



**Role of Development Finance Institutions to Zimbabwe's economic growth:  
Case of Transport and Power infrastructure development.**

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## DEDICATION

First and foremost, I dedicate this research to God Almighty for allowing me an opportunity to engage in the program and giving me strength to carry it out. I also dedicate it to my mentor and advisor Dr Beulah Machiri, thank you for the guidance Ma.

## ACKNOWLEDGEMENTS

Many thanks to my supervisor, Dr Chidakwa A., for providing guidance and feedback throughout this project. Thanks also to my mother, for the encouragement. Special mention and gratitude to Dr B. Machiri for her continued support, guidance and prayers.

## DECLARATION

I, Runyararo Memory Kaparamula declare that this dissertation is my original work except where sources have been acknowledged and has never been submitted to any other institution for academic purposes. The work has been submitted and will never be submitted to any other University in the awarding of a degree.

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## ABSTRACT

The importance of Transport and Power infrastructure to a Country's development cannot be overemphasised. Zimbabwe is facing stagnating economic growth, if not economic decline, it is therefore not surprising that over the years, Zimbabwe's Transport and Power infrastructure has been deteriorating over the years largely as a result of a lack of financing from the public resources. Like many countries the world over, Zimbabwe has also made use of Development Finance Institutions to be able to finance its infrastructural development. This is notwithstanding the fact that many DFIs have decided to stop providing financing to Zimbabwe due to non-payment of debts. This study therefore endeavoured to evaluate the role played by Development Finance Institutions in the economic growth of the country, with a specific focus on the investments in the Power and Transport Infrastructure.

The study sought to understand the investments that have gone into the country's power and transport infrastructure since the year 2000 and the funding models which were used to finance these investments during this period as well as the sustainability of these ways of financing. The study was carried out using a descriptive survey research design and employed interviews, questionnaire and documentary research as its chief information sources.

The study found out that there has not been significant investment in both transport and power infrastructure over the years. The study also found out that apart from rehabilitation of two power stations, the power stations built in the 1950s are the ones which are still there. The study also revealed that there has been some investment in road transport infrastructure however this has not been at a fast-enough pace meaning more than two thirds of the country's roads are in a state of disrepair. The study found out that financing for infrastructure in the period under review was mainly from loans from DFI's, with other internal sources also complementing albeit at a smaller scale. The Study established that the identified funding model is actually the least sustainable.

The study recommends focused and increased use of Public Private Partnerships (PPPs) to finance infrastructure development. It also recommended plugging of leakages from the fiscus as well as tackling corruption and increasing resource management system.

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## LIST OF ABBREVIATIONS

ACBF	African Capacity Building Foundation
AfDB	African Development Bank
DFI	Development Finance Institution
ESAP	Economic Structural Adjustment Programme
IDBZ	Infrastructure Development Bank of Zimbabwe
IMF	International Monetary Fund
OECD	Organisation for Economic Co-operation and Development
PPP	Public Private Partnership
ZIMCODD	Zimbabwe Coalition on Debt and Development
ZIMRA	Zimbabwe Revenue Authority
ZPC	Zimbabwe Power Company

## CHAPTER ONE

### INTRODUCTION AND BACKGROUND TO THE STUDY

#### 1.1 INTRODUCTION

The general idea that development finance institutions (DFIs) are central to the development and economic growth of countries is not new. However, it is more in the change of approach in development finance institutions that has driven scholars and researchers to get an understanding of the contributions of DFIs to economic growth. This is so particularly in the Global South. There has been shift in development finance, from a period where emphasis was on market liberalisation to infrastructure development and private sector investment and not government alone (Tyson & McKinley, 2014). Aid from developing countries is waning and so is Official Development Assistance (ODA). According to Runde and Milner (2019), financing provided by developed countries to developed countries will not close the US\$2.5 Trillion necessary to achieve the Sustainable Development Goals. This scenario therefore paves way for the participation of the private sector in economic development, and this is where DFI's can play and have been playing a pivotal role in channelling private sector funds towards investment in Infrastructure. This viewpoint is in sync with that one of Munell (2011), who argued that the inclusion of private sector players through equity financing and investment promotion is now more pronounced in propelling sustainable economic development.

The contributions of Infrastructure to economic growth are in various ways and hence investing in infrastructure cannot be overemphasized. According to Sahoo and Dash (2012), Brooks & Go (2014) infrastructure investment has a fiscal stimulus effect; that is, it leads to raising general productivity in the economy. This is because it facilitates the development of other sectors of the economy such as manufacturing and agriculture which are dependent on the infrastructure. This effect has higher impact in developing countries more than developed ones (Yilmaz & Cetin, 2018). A lack of investment in infrastructure, particularly Power and transport infrastructure having severe consequence on economic growth (Chavula, 2013). In a study of Uganda, Reinnika and Svenson (2002), reported that a lack of investment in electricity was a major deterrent in private sector investment in the country hence the poor economic growth.

This study seeks to establish the role of Development Financials Institutions (DFIs) in Zimbabwe with a particular focus on promoting economic growth. Infrastructure is broad encompassing a range of items, for the purposes of this study, the researcher will focus on transport and power infrastructure. Several scholars such as Chogugudza-Sithole (2012); Straub et al, (2008); Calderon and Serven (2008) have already established the nexus between infrastructure development and economic growth. Chogugudza-Sithole has particularly focused on Zimbabwe, while the others have drawn examples from Asia.

This chapter presents the Background to the problem, statement of the problem, research objectives and research questions. It also presents the limitations and delimitations, as well as the justification of the study.

## 1.2 BACKGROUND TO THE PROBLEM

Zimbabwe's economic growth story has been a rollercoaster, with a decline in the early 2000s which came to a head in 2008 when Inflation peaked to 89.7 sextillion per cent as of November 2008 (Hanke, 2017). After having experienced significant growth of over 10 per cent in the period 2010-2013 (World Bank, 2018), the country is witnessing economic decline with the World Banking (2019), estimating a contraction of the Gross Domestic Product by 7.5 per cent. The economic decline has been worsened by drought and political instability on the back of dilapidated social and economic infrastructure. While the list of social and economic infrastructure is extensive, this study is only concerned with Power and Transport infrastructure.

The power infrastructure in Zimbabwe is basically limited to electricity though other sources do exist however they are not exploited well. An efficient and viable electricity sector will ensure economic growth and development, considering the pivotal role played by power in all the other sectors of the economy. (African Development Bank, 2019). The production and distribution of electricity is managed by the government through the Zimbabwe Power Company (ZPC). Zimbabwe currently produces a total of 522 Megawatts (Zpc.co.zw, 2020) and imports 50 Megawatts from Eskom of South Africa and 100 Megawatts from Hidroelectrica de Cahora

Bassa (HCB) of Mozambique daily (Bhoroma, 2019). This against a daily demand of 1500 Megawatts.

Out of the 5 power stations Zimbabwe has, only three are functioning. Years of poor maintenance and corruption however mean that out of an installed capacity of 2000 Megawatts, the country is producing only at 26, 1 percent capacity. According to the AfDB (2019), Zimbabwe's power woes are as a result of aged infrastructure which dates back to the 1950s. Speaking to The Standard newspaper (2019), Bernard Chizengeya, ZPC Business Development lamented on the lack of maintenance on the thermal power plants such as Harare, Munyati and Bulawayo as well as their having gone for more than 25 years their life expectancy without recapitalization. The erratic rainfall has also resulted in poor electric generation given the country's over reliance on hydro generated electricity. Zimbabwe has the capacity to import about 450 Megawatts from South Africa and Mozambique however due to payment arrears running to USD 80 million it has been limited to the current 150 Megawatts.

Over the years Zimbabwe has invested significantly in energy programmes, for instance in 2011, approximately USD 40 million was disbursed to rehabilitate the Hwange, Kariba South and small thermal power stations but due to a plethora of challenges, these programmes have resulted in unsustainable marginal gains in power generation (African Development Bank, 2019). The Zimbabwe Infrastructure report 2019, also states that The 2018 Budget earmarked USD 36.5 million from the Rural Electrification Fund (REF) to target 706 rural institutions, installation of 50 stand-alone solar micro grid solar systems at public institutions, and 16 biogas digesters (African Development Bank, 2019). Corruption has also seen investments into power projects such as the Dema Diesel power plant and the Gwanda solar project achieve very little to nothing to the national grid while benefitting cronies of the elite such as Wicknell Chivhayo and Kuda Tagwirei of Sakunda Holdings.

Transport Infrastructure can be divided into four sub-sections, which are Road, rail, aviation and inland water. The inland water subsection is very small and negligible. The transport sector is administered by the Ministry of Transport and Infrastructural Development and supported by various departments, councils and parastatals including Zimbabwe National Road

Administrations (ZINARA), National Railways of Zimbabwe (NRZ) and the Civil Aviation Authority of Zimbabwe (CAAZ) (African Development Bank, 2011). The aviation industry provides international and local air transportation links, with Harare International airport as the main hub. The other important airports are Joshua Nkomo International Airport in Bulawayo, Victoria Falls, and Buffalo Range. Furthermore, more than 200 airports and aerodromes of diverse standards and capacity are strewn throughout the country. The airports' importance is mainly in the tourism industry where it provides access to several tourist destinations (African Development Bank, 2019)

Zimbabwe's road network was once considered among the best in Africa and it was a significant contributor to the growth of the Zimbabwe economy. The railway network connects Zimbabwe with all its four neighbors and beyond. It is a major factor in trade and economic growth within the region. Within Zimbabwe, it connects all major mining areas, heavy industrial centers as well as the major agricultural collection centers and provides much of the transport of mineral exports to seaports in South Africa (African Development Bank, 2011). The railway system in Zimbabwe is made up of 2,760 km of narrow-gauge main track lines, of which 313 km are electrified, about 2,500 km of branch lines and sidings. The rail track is in poor condition and about 90% is under speed restriction while the road network is 88,300 kilometres; of these only 15000 kilometres are paved. In 1995, 73% of the roads were considered good, but this figure has since been drastically reduced with 12800 kilometres being reclassified as in poor condition and in urgent need of rehabilitation. According to the World Economic Forum (2019), the quality of Zimbabwe road and rail infrastructure is ranked at 116 and 86 respectively, which is a deterioration from 101 and 83 respectively from the previous year.

Like the Power industry, the transport infrastructure has also been bedevilled by poor maintenance and corruption as well as financial mismanagement. In an audit report in 2019, Auditor General Mildred Chiri revealed that USD 52 156 505 given to Air Zimbabwe, USD 2 600 000 to Civil Aviation Authority and USD 12 963 861 disbursed to the Central Mechanical Engineering Department (CMED) vanished without a trace (Kunambura, 2018). The rail infrastructure has not received any expansion since it was constructed in the early 1900s and in 2018, the National Railways of Zimbabwe received train wagons from South Africa under a

shady USD 400 million deal with the Diaspora Investment Group (Sibanda, 2018) . The train wagons were incompatible with the Zimbabwe rail tracks and hence as good as useless. In 2019 Zimbabwe raided USD 10 million from an escrow account established by the China Eximbank for the expansion of Robert Mugabe International Airport leading to the cancellation of the USD 1.3 billion loan by the Chinese (Gagare and Kairiza, 2019).

Zimbabwe is well aware of the contribution of infrastructure to the country's economic growth and development. The deplorable state of most of the country's infrastructure, especially transport and power where indicators such as rising death toll due to accidents are awash in the press. The 14-hour load shedding and sometimes more witnessed throughout the country also speaks to this deplorable state. In the 2020 Budget, the finance minister set the budget for the construction, and maintenance of infrastructure at \$24,7 billion to be mobilised from both local and foreign sources (Machivenyika, 2019) .

Development Finance Institutions are critical in making investments into infrastructure that then according to Hirschman (1958), leads to the growth of the overall economy. The main aim of DFIs is investment in sustainable projects (Francisco, 2018), enhancing the impact on development (Ahmed & Fang, 2012) and the mobilisation of private sector capital (Akerlof, 2017). Colverson and Perera (2012) state that even though investing financial resources is the core business of DFIs, they also provide technical assistance that is tailored to specific projects so as to enhance the capacity of the entities they provide finance to. The role of DFIs should also include any legal activity associated with investment promotion, development funding and resource mobilisation (Jenkins, 2007). Further, DFIs aim to address market imperfections, and provide investment for financial intermediaries and enterprises (Jenkins & Fries, 2012).

Kiram (2016) notes that from 1980s up to 1995, development institutions have been particularly concerned with helping developing countries achieve their growth objectives through structural adjustment programmes. However, the project did not yield any success in Africa, with a lot of unemployment, increased inequalities and company closures being recorded in countries like Zimbabwe, Swaziland, Namibia, among others. Despite the limitations and failures of such programmes, DFIs still play a role in the development of countries.

According to Willem (2011), DFIs have become more important over the past decade. They can provide finance (e.g. loans, guarantees, equity) for the public and private sectors. Private sector support by DFIs globally in terms of annual commitments has grown rapidly, from US\$15.4 billion in 2003, to US\$21.4 billion in 2005, US\$33 billion in 2010 and according to Francisco (2018), US\$50 billion in 2016. This represents more than a doubling in annual commitments over the past six years. DFI support is now equivalent to a quarter of Official Development Assistance (ODA), although it is mostly not counted as ODA. There are 26 developing countries where investment by three DFIs (International Finance Corporation (IFC), European Investment Bank (EIB) and the CDC) together have averaged between 2% and 12% of total domestic investment for the period for which data are available – this is quite considerable. Therefore, examining the contribution of DFIs in terms of economic growth as a result of infrastructural development is appealing (Francisco, 2018)

In recognizing the critical role of DFIs' to economic growth and a need to direct DFIs to specific sectors, South African Deputy Finance Minister Nhlanhla Nene, explained that “As government, we are continuously confronted with the question of how best to position our DFIs in order to enhance their capacities to effectively and efficiently deliver significant and tangible developmental results to all the qualifying needy individuals and institutions of South Africa. This means that the contributions of DFIs must be measured not by meaningless statistical numbers, but by their direct impact on the lives of the ordinary people of South Africa observable through sustained improvements in incomes and standards of living as a result of access to DFI funding, projects, facilities, and infrastructure base.” (Nene, 2011)

In Zimbabwe, DFIs which have been particularly active in the financing of Infrastructure include but are not limited to The World Bank, The International Monetary Fund (IMF), African Development Bank (AfDB), Infrastructure Development Bank of Zimbabwe, China Eximbank, Department for International Development (DFID), United States Agency for International Development (USAID).



### 1.3 STATEMENT OF THE PROBLEM

The state of Zimbabwe's transport and power infrastructure has been deteriorating over the years largely due to underfunding from the public resources. The country cannot access financial support from international DFIs due to non-payment of debts. Also, the reported unscrupulous handling of development finance for example the raiding of 10 million from an escrow account setup by China for the refurbishment of Robert Mugabe International Airport (Global Construction Review, 2019). The world over, Development Financial Institutions play in infrastructure development, with specific emphasis on the investments in transport and power infrastructure which are key economic drivers of any economy, with Zimbabwe not being an exception. However, given the constriction of Zimbabwe's finances and the growing need for investment in the transport infrastructure as well as the power infrastructure in Zimbabwe there is need for clearly understanding the role DFIs have historically played in the financing of these two critical components, the role they are currently playing as well as the role they can play in this financing.

### 1.4 RESEARCH OBJECTIVES

This research was be guided by the following objectives:

- i. To investigate the extent of investment in transport and power infrastructure in Zimbabwe since 2000
- ii. To establish how the transport and power infrastructural projects investments were being financed
- iii. To assess the sustainability of current funding models
- iv. To proffer recommendations on financing Zimbabwe's transport and power infrastructure projects.

### 1.5 RESEARCH QUESTIONS

The following are the main research questions guiding the research:

- i. What is the extent of investment in transport and power infrastructure in Zimbabwe since the 2000s?
- ii. how were the transport and power infrastructural projects investments were being financed?
- iii. How sustainable are the current funding models?
- iv. What are the recommendations for financing Zimbabwe's transport and power infrastructural development?

## 1.6 JUSTIFICATION OF THE STUDY

Alemayehu (2009), posits that policy makers and developmentalists are becoming more interested in issues that deal with job creation, income generation and the distribution of wealth. Such lines of thought have led to the gaining in prominence of locally generated funds in the development process. In addition, in the African Union (AU) Agenda 2063 (2015), is underpinned by development financing from domestic sources instead of reliance on international aid and debt. It is against this background that the study becomes important given that Zimbabwe's reliance of ODA and external debt is limited. There is, therefore, need to fully understand how domestic resource mobilisation efforts can be further harnessed in Zimbabwe.

Todaro and Smith (2016) state that a shift from aid to investment promotion in most developing countries, including Zimbabwe, has necessitated the need to conduct empirical reviews on how DFIs contribute to the growth of countries. Furthermore, it should also be noted that developing countries are not a homogenous group, due to the differences in policy and approach to investment thus, a cases by cases study of how DFIS help countries is essential in establishing the magnitude of how these institutions contribute to growth of a country, taking into consideration the policies crafted by governments to promote and protect investments.

Munnell (2011) observed that while there has been a number of projects being funded by DFIs, such funding has not translated to economic development, and given the reliance of policy makers on theoretical studies, without paying attention to the practical issues, this research then becomes a source of reference in understanding the role of DFIs in stirring growth of Zimbabwe.

The findings of the study will contribute in understanding how DFIs can be utilised to fund the country's projects, as well as in private sector investment.

Empirical research on DFIs in Zimbabwe is relatively thin, due in part to the difficulty in obtaining data for development projects and the tendency of researchers to generalise findings from other case countries to the Zimbabwean situation, which in its own right is unique owing to the economic fundamentals affecting the country. Thus, information irregularity is particularly prevalent in assessing the role of DFIs in the growth of the country. As such this study will also help investment actors in understanding the macro and micro economic conditions affecting the country, which may help their investment strategies.

#### 1.7 SCOPE AND LIMITATIONS OF THE STUDY

This research **will** be restricted to the role of Development Finance Institutions in the development of Power and Transport Infrastructure in Zimbabwe. The researcher **will** therefore not examine the contributions of DFIs to development of other types of infrastructure even though their role in economic development is substantial. The research will also focus on Zimbabwe, while other countries may be used for comparison and other purposes, the study shall be focused on Zimbabwe hence any generalisations should be confined to Zimbabwe. The study will cover information pertaining to the research question from the period January 2015 to June 2019.

Given how contested and political the role and movement of development finance Institutions and funds is in Zimbabwe, the researcher is present to the fact that there may be challenges accessing information from that sector. The researcher is also cognisant of the time constraints that may affect both the researcher and the potential respondents and interviewees; the researcher will endeavour to circumvent these challenges through a variety of strategies but is present to their existence.

## 1.8 ORGANISATION OF THE STUDY

Chapter one begins the study by giving an introduction which places in context the basis on which the study has been undertaken. Contained in the chapter is a statement of the problem, the research objectives and questions, as well as delimitations and limitations of the study. The chapter also contains the justification of the study as well as the organization of the entire study.

Chapter Two of the study examines the literature or body of knowledge already in existence so that a rational association can be established between the identified variables as well as establish the gaps in the body of knowledge. The chapter also discusses the conceptual framework of the study to show the relationship between the variables both dependent and independent. The Chapter also presents a theoretical background of the study.

Chapter Three presents the methodology which includes the research design, data collection instruments, sampling techniques and the data analysis methods that will be employed to analyse and make sense of the information collected from the field.

Chapter Four is focused on the analysis of the data collected from the field. After analysis the data is then presented in tables where applicable as well as in prose. The Chapter will also have a write up to explain the data presented in tabular form.

Chapter Five is the final chapter of the study. It ends with conclusions and recommendations of the study.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 INTRODUCTION

This chapter reviews relevant theoretical and empirical literature on the role of Development Finance Institutions (DFIs) in economic growth, particularly infrastructure development. The review gives the basic foundation on what has already been done and known in the area of study (Boote & Beile 2005; Neuman, 2014). By deduction, the review also helps in identifying unresolved issues and research gaps that would inform new studies. This chapter is arranged as follows: Section 2.2 covers the conceptual framework. A theoretical framework highlighting the important theoretical thinking guiding the study is reviewed in Section 2.3. Section 2.4 reviews the infrastructure funding mechanisms. The chapter ends with a conclusion in Section 2.5.

#### 2.2 CONCEPTUAL FRAMEWORK

This section will review the major concepts in the study which include, Development Finance Institutions (DFIs), Infrastructure and Economic growth. The concepts are discussed in turn beginning with DFIs then Infrastructure and lastly Economic growth.

##### 2.2.1 Development Finance Institutions (DFIs)

DFIs are government-controlled institutions that invest in private sector projects in developing countries. They are engaged in supporting the private sector and in mobilising additional private finance. Most DFIs are funded by donors governments' development agencies, and can raise additional funds through private banks and capital markets (Romero, 2014). Dalberg (2010), also added that DFIs are also multilateral, regional or bilateral financial organisations whose mandate is assisting developing countries with loans, guarantees and equity, in both public and private spheres of the economy so as to foster development while also making sure of their continued financial stability in the long run. The World Bank Group (2015), expands the definition of DFI's to include non-governmental microfinance organisations that match grants in a bid to promote community development, decentralisation and empowerment of local communities.

According to Ghosh (2003), DFIs' operations involve balancing between operating as a commercial entity, like any financial institution and working as an aid to development through

providing concessionary funds for development. This understanding therefore entails that DFIs do not just give out long term loans to any country which asks but do due diligence and are informed by their lenders' assessment checklist (The World Bank Group, 2014). Through their developmental mission and public funding, DFIs have, by definition, a higher risk tolerance and a longer investment time frame (Dickinson, 2016). The sector chosen for funding varies from DFI to DFI, others focus on private sector development while others focus on poverty alleviation, infrastructure development and education among other public sector issues (World Business Council, 2007)

Use of DFI funding should lead to the best possible development outcomes, such as increasing job opportunities and alleviating poverty (Kwakkenbos and Romero, 2013). According to the United Nations (UN, 2005: 14), DFIs play at least five crucial roles which are as follows:

- Appraise the economic and social development impact of projects seeking financing;
- Accompany investors in the long run, through long-term loans;
- Offer technical assistance to sectors essential to growth;
- Attract investors by facilitating financing operations; and
- Alleviate the negative impact of financial crises through counter-cyclical financing by offering loans, even during downturns, and pooling efforts with regional financing institutions.

Rioja and Valey (2004), Aghion et al., (2005), acknowledged that the effect of Development Financial Institutions is much more profound in middle-income countries. Rousseau and D'Onofrio (2013)'s findings were also in line with the above, albeit focusing on Sub-Saharan Africa. Calice (2013), notes that DFIs played a very important role in avoiding a drastic credit crisis in several developing economies particularly during the 2007/2008 global economic crisis. This they were able to do by escalating their activities, given how private agents had increasingly become risk averse.

DFIs have done very well in providing Capital in risky environments. They have been known to step in when Private Capital is risk averse and there are recorded cases where the risk taking has reaped rewards for DFIs and the governments and populations concerned. A good example is in

the cases of Bangladeshi telecom and Afghan Telecom. According to Runde (2014), Bangladesh now has 117.6M mobile phone users, and Afghanistan has 21.6M—both over of 70 percent of the countries' populations. The private sector was reluctant to invest in this industry due to political and economic risk and fifteen years ago both countries had zero mobile phone users until DFIs stepped in to fund investment in mobile phone infrastructure. Another success story of when DFIs invested in politically risky environments is when the Overseas Private Investment Corporation (OPIC), a US DFI provided funding for a fuel storage facility in Ukraine

Bracking and Ganho (2011), Bortes et al (2011), Jouanjean and Te Velde (2013), Romero (2014) in their evaluation of the impact of DFIs in economic development particularly employment creation, conclude that there is a positive correlation between involvement of DFIs and employment creation. Their studies however focused on quantity of jobs and not necessarily quality. Rosseau (2014), also reached similar findings albeit focusing on Sub-Saharan Africa. A study by Dalberg (2010), revealed that European DFI member states investments had directly created around 422 000 jobs and indirectly about 1,3 million jobs. A study of DFIs by the Department for International Development also revealed similar findings adding further support to the effectiveness of DFIs in economic growth in the countries they serve (Attridge *et al.*, 2019)

Literature suggests that the areas where DFIs have not done well are mainly attributed to their shortcomings in corporate governance structures, a weakness which has made them vulnerable to other vices such as poor managerial skills due to nepotism in employment and also political interference which has also resulted in corruption and poor financial management (Dinc, 2005; Caprio et al, 2004; La Porta et al, 2002). These failures have affected their performance and the fact that putting in place proper governance systems is not exactly easy due to the multitude of institutions usually involved in the ownership of a DFI (Lemma, 2015). Shirai (2009) argues that corrupt officials and weak institutional environments were the reasons for the failure of development banks. Paulson and Townsend (2004) believed that limited skills in finance, management, and operations were the main reason for failure of the earlier DFIs.

Scott (2007), also posits that DFIs have also struggled with balancing the trade-off between their conflicting objectives of fulfilling their founding mandate and also maintaining financial stability. Shakil Faruqi (2015), explained that these conflicting interests have been the bane of many DFIs, arguing that several DFIs collapsed as a result of failing to strike a balance and investing in projects which did not yield results from a financial perspective.

### 2.2.2 Infrastructure

Teriman et al (2010), defines infrastructure as the structural elements that facilitates the production and movement of goods and services between different people and places, Infrastructure is broadly divided into two categories; that is physical and economic infrastructure and social infrastructure. Physical and economic infrastructure refers to public utilities and works that promote economic activity such as roads, energy, railways, water and sewer reticulation systems, while social infrastructure refers to the infrastructure that promotes the health, education and cultural standards of the population; that is activities that have both direct and indirect impact on the welfare of the citizens, it involves health, housing and education facilities (Hardwicke, 2008; Bigotte & Antunes, 2007; Goel, 2002; Yoshino and Nakahigashi 2000)

In his seminal paper prepared for the Annual Bank Conference on Development Economics, Professor Remy Prud'homme (2004), identified four main features of physical and economic infrastructure which are as follows:

First, they are capital goods which are not consumed directly but rather in combination with labour and other inputs. Second infrastructure is lumpy, meaning that it has to be constructed and finished in order to be useful, for example a dam that is 95% complete has zero economic value. Another implication of the lumpiness of infrastructure is also that it is difficult to gradually increase as demand and supply increase and also its construction of takes a long time. Third, infrastructure usually has a very long lifespan. A good example is the Homs dam in Syria which was built in the 1300s but is still operational to this day (Tata &Howard, 2018). The implication from this characteristic is in terms of financing as well as maintenance. Fourth Prud'homme (2004) explained that infrastructure is usually immobile, for instance a dam once built cannot be relocated to another location. The implication here is that there is need for clear and focused



planning before investing in infrastructure, focusing not only on present needs but also future needs and dynamics.

The amount and quality of a nation's physical and economic infrastructure has an important bearing on economic growth as it is often viewed as the wheels of economic activity since it provides the environment for productive activities to take place and facilitates the generation of growth (African Development Bank, 2011). If well developed, physical and economic infrastructure stimulates economic growth and the opposite is true if it is not well developed (McRae, 2015). Research done by De la Fuente & Estache (2004) and Foster & Briceno-Garmendia (2009) has shown that there is a strong correlation between investment in physical infrastructure and economic growth.

### 2.2.3 Economic growth

Okpe (2013), posited that economic growth is the process of consistent per capita income growth over a long period of time. Jhingan, (2007), opined that the increase in income per capita is accompanied by the increase in labour force, consumption and trade, both within the economy and with other economies. Jhingan (2007), also stressed that supporting structural and technological infrastructure are key to growth. In their definition of economic growth, Todaro and Smith (2003), alluded to an increase in a country's capacity to produce goods and services calculated from one period to another. In addition, their definition also pointed to an improvement in the standards of living and societal welfare as being part of economic growth. Economic growth is usually measured via The Gross Domestic Product (GDP) and the Gross National Product (GNP). GDP measures the monetary value of all productive activities carried out in a country by people within that country.

In the early days after the second world war, the understanding was that economic growth will lead to trickle down effects where those at the bottom of the economic ladder would eventually benefit (Ranieri and Ramos, 2013). This reasoning therefore implies that development is an incremental process that benefits from this trickled down process over a period of time. Studies by Berg and Ostry (2011), support this thinking based on the cases of developed countries such as the UK and USA where real per capita income has grown steadily from 1950 to the late

2000s. While some developing countries also showed similar stories, the majority did not (Berg & Ostry 2011).

Several studies in the late 90's to the early 2000's by Kanbur, (2000), Stiglitz and Squire (1998), Li and Zou (1998) and Dagdeviren et al., (2000) indicated that this trickle-down concept was not really working and development thinking had to change. According to the Asian Development Outlook (2012), inequality was actually rising as pointed out by Kanbur (2000) despite growing per capita income. The poor were getting poor and the rich getting richer. This led to the introduction of the concept of inclusive growth (Raul et al., 2013). Inclusive growth is defined as economic growth that results in the majority of the people particularly the poor, getting access to socio-economic opportunities while protecting vulnerable groups and peoples in a fair and equitable atmosphere. The concept of economic growth is broad based and non-sectoral, promoting equitable employment and enhancing the resilience of disadvantaged and marginalized groups in society. (AfDB, 2011). A key element in the idea of inclusive growth is a focus on the poor and marginalized. Ferreira and Ravallion (2009), note that inclusive growth is a critical driver of poverty reduction

With growing concerns about climate change, development thinking is now moving towards sustainable growth (The Montpellier Panel, 2013). According to Stoddart (2011), the overarching idea of sustainable development is the long-term stability of the economy and the environment and this is achievable through the incorporating economic, social and environmental factors in the decision-making process. The African Development Bank postulates that in order to achieve sustainable growth and development there is a need to adopt green growth. This is an approach which takes a holistic approach to development through placing importance on human, social and natural capital, efficiently and sustainably producing goods and services and building resilience in a changing and increasingly interconnected world (AfDB, 2012).

Member countries of the United nations came up with and adopted 17 objectives in 2015 aimed at ensuring holistic and sustainable growth across the globe. These are called Sustainable Development Goals whose ambitious aim are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030 (United Nations

Development Programme, 2015). Member countries streamline their development plans in line with these Sustainable Development goals.

## 2.3 THEORETICAL FOUNDATIONS

The previous section covered the major concepts underpinning the study, in this section, the focus is on unpacking the study's theoretical frameworks that include the unbalanced growth theory and the endogenous growth theory. The theories are discussed in turn starting with the Unbalanced Growth Theory.

### 2.3.1 Unbalanced Growth Theory

The unbalanced growth theory was propounded by Hirschman in 1958. He postulated that the best way to achieve economic growth in developing countries is through a deliberate unbalancing of the economy according to a pre-designed strategy. Hirschman argues that the majority if not all of the industrialised countries in the world have achieved their economic growth via the same modus operandi where they first develop one sector, then that sector's development extends to other sectors and eventually the whole economy. The choice of sector is based on sectoral competitive advantage or "propulsiveness", that is the ability of a sector to stimulate growth in other sectors.

Singer (1969) believed that Unbalanced growth generates "pulls" and "pressures" in production systems that call for new inventions and innovations to solve bottlenecks. Growth in one sector creates competition, imbalances and pressures in the system that then encourages growth. Either way one sector will always grow faster than another, so the need for unbalanced growth will continue as investments must complement existing imbalance. Hirschman states "If the economy is to be kept moving ahead, the task of development policy is to maintain tensions, disproportions and disequilibrium" (Singer, 1969)

Ghate and Wright (2012), Peck (2018) and Huang (2013) have written in support of the unbalanced growth theory focusing on the economic growth of India , UK and China respectively arguing that through forward and backward linkages, development of one industry will spill over to another industry and one by one all the industries will develop until all the

industries in the economy are developed leading to economic growth. It follows that the economic growth will be based on deliberate imbalances within the system. The inevitable consequence of this is tensions, competition and inducements which according to Hirschman (1958), will actually be good for economic growth as their frequency increases the rate of growth. Hirschman argues that the path of development is one full of pressures, disturbances and uneasiness; that inflation, population pressures, and balance of payments disturbances are useful because they are essential parts of the development process. Inflation is an "inducement mechanism" while there is a general rise in prices there also exists a general rise in productivity

The relevance of the unbalanced growth in this research emanates from the viewpoint that, it accentuates that investment in an economy should be directed in selective sectors following a deliberate plan rather than a simultaneous investment across the board (Imbs and Wacziarg, 2003). The reasoning being that these identified sectors which receive investment will then serve as the forerunners to development, once they are developed, they will then lead to the development of other sectors through forward and backward linkages (Cohen, 2007; Hausmann et al., 2008).

Writing on the experiences of China, Holtz (2011), argued that the unbalanced growth theory works when the government deliberately engages in strategic sectors and withdraws from less strategic or low impact sectors. He argues that such an understanding is what explains the high involvement of the Chinese state in many sectors, most notably the development of infrastructure such as roads and power generation. Saggi (2006), explains the vertical industry policy adopted by the Chinese government, where the state sets state owned enterprises (SEO) to carry out the unbalanced growth where the SOEs deliberately develop certain sectors and ignore others, with the decision on which sector to choose being made on the potential multiplier effect of the sector(s).

The unbalanced growth theory undoubtedly stresses that economic growth cannot be registered across all sectors in the economy simultaneously. Certain selected sectors should be developed and these will serve as pilots to the development of other sectors which will not have been

selected based on their centrality to the development nexus; that is their importance as far as supporting the development of other sectors and the economy as a whole.

### 2.3.2 Endogenous development theory

Renowned Economist Paul Romer (1994), posited that endogenous growth theory denotes that economic growth is primarily as a result of internal or endogenous factors and not external factors. It holds that investments in human capital, innovation and knowledge are pivotal to economic growth. Romer (1994), also explained that the theory focuses on positive externalities and spillover effects. According to Millar et al., (2008), Endogenous development denotes a theory of development that values the local people's views above all else. Development is viewed through the lenses of the locals who decide what development means to them and what kind of development they would want to see in their community. Hountondji (2002), maintains that endogenous development takes local cultures as the basis or starting point from where a central framework for development can be designed. Another feature of endogenous development is that it is people centred and sustainable.

While endogenous development is inward looking, it is not closed off from external inputs such as technology and modern science (Millar, Apusigah and Boonzaaijer, 2008), The idea rather is that it seeks to eliminate the external factors that threaten the indigenous systems. Endogenous development is centred on Indigenous Knowledge Systems (IKS), and only draws upon external factors when they have the ability to enhance the traditional systems.

According to Millar et al. (2008), Endogenous development places paramount importance on the need, ability and potential of people for initiating and negotiating their own development path. It supports and promotes change that is locally informed and relevant. Africa has been the recipient of several billion dollars of Aid but it remains poor. The reasons for this are varied but one emerging line of thought is that the development Aid or interventions were blind to local sensitivities and contexts. Developmental Aid was imposed on the African people with a view, erroneous though, that the change introduced will be self-renewing which is hardly the case. There are several capital investments projects which were initially high yielding but faltered later on. Hoppers (2002), blames this on a failure to involve local communities so that they can

integrate them into their own local systems and take ownership of the projects. In her book titled *Dead Aid*, Development economist Dambisa Moyo argues that the current aid-based model of development where the donors call the shots and prescribe solutions is not working, and there is need for a locally grown model (Moyo, 2009).

Kingsley Chiedu Moghalu goes further to say that Foreign Aid is why Africa remains underdeveloped, given how huge amounts poured into Africa over the years have left Africa underdeveloped. He also stresses that development by definition is a process that should be driven internally by organizing the production economy in an efficient manner not by waiting for money and ideas from foreign organisations (Moghalu, 2014). In addition, Acemoglu and Robinson (2014), contend that aid in as much as it cannot be blamed for all development failures in Africa, it can be blamed for blocking African governments from learning from their mistakes and correcting them using solutions that work best in each country context.

An understanding of the endogenous growth theory helps in distinguishing the different approaches to development funding between local DFIs, Afrocentric DFIs and those based in the global North such as the IMF and The World bank. It also helps in understanding the different funding mechanisms between the two as well as the level of involvement of the DFIs.

## 2.4 INFRASTRUCTURE FINANCING MECHANISMS

### 2.4.1 Importance of investing in infrastructure

In a study on the contribution of Infrastructure to Economic Growth, Calderon and Servén (2004), simultaneously considered transport, power and telecommunications. The study considered both quantity and quality of infrastructures and computed indices for stocks of infrastructure and improved quality of services as a measure of infrastructure development along with other economic growth control variables. Their results revealed that the volume of infrastructure stocks has a significant positive effect on long-run economic growth. The last two decades have seen a growing interest in evaluating the contributions of infrastructure to economic growth and development, with results pointing to a positive correlation (Jerome, 2011). Ehler (2014), also speaks on how the lack of well-performing infrastructure retards economic development. He goes further to state that this is not only true for developing countries

but also for developed countries which fail to invest in renewable energy and social infrastructure.

Lumbila (2005), noted that African countries boasting larger infrastructural stocks receive significantly more Foreign Direct Investment (FDI), as well as domestic investment as compared to less endowed countries. Lumbila's study focused on telephone connections. Echoing Lumbila's assertions, Estache (2006), explained that a lack of infrastructure can be an impediment to more investment, and it can also be one of the dimensions of the poverty trap argument since it seems that a critical mass of infrastructure is needed to convince investors to make the decisions leading to growth.

Studies have increasingly demonstrated the importance of investing in infrastructure, as it leads to poverty alleviation (Ariyo and Jerome, 2004; Calderon, 2008; Estache and Wodon, 2010; Ogun, 2010). Infrastructure acts as a catalyst to economic growth and development and increasing the poor's access to other social infrastructure services such as education and health and by so doing leading to the alleviation of poverty and inequalities (Jerome, 2011). A good example is how investment in electricity infrastructure in Costa Rica among the rural poor led to the number of businesses jumping from 15-86 (Gaal and Afrah, 2017). Llanto (2008), also noted that infrastructure is a major driver for poverty eradication, citing that the lack of adequate transport and energy industry infrastructure, as well as water infrastructure can have a negative effect on existing industries in addition to acting as a deterrent to new industries.

Akinyosoye (2010) contends that an adequate infrastructure base will result in an increase in productivity, for instance improved road and rail infrastructure, electricity generation, water and irrigation projects will raise agricultural input and hence improved quality of life as a result. These findings are also in line with the findings put forward by Orabuone (2008), who postulated that inadequate and poor road infrastructure makes transportation expensive which leads to reduced access to high quality inputs and markets for local produce. This is especially true for rural populations where poor road infrastructure is common. For rural people this infrastructure inadequacy also leads to their inability to access other social infrastructure such as schooling and health. (Orabuone, 2008)

There is clear evidence that rural isolation is associated with low agricultural productivity linked to poor market access and low use of fertilizers and modern agricultural technologies. It is also linked with poor health and low school enrolment. Rural isolation can imprison the elderly and people with disabilities. Good transport infrastructure is a necessary condition for economic growth and poverty alleviation, but transport investments alone cannot address the problems of the poorest households (Starkey & Hine, 2014). Studies by Starkey & Hine (2014), have demonstrated how poor transport infrastructure is directly linked to poor agricultural production in isolated rural areas as a result of poor access to fertilizers, expert knowledge and agricultural technologies. They argued that investments in transport infrastructure will go a long way in dealing with these issues.

#### 2.4.2 INFRASTRUCTURE FUNDING MODELS

This section will focus on a description of the various infrastructure financing models, focusing on their main features and distinctions. A variety of models have emerged to enable private sector investment in the provision of infrastructure, these models fall under the auspices of the Public-Private Partnerships (PPP) where public assets are provided through tapping into the resources and expertise of private firms (European Investment Bank, 2004). PPP are intended to obtain more ‘value for money’ than under traditional public procurement options, and when correctly implemented, they produce reduced life-cycle costs, better risk allocation, faster implementation of public works and services, improved service quality and additional revenue streams (Renda and Schrefler, 2006) The models to be considered for the purposes of this study include build-operate-transfer (BOT), Project Finance and land leasing. this list is however not exhaustive but was selected in light of the models’ fit for financing of energy and transport infrastructure. In addition to these, governments also use borrowing from other governments as well user charges. The funding models will be discussed in turn starting with Build-Operate-Transfer, then Project finance followed by land leasing and lastly User charges.

##### 2.4.2.1 Build-Operate-Transfer

BOT refers to an infrastructure funding model where the government delegates to a private organisation the power to design and build infrastructure and also to operate the infrastructure for



a certain agreed period then transfer it to the government at the end of the agreed period (Llanto, 2008). The onus of finding finance for the project is on the private sector, who also have the rights to the revenue accruing from the completed facility. At the end of the concession agreement the facility will be transferred to the government at no cost and free of any encumbrances (The World Bank, 2012).

In a BOT arrangement, the private entity also known as the concessionaire may be required to establish a Special Purpose Vehicle for the implementation and operation of the project. The government may also contribute a capital grant, however in most cases the government makes no financial contribution at all (United Nations Economic and Social Commission for Asia and the Pacific, 2016). The concessionaire assumes responsibility for any risks during the design and construction phase and control of all operational costs, with the understanding that these costs will be recouped from the revenue collected from operating the facility once completed (Lema, 2007).

Chung et al (2011), contend that the BOT approach is widely used to finance road, rail and telecommunications infrastructure projects in several developed and developing countries. Popular examples of BOT infrastructure include the 80km elevated expressway in Bangkok, Thailand, the 1200 MW Hab River project in Pakistan, the 5400km road construction project in Mexico and the 300 MW coal power plant in the Philippines (The World Bank, 2012). Closer to home, the Suez Canal in Egypt was funded through the BOT model, with Egyptian private financiers exclusively funding the construction and later expansion of the Suez Canal (Otto, 2019).

Stafano (2007), explains that BOT is a preferred infrastructure financing model by governments in developing countries who intend to own infrastructure but are unable to fund them due to debt distress. He noted the following advantages of using BOT as an infrastructure funding model:

- Encourage private investment
- Inject new foreign capital to the country
- Transfer of technology and know-how
- Completing project within time frame and planned budget

- Providing additional financial source for other priority projects
- Releasing the burden on public budget for infrastructure development

#### 2.4.2.2 Project Finance

Gatti (2008), defines project finance as an infrastructure funding model that raises funding for a specific project. The model does not rely on the ability of the parties that propose the project, usually the government's solvency but rather looks at the ability of the project to repay the loan. Cashflow from the project therefore represent loan reimbursement while the project assets represent collateral (Gatti, 2013). Esty (2004), defines project finance as a transaction involving the creation of a legally independent project company that is funded with equity from one or more private entity and nonrecourse debt for the purpose of investing in infrastructure development. From Esty's definition it can be inferred that this financing model operates through a project company (SPV). The SPVs are created from the equity provided by sponsors using debt which will be repaid from the project cashflows (Gatti, 2013).

Pinto (2017) notes that Project Finance is mostly used for capital intensive projects such as power plants, toll roads, oil pipelines and or refineries and industrial plants with clearly discernible cash flows, in high risk countries through the use of long term financing (Fola, 2019). This understanding therefore implies that lenders need to be very certain of the ability of the project to meet its debts from cashflows alone since no other funds will be made available to service the debt as per the definition of the model. Large-scale projects require substantial investments up-front and only start to generate cash inflows after a relatively long construction period. Thus, PF debt is characterized by much longer maturities compared to other forms of financing (Gardner and Wright, 2011)

Apart from the project sponsor, the other main party that plays a pivotal role in project finance are the lenders. Infrastructure projects involve large investments, and so a considerable fraction is generally raised in the form of debt from lenders which might include banks, specialized lending institutions or bond markets (Morgan Asset Management, 2011).

Corielli et al (2010) and Pinto & Alves (2016) recommend PF as a model of choice arguing that it lowers the cost of funding through mitigating costs of agents, improving risk management and reducing information asymmetries. In addition, Esty (2003), refers to the reduction of corporate tax and tax holiday as a significant economic benefit of PF. In the studies of Pinto and Alves (2016), it was made clear that when seeking long-term funding cost reduction, borrowers opt for PF.

In spite of the above advantages, Fabozzi et al (2016), Bonnetti et al (2010), argue that PF has three main drawbacks which are: (i) complexity in terms of designing the transaction and writing the required documentation; (ii) higher costs of borrowing when compared to conventional financing; and (iii) the negotiation of the financing and operating agreements is time-consuming. Bonnetti et al (2010), however also contends that the benefits arising from PF such as reduction in net financing costs as well as off-balance sheet financing and risk sharing outweigh its drawbacks

#### 2.4.2.3 Land Leasing

Financial leasing refers to a contract between two parties where one party known as the lessor provides an asset for usage to the lessee for a specific period of time, in return for explicit payments (Fletcher et al., 2005). For this purpose of this study however, Leasing is going to be referred to as an asset-based funding model where lessors retain ownership of the leased asset for the lifespan of the contract serving as collateral for the contract. This has the effect of separating the economic use of an asset from its legal ownership (Fola, 2019)

Drury and Braund (1990) provided a clear and concise summary of the main seven reasons why firms may opt for leasing ahead of other funding models:

- i. Timing differences, different accounting year-ends which enable the lessor to capture the depreciation tax shields earlier than the lessee.
- ii. The lessor can borrow at a lower rate than the lessee.
- iii. Equality of costs, between leasing and borrowing.
- iv. Lease finance can be obtained with greater facility and fewer restrictions.
- v. Leasing can provide off-balance sheet financing.

- vi. Operating leases provide an important protection against the risk of obsolescence.
- vii. Managerial motivations to lease for reasons of self-interest

Given, the general meaning of financial leasing has been established, it is now apparent to explain its meaning as an infrastructure funding model. The first port of call is in explaining that governments at both central government and local government level possess a plethora of assets that include but is not limited to land, buildings, housing, factories and clinics and schools (Peterson, 2007). Disposal of some of these assets may offer funding to finance some infrastructural development, however Peterson (2007) has cautioned against this as it is a short-term solution.

Utilising the land assets at the government's disposal is guaranteed to finance infrastructure for a longer period. Instead of selling the land, the government has the opportunity to convert the land assets by land leasing. The general idea is to fund infrastructure investments from leasing the land assets, if there is any shortfall, it can be supplemented by borrowing against the value of the government's land assets in the balance sheet. Fola (2019), contends that land leasing started with the intention to stimulate local economic development by allowing cities to attract foreign investments via the provision to investors of reliable land occupancy terms. The cities then used the huge income generated primarily in investments in infrastructure development, and thereby ensuring economic growth.

In summary, land leasing has the capacity and demonstrated ability to generate significant income that is able to fund infrastructure development. In addition, in the case of developing economies where urban cities are growing fast, using land assets as a ploy for accelerated investment in infrastructure is effective. The downside of this model however is that land available for land leasing is not infinite, and as Peterson (2007) put it, it can be used as a transitional infrastructure funding strategy.

#### 2.4.2.3 User Charges

User charges refers to fees or levies charged to users of the infrastructure or the goods generated from these infrastructures (Hou & Zhang, 2019). Interwies et al. (2005), defined user charges as

a form of payment for use of resources, infrastructure and services where the price is set by a public authority and with the intention of using the revenue generated to the maintenance and or expansion of the specific infrastructure or service. Examples of user charges are toll fees on highways, electricity charges and water bills. User charges are an important source of infrastructure financing, according to the Institute for Government (2020), the majority of utilities and major infrastructure in the United Kingdom is financed through user charges. Toll roads accelerate the availability of initial funding for construction, thereby providing a perpetual and convenient source of funding unlike tax based funding (Zhou and Chilunjika, 2018)

In the United States, user charges are mainly used in transport infrastructure, for example revenues from non-commercial motor boat fuels are transferred to an Aquatic Trust Fund for maintenance of water bodies. In Sweden a battery tax is levied on users and this is used to finance the safe disposal of the used products (Stavins, 2002). In most cases user charges are partly or wholly responsible for the financing of the infrastructure to which they are levied. This distinction then makes a clear distinction between user charges and environmental taxes and pollution charges which are mean for raising fiscal revenue and discouraging pollution respectively (OECD, 2011).

Parasibu (2005), discussed the impact of toll fees on the development of road transport infrastructure in Indonesia and noted that there was need for private capital in the development of toll roads. His research however concluded that the toll road system supported development of quality road infrastructure. These finding mirrored those by Spry and Crowley (2004). However Spry and Crowley (2004), cautioned against government monopoly in toll fees, arguing that it increases costs, without accompanying increased quality of roads. In South Africa toll roads have greatly enhanced the availability of initial funding for road infrastructure construction in comparison to the traditional tax-based funding (<http://www.arrivealive.co.za>). Toll roads in South Africa have led to the renovation of more than 65% of the road transport infrastructure, thus establishing the importance of toll fees as an important source of revenue outside government budgetary financing (<http://allafrica.com>).

### 2.4.3 EFFECTIVENESS OF DFIs IN FINANCING INFRASTRUCTURE

With the popularisation of Monitoring and evaluation, several Bilateral and multilateral DFIs, have designed tools to evaluate their effectiveness. The most comprehensive of these tools is perhaps the one developed by The International Finance Corporation (IFC) in 2005, called the Development Outcome Tracking System (DOTS), which measures the performance of DFIs against a clearly defined baseline under the following categories:

- Financial performance
- Economic performance
- Environmental and social performance
- Private sector development

In recognizing the critical role of DFIs' to economic growth and a need to direct DFIs to specific sectors, South African Deputy Finance Minister Nhlanhla Nene, explained that "As government, we are continuously confronted with the question of how best to position our DFIs in order to enhance their capacities to effectively and efficiently deliver significant and tangible developmental results to all the qualifying needy individuals and institutions of South Africa. This means that the contributions of DFIs must be measured not by meaningless statistical numbers, but by their direct impact on the lives of the ordinary people of South Africa observable through sustained improvements in incomes and standards of living as a result of access to DFI funding, projects, facilities, and infrastructure base." (Nene, 2011)

According to Willem (2011), DFIs have become more important over the past decade. They can provide finance (e.g. loans, guarantees, equity) for the public and private sectors. Private sector support by DFIs globally in terms of annual commitments has grown rapidly, from \$15.4 billion in 2003, to \$21.4 billion in 2005 and \$33 billion in 2009. This represents more than a doubling in annual commitments over the past six years. DFI support is now equivalent to a quarter of official development assistance (ODA), although it is mostly not counted as ODA. There are 26 developing countries where investment by three DFIs (IFC, EIB and CDC) together have averaged between 2% and 12% of total domestic investment for the period for which data are available – this is quite considerable. Therefore, examining the contribution of DFIs in terms of economic growth as a result of infrastructural development is appealing.

The DFIs played a very significant role in rapid industrialization of the Continental Europe. Many of the DFIs were sponsored by national governments and international agencies. The first government sponsored DFI was created in Netherlands in 1822. In France, significant developments in long-term financing took place after establishment of DFIs, such as, Credit Financier and Credit Mobiliser, over the period 1848-1852. In Asia, establishment of Japan Development Bank and other term-lending institution fostered rapid industrialization of Japan. (Asian Development Bank, 2006).

DFIs, particularly development banks worldwide, operate with various degrees of success (Paulson and Townsen, 2004). According to Thorne and du Toit (2009) there was a large-scale failure of development banks in the 1970s and 1980s, which led to their disappearance from the development agenda. This failure which is still seen in the developing countries is ascribed to poorly controlled spending which has resulted in the DFIs delivering very little in terms of infrastructure development (Siraj, 2004; Shirai 2009; Estache and Fay, 2010).

Harris (2003), is particularly critical of the effectiveness of DFIs in infrastructure developing drawing particular attention to public private partnership models such as build operate and transfer (BOT). He argues that the levies charged on use of the infrastructure by the private entities is against the poor since they are concerned with recouping their costs. Foster and Briceño-Garcia (2010), agreed with this argument citing that when infrastructure projects are designed to only cater for those who can afford, then those who can afford are the only ones who will benefit from the infrastructure. From this understanding, DFIs following the BOT model are therefore ineffective in financing infrastructure since they will shy away from investing in high risk countries with poor people (Estache, 2006). A study by Te Velde and Warner (2007) corroborated this understanding; revealing that DFIs were unwilling to take risks in terms of liquidity and also showed a lack of transparency in their undertakings, particularly in offering technical assistance to infrastructural projects.

In a publication by the African Development Bank (AfDB, 2009) on the performance of their various portfolios, it was stated that nine percent of their investment achieved their various

development objectives in 2008, of which the most successful ones, carried out in North and West African countries, were infrastructure projects, with an approximate 93 percent success rate. According to Yaron (2005), various evaluations carried out by different multilateral and bilateral DFIs to measure their performance, it was revealed that DFIs controlled by sovereign governments failed to meet their expectations.

## 2.5 Conclusion

This chapter reviewed the theoretical framework and conceptual frameworks of the study. It also reviewed the different models of infrastructure funding as well as discussed, the importance of investing in infrastructure. The chapter also reviewed the effectiveness of DFIs in infrastructure financing. The next chapter will present the study's research design and methodology.



## CHAPTER THREE

### METHODOLOGY

#### 3.1 INTRODUCTION

This chapter contains an in-depth description of the study's research methodology. It includes the definition of the target population, sample size and the sampling procedures as well as the methods that were employed in collecting data from respondents. The chapter provides an explanation of how validity and reliability of the research instruments was met. It also outlines the data presentation and analysis techniques.

#### 3.2 RESEARCH DESIGN

According to Fraenkel and Wallen (1996), research design can be defined as an outline of how the research is going to be carried out. This research was conducted through a descriptive survey research design. O'Leary (2005) defines survey research as a systematic gathering of primary data through the use of a structured questionnaire and interview in a reasonably large number and highly representative sample of respondents. According to Kotter (1990) descriptive research involves describing and interpreting events or situations as they are. Kothari (2004) also opines that descriptive research enables the researcher to describe a state of affairs as it exists without manipulation of variables, which is what this study seeks to do. The design is also cost effective, adaptable and ensures quick collection of data in that it combines both quantitative and qualitative data collection procedures.

This research **design will therefore enable the** researcher to clearly understand the role played by Development Finance Institutions to Zimbabwe's economic growth with particular reference to the transport and power infrastructure. The use of this research **design will eliminate bias and maximise the reliability of data gathered** (Kothari, 2004).

#### 3.3 TARGET POPULATION

Wegner (2000), defines population as the collection of all the observations of a random variable under study and about which one is trying to draw conclusions in practice. Polit and Hungler (1999) add on to this definition, stating that population is not limited to people but can also refer

to objects that conform to a set of specifications. In this study the population consisted of the officials from the Ministry of Finance and Economic Planning, Agricultural Bank of Zimbabwe, The Small Enterprises Development Corporation (SEMDCO) Infrastructure Development Bank of Zimbabwe, African Development, Industrial Development Corporation and socio-economic development experts with a strong understanding of the transport and power infrastructure landscape.

### 3.4 SAMPLING AND SAMPLING TECHNIQUES

Mugenda and Mugenda (2003) describe a sample as a subject of the population, in which case a population constitutes all the individuals which possess “some common observable characteristic.” There is need to make the sample size as big as possible so as to draw inferences which are more representative of the population. Frey et al (2000) defines sampling as selecting “a subgroup of a population.” A sampling method therefore involves taking a representative section of the population and making use of the data gathered thereof as research information representative of the larger population. The research employed purposive sampling and snowball sampling techniques

#### 3.4.1 Purposive sampling

According to Babbie (2007) purposive or judgmental sampling is a method of sampling which is non-probability where the researcher selects respondents based on his/her judgement about the respondents he/she thinks will give the best or most useful responses for the study subject. Frey et al (2000) also opined that in purposive sampling the population is non-randomly selected based on a particular characteristic. In employing purposive sampling, the researcher thus recruited the officials she deemed most qualified to respond to his inquiries.

#### 3.4.2 Snowball sampling

According to Babbie (2007), snowball sampling refers to a non-probability sampling method where the researcher asks for referrals from a respondent based on the respondent’s knowledge of people who are better placed to also answer the researcher’s questions. In this research, snowball sampling will be employed in recruiting experts to respond to questions with regards to internal resource mobilization and financing a country, Zimbabwean particular’s socio-economic development. Snowball sampling was also selected because it is ideal where respondents might

not trust the motives of the researcher, but will open up if the researcher has been referred by someone known to the respondents.

### 3.5 DATA COLLECTION INSTRUMENTS

The researcher employed both primary and secondary data in the research. According to Kotter (1990) primary data consists of information collected for the specific purpose of the research. Secondary data refers to data that is collected by someone other than the user and usually for a different purpose altogether. The researcher employed Questionnaires and interviews for primary data collection and Documentary research for secondary data.

#### 3.5.1 Questionnaires

Primary data was collected from the field using questionnaires and interviews. As noted by Kothari (2008) the questionnaire method has been extensively used in a wide range of business and economic surveys due to its unbiased nature and ability to capture larger samples. Notwithstanding their limitation when it comes to illiterate respondents. This weakness was immaterial however given that the research was targeting experts. Stratpac (2011) notes that questionnaires are by their very nature less intrusive than face to face interviews or even telephone interviews.

#### 3.5.2 Interviews

An interview refers to a method of collecting data that involves one person; the interviewer asking questions to another person; the interviewee (Babbie, 2007). An interview can be face to face where respondents both parties are physically together or where the conversation is over the telephone. Interviews allow for the recording of non-verbal cues as well as gathering more information as compared to a structured questionnaire.

#### 3.5.3 Documentary research

The researcher employed documentary search to collect secondary data. According to Scott & Marshall (2015), documentary research is "Research that uses personal and official documents as a source material. Documents... may include such things as newspapers, diaries, stamps, directories, handbills, maps, government statistical publications, photographs, paintings, gramophone records, tapes, and computer files." In this study the researcher used publications

from the Ministry of Finance and Economic Planning, Agricultural Bank of Zimbabwe, The Small and Medium Enterprises Development Corporation (SEMDCO), African Development Bank, International Monetary Fund, World Bank, Infrastructure Development Bank of Zimbabwe and the Zimbabwe Coalition on Debt and Development (ZIMCODD) and from renown experts and scholars.

### 3.6 DATA ANALYSIS

#### 3.6.1 Content analysis

Qualitative data was analysed through the use of content analysis. Content analysis is a research method for studying documents and communication artefacts, which might be texts of various formats, pictures, audio or video (Bryman 2011). There are two general types of content analysis: conceptual analysis and relational analysis. Conceptual analysis determines the existence and frequency of concepts in a text. Relational analysis develops the conceptual analysis further by examining the relationships among concepts in a text (Krippendorff 1980). For the purposes of this study, conceptual analysis was used.

### 3.7 DATA PRESENTATION

A thematic framework was created to present textual data while quantitative data was coded and classified then summarised in tables and graphs.

### 3.8. CONCLUSION

This chapter presented the methods that this study used to achieve its objective. It presented the descriptive survey research design, the target population which includes officials from the Ministry of Finance and Economic Planning, The Small and Medium Enterprises Development Corporation (SEMDCO), African Development Bank, International Monetary Fund, World Bank, Infrastructure Development Bank of Zimbabwe and the Zimbabwe Coalition on Debt and Development (ZIMCODD). The target population also involved scholars and experts from other organizations not stated above. The chapter also described how the research used questionnaires and interviews for the collection of primary data and the documentary research for the collection of secondary data. Also contained in the chapter were the preferred sampling techniques of

snowball and purposive. The chapter concluded by illustrating that the data is going to be analysed using descriptive statistics as well as content analysis.

## CHAPTER FOUR

### PRESENTATION AND ANALYSIS OF FINDINGS

#### 4.1 INTRODUCTION

In Chapter three, the research provided the techniques that were used in the collection, presentation and analysis of data. Issues to do with validity and reliability of the techniques were also addressed so that they could not have an adverse impact on the study findings.

This chapter presents the study's findings and analysis based on the research objectives. The analysis of the research findings in some cases, led to the identification of potential solutions to the research problem and these recommendations were then presented in Chapter 5 which is the conclusive chapter of this research. The study objectives that guided the data collection were:

- To investigate the extent of investment in transport and power infrastructure in Zimbabwe since 2000
- To establish how the transport and power infrastructural projects investments were being financed
- To assess the sustainability of current funding models
- To proffer recommendations on financing Zimbabwe's transport and power infrastructure projects.

Section 4.2 describes the sample elements for both the questionnaire and the interviews as well as the response rate of the questionnaires. Section 4.3 covers the presentation of data gathered from the interviews and questionnaires as well an analysis of the data as explained in Chapter 3. The conclusion is Section 4.4

#### 4.2 Description of the sample elements

Purposive and snowball sampling methods were employed in the selection of respondents for both the questionnaire and interviewers. The respondents selected were selected for their knowledge and experience in the subject matter as well as the various role their organisations had played in infrastructure development in Zimbabwe. For the Questionnaires, Two

Questionnaires each were distributed to The World Bank office in Harare, African Development Bank, and the World Bank's Harare office. Three questionnaires each were distributed to Infrastructure Development Bank of Zimbabwe (IDBZ), and the Ministry of Finance as well as one former Minister of finance. For the Interviews, two officials each were selected from the Ministry of Finance and the IDBZ and one official each from AfDB, World Bank and the Zimbabwe Electricity Supply Authority.

Of the 11 Questionnaires distributed, only 7 were returned fully completed, the others were either not returned or not completed in full and were thus excluded from the data presentation and analysis. The 7 returned signify a 64 per cent response rate which is good enough for analysis according to Pazzaglia (2016). The researcher managed to carry out 7 interviews which were according to the plan, signifying a 100% response rate.

The Questionnaire and the interview guide were both developed in line with the study objectives. Both the Questionnaire and Interview Guide are attached below as Appendix A and B respectively. The Questionnaire and Interview process took place over a five-week period.

#### 4.4 DATA PRESENTATION AND ANALYSIS

The presentation and analysis of the research findings is in line with the research objectives stipulated in Chapter 1. The data shall be presented and analyzed under each objective.

##### 4.4.1 Investigating the extent of investment in transport and power infrastructure in Zimbabwe since 2000

This research objective was aimed at creating an understanding of the investments that have been made into the transport and power infrastructure in Zimbabwe since 2000, regardless of the financing source. Zimbabwe has really not done much as far as investment in new power infrastructure is concerned. To date the country relies on two power stations from the five initially installed in the 1950s. The other three do not contribute anything to the power grid due to lack of maintenance. In 2015, the Zimbabwe Multi-Donor Trust fund allocated US\$12.6 million towards the rehabilitation of the Bulawayo substation, however as of today, there is no power coming from that power station. This situation on the ground is well in line with the

findings reported in the African Development Bank’s 2019 infrastructure report, which stated that the country’s power troubles are as a direct result of aged infrastructure which is now over 60 years. (AfDB, 2019).

The only investments the country has embarked on as far as power infrastructure is concerned is the rural electrification programme initiated in 2002 which has seen the electrification of several rural areas in various provinces. Table 2 below highlights the percentage electrified in the rural area per province.

**Table 1:Percentage of rural electrification to date per province since 2002**

<b>PROVINCE</b>	<b>%GE</b>
Manicaland	39
Mashonaland west	37
Mashonaland East	28
Mashonaland Central	49
Midlands	22
Matebeleland South	30
Matebeleland North	31
Masvingo	32

Source: Parliament of Zimbabwe (2018)

In addition to the above, the other investment in Power infrastructure have been the 2011 rehabilitation of the Hwange, Kariba South and small which unfortunately only led to marginal gains in power generation according to the African Development Bank (2019). Other investments have been the Dema Diesel power plant which was unfortunately discontinued due to what one respondent called “poor long term thinking and gross corruption and incompetence.” The same can also be said about the Gwanda Solar project where the government paid significant money to Wicknell Chivhayo for the construction of a solar grid in Gwanda but have nothing to show for it.

Investment in Transport infrastructure have been better, though the investments have been largely in road transport. Very little investment has gone into Rail transport, save the coaches



secured from South Africa under a USD400 million deal from the Diaspora Investment Group, the trains according to one respondent were “a clear sign of corruption and rank incompetence, given how the coaches were incompatible with our rail lines.” The researcher also gleaned that in 2010, there was a BOT project implemented by Beitbridge Bulawayo Railway (PVT) Limited, a subsidiary of NLPI Ltd, established to implement the project. The project resulted in a 350km railway line from Beitbridge to Bulawayo, which was built in record time for such a project, with the construction phase lasting only 18 months (Dube and Chigumira, 2010).

In air transport infrastructure investments were made in the extension of the Victoria Falls in 2013 using a US\$150 million loan from China EximBank. In the same year, the Joshua Nkomo International Airport was finally completed after a ten-year building period for the expansion of the airport originally built in 1959. The delay in the construction was as a result of funds running dry during the construction period.

The researcher managed to glean the following information with regarding investment in transport infrastructure. The government managed to construct a total of 35 toll plazas throughout the country to enable collection of toll plazas. The country has also embarked on significant resurfacing of the roads such as the Mutare-Harare highway, Msasa and Norton road over rail, Mt Darwin Mukumbura and several other roads throughout the country. There however is no comprehensive list of these road construction projects. Notwithstanding the fact that there have been significant investments in road transport infrastructure, is the reality that the rate of road infrastructure investment is not matching the rate at which road transport is getting dilapidated. The African Development Bank Zimbabwe Infrastructure report claims that of the 15000 kilometres of road in Zimbabwe, 12800 are in poor condition (AfDB, 2019).

#### 4.4.2 To establish how the transport and power infrastructural projects investments were being financed

This research objective and accompanying question was aimed at developing an understanding of the funding models that were being utilised in the development of power and transport infrastructure in Zimbabwe since the year 2000. The research questions on both the questionnaire and interview guide were open, allowing the respondents to fully express their knowledge

without any restriction. To achieve this research objective, the researcher employed use of one question on both research instrument as indicated on both Appendix A and Appendix B as well as the literature available from the organisations identified in Chapter 3.

The views of the respondents, while varied, had a lot of similarity. It was revealed that Infrastructure financing in both power and transport over the years has been financed by Debt financing, Public Private Partnership, government budget allocations and User charges. These methods of Infrastructure financing are discussed in turn below

#### 4.4.2.1 Debt financing

The government of Zimbabwe has heavily relied on borrowing from external funding sources such as development financial institutions in order to finance its infrastructural development, particularly power generation which requires large sums of money. A case in point being the Kariba South Power Extension Project which was funded by a US\$320 million loan from the Chinese government and US\$213 million borrowed from different DFIs. The importance of project finance such as the one provided by the Chinese on this project reinforces the assertions by Pinto (2017), who noted that project finance, which is a version of debt financing is mostly used in capital intensive projects, which the Kariba South Power Extension Project is a perfect example. Commenting on the debt finance to Zimbabwe's power infrastructure one respondent said:

*Infrastructure development, especially power infrastructure is very expensive for instance the Kariba South Power Extension Project needed almost US\$600 million and Zimbabwe is unable to manage without borrowing from Development Finance Institutions. The souring of relations with western DFIs has resulted in very little to no investment in power infrastructure since it was constructed years ago by the colonial government.*

Morgan Asset Management (2011), also noted the fact that often, the government needs to raise additional financing from several sources including banks, specialised lending organisations and infrastructure bonds to compliment the amount provided by a principal sponsor since it is often too pricey and risky for one lender to bring all the required financing. This is exactly the case

where the Zimbabwean government had to look for further financing to compliment the financing from the Chinese government.

Transport infrastructure development in Zimbabwe has also been financed by debt finance, for example in 2019, the Zimbabwean government entered into a financing agreement worth US\$1,3 billion for the expansion of Robert Gabriel Mugabe International Airport among other infrastructure developments. This deal later fell through as explained by Respondent 2, however its significance as a source of finance remains after the fact:

*Rarely if ever do African governments finance their infrastructure development using their own resources. Of late, The Chinese government and DFIs from China have come in a huge way to finance infrastructure development in Africa, Zambia is one country where the Chinese have really helped with development of their road network. The Zimbabwean government was also set to benefit from this entrance of Chinese DFIs in the field when they had secured funding from China Eximbank for the rehabilitation and expansion of the Robert Mugabe International Airport before the Chinese cancelled the loan after the Zimbabwean government had diverted US\$10 million from an escrow account, angering the Chinese.*

#### 4.4.2.2 Public Private Partnerships (PPPs)

In 2004, Zimbabwe released a revised policy statement on the use of Public Private Partnerships in several sectors for the development of infrastructure through a collaboration between government and private players. PPPs have been an important source of financing for the transport in Zimbabwe, road transport to be specific, for example the 77-kilometre Ngezi Platinum Highway constructed in 2001, was as a result of a collaboration between the Ministry of Transport and a private consortium in a Build-Operate-Transfer Setup. The Newlands Bypass completed in 2007, was done on a Build-Transfer (BT) basis with the constructor handing over to the government upon completion. It consists of a four-lane highway that starts just south of the Newlands shopping centre and then re-joins Enterprise Road at the intersection with Kew Drive and Glenara Avenue North (Dube and Chigumira, 2010) . The importance of PPPs in infrastructure development, were in tandem with the assertions made by Chung et al (2011), who

contended that the Build-Operate-Transfer approach is widely used in the financing of road, rail and telecoms infrastructure in both developing and developed countries. One respondent commended on the efficiency of PPP:

*Public Private Partnerships are efficient, and carry out work in record time and using industry standards. Basically, PPPs bring efficiency to the development of infrastructure while making sure that public service delivery is not privatised which might result in high costs and exclusion of poor people from accessing public goods.*

The sentiments expressed by the respondent were in tandem with the issues raised by Cuttaree *et al* (2009), who explained that the BOT approach was ideal for developing countries who intend to own infrastructure but lack the resources to construct the infrastructure. While lauding the benefits of BOT, Lema (2007), also raised concerns around the prices charged on the infrastructure so that the private player recoups its investment. This was echoed by the sentiments of one respondent who noted that:

*Yes, PPPs are good, especially BOTs, however caution needs to be maintained because if a government is not careful whatever infrastructure that comes from the arrangement might be priced out of reach of poor people since the private partner will be concerned with recouping their investments at all costs.*

#### 4.4.2.3 Government budget allocations

Zimbabwe like any other country in the world raises a significant chunk of its revenue from taxation. The revenue from taxation is used for different government projects and expenditure. Government has over the years made budgetary allocations to investment in Infrastructure from its internally generated resources. Internally generated resources particularly from taxation is important as it allows the country to maintain control and ownership of its infrastructure. Over the years, Zimbabwe has made use of internal revenue to finance investments in Infrastructure for example the Rural electrification programme has been financed by the Rural Electrification Fund, which is financed by a levy paid by everyone who purchases electricity tokens.

#### 4.4.2.4 User Charges

In Zimbabwe, user charges are levied on power (electricity) and road usage. People pay for using electricity to the Zimbabwe Electricity Transmission and Distribution Corporation (ZETDC), a subsidiary of the Zimbabwe Electricity Supply Authority (ZESA). The fees levied are however not enough to cover the cost of transmission, let alone expansion hence user fees are not a viable financing source for power infrastructure development in Zimbabwe. One respondent remarked that:

*Zimbabwean electricity charges are below the regional average and hence ZESA makes losses. That also added to the fact that many people defaulted on their bills, especially before the introduction of the prepaid meters.*

One respondent noted that when people pay for prepaid electricity, there is a special levy that goes towards rural electrification. This money, if used appropriately can significantly contribute to the development of electricity for people in the rural areas.

The most notable user charges in Zimbabwe are the Toll fees which were established in 2009. According to the Zimbabwe 2009 Mid-Year Fiscal Policy Statement the purpose of tolls is to “provide additional alternative financial resources from private players through Public-Private Partnership (PPP) arrangements in support of broadening and expediting the trunk road network rehabilitation as well as construction of roads.” Toll fees are collected at 35 Toll gates situated across the country. The toll fees in Zimbabwe are collected by the Zimbabwe National Road Authority (ZINARA), which is a corporate body established by the Road Act (Chapter 13:18). ZINARA’s mandate is to fix, collect, disburse road user charges and mobilize revenue for roads development and maintenance (ZINARA, 2002). Toll fees are paid by drivers on the country’s highways in line with the pronouncements by Hou and Zhang (2019), that user charges are levied on users of the infrastructure.

Toll fees in Zimbabwe have generated significant revenue for ZINARA, however the organisation has been rocked by a series of scandal where the funds are not being utilised for their mandate of fixing the country’s roads as explained by Zhou and Chilunjika (2018). One respondent commented on this saying:

*ZINARA exceeds its revenue collection targets every year, however there is very little to show for it on the roads, with many roads being death traps with many drivers being involved in accidents through attempting to evade potholes. Recently it emerged that ZINARA bosses were paying themselves hefty amounts of money for silly things like haircuts and gym membership and gym equipment.*

The sentiments expressed by the respondent above auger well with the principle of quid pro quo, as explained by Gildenhuis (2010), that there should be a direct relation between the amount paid and the service received. Lack of maintenance of roads in favour of paying ZINARA executives goes against that understanding as motorists are not getting value for their money.

#### 4.4.3 To assess the sustainability of current funding models

This objective and accompanying questions were meant to find out if the current funding models in infrastructure financing in Zimbabwe can be relied on and also to what extent. To respond to this objective, the researcher employed use of one question on both research instruments as indicated on both Appendix A and Appendix B as well as the literature available from the organisations identified in Chapter 3. The results will be presented and analysed based on the four funding models identified on the first research objective which are Debt finance, Public Private Partnerships, Government budget allocations, and User charges

##### 4.4.3.1 Debt financing

Zimbabwe is already in debt distress, hence there is no way, debt finance can be sustainable. One respondent contended that:

*Zimbabwe's debt situation is unsustainable, that is both domestic and external. Also, these Chinese loans the government is getting are not transparent hence are not to be trusted. The fact that the country has already been barred from accessing loans from western countries due to non-payment of debts means we should not be borrowing anymore until we have paid back everything*

The views expressed by the respondent are in tandem with recommendations by Stafano (2007), that countries in debt distress should instead focus on using the Build Operate Transfer approach to finance their infrastructure instead of incurring more debt.

#### 4.4.3.2 Public Private Partnerships

Respondents highly rated PPPs, and argued that they were a very sustainable source of infrastructure financing. Arguments for the fact were that most PPPs often pay their own costs and are a relatively cheap source of finance for the government, especially some forms of PPPs where the government does not need to provide any initial funding. This was a fact supported by the assertions of Stafano (2007) who postulated a list of advantages of PPPs, specifically the BOT approach. The advantages include providing additional financial source for other priority projects and releasing the burden on public budget for infrastructure development.

One respondent noted that PPPs are also sustainable given that, they are carried out using the principles of business:

*Private players who partner government do so because they want to make money, not for altruism hence the PPP is handled using business standards which assures quality development which will maximise and justify their investment and expected return.*

Llanto (2008) and Stafano (2007) both reached similar findings, observing that engaging private players in infrastructure development leads to the introduction of innovation and quality into public sector goods. Chung et al. (2011), however notes that there is need for care in entering into PPP agreements to make sure that the costs of using the infrastructure remain affordable for the common person, since if left to their devices, private players may overcharge in a bid to make as much profit as possible from their investment.

#### 4.4.3.3 Government Budget allocations

The majority of the respondents indicated that government budget allocations are the least sustainable infrastructure financing model, with the overarching theme being that the bulk of the Zimbabwean budget goes towards wages. One respondent noted that:

*Zimbabwe has a very big wage bill, over 90% of the budget is taken up by the wage bill leaving less than 10% for everything else. When we look at this fact, it is therefore not very wise to think government budget allocations can take care of the infrastructure development.*

In as much as the above is true, the Zimbabwean government has however made budget allocations to infrastructure development particularly transport, for example the construction of

the St Alberts Dotito Road and Mt Darwin Mukumbura road in 2019 was from budget allocations as stated by the IDBZ. The IDBZ also noted other transport infrastructure development from 2015 as having been directly funded from government budget allocations (<https://www.idbz.co.zw/project-operations/government-projects>)

#### 4.4.3.4 User charges

The majority of respondents suggested that user charges are the most sustainable funding model, arguing that as long as there was sufficient usage of the infrastructure then the funding will always be available. One respondent commented that:

*Toll fees are the most sustainable of all infrastructure funding models in Zimbabwe. This is so because, toll fees are collectable throughout the infrastructure's life cycle, for example tollgate fees. Once it is constructed it will bring in revenue 24/7 and the more cars that use the road the more revenue collectable.*

Another respondent also agreed with this view, adding that with the digitisation of the tollgates, it is now almost impossible for any motorist to evade the tollgate and also the issue of leakages through pilferage by toll attendants has been greatly reduced if not altogether removed given that everything is digital.

These views are in line with the findings by Zhou and Chilunjika (2018) who posited that tollgates offer an accelerated and perpetual source of revenue available for infrastructure development and maintenance. This is also in line with the findings in South Africa where toll fees have led to the renovation of more than 65% of the road transport infrastructure (<http://allafrica.com>).

## 4.5 CONCLUSION

The chapter presented and analysed the results from the questionnaires and the semi-structured interviews as well as documentary analysis. The results gathered and presented are in tandem with the literature reviewed in the second Chapter. The respondents provided key insights concerning the financing of Zimbabwe's socio-economic development which were all informed by the objectives of the research clearly outlined in Chapter 1. Chapter 5 will provide summaries



and conclusions of the research issues as well as recommendations which emanated from the data analysis in this chapter.

## CHAPTER FIVE

### CONCLUSION AND RECOMMENDATIONS

#### 5.1 INTRODUCTION

This Chapter is the conclusive Chapter of this research. It presents a summary of the research findings and conclusions. The chapter also presents the recommendations which are informed from the data analysis in the previous chapter. The Chapter is arranged in the following way: Section 5.2 will focus on a presentation of research synthesis based on each research question. Section 5.3 will then present the recommendations based on the study's research objectives set out in the first Chapter of the Dissertation.

#### 5.2 SYNTHESIS OF RESEARCH FINDINGS

This study looked at literature that was produced earlier and integrated the study's findings with new information produced during the process of data collection and analysis. The interview and questionnaire respondents as well as documents gleaned provided valuable insights which were responding to the main three research objectives identified in the first chapter. Below I a presentation of the summaries and conclusions of the research findings per each research objective

##### 5.2.1 INVESTIGATING THE EXTENT OF INVESTMENT IN TRANSPORT AND POWER INFRASTRUCTURE IN ZIMBABWE SINCE 2000

The study found out that since 2000 the country has not embarked on many investments in power infrastructure. The investments done were just rehabilitation and no new power stations have been constructed since the 1950s. The study also found out that due to this lack of investment in both construction maintenance, only two power stations; that is Kariba and Hwange are currently feeding into the national grid while the other three; that is Munyati, Bulawayo and Harare are producing nothing.

The little investment that has taken place in terms of power infrastructure has been the rehabilitation of the Hwange and Kariba power stations. While there is a suggestion that in 2011

the Bulawayo power station was rehabilitated, there is nothing on the ground in terms of power output to explain this. The government has also invested in two highly controversial power plants; that is the Gwanda Solar project where the government paid out money but nothing was delivered as well as the Dema Diesel power plant which also had to be stopped after it proved to be more expensive and not value for money. The study also found out that there have been significant investments in rural electrification as shown by the table below

**Table 2: Percentage of rural electrification to date per province since 2002**

<b>PROVINCE</b>	<b>%GE electrified</b>
Manicaland	39
Mashonaland west	37
Mashonaland East	28
Mashonaland Central	49
Midlands	22
Matebeleland South	30
Matebeleland North	31
Masvingo	32

The study found that there was a Build Operate Transfer agreement which built a 350-kilometre railway between Beitbridge and Bulawayo in 2010, part from that the study found no other major investment in rail transport infrastructure, hence the bulk of the railway lines and coaches are in states of disrepair. The study also revealed that there was a shady deal led by Diaspora Investment Group which saw the purchase of coaches from South Africa which were incompatible with the Zimbabwean rail tracks and have since been returned.

The study found that there has been significant investment construction and resurfacing of roads in Zimbabwe however in spite of this, more than 705 of the country's roads are in poor conditions meaning there is need for more investments. In terms of Air Transport, the study found that there have been expansions of the Joshua Nkomo and Victoria Falls International Airports and no credible addition to the national airline's fleet.

## 5.2.2 ESTABLISHING HOW THE TRANSPORT AND POWER INFRASTRUCTURAL PROJECTS INVESTMENTS WERE BEING FINANCED

The study found out that there are four main ways how infrastructural projects investments were being financed in Zimbabwe. The identified ways are Debt financing, Public Private Partnership (PPPs), Government budget allocations and User charges. These funding models/ways are summarised and concluded below:

### 5.2.2.1 Debt financing

The study revealed that Zimbabwe, just like many developing countries relies on borrowing to finance its infrastructural projects particularly power infrastructure projects which are often very expensive and, in most cases, requires getting debt finance from more than one lender. The study revealed that debt finance was playing a significant role in financing transport and power projects investment in Zimbabwe. The study further gleaned that China Exim bank, was the biggest lender in terms of Zimbabwe's power and transport Infrastructure, having provided loans for the Victoria Falls airport expansion, the Kariba South Power extension project as well as the expansion of the Robert Gabriel Mugabe International Airport which was later cancelled however after the government diverted US\$10 million in the escrow account angering the Chinese. This method of finance makes the largest contribution in transport and power infrastructure development in Zimbabwe

### 5.2.2.2 Public Private Partnership (PPPs)

Despite the information of PPP projects being scant, the study revealed that it is one of the ways infrastructure in Zimbabwe was being financed. This method in Zimbabwe holds true for investments into transport infrastructure specifically road and rail as there is no evidence of the model having been used in air transport infrastructure in Zimbabwe. The study did not find any evidence of the PPP financing method being used in power infrastructure. The study found out that the Build-Operate-Transfer (BOT), and the Build-Transfer (BT), approaches are the PPP models utilised in the Zimbabwean context. The study revealed that most countries use BOT in toll road construction, however Zimbabwe decided to go it alone, and there have been suggestion that the low volumes of traffic in Zimbabwe which might not make the ventures profitable have played a part in this, however there was no conclusive evidence to support these suggestions.

#### 5.2.2.3 Government Budget Allocations

About 90% of the Zimbabwean government's budget goes towards payment of wages to civil servants. In spite of this revelation, the study found that several transport and power infrastructure projects have been financed from government budget allocations. Given that tax revenue is the main source of revenue for the government, this basically means that to an extent taxation has played a significant role in the construction of power and transport infrastructure. The budget deficit often faced by the government however undermines the role government budget allocation can play towards the financing of power and transport infrastructure.

#### 5.2.2.4 User Charges

It was revealed in the study that Zimbabwe introduced toll fees in 2009 and as of 2020, it has a total of 35 tollgates across the country. The tollgates raise revenue by charging motorists' different fees depending on the type of vehicle they drive. ZINARA, the government organisation responsible for collection of tollgate fees, collects several millions in revenue every year and is mandated to use those funds to fix the roads. Given the dilapidated state of the country's roads, the importance of toll fees as a financing source is not high. People also pay user charges for use of electricity including a 6% levy which goes towards the Rural Electrification Fund. The significant investment towards rural electrification buttresses the importance of electricity user charges to financing power infrastructure development. The low user fees paid, especially for electricity have however also called to question the contributions they make to investments in power infrastructure.

### 5.2.3 ASSESSING THE SUSTAINABILITY OF CURRENT FUNDING MODELS

The study revealed that if properly managed User charges can be the most sustainable funding model, considering the fact once the infrastructure is built, collection of user charges is perpetual, for instance once a toll plaza has been constructed then motorists will continue paying toll fees 24 hours a day, 7 days a week for its entire life. The same with electricity, where the amount paid by each user is directly influenced by how much they use the electricity. PPPs were revealed the next most sustainable model. Arguments for this are that, some PPP models do not require government to invest any money which means poor countries and or countries in debt

distress can actually develop their infrastructure by engaging private players. The user fees accruing from the infrastructure will be able to pay for its construction meaning, government will just get into an agreement with a private firm to build, operate (and recoup their investment) then transfer it to government ownership. This off course is only true for projects which have clearly discernible returns as well as through PPP models which do not require any payment from government.

The least sustainable model was debt financing. The research findings were that Zimbabwe is already heavily saddled with both domestic and external debt and therefore any funding model that involve adding to the debt distress is unsustainable. The second least sustainable funding model was government budget allocations. Government budget allocations work when the economy is growing not in the Zimbabwean situation where the economy is shrinking. The study findings were that given how Zimbabwe's wage bill gobbles about 90% of the budget, leaving only 10% for all other government expenditure, the government budget allocations cannot be a sustainable model for financing power and transport infrastructure which is notoriously pricey.

### 5.3 RECOMMENDATIONS

The study was based on predetermined research objectives and thus in light of these objectives, the following recommendations were made:

#### 5.3.1 Make more use of Public Private Partnerships

Experiences from other countries indicate success in making use of PPP for infrastructure development, for example the Suez-Canal which was built via a Built-Operate-Transfer model. Even examples from Zimbabwe such as the Beitbridge Bulawayo Railway show that if properly managed PPPs can yield significant returns in terms of investment in infrastructure. The National Railways of Zimbabwe was at one point a major player in the commerce in the SADC region, meaning that there are plenty of Private players who can be partnered with to revamp the NRZ and generate significant revenue for the country.

One of the reasons emerging from the study for low uptake of PPPs in Zimbabwe, is the high required capital outlay. The researcher recommends that the government or local authority

whoever is responsible for the particular infrastructure in question breaks down the investment project into smaller segments hence making the capital outlay less daunting and chances of recouping investment higher and by so attracting more partners willing to invest. An example is the Masvingo-Harare highway, if the project is split let's say into four segments and four different investors are partnered with it will reduce the initial cost and thus be more attractive to investors.

### 5.3.2 Efficiency in Infrastructure management

This recommendation is closely linked to the one above. As revealed by the study, ZINARA has been rocked by corruption and mismanagement scandals and so far, there is really nothing on the ground to justify the millions the organisation is taking in toll fees, one way is to handover the management of the toll gates to private players. Private players will run the toll roads using proper business principles and since they will be after profit, they will increase efficiency and quality of service, to justify their profit seeking. The government should then enter into contracts with private players which have clear targets and failure to achieve the targets will lead to forfeiture of the operating licence. This will definitely push standards up and lead to actual investment in the roads.

### 5.3.3 Tackling Corruption

Corruption has resulted in the loss of millions of US dollars meant for power and transport infrastructure. Cases in point are the Dema Diesel Plant which was awarded to a company which had not even participated in the tender process as well Gwanda Solar Project where a politically connected person was awarded a tender, got several millions from the government and produced nothing and actually walked free. Prosecuting all corrupt people and putting in place stiffer penalties will lead to efficiency in the award of tenders as well as delivery by the people/organisations who end up winning the tenders. Tackling corruption will also avoid cases like the embezzlement of funds at Air Zimbabwe, CMED among other parastatals in the Ministry of Transport as revealed by the Auditor general's report.

### 5.3.3 Generate more internal revenue

Domestic resource mobilisation is gaining traction in the socio- economic development circles and Zimbabwe will be served well by focusing on increasing their internal resource generation capacity. Below are the recommended ways they can do this:

- Plugging leakages- lots of mineral revenue is being lost to smuggling and looting
- Avoiding unnecessary tax exemptions, for example the tax break given to Chinese tech giant Huawei.



## BIBLIOGRAPHY

- AfDB (2012). *Briefing Notes for AfDB's Long-Term Strategy – Briefing Note 6: Inclusive Growth Agenda*. Tunis, African Development Bank.
- African Development Bank (2011) *Infrastructure and Growth in Zimbabwe*.
- African Development Bank (2019) *ZIMBABWE INFRASTRUCTURE REPORT 2019*.
- Aghion, P. and Nick Bloom, Richard Blundell, R. G. and P. (2014) 'Competition and Innovation : An Inverted-U Relationship Howitt Stable', *The Quarterly Journal of Economics*, 120(2), pp. 701–728.
- ADB (2012). *Asian Development Outlook 2012: Confronting Rising Inequality in Asia*. Mandaluyong City, Philippines, Asian Development Bank.
- Alemayehu, G. (2006) *Openness, Inequality and Poverty in Africa*.
- 'An Overview of Development Financial Institutions in India' (2006).
- Attridge, S. et al. (2019) *THE IMPACT OF DEVELOPMENT FINANCE INSTITUTIONS*. London.
- Berg, A. and Ostry, J. (2011). 'Equality and Efficiency: Is there a trade-off between the two or do they go hand in hand?', *Finance and Development*, 48(3), 12–15.
- Bhoroma, V. (2019) *Achieving self-sufficiency in Zim power generation, Zimbabwe Independent*. Available at: <https://www.theindependent.co.zw/2019/05/24/achieving-self-sufficiency-in-zim-power-generation/> (Accessed: 29 January 2020).
- Boote, D.N. and Beile, P. 2005 Scholars before Researchers: On the Centrality of the Dissertation Literature Review in Research Preparation. *Educational Researcher*. 3-15. Available: <https://doi.org/10.3102/0013189X034006003> (Accessed on 18 February 2020)
- Briceno-Garmendia, Cecilia M.; Foster, Vivien. 2009. *Africa's infrastructure : a time for transformation (English)*. Africa development forum. Washington, DC: World Bank. <http://documents.worldbank.org/curated/en/246961468003355256/Africas-infrastructure-a-time-for-transformation>
- Caprio; Laeven, Luc and Levine, Ross. (2003). Governance and Bank Valuation. *Journal of Financial Intermediation*. 16. 584-617. 10.1016/j.jfi.2006.10.003.

Bracking, S and Ganho, A (2011). Investing In private sector development: what are the returns?.

Chogugudza-Sithole, E. (2012) *THE ROLE OF INFRASTRUCTURE DEVELOPMENT IN ECONOMIC GROWTH IN ZIMBABWE ( 1981-2008 )*. University of Zimbabwe.

Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and Conducting Mixed Methods Research* (2nd ed.). London: Sage Publications Ltd.

Dagdeviren, H., van der Hoeven, R. and Weeks, J. (2000). 'Redistribution matters: Growth for Poverty Reduction', *Employment Paper*, No. 2000/10. Geneva, International Labour Organization.

Dalberg Global Development Advisors (2010) 'The Growing Role of the Development Finance Institutions in International Development Policy', (July).

De la Fuente, A. and A. Estache. (2004). Infrastructure Productivity and Growth: A quick survey. Washington DC., WBIGF, mimeo.

Dickinson, T. (2016) 'Development Finance Institutions : Profitability Promoting Development \*'.

Dube, C. and Chigumira, G. (2010) *ThescopeforPPPsinZimbabwe\_ Revised20-06-11*. ZWPS 03/10. Harare.

European Investment Bank (2004) 'The EIB's role in public-private partnerships (PPPs)'.

Fola, M. R. (2019) 'Implications of financing models on infrastructure projects'.

Gaal, H. O. and Afrah, N. A. (2017) 'Lack of Infrastructure : The Impact on Economic Development as a case of Benadir region and Hir-shabelle , Somalia', *Developing Country Studies*, 7(1), pp. 49–55.

Gagare, O. and Kairiza, T. (2019) 'Chinese suspend US\$1,3bn projects', *Zimbabwe Independent*, 24 October.

Gardner, D. and Wright, J. (2011) 'Project Finance', *Project Finance*. HSBC, pp. 1–13.

Global Construction Review (2019) *China freezes three Zimbabwean projects after government raids airport account*, *Global Construction Review*. Available at: <http://www.globalconstructionreview.com/news/china-freezes-three-zimbabwean-projects-after-gove/>

(Accessed: 29 January 2019).

Jerome, A. (2011) 'Infrastructure, Economic Growth and Poverty Reduction in Africa', *Journal of Infrastructure Development*, 3(2).

Jhingan, M. L. (2011) *The Economics of Development and Planning*. Delhi: Vrinda Publications (P) Ltd.

Jouanjean, M. and Willem, D. (2013) 'The role of development finance institutions in promoting jobs and structural transformation : a quantitative assessment'.

Hountondji, P. J. (2002) "Knowledge Appropriation in a Post-colonial Context", in Hoppers, C. O. (ed.) *Indigenous Knowledge and the Integration of Knowledge Systems: Towards a Philosophy of Articulation*, pp. 23–38.

Kanbur, R. (2000). 'Income Distribution and Development' in A.B. Atkinson and F. Bourguignon (eds), *Handbook of Income Distribution, Vol. 1*. Amsterdam, North-Holland

Kunambura, A. (2018) *Transport Ministry scandals exposed, The Zimbabwe Independent*. Available at: <https://www.theindependent.co.zw/2019/07/05/transport-ministry-scandals-exposed/> (Accessed: 2 February 2020).

Kwakkenbos, J. and Romero, M. J. (2013) 'Engaging the private sector for development : The role of Development Finance Institutions ?', pp. 25–30.

Lema, N. M. (2007) 'An Assessment of the Build - Operate - Transfer ( BOT ) Model for Infrastructure Project Financing in Tanzania'.

Lemma, A. F. (2015) *Development Impact of DFIs What are their impacts and how are they measured ?*

Li, H. and Zou, H. (1998). 'Inequality is not Harmful for Growth: Theory and Evidence', *Review of Development Economics*, Vol. 2, Issue 3: 318–334.

Llanto, G. M. (2008) 'Build-Operate-Transfer for Infrastructure Development: Lessons from the Philippine Experience', in Kumar, N. (ed.) *International Infrastructure Development in East Asia – Towards Balanced Regional Development and Integration*. Chiba: IDE-JETRO, pp. 319–359.

Machivenyika, F. (2019) '2020 infrastructure budget set at \$25bn', *The Herald*, 22 November.

- McRae, S (2015) "Infrastructure Quality and the Subsidy Trap." *American Economic Review*, 105 (1): 35-66.
- Millar, D., Apusigah, A. A. and Boonzaaijer, C. (2008) 'Endogenous Development in Africa Towards a Systematisation of Experiences'.
- Nene, N. (2011) *Budget Briefing*. South Africa.
- Neuman, W. (2014) *Social Research Methods: Qualitative and Quantitative Approaches*. Pearson, Essex, UK.
- Ogbuiyi, S and Okpe, I (2013). Evaluation of Library Materials Usage and Services in Private Universities in Nigeria. *Kuwait Chapter of Arabian Journal of Business and Management Review*. 2. 33-41. 10.12816/0001225.
- OECD (2019) *Tax Revenue, OECD DATA*. Available at: <https://data.oecd.org/tax/tax-revenue.htm> (Accessed: 8 January 2020).
- Otto, A. (2019) *African States Should Learn From Suez Canal Financing Experience - Egypt, Uganda Radio Network*. Available at: <https://ugandaradionetwork.net/a/story/african-states-should-learn-from-suez-canal-financing-experience-egypt-> (Accessed: 26 January 2020).
- Parliament of Zimbabwe (2018) 'Factsheet: National Rural Electrification Programme In Zimbabwe', pp. 1–7.
- Paulson, Anna L. & Townsend, Robert, 2004. "Entrepreneurship and financial constraints in Thailand," *Journal of Corporate Finance*, Elsevier, vol. 10(2), pages 229-262, March.
- Pinto, J. M. (2017) 'What is project finance?', *Investment Management and Financial Innovations*, 14(1), pp. 200–210.
- Ranieri, R. and Ramos, R. A. (2013) *INCLUSIVE GROWTH* : 104. Brasilia.
- Renda, A. and Schrefler, L. (2006) 'Public-Private Partnerships- Models and Trends in the European Union'. Brussels: European Parliament.
- Rioja, F., & Valev, N. (2004). Finance and the sources of growth at various stages of economic development. *Economic Inquiry*, 42(1), 127-140.
- Romero, M. J. (2014) *A private affair: Shining a light on the shadowy institutions giving public support to*

*private companies and taking over the development agenda.* Brussels.

Rousseau, Peter L. and D'Onofrio, Alexandra, *Monetization, Financial Development and Growth: Time Series Evidence from 22 Countries in Sub-Saharan Africa* (January 1, 2013). Available at SSRN: <https://ssrn.com/abstract=2025656> or <http://dx.doi.org/10.2139/ssrn.2025656>

Runde, D. (2014) *Development Finance Institutions Come of Age*, *Forbes*. Available at: <https://www.forbes.com/sites/danielrunde/2014/10/17/development-finance-institutions-come-of-age-dfi/#66e9a9d35c2c> (Accessed: 18 January 2020).

Saunders, M. N., & Lewis, P. (2012). *Doing research in business & management: An essential guide to planning your project*. Pearson.

Saunders, M.N.K., Lewis, P. and Thornhill, A. (2003) *Research methods for business students*(3rd Ed). Harlow: FT Prentice Hall

Scott, W. R. (2007) *Institutions and Organizations: Ideas and Interests*. Thousand Oaks, CA: Sage Publications,.

Shakil Faruqi, (2015). "The Role of DFIs in Industrial Growth and Transformation: Why the East Asian Countries Succeeded and Pakistan Did Not," *Lahore Journal of Economics*, Department of Economics, The Lahore School of Economics, vol. 20(Special E), pages 13-30, September.

Sibanda, N. (2018) *US\$400m mega deal poser: NRZ equipment incompatible*, *Zimbabwe Independent*. Available at: <https://www.theindependent.co.zw/2018/05/24/us400m-mega-deal-poser-nrz-equipment-incompatible/> (Accessed: 3 February 2020).

Stiglitz, J.E. and Squire, L. (1998). 'International Development: Is it Possible?', *Foreign Policy*, Issue 110: 138–151.

Tata &Howard (2018) *A history of Dams, from ancient times to today*, *Tata & Howard*. Available at: <https://tataandhoward.com/a-history-of-dams-from-ancient-times-to-today/> (Accessed: 23 January 2020).

The African Union Commission (2015) *AGENDA 2063: The Africa We Want FIRST TEN-YEAR IMPLEMENTATION PLAN*.

'The role of development finance institutions in tackling global challenges' (2011) *te Velde, Dirk Willem*. London: Overseas Development Institute.

The World Bank (2012) *BOT - PPP in Infrastructure Resource Center, PUBLIC-PRIVATE-PARTNERSHIP LEGAL RESOURCE CENTER*. The World Bank Group. Available at: <https://ppp.worldbank.org/public-private-partnership/> (Accessed: 22 January 2020).

The World Bank Group (2014) 'A Checklist for Public-Private Partnership Projects 1'. Washington DC: The World Bank Group, pp. 1–14.

Todaro, M. P. and Smith, S.C. (2009) *Economic Development*, Harlow: Addison Wesley, pp. 49-56 and 485-6.

United Nations Development Programme (2015) *What are the Sustainable Development Goals?*, UNDP.org. Available at: <https://www.undp.org/content/undp/en/home/sustainable-development-goals.html> (Accessed: 26 January 2020).

United Nations Economic and Social Commission for Asia and the Pacific (no date) *Build-Operate-Transfer (BOT), A Primer to Public-Private Partnerships in Infrastructure Development*. Available at: [https://www.unescap.org/ttdw/ppp/ppp\\_primer/2253\\_b\\_buildoperatetransfer\\_bot.html](https://www.unescap.org/ttdw/ppp/ppp_primer/2253_b_buildoperatetransfer_bot.html) (Accessed: 24 January 2020).

Willem, D. (2011) 'The role of development finance institutions in tackling global challenges'. London: Overseas Development Institute.

World Bank (2015) 'World Development Indicators'. Washington DC: World Bank.

Yoshino and Nakahigashi Masaki (2000), *"The Role of Infrastructure in Economic Development"* - preliminary Version. Keio University, Japan

Zhou, G. and Chilunjika, A. (2018) 'Article-Mobilising Domestic Revenue through Toll Gates in Zimbabwe- Mobilising Domestic Revenue through Toll Gate Systems in Zimbabwe', (October).

ZIMCODD (2016) *Cash Crisis, Bond Notes and the Zimbabwe's Economy: The Real Problem*. Harare.

# Appendices

## APPENDIX A: Questionnaire

My name is Runyararo Memory Kaparamula, a post graduate student at the University of Zimbabwe. I am currently studying for a Master of Business Administration degree. In accordance with the requirements of the degree program, I am undertaking a study on the Role of Development Finance Institutions to Zimbabwe's economic growth, specifically focusing on Transport and Power infrastructure development. All information you provide shall be solely used for academic purposes.

Please tick where appropriate

1. How many years have you worked in the development sector? \_\_\_\_\_
2. what is the extent of investment in Zimbabwe's transport Infrastructure since the year 2000?

a) Road                      Good\_\_\_\_\_ Moderate\_\_\_\_\_ Poor\_\_\_\_\_

b) Rail                        Good\_\_\_\_\_ Moderate\_\_\_\_\_ Poor\_\_\_\_\_

c) Air                         Good\_\_\_\_\_ Moderate\_\_\_\_\_ Poor\_\_\_\_\_

- a) How were these investments financed?

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- b) Do you think these ways or models of funding are sustainable?

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3. what is the extent of investment in Zimbabwe's Power Infrastructure since the year 2000?

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a) How were these investments financed?

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b) Do you think these ways or models of funding are sustainable?

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## APPENDIX B: Interview Guide

My name is Runyararo Memory Kaparamula, a post graduate student at the University of Zimbabwe. I am currently studying for a Master of Business Administration degree. In accordance with the requirements of the degree program, I am undertaking a study on the Role of Development Finance Institutions to Zimbabwe's economic growth, specifically focusing on Transport and Power infrastructure development. All information you provide shall be solely used for academic purposes.

1. what is the extent of investment in Zimbabwe's transport Infrastructure; that is road, rail and air since the year 2000?
  - c) How were these investments financed?
  - d) Do you think these ways or models of funding are sustainable?
  
2. what is the extent of investment in Zimbabwe's power Infrastructure since the year 2000?
  - a. How were these investments financed?
  - b. Do you think these ways or models of funding are sustainable?