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ILO/SIDA PARTNERSHIP ON EMPLOYMENT

ACCELERATING STRUCTURAL TRANSFORMATION TOWARDS SDG GOALS: MACROECONOMIC AND SECTORAL POLICIES FOR FULL AND PRODUCTIVE EMPLOYMENT IN RWANDA

Dickson Malunda

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Foreword

Full and productive employment and decent work are at the heart of the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs). In addition to the specific goal (SDG8) of promoting "sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all", decent work is featured in many of the other SDGs.[1]

In adopting the SDGs, in particular SDG8, the international community has put job creation at the heart of economic policy-making and development plans: economic growth that generates decent work opportunities will lead to inclusive and poverty-reducing growth. Systematic follow-up and review of the implementation of the 2030 Agenda is required in order to maximize and track its progress. The follow-up and review is expected to "maintain a longer-term orientation, identify achievements, challenges, gaps and critical success factors and support countries in making informed policy choices".[2]

In order to support ILO constituents in their efforts to maximize and track progress on SDG8, a multi-country research programme has been undertaken that diagnoses opportunities and challenges associated with promoting productive employment and that identifies policy options for achieving SDG8. Within the framework of the ILO/Sida Partnership on "More and better jobs for inclusive growth and improved youth employment prospects", this global research on "SDGs and employment policies: Macroeconomic, sectoral and labour market policies for structural transformation and full and productive employment" was conducted in 10 countries, taking into account their specific country context. In particular, the research focused on the interlinkages and potential virtuous circle between targets 8.1 (sustaining per capita economic growth), 8.2 (sustaining labour productivity growth), 8.3 (promoting development-oriented policies), 8.5 (promoting full and productive employment for all women and men) and 8.6 (decreasing the share of NEETs by engaging young people in the labour market).

To better tailor policy advice and to customize employment diagnostics, it is important to present types of employment and economic growth pathways, and similar dynamics, according to core employment and productive characteristics and challenges. This is related, for example, to demographic transition and labour market transformations driven by globalization and technological change. The country selection included a diversity of countries across the employment and productive transformation pathways for more nuanced and contextualized policy guidance.

Four global syntheses are presented, based on the country studies, focusing more specifically on: (i) Structural transformation for inclusive growth and productive employment; (ii) Gender impacts of structural transformation; (iii) Young people not in employment, education and training; and (iv) Delivering on SDG8.

[1] See ILO: *Decent Work and the 2030 Agenda for Sustainable Development* for more information on the linkages between decent work and the SDGs. Available at: https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_436923.pdf

[2] United Nations (2015): Transforming our world: The 2030 Agenda for Sustainable Development". Available at: http://undocs.org/A/RES/71/313

The Employment, Labour Markets and Youth Branch (EMPLAB) is engaged in global advocacy and in supporting Member States' efforts to put the aim of more and better jobs at the centre of economic and social policies and of growth and development strategies. Policy research and knowledge generation and dissemination are essential components of EMPLAB's activities. The ILO/Sida Partnership on Employment working paper series is designed to disseminate the main findings of research on a broad range of topics undertaken by EMPLAB on employment and youth employment policies. The working papers are intended to encourage the exchange of ideas and to stimulate debate. The views expressed in them are the responsibility of the authors and do not necessarily represent those of the ILO.

Sukti Dasgupta
Chief
Employment, Labour Markets and Youth Branch

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Executive summary

Rwanda's economic growth over the past two decades has been remarkable. An analysis of the macroeconomic trends shows that the overall economy has grown at a significant rate, averaging annual GDP growth rates of 8 per cent during this time. Rwanda's GDP per capita increased from less than US$229 in 2000 to US$773 in 2018. In addition, there is evidence of a significant increase in private sector investment following the introduction of a revised tax code and implementation of the "doing business" reforms since 2005. Both foreign and domestic investment have increased, with FDI exceeding local investment, and new jobs have been created. Exports have not only increased but have also been diversified into non-traditional agricultural products. Increased revenues from tourism have been a result of infrastructural investments in MICE tourism facilities, such new hotels, a convention centre, investments in Rwanda Air and marketing campaigns, such as "Visit Rwanda".

However, imports have also increased and so the balance of trade has worsened. To counter this trend, the Government has implemented the "Made in Rwanda" policy in order to promote import substitution and reduce Rwanda's trade deficit. In addition, development on the monetary side shows that, although interest rates have been stable for 10 years, lending rates are still high, averaging about 17 per cent over the past 10 years. In order to rectify this problem, the National Bank of Rwanda has maintained an accommodative monetary policy, reducing the policy rate to 5 per cent in May 2019 from 5.5 per cent. This is intended to translate into lower interest rates on loans and subsequently to a narrower spread.

An analysis of the impact of economic growth on structural transformation and employment in Rwanda shows that economic development has been coupled with employment generation. A breakdown of the observed GDP growth in terms of per capita value added over the past 10 years shows that 88 per cent of Rwanda's GDP growth has been linked to increased productivity, 6 per cent to changes in the employment rate and 6 per cent to the increase in the share of the working age population. As opposed to the jobless growth witnessed in other developing countries, economic growth in Rwanda has been accompanied by job creation.

In terms of employment the most dynamically growing sectors over the past decade include construction, transport (by 53 per cent), information, communications and technology (ICT) (56 per cent), tourism and recreation (120 per cent), and services (113 per cent). In the construction sector, Rwanda Housing Authority and City of Kigali have implemented measures to reduce high costs and streamline procedures for obtaining construction permits. In the ICT sector, Rwanda's ambition is to become an ICT hub in the region. This has led to significant investment, including in high-speed broadband infrastructure and cybersecurity systems. These have transformed the country into one of the most connected in Africa. In the tourism sector, Rwanda has continued to position itself as a hub of "meetings, incentives conferencing and exhibitions" (MICE) tourism by making investments in Rwanda Air (the national carrier) and building conference facilities such as the Kigali Convention Centre and the Kigali Arena. In addition, Rwanda has partnered with the UK's Arsenal Football Club to promote the "Visit Rwanda Campaign", all of which have led to employment and revenue growth in the tourism sector. Employment in the service sector has been boosted by the abovementioned Made in Rwanda Program, a government-led domestic market recapturing strategy aimed at encouraging citizens to buy goods and services from both local and foreign companies located in Rwanda.

In terms of inter-sectoral shifts, construction, transport and ICT, tourism and recreational plus services have been net recipients of workers. On the other hand the primary

sectors of agriculture, fishing, forestry, mining and quarrying have been net losers of workers over the past 10 years in Rwanda. The shifting of workers from the agricultural sector is a positive development, which has contributed 25 per cent of the inter-sectoral employment shifts. This is in line with the Government's targets for increasing productivity by moving workers from the farming to the non-farming sectors over time.

Labour productivity has increased significantly over the past 20 years, from 189,302 Rwandan francs (RWF) to RWF 1,145,407 in nominal terms, translating into RWF 1,039,788 in real terms. Utilities, financial services and government services have had the highest productivity growth in Rwanda due to the ICT innovations and mainstreaming implemented in these sectors.

Findings from the study show that the major constraints on promoting full and productive employment in Rwanda include the following. Agricultural productivity constraints, such as prolonged droughts, land scarcity and inadequate soil fertility in some districts. Industrial productivity constraints, such as the relatively high cost of utilities such as water and electricity, coupled with unreliable power supply in some districts; mismatches between the skills demanded by employers in the private sector and the skills acquired by graduates; limitations in access to finance among entrepreneurs in the private sector due to high interest rates on SME loans; and structural challenges, as labour supply still outstrips demand in Rwanda.

The following are the key findings and recommendations on bringing young people not in education, employment or training (NEET) into Rwanda's labour market. NEETs need access to employment services: a significant proportion of NEET youths had not received assistance from employment services by the time the School-To Work Transition-Survey (STWT) was conducted and these need to be intensified. Improved access to such services will enable NEET young people, especially those living in rural areas and country towns, to obtain job application and interview skills. An average of two interviews for seven applications indicates a near success rate of 28 per cent, indicating a need for more job application training.

Discouragement among NEETs is manifested by the fact that about 27 per cent indicated that they had not taken active steps to find work or establish their own businesses in the four weeks prior to the survey. About a quarter of discouraged NEETs indicated they did not know where or how to find work, while others cited their inability to satisfy employer requirements and failure to find suitable employment as the major reasons for their discouragement. This indicates a deficit in post training career guidance and job search skills offered to tertiary school graduates, which needs to be addressed by tertiary institutions. In terms of challenges faced by NEET young people in finding jobs in Rwanda, a lack of education, an unsuitable general education and lack of work experience were the key challenges cited.

In terms of job search methods, the majority of the NEET youths who had taken active steps to find work (37 per cent) used informal personal networks of friends and relatives rather than formal employment services. Work readiness training for fresh graduates need to be incorporated in technical, and vocational education and training (TVET) and institutions in order to expose young people to different employment search avenues, including formal employment agencies such as the Kigali and Musanze employment services, which link potential employees to employers. In addition, employment services have to become more accessible online in order to eliminate transport costs that the majority of NEET youths may not be able to afford.

In terms of work preferences, the majority of uneducated NEET young people were looking for manual work, while educated NEETs preferred white-collar, clerical and managerial jobs with flexible arrangements and good salaries. A preference for flexibility, a

consequence of the limitations in the quantity and quality of jobs (in terms of pay), shows that some educated NEET young people prefer to maximize their incomes by doing part-time work in several workplaces, rather than being tied to low-earning jobs. Therefore work readiness training programmes need to incorporate the current realities of the gig economy, which entails equipping young people with a variety of hard and soft skills so that they can thrive in an increasingly uncertain labour market.

Findings from the School-to-work Transitions Survey showed that only 20 per cent of Rwandan youth had successfully completed the transition from school to fixed-term and or/ satisfactory employment. The majority were still in transition, while others had not started their transitions. Regression results show that younger people and youths in urban areas are more likely to make successful school to work transitions compared with their older and rural counterparts. In terms of education, young people who have acquired vocational education or a university degree are significantly more likely to make a successful transition than their counterparts who do not have any formal schooling. Migration significantly increases the chances of making school to work transitions, while young people with networks are more likely to transition into Rwanda's labour markets.

In terms of the data needed to improve monitoring of SDG 8 variables with regard to NEET young people in Rwanda, we recommend follow up school-to-work transition surveys to be conducted by the National Institute of Statistics at periodic intervals of 3–5 years at the national level. Implementation of these surveys will complement existing data from the labour force surveys and the EICV surveys. Alternatively, periodic labour force and EICV surveys should incorporate a school-to-work transition component to constantly monitor employment access and challenges for NEET youths over time.

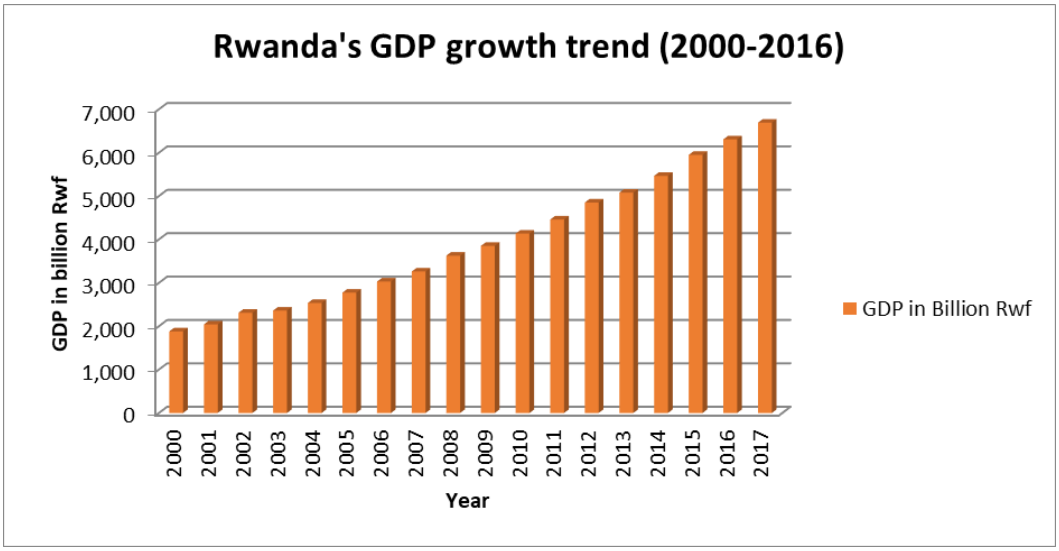
1. Economic developments

Rwanda's economic growth over the past two decades has been remarkable. With a government that is committed to achieving sustainable economic growth, coupled with growth in employment opportunities for its people, Rwanda has made impressive progress in rehabilitating and stabilizing its economy to exceed pre-1994 levels. The overall economy has grown at a significant rate, averaging annual GDP growth rates of 8 per cent in the past two decades against a target of 11.5 per cent required to achieve Rwanda's economic transformation goals, as laid out in the National Strategy for Transformation 1 (NST1). Rwanda's GDP per capita has increased from less than US$331 in 2000 to US$824.5 in 2018. Through its robust macroeconomic framework and economic policies, the Government has laid a path towards economic transformation whose impact has been evident. Rwanda's economy has expanded significantly in the past twenty years, increasing from RWF 1,881 billion to RWF 6692 billion at constant prices.

Figure 1. Rate of GDP growth, 2000–2020, Rwanda

Source; NISR National accounts 2018

Figure 2. GDP growth trend, 2000–2016, Rwanda



Source; NISR National accounts 2016

There is evidence of a significant increase in private sector investment following the introduction of a revised tax code and the implementation of the "doing business" reforms since 2005. Both foreign and domestic investment have increased, with FDI exceeding local investment, and new jobs have been created. Exports have increased and there is some evidence of export diversification into non-traditional agricultural products, as well as an increase in revenues from tourism. Increased revenues from tourism have been a result of infrastructural investments in MICE tourism facilities, such as new hotels, a convention centre, investments in Rwanda Air and marketing campaigns such as Visit Rwanda.

However, imports have also increased and so the balance of trade has worsened. To counter this trend, the Government has implemented the Made in Rwanda policy to promote import substitution and reduce Rwanda's trade deficit. Although GDP per capita and government revenues as a proportion of GDP have increased, Rwanda remains dependent on overseas development assistance for about 40 per cent of its annual budget (National Bank of Rwanda, 2018).

Further evidence of Rwanda's emerging economic transformation is a significant shift in productivity in both agriculture and the service sector. There is an incipient structural shift in the mode of production away from low-productivity subsistence farming to a higher degree of market-orientation and more use of soil-enriching and yield-enhancing cash inputs, such as fertilizers. Productivity gains in the service sector have been driven mainly by Rwanda's policy of streamlining ICT within all sectors, including e-health, e-government and Irembo platforms for accessing and paying for government services. Rwanda's ambition is to become an ICT hub in the region and the Government has made significant investments in ICT infrastructure, leading to 52 per cent internet penetration by 2018. Coverage of high-speed broadband infrastructure has now reached all parts of the country. To increase smartphone penetration, the Connect Rwanda campaign, in which people contribute to smartphone acquisition for fellow citizens, was launched in 2020. A state-of-the-art cyber-security facility has been operationalized to protect business and government systems from cyber-attacks. The number of electronic services has increased significantly fuelled by disruptive advancements in electronic financial services, including Tap and Go which has improved efficiency in the public transport sector (Rwanda ICT policy, 2015).

Annual growth rate of real GDP per capita (SDG indicator 8.1.1)

Rwanda's GDP per capita has grown steadily, from USD$331 in 2010 to US$824.5 in 2018, based on constant 2010 dollars (World Bank Development Indicators, 2020) Against a sustained positive economic growth rate, Rwanda's per capita GDP grew on average by 5.1 per cent between 2000 and 2018. Despite this impressive growth, this is rate is lower than the 7 per cent target laid out for the least developed countries under the 2030 SDG agenda. A number of challenges underlie this finding. Although growth in all sectors was positive and resilient in the face of a slowing global economy, NST1 targets have not yet been met. Between 2000 and 2018, annual growth in terms of value added in agriculture averaged 5.5 per cent against the NST1 target of 8.5 per cent, while annual growth in industry averaged 7.7 per cent against the NST1 target of 14 per cent. Finally, annual growth in the service sector averaged 9.5 per cent against a target of 13.5 per cent under the NST1 (World Bank Development Indicators, 2020).

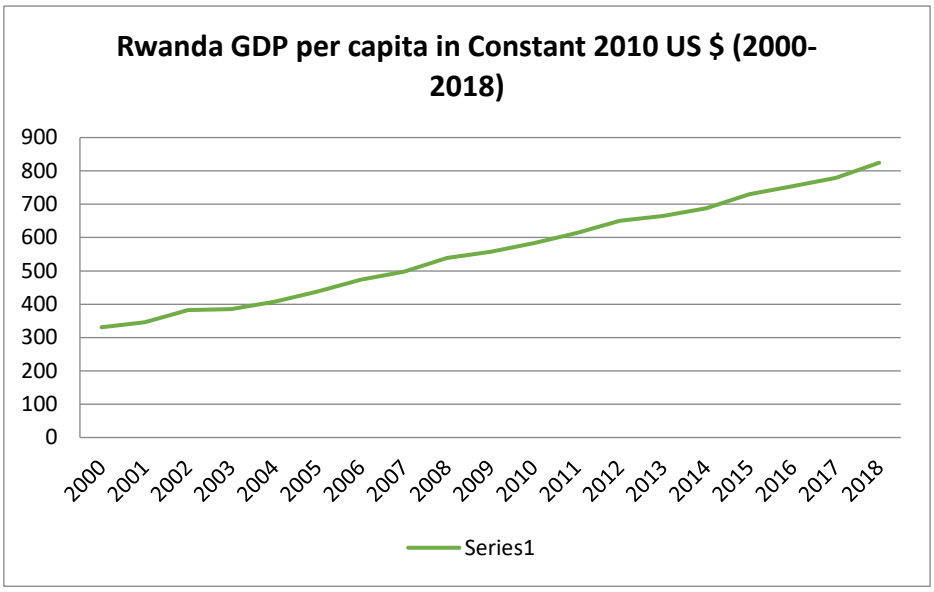
Agricultural growth was mainly affected by crop disease and climate change effects. Other constraints include small land holdings, challenges in accessing credit due to risk perception, low value chain development, market connectivity and other things. Mining, which falls under industry, was affected by volatile global prices, while manufacturing grew slowly. The performance in mining and manufacturing adversely impacted growth in

industry. Relative to industry and agriculture, services have performed much better despite not hitting the NST1 target of 13.5 per cent.

Although exports have become more diversified performance has been weaker than projected in both traditional and non-traditional sectors. Exports averaged growth of about 14 per cent between 2000 and 2018 as opposed to 28 per cent annual growth target in the NST1.

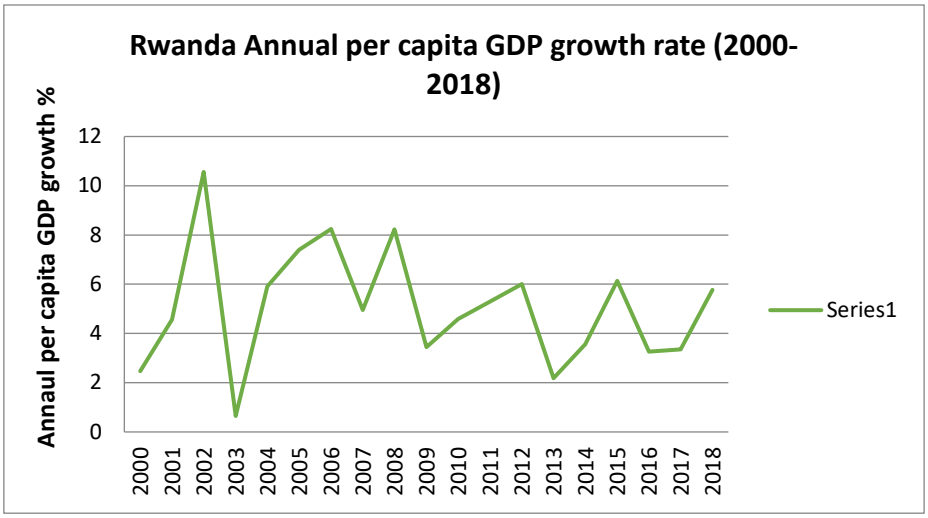
Lastly, the real per capita income growth rate has been eroded by a high population growth rate of 2.5 per cent and the already implemented family planning efforts will have to be enhanced and decentralized to all parts of the country, including rural Rwanda, if population growth is become sustainable. This will have to be complemented with welfare and household productivity improvement efforts if Rwanda is to realize its median income per capita GDP target of at least US$1100. Figure 3 GDP per capita, Rwanda, 2000–2018 (constant 2010 US$)

Figure 3. GDP per capita, Rwanda, 2000–2018 (constant 2010 US$)



Source: Author's calculations from World Bank Development Indicators, 2020.

Figure 4. Annual GDP per capita growth rate, Rwanda, 2000–2018 (constant 2010 US$)



Source: Author's calculations from World Bank Development Indicators, 2020.

Poverty, working poverty rates (SDG indicator 1.1.1), and Gini coefficients

Rwanda's policy agenda in the past two decades has been geared towards reducing household poverty. Against the national poverty line currently at RWF 159,375 (NISR, 2018), poverty has reduced over the years by an aggressive national policy agenda. The policies implemented include free or subsidized access to education and infrastructure development through rural road construction. These, among other polices, have reduced poverty from 58.9 per cent in 2000 to 38.2 per cent by 2017, as against the targeted 30 per cent under Rwanda's National Strategy for Transformation (NST1).

Table 1. Poverty, working poverty rates an inequality, Rwanda, 2000-2017

	2000–2001	2005–2006	2010–2011	2013–2014	2016–2017
Headcount poverty rate	58.9	56.7	44.9	39.1	38.2
Poverty gap rate			14.8	12	11.7
Working poverty rate		54.9	40.9	34.9	33.6
GINI coefficient	0.473	0.522	0.49	0.447	0.429

Source: Integrated Household Living Conditions Survey, NISR (2006, 2011, 2014, 2017).

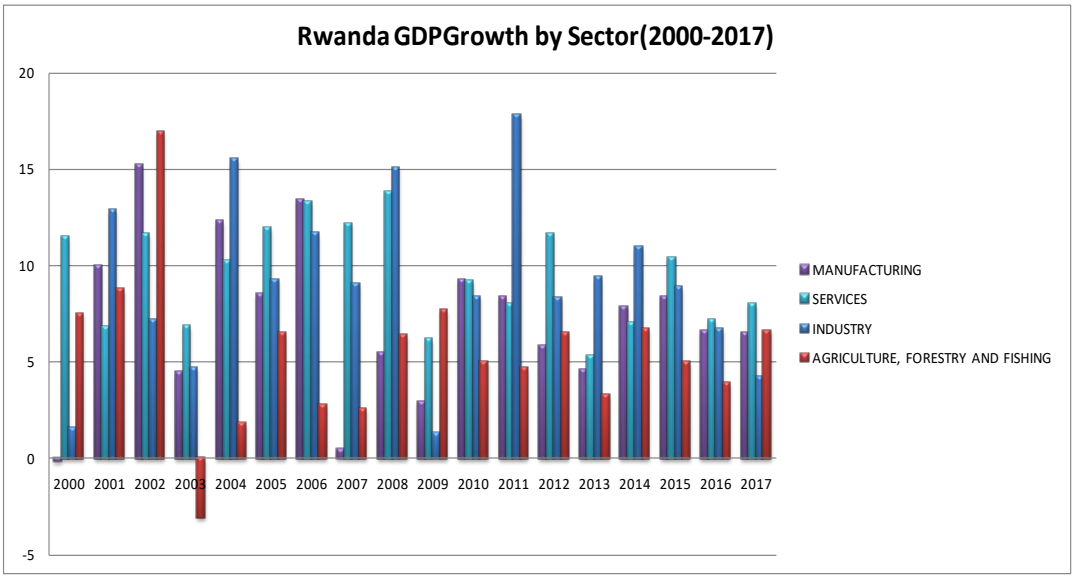
Despite the consistent gradual decline in poverty rates from 58.9 per cent in 2000, the rate has stagnated in the past three years at between 38 and 39 per cent. The slow-paced decline is a threat to achieving the 2030 sustainable development target of ending poverty in all its forms, and efforts will be required to address the current low productivity of the significant proportion of the population that is mainly employed in agriculture. These efforts will include provision of skills-based education, improving health and health care and increased use of inputs in agriculture.

Real GDP annual growth rates, including by sector; GDP growth

Economic growth has been driven predominantly by the service sector, which has averaged 9.5 per cent in the past two decades, and industry, which has averaged 9 per cent. The contribution of the agricultural sector has been limited to an average of 5.5 per cent. The low growth of the sector has been driven by, among other factors, low growth of the export crops subsector and low growth of the food crops subsector.

Overall, the sub-sectors responsible for generating the highest growth in the economy (averaging over 10 per cent) include mining and quarrying, manufacturing of non-metallic mineral products, manufacturing of metal products, machinery and equipment, construction, trade and transport, wholesale and retail trade, transport services, hotels and restaurants, information and communication, education, and cultural, domestic and other services. The subsectors with the least growth in the past two decades include food crops, livestock products, forestry, manufacturing of beverages and tobacco, electricity, water and waste management, and real estate activities (see Annex 1).

Figure 5. GDP growth by sector, Rwanda, 2000–2017

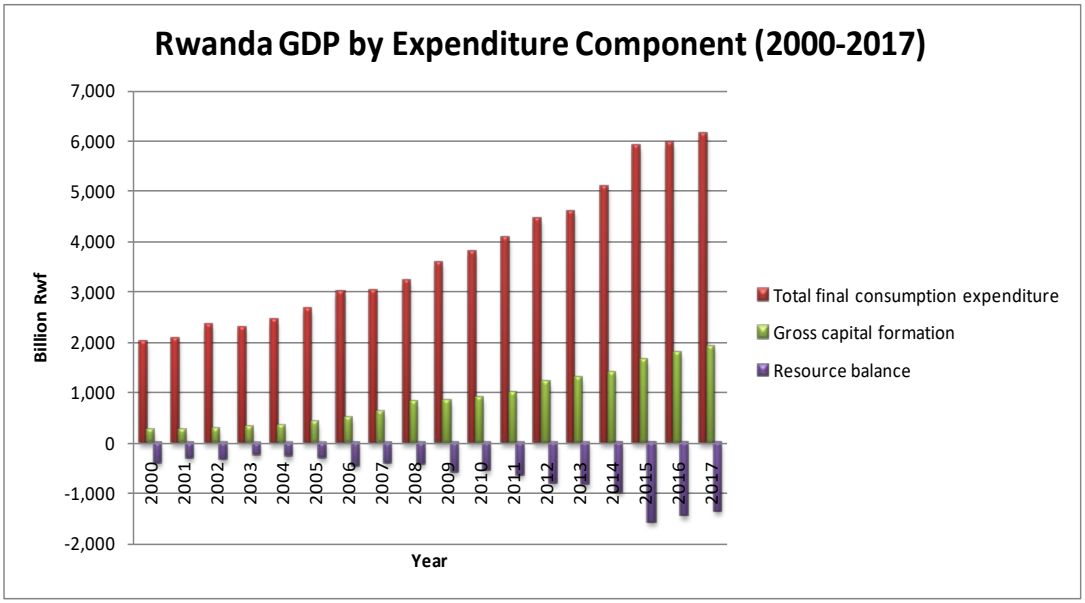


Source: Macroeconomic Framework Public dataset, MINECOFIN, 2018.

GDP by major expenditure component and the contribution of the expenditure components to GDP growth

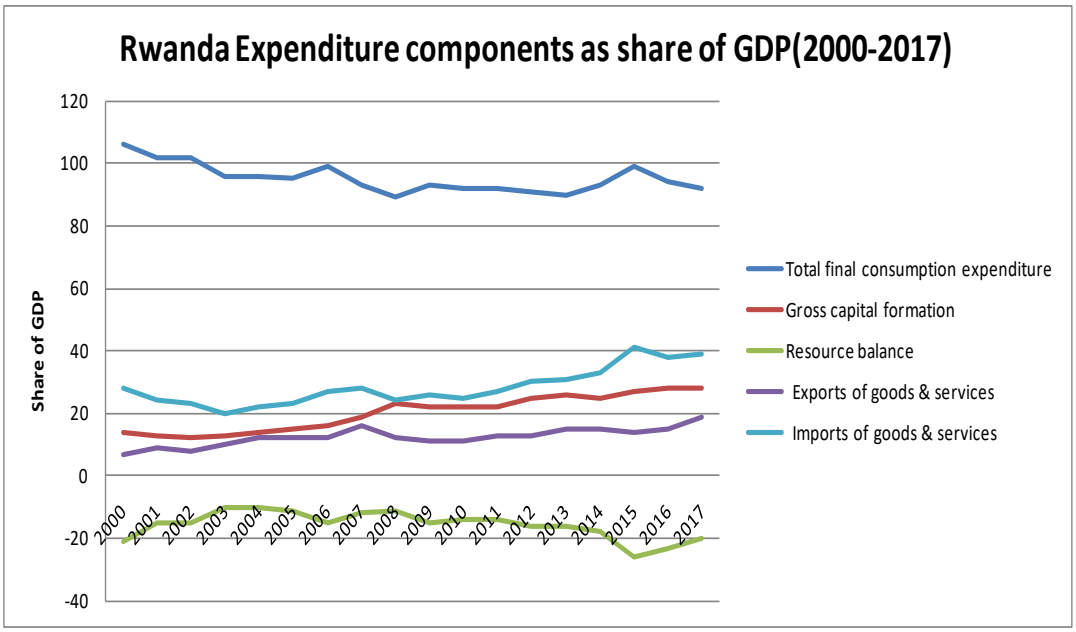
A breakdown of GDP by component shows that expenditure on consumption increased significantly, from about RWF 2000 billion in 2000 to about RWF 6000 billion in 2017, while expenditure on capital goods, which help to increase the productive capacities of the economy, increased from about RWF 200 billion in 2000 to about RWF 1900 billion in 2017. This implies that investment in capital goods needs to be ramped up to about 40 per cent of GDP if Rwanda is achieve its ambitious growth targets (Donald Kaberuka, Rwanda leadership retreat, 2020).

Figure 6. GDP by component of expenditure, Rwanda, 2000–2017 (RWF billion)



Source: Macroeconomic Framework Public dataset, MINECOFIN, 2018.

Figure 7. Components of expenditure as a proportion of GDP, Rwanda, 2000–2017 (Percentage)



Source: Macroeconomic Framework Public dataset, MINECOFIN, 2018.

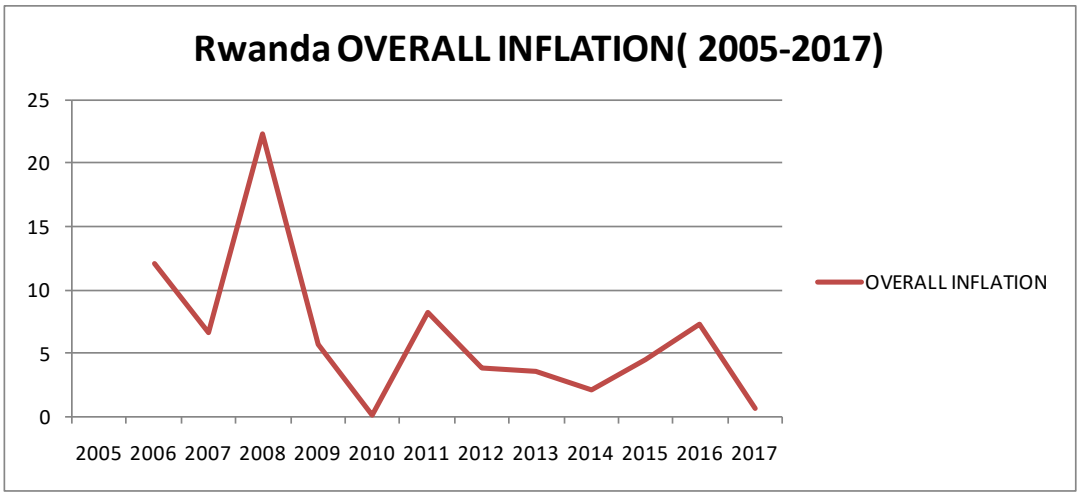
According to Figure 7, household and NGO consumption dominate expenditure as a share of GDP, presently accounting for over 76 per cent, this has fallen from 93 per cent in 2000, however. Imports of goods and services have accounted, on average, for between 20 and 39 per cent in the past two decades, whereas exports have accounted for between 7 and 19 per cent in the same period. The proportion of exports has been increasing, while that of imports has cycled between 24 and 39 per cent in the past decade.

Inflation, interest rates and the fiscal position

Inflation

Apart from 2008, Rwanda's inflation has consistently been in single digits, averaging 6.9 per cent in the past decade. Local inflation has been the major driver of overall inflation, averaging 6.9 per cent, as against an import inflation average of 5.1 per cent. The major drivers of local inflation have been food, housing and education. Despite the 2008 hitch, Rwanda's inflation has been within the government macroeconomic target of 5 per cent and the prospects are that it will remain stable. However, it will remain prone to volatilities in the agricultural sector and international oil prices.

Figure 8. Overall inflation, Rwanda, 2005–2017 (Percentage)



Source: Macroeconomic Framework Public dataset, MINECOFIN, 2018.

Interest rates

The National Bank of Rwanda (NBR) has maintained an accommodative monetary policy stance in order to con¬tinue supporting the financing of the economy by the banking sector. For example, the NBR reduced its policy rate (key repo rate – KRR) from 6.25 per cent in Decem¬ber 2016 to 6.0 per cent in June 2017 and 5.5 per cent in December 2017. Interest rates have generally been stable over the years, which partly explains the stable macroeconomic environment the economy has experienced. Over the past 10 years, the key repo rate has ranged between 6.7 and 5.5 per cent, with a recent decline to 5.71 per cent as the Central Bank endeavours to reduce the cost of capital for the private sector.

Table 2. Interest rates, Rwanda, 2009-2018

	2009–10	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18
Key repo rate	6.5	6.25	6	6	5.5	5.5	5.5	6.35	5.71
Discount rate	10.5	10.25	10	10	9.5	9.5	9.5	10.35	9.71
Repo rate	3.62	4.99	4.42	4.11	4.21	3.98	4.38	4.8	4.19
T-bills rate	7.29	9.42	8.78	7.42	7.07	6.27	5.92	8.79	6.88
Interbank rate	5.93	6.1	6.4	5.76	5.85	5.24	5.58	6.38	5.71
Deposit rate	7.94	7.84	7.92	7.86	8.7	8.23	8.33	7.83	7.82
Lending rate	16.95	16.85	16.76	17.33	17.19	17.08	17.3	17.25	17.15
Spread	9.01	9.01	8.84	9.47	8.49	8.85	8.98	9.42	9.33
Real deposit rate	2.4	0.11	3.15	4.1	8.03	7.38	5.45	1	5.54

Source: BNR Annual Reports.

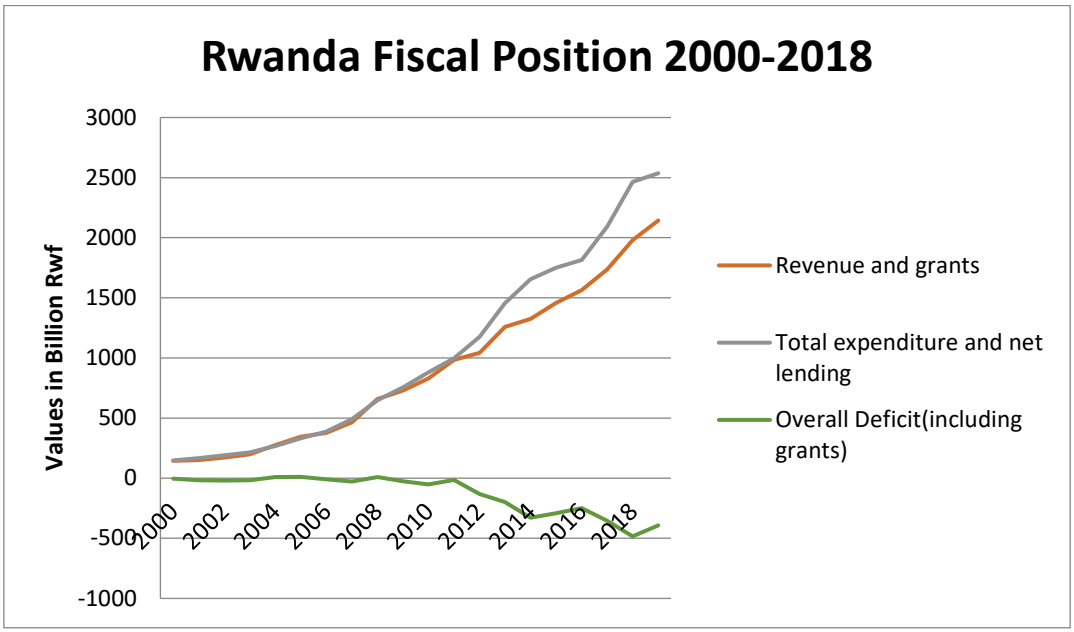
Despite the stable interest rates, the lending rate has remained significantly high at approximately 17 per cent, making the cost of capital for the private sector high and an impediment to private sector growth and investment. This is one of the critical challenges the Government must address if private sector investment is to grow and, equally, remain sustainable. Table 2 shows that the spread between the interest charged on bank loans to the public and the interest paid on bank deposits has remained high, averaging about 9 per cent in the past 18 years. Commercial banks claim that the low savings rate in Rwanda pushes them to acquire capital from foreign sources at higher cost, which then translates into higher lending rates and subsequently a high spread. In order to rectify this problem, the National

Bank of Rwanda has maintained an accommodative monetary policy, reducing the policy rate to 5 per cent in May 2019 from 5.5 per cent. This is intended to translate into lower interest rates charged on loans and subsequently to narrow the spread (NBR, Monetary Policy and Financial Stability Statement, 2019). In addition, the National Bank of Rwanda has implemented financial literacy programmes among the public to raise awareness of the benefits of savings. Finally, the NBR has been pushing for more use of digital payment methods (such as online payments and e-wallets, such as tap-and-go for city commuters) to promote a cashless economy, thereby increasing the amount of credit available to the private sector.

Fiscal position

As the economy has expanded due to high growth rates, the country's revenue has improved over the years from 67 billion in 2000 to 1718 billion in 2019 at current prices. The positive growth rate in revenue has been outstripped by the growth in total expenditure partly because of the inability of the country to generate enough revenue to meet public needs. This has led to growth in overall deficit, public debt in form of grants and borrowing.

Figure 9. Fiscal position, Rwanda, 2000–2018 (RWF billion)



Source: Macroeconomic Framework Public dataset, MINECOFIN, 2018.

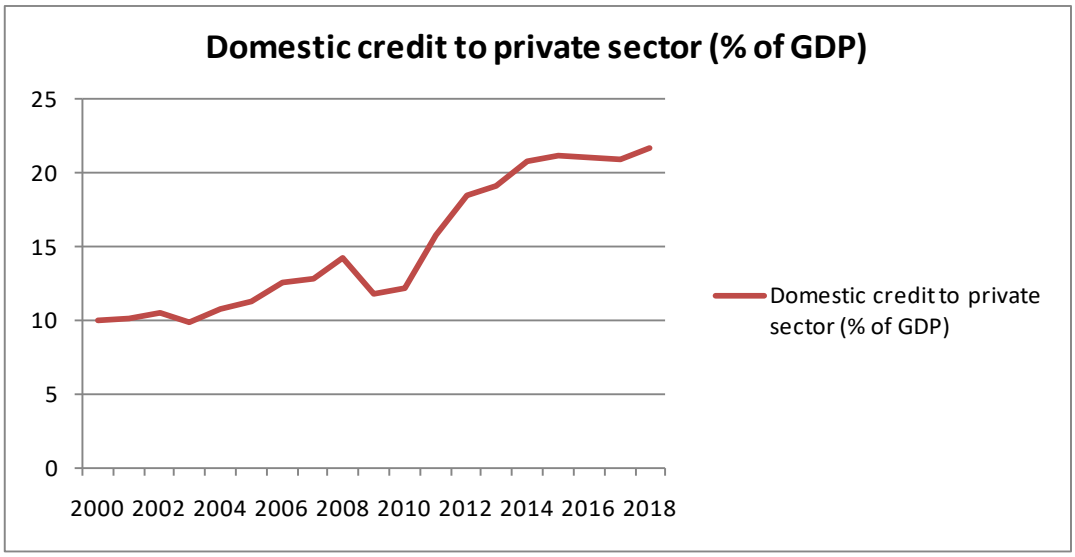
Rwanda's Fiscal Consolidation Strategy (FCS) has continued to aim at achieving fiscal and debt sustainability toward progressing the EAC macroeconomic convergence criteria. In addition, the Fiscal Consolidation Strategy has sought to reduce the external current account deficit and the country's reliance on external financing, as well as to improve prioritization and efficiency of public expenditure.

The Government has also continued with fiscal consolidation in order to safeguard external and macroeconomic stability, while supporting growth. Therefore, the tight fiscal policy stance (evidenced by the slowdown in capital spending) is likely to continue due to the lower level of external project grants available to Rwanda, as well as the need to gradually reduce the overall deficit toward EAC convergence criteria.

Sectoral shares of credit extension to the private sector

As the economy has expanded over the years, domestic credit to the private sector has equally grown from 10 per cent in 2000 to 21 per cent in 2018. The trend hasn't been all positive having decreased in 2009 when the economy contracted. In the last few years it has cycled between 19 and 21 per cent.

Figure 10. Domestic credit to the private sector, Rwanda, 2000–2018 (% of GDP)



Source: BNR Annual Reports, 2018.

In absolute terms, the main sectors absorbing the new loans include public works and buildings, commerce, restaurants and hotels, transport, warehousing and communications, and manufacturing, while mining has received the least loans.

Table 3. New authorized loans by economic sector, Rwanda

Sector	2007	2008	2009	2010-11	2011–12	2012–13	2013–24	2014–15	2015–16	2016–17	2017–18
Non-classified activities	7.99	11.99	16.26	37.1	77	65.8	64	59.4	74.3	84.5	97.4
Agricultural fisheries and livestock	3.59	1.91	2.17	9.1	11.1	9.6	8.1	12.2	13.5	10.1	9.6
Mining	0.01	0	0	0	0	0	0.2	0.6	1.7	0.7	0.4
Manufacturing	13.67	9.96	15.58	24.1	20.5	40	73.6	39.6	74.7	56.5	64.9
Water and energy	0.17	0.23	1.81	2.3	0.6	4.1	21.3	10.7	8	25.5	11.6
Public works and buildings	26.47	53.86	35.98	71.9	113.9	95.1	118.4	189.2	207.6	210.3	227.4
Commerce, restaurants and hotels	60.85	73.04	61.45	115	184.9	202.3	240.8	285.5	351.5	301.6	286.9
Transport/warehousing/ communications	14.06	17.82	30.46	22.2	28.1	29.8	30.1	50.9	48.2	57.2	83.8
OFI & Insurance and ONFS	2.56	1.99	5.02	8.1	11.5	7.9	2.6	6	5.8	8.8	4
Services provided to the community	2.92	9.37	3.56	7.7	10	13	18.8	34.4	22.5	23.1	24.1
Total	132.3	180.2	172.3	297.6	457.5	467.6	577.7	688.3	808	778.2	810.9

Source: BNR Annual Reports.two

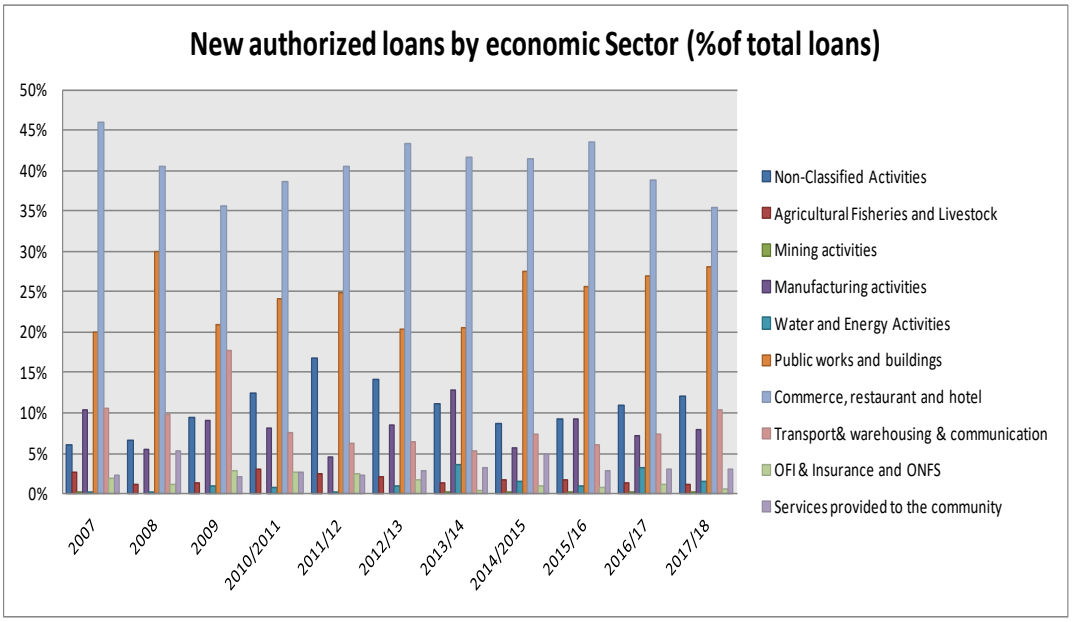
As a proportion of total new authorized loans to the private sector, commerce, restaurants and hotels have dominated private sector credit, averaging about 40 per cent, followed by public works and buildings, which averaged about 24 per cent over the past 20 years in Rwanda. This is in line with the high growth experienced in the service and construction sectors during the period. However, credit to the agriculture sector has averaged only about 2 per cent because of its inherent risk. More effort needs to be put into reducing the risk by increasing access to agricultural insurance in order to increase credit access to the sector.

Table 4. New authorized loans by economic sector, Rwanda (% of total loans)

	2007	2008	2009	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18
Non-classified activities	6	7	9	12	17	14	11	9	9	11	12
Agricultural fisheries and livestock	3	1	1	3	2	2	1	2	2	1	1
Mining activities	0.01	0.00	0.00	0.00	0.00	0.00	0.03	0.09	0.21	0.09	0.05
Manufacturing activities	10	6	9	8	4	9	13	6	9	7	8
Water and energy	0.1	0.1	1.1	0.8	0.1	0.9	3.7	1.6	1.0	3.3	1.4
Public works and buildings	20	30	21	24	25	20	20	27	26	27	28
Commerce, restaurants and hotels	46	41	36	39	40	43	42	41	44	39	35
Transport, warehousing communication	11	10	18	7	6	6	5	7	6	7	10
OFI & insurance and ONFS	2	1	3	3	3	2	0	1	1	1	0
Services provided to the community	2	5	2	3	2	3	3	5	3	3	3
Total	100	100	100	100	100	100	100	100	100	100	100

Source: BNR Annual Reports.

Figure 11. New authorized loans by economic sector, Rwanda

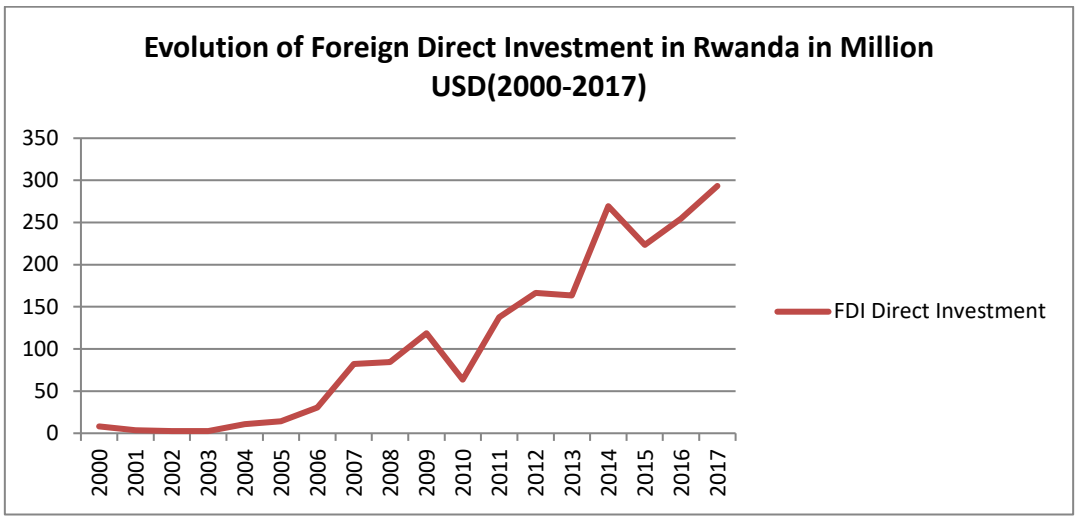


Source: BNR Annual Reports

Patterns of foreign direct investment in Rwanda (2000–2018)

To address the domestic capital gap arising from low domestic savings, the Government established the Rwanda Development Board towards the end of the last decade. This has improved the environment for doing business, making Rwanda one of the best investment destinations in Africa. This has increased foreign direct investment from US$8 million in 2000 to US$293 million in 2017.

Figure 12. Development of foreign direct investment, Rwanda, 2000–2017 (US$ million)

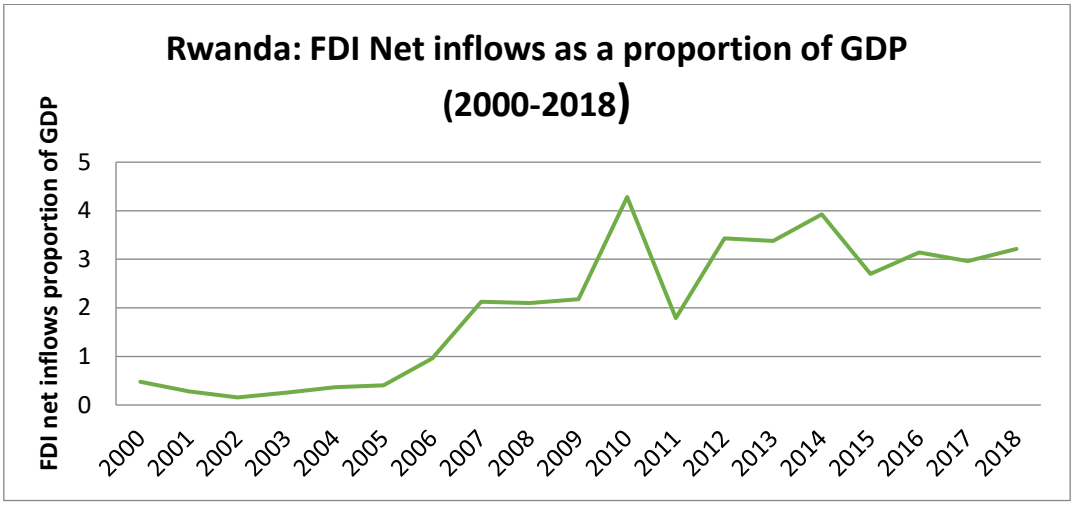


Source: BNR Annual Reports.

Trends in FDI net inflows as a proportion of GDP (2000–2018)

As a share of GDP, net flows of income into Rwanda increased steadily from about half of GDP in 2000 to about twice GDP in 2007–2008. Thereafter net FDI inflows into Rwanda stagnated at over twice annual GDP, probably because of the uncertainty arising from the global financial crisis. After 2009 net FDI inflows into Rwanda shot up to 4 times the GDP, and later plunged in 2011. After 2011, Net FDI inflows recovered and fluctuated around three times GDP until 2018. From a low base of about half GDP in 2000, net FDI inflows into Rwanda grew to three times GDP in 2018. This FDI growth has been due to the work done by the Rwanda Development Board in attracting FDI and also policies such as doing-business reforms, which have promoted Rwanda as a favourable investment destination. According to the 2019 World Bank Doing Business Index, Rwanda is ranked the twenty-ninth easiest place to do business in the world.

Figure 13. FDI net inflows as a proportion of GDP, Rwanda, 2000–2018 (Percentage)



Source: World Bank Development Indicators, 2020.

Patterns of foreign direct investment in Rwanda by sector (2012–2018)

According to Table 5, the sectors that consistently attracted most FDI between 2012 and 2016 in Rwanda include; ICT, financial services, tourism and wholesale and trade. By contrast, key sectors that did not attract adequate FDI during this period include education and agriculture. Within agriculture, more investments are needed in the agro-processing sector in order to add value to agricultural produce and create more jobs.

Table 5. FDI inflows, Rwanda, 2012–2016 (US$)

Sectors	2012	2013	2014	2015	2016
Administrative and support service activities	330 900	8 628	232 783	–	615 616.78
Agriculture	**10 667 736**	**20 518 838**	**8 705 520**	**17 293 393.04**	**5 528 011.02**
Construction	1 028 509	2 409 533	1 452 839	22 003 652.32	7 370 505.55
Education	(2 431)	1 208 206	2 637 154	2 513 766.07	2 537.14
Electricity, gas, steam	181 506	343 154	19 614	76 138 490.11	21 886 216.80
Financial and insurance activities	*22 278 265.78*	*37 950 219*	*68 815 496*	*57 854 559.14*	*70 312 217.86*
Human health and social work activities	634 484.45	–	–	574 787.28	1 279 270.10
ICT	*167 329 782.03*	*20 450 220*	*116 152 255*	*76 678 304.67*	*113 143 424.79*
Manufacturing	*34 932 705.03*	*63 969 120*	*21 207 441*	*14 465 344.93*	*41 115 043.98*
Mining	109 738.53	99 280 083	136 175 362	7 139 974.64	6 724 978.22
Other service activities	1 933 417.70	385 050	207 461	342 451.94	513 819.47
Professional, scientific and technical activities	–47 829.71		1 969 000	1 035 754.20	412 143.72
Real estate activities	–	271 475	–	7 670 564.39	11 046 106.19
Tourism	*1 728 254*	*1 962 904*	*71 801 458*	*66 859 573.34*	*4 396 115.53*
Transportation and storage	5 776 751.02	974 164	(62 637)	3 226 537.14	532220.69

Sectors	2012	2013	2014	2015	2016
Water supply	–		–	17 173.05	0
Wholesale and retail trade	8 081 456.40	7 910 824	29 599 251	26 030 232.95	57 374 554.97
Total	254 963 244.4	257 642 420	458 912 996	379 844 559	342 252 782.81

Source: Foreign Private Capital Census Report (NISR)

Table 6 shows that there have been fluctuations in FDI inflows by sector, as well as in sectoral shares between 2012 and 2016. While ICT and mining were the most attractive sectors at the beginning (2012), comprising 65 per cent and 14 per cent, respectively, of all FDI inflows, financial and insurance had the most steady and rising share of FDI, rising from 8.7 per cent in 2012 to 20.5 per cent in 2016, rising to second position from third . In 2013 and 2014 tourism received a sizable share of FDI, at 16 and 18 per cent, respectively.

Table 6. Sectoral distribution of FDI inflows, Rwanda, 2012–2016 (%)

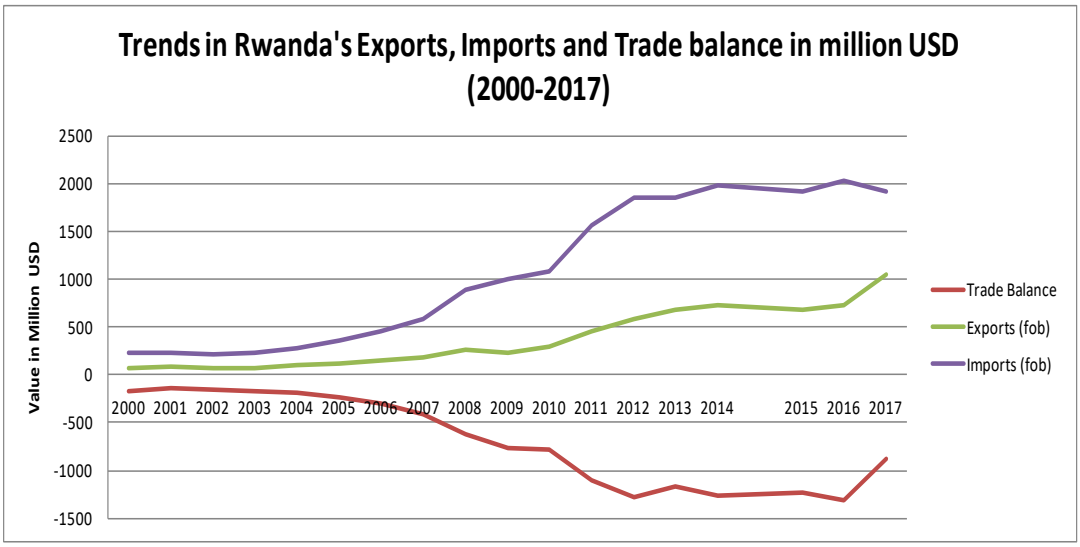
Sectors	2012	2013	2014	2015	2016
Administrative and support service activities	0.1	0	0.1	0	0.2
Agriculture	4.2	8	1.9	4.6	1.6
Construction	0.4	0.9	0.3	5.8	2.2
Education	0	0.5	0.6	0.7	0
Electricity, gas, steam	0.1	0.1	0	20	6.4
Financial and insurance activities	8.7	14.7	15	15.2	20.5
Human health and social work activities	0.2	0	0	0.2	0.4
ICT	65.6	7.9	25.3	20.2	33.1
Manufacturing	13.7	24.8	4.6	3.8	12
Mining	0	38.5	29.7	1.9	2
Other service activities	0.8	0.1	0	0.1	0.2
Professional, scientific and technical activities	0	0	0.4	0.3	0.1
Real estate activities	0	0.1	0	2	3.2
Tourism	0.7	0.8	15.6	17.6	1.3
Transportation and storage	2.3	0.4	0	0.8	0.2
Water supply	0	0	0	0	0
Wholesale and retail trade	3.2	3.1	6.4	6.9	16.8
Total	100	100	100	100	100

Source: Foreign Private Capital Census Report (NISR)

Evolution of and composition of exports and imports

Rwanda's exports have increased significantly, from US$ 69 million in 2000 to US$1 billion by 2017. The increase has resulted from the enormous policy efforts by the Government to address the trade deficit. Policy mechanisms have included export diversification and the "Made in Rwanda" campaign that has in a way initiated import substitution and increased productivity in sectors such as mining, manufacturing and agriculture

Figure 14. Trends in exports, imports and trade balance, Rwanda, 2000–2017 (US$ million)



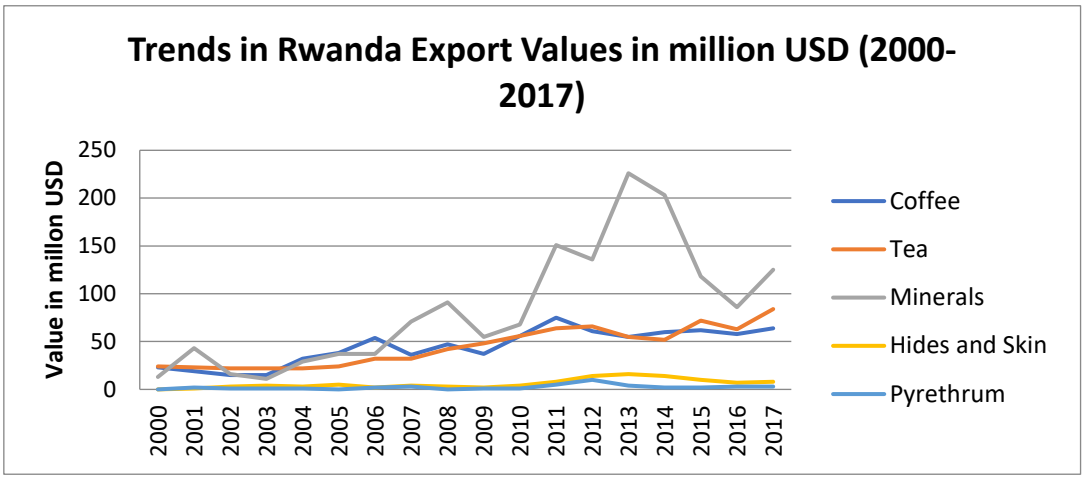
Source: BNR Annual Reports.

Despite the increase in exports, imports have experienced a higher growth rate than exports in the same time frame. This has led to an increase in the trade balance from US$169 million to US$1309 million in 2016, falling to US$861 million in 2017.

Although exports have been diversified over time, Rwanda's main exports are traditional primary products including coffee, tea, cassiterite, coltan, hides and skins and pyrethrum. The composition of the main exports makes the country vulnerable to price variations and climate change that affect primary commodities. For instance, coffee export revenue increased to US$75 million in 2011 only to fall to US$64 million in 2017, despite an increase in volumes, a feature that has characterized other products.

To address the associated challenges the Government has invested in tourism, among other diversifying efforts. Tourism has become the major export revenue earner in the past decade.

Figure 15. Trends in export values, Rwanda, 2000–2017 (US$ million)



Source: BNR Annual Reports

2. Labour market developments

According to the 2018 labour force survey, the annual unemployment rate in Rwanda stood at 15.1 per cent, indicating, roughly, that for every seven people in the labour force there was one unemployed person. The unemployment rate was higher among women (17.1 per cent) than among men (13.5 per cent) and higher among young people (18.7 per cent) than among adults (12.3 per cent). It was also higher in urban areas (16.5 per cent) than in rural areas (14.7 per cent)

Rwanda's working age population has increased gradually from 4million in 2000 to the current 6.7 million. This has been complemented by an increase in both employed and unemployed people. The total labour force participation rate has ranged between 80 and 86 per cent, while the employment to population ratio is currently at 86 per cent. The inactive rate increased tremendously in 2016 because those who what was initially classified as unemployed were classified as inactive.

Table 7. Selected indicators, Rwanda, 2000–2017 ('000)

Indicator	2000–01	2005–06	2010–11	2013–14	2016–17
Working age Population (000)	4 118	5 116	5 888	6 400	6 756
Employed	3 571	4 299	4 783	5 479	5 825
Unemployed	488	735	994	810	109
Inactive	59	81	110	112	931
Labour force participation rate			83.1	87.4	87
Employment to population ratio			81.2	85.6	86

Source: Authors calculations from EICV surveys.

Labour productivity in Rwanda

In the past two decades labour productivity has increased by 500 per cent, from RWF 189,302 to RWF 1,145,407 in nominal terms, translating into RWF 1,039,788 in real terms (see Table 8). The increase has largely been due to high economic growth. The proportionate increase in GDP has been higher than the proportionate increase in employment and population, on average, during the same period.

Table 8. Total employment and labour productivity, Rwanda, 2000–2017

Year	Total employment	Nominal GDP	National labour productivity	Real GDP	National labour productivity (real GDP)
2000–01	3 571 000	676 000 000 000	189 303		
2005–06	4 299 000	1 439 914 990 482	334 942		
2010–11	4 783 000	3 366 608 332 281	703 870	4 241 000 000 000	886 682
2014–15	5 479 000	5 466 207 499 041	997 665	5 697 000 000 000	1 039 788
2016–17	5 825 000	6 672 000 000 000	1 145 408	6 397 000 000 000	1,098 197

Source: NISR EICV 1,2,3,4,5 and National Statistics data

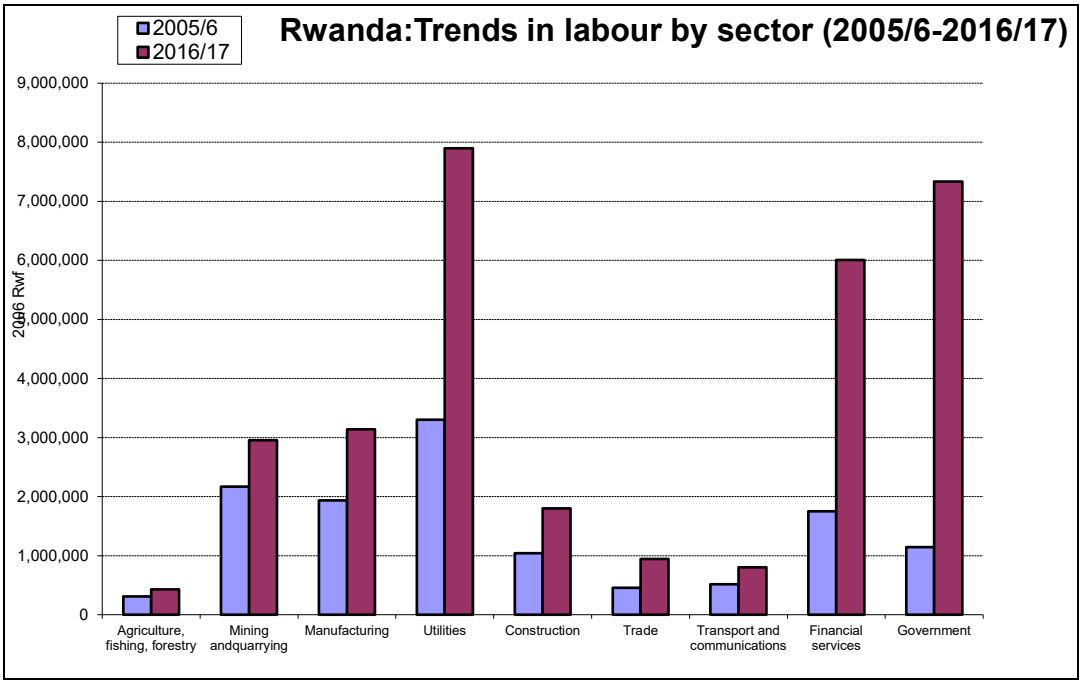
Trends in labour productivity by sector in Rwanda (2005/6–2016/17)

A computation of labour productivity in terms of GDP output per worker per sector between 2005–2006 and 2016–2017 shows that the sectors of utilities, financial services and government services have had the highest productivity growth in Rwanda over the past 10 years. GDP output per worker per year has increased from about RWF 3.4 million to RWF 7.8 million in the utilities sector; productivity in financial services has grown from RWF 1.7 million per worker per year to RWF 6 million; and government services have had the highest productivity growth over the past 10 years, increasing from about RWF 1.2 million in GDP to RWF 7.4 million per worker per year.

The main policies the growth in these sectors include ICT mainstreaming and investments in ICT infrastructure given Rwanda's ambitions of becoming an ICT hub. Government services have been digitised and currently being offered and paid for using electronic platforms such as Irembo. Under the electronic platforms, Rwanda citizens can access and pay for services new passports, tax payments, and others, thus improving productivity over time. The latest initiative aimed at increasing productivity with the government services sector is the Connect Rwanda initiative were capable Rwandans are buying smart phones for poor rural Rwandans to ensure that everyone can access government electronic services via the internet using a smart phone.

ICT innovations in the utilities sector, such as pre-paid electricity meters, Tap-and-Go and others, have led to efficiencies and increased productivity over the past 10 years. ICT innovations in the financial services sector include mobile money payments, agent banking and e-banking, which have led to productivity increases in this sector. By contrast, productivity growth has been lowest in agriculture, even though this sector employs the majority of people in Rwanda. The key constraints to agricultural productivity growth in Rwanda include prolonged droughts, land scarcity and inadequate soil fertility in some districts.

Figure 16. Labour trends by sector, Rwanda, 2005–2017 (2006 RWF)

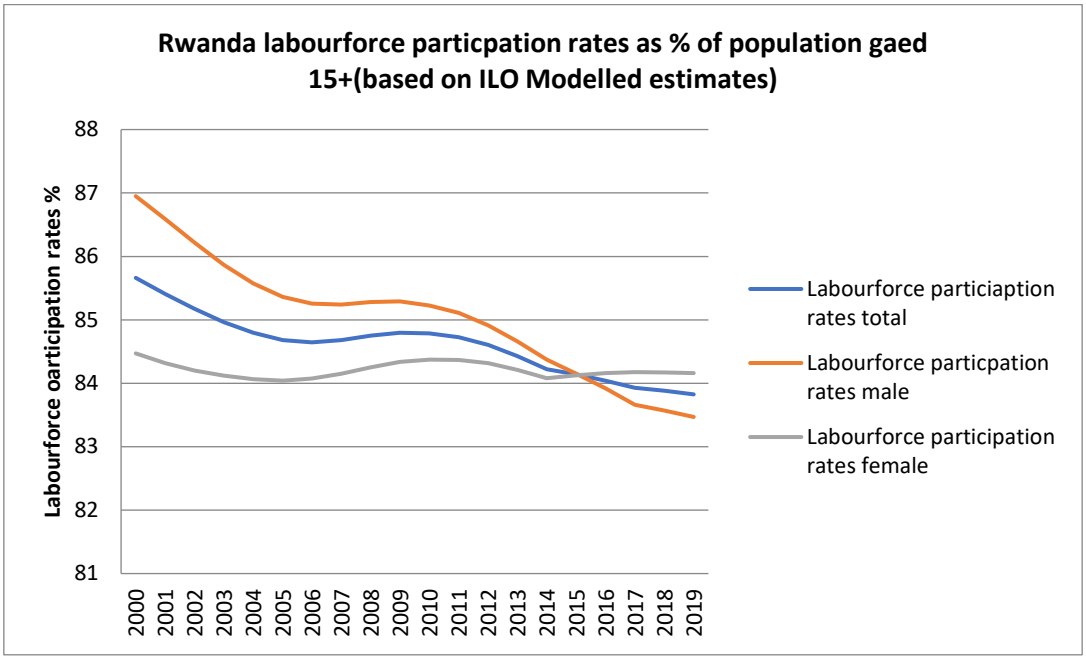


Source: NISR EICV2 and EICV5 surveys and National Statistics.

Rwanda Labour force participation by age and sex;

According to ILO estimates Rwanda's labour force participation rate as a percentage of the total population aged 15 or above has gradually fallen over the past 18 years, from about 85.7 per cent in 2000 to about 84 per cent in 2018. This reduction has been because some young people who were originally part of the labour force have been enrolled back into schools over time through free education policies, such the Nine Year and 12 year Basic Education programmes that have been implemented in Rwanda. Compared to male labour force participation, which has fallen over time, female labour force participation has stagnated at around 84 per cent, implying that as the population aged over 15 years of age has grown, more females have joined the labour force.

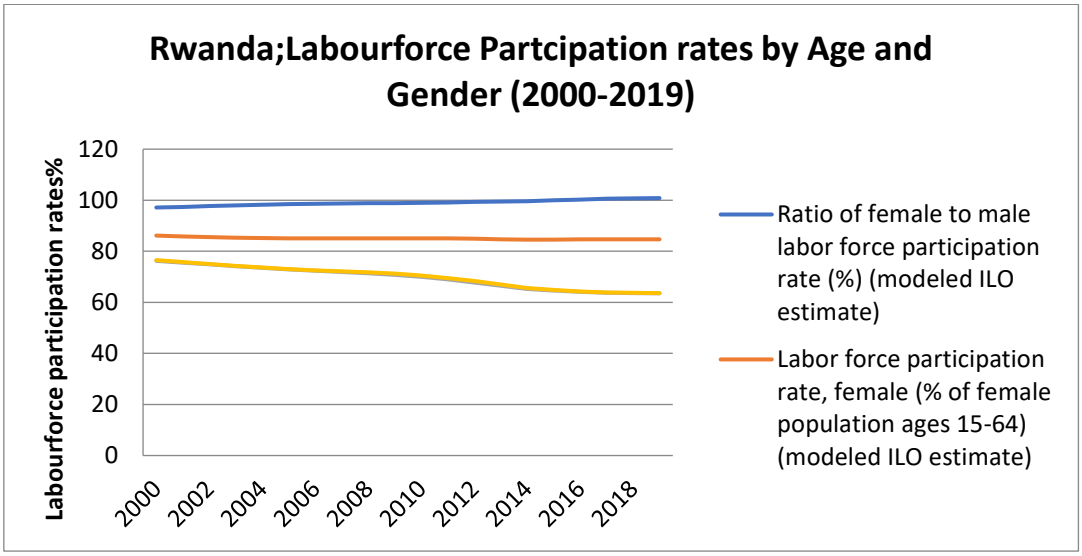
Figure 17. Labour force participation rates as a percentage of population aged 15 or over, Rwanda, 2000-2018 (ILO modelled estimates)



Source: World Bank Development Indicators, 2019.

In terms of gender, the ratio of male to female labour force participation based on modelled ILO estimates in Rwanda has been close to 100 per cent over the past 20 years, implying that there is near gender parity in terms of labour force participation between males and females in the country. By contrast, labour force participation rates for both male and female young people aged 15–24 have been declining, from about 78 per cent in 2000 to about 62 per cent in 2019. This due to education and skilling programmes within the framework of which a number of young people have returned to school and training institutions.

Figure 18. Labour force participation rates by age and gender, Rwanda, 2000–2019 (Percentages)



Source: World Bank Development Indicators, 2019.

Employment by sector[3]

The agriculture, fishing and forestry sector employs the majority of the workforce and increased from 3,596,000 persons in 2005–2006 to 4,065,850 in 2016–2017, accounting for 69.8 per cent of total employees. This is followed by trade, other services and construction. The sectors employing the least number of people are real estate services, utilities, information and communication and financial services. In terms of employment growth, sectors such as tourism, services and construction have had the highest rates over the past 10 years, expanding by 153, 144 and 75 per cent, respectively, while employment in the agriculture sector has grown by a modest 13 per cent, reflecting the ongoing efforts to generate off-farm jobs. Expansion in the services and tourism sectors are line with Rwanda's ambition of becoming a knowledge and service middle income country and have been driven by policies such as doing-business reforms and the "Visit Rwanda" campaigns aimed at promoting tourism.

Table 9. Change in total employment, Rwanda, 2006–2017

	Total employment		% change
	2005–06	2016–17	
Agriculture, fishing, forestry	3 596 000	4 065 850	13.1
Mining and quarrying	48 000	52 425	9.2
Manufacturing	112 000	122 325	9.2
Utilities	10 000	11 650	16.5
Construction	146 000	256 300	75.5
Trade	444 000	495 125	11.5
Transport and communications	91 000	163 100	79.2

[3] Care has been taken to standardize the definitions of employment and unemployment. In the EICV surveys a person who worked for at least an hour in the past seven days is regarded as employed. However, 2017 labour force surveys defines employment as a person having worked and earned an income over the past seven days.

	Total employment		% change
	2005–06	2016–17	
Financial services	20 000	17 475	-12.6
Government	211 000	81 550	-61.4
Recreation and tourism	23 000	58 250	153.3
Other services (real estate, education, health & social work , household enterprises)	205 000	500 950	144.4
Total	4 906 000	5 825 000	18.7

Source: Integrated Household Living Conditions Survey, NISR (2005/6, 2017).

Employment by occupation and sex

The skills pyramid is rectangular in nature, with managers and professionals accounting for less than 3 per cent, while artisans account for more than 75 per cent of the workforce. In terms of occupation, against the limited skills and nature of the economy, the majority of Rwandans are working as skilled agricultural, forestry and fishery workers, predominantly women, with a proportion of 63 per cent, having fallen from 81 per cent. These are followed by elementary occupations, which account for 32 per cent of female and 24 per cent of male employment.

Table 10 Occupational composition, male and female, Rwanda, 2011–2017

Occupation	Male			Female		
	ICV3	EICV4	EICV5	EICV3	EICV4	EICV5
Senior officials and managers	0.20	1.30	0.60	0.10	0.20	0.10
Professionals	3.50	3.20	4.30	2.00	2.10	2.20
Technical and associate professionals		0.80	1.10		0.40	0.20
Clerical support workers	1.00	0.40	0.20	0.80	0.40	0.40
commercial and sales	7.70			7.40		
Skilled service sector	7.00			4.00		
Services and sales workers		10.40	11.90		8.20	8.90
Skilled agricultural, forestry, and fishery workers	61.30	48.70	43.10	81.90	70.30	62.70
Craft and related trades workers	12.90	5.90	4.30	2.80	1.20	1.30
Plant and machine operators, and assemblers	5.20	2.70	2.40	0.30	0.10	0.20
Elementary occupations		26.60	32.20		17.10	24.00
Unskilled labourers	0.70			0.10		
Missing information	0.60			0.60		
Total		100.00	100.00		100.00	100.00
Count ('000)		2 573.00	2 711.00		2 972.00	3 114.00

Source: Integrated Household Living Conditions Survey, NISR (2011, 2014, 2017).

Status in employment by sex

The majority of Rwandans are employed in agriculture, predominantly as independent farmers. The proportion of independent farmers fell from about 85 per cent in 2001 to 53 per cent in 2016–2017, however, which is in line with Rwanda's ambition of transitioning workers from subsistence agriculture into off-farm jobs over time. In addition, the proportion of wage farm workers increased from 3.6 per cent to about 16 per cent in 2016–2017, indicating increased commercialization within Rwanda's agriculture sector. As medium and large-scale farmers commercialize they are in a better position to employ wage workers on their farms. In line with Rwanda's ambition of transitioning farmworkers into off-farm activities, non-farm wage employment has increased significantly, from 7.3 per cent in 2000 to 21 per cent in 2016–2017.

Table 11. Distribution of current employed population by job type, Rwanda, 2011–2017

	EICV1	EICV2	EICV3	EICV4	EICV5
Wage farm	3.61	8.19	11.9	12.2	15.9
Wage non-farm	7.28	10.89	18.7	20.8	21
Independent farmer	84.96	71.30	56.5	54.6	53.2
Independent non-farmer	3.70	8.07	11.5	11.2	8.9
Unpaid non-farmer and others	0.45	1.58	1.3	1.2	1

Source: Integrated Household Living Conditions Survey, NISR (2000, 2006, 2011, 2014, 2017).

Proportion of informal employment in non-agricultural employment (SDG indicator 8.3.1) by sex

According to the EICV4 NISR economic activity report of 2014, employees are considered to have informal jobs if their employer does not pay contributions to their social security, or if they do not benefit from paid annual leave or payment for leave not taken, or paid sick leave in case of illness or injury. Informal employment is a job-based concept. It is measured as the number of informal jobs, with people having more than one such job counted multiple times. Table 12 shows the proportion of informal jobs per sector rather than the number of people employed because one person can have more than one informal job according to the definition above. It shows that in total, 97.4 per cent of jobs in the agricultural and non-agricultural sectors were informal, with more women doing informal jobs than men. The sectors in which informal jobs are most prevalent are agriculture, mining and quarrying, wholesale and retail trade, transport, trade and construction, whereas they are least prevalent in education, health care and social work, financial and insurance activities.

Table 12. Proportion of informal jobs per sector, Rwanda, 2014

	Male	Female	Total
Agriculture, forestry, and fishing	99.9	100.0	99.9
Mining and quarrying	97.4	100.0	97.7
Manufacturing	95.8	97.9	96.5
Electricity, gas and air conditioning	74.8	17.8	65.9
Water supply, gas, and remediation S	85.9	100.0	87.8
Construction	99.1	99.6	99.2
Wholesale and retail trade, repair o	99.2	99.7	99.5
Transportation and storage	98.8	92.8	98.4

	Male	Female	Total
Accommodation and food service activity	86.0	89.6	87.5
Information and communication	76.8	48.6	69.1
Financial and insurance activities	51.5	41.5	47.5
Real estate activities	100.0		100.0
Professional, scientific, and technical activity	73.2	76.0	74.2
Administrative and support service A	58.1	95.1	66.8
Education	27.9	23.9	26.2
Human health and social work activity	37.0	30.2	33.2
Arts, entertainment, and recreation	97.6	98.7	98.2
Other service activities	98.2	98.9	98.4
Activities of households as employer	99.4	100.0	99.7
Activities of extraterritorial organ	45.8	46.3	46.0
Total	96.6	98.2	97.4

Source: Integrated Household Living Conditions Survey, NISR (2014), Table 4.11.

Average hourly earnings of female and male employees, by occupation and age (SDG indicator 8.5.1)

The average number of hours worked per week are higher among urban employees than among rural employees. Employees in urban areas work for 46 hours, 16 hours more than those in rural areas. Women work for 10 hours fewer than men, who work 37 hours per week.

In terms of occupation type, independent non-farm and wage non-farm workers work longer hours than other occupations, averaging 50 hours a week, while wage non-farm workers work the least hours, averaging 26 hours a week. An analysis across EICV4 and EICV5 shows that, apart from wage farm workers and independent farmers, for whom average hours have generally been reduced, average hours worked in other jobs types have increased. The decrease in average weekly hours within the farm sector is due to increasing job diversification over time. Findings from the EICV surveys over time show increasing diversification of jobs per person over time. This implies that farm workers and independent farmers are increasingly allocating their time to more productive non-farm activities during the week to compensate for the low productive nature of agriculture thus reducing average weekly hours worked in the sector over time.

Table 13. Average number of actually weekly hours worked by main job type (EICV4 and EICV5), Rwanda, 2014

	Wage farm		Wage non-farm		Independent farmer		Independent non-farmer		Unpaid non-far and other		Total	
Urban	31.9	26.2	52	53.9	26.2	22.9	50.6	50.6	43	45.3	46	46.6
Rural	30.1	29.2	43.2	47	26.2	24.9	42.1	44.5	38.8	42.2	29.8	29.7
Male	33.8	31.8	46.8	49.7	28.5	26.7	48.9	49.9	36.8	46.2	36.6	37.2
Female	26.9	26.9	48.2	51.8	24.8	23.8	39.7	42.8	42.1	43.1	28.2	28.7

Source: Integrated Household Living Conditions Survey, NISR (2017).

Against the above working hours, urban employees earn approximately RWF 1500 per hour compared with RWF 875 for employees in rural areas. Men earn RWF 1258 per hour compared with women, who earn RWF 815 per hour. The implication is that the economy rewards urban dwellers and males more than rural employees and female employees.

Table 14. Median monthly income from paid employment by job status of paid workers (EICV4 and EICV5), Rwanda, 2017

Area of residence	Wage farm		Wage non-farm		Total	
	EICV4	EICV5	EICV4	EICV5		
Urban	26 000	26 000	68 000	78 000	62 400	70 000
Rural	18 200	18 200	40 000	46 800	26 000	26 000
Male	20 800	20 800	52 000	61 400	40 000	46 800
Female	18 200	18 200	48 000	50 000	23 400	23 400
Age groups						
16–24	18 200	18 200	39 000	40 000	27 000	31 200
25–34	18 200	18 200	65 000	65 000	40 000	44 000
35–44	18 200	18 200	62 500	78 000	39 000	39 000
45–54	18 200	18 200	65 000	78 000	28 600	31 200
55–64	18 200	18 200	52 000	70 000	21 667	20 800
65+	18 200	18 200	30 000	43 767	18 200	20 800

Source: Integrated Household Living Conditions Survey, NISR (2017).

Unemployment rates, by age and sex (SDG indicator 8.5.2)

Unemployment rates have ranged between 1.6 to 2.5 in the past two decades, partly because of the definition of employment, which also included unpaid subsistence workers. Under the newer definition of unemployment, however, which includes unpaid subsistence workers, the overall proportion has increased to 15 per cent (labour force survey, NISR 2019).

Because the new definition takes into account the wage aspect of employment, government policy should be oriented towards the new rate as it is reflective of quality employment, which is important with regard to improving welfare in the country.

Table 15. Unemployment, 12-month reference period and seven-day reference period (EICV1 – EICV4), Rwanda, 2017

	Unemployment (12 month reference period)			Unemployment (seven day reference period)	
	EICV1	EICV2	EICV3	EICV3	EICV 4
All Rwanda	1.6	1.9	0.9	2.4	2
Male	1.3	1.6	0.8	2.4	1.6
Female	1.9	2	1	2.4	2.4
16-24	2.4	2.4	1.7	3.5	3.3
25-33	2.2	2.6	1.2	3.1	2.7
35-44	0.8	1.1	0.5	1.7	1.2
45-54	0.8	1.2	0.2	1.3	0.7
55-64	0.4	0.8	0.1	0.9	0.1
65+	0.5	0.9	0	0.1	0

Source: Integrated Household Living Conditions Survey, NISR (2000, 2006, 2011, 2014, 2017).

Proportion of young people (aged 15–24 years) not in education, employment or training by sex (NEET rate, SDG indicator 8.6.1)

With a median age of 19 years, the population of Rwanda is dominated by young people and this looks set to persist into the future. The predominantly low level of education, however, threatens the expected demographic dividend. This is manifest in the high percentage of young people not in education or in paid or profitable employment, which currently stands at 33.7 per cent, having fallen from 35.9 per cent in the past decade. The majority of NEET youths are women, at 43 per cent, with men standing at 23.5 per cent. Promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all requires the Government and development partners to address school drop-out rates, while at the same time putting in place mechanisms for private sector development in order to create employment opportunities for the young.

Table 16. Percentage of young people not in education or in paid or profitable employment by province, area of residence, age group and sex (EICV4), Rwanda, 2017

	EICV4			EICV3		
	Male	Female	Total	Male	Female	Total
16-19	16.9	21.8	19.4	15.4	20.5	18
20-24	23.1	45.1	34.6	26.7	47.6	37.9
25-30	29.9	58.7	45.2	35.1	62.3	49.7
Total	23.5	43	33.7	25.9	44.7	35.9

Source: Integrated Household Living Conditions Survey, NISR (2011, 2014, 2017).

Labour force by educational attainment; employment by educational attainment

Rwanda's labour force has low levels of education; a majority of the workforce have primary education as their highest level. There has been a slight decline of approximately 1

per cent in the number of persons with no education and those who have not completed primary school, while there has been an equivalent increase in persons with lower education and upper secondary education and a slightly lower increase in tertiary education. The marginal increase is partly due to the long span required to realize educational investment. Nevertheless, in the past decade the Government has invested enormously in education in the form of free 9- and 12-year basic education, the results of which cannot be realized in the immediate future.

Table 17. Level of education attained (EICV3–5), Rwanda, 2017

Level of education attained	Numbers ('000)			Percentages		
	EICV3	EICV4	EICV5	EICV3	EICV4	EICV5
None	1 143	966	966	19.42	17.42	16.58
Primary not completed,		2 520	2 546	-	45.45	43.71
attended but no qualification	2 635			44.76		
Primary completed	1 426	1 388	1 471	24.22	25.03	25.25
Post primary		81	76	-	1.46	1.30
Vocational	104			1.77		
Lower secondary	268	217	262	4.55	3.91	4.50
Upper secondary	200	248	331	3.40	4.47	5.68
University	102	125	173	1.73	2.25	2.97
Unknown	9			0.15		
Total	5 887	5 545	5 825	100	100	100

Source: Integrated Household Living Conditions Survey, NISR (2011, 2014, 2017).

Estimating the employment elasticity of growth in Rwanda over time

Point elasticity approach

This irons out volatility associated with arc elasticity. This is computed using econometrically generated behaviours between variables. The random effects model was used because it accounts for three sources of residuals in a regression, namely time-related error, cross-section related error and white noise, which in essence makes it obtain efficient estimates. One-way random effects was adopted because of the limited data points.

$$Y_{it} = \alpha + BX_{it} + \lambda_{it} + \varepsilon_{it} \text{----------} (i)$$

$$E(\lambda\ \varepsilon) = 0 - - - - - - - - - - - - - (ii)$$

$$E(\lambda\ X) = 0 - - - - - - - - - - - - - (iii)$$

$$E(X\ \varepsilon) = 0 - - - - - - - - - - - - - (iv)$$

Y: log of Employment

X: log of Gross Domestic Product

B: Employment elasticity of growth

Assumptions: All classical assumptions of the one way random effects hold

Findings

Rwanda's economy has expanded in tandem with employment growth in the past two decades. This relationship reflects the positive jobs spill over from economic growth or rather a positive employment elasticity of growth of 0.203***.

Table 18. Employment and productivity growth, Rwanda, 2000–2017

Year	Total employment	Nominal GDP	National labour productivita
2000/01	3 571 000	676 000 000 000	189 303
2005/06	4 299 000	1 439 914 990 482	334 942
2010/11	4 783 000	3 366 608 332 281	703 870
2014/15	5 479 000	5 466 207 499 041	997 665
2016/17	5 825 000	6 672 000 000 000	1 145 408

Source: Author's Calculations from EICV surveys and National Statistics (NISR)

This resulted in employment growth from 3,571,000 in 2000 to 5,825,000 in 2017. The increase in both employment and economic growth has resulted in a rise in labour productivity from RWF 189,303 to RWF 1,145,408.

Table 19. Rwanda, 2000–2017

	ln total employment	
Lngdp	0.203***	
	(13.09)	
_cons	9.578***	
	(21.65)	
R-sq	0.983	
	t statistics in parentheses	
"* p<0.05	** p<0.01	*** p<0.001"

Author's Computations from EICV surveys and National Statistics (NISR)

3. Sustaining per capita economic growth and job creation through structural transformation

In this section, we will explore in more depth the process of structural transformation, bringing together the findings in the sections on economic development and labour market developments. We will also assess the impact of fiscal, monetary and exchange rate policies on sectoral dynamism.

In addition, we will identify the dynamically growing sectors in terms of employment and productivity over the past 10 years in Rwanda. We use the World Bank decomposition tool JOGGs, which breaks down GDP growth into its component parts, including growth due to changes in employment rate, growth due to changes in productivity (output per worker) and growth due to changes in the share of the working age population. In addition, we will analyse changes in employment and productivity at the sectoral level in order to determine which sectors have been growing dynamically in terms of both employment and productivity. Lastly we analyse dynamic shifts in employment between the different sectors over the past 10 years to determine the sectors that employees are leaving and joining over time. The analysis of inter-sectoral shifts gives an indication of the effectiveness of policies aimed at transitioning workers from low productive farm jobs into more productive off-farm jobs over time.

Methodology

The methodology uses Shapley decompositions, which is a simple additive method that links changes in a particular component to changes in total per capita GDP, by taking into account the relative size of the sector or component, as well as the magnitude of the change (World Bank JOGGS Manual, 2015). Here GDP growth is decomposed using several consecutive steps. In the first step, growth in per capita GDP (proxied by per capita Value Added) is decomposed into employment rate changes, changes in output per worker and demographic changes. In the second step employment changes are further decomposed into changes in employment by sectors. The third step decomposes changes in output per worker into changes linked to variations in output per worker within sectors and changes linked to sectoral relocation of workers between sectors. A fourth step goes further in understanding the role played by each sector in the aggregate effect of employment relocation across sectors, while the fifth step looks at the role of capital and TFP as sources of changes in output per worker at the aggregate level. A sixth step puts all the elements together, to see how each factor affected total per capita growth.

Understanding the aggregate employment and productivity profile of growth

To understand how growth has translated into increases in productivity and employment at the aggregate level and by sectors (or regions), per capita GDP, $Y/N=y$ can be expressed as:

$$\frac{Y}{N} = \frac{Y}{E}\frac{E}{A}\frac{A}{N} \qquad (1)$$

Or $$y = \omega^* e^* a$$

where Y is total Value Added, E is total employment, A is the total population of working age and N is total population. In this way Y/E=ω is total output per worker, E/A is the share of working age population and A/N is the labour force as a fraction of total population. We refer to e, as the employment rate

Per capita GDP growth can be decomposed into growth associated with changes in output per worker, growth associated with changes in employment rates and growth associated with changes in the size of the working age population. The methodology uses Shapley decompositions which have the advantage of being additive. This means that the total change in per capita GDP will be the sum of the growth attributed to each of its components ω, e, and a. Thus if we let ω, *e* and *a* denote the fraction of growth linked to each component then the growth rate of an economy can be expressed as:

$$\frac{\Delta y}{y} = \bar{\omega}\frac{\Delta y}{y} + \bar{e}\frac{\Delta y}{y} + \bar{a}\frac{\Delta y}{y}$$

And total growth as: $\Delta y = \bar{\omega} * \Delta y + \bar{e} * \Delta y + \bar{a} * \Delta y$

ω *Δy will reflect the amount of growth that would be consistent with a scenario in which the employment rate *e,* had changed as observed but output per worker and the share of population of working age *a* had remained constant.

Findings

Based on constant 2014 RWF, Rwanda's GDP in terms value added has almost doubled from RWF 3,143 billion in 2006 to RWF 5,970 billion in 2016–2017. This growth in GDP has been accompanied by 19 per cent growth in employment with the total number of employed persons increasing from about 4.9 million in 2005–2006 to about 5.8 million in 2016–2017. In addition, productivity in terms of output per worker has increased by 60 per cent, while the employment rate has increased by 3 per cent over the past decade. According to the JOGGS decomposition methodology, the employment rate is a ratio of the total number of people employed[4] to the total population of working age (see Table 20). Lastly, the share of the working age population has increased by 3 per cent, from 84 per cent in 2005–2006 to 87 per cent in 2016–2017 (see Table 20).

Table 20. Employment, output, productivity and population. Rwanda, 2005–2006 to 2016–2017

	2005/6	2016/17	% change
GDP (value added) (million)	3 143	5 970	90
Total population	10 674 689	11 893 228	11
Total population of working age	8 966 739	10 299 535	15
Total number of employed	4 906 000	5 825 000	19
GDP (value added) per capita	294 435	501 966	70
Output per worker	640 644	1 024 893	60
Employment rate	55	57	3
Share of population of working age	84	87	3

Source: Authors computations from EICV2, EICV5 and National Accounts data (NISR)

A breakdown of GDP growth in terms of per capita value added over the past 10 years shows that 88 per cent was linked to increased productivity (output per worker) within the different economic sectors, 6 per cent to changes in the employment rate and 6 per cent due

[4] To allow for better comparison between the 2005–2006 and the 2016–2017 EICV surveys, the definition of employment used in this analysis a person is considered to be employed if they have worked for at least one hour in the past seven days. This is different from the wider definition of work used in the labour force surveys.

to the increase in the share of the working age population. This implies that GDP growth in Rwanda has been accompanied by job creation over the past 10 years.

Table 21. Decomposition of growth in per capita value added, Rwanda, 2005–2006 to 2016–2017

	2014 RWF	Percentage of total change in per capita value added growth
Total growth in per capita GDP (value added)	207 532	100
Growth linked to output per worker	182 366	88
Growth linked to changes employment rate	13 105	6
Growth linked to changes in the share of population of working age	12 061	6

Source: Authors computations from EICV2, EICV5 and National Accounts (NISR)

Analysing and identifying dynamically growing sectors in terms of employment and underlying policies (2005/2006–2016/2017)

In terms of employment, the most dynamically growing sectors over the past 10 years include construction (53 per cent), transport and communication (ICT) (56 per cent), tourism and recreation (120.5 per cent), and services (including health, education, real estate activities and household enterprises) (113 per cent) (see Table 22).

Table 22. Employment by sectors of economic activity, Rwanda 2005/2006–2016/2017

	Total employment			Employment/pop of working age		
	2005/6	2016/17	% change	2005/6	2016/17	% change
Agriculture, fishing, forestry	3 596 000	4 065 850	13.1	40.1	39.5	-1.6
Mining and quarrying	48 000	52 425	9.2	0.5	0.5	-4.9
Manufacturing	112 000	122 325	9.2	1.2	1.2	-4.9
Utilities	10 000	11 650	16.5	0.1	0.1	1.4
Construction	**146 000**	**256 300**	**75.5**	**1.6**	**2.5**	**52.8**
Trade	444 000	495 125	11.5	5.0	4.8	-2.9
Transport and communications	**91 000**	**163 100**	**79.2**	**1.0**	**1.6**	**56.0**
Financial services	20 000	17 475	-12.6	0.2	0.2	-23.9
Government	211 000	81 550	-61.4	2.4	0.8	-66.4
Recreation and tourism	**23 000**	**58 250**	**153.3**	**0.3**	**0.6**	**120.5**
Other services (real estate, education, health & social work, household enterprises)	**205 000**	**500 950**	**144.4**	**2.3**	**4.9**	**112.7**
Total	4 906 000	5 825 000	18.7	54.7	56.6	3.4

Source: Authors computations from EICV2, EICV5 and National Accounts (NISR)

The growth of these sectors is attributed to policies that have been implemented to improve the business environment in Rwanda over the past 10 years, as shown below.

Construction

As part of the ongoing government reforms to improve the business climate in the country, three major reforms have been instituted that decrease bureaucracy in the construction sector. In addition to ensuring timely electricity provision for investors,

Rwanda Housing Authority and City of Kigali have implemented measures to reduce high costs and streamline procedures for obtaining construction permits. Procedures that have been revised include geo-technological studies, topographical surveys and Environmental Impact Assessment. Reducing the bureaucracy involved in obtaining construction permits helps reduce losses incurred by property developers due to high interest on loans and mortgages due to late issuance of construction permits.

ICT and transport

As it is Rwanda's ambition to become an ICT hub of the region, the Government has invested significantly, making it the most connected country in Africa. Coverage of high-speed broadband infrastructure has now reached all corners of the country. A state-of-the-art cyber security facility has been operationalized to protect business and government systems from cyber-attacks. Government services are now accessible on the Irembo Platform and payment is possible electronically. The number of electronic services has increased significantly, fuelled by disruptive advancements in electronic financial services, such as Tap-and-Go, which has increased efficiency in the public transport sector

Tourism

Over the past 10 years Rwanda has continued to position itself as a hub of MICE tourism by investing in Rwanda Air, the national carrier, building conference facilities such as the Kigali Convention Centre and Kigali Arena, and attracting local and foreign investments in hotels. In addition, Rwanda has partnered with Arsenal Football Club to promote the "*Visit Rwanda Campaign".* All have led to employment and revenue growth in the tourism sector.

Services

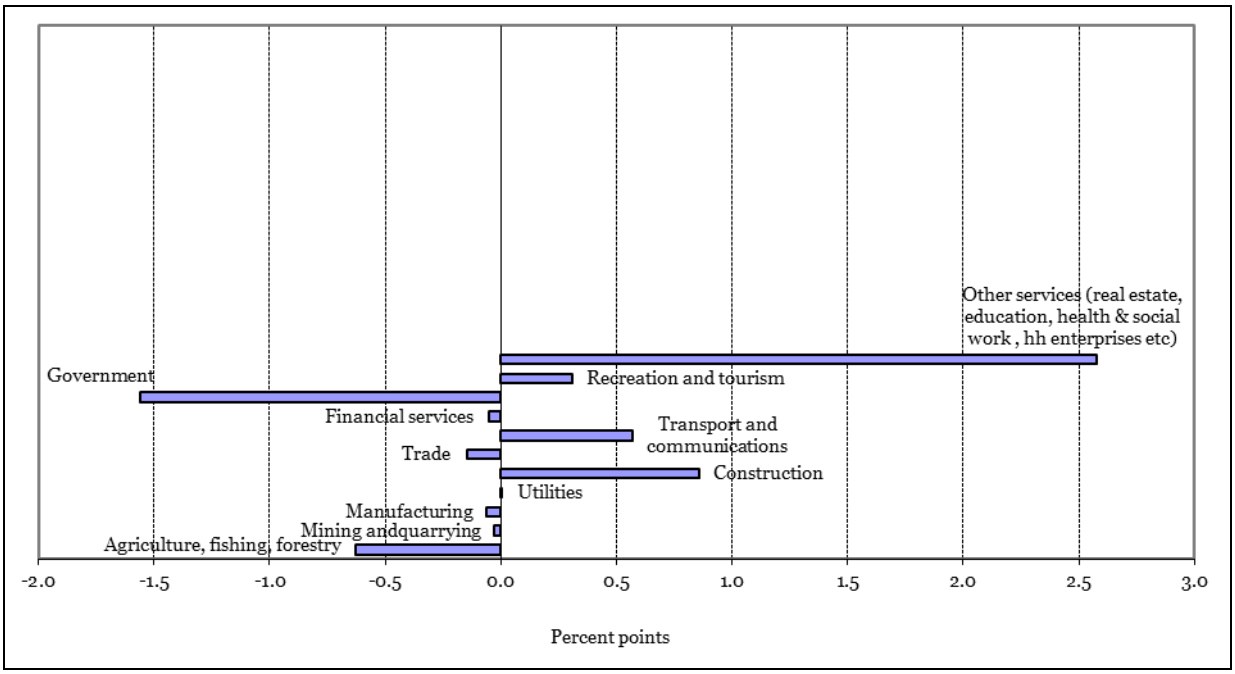
In line with Rwanda's ambition of become a middle income service based economy, sustained policies aimed at improving the business environment have attracted both local and foreign direct investments within the real estate, education health and social sectors over time. This has led to 144 per cent growth in the number of jobs in the service sector over the past 10 years.

Figure 19 shows the contribution of each sector to the overall change in the employment to population ratio in Rwanda over the past 10 years. The contribution of each sector is calculated by dividing the employment in a given sector by the working age population in 2005/2006 and 2016/2017. We then obtain the differences between these two ratios for each sector to determine sectoral changes in the employment to population ratio. The overall change in this ratio is obtained by subtracting the national employment to population ratio in 2005/2006 from the ratio in 2016/2017. The sectoral changes are normalised to 1 and then multiplied by the national change in order to obtain the sectoral changes in percentage points.

Findings show that in terms of contribution to the changes in Rwanda's employment to population ratios, services are the most dynamically growing sector, with a contribution of 2.6 percentage points. This is in line with Rwanda's NST ambition of becoming a middle income service-based economy by 2030. Services are followed by construction, transport and ICT and tourism.[5]

[5] ICT and tourism are classified separately from other services due to their strategic and enabling importance within Rwanda's economy, warranting separate monitoring. Tourism is a key service, while ICT is an enabler that cuts across other sectors.

Figure 19. Contribution of each sector to changes in the employment-to-population ratio, Rwanda 2005/2006 to 2016/2017



Source: Authors computations from EICV2, EICV5 and National Accounts (NISR)

Analysing dynamically growing sectors in terms of productivity in Rwanda (2005/2006–2016/2017)

In terms of productivity, government services (539 per cent), financial services (243 per cent), trade (107 per cent), utilities (139 per cent) and construction (73 per cent) have enjoyed the highest growth over the past 10 years in Rwanda (see Table 23). Productivity in government services has been increased by the policy of ICT mainstreaming in all government institutions. Here, registration and payment for government services can now be done electronically on the Irembo platform. Productivity in the financial industry has been improved through a series of digital interventions, such as electronic banking, mobile banking and electronic payments, all of which are in line with Rwanda's policy of promoting a cashless economy.

Within the trade sector, electronic billing machines (EBMs) have been introduced to increase efficiency in the payment of taxes. As part of the ongoing government reforms to improve the business climate, three major reforms have been instituted that decrease bureaucracy in construction, ensure timely electricity provision for investors, and reduce the amount of time exporters spend at customs. Today, exporters are able to obtain certificates of origin online. In addition, exporters are able to apply for phyto-sanitary certificates from the Ministry of Agriculture and Animal Husbandry online. This has facilitated businesses that export tea, coffee and other agricultural products.

Table 23 Changes in output per worker by sector, Rwanda, 2005/2006–2016/2017 (RWF 2014)

	2005/2006	2016/2017	% change
Agriculture, fishing, forestry	308 954	430 414	39
Mining and quarrying	2 166 667	2 956 605	36
Manufacturing	1 937 500	3 139 178	62
Utilities	*3 300 000*	*7 896 996*	*139*
Construction	1 041 096	1 802 575	73
Trade	*454 955*	*943 196*	*107*
Transport and communications	*516 484*	*803 188*	*56*
Financial services	*1 750 000*	*6 008 584*	*243*
Government	*1 146 919*	*7 332 925*	*539*
Recreation and tourism	3 000 000	2 128 755	-29
Other services (real estate, education, health & social work, household enterprises)	4 541 463	3 397 545	-25
Total output per worker	640 644	1 024 893	60

Source: Authors computations from EICV2, EICV5 and National Accounts (NISR)

Table 24. Analyzing sectoral employment elasticities of growth 2014-2017 to determine Government investment options in employment generating sectors in Rwanda

Changes in GDP output per worker by sectors, Rwanda (2014-2017)				Employment changes by sector (2014-2017)			
Sector	**2014**	**2017**	**% change**	**2014**	**2017**	**% change**	**Sectoral employment Elasticities of Growth**
Agriculture, forestry and fishing	343 933	387 719	12.73	4 381 671	4 513 582	3.01	0.24
Mining and quarrying	1 586 165	2 314 469	45.92	78 176	66 970	-14 33	-0.31
Manufacturing	2 192 199	2 360 680	7.69	140 042	162 665	16.15	2.10
Electricity gas, steam and air condition	8 582 872	12 289 106	43.18	5 243	4 801	-8.43	-0.20
Water supply, sewage, waste management	4 772 510	5 645 851	18.30	6 286	5 845	-7.02	-0.38
Construction	1 250 472	1 393 766	11.46	299 087	331 476	10.83	0.95
Wholesale and retail trade	540 305	662 822	22.68	779 189	743 789	-4.54	-0.20
Transportation and storage	1 519 915	1 451 480	-4.50	134 218	172 238	28.33	-6.29
Accommodation and food service activities	2 288 970	3 487 947	52.38	39 319	35 551	-9.58	-0.18
Information and communication	7 335 429	8 086 253	10.24	10 497	12 985	23.70	2.32
Financial and insurance activities	8 179 959	12 635 258	54.47	19 071	14 879	-21.98	-0.40
Real estate activities	1 045 130 641	333 546 735	-68.09	421	1 562	271.02	-3.98
Professional, scientific and technical	6 877 517	6 580 977	-4.31	22 101	29 175	32.01	-7.42

Changes in GDP output per worker by sectors, Rwanda (2014-2017)				Employment changes by sector (2014-2017)			
Sector	2014	2017	% change	2014	2017	% change	Sectoral employment Elasticities of Growth
Administrative and support service activities	3 141 854	8 285 606	163.72	59 519	34 397	-42.21	-0.26
Public administration and defence	5 151 794	5 108 69	-0.84	48 915	61 269	25.26	-30.14
Education	1 820 926	1 902 339	4.47	83 474	87 261	4.54	1.01
Human health and social work activities	2 775 960	3 266 420	17.67	44.309	48.371	9.17	0.52
Cultural domestic and other services	637 477	881 839	38.33	371 778	381 022	2.49	0.06
Total output per worker	743 763	886 770	19.23	6 558 537	6 736 812	2.72	0.14

Monetary values are 2014 Rwf

Source: EICV4, EICV5 and National Statistics

Table 24 compares changes in productivity with changes in employment at sector level. Sectors such as agriculture, manufacturing construction, ICT, education and human health and other services have had positive increases in productivity, accompanied by positive increases in employment. This implies that GDP growth in these sectors has resulted in job creation. Increased investment and government expenditure in these sectors will potentially lead to increased job growth because they have positive elasticities of growth.

By contrast, GDP growth in sectors such as trade, utilities, mining, accommodation and food services, financial services and administrative and government activities has been accompanied by a decline in jobs, leading to negative employment elasticities of growth. Investments in these sectors may not create positive spin-offs in terms of employment.

A third category of sectors are those in which employment has increased despite declines in productivity. These include public administration and defence, as well as professional and scientific activities. Expenditure and investments in these sectors are likely to generate positive spin-offs in terms of employment.

Analysing intersectoral shifts in employment and productivity in Rwanda over the past 10 years

Decomposition of growth in terms of value added per capita by sector shows that in most sectors in Rwanda, increases in productivity have been a major contributor to observed growth compared with employment and intersectoral shifts over the past 10 years. Overall, increases in productivity contributed 73 per cent of the observed growth, while employment changes, intersectoral shifts and demographic changes contributed 6, 15 and 5.8 per cent, respectively. Sectors in which most of the growth has been driven by productivity increases rather than employment increases include trade, construction and the government sector. Despite the movement of people out of the government sector, productivity increased in that sector because of increasing automation through platforms such as Irembo. The productivity increase offset the reduction in output per capita due to employment shifts, leading to an overall government service contribution of 12.4 per cent over the past 10 years.

In the service sector, however, per capita growth has been driven mainly by inter-sectoral shifts (accounting for 32 per cent) and the creation of new jobs (accounting for 9 per cent) rather than productivity. It implies that, in addition to the creation of new jobs, workers have moved from low productive activities to higher productive activities within

Rwanda's service sector over the past 10 years. This implies that, with the appropriate skilling programmes, there is still scope for labour to move from low productive agriculture into the service sector.

Given the high contribution of intersectoral changes within the service sector and the movement of labour out of the agricultural sector, increased skilling of current workers through TVET and other on-the-job training programmes is needed to enable these transitions and achieve government targets.

Table 25. Growth decomposition, percentage contribution to total growth in GDP (value added) per capita, Rwanda, 2005/2006–2016/2017

	Contribution of within sector changes in output per worker (%)	Contribution of changes in Employment (%)	Contributions of Inter-sectoral Shifts (%)	Total (%)
Sectoral contributions				
Agriculture, fishing, forestry	*19.9*	*-2.2*	*3.7*	*21.4*
Mining and quarrying	1.7	-0.1	-0.3	1.3
Manufacturing	6.0	-0.2	-0.7	5.1
Utilities	2.1	0.0	0.0	2.1
Construction	*6.4*	*2.9*	*1.9*	*11.3*
Trade	9.8	-0.5	0.2	9.5
Transport and communications	*1.5*	*1.9*	*-0.4*	*3.1*
Financial services	3.4	-0.2	-0.8	2.5
Government	*40.3*	*-5.4*	*-22.6*	*12.4*
Recreation and tourism	*-1.5*	*1.1*	*2.1*	*1.7*
Other services (real estate, education, health & social work, household enterprises)	*-16.7*	*8.8*	*31.7*	*23.8*
Subtotals	73.1	6.3	14.8	94.2
Demographic component	-	-		5.8
Total				100
Total % change in value added per capita 2005/6-2016/17				70.5

Source: Authors computations from EICV2, EICV5 and National Accounts (NISR)

In terms of intersectoral shifts, Table 26 identifies sectors that have been net recipients and net losers of workers over the past 10 years in Rwanda. Construction, transport and ICT, tourism and recreational plus services have been net recipients, while the primary sectors of agriculture fishing, forestry, mining and quarrying have been net losers of workers. One key sector that has been a net loser is government services, which have contributed a large negative portion to the impact of inter-sectoral shifts on output, a finding of major concern to the government. The shifting of workers from the agricultural sector, however, is a positive development which has contributed 25 per cent of the intersectoral shifts observed within Rwanda's labour market over the past 10 years.

Table 26. Decomposition of intersectoral shifts, Rwanda, 2005/2006–2016/2017

	Direction of employment share shift	Contribution to intersectoral shifts (%)
Sectoral contributions		
Agriculture, fishing, forestry	-	*25*
Mining and quarrying	-	-2.1
Manufacturing	-	-4.8
Utilities	-	-0.3
Construction	+	*12.9*
Trade	-	1.1
Transport and communications	+	-2.5
Financial services	-	-5.1
Government	-	-152.5
Recreation and tourism	+	*14.2*
Other services (real estate, education, health & social work, household enterprises)	+	*214.0*
Total contribution of inter-sectoral shifts		100

Source: Authors computations from EICV2, EICV5 and National Accounts (NISR)

Assessing the impact of fiscal, monetary and exchange rate policies on sectoral dynamism and employment creation in Rwanda

Fiscal policy

Rwanda's Fiscal Consolidation Strategy (FCS) has continued to achieve fiscal and debt sustainability toward making progress with the EAC macroeconomic convergence criteria. Rwanda's aim of achieving macroeconomic convergence with partner EAC countries has impacted on sectoral dynamism and employment creation by enhancing regional trade in goods and services, which has boosted jobs by creating wider regional markets for Rwanda (National Bank of Rwanda, 2017).

Secondly, Rwanda has prioritized investment in productivity-enhancing infrastructure, including internet fibre networks, roads, airports, hotels and so on. These infrastructure investments have been key to enhancing sectoral dynamism by creating a conducive environment for business and industrial investments, thus creating jobs in transport and ICT, trade, tourism and construction.

In addition, the National Bank of Rwanda has implemented prudent economic policies aimed at achieving macroeconomic stability in terms of inflation, interest and foreign exchange rates, all of which have provided a conducive environment for attracting foreign direct investment and jobs.

Domestic resource mobilization policies and employment creation

The Government has introduced electronic billing machines to improve domestic resource mobilization through taxes. Some players in the private sector, however, claim that tax rates are relatively high, which affects business growth and subsequent job creation in Rwanda. To create employment, the Government should strike a balance between domestic resource mobilization and allowing the survival of new enterprises, which will create jobs for young people. Domestic resource mobilization policies that aim to broaden the tax base

by supporting the growth of new start-ups through tax holidays are more conducive to employment creation than tax policies aimed at deepening the tax base by increasing taxes paid by existing enterprises. These are more likely to stifle and lead to the collapse of new start-ups, thus affecting the creation of new jobs in the private sector.

Monetary policy

In 2017, the National Bank of Rwanda (NBR) maintained an accommodative monetary policy stance. Its objective was to continue supporting the financing of the economy by the banking sector, given that both inflationary and exchange pressures remained subdued. The NBR reduced its policy rate (KRR) from 6.25 per cent in December 2016 to 6.0 per cent in June 2017 and 5.5 per cent in December 2017. As a result, outstanding credit to the private sector increased by 13.9 per cent between December 2016 and December 2017 against 9.1 per cent recorded in the corresponding period of 2016. Broad money increased by 12.3 per cent compared with 7.6 per cent during the same period.

In Rwanda the interest rate pass-through to the lending rate remains very weak and this limits the impact of monetary policy actions on the cost of banking loans and subsequent job creation. The exchange rate channel started to improve after the introduction of more flexibility in exchange rate policy and a decline in foreign resources. However, the monetary aggregates channel is active in Rwanda. A shock to M3, as well as changes in the available amount of credit as a result of the BNR's actions appears to have a very rapid, significant and persistent effect on output, which peaks after around five quarters (Kigabo, 2015).

The impact of exchange rate policies on job creation in Rwanda

The real exchange rate is one of the key economic indicators of Rwanda's international competitiveness. To ensure macroeconomic stability, the National Bank has worked to ensure that Rwanda's real exchange rate is broadly aligned with its equilibrium value. This is an important part of a country's external sector competitiveness because it improves trade balance and ensures macroeconomic stability (National Bank of Rwanda Economic Review, 2016). Rwanda's policies aimed at diversifying exports, increasing exports and reducing imports are key to easing exchange rate pressures. One policy implemented to reduce Rwanda's trade deficit, substitute imports and reduce the import bill is the Made in Rwanda policy. This encourages the population to consume goods and services made in Rwanda, irrespective of whether they are produced by local or foreign firms. Reducing import bills increases the country foreign exchange reserves and also helps reduce inflationary pressures, which helps to increase savings for investments and, subsequently, job creation.

Impact of doing-business reforms on foreign direct investment and job creation

As a result of the consistent reforms implemented to ease doing business and to promote investments in Rwanda over the past 10 years, foreign direct investment was forecast to grow by 10.2 per cent in 2017 from USD 266.3 million to USD 293.4 million. Reforms such improving the ease of doing business, zero tolerance for corruption and well defined property rights are aligned with increased investments and job creation in Rwanda.

Economic cooperation, regional integration and trade

In terms of trade and regional integration, emphasis has rightly been placed on increasing external connectivity, thereby boosting exports and jobs. This is a key priority under EDPRS-II and a powerful tool to spur economic growth, raise living standards and reduce poverty. With a share of 17.6 per cent of total formal exports in 2017, Rwanda's exports to other East African Community (EAC) member countries increased by 10.0 per cent in volume terms. In terms of value, Rwanda's exports to the EAC increased to US$ 166.8 million in 2017, from US$ 151.7 million in 2016. The increase in export receipts was driven by an increase in exports to Kenya (+14.3 per cent) and Uganda (+168.7 per cent).

Increased trade between Rwanda and other EAC countries has been achieved because eight non-tariff barriers were eliminated.

Diagnosing opportunities and challenges associated with promoting full and productive employment in Rwanda

A number of studies have been conducted in an effort to understand the potentialities of the different districts and constraints on economic activity. In 2015, Malunda and Kiberu conducted a study of productive jobs in selected districts in Rwanda and highlighted a number of opportunities and constraints to promoting productive employment. In 2018, UNCTAD has done some work on Rwanda's productive capacities. RODA has investigated potentialities and branding in secondary cities, while IPAR has conducted studies to understand drivers of competitiveness within the Secondary cities in Rwanda. These sources have been used to determine opportunities and challenges associated with promoting productive employment in Rwanda.

Challenges to productive employment and policy responses in Rwanda

According to work done by Malunda and Kiberu (2015), and the 2019 Economic Development phasing studies carried out in Rwanda's secondary cities by IPAR Rwanda, various key challenges to the creation of productive jobs and policy responses were identified.

Agricultural productivity constraints

Prolonged droughts, land scarcity and inadequate soil fertility in some districts are some of the major factors that impede the creation of productive employment opportunities in the agricultural sector. Despite the implementation of land consolidation and crop intensification programmes some smallholder farmers have not been able to benefit fully. In addition, some feeder roads are not accessible during the rainy season and this slows down agricultural productivity. In order to deal with drought, the government of Rwanda has rolled out the small-scale irrigation technologies programme, a subsidized scheme in which smallholder farmers purchase irrigation equipment and pay into a revolving fund which enables other farmers obtain irrigation equipment over time. In addition the government is implementing a programme aimed at developing secondary cities in order to ease pressure on Kigali. Through this programme more feeder roads have been created to link rural areas where agricultural production takes place to the urban centres. The fertiliser programme has been improved using smart agricultural technology, known as "Smart Nkuganire", in order to ensure that farmers receive the required fertiliser in a timely manner.

Industrial productivity constraints

There are still constraints that limit industrial productivity and consequently the creation of productive jobs in industry and manufacturing. The relatively high cost of utilities, such as water and electricity, coupled with the unreliability of power supply are some of the key constraints. In some industrial zones in secondary cities, the cost of acquiring land to set up industries is high. In addition, three-phase electricity lines are needed to support industrial production in the secondary and tertiary towns and cities. In addition, the inadequate supply of agricultural raw materials to feed the budding industrial sector means that industries are operating below capacity. In order to mitigate some these industrial challenges, the Rwanda Electricity Group (REG) has invested in new hydro-electric power dams to generate more electricity. The REG has also introduced a client charter, committing itself to ensuring that investors will be connected to the national grid in no more 20 days, down from 34 days. REG customers can apply online to be connected to the national grid.

To simplify the purchase of the equipment needed for electricity connection, such as transformers and cables, REG works with authorized suppliers to reduce the import costs, while ensuring quality. Alongside the introduction of guidelines governing electricity outages to industry, which impose sanctions on electricity outages that last more than ten minutes, the automation of outage monitoring systems will allow REG to better monitor the frequency and duration of electricity outages.

To mitigate problems of inadequate raw materials for industries, farmers have been encouraged to produce in cooperatives, which can then supply adequate raw materials, such as milk, to processing plants. In districts such as Nyagatare, the Government has mapped out and earmarked 16,000 hectares for the Gabiro agricultural hub. This land will be irrigated using water from the Akagera River to produce maize and other crops on a large scale to feed the planned agro-processing industries in the region.

Skills gaps and skills mismatches

There is a mismatch between the skills demanded by employers in the private sector and those of graduates. In addition, some young people have a white-collar job mentality and ignore jobs in some sectors because of their perceived low status, despite their productive potential. As a result, there are missed opportunities in blue-collar sectors such as agriculture. Lastly, low business skill levels within the population, coupled with limited innovation and creativity, result in too many people copying one another and engaging in the same businesses, leading to stiff competition in the informal business sector.

Financial constraints to business productivity;

There are limitations on access to finance for businesses in the private sector such as high interest rates on SME loans. This reduces their options. High collateral requirements are another problem. Although the National Bank of Rwanda has regularly reduced the cap rates at which commercial banks borrow, this has not resulted in reduced interest rates for private sector loans. Commercial banks sometimes attribute this to low domestic savings rates, which means that they have to draw on foreign capital. High interest rates on loans limit business growth and expansion and thus the creation of more productive jobs in the informal business sector. To mitigate this problem, the Government has implemented the Business Development Fund (BDF), which is aimed at increasing credit access to SMEs through loan guarantees to private sector actors.

Structural challenges

Labour supply still outstrips demand in the Rwanda. According the 2018 labour force survey the annual unemployment rate stood at 15.1 per cent, indicating roughly that for every seven persons in the labour force one person was unemployed. The unemployment rate was higher among women (17.1 per cent) than among men (13.5 per cent) and higher among young people (18.7) than among adults (12.3 per cent). It was also higher in urban areas (16.5 per cent) than in rural ones (14.7 per cent). The composite measure of labour underutilization, including unemployment, was 55.0 per cent, which means that more than a half of the extended labour force was either unemployed, time-related underemployed or in the potential labour force. A number of measures have been implemented to address this.

Skills gaps

Although curriculum reforms have been implemented to move towards a competence-based rather than a curriculum-based system, there are still skills gaps because some trainers have only limited English. Some graduates who have the skills to meet labour market demands do not have access to adequate internships to expose them to on-the-job realities. Practicing TVET skills is adversely affected by the fact that some TVET graduates face a year or two of delay before they are able to work with the tools and equipment they need to

practice skills learned at school. The government also embarked on promoting skills through different education programs for instance the 9 year and 12-year basic education systems. In addition, the government has invested in higher education hands on technical and Vocational skills (TVET) to address the challenges of skills gap. The Government has introduced further education reforms aimed at reducing illiteracy levels by promoting adult literacy education and entrepreneurship courses in secondary schools and tertiary institutions.

Policy responses and opportunities for promoting full and productive employment in Rwanda

The following sectors need to be harnessed to create productive jobs in Rwanda.

Agriculture

Most districts in Rwanda have fertile soils favourable for growing a number of crops on a large scale, mainly bananas, coffee, vegetables and fruit, while marshlands and low valleys are suitable for rice growing. Scaling the use of modern methods of farming – such as fertilizers, irrigation technologies and precision farming – will not only increase productivity in the agriculture sector, but will also provide needed raw materials to agro-processing industries and create more jobs in Rwanda. Because at least some workers will continue to work in agriculture over time, the Government should focus not only on moving people into off-farm jobs, but also on improving productivity and productive jobs in agriculture.

Agro-processing

Value added as regards agricultural products needs to be stepped up across all districts in Rwanda. Efficient functioning of agro-processors will improve the efficiency of actors in the different value chains and create more jobs. In order to promote agro-processing in Rwanda, the Ministry of Commerce (MINICOM) plans to set up three community processing centres to enable producers to engage in value-added processing of raw materials without bearing the total cost of the machinery and technology required. These facilities have not yet been implemented.

Tourism

A number of initiatives and investments have been implemented over the past 10 years to improve the tourism sector in Rwanda. Destinations covered by Rwanda Air in Africa, Europe, America and Asia have been increased in the wake of to investments such as new aircraft. In addition to traditional tourism in national game parks, Rwanda has continued to promote MICE tourism through the construction of state-of-the-art facilities, such as high end hotels, the Kigali Convention Centre, the Kigali Arena and others. Finally, as already mentioned, the Rwanda Development Board has implemented the "Visit Rwanda" campaign through a deal signed with Arsenal Football Club to promote Rwanda as a good tourist destination. Since its launch in 2014, conference tourism has become an important source of revenue, drawing thousands of meetings and conference travellers from all parts of the world. Rwanda earned US$ 404 million in 2016, up from US$ 200 million in 2010. In 2017, Rwanda hosted over 169 international meetings, which attracted tens of thousands of travellers, which also benefitted many service providers, such as hotels, lodges, restaurants and Rwanda Air.

Trade

The rapidly rising population in Rwanda represents an enormous boost in demand for goods and services, creating opportunities for productive jobs in trade. In addition, secondary cities such as Rubavu, Musanze and Rusizi are rapidly urbanizing, as are neighbouring countries the Democratic Republic of Congo, Burundi and Uganda. This

location advantage facilitates cross-border business and thus also boosts productive employment.

Energy sector

A number of Industrial zones are planned in secondary cities, including Rubavu, Muhanga, Rusizi, Huye, Nyagatare and Musanze. Because of their irregular power supply, however, their potential has not been adequately tapped. Therefore government and private investment in the energy sector has real potential to create productive work in the various pilot districts.

ICT sector – ICT Innovation City

As part of its commitment to digital infrastructure investment, Rwanda signed a deal with Africa50 late in 2018 to co-build the US$ 2 billion Kigali Innovation City. This is an Africa-focused innovation hub and a holistic ecosystem of technology clusters. The city is expected to attract technology companies from all over the world to create an innovation ecosystem and promote a knowledge-based economy. It is forecast to generate US$ 150 million in ICT exports annually and over 2,600 students are expected to graduate every year from its universities, increasing the technology talent pool. In a bid to transform the country from a subsistence agriculture economy to a knowledge-based, middle-income economy, the Rwandan Government has committed to investing in digital infrastructure, facilitating innovators through quick business registration, and providing workspaces in government tech-hubs, all which are major incentives for people in the business of innovation. The Rwanda Utilities Regulatory Authority (RURA), which is overseeing many innovative technologies, such as payment gateways and transport initiatives, has developed a "sandbox" in which start-ups can launch their initiatives and be regulated at a later date, up to a year after launching.

ICT infrastructure

In 2011, the government completed a nationwide 2,300-kilometre fibre-optic cable network connecting Rwanda to the outside world and providing fast internet access to a wider range of broadband services. "Sandboxes" and reliable internet access are crucial elements of any innovation ecosystem. Digital technologies have led to the creation of new productive job opportunities in technology, while at the same time causing the loss of some low-end jobs. Rwanda's investments and incentives have attracted a number of innovators and tech hubs from Africa and the rest of the world, including Andela, which has launched a pan-African tech hub in Kigali which will be recruiting and training software developers from all over Africa. In 2019, CC Hub, a Nigerian innovation lab, also launched its new design lab in Rwanda. The design lab fosters collaboration among researchers, designers, product engineers and global stakeholders to solve Africa's systemic problems in public health, education, governance and the private sector. Multinational businesses are also setting up shop in Rwanda. South American laptop maker, Positivo BGH started manufacturing laptops in Rwanda in 2018. Given the onset of the fourth industrial revolution (4IR), investments in the ICT sector will lead to e-health, e-governance and e-education tech solutions, which will provide more opportunities for productive jobs in Rwanda.

4. Bringing young people into Rwanda's labour market

Integrating NEETs in Rwanda's labour market

Introduction

In this section we highlight the characteristics of NEET young people in Rwanda, based on data collected from the ILO-based School-to-Work-Transition Surveys, conducted by the Institute of Policy Analysis and Research-Rwanda in 2015. A total of 2561 young people were randomly sampled across the five provinces in Rwanda. The surveyed youths were classified into five categories: (i) young people in school (740 respondents); (ii) young people not in employment, education or training (NEET – 585 respondents); (iii) young people in formal employment (594 respondents); (iv) self-employed young people (595 respondents); and (v) young people both in school and self-employed (6 respondents) and years' old both in school and formally employed (41 respondents). In this section we focus on the characteristics, aspirations, employment preferences, job search methods, job search challenges and training needs of NEET young people in Rwanda.

Table 27. Composition of surveyed young people, Rwanda

	Frequency	Per cent
In school	740	29
Not in employment, education or training (NEET)	585	23
Employed	594	23
Self-employed	595	23
In school and employed	41	1.6
In school and self-employed	6	.2
Total	2 561	100.0

Source: IPAR-Rwanda School to Work Transition survey, 2015

Job search process among NEET young people in Rwanda

To obtain an understanding of the job search process, NEET young people were asked about the length of time they had been searching for jobs, the actions they had taken to find a job and the challenges they had faced in Rwanda.

Table 28. Descriptive statistics, survey of young people, Rwanda

NEET	N	Mean
Mean reservation wages for NEET young people (RWF)	318	76 110
Average number of jobs applied for since start of job search	400	7
Average number of interviews/shortlisting for NEET young people	400	2

Source: IPAR-Rwanda School- to-Work Transition survey, 2015

On average, NEET young people had a reservation wage of RWF 76,110 per month, implying that they would not go for a job that paid below that amount. In addition, NEET young people interviewed as part of the 2015 Rwanda School-to-Work Transition Survey

had applied, on average, for seven jobs since the start of their job search process, yielding an average of two interviews from the job search process. Given that labour markets tend to have backlogs of different cohorts of graduates, an average of seven job interviews is a commendable effort on the part of these young people. However, an average of two interviews out of seven applications indicates a near success rate of 28 per cent, indicating a need for more job application training for NEET young people in Rwanda. About 84 per cent of NEET young people had not received assistance from employment services by the time of the STWT survey (see Table 29).

Table 29. "Have you received any advice/help/assistance from the employment services?" (NEET)

	Frequency	%
None	344	83.5
Advice on how to search for jobs	40	9.7
Information on vacancies	17	4.1
Guidance on education and training opportunities	6	1.5
Placement at education/training programmes	5	1.2
Total	412	100.0

Source: IPAR-Rwanda School to Work Transition survey, 2015

Duration of inactivity /unemployment among NEET young people

The majority (58 per cent) of the NEET youths interviewed had not been employed, in school or in training for over a year, while 22 per cent – a sizeable proportion of NEET young people – had spent about one year in this state. A backlog of about 70 per cent of the NEET young people who had been inactive for over a year indicates an urgent need to step up efforts to integrate them into the labour market or into training programmes to avoid de-skilling and discouragement (see Table 30).

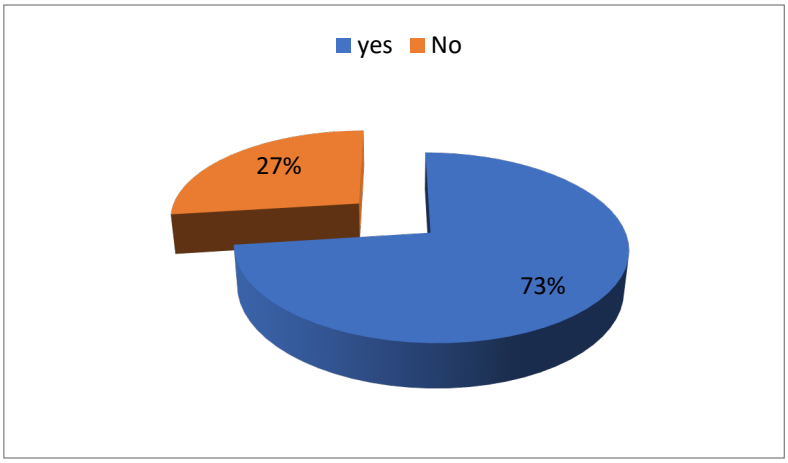
Table 30. "How long have you been unemployed?" (NEET)

	Frequency	%
Less than a month	8	1.4
A month	18	3.1
Six months	89	15.3
One year	127	21.9
More than a year	339	58.3
Total	581	100.0

Source: IPAR-Rwanda School to Work Transition survey, 2015

Discouragement among some NEET young people is indicated by the fact that about 27 per cent of them stated that they had not taken active steps to find work or establish their own businesses in the four weeks prior to the survey, which was carried out in 2015 (see Figure 20). The majority (37 per cent) of the NEET young people who had taken active steps to find work drew on informal personal networks of friends and relatives, indicating a need to make NEET young people aware of formal employment agencies, such as the Kigali and Musanze employment services.

Figure 20. Proportion of NEET young people who took steps to find work or establish their own business in the previous four weeks



Source: IPAR-Rwanda School to Work Transition survey, 2015

In addition, 28 per cent of NEET young people, a significant proportion of those who took steps to find work, indicated that their job search included checking at work sites, farms, factory gates and markets. This plausibly indicates a section of NEET youths who have limited skills and are looking for unskilled jobs in the informal sector. The implication is that TVET programmes should not only target educated young people, but also uneducated NEETs who can be trained to contribute productively in both the formal and informal sectors.

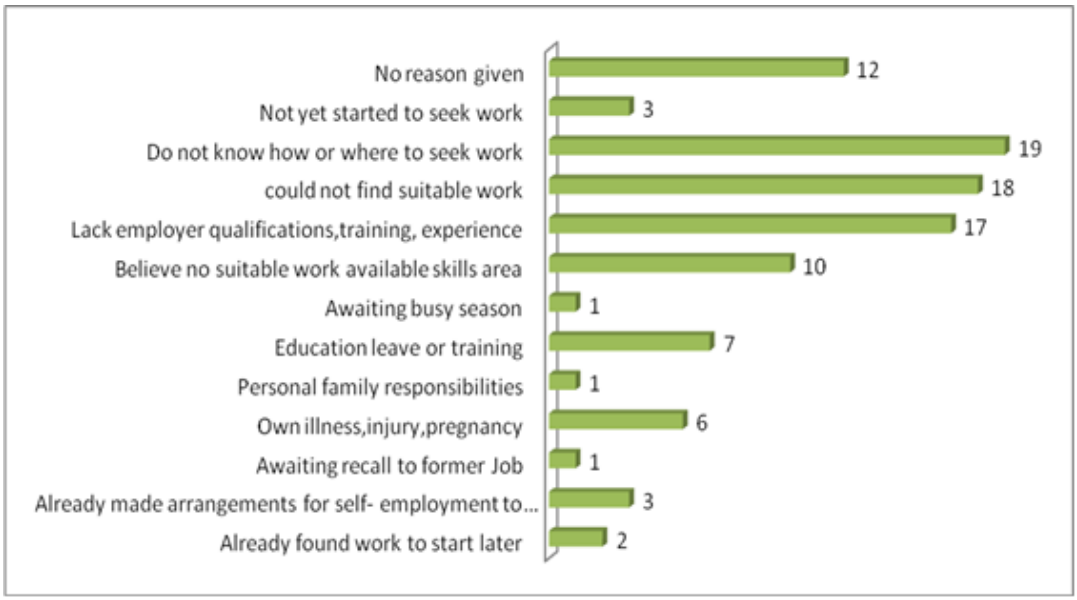
Table 31. "What steps have you taken to seek work during the past four weeks?" (NEET)

	Frequency	%
Through education/training institution	11	4.4
Checking at worksites, farms, factory gates, markets	*70*	*28.0*
Answering advertisements	60	24.0
Seeking assistance of friends or relatives	*93*	*37.2*
Looking for land, building, machinery, equipment to establish own enterprise	4	1.6
Arranging for financial resources to start a business	12	4.8
Total	250	100.0

Source: IPAR-Rwanda School to Work Transition survey, 2015

Out of the 581 NEET young people surveyed, 90 – 15.4 per cent – stated that they had not taken active steps to seek work in the four weeks prior to the survey, indicating that they had become discouraged. When probed further, three main reasons stood out: 19 per cent of the discouraged NEET youths indicated that they did not know how and where to seek work. This indicates a failure of post-training career guidance and job search skills offered to tertiary graduates. Furthermore, 17 per cent indicated that they failed to meet the requirements for the advertised jobs, while 18 per cent indicated that they could not find suitable work.

Figure 21. Reasons underlying discouragement among NEET young people, Rwanda (%)



Source: IPAR-Rwanda School to Work Transition survey, 2015

The failure to meet requirements calls for additional efforts to integrate NEET young people in effective internship and apprenticeship programmes to make graduates workplace-ready. Current internship programmes need to be strengthened in order to go beyond the mandatory requirements for graduation, but mainly as a pathway to prepare them for entry to the labour market.

Educated NEET youths' failure to find suitable work may indicate a mismatch between the skills offered by training institutions and the skills required by employers. This calls for early and effective career guidance to encourage students to acquire both the hard and the soft skills required by employers. Career guidance in secondary schools is usually offered to students in candidate classes, which is sometimes late. Students' strengths and weaknesses should be identified and developed earlier to enable them align their strengths with the skills needed in the job market. Career advisors in schools and tertiary institutions need to keep themselves abreast of the latest developments in the labour market and guide the students accordingly. After all, Fourth Industrial Revolution (4IR) technologies are rapidly changing skills requirements in local and international labour markets.

Given that 10 per cent of discouraged young people believe that there are no suitable work opportunities in Rwanda, formal and informal training programmes need to prepare new graduates to look beyond their own country in order to tap employment opportunities in the East African region and the Middle East. Despite some problems of abuse of workers, labour exports are increasingly becoming a major source of employment for young people in developing countries. Bilateral agreements are needed between labour exporting countries and Middle Eastern countries to ensure that worker safety and rights are not violated during their periods of employment abroad.

Understanding NEET young people's preferences and aspirations in the labour market in Rwanda

In order to obtain some understanding of the preferences and aspirations of NEET youths in Rwanda's labour market, respondents were asked to state the nature of the work they were looking for and why, as part of the School-to-Work Transition Survey carried out by IPAR in 2015.

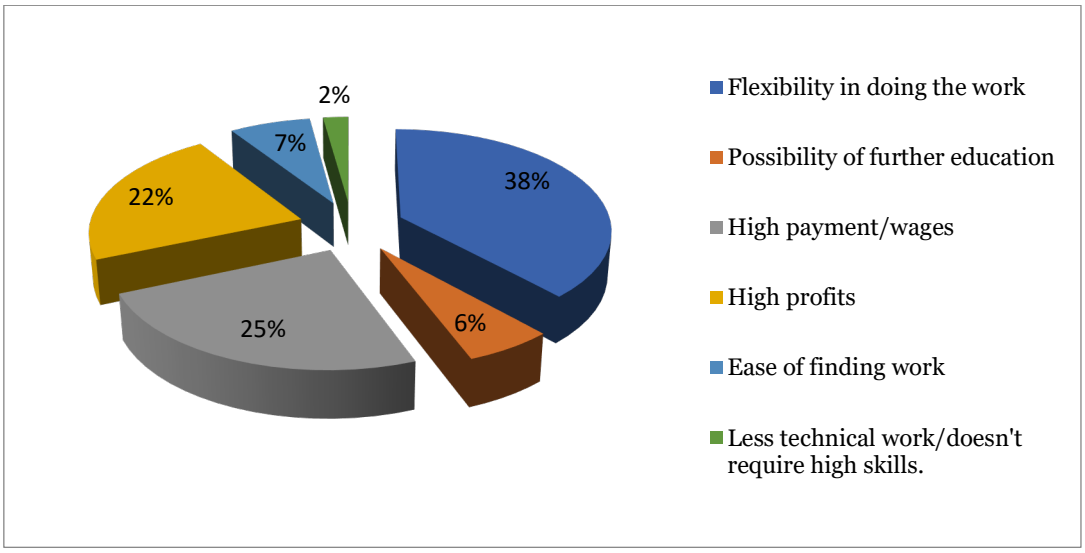
Table 32. What sort of job are you looking for (occupation)? (NEET)

	Frequency	%
Manual job	125	34
Clerical job	41	11
Technical job	81	22
Administrative job	21	6
Managerial job	43	12
Professional job	32	9
Other	27	7
Total	370	100.0

Source: IPAR-Rwanda School-to-Work Transition survey, 2015

In terms of occupation, three major preferences emerged among the NEET youths. The majority of uneducated NEETs (34 per cent) indicated that they were looking for manual jobs, while others were looking for technical (22 per cent), managerial (12 per cent) or clerical jobs (11 per cent). When probed about the reasons underlying their preferred occupation, flexibility was valued highly, at 38 per cent of respondents, followed by high wages (25 per cent) and benefits (22 per cent). A high preference for employment flexibility is strongly in line with new trends in Rwanda's labour market, as some young educated workers prefer to maximize their income by doing part-time "gigs" at several workplaces, rather than being tied to low-earning normal 9 to 5 jobs. Therefore work readiness training programmes need to incorporate the current realities of the *gig economy*,[6] which entails equipping young people with a variety of hard and soft skills to enable them to thrive in an increasingly uncertain labour market with limited job security.

Figure 22. What are the reasons for your preference?



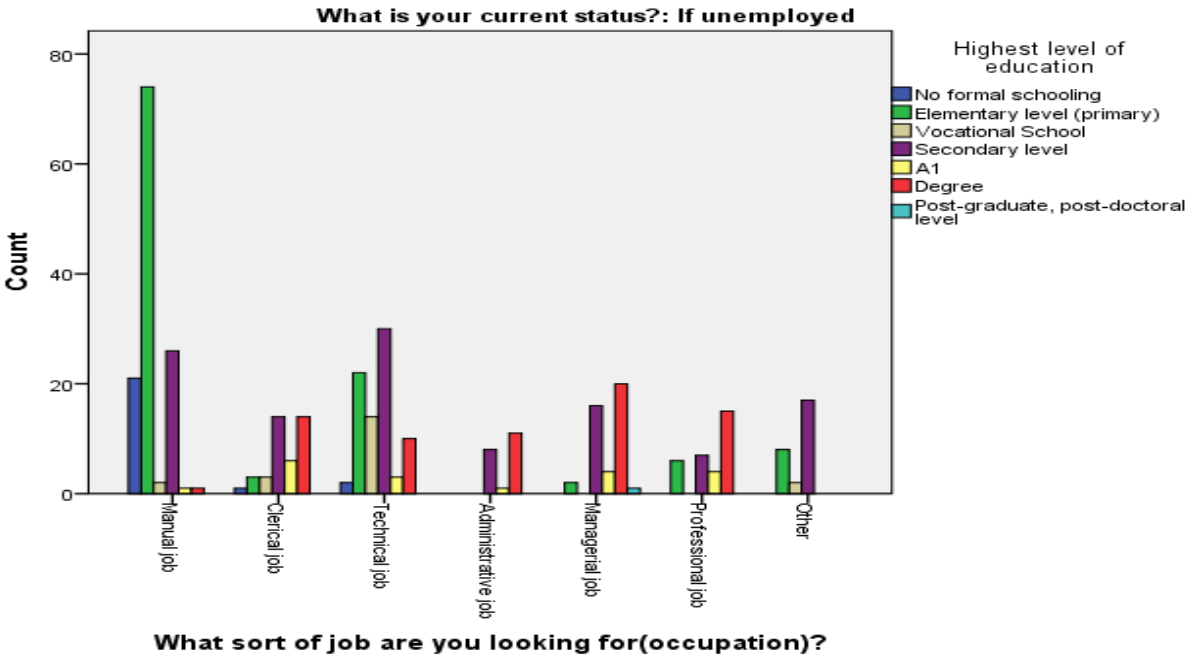
Source: IPAR-Rwanda School-to-Work Transition survey, 2015

A breakdown by education level shows that manual jobs were preferred mainly by NEET young people with no formal schooling and those who had completed primary and

[6] *Biraka* is the Kinyarwanda name for part-time gigs in Rwanda.

secondary education. On the other hand, managerial, clerical and administrative jobs were preferred by NEET degree holders (see Figure 23).

Figure 23. What sort of job are you looking for? By education



Source: IPAR-Rwanda School-to-Work Transition survey, 2015

This finding alludes to the challenge of so-called "degree syndrome" and the white-collar mentality, which causes most graduates to look for – non-existent – clerical and administrative jobs instead of trying out blue-collar jobs that are considered to be of lower status but are readily available. A dual system of training whereby graduates acquire a vocational/technical skill in addition to their degree would go a long way towards increasing employment in the blue-collar sector among educated NEET young people in Rwanda.

Challenges faced by NEET young people in finding work in Rwanda's labour market

The main supply-side challenges faced by NEET young people in finding jobs in Rwanda include a lack of education (30 per cent), an unsuitable general education (11.4 per cent) and a lack of work experience (20.5 per cent) among those sampled. Given that 30 per cent of the sampled NEET youths lacked education, formal and non-formal, TVET and business training programmes in Rwanda should target not only young people who have completed school, but also youths who have dropped out of school or who have never had an education at all. The youth unemployment challenge in Rwanda consists of both educated and uneducated youths and the emphasis should be on programmes to provide uneducated young people with skills and incorporate them into the labour market.

Given that a lack of work experience is also a major challenge to accessing jobs, internships and apprenticeships have to be structured in such a way that young people can create their own businesses after apprenticeships or seek employment after internships. The challenges of an unsuitable education combined with skills mismatches was cited by 15.2 per cent of the NEET youths, indicating the need to align Rwanda's education system with labour market requirements. A key education reform is the move away from curriculum-based towards competence-based training. This needs to be enhanced through improved English skills to improve communications and delivery between lecturers and their students.

Table 33. What has been the main obstacle in finding a good job? (NEET)

No education	*125*	*29.8*
Unsuitable general education	*48*	*11.4*
Mismatch between education requirements and that received	16	3.8
No work experience	*86*	*20.5*
Not enough jobs available	*95*	*22.6*
Considered too young	2	0.5
Being male/female	1	0.2
Discrimination (for example, disability, religion, race, appearance)	25	6.0
Low wages in available jobs	11	2.6
Poor working conditions in available jobs	11	2.6
Total	420	100

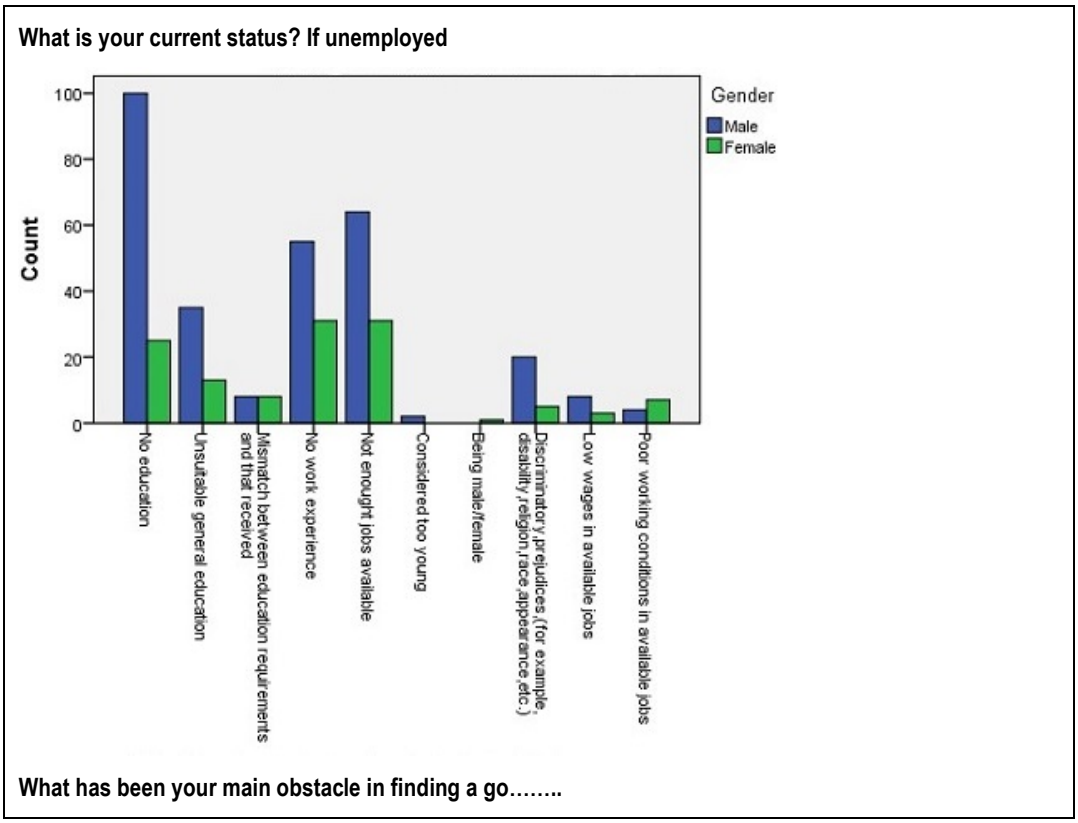
Source: IPAR-Rwanda School-to-Work Transition survey, 2015

On the demand side, about 23 per cent of NEET young people cited the poor quality of the available jobs as a key constraint. This highlights the need for more efforts to attract FDI, create a favourable growth-enhancing business environment for youth start-ups, prepare young people to take up jobs abroad and improve access to capital for existing businesses to create more jobs.

Challenges by gender

A breakdown of job access challenges by gender indicates that males NEET young people are disproportionately affected by a lack of education, lack of experience and skills mismatches compared with their female counterparts. The good news is that discrimination by gender was cited by only one respondent, implying that this not a major obstacle to accessing jobs for NEET young people in Rwanda.

Figure 24. What has been the main obstacle in finding a good job? By gender

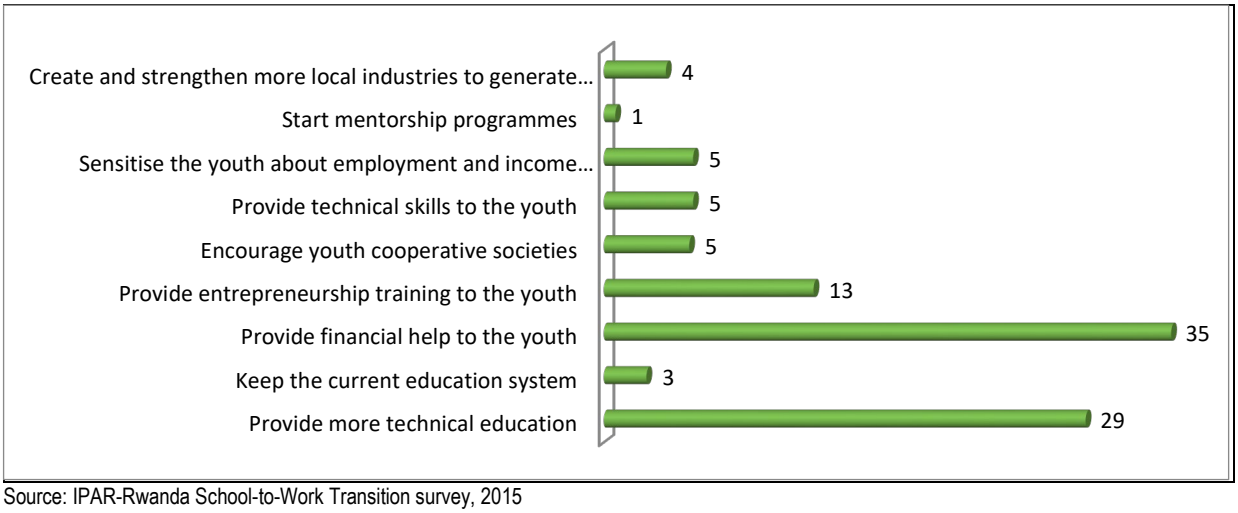


Source: IPAR-Rwanda School-to-Work Transition survey, 2015

Solutions suggested by NEET young people to the problems they face finding employment in Rwanda

As part of the problem solving process, NEET youths were asked to share their thoughts on what they saw as potential solutions to their labour market access challenges. It appears that NEET young people look more to private sector development (through increased access to finance and entrepreneurship training) and the provision of more technical education (TVET) as the key solutions to the youth unemployment problem in Rwanda. This implies that policies that deal with demand-side constraints to the creation of productive jobs in Rwanda are likely to yield more jobs than policies tackling supply-side constraints.

Figure 25. NEET young people's suggestions for tackling job access challenges (%)



Source: IPAR-Rwanda School-to-Work Transition survey, 2015

Sectoral work preferences among NEET young people in Rwanda

In addition to their occupational preferences, NEET youths were asked about the ideal sectors in which they would like to work. The largest proportion – 18 per cent – wanted to work in wholesale and retail, while 14 per cent preferred to work in the primary sector (agriculture, forestry and fishing). The service sector came third, at 13.7 per cent, mainly transport, storage, ICT and financial services.

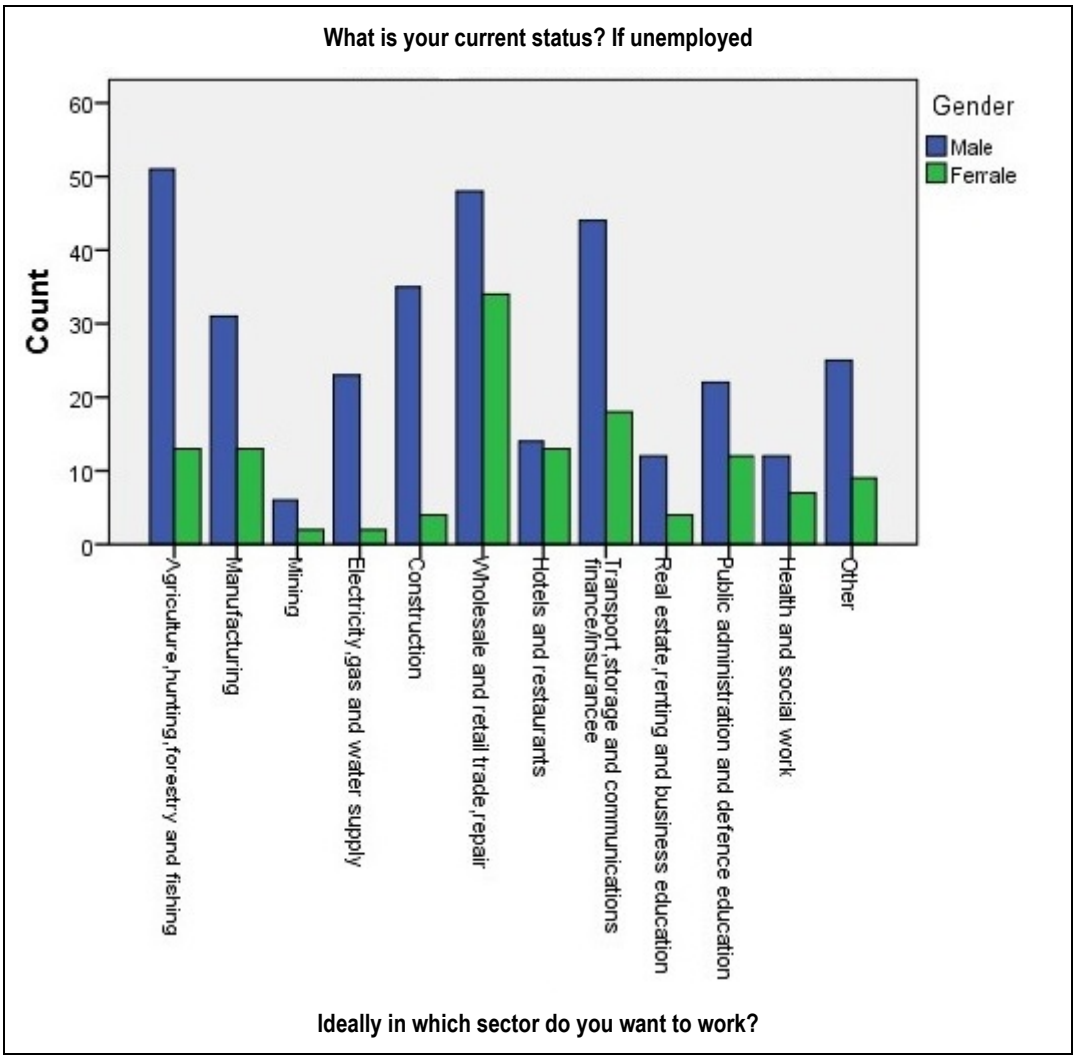
Table 34. Ideally, in what sector would you like to work? (NEET)

	Frequency	%
Agriculture, hunting, forestry and fishing	64	14.1
Manufacturing	44	9.7
Mining	8	1.8
Electricity, gas and water supply	25	5.5
Construction	39	8.6
Wholesale and retail trade, repair	82	18.1
Hotels and restaurants	27	5.9
Transport, storage and communications finance/insurance	62	13.7
Real estate, renting and business education	16	3.5
Public administration and defence education	34	7.5
Health and social work	19	4.2
Other	34	7.5
Total	454	100.0

Source: IPAR-Rwanda School-to-Work Transition survey, 2015

A gender breakdown of the sectoral work preferences of NEET youths indicates that young NEET males disproportionately prefer to work in agriculture and manufacturing. Female NEETs generally prefer to work in trade and services.

Figure 26. Ideally, in what sector would you like to work?

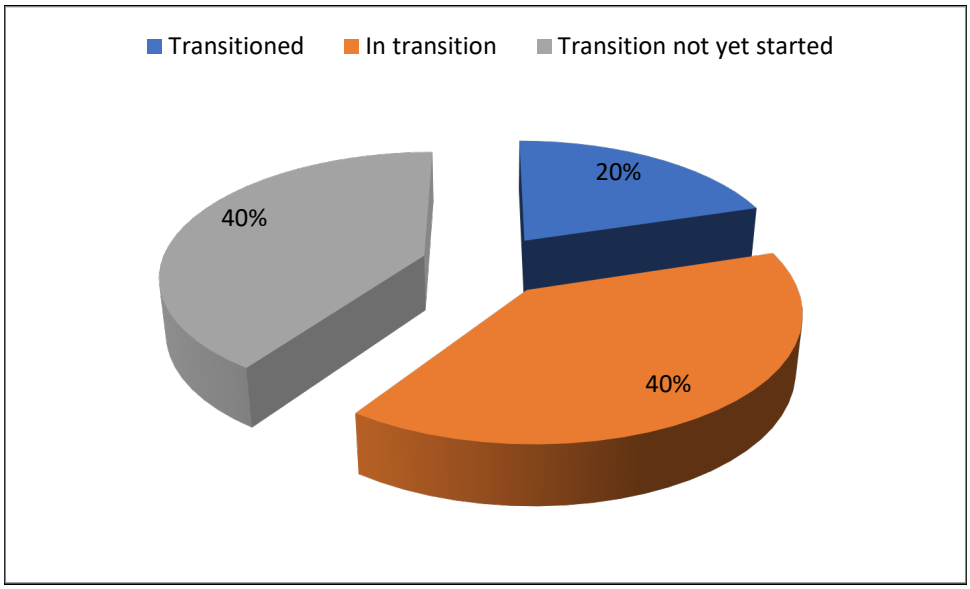


Source: IPAR-Rwanda School-to-Work Transition survey, 2015

School-to-work transitions for young people in Rwanda

The majority of Rwandan young men and women are still in transition or have not yet started it. According to the 2015 School-to-Work Transition Survey carried out by IPAR-Rwanda, only 20 per cent – a minority of young people – had transitioned from school to work (see Figure 27).

Figure 27. School-to-work transition rates, Rwanda



Source: IPAR survey, 2015.

Table 35. Distribution of Rwandan young people by stage of transition (Percentage)

Provinces	Transited	In transition	Transition not yet started
Kigali	25	39	36
Eastern Province	27	41	32
Northern Province	15	51	34
Southern Province	17	30	54
Western Province	11	37	52
Whole country	20	40	40

Source: IPAR-Rwanda School-to-Work Transition survey, 2015

Findings from the 2015 School-to-Work Transitions Survey of Rwandan youth in different parts of the country showed that only 20 per cent had successfully completed the transition from school to full-time and/or satisfactory employment. The majority of Rwandan young people in all provinces were still in transition or had not yet started it. The number of transitions appeared to be higher in Kigali than other provinces. Stages of transition were gender sensitive: young males were more likely transit than young females. In addition, more young males were in transition.

A Rwandan young person who has transitioned from school to work is most likely to be an older youth in Kigali. Not surprisingly, Rwandan young people in urban areas have more opportunity to make the transition than in the provinces. This is mainly because labour demand is higher in urban areas.

In Rwanda those with a higher level of education is more likely to enjoy an easier transition to work. Rwandan youth who live in Kigali with a higher level of education are in a much more advantageous position than their rural counterparts.

Youth mobility

As regards the effects of migration on school-to-work transitions, the survey found out that most young people do not live and work in the same area where they grew up. They moved in search of better opportunities in terms of education and employment (see Table 36). Overall, 56 per cent described their original place as rural. This implies that in search for better opportunities, the majority of the youth moved from rural to urban areas. 46 per cent of the respondents moved in search for employment opportunities while the 39 per cent moved in search for education opportunities. It is noteworthy that across all provinces, the majority of the youths moved from their original places of residence in search for work/employment.

The fact that most young people move from rural to urban areas implies that the Government needs to address youth employment issues. This calls for the faster implementation of the Secondary Cities Project in order to create jobs and curb rural–urban migration. The Secondary Cities Project entails developing six secondary cities selected as secondary growth poles to reduce migration to Kigali. These cities are Musanze, Rubavu, Nyagatare, Muhanga, Rusizi and Huye. The Government has invested in developing secondary city masterplans that will guide the development of these six secondary cities.

Table 36. Reasons for youth mobility by province (Percentage)

Characteristics	Entire country (%)	Kigali province (%)	Eastern province (%)	Northern province (%)	Southern province (%)	Western province (%)
Describe your original place of residence						
Rural	56	56	51	56	53	62
Urban	32	35	29	33	39	12
Peri-Urban	12	9	20	10	8	27
Do you live and/or work in the same area you grew up in?						
Yes	36	23	35	43	52	49
No	64	77	65	57	48	52
Main reason for moving to your current residence?						
Education/training	39	35	35	34	71	39
Work/employment	46	47	41	58	25	56
Resettlement	8	11	14	2	2	2
Conflicts	2	1	7	0	1	
Marriage	3	3	3	5	2	1
Other	2	3		1	1	2

Source: Calculations from the survey data.

Table 37 shows whether unemployed young people are willing to move to another location in search of employment. Overall, a higher percentage are willing to move to the capital city (34 per cent), while 22 per cent are willing to move to other urban towns. By contrast, 16 per cent of young people are not willing to move anywhere else, while 14 per cent have no preference. Only 10 per cent of young people are willing to move to rural areas, while just 5 per cent are willing to move to another country in search for opportunities. The small percentage of Rwandan young people willing to move to another country in search for opportunities implies that they need to be better prepared to take opportunities that may be available within the East Africa region and, for example, in the Middle East.

A disaggregation of youth mobility by gender shows that a slightly higher percentage of females (24 per cent) than males (21 per cent) are willing to move to another town/city. By contrast, a higher percentage of young females (24 per cent) are not willing to move anywhere compared with their male counterparts (14 per cent). Additionally, a higher percentage (6 per cent) of young males are willing to move to another country than young females (3 per cent). Finally, a higher average percentage of male young people (11 per cent) than females (10 per cent) are willing to move to rural areas. This implies that young people are willing to change their geographical location in search of employment opportunities. However, the majority are willing to move to urban than rural areas and the Government needs to take this into consideration while designing policy options to enhance youth employment.

Table 37. Willingness to move to another location to find work by age, gender and residence

Category	Male	Female	Rural	Urban	Peri-urban	15–24 years	25–34 years	Total
No	42	24	20	38	8	40	26	66
	14%	20%	23%	15%	9%	18%	13%	16%
Moving to capital city	102	42	36	71	37	83	61	144
	34%	34%	41%	29%	41%	38%	30%	34%
Moving to a town/city(other than capital city)	63	29	16	50	26	39	53	92
	21%	24%	18%	20%	29%	18%	26%	22%
Moving to a rural area	32	12	6	34	4	21	23	44
	11%	10%	7%	14%	4%	10%	11%	10%
Moving to another country	17	3	7	11	2	13	7	20
	6%	3%	8%	5%	2%	6%	3%	5%
No preference	46	12	2	42	14	25	33	58
	15%	10%	2%	17%	15%	11%	16%	14%
Total	302	122	87	246	91	221	203	424
	71%	29%	21%	58%	22%	52%	48%	100%

Source: IPAR-Rwanda School-to-Work Transition survey, 2015

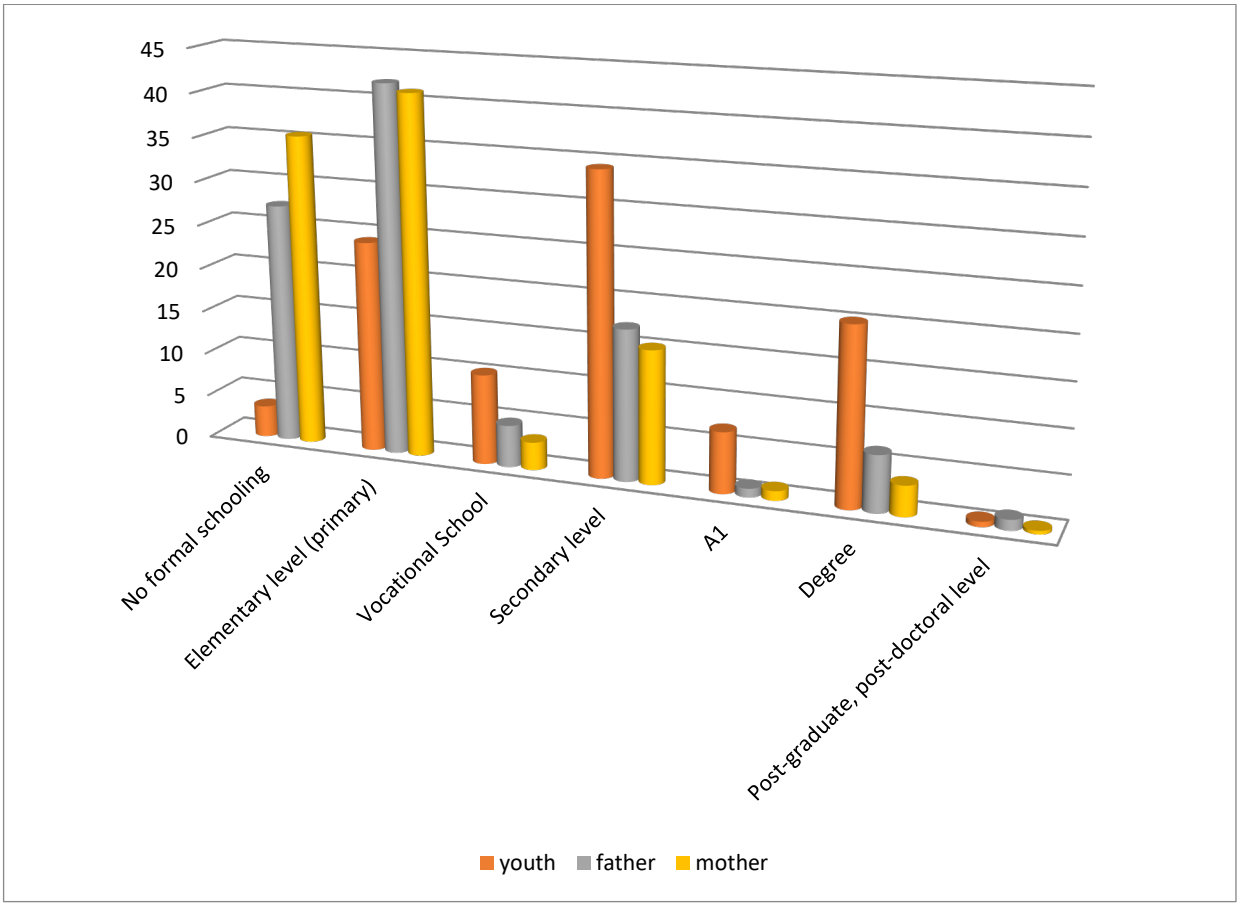
Education attainment

In this section, we present young people's job and educational characteristics and those of their parents, the share of school leavers and their reasons for leaving school. These characteristics are pertinent to understanding young people's employment prospects.

Higher education levels among young people than among their parents

There has been remarkable progress in educational facilities and enrolment in recent years. It is thus not surprising that young people's education levels in Rwanda are surpassing those of their parents, as seen in Figure 28. The reason might be that these parents lacked access to school facilities and permission to attend school, which is not the case for their children. A high percentage of mothers (35 per cent) and fathers (27 per cent) had no formal schooling, in contrast to young people today, among whom the figure is only 3 per cent. Most of those parents who did receive formal schooling did so only at primary level (42 per cent for fathers and 40 per cent for mothers). As we have already seen, the highest level of education of most young people is secondary. Improving the quality of education by providing soft skills as well as technical skills is key to increasing youth employability in Rwanda.

Figure 28. Highest education levels of young people in comparison with their parents



Source: IPAR-Rwanda School-to-Work Transition survey, 2015

Share of early school leavers and reasons for leaving school

Looking at the different reasons why young people leave school, it can be observed from Table 38 that 57 per cent leave school before completion mainly for economic reasons. This is true for all provinces. A total of 25 per cent of young people left school because they had completed their courses. This implies that, for the majority of young people, the level of education attained is not necessarily the highest they aspired to, but that they were constrained by economic circumstances. Other reasons for leaving include getting married (2 per cent), failing exams (5 per cent), wanting to start work (5 per cent), family conflicts (2 per cent), illness (1 per cent) and other (4 per cent). Early departure from school, without a diploma, can be a disadvantage in a labour market that favours educated workers. In Rwanda, however, most young people finish school at an early stage (secondary level) and start looking for jobs because at present the bulk of jobs available in Rwanda are unskilled.

Table 38. Reasons for leaving school (Percentage)

Reasons	Overall	Kigali	Eastern province	Northern province	Southern province	Western province
Finished course	25	29	30	15	25	17
Failed examinations	5	4	2	7	5	6
Wanted to start working	5	5	4	6	2	5
To get married	2	2	1	0	3	3
Economic reasons (couldn't afford it)	57	55	49	62	59	62
Illness (sickness)	1	1	2	1		1
Family conflicts	2	1	5	2	3	2
Alcoholism/drug abuse	0	0	2			
Other	4	2	5	7	3	4

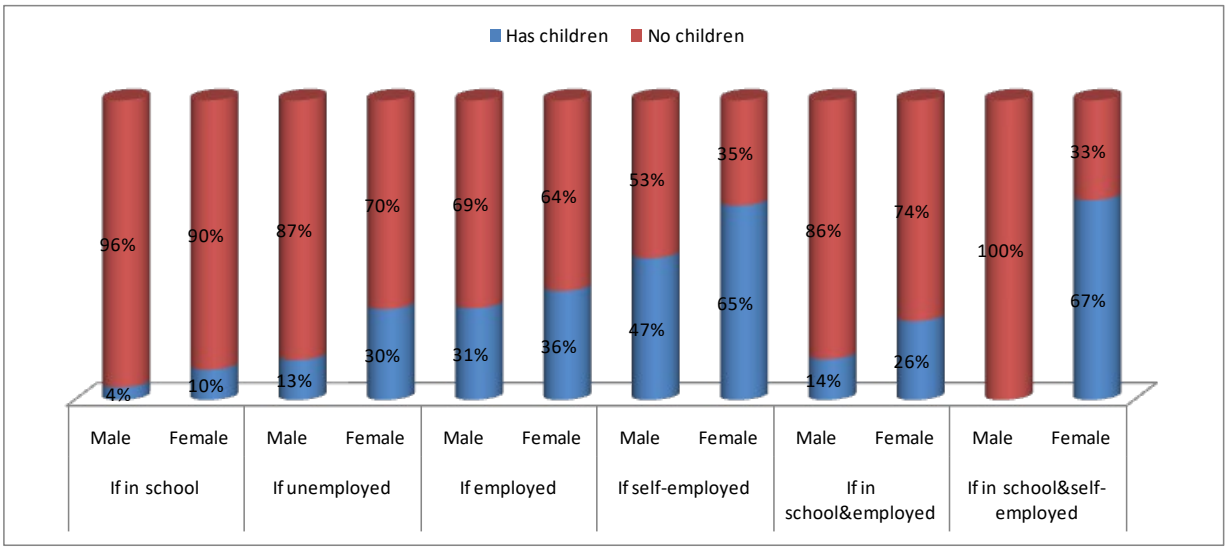
Source: IPAR-Rwanda School-to-Work Transition survey, 2015

Family status and young people's labour market choices

Family status can impact a young person's labour market choices. A young person with dependents might be called upon to serve as the breadwinner for a growing family, thus taking up any work available (usually men) or alternatively may feel pressured to remain at home to care for a growing household (usually women). The data confirm that traditional roles still prevail among today's young people (Figure 29). As expected, a high average percentage of young people without children are in education. Over (40 per cent) and (30 per cent) of the female and male young people without children, respectively, are in education. There are smaller average percentages of young people with children in education. Again in line with expectations, there is a high average percentage of female young people with children (over 40 per cent) in self-employment. Self-employment is more flexible and does not necessarily conflict with maternal roles; hence many mothers are pushed into self-employment rather than formal employment. Furthermore, a high average percentage of young males with children (about 50 per cent) are self-employed. This can be attributed to the fact that young parents are forced to engage in any activity in order to make ends meet for the family. About 29 per cent of young males with children are employed as against 15 per cent of their unemployed counterparts. Also, more young females with children (about 27 per cent) are employed than unemployed (about 24 per cent).

This implies that family responsibilities can put pressure on people to look for employment. Basically, both young men and young women without children have greater freedom to remain in education (see the significantly higher share of non-parents still in school), while young fathers and mothers become economically active in pursuit of income for the household.

Figure 29. Distribution of young people in relation to current activity status, parental situation and gender



Source: IPAR-Rwanda School-to-Work Transition survey, 2015

Drivers of school-to work-transitions in Rwanda

Model specification

Understanding the factors that drive young people's school-to-work transitions is important in designing and implementing youth employment policies in Rwanda. In the previous section we saw descriptive indications of a possible link between age, gender, education level and current place of residence as independent variables and school-to-work transition as a dependent variable. To determine how the above independent variables affect school-to-work transitions in Rwanda, we developed the following model:

$SWTst = \beta 0+\beta 1age+\beta 2gender+ \beta 3education+ \beta 4$ geographical location$+ \varepsilon t$ (random error term)

where, age (if it corresponds to experience), education level and geographical location are expected to be related positively to school-to-work transition. Gender does not have any expected signs. Dummy variables have been applied to variables such as education level and geographical location, changing missing values to numeric.

We use an ordered logistical model to determine the drivers of school-to-work transitions in Rwanda because the dependent variable, which is the stage of transition, is ordered from a low level, at which the transition has not yet started, to a middle level, at which a young person is in transition, and finally to high level, at which a young person has completely transitioned into the labour market.

Findings

The findings from an ordered logistic regression show that younger people and young people in urban areas are more likely to make a successful school-to-work transition than their older and rural counterparts. In addition, compared with young people in the northern province, young people in the western and southern provinces of Rwanda are significantly more likely to make successful school-to-work transitions. In terms of education, young people who have acquired vocational education A1 and a university degree are significantly more likely to make a successful transition than their counterparts without formal schooling. Migration significantly increases the chances of making a school-to-work transition, while

young people whose fathers are engaged in the service industry are more likely to make successful transitions than those whose fathers are in agriculture. Given that the father's occupation is used as a dummy to capture the effect of social networks in making successful transitions, service sector networks seem to be more effective than agricultural sector networks in promoting successful school-to-work transitions.

Table 39. An ordered logistic regression of the drivers of school-to-work transitions in Rwanda

Ordered logistic	**Regression**	**Number of obs**	**=**	**1235**
		LR chi2(20)	**=**	**227.56**
		Prob > chi2	**=**	**0**
Log likelihood =	**-1166.54**	**Pseudo R2**	**=**	**0.0889**
Transition	Coef.	Std. Err.	z	P>z
Age	-0.99001	0.122753	-8.07	0.000***
Gender	0.118646	0.117405	1.01	0.312
Urban	0.460014	0.159601	2.88	0.004
Rural	-0.33876	0.185671	-1.82	0.068
Kigali	-0.08797	0.176483	-0.5	0.618
Eastern_province	0.060714	0.206227	0.29	0.768
Western_province	0.823403	0.209705	3.93	0.000***
Southern_Province	0.503539	0.22288	2.26	0.024**
Primary_educ	0.515349	0.293385	1.76	0.079
Vocational~h	1.705589	0.343357	4.97	0.000***
Secondary_~c	0.478775	0.289801	1.65	0.099
A1	1.125741	0.363984	3.09	0.002**
Degree	0.910049	0.313165	2.91	0.004**
postgraduate	0.789968	0.816937	0.97	0.334
Migrated	0.524831	0.124461	4.22	0.000***
F_Indusrt_~e	0.272196	0.247855	1.1	0.272
F_Service	0.387073	0.19655	1.97	0.049*
F_Unpaid_f~r	-0.22296	0.271789	-0.82	0.412
F_Unemployed	-0.03953	0.212248	-0.19	0.852
F_other	0.168549	0.174664	0.96	0.335

Source:Authers Computations from IPAR-Rwanda School-to-Work Transition survey, 2015

5. Conclusions and recommendations for integrating NEET young people in Rwanda's labour market

School-to-work transitions

The main findings indicated that only 20 per cent of the sampled Rwandan young people had successfully completed the transition from school to full-time and/or satisfactory employment, 39 per cent are in transition and 40 per cent have not yet started transition.

Regression results show that younger young people and young people in urban areas are more likely to make successful school-to-work transitions into the labour market than their older and rural counterparts. In terms of education, young people who have acquired vocational education, AI and a university degree are significantly more likely to make successful transitions than their counterparts without formal schooling. Migration significantly increases the chances of making school-to-work transitions, while young people whose fathers are engaged in the service industry are more likely to make successful transitions than young people whose fathers are engaged in the agricultural sector. Social networks in the service sector seem to be more effective than agricultural sector networks in promoting successful school-to-work transitions for young people in Rwanda.

Limited access to employment services for NEET young people

The fact that the vast majority – 84 per cent – of NEET young people had not received assistance from employment services by the time of the STWT survey, employment services need to be improved substantially. NEET young people, especially those living in rural areas and up-country towns, need to obtain job application and interview skills. In addition, an average of two interviews out seven applications indicates a near success rate of 28 per cent, implying a need for more job application training for NEET young people in Rwanda.

Discouragement among NEET young people

Discouragement among NEETs is manifested by the fact that about 27 per cent indicated that they had not taken active steps to find work or establish their own businesses in the four weeks prior to the survey. About a quarter of discouraged NEETs indicated they did not know where or how to find work, while others cited their inability to satisfy employer requirements and failure to find suitable employment as the major reasons for their discouragement. This indicates a deficit in post training career guidance and job search skills offered to tertiary school graduates, which needs to be addressed by tertiary institutions. In terms of challenges faced by NEET young people in finding jobs in Rwanda, a lack of education, an unsuitable general education and lack of work experience were the key challenges cited.

Job search methods

The majority (37 per cent) of NEET young people who had taken active steps to find work resorted to informal personal networks of friends and relatives rather than formal employment services. This further highlights the need to raise awareness among NEET young people about using formal employment agencies, such as those in Kigali and Musanze.

Work preferences

In terms of work preferences, the majority of uneducated NEET young people were looking for manual work, while educated NEET youths preferred white-colour technical, clerical and managerial jobs with flexible arrangements and good salaries. Furthermore, some educated NEET youths prefer to maximize their income by doing part-time gigs at several workplaces, rather than being tied to low-earning jobs. Therefore work readiness training programmes need to incorporate the current realities of the gig economy, which entails equipping young people with a variety of hard and soft skills needed for them to thrive in an increasingly uncertain labour market with limited job security.

Bibliography

Assaad, R. and Levison, D. 2013. Employment for Youth. A Growing Challenge for the Global Economy. Background research paper submitted to the High Level Panel on the Post-2015 Development Agenda.

Ernst, C. 2008. "Promoting Youth Employment", Poverty in Focus, International Poverty Centre.

Fields, G. 2007. "Economic Development, Labor Market and Poverty Reduction", Policy and Issues.

Fox, L. and Gaal, M. 2008. Working Out of Poverty: Job Creation and the Quality of Growth in Africa (Washington DC, World Bank).

Government of Rwanda. 2007. Economic Development and Poverty Reduction Strategy 2008–2012, Preliminary Draft, June 2007. MINECOFIN, Kigali.

Gutierrez, C., Orecchia, C., Paci, P. and Serneels, P. 2007. Does Employment Generation Really Matter for Poverty Reduction? World Bank Policy Research Working Paper 4432.

ILO. 2011. Global Employment Trends 2011: The Challenge of a Jobs Recovery (Geneva, ILO).

Thomas R. KIGABO and Callixte KAMANZI, 2015: Job Creating Growth and Governance: The Case of Rwanda

D.Malunda and B. Kiberu (2015), Employment Diagnostic Analysis and Geographical Estimation of The Deficit of Productive Jobs in selected Districts in Rwanda

Malunda, D. (2013). The employment intensity of growth in Rwanda, IPAR, CSAE Oxford Conference.

McKay, A. 2002. A Profile of Poverty in Rwanda: An Analysis based on the Results of the Household Living Conditions Survey 1999–2001 (University of Bath, UK).

MINECOFIN. 2002. Household Living Conditions Survey 1999–2001. MINECOFIN, Kigali.

MINECOFIN (2017). Budget Framework Paper 2017/2018-2019/2020. Rwanda, April 2017

National Institute of Statistics Rwanda (2017). Labor Market and Economic Activity Trends in Rwanda. Working paper, Kigali.

World Bank. 2019. African Development Indicators 2012: Jobs (Washington DC, World Bank).

World Bank (2010). Job Generation and Growth Decomposition tool, Reference manual and user Guide, version 1.0

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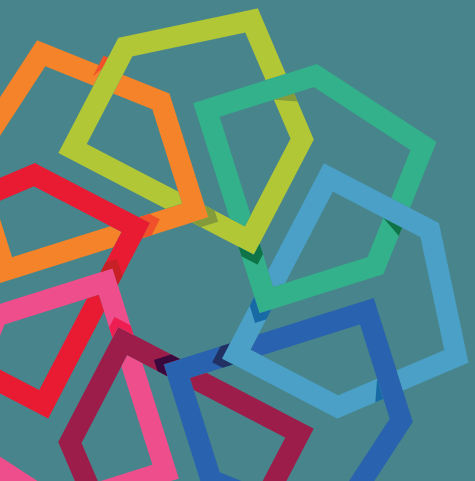

International Labour Organization

Contact:
Employment, Labour Markets and Youth Branch (EmpLAB)
Employment Policy Department
International Labour Office
4, route des Morillons CH-1211 Geneva 22, Switzerland
https://www.ilo.org/emppolicy