

Rwanda Inclusive Growth Diagnostic (IGD) Screening Profile¹

Economic Overview

Rwanda is a low income country of 11 million people, 63 percent of whom live in extreme poverty (below \$1.25/day). Its average per capita income (PPP GNI) was \$1,270 in 2011, having grown by an average 5.3% annually over the last 10 years, which has resulted in a decline in extreme poverty of 2.6% per year. Its Gini index, at 50.8, indicates a more skewed distribution of income than many countries. The adult labor force participation rate in 2011 was 87.4%, higher than the average for Sub-Saharan Africa (69.6%) and the average for low income countries (75.1%). The adult female labor force participation rate of 86.4% is also higher than the average for both Sub-Saharan Africa (63.1%) and Low Income countries (67.7%). This is typical of very poor countries where most adults must either work or starve. The ratio of female to male labor participation rate is very high at 101.2%, compared with the 84% and 83.5% Sub-Sahara African and Low Income Country averages, respectively. [World Bank World Development Indicators (WB WDI)]

In the 2012-2013 World Economic Forum Global Competitiveness Index (WEF GCI) Rwanda received good marks for maintaining a low general government debt (23.4% of GDP) and a low fiscal deficit (-1.9% of GDP), but its gross national savings ratio was too low (14.9% of GDP, ranking 97 out of 144 countries). It had a moderately high rate of inflation (5.7%) and a low country credit rating, ranking 85 and 120, respectively, in these two categories of the WEF GCI. This resulted in a moderately low overall ranking for its macroeconomic environment (78 out of 144). (See Tables 1 & 2) WB WDI reported Rwanda's consumer price inflation as 5.7% in 2011 and 6.3% in 2012.

Based on the indicators discussed below, there appears to be substantial potential for income growth both in smallholder agriculture and in higher wage non-farm employment. With such a large proportion of the workforce still engaged in agriculture, and with value-added per worker comparatively low in that sector, there should still be scope for further improvement there beyond recent gains. However, low value-added per worker may also be a sign that agriculture is simply saturated with a growing labor force that has nowhere else to go. Since the non-agricultural sectors provide only 21% of total employment, and only around 10% of workers are employed in formal sector activities, the big question is why non-farm activities are not growing faster to absorb that labor force and use it more productively. It presents a challenging puzzle.

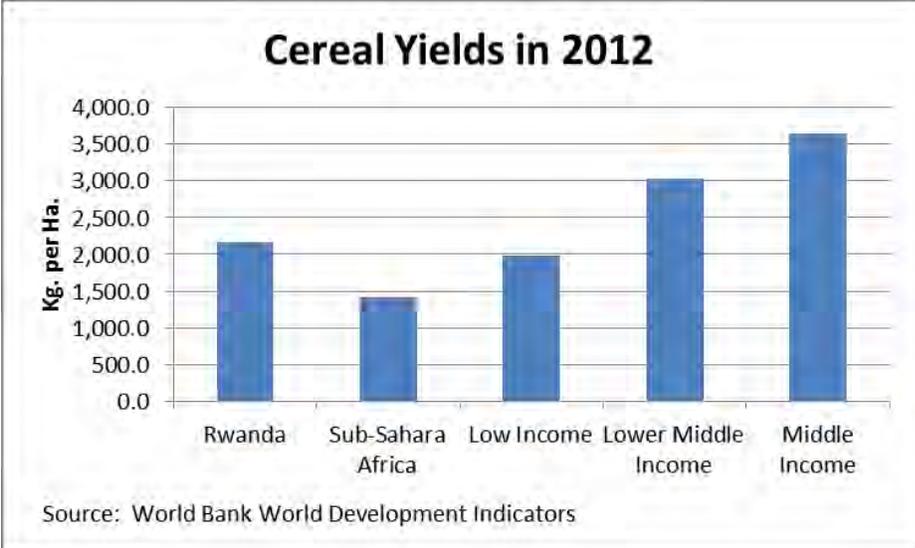
The levels of investment and capital formation are low, but not overly so, and appear to be fairly productive. Rwanda gets relatively good marks from some sources for access to credit and financial market development, yet many businessmen complain about access to financing as their most problematic factor to doing business there, and the historic level of domestic credit to the private sector has been very low (need updated figures here). The country receives moderately good grades for the ease of doing business and the quality of its infrastructure, except for telephone access. Businessmen complain about an inadequately educated workforce, and the levels of secondary and tertiary education are problematic; yet the country gets good marks for the quality of its education system and adult literacy is higher than in comparator countries. Compared with many other Sub-Sahara African countries Rwanda gets incredibly good grades for effective institutions, regulatory system and control of

¹ This country profile presents indicators available online that are relevant to the IGD analytical nodes of the "Analytic Guide for an Inclusive Growth Diagnostic (the productive employment model)," which is available from <https://dec.usaid.gov/dec>

corruption, but it scores poorly in providing access to the internet and in the trading across borders area, with the cost of importing particularly high. Its total trade with the outside world is relatively low and it scored poorly on a World Bank Trade Restrictiveness Index a few years ago, so the extent of constraints on trade and their effects on local competition and employment might be key constraints, although other policies that can provide disincentives for employment generation are not raising red flags. As for the employability of the workforce, although businessmen complain about the adequacy of education they did not complain about its general health status, despite some worrying health data.

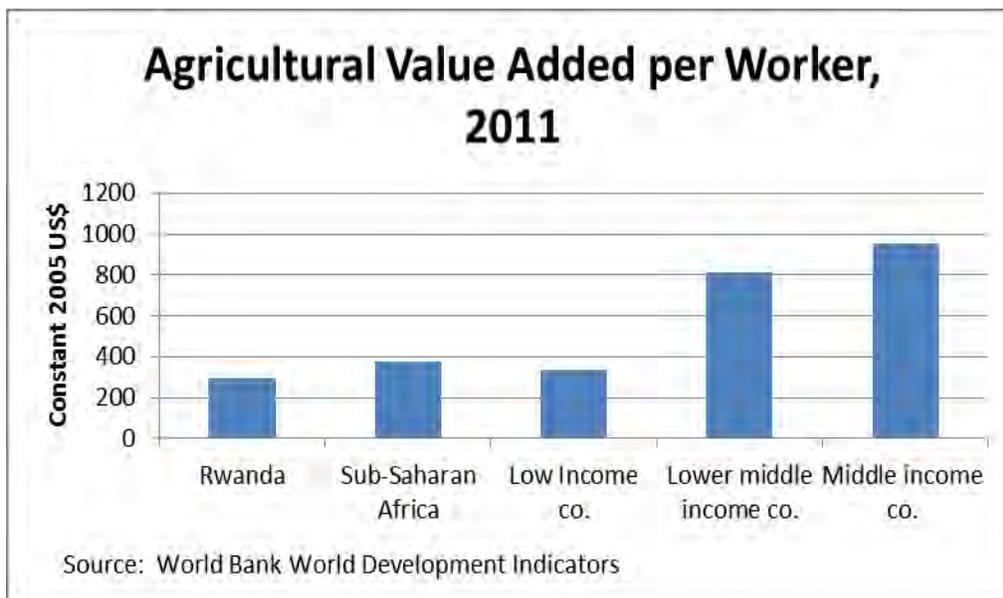
Potential for higher smallholder agricultural production and rural incomes

Rwanda is predominantly rural, with 81% of the population living in rural areas, and 78.8% of employment was in agriculture in 2005. However, agriculture contributes only 31.9% to GDP, indicating much lower productivity per worker than in the non-agricultural sectors. Average cereal yield was 2,170 kg. per hectare in 2012, higher than the averages for Sub-Sahara Africa (1,417 kg.) and low income countries worldwide (1,982 kg.) but much lower than that for lower middle income (3029 kg.) and middle income countries (3653 kg.). (But in Rwanda the main staple food crop is beans.) Total crop production increased 60% between the 2000-2006 average and 2011, and livestock production increased 34% since 2004-06, due in part to a 15% increase in agricultural land, to a 36% increase in arable land,² and in part to a doubling of average cereal yields after 2000³. Total agricultural value added increased 79% in constant price terms between 2000 and 2011, while the rural population increased by 28%. As a result, total agricultural value added per worker in Rwanda grew by 29% between 2000 and 2011. But it was still equal to only US\$294 in 2011 (in constant 2005 US\$), far below the \$375 average for Sub-Saharan Africa developing countries and the \$336 average for low income countries, not to mention that achieved in lower middle income countries. (WB WDI)



² Agricultural land refers to the share of land area that is arable, under permanent crops, and under permanent pastures. Arable land includes land defined by the FAO as land under temporary crops (double-cropped areas are counted once), temporary meadows for mowing or for pasture, land under market or kitchen gardens, and land temporarily fallow. Land abandoned as a result of shifting cultivation is excluded. Land under permanent crops is land cultivated with crops that occupy the land for long periods and need not be replanted after each harvest, such as cocoa, coffee, and rubber. This category includes land under flowering shrubs, fruit trees, nut trees, and vines, but excludes land under trees grown for wood or timber. Permanent pasture is land used for five or more years for forage, including natural and cultivated crops. -- <http://data.worldbank.org/indicator/AG.LND.AGRI.K2>

³ Three-year average yield for 2010-12 over 2000-02. WB WDI.



1A&B) On-farm productivity & Processing and marketing of farm products

1Aa) Agricultural research & extension services

1Ab) Access to credit for farm inputs & capital improvements

1Ac) Rural infrastructure for irrigation and farm-to-market roads

1Ad) Land tenure and land markets

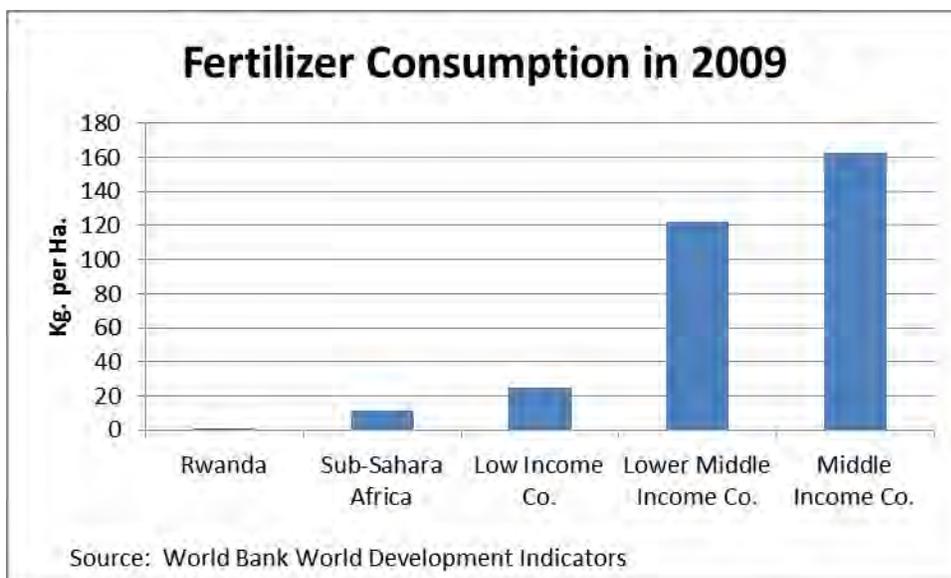
1Ba) Market and pricing policies

1Bb) Availability of information about and contacts with higher value markets

1Bc) Rural infrastructure for transport, electric power, storage, markets, communication

1Bd) Access to rural credit for agriculture product processing, storage, marketing, etc.

The EIU Global Food Security Index (GFI) indicates Rwanda spends 2% of the agricultural contribution to GDP on agricultural research and development, placing it in the third quintile of the 105 countries covered and above most developing countries. The same index placed Rwanda in the third quintile in access to finance for farmers, but in the bottom fifth in agricultural infrastructure. As components of the latter index, it scored poorly in the existence of crop storage facilities and in the bottom half for road infrastructure. Fertilizer consumption in Rwanda was only 1.1 kg. per hectare of arable land in 2009, down from 8.3 kg. in 2008, far below the Sub-Sahara average of 11.4 kg. in 2009 (12.2 kg. in 2008) and the low income country average of 25 kg. The lower middle income average was 122 kg. and middle income countries averaged 162 kg. per ha. (WB WDI), so there is much room for improvement. In 2013 the MCC scored Rwanda as better than 94% of a comparable group of 81 developing countries in land rights and access. The World Bank Doing Business Indicators 2014 gave Rwanda a very good score, ranking 8 out of 189, for registering property—a marked improvement from the year before, when Rwanda ranked 63 out of 185 (it significantly reduced the number of procedures, days and cost required to register property). The 2012-2013 WEF Global Competitive Index gave Rwanda a very high score for agricultural policy costs, ranking 2nd highest out of 144.



1) Potential for more productive, higher wage non-farm employment.

As noted above, adult labor force participation rates in Rwanda are very high, but only 21.2% of employment was in non-agricultural activities. In 2000, only one third of those employed in non-agricultural activities were women (latest data available), or 7% of total employment. (WB WDI) However, the non-farm sector is not terribly hampered by a poor business climate, as the country ranked a respectable 52 out of 185 in the 2013 World Bank Ease of Doing Business (DB) Index, and its ranking improved to 32 out of 189 in 2014, having undertaken reforms in all ten of the DB sub-index areas over the last two years (reforms were recorded in getting electricity and enforcing contracts in the 2013 DB Index and in all 8 of the other DB index areas in 2014—a remarkable performance in economic policy reform). Rwanda received very good marks for starting a business, ranking 9 out of 189. Its worst scores were in trading across borders, ranking 162, and resolving insolvency, ranking 137, despite making some improvements during the previous year.

✓ Reform making it easier to do business

RWANDA		Sub-Saharan Africa	GNI per capita (US\$)	560	
Ease of doing business (rank)		Low Income	Population (m)	11.5	
✓ Starting a business (rank)	9	✓ Registering property (rank)	8	✓ Trading across borders (rank)	162
Procedures (number)	2	Procedures (number)	3	Documents to export (number)	7
Time (days)	2	Time (days)	12	Time to export (days)	26
Cost (% of income per capita)	4.4	Cost (% of property value)	0.2	Cost to export (US\$ per container)	3,245
Minimum capital (% of income per capita)	0.0	✓ Getting credit (rank)	13	Documents to import (number)	9
✓ Dealing with construction permits (rank)	85	Strength of legal rights index (0–10)	8	Time to import (days)	30
Procedures (number)	13	Depth of credit information index (0–6)	6	Cost to import (US\$ per container)	4,990
Time (days)	104	Public registry coverage (% of adults)	2.1	✓ Enforcing contracts (rank)	40
Cost (% of income per capita)	375.7	Private bureau coverage (% of adults)	13.0	Procedures (number)	23
✓ Getting electricity (rank)	53	✓ Protecting investors (rank)	22	Time (days)	230
Procedures (number)	4	Extent of disclosure index (0–10)	7	Cost (% of claim)	78.7
Time (days)	30	Extent of director liability index (0–10)	9	✓ Resolving insolvency (rank)	137
Cost (% of income per capita)	4,018.7	Ease of shareholder suits index (0–10)	4	Time (years)	2.5
		Strength of investor protection index (0–10)	6.7	Cost (% of estate)	29
		✓ Paying taxes (rank)	22	Recovery rate (cents on the dollar)	19.0
		Payments (number per year)	17		
		Time (hours per year)	113		
		Total tax rate (% of profit)	29.9		

From World Bank/IFC 2014 Doing Business Report, p. 219

2A) Private Sector Demand for More Productive Employment

2Aa) Level of Private Investment (HRV Constraints Analysis)

2Aai) Private returns to economic activity

Gross capital formation in Rwanda has grown from an average of 13.5% of GDP in 2000-2002 to 21.3% in 2009-2011, reaching 21.4% of GDP in 2011, comparing favorably with an average of 21.3% for Sub-Saharan Africa but still lower than the 24.8% average for low income countries (WB WDI). Net foreign direct investment was equal to only 1.7% of GDP in 2011, and averaged 1.8% over the last 5 years. This is quite low compared with the 5-year averages of 3.3% for all Sub-Saharan and low income countries. According to the IMF World Economic Outlook, total investment in Rwanda reached 22.9% of GDP in 2012, and averaged 22.1% over the 6-year period 2007-2012. Rwanda was the 88th highest in 2012 among 173 countries for this indicator. One bright spot about investment in Rwanda is its apparent productivity and lack of wasteful investment spending. Rough incremental capital/output ratio (ICOR) calculations, based on 5-year averages of gross fixed capital formation and subsequent GDP growth rates, indicate very low ICORs, at 2.5 and below from 2000 to 2010.

2Aai1) Evidence of low social returns

Is there inadequate human capital to run a business successfully?

In the 2012-2013 World Economic Forum (WEF) survey of business leaders, the second highest percentage, 19.6%, listed an inadequately educated workforce as the most problematic factor for doing business in Rwanda. (See Table 3) However, 71.1% of the adult population was recorded as literate in 2010, compared with a 63% average in low income countries and in Sub-Sahara Africa and 71% in lower middle income countries (WB WDI). Some 67.5% of Rwanda women were literate in 2010, an increase from 59.8% in 2000. The 2012-13 WEF GCI ranked Rwanda very high (18 out of 144) in primary education enrollment, with 98.7% enrolled. The country also received good marks for the quality of the education system, ranking 50 for education overall and 64 for primary education itself (out of 144); but got a lower mark for higher education and training with low enrollment figures for secondary education (35.8%) and tertiary education (5.5%) and with a low score for the availability of research and training services. (See Tables 12 and 13)

Is there a lack of or poor condition of productive infrastructure?

The 2012-2013 WEF survey results about infrastructure placed Rwanda moderately low at 96 out of 144 countries, and 11.4% of respondents (the 4th highest) listed an inadequate supply of infrastructure as the most problematic factor for doing business. The country received its lowest marks for telephone access and the availability of airline seats, but the quality of roads and the quality of overall infrastructure received good scores, ranking 40 and 48 out of 144, respectively. The quality of electricity supply received a moderate score, ranking 87. (See Tables 1, 3 & 4)

This is supported by other sources. Private firms reported an average of 4 power outages per month in 2011, down from 9.9 in 2006 (WB WDI). The 2014 World Bank Doing Business Report ranked Rwanda a moderate 53rd out of 189 for getting electricity, despite making an improvement noted in the 2013 DB report, and it still costs an average 4,019% of income per capita to do so. The WB WDI reports that 19% of Rwanda's roads were paved in 2004 (latest data available), a little higher than the 18.7% average for Sub-Saharan African countries and 14.1% for low income countries in 2005, but still problematic for private business.

2Aai2) Private appropriability

Government failure/poor governance

The Heritage Foundation/Wall Street Journal Business Freedom Index gave Rwanda a relatively high score of 76.9 in 2011 (with 100 being the best), an improvement of 2.4 points from the year before. It ranked 75 out of 183 countries in the overall Economic Freedom Index. It ranked 63 out of 144 in the 2012-2013 WEF Global Competitiveness Index (GCI) (See Table 1). The Canadian Fraser Institute, in its annual Economic Freedom of the World Report for 2013, ranked Rwanda 39th out of 152 countries in its overall index. This was a great improvement from ranking 119th in 1995. The largest improvements in Fraser Institute scores and rankings were in the Sound Money and Regulation categories. Rwanda's rating score also improved in the Legal System and Property Rights area, but its ranking less so, most likely because the scores of other countries in the index also improved. Rwanda scored +0.07 in the 2011 Government Effectiveness Estimate of the World Bank Governance Indicators, out of a -2.5 to +2.5 range, ranking 89th in a list of 212 countries. It scored -0.31 in the WB Rule of Law Estimate, in 115th place out of 214.

Corruption was cited by the lowest percentage (0.4) of WEF respondents as the most problematic factor for doing business in Rwanda, along with crime and theft, government instability/coups and poor public health. (See Table 3) Rwanda was given a high average score of 5.2 in the WEF GCI for Institutions, ranking 20 worldwide out of 144. It received outstanding scores ranking better than 50 in 19 of the 21 elements evaluated in the Institutions "pillar." (See Tables 1 & 5) Rwanda scored 53 out of 100 possible points in the Transparency International Corruption Perceptions Index in 2012 and placed 50th among 176 countries scored. The World Bank Governance Matters Control of Corruption estimate of 2011 scored Rwanda +0.45 in the -2.5 to +2.5 range, an improvement from -0.74 in 2005 and ranking 65th out of 212 countries.

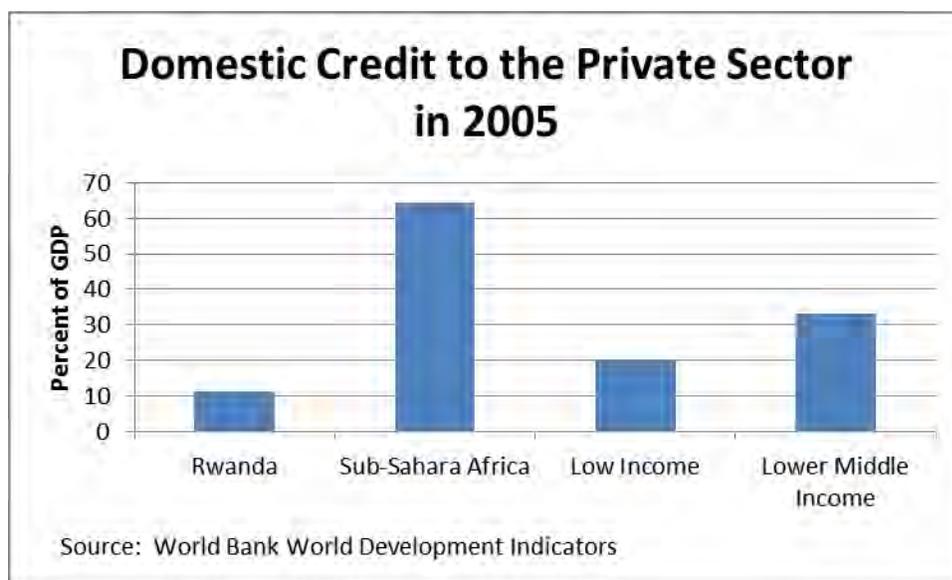
Market failures in the availability of information for innovation and "coordination"

Rwanda ranked a low 113 (out of 144) in the 2012-13 WEF GCI Technological Readiness Index, but a much better 60 in Business Innovation & Sophistication Factors. It is particularly weak in the access and use of the internet, but stronger in foreign direct investment and technology transfer. Its scores ranked high in government procurement of advanced tech products, willingness to delegate authority and the nature of its competitive advantage. (See Tables 1, 6, 7 and 8)

2Aaii) Cost of finance

Domestic credit to the Rwanda private sector was only 11.2% of GDP in 2005 (latest available data in WB WDI). This compares unfavorably with the Sub-Sahara African developing country average of 64.3% of GDP that year. The low income country average was 20.3% in 2005. The lower middle income country average was 33.0%. However, the MCC ranked Rwanda as scoring higher than 98% of its "peer" group of 85 developing countries providing access to credit in 2013; and in the World Bank 2014 Doing Business Indicators the country was ranked a very high 13 out of 189 for getting credit. Its real interest rate has been volatile, rising from 2.8% in 2008 to 13.9% in 2010, and it fell from 22.9% in 2002 to -4.6% the following year, apparently as the nominal interest rate was not adjusted to fluctuating rates of price inflation. (WB WDI). The lending interest rate has hovered around 16.5% over the last decade (2000-2010), while the interest rate spread averaged 7.4% from 2000 to 2006, but rose to 16.1% in 2009 and fell back down to 9.6% in 2010. (WB WDI) The Heritage Foundation/Wall Street Journal Investment Freedom Index scored Rwanda a low 50 out of 100 possible points in 2011, indicating fairly strong government influence over the financial sector. In the 2012-13 WEF GCI Rwanda scored 4.4 (from 1-7 high) and ranked a very respectable 49 out of 144 in Financial Market Development, but access to

financing was listed as the most problematic factor for doing business by 20.2% of survey responses (the highest percent). (See Tables 1, 3 & 9)



2Ab) Conversion from Informal to Formal Sector

A 2008 World Bank report on Rwanda noted that “The share of the labor force working in formal employment increased from 5 to 10 percent. Also, the proportion of the employed labor force engaged in agricultural occupations declined by 9 percent nationally to 80 percent between 2000/01 and 2005/06. Most of this decline occurred among men, and the domestic service and retail trade sectors absorbed most of the workers.”⁴ The World Bank Doing Business Report for 2014 ranked Rwanda a very high 32 out of 189 countries in business climate indicators. Trading across borders is the most troublesome area, ranking 162, as it takes an average of 26 days to export and 30 days to import a shipment of commodities and costs \$3,245 per container to export and a whopping \$4,990 per container to import. Resolving insolvency is the next most troublesome area, ranking 137, as it takes an average of 2.5 years, costs 29% of the estate value, and the recovery rate is only 19.0%, although these figures are greatly improved over the previous year’s figures. However, starting a business is particularly easy, ranking 9 worldwide out of 189, as there is no minimum capital requirement, takes 2 days on average, and costs 4.4% of income per capita. Rwanda also scores well in paying taxes, protecting investors and enforcing contracts, in addition to the getting electricity, getting credit, and registering property areas discussed above. Dealing with construction permits is a bit more troublesome, ranking 85.

2Ac) Labor Intensity of Production

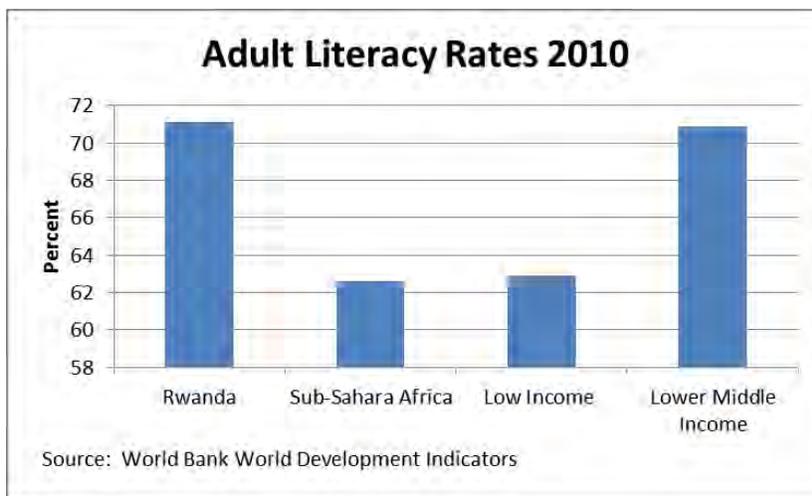
The 2012-2013 WEF GCI survey in the Goods Market Efficiency category (ranking 39 out of 144 overall) scored Rwanda high in several areas key to generating more employment, including customs procedures, rules on FDI, effectiveness of anti-monopoly policy, extent of market dominance and prevalence of trade barriers, although the intensity of local competition leaves something to be desired (ranking 98). (See Table 10) The World Bank Development Research Group Trade Research Unit

⁴ World Bank, “The Republic of Rwanda, Joint IDA-IMF Staff Advisory Note on the Poverty Reduction Strategy,” January 22, 2008, p. 2

calculated a Trade Restrictiveness Index that resulted in a high (not good) score of 16.18 for Rwanda in 2006-09 (latest).⁵ Its trade with the outside world totaled a low 47% of GDP in 2012, compared with a 70% average for developing Sub-Sahara African countries and 67% average for low income countries. (WB WDI). Rwanda scored its best WEF pillar ranking in Labor Market Efficiency, 11 out of 144, with especially good scores in the ratio of women to men in the labor force (ranking 4th in the world!), lack of brain drain, cooperation in labor-employer relations, reliance on professional management, and pay and productivity. (See Table 11) However, its restrictive trade policies and low level of trade with the outside world are also reflective of the low ranking it received in the 2014 Doing Business Indicators for Trading Across Borders (162 out of 189), as noted above. An enhanced ability to trade would favor a latent comparative advantage in more labor-intensive activities for both export and import-substitution goods and services.

2B) Employability of the Workforce:

Adult literacy rates are higher in Rwanda than in comparator countries, as 71.1% of the adult population was recorded as literate in 2010, compared with a 63% average in low income countries and in Sub-Sahara Africa and 71% in lower middle income countries. Some 67.5% of Rwanda women were literate in 2010, an increase from 59.8% in 2000, which compares favorably with that for Sub-Saharan Africa (54.2%) and low income countries (56%). (WB WDI) As noted above, the 2012-13 WEF GCI ranked Rwanda very high (18 out of 144) in primary education enrollment, with 98.7% enrolled. The country also received good marks for the quality of the education system, ranking 50 for education overall and 64 for primary education itself (out of 144); but got a lower mark for higher education and training (ranking 117) with low enrollment figures for secondary education (35.8%, ranking 128) and tertiary education (5.5%, ranking 123) and with a low score for the availability of research and training services. (See Tables 12 and 13)



⁵ The Trade Restrictiveness Index is an indicator of the trade restrictiveness of the MFN tariff schedule of a country. It calculates the equivalent uniform tariff of a country's tariff schedule that would keep domestic import levels constant. Product level tariffs are weighted by import shares as well as the responsiveness of imports to price changes (import demand elasticity). It includes preferential rates. It is expressed as a tariff rate. Lower is better. The higher the number, the more restrictive a country's trade policy, and the less open the country is to international competition. Desirable to be less than 7.0. <http://info.worldbank.org/etools/wti/3a.asp#>

Even more worrying from an employability standpoint, however, is the poor health of the workforce. The 2012-2013 WEF GCI overall ranking for Rwanda in Health and Primary Education is 100 out of 144 (Table 1). It ranked worse than 100 in all but 1 of the 8 health indicators surveyed, including the business impacts of malaria, tuberculosis and HIV/AIDS. More than 5% of the entire population has malaria and 2.9% of the adult population has HIV. Rwanda scores worse than 113-121 other countries in the business impacts of malaria, HIV/AIDS and tuberculosis. Despite these poor health marks, however, it is interesting that only 0.4% of the WEF survey respondents selected poor public health as one of the most problematic factors for doing business in Rwanda (Table 3). Perhaps this is simply indicative of the small percentage of the workforce utilized by the more successful formal sector entrepreneurs who participated in the survey. The WEF GCI listed Rwanda's life expectancy as only 55.1 years, ranking 126 and longer than only 18 other countries in its survey. (See Table 12) However, a WB WDI table lists the country's life expectancy in 2011 as 62.9 years, an increase over the 55.2 years recorded in 2005. This is longer than the Sub-Saharan average of 55.9 and a little longer than that of low income countries worldwide (61.1 years).

Rwanda's population growth rate is moderately high at 2.8% per year. (WB WDI) It is on par with the average for Sub-Saharan African countries of 2.7% but a little higher than the average for low income countries (2.3%). This makes it more difficult for the country to improve its health and education services fast enough to keep up with the increasing need for them.

Appendix

Table 1. The Global Competitiveness Index:	Rank	Score
Rwanda	<u>out of 144)</u>	<u>(1–7)</u>
GCI 2012–2013	63	4.2
GCI 2011–2012 (out of 142)	70	4.2
GCI 2010–2011 (out of 139)	80	4.0
Basic requirements (60.0%)	70	4.6
Institutions	20	5.2
Infrastructure	96	3.2
Macroeconomic environment	78	4.6
Health and primary education	100	5.3
Efficiency enhancers (35.0%)	94	3.8
Higher education and training	117	3.2
Goods market efficiency	39	4.5
Labor market efficiency	11	5.1
Financial market development	49	4.4
Technological readiness	113	3.0
Market size	128	2.3
Innovation and sophistication factors (5.0%)	60	3.7
Business sophistication	70	3.9
Innovation	51	3.4

Source: WEF, *Global Competitiveness Report 2012–2013*, p. 306

Table 2. Macroeconomic environment: Rwanda	Rank	Score
	<u>(out of 144)</u>	<u>(1–7)</u>
3.05 Country credit rating, 0–100 (best)*	120	23.4
3.02 Gross national savings, % GDP*	97	14.9
3.03 Inflation, annual % change*	85	5.7
3.01 Government budget balance, % GDP*	50	-1.9
3.04 General government debt, % GDP*	32	23.4

Notes: Values are on a 1-to-7 scale unless otherwise annotated with an asterisk (*).
Source: WEF, *Global Competitiveness Report 2012-13*, p. 307

Table 3. The most problematic factors for doing business	
in Rwanda	(Percent of Responses)
Access to financing	20.2
Inadequately educated workforce	19.6
Tax rates	17.5
Inadequate supply of infrastructure	11.4
Tax regulations	7.5
Poor work ethic in national labor force	6.5
Inflation	5.9
Foreign currency regulations	3.7
Restrictive labor regulations	2.4
Policy instability	2.2
Inefficient government bureaucracy	1.8
Corruption	0.4
Crime and theft	0.4
Government instability/coups	0.4
Poor public health	0.4
<p>Note: From the list of factors above, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.</p> <p>Source: WEF, <i>Global Competitiveness Report 2012-13</i>, p. 306</p>	

Table 4. Infrastructure: Rwanda	Rank	Score
	(out of 144)	(1-7)
2.09 Fixed telephone lines/100 pop.*	138	0.4
2.08 Mobile telephone subscriptions/100 pop.*	137	40.6
2.06 Available airline seat kms/week, millions*	128	13.2
2.04 Quality of port infrastructure	109	3.5
2.07 Quality of electricity supply	87	4.2
2.05 Quality of air transport infrastructure.....	84	4.3
2.01 Quality of overall infrastructure	48	4.9
2.02 Quality of roads	40	5.0
2.03 Quality of railroad infrastructure	NA	NA
<p>Notes: Values are on a 1-to-7 scale unless otherwise annotated with an asterisk (*).</p> <p>Source: WEF, <i>Global Competitiveness Report 2012-13</i>, p. 307</p>		

Table 5. Institutions: Rwanda	Rank	Score
	(out of 144)	(1–7)
1.19 Strength of auditing and reporting standards	69	4.6
1.14 Business costs of terrorism	66	5.6
1.20 Efficacy of corporate boards	46	4.8
1.16 Organized crime	40	5.8
1.03 Diversion of public funds	37	4.5
1.01 Property rights	34	5.2
1.02 Intellectual property protection	32	4.8
1.15 Business costs of crime and violence.....	30	5.6
1.21 Protection of minority shareholders' interests	30	4.8
1.22 Strength of investor protection, 0–10 (best)*	29	6.3
1.18 Ethical behavior of firms	28	5.0
1.06 Judicial independence	25	5.3
1.05 Irregular payments and bribes	21	5.8
1.17 Reliability of police services	19	5.9
1.11 Efficiency of legal framework in challenging regs.	17	4.8
1.10 Efficiency of legal framework in settling disputes	15	5.1
1.12 Transparency of government policymaking	7	5.5
1.04 Public trust in politicians	6	5.6
1.07 Favoritism in decisions of government officials	5	5.1
1.08 Wastefulness of government spending	4	5.5
1.09 Burden of government regulation	2	5.3
1.13 Gov't services for improved business performance.....	NA	NA

Notes: Values are on a 1-to-7 scale unless otherwise annotated with an asterisk (*).

Source: WEF, Global Competitiveness Report 2012-13, p. 307

Table 6. Technological readiness: Rwanda	Rank	Score
	(out of 144)	(1–7)
9.05 Broadband Internet subscriptions/100 pop.*	130	0.0
9.04 Individuals using Internet, %*	124	7.0
9.06 Int'l Internet bandwidth, kb/s per user*	111	4.4
9.01 Availability of latest technologies	87	4.7
9.02 Firm-level technology absorption	84	4.6
9.07 Mobile broadband subscriptions/100 pop.*.....	77	6.4
9.03 FDI and technology transfer	55	4.8

Notes: Values are on a 1-to-7 scale unless otherwise annotated with an asterisk (*).

Source: WEF, Global Competitiveness Report 2012-13, p. 307

Table 7. Business sophistication: Rwanda	Rank	Score
	(out of 144)	(1–7)
11.01 Local supplier quantity	119	4.2
11.06 Control of international distribution	102	3.7
11.02 Local supplier quality	88	4.2
11.05 Value chain breadth	85	3.4
11.08 Extent of marketing	76	3.9
11.07 Production process sophistication	70	3.6
11.03 State of cluster development	69	3.7
11.04 Nature of competitive advantage	45	3.8
11.09 Willingness to delegate authority	37	4.2
Notes: Values are on a 1-to-7 scale unless otherwise annotated with an asterisk (*).		
Source: WEF, <i>Global Competitiveness Report 2012-13</i> , p. 307		

Table 8. Innovation: Rwanda	Rank	Score
	(out of 144)	(1–7)
12.07 PCT patents, applications/million pop.*	119	0.0
12.06 Availability of scientists and engineers	85	3.8
12.03 Company spending on R&D	70	3.1
12.02 Quality of scientific research institutions	69	3.6
12.01 Capacity for innovation	55	3.3
12.04 University-industry collaboration in R&D	52	3.8
12.05 Gov't procurement of advanced tech products	10	4.5
Notes: Values are on a 1-to-7 scale unless otherwise annotated with an asterisk (*).		
Source: WEF, <i>Global Competitiveness Report 2012-13</i> , p. 307		

Table 9. Financial market development: Rwanda	Rank	Score
	(out of 144)	(1–7)
8.06 Soundness of banks	84	4.9
8.02 Affordability of financial services	76	4.0
8.07 Regulation of securities exchanges	61	4.2
8.03 Financing through local equity market	56	3.7
8.01 Availability of financial services	51	4.9
8.04 Ease of access to loans	32	3.4
8.05 Venture capital availability	27	3.4
8.08 Legal rights index, 0–10 (best)*	24	8
Notes: Values are on a 1-to-7 scale unless otherwise annotated with an asterisk (*).		
Source: WEF, <i>Global Competitiveness Report 2012-13</i> , p. 307		

Table 10. Goods market efficiency: Rwanda	Rank	Score
	(out of 144)	(1-7)
6.14 Imports as a percentage of GDP*	103	33.6
6.16 Buyer sophistication	101	3.0
6.01 Intensity of local competition	98	4.4
6.10 Trade tariffs, % duty*	98	8.8
6.15 Degree of customer orientation	85	4.5
6.11 Prevalence of foreign ownership	77	4.6
6.02 Extent of market dominance	63	3.8
6.09 Prevalence of trade barriers	60	4.5
6.03 Effectiveness of anti-monopoly policy	44	4.4
6.05 Total tax rate, % profits*	39	31.3
6.04 Extent and effect of taxation	20	4.4
6.12 Business impact of rules on FDI	18	5.3
6.13 Burden of customs procedures	6	5.6
6.07 No. days to start a business*	4	3
6.06 No. procedures to start a business*	3	2
6.08 Agricultural policy costs.....	2	5.5
Notes: Values are on a 1-to-7 scale unless otherwise annotated with an asterisk (*).		
Source: WEF, <i>Global Competitiveness Report 2012-13</i> , p. 307		

Table 11. Labor market efficiency: Rwanda	Rank	Score
	(out of 144)	(1-7)
7.03 Hiring and firing practices	59	4.1
7.02 Flexibility of wage determination	58	5.2
7.04 Redundancy costs, weeks of salary*	54	13
7.05 Pay and productivity	47	4.2
7.06 Reliance on professional management	42	4.7
7.01 Cooperation in labor-employer relations	40	4.7
7.07 Brain drain	19	4.8
7.08 Women in labor force, ratio to men*	4	1.02
Notes: Values are on a 1-to-7 scale unless otherwise annotated with an asterisk (*).		
Source: WEF, <i>Global Competitiveness Report 2012-13</i> , p. 307		

Table 12. Health and primary education: Rwanda	Rank	Score
	(out of 144)	(1–7)
4.08 Life expectancy, years*	126	55.1
4.06 HIV prevalence, % adult pop.*	125	2.9
4.07 Infant mortality, deaths/1,000 live births*	124	59.1
4.05 Business impact of HIV/AIDS	122	4.0
4.02 Malaria cases/100,000 pop.*	120	5,408.5
4.01 Business impact of malaria	115	4.2
4.03 Business impact of tuberculosis	114	4.4
4.04 Tuberculosis cases/100,000 pop.*	93	106.0
4.09 Quality of primary education	64	3.9
4.10 Primary education enrollment, net %*	18	98.7
Notes: Values are on a 1-to-7 scale unless otherwise annotated with an asterisk (*).		
Source: WEF, <i>Global Competitiveness Report 2012-13</i> , p. 307		

Table 13. Higher education and training: Rwanda	Rank	Score
	(out of 144)	(1–7)
5.01 Secondary education enrollment, gross %*	128	35.8
5.02 Tertiary education enrollment, gross %*	123	5.5
5.07 Availability of research and training services	110	3.5
5.05 Quality of management schools	73	4.2
5.08 Extent of staff training	69	3.9
5.06 Internet access in schools	66	4.3
5.04 Quality of math and science education	62	4.1
5.03 Quality of the educational system	50	4.1
Notes: Values are on a 1-to-7 scale unless otherwise annotated with an asterisk (*).		
Source: WEF, <i>Global Competitiveness Report 2012-13</i> , p. 307		