



# AN ASSESSMENT OF FACTORS INFLUENCING CHINESE INVESTMENTS IN AFRICA: A CASE STUDY OF CHINESE FDI IN RWANDAN ECONOMIC SECTORS

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## Abstract

*The shift of China's Africa policy with a stronger focus on infrastructural development, agricultural cooperation resonates with the needs to feed and cater for its 1.3 billion people. As a result, Chinese manufacturers are relocating their factories to countries where operations are cheaper. From Mauritius to Nigeria to Ethiopia and Rwanda, Chinese firms are investing thereby ushering in a new phase of structural transformation. Rwanda is a land locked east-central African country and among the 10 smallest countries on the African continent with a dearth of oil and minerals. Such resources often fuels violent conflicts and insecurity. As such, attracting Chinese FDI by Rwanda must be down to the other areas of advantages it enjoys over its neighbours, which must be significant to the outsiders putting the Rwandan economy into perspective and consideration. This study examined and assessed the factors shaping and influencing Chinese Foreign direct investment (FDI) within the various Economic sectors of Rwandan. The literature reviewed (Secondary data) led to identification of the factors influencing Chinese FDI into Rwanda. These identified factors formed the backbone of the research questionnaire, administered to the Eighteen Government Ministries of Rwanda. Mono Quantitative Method (MQM) research design to collect data and its analytical procedure was used. The results show that the factors identified are significant". The implication is that the eleven factors identified, assessed and*

*ranked were influential in shaping Chinese Foreign direct investment into Rwandan Economic sectors. Because for any FDI inflow and thrive, there must be ground preparation, orderly, friendly policies by the host government that will boost the morale of the investors. Rwandan Political, Economic and Social Stability coupled with its Realistic and Sustainable Government Policies and the Political will by its leadership is remarkable and is a positive pointer to attracting investments into the economy.*

*Keywords: Assessment, Chinese FDI, Factors, Influential, Investors, Policies, Rwanda*

## **INTRODUCTION**

### **Genesis of Chinese Investments in Africa and Rwanda**

Chinese investments and other engagements in Africa varies widely and ranges from the development, trade, economic and international relationship perspectives. Jing Men and Barton (2011) discussed logical reasons about the impact of Chinese investments and other engagements in Africa. They asserted that China's rise on the international scene over the past few years has correlated with its exponential economic growth. this economic growth has acted as a double edged-sword: China has simultaneously become a possible model for developing nations, whilst acting as a potential rival for developed countries, whether economically, politically or even from a security perspective. China's growth as an economic and political powerhouse is supported by the good relations that it maintains with other developing countries and notably those from the resource-rich African continent. China's 'new march' on Africa is attracting much international attention, criticized by some whilst applauded by others. no matter the criticism or praise, it is commonly recognized that China's increasing engagement in Africa has made a great impact on international politics and China's Africa policy has its own characteristics quite different from that of the West. this uniqueness has been analysed, criticized, extolled and questioned.

In effect, China's relations with Africa dates back to the 1950s, but of late the evolution of these relations has taken on a new dimension, which necessitates careful analysis. this is all the more important since africa has always been considered as Europe's backyard, owing to former colonial ties and to current-day conditional relations. The European Union (EU), the world's largest development aid provider, has been feeling the heat of Beijing's closer ties with africa, caused in part by the ineffectiveness of the eu's policy-orientation that is strongly focused on political conditionality. As a result, the EU's overall policy-making towards Africa has suffered from a loss of credibility and this has been

further exposed both by the success of China's investments in Africa and by the favourable response that China's investment proposals have received from African leaders. China-Africa development cooperation was based on the principle of mutual benefit as it is fundamental for the sustainability of aid projects and the promotion of endogenous development in Africa (Xu, 2011).

Trade between China and Africa has also grown exponentially in recent years. Since 2006, China has adjusted the priorities for its aid policy in Africa from construction to agricultural development with a view to assisting Africa in tackling food security (Han 2010; Sun 2011). The shift of China's Africa policy with a stronger focus on infrastructural development, agricultural cooperation resonates with China's rising food demand. China needs to feed and cater for its 1.3 billion people with 7 % of the world's arable land in a sustainable manner (Brautigam 2009). China has set up a growing number of investment schemes related to food production in Africa through investment in infrastructure, technology demonstration and training programmes in aid programmes (Sun 2011). Chinese businesses have brought the needed equipment, technology and expertise for Africa's economic development (Alden et al. 2009).

Today, China's economic superpower status has come with rising wages and production costs. As a result, Chinese manufacturers are relocating their factories to countries where operations are cheaper. Can the "flying geese" model be used to explain the emergence of Chinese operations in Africa, with China as the "leading goose" and African countries as its "follower geese?" (Lin, 2011). From Mauritius to Nigeria to Ethiopia to Rwanda, Chinese firms are employing local workers and may play a role in moving African manufacturing up the ladder of industrialization, ushering in a new phase of structural transformation (Eom, 2018; Brautigam and Xiaoyang 2014; Brautigam et al., 2013; Brautigam and Xiaoyang 2011; Brautigam 2007).

Rwanda is a landlocked east-central African country surrounded by Uganda, Tanzania, Burundi, and the Democratic Republic of Congo. It is among the 10 smallest countries on the African continent with a dearth of oil and minerals. As such, attracting Chinese FDI must be down to the other areas of advantages it enjoys over its neighbours. These areas attract or repulse any FDI flow into the country and must be significant to the outsiders putting the Rwandan economy into perspective and consideration. The figure 1 below shows Map of Africa with Rwanda.



Figure 1: Map of Africa Showing Rwanda

Source: <https://taarifa.rw>

### Research Problem

Zhao (2013), Ong'ayo (2010) and Tan-Mullins et al. (2010) affirm that many studies have not provided more nuanced, disaggregated and critical lenses into the existing and potential risks that undermine the sustainability of Chinese investments (). Nonetheless, it is widely recognized that China's involvement in the region has repercussions for the local economy, natural resources utilization and livelihoods of the poor (Tull 2006; Zafar 2007; Moyo 2009; Tan-Mullins et al. 2010). The increasing criticisms of Chinese investments over malpractices and lack of supervision and control of those irresponsible businesses have largely attributed to their negative impacts on the environment and local communities (Naidu and Davies 2006; Alden and Alves 2009). Consequentially, the Chinese government policy has called for 'responsive projects' that ought to attach importance to tackle these issues, but the effectiveness of these policies has yet to be seen. For the African governments, setting high benchmarks for Chinese investments is not conducive, which may explain why Chinese projects are treated more favourably than those from G8 countries by the African governments (Bosshard 2008). Despite these negative views, Chinese FDI in African Countries (Rwanda Included) has not been focused solely on the exploitation of natural resources. Chinese FDI has actually helped to

achieve significant growth in the manufacturing and services industry in both countries (Frimpong, 2012).

Bungenberg and Hobe (2015) stressed that, the availability of natural resources in a country is no longer considered only a blessing and a helpful precondition for development. Rather it proves sometimes to be a curse. The economic value of natural resources often fuels violent conflicts. To a certain extent the plundering of the natural resources of the Democratic Republic of Congo (DRC) by Uganda, Burundi and Rwanda, respectively, is part of an international resource conflict, particularly on gaining access to the rich natural resources in the Great Lakes Region. Furthermore, the availability of natural resources often fuels internal conflicts over power.

However, there are also growing economic disparities in the country. This inequality is diverse, not only between the members of RPF and other parties, but is also perceived as inequality between Hutu and Tutsi, returnees and survivors, and between Anglophone and Francophone speakers. Power is also unbalanced geographically between Kigali and the rural areas. A report of the International Crisis Group (ICG) emphasised the growing economic disadvantage of the Hutu community. This would make them more vulnerable to political manipulation by political entrepreneurs in the future (International Crisis Group, 2002: 26). If one further scrutinises the statistics, the situation indeed looks less bright. There are currently more people living below the poverty line than before the genocide, and income inequality as measured by the Gini coefficient is rising continuously. Unfortunately, since 2005 UNDP has no longer calculated the Gini coefficient. The report, 'Turning Vision 2020 into Reality' (UNDP, 2007), was received negatively by the government, as it delved extensively into the problem of inequality: Inequality in Rwanda is not only rising, it is changing in nature: it is becoming increasingly rural and increasingly detrimental to the poorest and most vulnerable groups in society. In addition, extreme inequality can weaken political legitimacy and corrode institutions, leading to higher political instability caused by popular movements of discontent in countries with large gaps between the rich and the poor (UNDP, 2007; Campioni and Noack 2012).

Hence, the need to grasp a good future outlook, while also taking into consideration the Rwandan historical outlook, socio-cultural, socio-political, social tension tendencies (due to its genocide history), inequality issues, neighbouring countries peace and impact on the country in the light of FDI. The figure 2 below shows the four scenarios of Rwandan future for peace, equality and development.

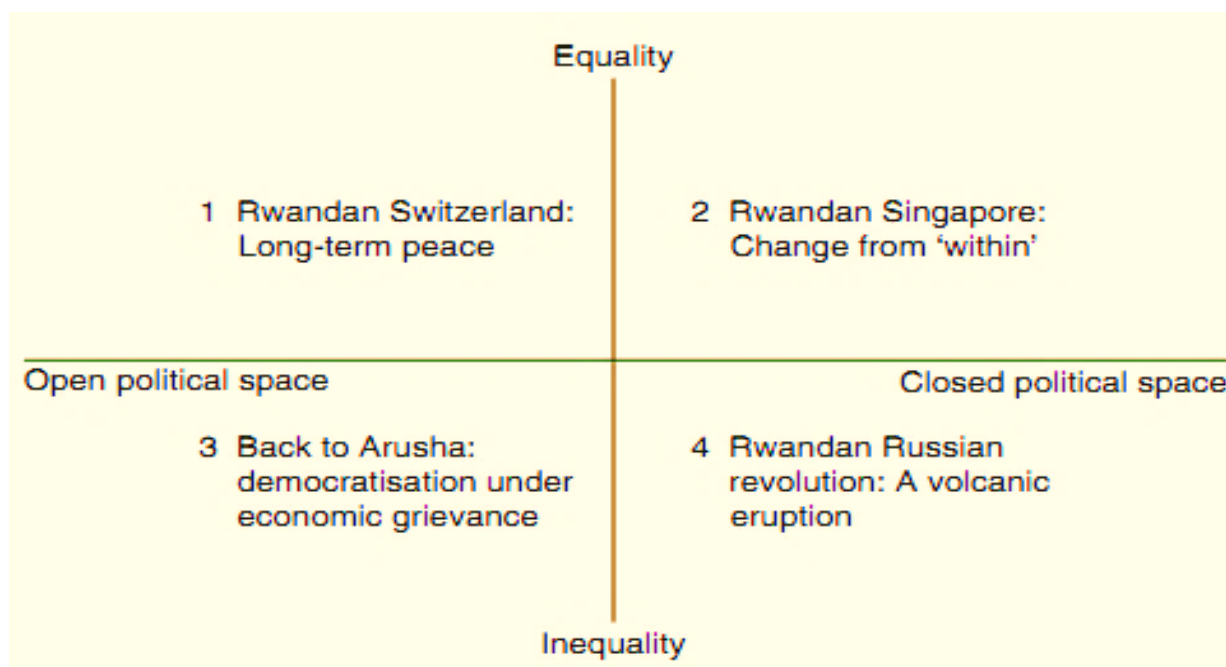


Figure 2: Four Scenarios of Rwandan Future

Source: Campioni and Noack 2012.

### Research Aim and Limitation of Scope

The aim of this research work is to examine the factors shaping Chinese Foreign direct investment (FDI) within the various Economic sectors of Rwandan with a view to identify and assess Chinese Foreign direct investment factors in Rwanda. This study focused on Chinese FDI, collaborations of companies and businesses operations within the Rwandan business environment. The main target will be the FDI by these Chinese companies and businesses in a Rwanda. The research will be limited to the Perception of the various stakeholders, Professionals, Investments, Trade and Management specialists working within the Rwandan Ministries across various sectors of the Rwandan economic and business environment.

### Research Hypotheses

To address the research problem and fully achieve the research aim, Research hypothesis were formulated to test the Statistical Significance and Non-Significance with respect to:

- **H<sub>0</sub>**: There *are no* significant factors shaping Chinese Foreign direct investment in Rwandan Economic sectors.
- **H<sub>A</sub>**: There *are* significant factors shaping Chinese Foreign direct investment in Rwandan Economic sectors.

## LITERATURE REVIEW

### Chinese FDI in africa

China's arable land is depleting so rapidly that only approximately 122 million hectares remained as of 2006 (Brautigam 2009). Food shortages and rising food prices have contributed to China's increased dependence on grain imports. Thus, China views the rich soils of Africa and other countries as useful for grain production and organic agriculture for the Chinese market (Alden and Alves 2009). To date, China has established 14 agro-technical demonstration centres in Africa in using public-private models to assist African countries in developing sustainable agriculture (Brautigam and Tang 2009; Xu 2011). China sent 104 senior agricultural technicians to 33 African countries between 2007 and 2009 to work with local groups to increase crop yields and to improve the performance of the agricultural sector (Chinese Academy of International Trade and Economic Cooperation 2010). Certain agricultural biotechnology developed in China has also been introduced to Africa for the propagation of more drought-resistant crops such as rice to cope with increased pressure on local food supply (Rubinstein 2009). However, these efforts may not greatly boost food export from Africa to China. The impossibility to make sizeable profits for investors from food supplied by Africa due to high costs of transportation, a lack of skills in the local population and a lack of technology for large-scale production constitute major constraints to the expansion of this sector (Cotula et al. 2009; Rubinstein 2009).

China-Africa development cooperation displays another dimension. To cope with its domestic environmental problems and shortage of natural resources, China has increased its reliance on outsourcing the needed resources such as biofuels from Africa. Growing cassava, palm oil and sugarcane to produce biofuels in Africa highlights one of the key strategies for bilateral agricultural cooperation (Sun 2011). In 2006, the state farm of China's Shanxi Province announced a huge plan with a budget of \$62 million to establish a 5,000 hectare rice and cassava plantation in Cameroon (Jansson 2009). And China imports 5,000 tonnes of cassava from Nigeria, the world's largest cassava exporter (Sun 2011). As the biggest importer of timber in a global scale, China's interest in logging in Mozambique, for instance, has made Mozambique's Zambezi province a primary export region for China (Naidu and Davies 2006). China's investments in Africa will likely grow exponentially in the coming decade. Alden argues that China-Africa development cooperation is embedded within China's rise and its export of capitalism to Africa with disastrous environmental consequences (Alden 2007). Alden's seemingly exaggerated view provokes the need for policy-makers and investors to think beyond aid and development project cycles how they can contribute to sustainable development in Africa rather than pursuing short-term gains.

While the modalities of Chinese aid and investments in Africa are tremendously conducive to African recipients, China's own development status and experiences gained over, 30 years of continuous rapid growth add another dimension with regard to evidence-based policy-making, institutional reform and government roles in driving changes and implementing innovative programmes. For many, China is a case in point where the market economy coupled with strong state intervention is fundamental to its current success in dealing with economic and social challenges. Thus, China offers important lessons for other developing countries (Reinert 2007; Chang 2008). Due to rapid globalization and the growing interdependence among countries, FDI has been recognized as one of the most significant means of international capital transfers. Over the years, FDI has grown to be an essential component in the economic development of many nations (Benacek et. al., 2000).

FDI in Africa has been increasing steadily since 2002 with approximately \$53 billion worth of FDI in 2007, representing an increase from 2006 of 47.2%. This increase was the highest recorded level of FDI in Africa at the time. With the global recession, the percentage of global FDI into Africa has experienced a significant decline from 3.2% in 2006 to 2.9% in 2007. Since then, however, the African economy has proved resilient, growing to over \$61.9 billion in 2008, and the rate of return on FDI in Africa since 2004 has grown to 12.1%. In addition, mergers and acquisitions in Africa have risen by approximately 157% to \$2 billion in 2008 (Oyeranti, *et al.*, 2010).

Morgan (2003) and Johnson (2005) have highlighted the beneficial impacts that FDI can provide to a host country. These include:

- (1) Generating additional resources such as capital and technology, to help boost the level of domestic outputs and deliver better, more affordable goods and services;
- (2) Outflow of human resources, management practices and technologies from foreign firms to domestic businesses , which enables the host country to improve their operations and competitiveness; and
- (3) Increased involvement of the host country in transnational markets, such as foreign exchange market and international trade.

Due to the economic growth and welfare that FDI brings to the host country, most developing countries prefer this investment because it offers a faster way to achieve a more advanced level of economic development. However, FDI presents a lot of risks for investors. Due to these risks, countries are compelled to offer tangible incentives, as well as to put supportive regulation and systems in place to draw investors. Unfortunately, most developing nations frequently neglect to build an incentive system for foreign financiers (Botric & Skuflic,



2005). China’s FDI in Africa can also be viewed from the trade relationships (import and export) it enjoys with the continent as shown in Figure 3 and 4.

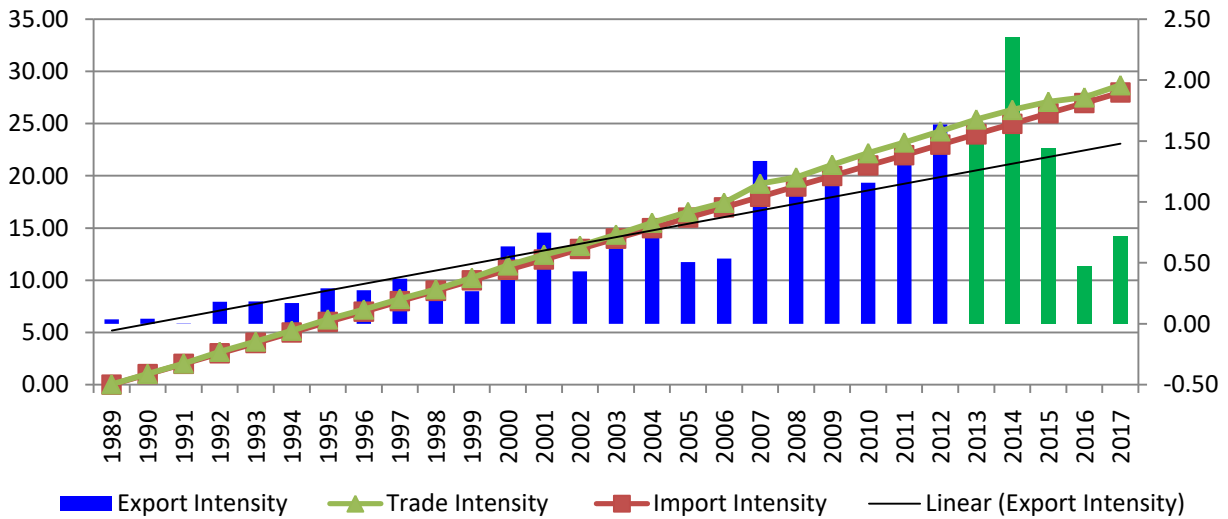


Figure 3: The Export, Import and Trade Intensity of Sub-Saharan Africa to China  
 Source: Compiled by the Author, 2019 from WITS (World Integrated Trade Solution) and World Bank Data

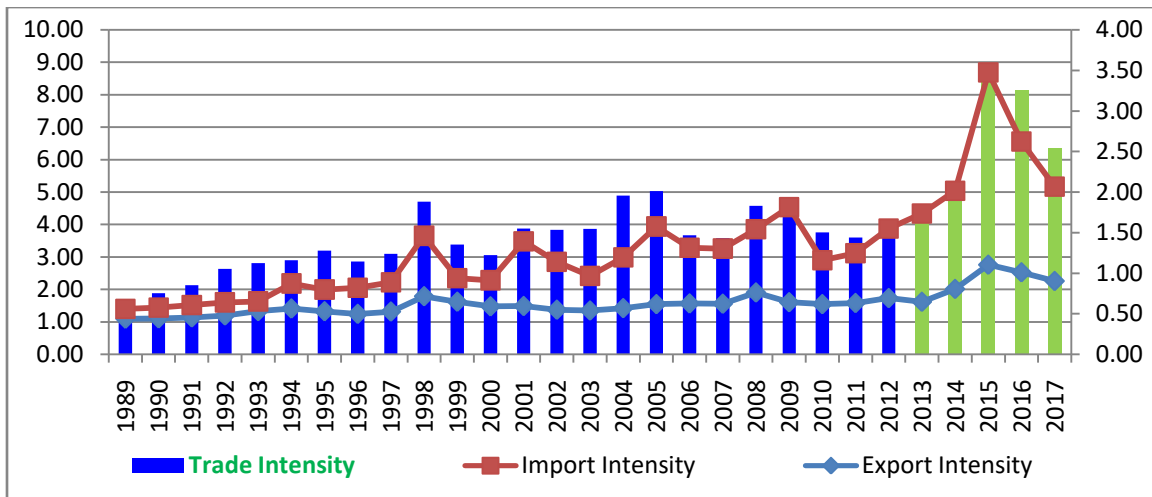


Figure 4: The Export, Import and Trade Intensity of China to Sub-Saharan Africa  
 Source: Compiled by the Author, 2019 from WITS (World Integrated Trade Solution) and World Bank Data

Foreign direct investment (FDI) in the African region has hit a record \$60 billion, five times its 2000 level. For example, Chinese FDI to Africa rose to \$3.5 billion in 2013, and nearly all African countries are benefiting from China’s participation today. In Ethiopia, total FDI inflows in

2013 accounted for 2 percent of GDP. Intra-African investment is also on the rise, creating a virtuous circle that encourages greater foreign investment. Investors in Africa nearly tripled their share of FDI projects over the last decade, from 8 percent in 2003 to 22.8 percent in 2013. Figure 5 below shows the Chinese FDI history in Africa (Diop et al., 2015).

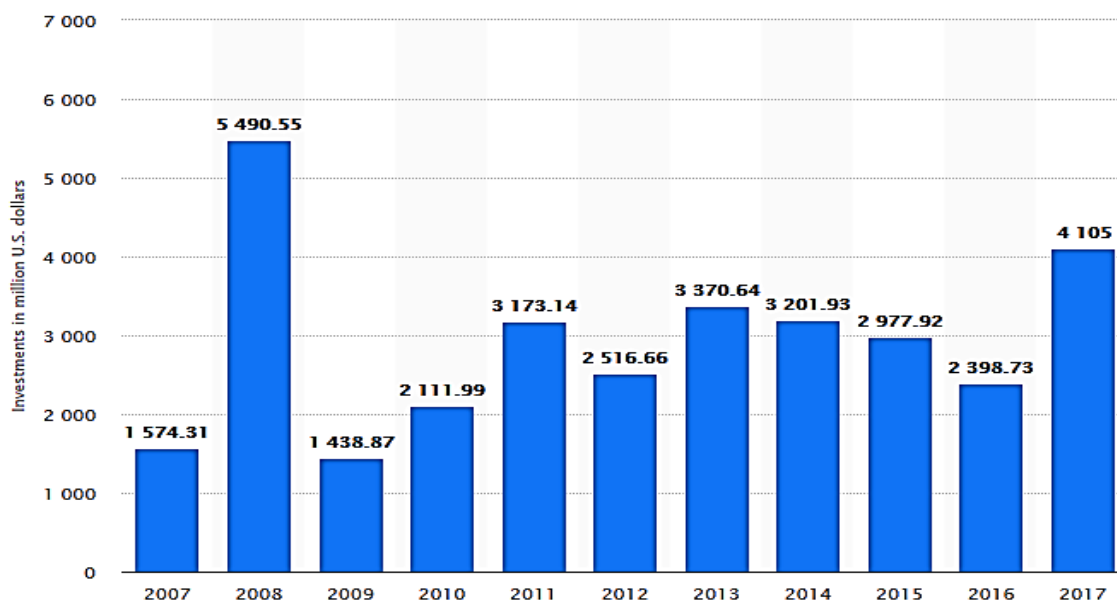


Figure 5: Cash flow of Chinese direct investments in Africa from 2007 to 2017 (in million USD)  
Source: <https://statista.com/statistics/277985/cash-flow-of-chinese-direct-investments-in-africa/>

Despite considerable external challenges, African countries are now seeking to demonstrate that they can weather the end of the commodity super-cycle and achieve more sustainable and inclusive growth by diversifying their economies, boosting productivity and adopting policies that aid the poor. Five African countries were among the top ten improvers globally in the 2015 Doing Business rankings for 2013/14. Overall, Africa accounted for the largest number of regulatory reforms—75 of the 230 worldwide. The continent has become the second most attractive investment destination in the world – ranking just behind North America – as investors are looking beyond the more established markets of South Africa, Nigeria and Kenya. Increased investment and industrialization will help to unlock the potential for job creation and poverty reduction in African countries. The reason for this trend is simple. The world’s eyes are turned toward Africa’s market of one billion people, including a growing middle class. Investors also see significant opportunities to invest in Africa’s non-commodities sectors: financial services, construction and manufacturing now account for 50 percent of Chinese FDI in Africa. Moreover, while to date relocation of manufacturing is relatively limited, the potential is

significant. Today, China, Turkey and India are the top three job creators in Africa's manufacturing sector. In an industrial zone outside Addis Ababa, the Chinese-owned Huajian factory — which opened in 2012 and became profitable in its first year of operation—reportedly plans to expand its workforce to 30,000 as part of a \$2-billion investment, one more indication that “made in Ethiopia” could become the next “made in China.” But can Africa become a global outsourcing hub? Only if the right conditions are in place. With rising production costs in Asia, manufacturers have been looking at countries such as Ethiopia, Kenya and Rwanda (Diop et al., 2015).

### **Rwandan Economic Outlook and FDI inflows: Determinant Factors**

Small and landlocked, Rwanda is hilly and fertile with a densely packed population of about 12.2 million people (2017). It borders the far larger and richer Democratic Republic of Congo, as well as its closest East African neighbors, Tanzania, Uganda, and Burundi. Rwanda now aspires to Middle Income Country (MIC) and High-Income Country (HIC) status by 2035 and 2050, respectively. The Vision is effected through a series of seven-year National Strategies for Transformation (NST1), underpinned by detailed sectoral strategies that are aimed toward achievement of the SDGs. The NST1 came after the implementation of two, five-year Economic Development and Poverty Reduction Strategies—EDPRS (2008-12) and EDPRS-2 (2013-18), under which Rwanda experienced robust economic and social performances. The growth averaged 7.5% over the decade to 2017 while per capita growth domestic product (GDP) grew at 4.7% annually. Public investments have been the main driver of growth in recent years. External financing through grants, concessional and non-concessional borrowing played an important role in financing of public investments. Growth slowdown of 2016 and 2017 highlighted the limits of public sector-led growth model. Going forward, the private sector will play a bigger role in helping to ensure economic growth. Low domestic savings, skills, and the high cost of energy are some of the major constraints to private investment. Stronger dynamism in the private sector will help to sustain high investment rate and accelerate the growth. Promoting domestic savings is viewed as critical. Rwanda's strong economic growth was accompanied by substantial improvements in living standards, with a two-thirds drop in child mortality and near-universal primary school enrollment. A strong focus on homegrown policies and initiatives has contributed to significant improvement in access to services and human development indicators. The poverty rate dropped from 39.1% in 2014 to 38.1% in 2017, while inequality measured by the Gini coefficient stood at 0.42 (World bank – Rwanda). These were fully demonstrated in figure 6 to 7.

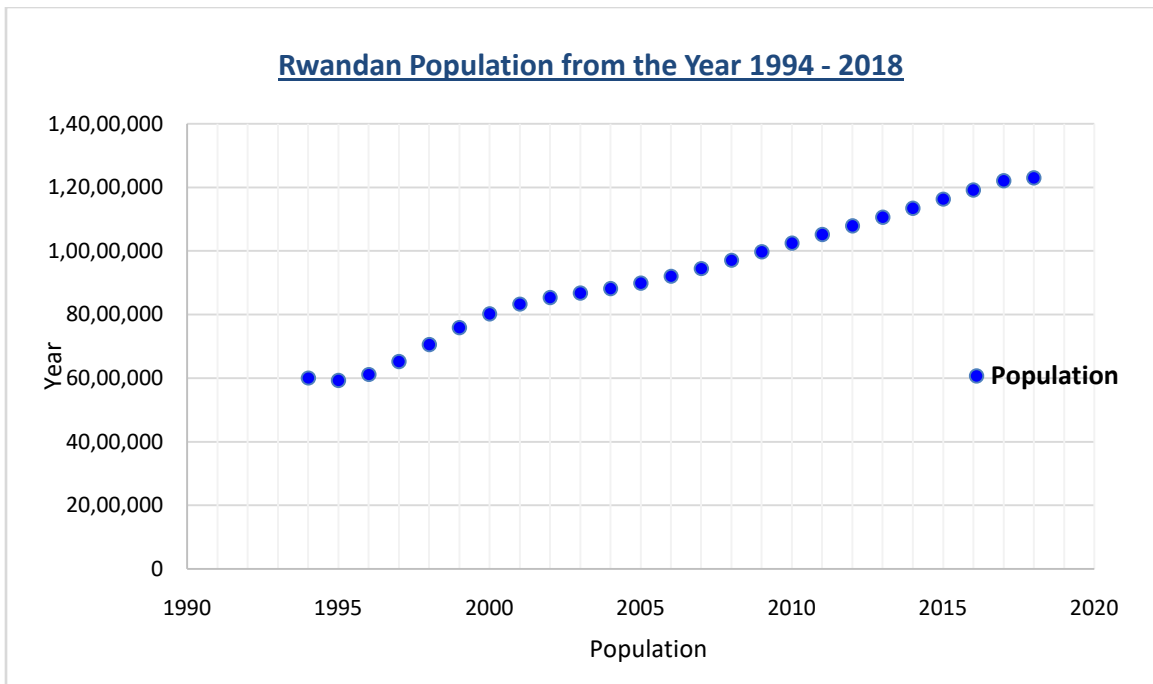


Figure 6: Rwandan Population from 1994 - 2018

Source: Compiled by the Author, 2019 from World Bank Data and worldometer

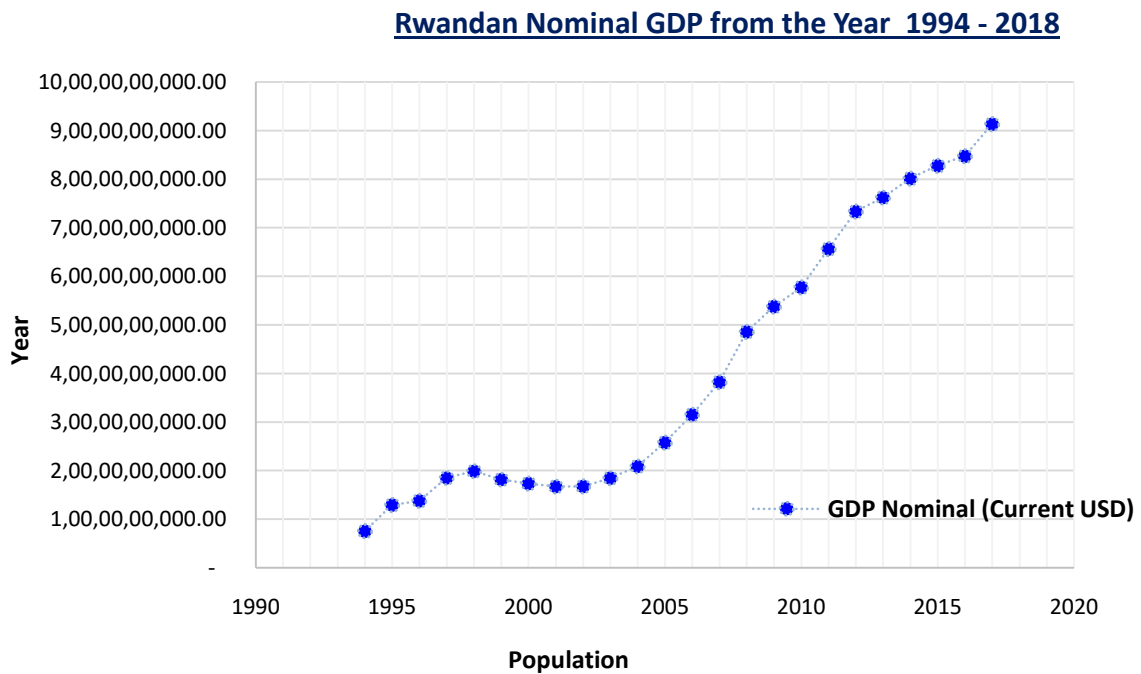


Figure Error! No text of specified style in document.-3: Rwandan Nominal GDP from 1994 - 2018

Source: Compiled by the Author, 2019 from World Bank Data and worldometer

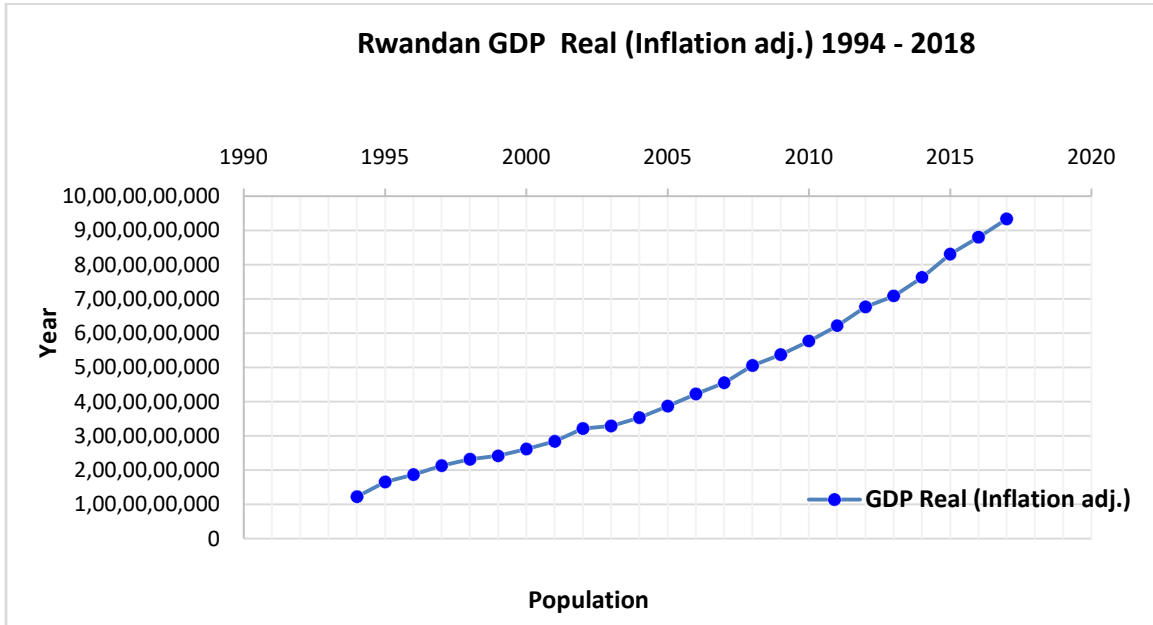


Figure 8: Rwandan GDP Real (Inflation adj.) from 1994 - 2018

Source: Compiled by the Author, 2019 from World Bank Data and worldometer

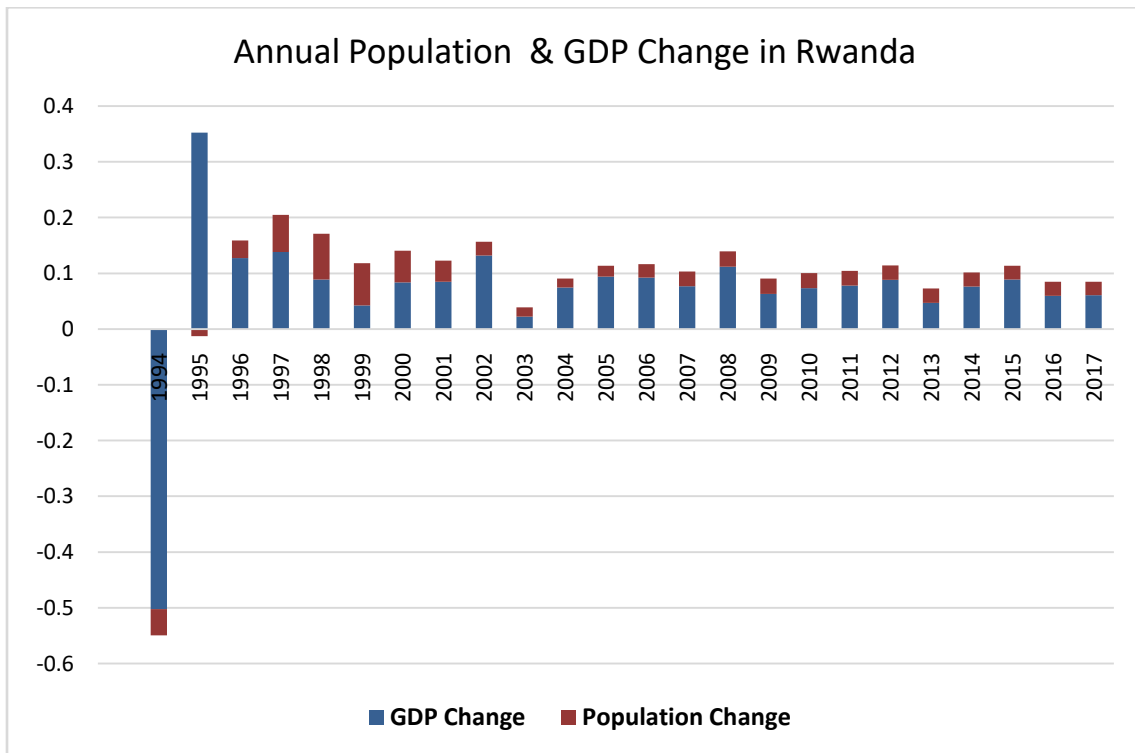


Figure 9: Rwandan Annual Population and GDP Changes from 1994 - 2018

Source: Compiled by the Author, 2019 from World Bank Data and worldometer

Altogether, these led to rapid urbanization and rural-urban migration.

Greater urbanization is explicit in Rwanda's plans for becoming a middle-income country by 2020. The World Bank is supporting the government's urbanization strategy with a \$95 million Rwanda Urban Development Project that aims to provide basic infrastructure and services to six secondary cities around the country—Muhanga (formerly Gitarama), Rubavu (Gisenyi), Nyagatare, Huye (Butare), Rusizi (Cyangugu), and Musanze (Ruhengeri)—and to Kigali City, which makes up the core of the greater Kigali area. The Bank's new Rwanda Economic Update focuses on the rapid pace of urbanization as its special topic, *Rethinking Urbanization in Rwanda: From Demographic Transition to Economic Transformation*. The report finds the urban share of Rwanda's total population (now about 12 million) has increased far faster than official records suggest because the definitions of urban areas need streamlining. A 2012 census and 2014 household survey calculated the urban share of the population at 16.5 and 17.3 percent respectively. However, using another, simple definition of urban, the report's researchers found that the level of urbanization had increased far more—from 15.8 percent to 26.5 percent between 2002 and 2015, an increase of 132 percent or almost 2 million people. In other words, says the report, large scale urbanization has already taken place in Rwanda. Despite rapid urbanization, a dual migration pattern of internal migration is emerging: a move toward density in search of work, with districts of Kigali city attracting many migrants between 2011 and 2014 (29 percent of them). And a parallel move away from density in search of land, with a high share of migrants (33 percent) flocking to Rwanda's less populated Eastern Province. The Rubavu (Gisenyi) area on the border of the Democratic Republic of the Congo (DRC) is the only urban area other than Kigali that has significant appeal for internal migrants, as part of the busy transport corridor that runs from the DRC through Rwanda to the border with Uganda just north of Musanze. Links between urban population density and non-farm job creation are particularly strong in Greater Kigali and the cores of the six secondary cities, the report says. Within 20 km of Kigali, and within 5 km of secondary cities, a 10 percent increase in density is associated with higher non-farm employment (World bank, 2018)

The estimated effect of urban population density on poverty reduction is similarly strong, with a 10 percent increase in density associated with a 6 percent drop in the rate of moderate poverty within a 5km radius of a secondary city in Rwanda. As Rwanda draws up its long-term economic strategy for reaching high-income status (by 2050), how can it increase its urban dividend even more? Effective public policy could provide an enabling environment for investment, says the report, rather than deciding where investments should be located. Towns and cities were managed as part of a separate portfolio; with special support given to Kigali as the lead economy and recognition for the distinctive roles, other cities play in the national

economic geography as well. Increasing economic (and not just population) density is also critical, particularly where opportunities for connecting urban peripheries to surrounding rural areas remain untapped. So far, urban expansion has followed a pattern of low-density settlement (World Bank, 2018). James Musoni, Rwanda's Minister of Infrastructure was credited as saying:

*"We need to work on the factors that attract people to towns to achieve this type of urbanization and transform our cities into settlements. We must be able to identify sites for settlement and source the funds we need to support that."*

While Kigali's rapid expansion could be managed with more urban planning, the report says investment in other cities should focus on improving basic services. "Urbanization not only involves a demographic transition but, more importantly, facilitates socio-economic transformation," says Narae Choi, World Bank Urban Development Specialist. "It is time to rethink the urbanization strategy to leverage its potential for economic growth and the improvement of welfare." (world bank, 2018). These population and GDP changes is shown in the figure 10 below.

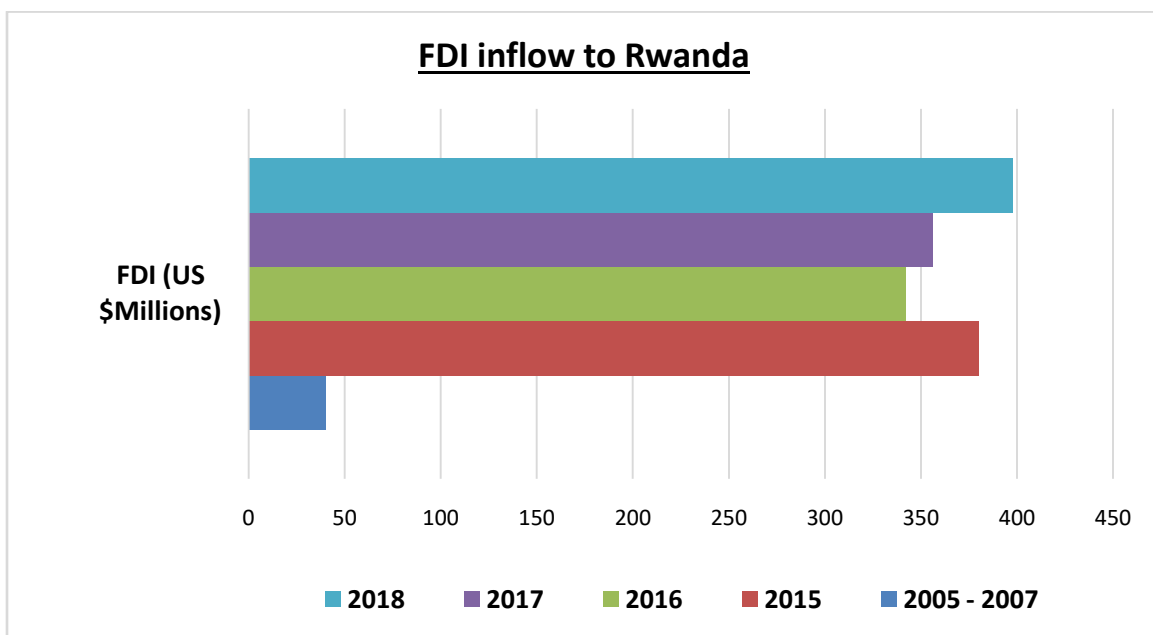


Figure 10: Rwandan Annual Population and GDP Changes from 1994 - 2018

Source: Compiled by the Author, 2019 from World Investment Report 2019

In Rwanda, total FDI inflows in 2013 accounted for 1.5% of GDP. Rwanda's FDI increased more than threefold from a low base in 2008 to \$258 million in 2013, totaling \$2.5 billion over the five years, and more than 50% of FDI projects are operational. Manufacturing accounts for the third

largest share of total FDI, after ICT and finance; and it has expanded five-fold during 2011-2013. Manufacturing FDI is dominated by construction materials and agro-processing subsectors. Given the high concentration in ICT and finance, job creation is relatively low, but net profits and return on investment are highest in manufacturing. Rwanda's strong performance in improving the regulatory business climate is attractive for FDI and contributes to the relatively high rate of project operationalization (Chen et al., n.d).

The development strategy of Rwanda was formulated in the report Rwanda Vision 2020 (Republic of Rwanda, 2002). It is primarily one of economic growth, and includes ambitious plans for the Rwandan economy and for overall development. It aims to increase investment in non-agricultural sectors, especially ICT, tourism and manufacturing. To reach sustainable growth the government aims for the economy to become knowledge- driven and investments are therefore directed to technology and technical education. In addition, it has a strong emphasis on the stimulation of a vibrant private sector. The idea is that the resulting economic growth, although it is perhaps not initially directed at decreasing inequality, will lead to a trickle-down effect that eventually will also improve the situation of the poor; it does not direct particular attention at decreasing socio- economic inequality. At first sight, this strategy has appeared to work: economic growth figures indicate positive prospects for Rwanda. GDP is rising, by around 6 to 8 per cent a year; there are also positive developments in the health and education sectors. Hence, the international community has praised the government for its achievements (Ibid).

Prominent among countries that invest in Rwanda is China. According to Chen et al., n.d; China has direct investment in 50 African countries, and is increasingly diversifying out of primary sectors. Manufacturing is the most important destination, and FDI from China and India come top in terms of job creation. China's FDI to Africa is shifting towards the manufacturing sector. Although a large share of China's investment in African countries has traditionally been in extractive industries and construction, investment in manufacturing has increased in recent years. Manufacturing in African countries has expanded from textiles and apparel to industries such as auto, home appliances, and building materials. Reasons for investment have expanded from avoidance of trade barriers and desire for new market access to include industrial rebalancing and strategic entry. Investment is now by a variety of private- and state- owned enterprises. Investment is also diversifying from traditional Greenfield investment, M&A, wholly owned enterprise, joint ventures or stake investment, to include cluster investments in economic and trade cooperation zones. China, Turkey and India are the top three job creators in manufacturing sector both for permanent and temporary type of jobs from 2008 to 2014, reflecting the importance of manufacturing FDI from new partners.



The Rwandan government's program for training its citizens across diverse industries has played a key role in the planning, implementation, and scaling of Chinese manufacturing in Rwanda. Some companies like C&H were introducing new experiments in technology transfer and training, which is disputed by some studies. As a landlocked country, these geographical constraints, rather than create an export-oriented manufacturing base, the national government has focused on transforming Rwanda into a business and technology hub (Eom, 2018). Louise Mushikiwabo, the Rwandan Minister of Foreign Affairs and Cooperation, describes a development model for local circumstances: "When you are not endowed with oil and all these other natural resources, you can use technology and innovation together to achieve economic goals." (Crisafulli and Redmond, 2012)

Rwandan policymakers consider the country "land-linked," not landlocked, envisioning a central location for the exchange of ideas and flow of economic networks in East Africa; towards this aim, Kigali has hosted World Economic Forum, African Union, and United Nations summits. In fact, Rwanda has been called the "Singapore of the Great Lakes" for its focus on becoming an international technology hub powered by knowledge-based human capital (Campioni and Noack, 2012). To achieve these goals, the Rwandan government has pursued what some describe as economic leapfrogging, seeking to skip over elementary technologies in labor-intensive manufacturing to move directly to advanced technologies in services, tourism, and information and communications technology (ICT) (Brezis et al., 1991; Davison et al., 2001). Mobile money is present where traditional banking infrastructure is absent: Rwandan mobile money penetration is high in Africa, and one study found that of Rwandans with mobile money accounts, 61 percent live in rural areas and 72 percent live on less than US\$2.50 a day (cgap.org). These were facilitated by Rwanda's extensive broadband Internet, among the fastest in Africa (www.agciro.rw). Recently, drones began delivering blood to rural Rwandan hospitals that are difficult to access by road: new technologies circumvent comparatively antiquated methods of delivery by motorcycle or car (bbc.com, 2016). These efforts are encapsulated in Vision 2020, Rwanda's post-genocide, national development program for becoming a middle-income, knowledge-based economy by the year 2020. The plan focuses on cultivating an educated and technically skilled Rwandan workforce to power the country's services, tourism, and ICT industries, crucial to creating a modern business climate underpinned by high-technology goods (www.sida.se)

In many ways, Rwanda has created an environment suitable for foreign investment to create training opportunities. Rwanda is the third least corrupt country in Africa, according to Transparency International (transparency.org). The RDB, a "government agency with a private sector mindset," aims to bring "the entire investor experience under one roof," with a "one stop

center” allowing investors to register businesses and obtain environmental clearances in a single, streamlined process (chinagoabroad.com). These decisions demonstrate Rwandan growing focus on creating a manufacturing base to support its changing economic needs. Chinese investment may initiate the process, but technology transfer will facilitate long-term localization. Previous training programs in Rwanda focused on services, tourism, and ICT, and this new push into manufacturing remains aligned with Vision 2020’s focus on building a productive labor force (Eom, 2018).

Sequel to the above reviewed literature, the table 1 below summarises the factors influencing Chinese FDI into Rwandan economic sectors.

Table 1: Summary of Factors Influencing Chinese FDI in Rwanda

S/N	Factors Influencing Chinese FDI in Rwanda
1	Political and Social Stability
2	Realistic and Sustainable Government Policies
3	Political Will by Rwandan Leadership
4	Economic Potentials and Steady GDP Growth
5	Population Growth and Availability of Cheap Labour
6	Existing Infrastructure (Power, ICT etc).
7	Modernization and Industrialization Potentials
8	Availability of trained Professional, Technical and Skilled work force
9	Positive Pacts and Smooth Bilateral Relationship with Chinese Government and its Investors
10	Ability to Absorb new technology and Its Transfer
11	Orderly and Friendly Business Environment for Investors

## RESEARCH METHODOLOGY

Research approaches varies according to various fields. In Business and Management sciences, it involve the collection of information (Saunders *et al.*, 2016) in a ‘systematic logical manner based on relationships and not just beliefs (Ghauri, and Grønhaug, 2010) while drawing knowledge from other disciplines (Easterby-Smith *et al.*, 2012).In particular, this is vital as practical knowledge through which research on business and managerial practice are correlated (Tranfield and Starkey, 1998). The literature reviewed (Secondary data) led to identification of the factors influencing Chinese FDI into Rwanda. These identified factors formed the backbone of the research questionnaire, administered to the Eighteen Government Ministries of Rwanda. *Mono Quantitative Method* (MQM) research design uses a single data collection technique,

such as a questionnaire, and corresponding quantitative analytical procedure. This is called a mono method quantitative study (Saunders et al., 2016). MQM involve all techniques and ways to design, collect and analyse the data based on a framework of methods and tools (Bergman, 2008; Halcomb and Sharon, 2009; AnderStoep & Johnston, 2009 and Sage Encyclopaedia). MQM often incorporates controls to ensure the validity of data collected in a standard manner (Bryman, 2006). Research method adopted in this study is shown in the figure below.

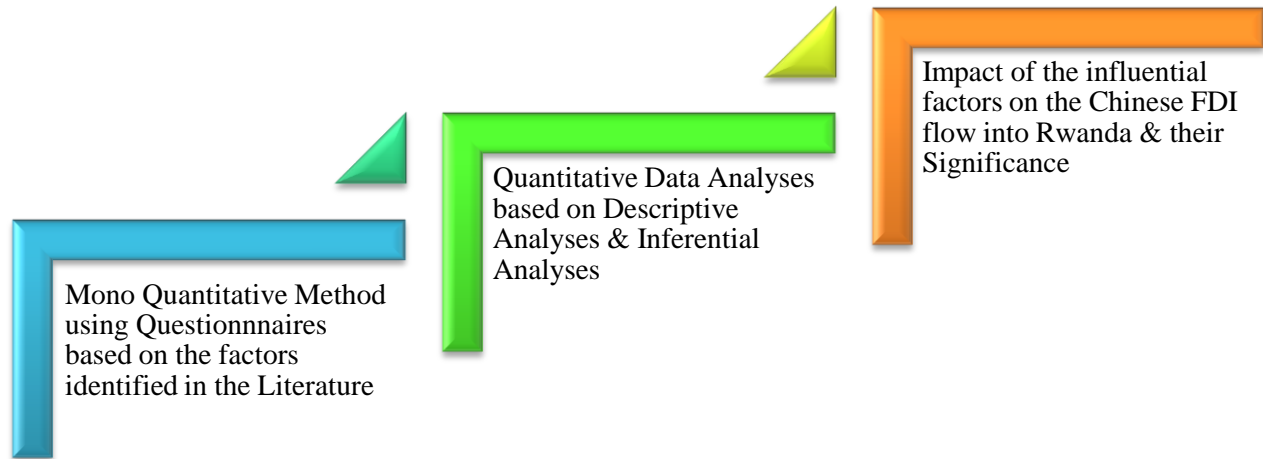


Figure 14: Research Methodological Framework

Ascertaining the target population is very difficult, hence Krejcie and Morgan (1970), table of determining sample size was used. The table fixed 384 as the sample size for a maximum number for a given population of 1, 000, 000. Random and Quota Sampling techniques were used. The Quota sampling allowed for allocating 40 number of questionnaire per ministry while also providing web link for e-questionnaire as an alternate choice of response to the respondents. These gave a chance for equal participation within the ministries as the responses were randomly from each ministry. Hence, random sampling based on quota allocation of questionnaires with web link for e-questionnaire as an alternate choice of response to the respondents.

Both descriptive statistics (Bar chart, pie charts, Frequency and Percentages tables, Pie-chart) and inferential statistics (Cronbach's Alpha for reliability; Mean Item Score (MIS); Relative Importance Index (RII); T-test statistics) were used for statistical analyses of data obtained in this study.

Alpha is used to determine Reliability pertaining to the consistency of scores. The less consistency within a given measurement, the less useful the data may be in analysis (Ritter, 2010; Cronbach's, 1951).

Alpha is calculated using the following formula:

$$\alpha = K / (K - 1) [1 - (\sum \sigma_k^2 / \sigma_{total}^2)],$$

.....**Equation** Error! No text of specified style in document.-1

Likert scaling was used for ranking questions that have an agreement levels. Such scale was structure as follows:

- Extremely High Impact (EHI)= 5 points
- Strong Impact (SI)= 4 points
- Moderate Impact (MI)= 3 points
- Less Impact (LI)= 2 points
- No Impact at all (NIA)= 1 points

The Mean item score is calculated for each factor using:

$$MIS = \sum_{n=i}^n \frac{(AXi+BXj+\dots ZXn)}{N}$$

.....**Equation** Error! No text of specified style in document.-2

For all computed values of MIS, do not exceed the chosen scale. This allows computational remarking of the aforementioned sectors.

The Relative Importance Index (RII) allows for calculating which factor's impact or any other attribute is of more cognizance than others are. It is calculated using the equation below.

$$RII = \sum_{n=i}^{z-N} \frac{(AXi + BXj + Cxk \dots Nxn)}{Z X N}$$

..... **Equation** Error! No text of specified style in document.-3

RII values ranges from 0.1 to 1.00; this allows ranking the factor / impact and other variables. Where Z represent the assigned 4,5,6,7, or 8-point Likert scale as the case may be.

*T-test* statistics one sample is used to test the statistical significance for the research hypotheses and is calculated using the formula below (kirk, 2008):

$$t = \frac{\bar{X} - \mu_0}{\hat{\sigma}/\sqrt{n}} \dots\dots\dots\text{Equation Error! No text of specified style in document.}-4$$

## ANALYSES AND FINDINGS

### Response Rate

Table 2: Responsive and Non-Responsive Questionnaires for both Manual and e-questionnaire

Questionnaires Distributed	Manually (Paper Filled Responses)		Electronically (e-questionnaire responses)	
	Frequency	Percentage	Frequency	Percentage
Returned	154	21.4%		
Non-Returned	566	78.6%	244	33.9%
Total	720	100%		

The table 2 above clearly indicated that, from the total of 720 number of questionnaires distributed manually, only 154 number of questionnaires were responsive; these represents 21.4%. Whereas 244 responses were obtained based on the alternative e- questionnaires provided. These affirm the utilization and usage of internet and ICT in Rwanda.

### Descriptive Statistics

The research data obtained from various respondents was shown in table 3. From the table, it can be observed that a total number of Eleven (11) factors were structure as questions using 5-point Likert scale.

Table 3: Impact of Factors Influencing Chinese FDI in Rwanda

S/N	Factors Influencing Chinese FDI in Rwanda	EHI	SI	MI	LI	NIA	Total
1	Political and Social Stability	242	133	23	0	0	398
2	Realistic and Sustainable Government Policies	216	178	1	0	3	398
3	Political Will by Rwandan Leadership	284	107	4	1	2	398
4	Economic Potentials and Steady GDP Growth	217	178	3	0	0	398
5	Population Growth and Availability of Cheap Labour	154	205	21	6	12	398
6	Existing Infrastructure (Power, ICT etc.).	153	82	71	56	36	398

7	Modernization and Industrialization Potentials	154	42	79	61	62	398
8	Availability of trained Professional, Technical and Skilled work force	141	111	44	70	32	398
9	Positive Pacts and Smooth Bilateral Relationship with Chinese Government and its Investors	259	118	12	2	7	398
10	Ability to Absorb new technology and Its Transfer	138	80	41	77	62	398
11	Orderly and Friendly Business Environment for Investors	201	197	0	0	0	398

### Reliability Consistency Test

The internal reliability and consistency of the data obtained was computed using the Cronbach's Alpha Coefficient for testing the reliability of responses from the tabulated research data. The results are shown in table 4 below.

Table **Error! No text of specified style in document.**: Cronbach's Alpha computation for consistency and reliability

Questions & Their Scale Components	N	N-1	Variance (V)	Total Variance (TV)	TV - V	Cronbach's Alpha	Remark
5-Points	11	10	2405.47	7237.17	4831.70	0.7344	Good
4-Points	11	10	2573.90	7237.17	4663.27	0.7088	Good
3-Points	11	10	719.24	7237.17	6517.93	0.9907	Excellent
2-Points	11	10	995.60	7237.17	6241.57	0.9487	Excellent
1-Points	11	10	542.96	7237.17	6694.21	1.0175	Excellent
<b>Average =</b>						<b>0.88</b>	Very Good

The reliability and consistency test above clearly indicates that the research responses obtained using the Likert Scale computed with an average score of 0.88, which is deemed *Very Good*. Hence, the responses satisfy the reliability test computed using the Cronbach's alpha. These also paved the way for reliable analyses of the factors influencing Chinese FDI into Rwandan Economic Sectors. It also allows for other analyses using MIS, RII and the T-test as detailed in the previous section for methodology.

### Examining the Impact of Factors Influencing Chinese FDI into Rwandan Economy

Overall effect of the factors influencing Chinese FDI into Rwandan Economic Sectors was analyzed. The results were shown in the various tables and figures below.

Table 5: Mean Item Score (MIS) for the factors influencing Chinese FDI into Rwandan Economic Sectors

S/N	Factors Influencing Chinese FDI in Rwanda	Mean Item Score	Remark
1	Political and Social Stability	4.55	Extremely High Impact
2	Realistic and Sustainable Government Policies	4.52	Extremely High Impact
3	Political Will by Rwandan Leadership	4.68	Extremely High Impact
4	Economic Potentials and Steady GDP Growth	4.54	Extremely High Impact
5	Population Growth and Availability of Cheap Labour	4.21	Strong Impact
6	Existing Infrastructure (Power, ICT etc.).	3.65	Strong Impact
7	Modernization and Industrialization Potentials	3.41	Moderate Impact
8	Availability of trained Professional, Technical and Skilled work force	3.65	Strong Impact
9	Positive Pacts and Smooth Bilateral Relationship with Chinese Government and its Investors	4.56	Extremely High Impact
10	Ability to Absorb new technology and Its Transfer	3.39	Moderate Impact
11	Orderly and Friendly Business Environment for Investors	4.51	Strong Impact

Table 5...

The Mean item scores computed for the eleven outlined factors influencing Chinese FDI into Rwandan Economic Sectors paved the way for computing relative indices below for ranking each factor based on impact.

Table 6: Relative Importance Index (RII) for factors influencing Chinese FDI into Rwandan Economic Sectors

S/N	Factors Influencing Chinese FDI in Rwanda	Relative Importance Index	Ranking
1	Political and Social Stability	0.910	3rd
2	Realistic and Sustainable Government Policies	0.904	5th
3	Political Will by Rwandan Leadership	0.937	1st
4	Economic Potentials and Steady GDP Growth	0.908	4th
5	Population Growth and Availability of Cheap Labour	0.843	7th
6	Existing Infrastructure (Power, ICT etc.).	0.731	8th
7	Modernization and Industrialization Potentials	0.683	10th

8	Availability of trained Professional, Technical and Skilled work force	0.730	9th
9	Positive Pacts and Smooth Bilateral Relationship with Chinese Government and its Investors	0.912	2nd
10	Ability to Absorb new technology and Its Transfer	0.678	11th
11	Orderly and Friendly Business Environment for Investors	0.901	6th

The figure 12 below shows how the values of Mean Item Score (MIS) and Relative Importance Index (RII) for each of the factors influencing Chinese FDI into Rwandan Economic Sectors.

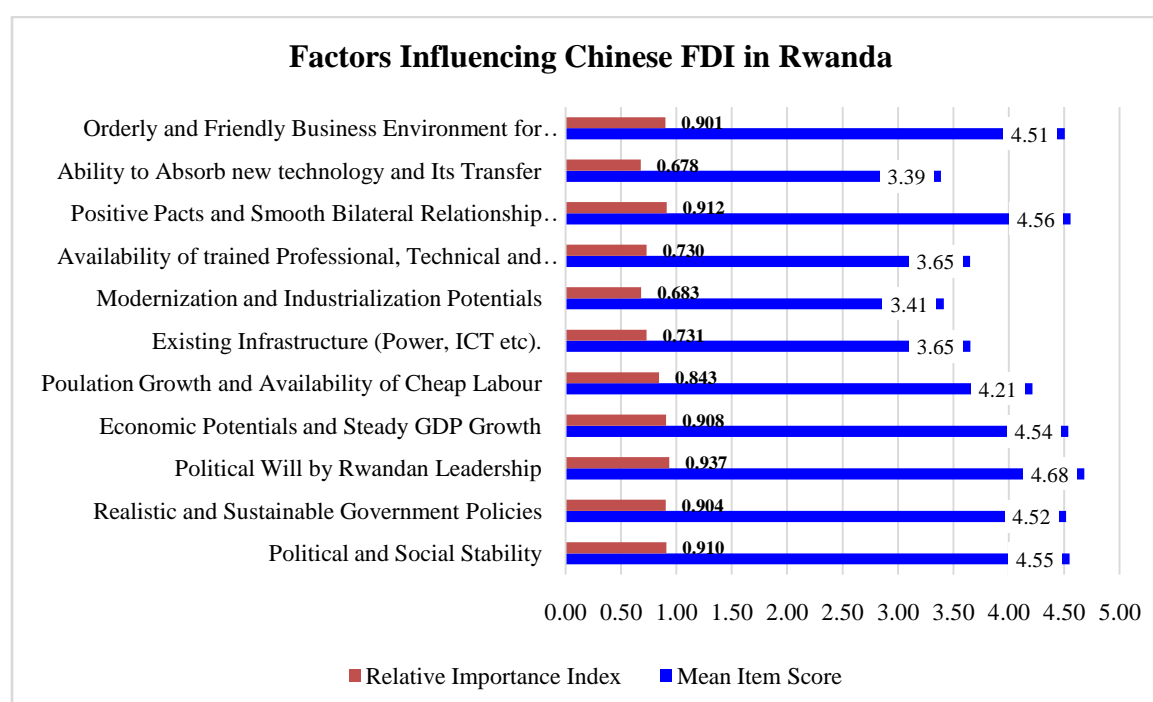


Figure 12: Mean Item Score (MIS) and Relative Importance Index (RII) for factors influencing Chinese FDI into Rwandan Economic Sectors

From the tables and Figures above, it can be deduce that the impact of the factors influencing Chinese FDI into Rwandan Economic Sectors varies accordingly. Five factors have extremely high impact on Chinese FDI flow into Rwanda; four factors have Strong impact on Chinese FDI flow into Rwanda while two factors have moderate impact on Chinese FDI flow into Rwandan economic sectors.

Factors such as: Political and Social Stability, Realistic and Sustainable Government Policies, Political Will by Rwandan Leadership, Economic Potentials and Steady GDP Growth, Positive Pacts and Smooth Bilateral Relationship were deemed as having an extremely high



impact of attracting Chinese FDI flow into various Rwandan economic sectors. Whereas, other factors that have a strong impact on attracting Chinese FDI flow into various Rwandan economic sectors were Population Growth and Availability of Cheap Labour, Existing Infrastructure (Power, ICT etc.), Availability of trained Professional, Technical and Skilled work force, Orderly and Friendly Business Environment for Investors. Lastly, Modernization and Industrialization Potentials, Ability to absorb new technology and Its Transfer were deemed as having moderate impact on attracting Chinese FDI flow into various Rwandan economic sectors.

The top most highly ranked factors were Political Will by Rwandan Leadership (1<sup>st</sup>); Positive Pacts and Smooth Bilateral Relationship with Chinese Government and its Investors (2<sup>nd</sup>); Political and Social Stability (3<sup>rd</sup>); Economic Potentials and Steady GDP Growth (4<sup>th</sup>) and Realistic and Sustainable Government Policies (5<sup>th</sup>). The middle ranked factors were Orderly and Friendly Business Environment for Investors (6<sup>th</sup>); Population Growth and Availability of Cheap Labour (7<sup>th</sup>); Existing Infrastructure like Power, ICT etc. (8<sup>th</sup>); Availability of trained Professional, Technical and Skilled work force (9<sup>th</sup>). Whereas, the least ranked factors were Modernization and Industrialization Potentials (10<sup>th</sup>) and the Ability to absorb new technology and Its Transfer (11<sup>th</sup>).

These ranked factors clearly shows that Rwanda as a country have come far and left behind its historic genocidal civil war that ravaged the country in the early 1990s. The policies of the government have stabilized the political and social fabric of the country and the people through realistic, effective and sustainable policies that can ensure sustainable development. These were only realistic due to the political will and good leadership that ensure Positive Pacts and Smooth Bilateral Relationship with Chinese Government and its Investors to trust and invest in Rwanda. The Chinese investors' willingness were due to some factors that will favour investment. Such business factors have to do with the Economic Potentials like Steady GDP and population Growth of the Rwanda as a nation; which is positive and on the rise annually.

The orderly and friendliness of Rwandan business environment for investors coupled with availability of Cheap, trained Professional, Technical and Skilled work force within the Rwandan human resources is a morale booster for its Chinese investors. These factors were in tandem with the Government quest for Modernization, Industrialization Potentials coupled with the available and existing Infrastructure (like Power, ICT) that paved the way for the population's ability to absorb new technology from investors and its effective utilization.

## Testing the Statistical Significance of the factors influencing Chinese FDI into Rwandan Economic Sectors

The values of the mean item scores for factors structured with the Likert scales were used to calculate the T-test statistics as detailed in the methodology. The result is based on the values for mean item scores in table 5 above; the results are shown in the table 7.

Table 7: Hypothesis testing for the factors influencing Chinese FDI into Rwandan Economic Sectors

11 Factors	Mean	Standard Deviation	Standard Error	N	Df	Alpha (level of Sign.)	Pvalue	Tcal	Ttab0.05, 10	Significance
	4.15	0.51	0.15	11	10	0.05	0.00	26.79	1.81	Yes

With 10 degrees of freedom (DF) and 5% level of significance, the T-test calculated (Tcal = 26.79) which is greater than T-test tabulated (T-tab<sub>0.05, 10</sub> = 1.81); the significance level (alpha = 0.05) is greater than the Probable value (Pvalue = 0.00). As such, the null hypothesis was rejected and the alternative hypothesis was accepted, which states, “*The factors shaping Chinese Foreign direct investment in Rwandan Economic sectors are significant*”. The implication of this significance is that the eleven factors identified, assessed and ranked were influential in shaping Chinese Foreign direct investment into Rwandan Economic sectors. These is so, because for any FDI inflow to thrive, there must be ground preparation, orderly, friendly policies by the host government that will boost the morale of the investors. Rwandan Political, Economic and Social Stability coupled with its Realistic and Sustainable Government Policies and the Political will by its leadership is remarkable and is a positive pointer to attracting investments into the economy.

## CONCLUSIONS

This study identified and examined eleven factors based on assessments and rankings on how they influenced Chinese FDI into Rwandan Economic Sectors. Their impacts varies with five factors deemed as having extremely high impact, four factors deemed having strong impact and the last two factors were deemed as having a moderate influential impact on Chinese FDI into Rwandan Economic Sectors. All these factors are significant as they influence Chinese FDI into Rwandan Economic Sectors. Because, they are related to the efforts by the Rwandan

government policies and its stable economic and business environment as viewed by the Chinese investors presently and potentially eyeing more investment into the Rwandan economy.

It is worthy to note that the foreign direct investment climate in the sub-Saharan Africa especially Rwanda (a land locked country) is perceived with optimism and is significantly more attractive. These were the result of considerable efforts to modernize, industrialize, attract and liberalize investment regulations, offer incentives for FDI while maintaining a stable, conducive, calm socio-political and socio-economic environment through realistic, sustainable growth and development policies. The result has been positive but shaky due to significant concerns over the economic and political stability of the neighboring countries and the African region.

### **IMPLICATIONS OF THE STUDY**

This research work is relevant in many ways. It broadens Understanding the Chinese FDI in Rwanda and its related impacts on Chinese Companies and Businesses, their performances and their success factors/criteria from the various perceptions of its stakeholders such as Professionals, Investments, Trade and Management specialists working with the Chinese companies and businesses within the various sectors of the Rwandan economic and business environment. This study can assist researchers in gaining an in-depth understanding of previous research efforts on this topic (Chinese FDI and Economic Transformations), and in exploring directions for future research while adding to the Scientific knowledge tank of the world through the literature by filling literature gaps where necessary. It will improve understanding of impacts of FDI and perception of Chinese Companies and Businesses in Rwandan business environment, Africa, as a whole.

### **LIMITATIONS OF THE STUDY**

The limitations of the study are as below:

- The results were from the data collect based on general responses on Chinese FDI from the Rwandan Government ministries mostly from mid-level managers to the top management. As such, involving the affected stakeholders from the private sectors will broaden the result, which was considered outside the scope of this study.
- FDI varies according to different sectors and different business environments. For example, manufacturing sector, Banking Sector, Information and Telecommunication sector, Oil and Gas Sector, Health Sector among others. The results were from the data collect based on general responses on Chinese FDI from the Rwandan Government

ministries mostly from mid-level managers to the top management. Each and every peculiar sector was not considered

- During the research questionnaire and interview pre-test period, some Rwandan government officials were reluctant to provide useful information to this research work through interviews. This limits the data to quantitative analyses.

## SCOPE FOR FURTHER STUDIES

The suggestions for further research begin from the limitations highlighted in the study enabling considerations and future evaluation. To advance the present research field on the Chinese FDI in Rwanda there will be need for further studies in various aggregates such as sector-by-sector microanalyses within the host countries; in this case, Rwandan context. These will shed more light on the Impact and effectiveness of the FDI on economic developments and collaborations based on the perception, similarities and differences in priorities between governments and private investors. Finally, future studies may consider other relevant models and approaches, which this research would not be able to incorporate them due to scope constraints.

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## APPENDIX

**Table: Cronbach's Alpha Scores Reference**

<b>Cronbach's alpha</b>		<b>Internal consistency</b>
$0.9 \leq \alpha$	indicates	Excellent
$0.8 \leq \alpha < 0.9$	indicates	Very Good
$0.7 \leq \alpha < 0.8$	indicates	Good
$0.6 \leq \alpha < 0.7$	indicates	Acceptable
$0.5 \leq \alpha < 0.6$	indicates	Poor & Questionable
$\alpha < 0.5$	indicates	Unacceptable

Source: Cronbach (1951)

### List of Government Ministries in Rwanda

The Government of Rwanda has 18 ministries, with Minister in President's Office and Minister in Prime Minister's Office in charge of Cabinet Affairs (<http://www.gov.rw/home/>)

The Ministry of Local Government (MINALOC) [www.minaloc.gov.rw](http://www.minaloc.gov.rw)

The Ministry of Infrastructure (MININFRA) [www.mininfra.gov.rw](http://www.mininfra.gov.rw)

The Ministry of Trade and Industry [www.minicom.gov.rw](http://www.minicom.gov.rw)

The Ministry of Agriculture and Animal Resources (MINAGRI) [www.minagri.gov.rw](http://www.minagri.gov.rw)

The Ministry of Finance and Economic Planning (MINECOFIN) [www.minecofin.gov.rw](http://www.minecofin.gov.rw)

The Ministry of Education (MINEDUC) [www.mineduc.gov.rw](http://www.mineduc.gov.rw)

The Ministry of Health (MINISANTE) [www.moh.gov.rw](http://www.moh.gov.rw)

The Ministry of Defence (MINADEF) [www.mod.gov.rw](http://www.mod.gov.rw)

The Ministry of Justice (MINIJUST) [www.minijust.gov.rw](http://www.minijust.gov.rw)

The Ministry of Youth (MINIYOUTH) [www.miniyouth.gov.rw](http://www.miniyouth.gov.rw)

The Ministry of ICT and Innovation [www.mitec.gov.rw](http://www.mitec.gov.rw)

The Ministry of Sport and Cultural (MINISPOC) [www.minispoc.gov.rw](http://www.minispoc.gov.rw)

The Ministry of Public Service and Labour (MIFOTRA) [www.mifotra.gov.rw](http://www.mifotra.gov.rw)

The Ministry of Foreign Affairs and International Cooperation. [www.minaffet.gov.rw](http://www.minaffet.gov.rw)

The Ministry of Environment (MoE) [www.minirena.gov.rw](http://www.minirena.gov.rw)

The Ministry in charge of Emergency Management [www.midimar.gov.rw](http://www.midimar.gov.rw)

The Ministry of Gender and Family Promotion (MIGEPROF) [www.migeprof.gov.rw](http://www.migeprof.gov.rw)