridge has documented a doubling in the value of financial transactions through innovative online funding and lending platforms from 2013 to 2015.[8] While the total amount raised in 2015 through such portals (US$4 million) is still only one thousandth of the overall financial system's assets, the potential of the technology to reach projects and customers not served by traditional funding mechanisms is significant. Fast recent growth indicates that these new portals meet the needs of both suppliers and customers.

[8] Cambridge Centre for Alternative Finance (2017): *The Africa and Middle East Alternative Financing Report*.

13. Rwanda is among the leaders in the region in creating an enabling regulatory environment for financial inclusion. The Economist Intelligence Unit's 2016 Global Microscope rates Rwanda at the 8th position of all countries.[9] Remarkably, Rwanda leapfrogged in the ranking by eight positions within one year, the third-highest observed relative improvement, mainly explained by significant capacity building in operating and supervising municipal savings and credit cooperatives. Compared to a total of thirteen surveyed SSA countries,[10] Rwanda's performance was bested only by Tanzania and Kenya, and it exceeded the regional average in seven out of twelve sub-indicators (Figure 7).

Figure 7. Regulatory Environment for Financial Inclusion

(EIU Microscope Index for Rwanda and SSA Average)



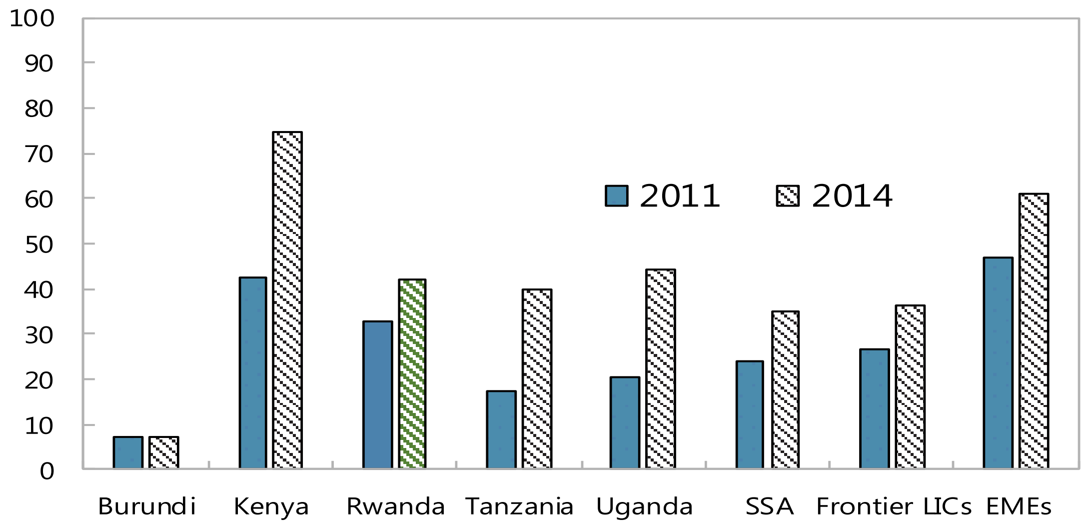
14. Rwanda also compares well with the EAC in the World Bank's Financial Inclusion Index. For the first time, the 2014 FINDEX survey included access to microfinance and mobile financial services, and the remarkable progress compared to 2011 may reflect that. The results also confirm a picture of consistent and rapid improvements in financial inclusion.[11] Interestingly, nearly all EAC

[9] The EIU Global Microscope Report focuses on the environment for financial inclusion and benchmarks 55 LIC and EMC against the composite of twelve indicators that reflect enabling conditions in laws, regulations, policy, and institutions.

[10] By relative order of their ranking in the index, the surveyed *SSA countries* are *Tanzania, Kenya, Rwanda, Ghana, Mozambique, South Africa, Senegal, Nigeria, Uganda, Ethiopia, Cameroon, Madagascar*, and *Democratic Republic of Congo*.

[11] An inherent limitation in all indicator-based measurements of inclusion is that they do not capture "extreme exclusion". In particular, the welfare losses for those parts of the population who may have no digital financial access at all, but are affected by the gradual disappearance of traditional (formal and informal) habits of financing and payment that comes with the diffusion of the new technologies.

Figure 8. Financial Inclusion Index for the EAC and Selected Regions



Source: World Bank (2016), Financial Inclusion Index

countries exceed both the composite SSA and the frontier LICs inclusion index,[12] and Kenya even exceeds the average index for emerging market economies (figure 8).

D. Financial Development

15. When measured against the IMF's financial development index, Rwanda's performance appears less favorable than it probably is. The IMF has developed a database capturing financial development across *depth*, *access*, and *efficiency*, measured across *institutions* and *markets* (table 4). Within this framework, Rwanda's performance is distinguished by the high quality of its financial institutions, but dragged down by its unsophisticated securities markets. However, recalling Rwanda's recent advancements in financial access and inclusion, it seems likely that the country's state of financial development is understated by the index, because it does not include data on microfinance or mobile financial services—the access parameters for institutions (number of mortar-and-brick branches; ATMs) may even be misleading in an innovative world that moves toward low-cost mobile payment and banking solutions.

[12] For the purpose of the FINDEX database, *Frontier LICs* include *Côte d'Ivoire, Ethiopia, Ghana, Kenya, Mozambique, Nigeria, Rwanda, Senegal, Tanzania, Uganda, Zambia, Bangladesh, Bolivia, Cambodia, Honduras, Kyrgyz Republic, Mauritania, Mongolia, Nicaragua, Papua New Guinea*, and *Vietnam*.

Table 4. Composition of the IMF's Financial Development Index

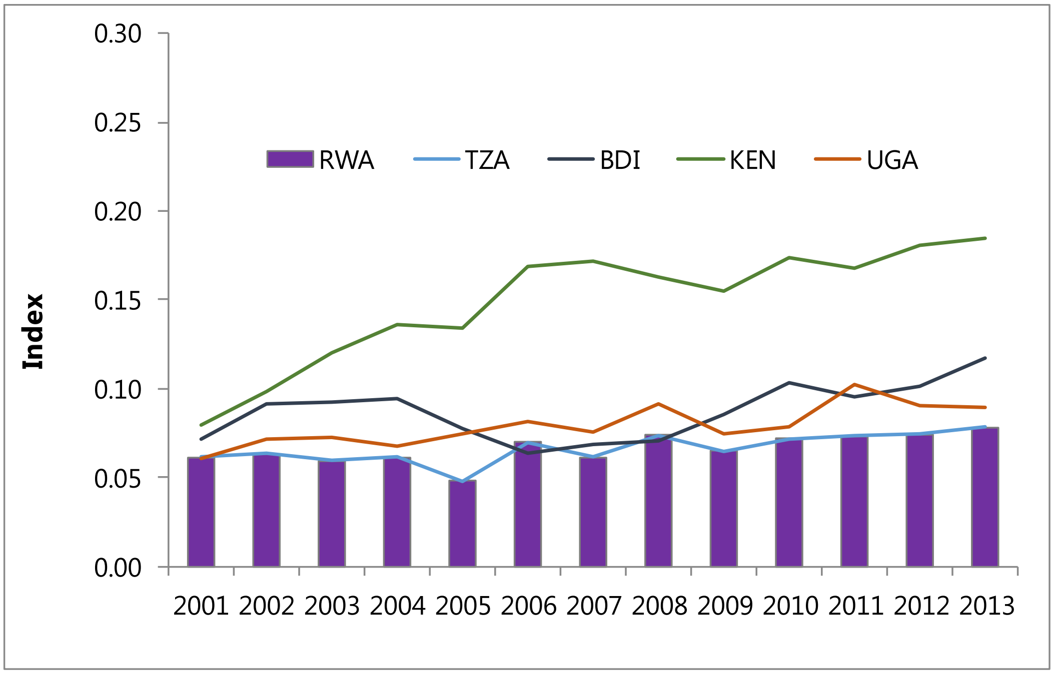
	FINANCIAL INSTITUTIONS	FINANCIAL MARKETS
DEPTH	1. Private sector credit (% GDP) 2. Pension fund assets (% GDP) 3. Mutual fund assets (% GDP) 4. Insurance premiums (% GDP)	1. Stock market capitalization to GDP 2. Stocks traded to GDP 3. International govt debt securities (% GDP) 4. Total debt securities of nonfin. corps. (% GDP) 5. Total debt securities of fin. corps. (% GDP)
ACCESS	1. Comm bank branches per 100,000 adults 2. ATMs per 100,000 adults	1. % of market cap. outside 10 largest companies. 2. Total number of issuers of debt.
EFFICIENCY	1. Net interest margin 2. Lending-deposite rate spread 3. Non-interest income to total income 4. Overhead costs to total assets 5. Return on assets 6. Return on equity	1. Stock market turnover ratio (stocks traded/capitalization)

Source: IMF database.

16. The index suggests that Rwanda's financial system has improved over the past decade, but is held back by size and scale limitations. Developments are much in line with regional peers (figure 9), but the overall level of the index is lagging other EAC countries. It appears that this mainly reflects the limitations of a tiny national securities market: It is very difficult for smaller countries to score well on an index that measures market efficiency per absolute number of transactions.[13] A long-term strategy for gradual regional integration of financial markets within the EAC may present the best available chances for overcoming these size and efficiency issues.

[13] This is a familiar conundrum for policy makers in many smaller countries: When the potential for scale effects is missing, what are the best policies to upgrade a small and supposedly inefficient financial landscape, if it is both overbanked and suffers from lack of competition?

Figure 9. Financial Development in Rwanda and the EAC



Source: IMF (2016), Staff calculations

E. Conclusion

17. Rwanda's financial sector has grown significantly over the past decade. All financial institutions providing services to Rwandan consumers grew fast, but with remarkable structural stability and without major signs of financial exuberance or overheating. In parallel, the BNR strengthened supervisory capabilities, and adopted best practices for banking sector stress tests and for regulating the microfinance sector.

18. Financial system conditions are sustainable. The financial cycle appears to be cooling in a controlled manner. Partly as a response, nonperforming loans are rising, requiring continued close monitoring. Extending the existing macroprudential tools and policies is a crucial next step to accompany the financial system's growing importance in Rwanda's private sector-led growth strategy.

19. At the same time, financial inclusion indicators are improving. Indices from different data sources, and measured across different dimensions, all convey significant progress in Rwanda's financial inclusion, benefiting wider circles of the population. A general policy stance that is gently tilted toward gender and income equality will provide fertile grounds for new financial products to take hold.

20. Innovations and a favorable regulatory environment are making their mark. Rwanda's regulatory environment has strengthened over the past few years, and there appears to be a strong correlation between the diffusion of new financial technologies and ongoing financial inclusion. Maintaining the appropriate balance between stability and consumer protection, and the encouragement and promotion of new financial techniques will be an important and difficult challenge for policy makers and regulators. But getting the balance right also promises significant rewards in terms of financial inclusion and economic growth.

21. Financial development indicators convey a similar story, but do not accurately reflect recent financial innovation. In particular, microfinance and mobile financial services have made a big difference in creating avenues for economic participation and small-scale enterprises, but they are usually not reflected in financial development indices. Similarly, the recent emergence of new internet-based alternative financing models have great potential to enhance access and inclusion, but are hard to measure and regulate. Given Rwanda's obvious limitations regarding size and minimum scale thresholds for efficient markets, a strategy of regional integration may hold the best promise for bringing financial development to the next level.

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