EVALUATING THE IMPACT OF THE UPGRADES TO THE FACILITIES AT NAMIBIA'S LARGEST INTERNATIONAL AIRPORT

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by

Aune Nyanyukweni Emvula

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Supervised by: Associate Professor Glen S. Holman

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ABSTRACT

Infrastructure development is vital and plays a big role in economic development of any state as high and sustainable economic growth requires modern and reliable infrastructure. However, due to risks related to time, quality, cost and scope, infrastructure investments do not always result in benefits that fuel economic development. The study identified two problem areas: (a) the current airport infrastructure is not sufficient to support aviation expansion as well as other modes of transport as per the NDP4; and (b) the airport was faced with a downgrade in its firefighting category during July 2014 following the DCA site audit findings.

This study was conducted to establish whether funds that were invested for the upgrade and renovation of the HKIA facilities in the 2013/2014 year resulted in improvements that fuel economic and social development in Namibia; and to explore whether participants in the study perceive the investment as money well spent. The study uses a mix of qualitative and quantitative methodologies in order to allow the cohort of insight into the subject matter.

Themes and propositions materialised from the data that back the following conclusions: (1) it is the participants' perception that the project enhanced the airport infrastructure and complemented other core elements which could be met to grow economic and social development further; (2) there is a close correlation between passengers/aircrafts movements and the investment made to the airport; (3) the upgrades to the airport resulted in its ability to demonstrate firefighting capabilities and its compliance to the ICAO firefighting requirements; (4) the project lacked involvement by the Namibian government who is the sole shareholder of the NAC and a financier of the HKIA project; (5) there is no aviation policy in the country to guide the aviation sector in its activities; and (6) the investment levels at the HKIA are considered too low as the current terminal building area is unable to complement the growing demand at HKIA. Most importantly, HKIA is a gateway for tourists and investors into Namibia, and requires excessive strategic planning and transformation in terms of its infrastructure, in order to carry out this function efficiently and in a sustainable manner. Therefore, there is a need for a funding mechanism that is sustainable to further develop the HKIA and consequently the economy.

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GLOSSARY OF TERMS

ACSA	Airports Company South Africa
AFD	Agence Française de Développement
AfDB	African Development Bank
ATAG	Air Transport Action Group
DCA	Directorate of Civil Aviation in Namibia
GAUTRAIN	Gautrain is an 80-kilometre (50 mi) mass rapid transit railway system in Gauteng, South Africa, which links Johannesburg, Pretoria, Ekhuruleni and O. R. Tambo International Airport.
GDP	Gross Domestic Product
HKIA	Hosea Kutako International Airport [Namibia's largest international airport]
HPP	Harambee Prosperity Plan [a Namibian targeted action plan to accelerate development in clearly defined priority areas].
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IRR	Internal Rate of Return
NAC	Namibia Airports Company
NDP4	Namibia's Fourth National Development Plan
NGOs	Non-governmental organizations
NPC	Namibia Planning Commission
NPV	Net Present Value
PIDA	Programme for infrastructure development in Africa
PPP	Public Private Partnership
ROE	Return on equity
ROI	Return on investment
SDGs	Sustainable development goals
UNESCO	United Nations Educational Scientific and Cultural Organization
VAT	Value Added Tax
Vision 2030	Namibia's policy framework for long-term national development

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1. INTRODUCTION

1.1 OVERVIEW

According to Romp and De Haan (2005), infrastructure development plays a major role in the economic development of any nation, as high and sustainable economic growth requires modern and unfailing infrastructure. Romp and De Haan (2005) emphasise that in the absence of such infrastructure, the economic value chain is inclined to be relaxed, unreliable, and possibly too costly. Furthermore, Beckers and Stegemann (2013) state that insufficient infrastructure presents one of the biggest obstacles for economic growth and social development worldwide.

However, due to risks related to time, quality, cost and scope, infrastructure investments do not always result in benefits that fuel economic development. Large infrastructure projects suffer from significant under management of risk throughout the life cycle of a project, as the management of risk is not always properly accounted for in their planning (Beckers and Stegemann, 2013). In addition, Romp and De Haan (2005) acknowledge that although infrastructure development is important and necessary for industrialisation and economic growth, the desire for growth does not necessarily mean higher or increased need for infrastructure, and more infrastructure does not necessarily translate into economic growth.

Namibia's Fourth National Development Programme 2012 (NDP4, 2012) indicates that current infrastructure investment levels are insufficient to support higher economic growth and maintenance programmes, especially in the transport sector.

Accordingly, NDP4 (2012), further indicates the need for focused investment in strategic infrastructure developmental programmes and projects that would involve creating long-term economic benefits to the country, equal to or greater than the initial and continued investment required in such infrastructure. The NDP4 (2012) specifically singled out Hosea Kutako International Airport (HKIA) to be upgraded as a targeted course of action. Furthermore, in 2014, the Namibian Minister of Works and Transport, Mr Erkki Nghimtina, announced that

initiatives of his ministry are geared towards a modern and reliable infrastructure, which is critical for high and sustained economic growth.

Although the investment level in the transport sector is still low according to the Trading Economics website (see Table 2.1. GDP, population and cost of airports on page 26 of this study report), the Harambee Prosperity Plan (HPP) explained that more money has been subsequently invested into the upgrades of the Namibian infrastructure for transport. The HPP is aimed at accelerating development in the country, more clearly and in more defined priority areas. The HPP is thus not intended to replace, but complement, the long-term goal of the NDPs and Vision 2030 (Harambee Prosperity Plan, 2016). The HPP (2016) further illustrates that the development of transport infrastructure has been prioritised in all NDPs, but it was only in NDP4 that the audacious goal of becoming a logistics and distribution hub was adopted. In this regard, the Namibian government took out long-term foreign loans of approximately N$2.2 billion for the purpose of advancing infrastructure projects. Included in the N$2.2 billion was an amount of N$135.7 million for airport infrastructure development to enable economic growth.

The Air Transport Action Group (ATAG), on its website, outlines the economic importance and social benefits of air transport or aviation as follows:

i. Aviation provides the only worldwide transportation network, which makes it essential for global business and tourism;
ii. Aviation transports close to 2 billion passengers annually and 40% of interregional exports of goods (by value);
iii. 40% of international tourists now travel by air;
iv. The air transport industry generates a total of 29 million jobs globally (through direct, indirect, induced and catalytic impacts);
v. Aviation's global economic impact (direct, indirect, induced and catalytic) is estimated at US$2,960 billion, equivalent to 8% of the world Gross Domestic Product (GDP);

vi. The world's 900 airlines have a total fleet of nearly 22,000 aircraft. They serve approximately 1,670 airports through a route network of several million kilometers managed by around 160 air navigation service providers; and

vii. 25% of all companies' sales are dependent on air transport. 70% of businesses report that serving a bigger market is a key benefit of using air services.

There are two international airports in Namibia, with Hosea Kutako International Airport (HKIA) being the largest. HKIA is situated 45 kilometres (km) east of Windhoek, the capital city of Namibia, and it is an airport category ICAO No 4E. The HKIA has two runways, with the main runway covering 4,532 meters in length and a parallel taxiway of 2,720 meters in length. The secondary runway is 1,525 meters long.

The HKIA is owned and managed by the Namibia Airports Company (NAC), a state owned enterprise which was established to ensure the:

i. Arrival, surface movement, parking or departure of aircrafts;

ii. Servicing of aircrafts, including the supply of fuel and lubricants; and

iii. Ground handling of aircrafts, passengers, baggage and cargo.

According to the Namibia Airports Company (2015), the HKIA handles over 800,000 passengers annually and about 17,514 aircraft movements. HKIA has daily connections to Johannesburg and Cape Town, and frequent flights to Frankfurt, Munich, Accra, Luanda, Maun and Victoria Falls. The airlines that have been landing at HKIA are Air Namibia, South African Airways, Air Link, TAAG Angola Airlines, and British Airways operated by COMAIR. Condor Airways from Germany commenced the Windhoek route during July 2016, whilst Qatar Airlines started flying from Doha to Windhoek at the end of September 2016. The KLM Royal Dutch Airlines started flying to Windhoek from Amsterdam in October 2016. In addition, the Ethiopian Airline also touched down at HKIA for the first time during October 2016.

1.2 PROBLEM STATEMENT

The Namibia Airports Company (2015) stipulates that it values the importance of developing and maintaining good infrastructure and facilities at its airports to maintain world-class standards. It further states that the company has been undertaking several strategic infrastructure and commercial development projects with the aim of improving its overall service delivery. This is ideal for Namibia, which aims to become a logistics and distribution hub by 2030, as indicated in the country's Vision 2030 policy framework for the long-term development of Namibia.

On the basis of the above overview, the following problem areas were identified:

1.2.1 The current airport infrastructure is not sufficient to support aviation expansion as well as other modes of transport (NDP4, 2012). Therefore, the national strategy is to ensure airport development and maintenance as well as to expand airport infrastructures to support development of other modes of transport. Thus, extensive investment will have to be made in transport infrastructure, including aviation (NDP4, 2012).

1.2.2 In addition to the NDP4 specification on upgrades to HKIA, the airport was also faced with a downgrade in its firefighting category during July 2014. The HKIA was downgraded from Category 9 to Category 5 by the Directorate of Civil Aviation ("DCA") in adherence to the International Civil Aviation Organization ("ICAO"), following the DCA site audit findings. The downgrade resulted from:

a. The firefighting equipment of HKIA that was old and not functional;
b. Lack of staff advanced training in firefighting; and
c. Shortage of staff for firefighting.

The downgrading of the HKIA to Category 5 meant that bigger aircrafts such as A330 airbus would no longer be allowed to land at HKIA due to international regulations.

It is against this background that a capital project was carried out on the airport service infrastructure over the last few years. The project was to upgrade and renovate or improve the terminal building, bulk water reticulations for firefighting, and expand the public parking at HKIA. The project resulted in the refurbishment of a modern duty-free restaurant and VAT tax refund facilities, and an extension of the public parking. In addition, eleven (11) firefighting trucks, new scanners, and metal detectors were purchased and installed. The cost breakdown for the project is summarised under Table 1.1 below.

Table 1.1: Project cost on HKIA upgrades to facilities

Activities	**N$ Million**
Renovation of key areas to comply with DCA findings	3.9
Long-term parking expansion	1.5
Bulk water reticulations for firefighting	16.8
11 Firefighting trucks	88.0
New scanners and metal detectors	48.0
TOTAL	**158.2**

1.3 RESEARCH QUESTION AND SCOPE

The objective of this study is:

> **"To establish whether funds that were invested for the upgrade and renovation of the HKIA facilities in the 2013/2014 year resulted in improvements that fuel economic and social development in Namibia; and to explore whether study participants perceive the investment as money well spent."**

The analysis will test the following hypotheses:

1.3.1. Whether study participants perceived that the funds invested in the upgrades were well spent;

1.3.2. Whether the upgrade to facilities at HKIA resulted in the increase in travel demands, specifically incoming and outgoing traffic;

1.3.3. Whether upgrades have improved air traffic flow; and

1.3.4. Whether there is evidence of performance improvements in firefighting capability.

The independent variable:

For quantitative measures, the independent variable which is the main emphasis of this research was identified as the investment in infrastructure at HKIA in Namibia.

The dependent variables:

A dependent variable is the variable that is affected by a change in the independent variable. The dependent variables for this research were:

a. Incoming and outgoing traffic for number of passenger movement;
b. Incoming and outgoing traffic for number of air crafts; and
c. Firefighting capability.

1.4 SIGNIFICANCE OF THE STUDY

The NDP4 (2012) states that modern, reliable infrastructure is critical for high and sustained economic growth. Without infrastructure, almost everything in the economic value chain tends to be slower, less reliable, and more expensive than necessary (NDP4, 2012).

Capitanul, Cosenza, Moudani and Camino (2014) states that an economically sustainable industry has to cover the costs of operations and provide a reasonable return on investment so that capital can be renewed. However, if an airport makes an investment in additional capacity, regardless of whether it is needed, its regulated asset base will increase and it will then be permitted by the regulator to increase its prices (Forsyth, 2007). Hence, the development functions assigned to the airline industry include creating high-paying jobs, deepening the technological sophistication of national economies, promoting tourism, facilitating international trade, contributing to national defence, and instilling a sense of national pride (Bowen, 2000). Bowen (2000) further states that investments in airport capacity have also been complemented by a host of efficiency improvements and amenities designed to distinguish the airport from its rivals. In addition, Forsyth (2007) outlines that governments are keen to ensure that airport

capacities are more than adequate, in order to attract more traffic. Airports are therefore seen by many governments as a stimulus to economic activities and as such, governments will induce airports to have too much rather than too little or just enough capacity.

These theories contributed to the tests and research that this study undertook in order to determine whether the investment of funds for the upgrade and renovation of the HKIA facilities during the 2013/2014 year resulted in improvements that fuel economic and social development in Namibia; and to explore whether participants perceive the investment as money well spent.

In a nutshell, when an airport pursues renovating and/or expanding its facilities, it requires large amounts of capital to finance such infrastructure development. The funding can be raised from public fund sources or private capital markets, which include both loans and equity. As indicated by Capitanul, Cosenza, Moudani and Camino (2014), the construction of an airport or extension of an existing one requires huge investments, which may consider public private partnerships in order to make such projects feasible. Therefore, an effective collaboration of the public and private markets is needed, as infrastructure financing gap cannot be tackled by the public or private sectors in isolation (Mezui and Hundal, 2013).

The NDP4 (2012) indicate that the current Namibian investment levels into infrastructure are insufficient to support higher economic growth of the country; and maintenance programmes, especially in the transport sector, are seriously lagging behind. The NDP4 (2012) further states that if investment in infrastructure is not increased, industries across the board will be affected, including the nascent transport and logistics sector, the tourism and hospitality sector, manufacturing sector, agricultural sector, and the mineral sector, - all of which have a high potential for economic and social development. The NDP4 (2012) and consequently the HPP (2016) specifically emphasised that the HKIA runway and terminal be upgraded. Furthermore, the HPP (2016) indicated that it was during the period of the NDP4 that significant progress had been made with respect to the upgrade of security related infrastructure at HKIA.

This study builds a case out of the HKIA 2013/2014 project and evaluates how the project contributed to the objectives of the NDP4 and subsequently Vision 2030 i.e. the impact of the project on performance enhancement as well as economic and social development in Namibia. The research problem ultimately provides an assessment of the impact of the overall airport enhancement project and derives lessons for other large government/developmental projects nationwide. The study embarks on a widespread and robust investigation of various variables. The results from the study could also derive lessons for the next planned HKIA development project and other large government / developmental projects nationwide. The desired outcome of the NDP4 is for Namibia to have a well-functioning, high quality transport infrastructure connected to major local and regional markets by the year 2017 (NDP4, 2012).

1.5 ORGANISATION OF THE STUDY

This research paper is organised in six (6) chapters. The chapters and content analysis applicable to the paper are outlined herewith.

Chapter 1 – Introduction: An overview and background to the research problem is provided in this chapter. The chapter starts off by giving a background to the study which enables the reader to understand what the research is about and also why it was deemed necessary for it to be conducted. The research problem is discussed and the research question which sets the scene for the study is formulated. Furthermore, aspects concerning the research objectives and hypotheses are elaborated upon in this section and the justification or significance of the study is also explained.

Chapter 2 – A Namibian perspective on infrastructure development: This chapter provides a general synopsis of the Namibian perspective contextualised with the research environment. The chapter also provides a virtual view on the African continent and a universal viewpoint in terms of airport developments.

Chapter 3 – Literature review: This chapter outlines a comprehensive literature review on the key theme of the thesis. The review of the investment of funds into airport infrastructure developments provides a practical foundation for the research problem by providing an academic perspective to the exceptional features that would diminish the research problem. The literature review constructs the theoretical context essential to the investigation of the study.

Chapter 4 – Research Methodology: This chapter elaborates on the aspects pertaining to the strategy and approach that was used, the research design, data collection and analysis methodology. The limitations experienced by the study are also highlighted.

Chapter 5 – Data collection, analysis and interpretation of results: This chapter presents, analyses and interprets the data that was gathered from the research survey questionnaire.

Chapter 6 – Recommendations and conclusion: This chapter concludes the study. Key aspects pertaining to the research are revisited in this section. The results of the study and findings are brought into the framework of the whole research, recommendations are made and concluding correlations are drawn.

1.6 CONCLUSION

This chapter has brought an underlying explanation of the importance of infrastructure development for economic development, which resulted in a study being conducted to prove whether the investment of finance in the upgrade and renovation of HKIA infrastructure did, in fact, result in improvements that fuel economic and social development in Namibia, and whether participants perceived that the funds invested were well spent. The rationale for the study was to gain an understanding of the value or return on investment, so as to comprehend the effect the project had on the country's economic and social development upon completion of the upgrades and enhancement of HKIA.

Chapter two (2) will provide an overview of the Namibian outlook of the study setting while chapter three (3) will offer a synopsis of the literature review on the study subject.

2. INFRASTRUCTURE DEVELOPMENT: A NAMIBIAN PERSPECTIVE

2.1 BACKROUND OF NAMIBIA

Namibia is one of the least populated countries in Africa, with a population size of about 2.3 million people as per the 2015 Trading Economics data. The country is divided into 14 regions and has a land surface of 824,292 km^2. Namibia is located in the southern part of the African continent, just north-west of South Africa. The other neighbouring countries include Botswana, which is situated on the eastern side, Zambia and Angola situated in the north, and the Atlantic Ocean adjacent to the western part of the country. Historically, Namibia was colonised, both politically and economically, by South Africa and attained its independence in 1990. However, the country still depends greatly on the South African economy, and its currency (the Namibian Dollar "N$") is pegged to the South African Rand on a one-on-one basis. The Namibian population is unevenly distributed on the ground as the bulk of the inhabitants reside in the northern part of the country and in Windhoek, the capital city. Figure 2.1 below illustrates the Namibian map and its neighbouring countries.

Figure 2.1: Namibian Map

Source: Southern-Africa Arroukatchee

The country's natural beauty allows Namibia to be a major tourist attraction, especially in conjunction with Botswana and South Africa, and for this reason it is a tourist destination in Africa. The indigenous people of Namibia take pride in the unique ecological landscapes of the country. Namibia's natural resources and its features such as the desert meeting the sea along the Swakopmund-Walvis Bay road present opportunities to the country as a tourist destination and inevitably contribute to the goal of becoming a logistics and distribution hub. It is thus important that value is added to the country's infrastructure for the accomplishment of economic benefit from there. Despite the fact that Namibia has been re-categorized from a lower-middle income to a middle-income level country in recent years, it is still reported to have a significant inequality income distribution between the privileged and the underprivileged.

2.2 NAMIBIA INFRASTRUCTURE DEVELOPMENT

Namibia established a National Planning Commission ("NPC") in terms of article 129 of the Namibian Constitution. The NPC is specifically tasked to outline and plan the priorities and direction of national development. Public infrastructure, as the NPC (2015) emphasised, is that component of the economy which creates an enabling environment for the smooth and efficient functioning of economic activities.

Namibia's development plans, as a developing country, are guided by certain foundation issues as identified by the NDPs. The fourth NDP (2012), which is under the custodian of the NPC, has identified five (5) basic economic development enablers that the government wants to focus on: institutional environment, education and skills, health, extreme poverty, and public infrastructure. The NPC (2015) highlighted that these are essential but not necessarily sufficient conditions for economic development. Although the presence of these enablers may not translate into rapid development, without them, sustainable development is virtually impossible (NPC, 2015). Thus, in order to generate more economic benefits, participation in developmental activities should be required not only from the public sector, but also the private sector. Namibia's goal to have a well-functioning, high quality transport infrastructure connected to major local and regional markets has been highlighted in the country's NDP4. The NDP4 (2012) indicates that transport and communication is expected to create 3,948 jobs between 2012 and 2017. It further highlights that in order for its targets to be realised fully, there is a need to make a substantial investment in the economy. In addition, the NDP4 (2012) requires that Namibia develop a funding mechanism in order to ensure adequate funding for infrastructure development. The development of transport infrastructure is aimed at making Namibia the preferred centre and corridor for southern and central African logistics operations, while at the same time enhancing the economic and industrialisation activities within Namibia (Informante, 2014).

The NDP4 (2012) has, so far, put measures in place to accelerate economic growth, and outlined that it will concentrate on the implementation of development plans, as well as observing and

appraising developmental activities in the country. Monitoring and evaluation is critical for the attainment of the benefits required from any project, including infrastructure developmental projects, as it enables one to assess whether the project is achieving its set goals.

The Namibian Vision 2030, as a policy framework, calls for: "…a vision that will take Namibia from the present into the future and guide the country to make deliberate efforts to improve people's quality of lives to the level of their counterparts in the developed world by the year 2030". The policy highlights the transport sector as critical to the development of all sectors of the economy, and in the promotion of national as well as regional integration. The policy further highlights the overall goals of Vision 2030 as (1) high and sustained economic growth, (2) employment creation, and (3) increased income equality.

Furthermore, in 2016, the Namibian government introduced an action plan called the Harambee Prosperity Plan (HPP), which is aimed at accelerating development in the country more clearly and in more defined priority areas., The Namibian President, His Excellency Dr Hage Geingob (2016) emphasised that the HPP is not meant to replace the NDPs, but rather to complement the long-term goal of the NDPs and Vision 2030. Development of transport infrastructure has been prioritised in all NDPs, but it was only in NDP4 that the audacious goal of becoming a logistics and distribution hub was adopted (HPP, 2016).

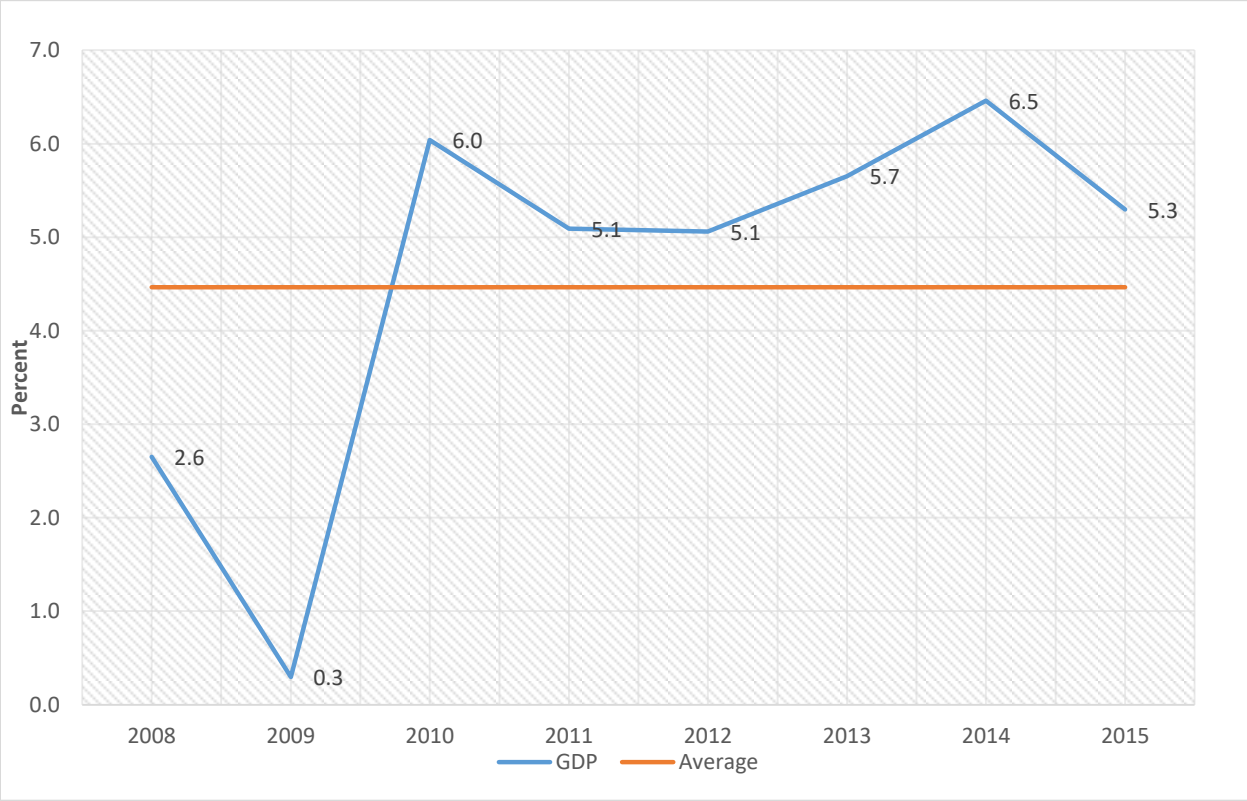
2.3 ECONOMIC GROWTH

Investopedia describes the gross domestic product (GDP) as one of the primary indicators used to gauge the health of a country's economy. It represents the total dollar value of all goods and services produced over a specific time period; one can think of it as the size of the economy (Investopedia, 2017).

According to NPC (2015), Namibia registered a slow economic growth of 4.5% at the end of 2014, compared to 5.1% in 2013; a 0.6% decline in growth compared to the previous year, and well below the NDP4 target of 6.4% for the year 2014. Although the economy has slowed, the

growth has been above the 4.5 percent average as registered over the last seven years. The year ended 31 December 2015 reported a real GDP of USD11.55 billion, indicating a 10.0% decline in growth when compared to the real GDP of USD12.84 billion as at 31 December 2014. The real GDP recorded in 2015 has slowed to 5.3% from 6.5% registered in 2014.

Figure 2.2: Namibia Annual Real GDP growth rates



Source: Namibia Statistics Agency

The Namibian GDP for the 2016 year was valued at USD10.27 billion [USD11.55 billion: 2015], which represented 0.02% of the world's economy. GDP in Namibia averaged USD5.43 billion from 1980 until 2015, reaching an all-time high of USD13.02 billion in 2012. The Minister of Economics and Director General of the NPC, Mr. Tom Alweendo (2015), emphasised that Namibia has made progress towards its goals and objectives; however, there is a need to continue making necessary investments in order to put the Namibian economy on a high and sustainable growth trajectory that will enable the country to achieve the objectives of the NDP4 and eventually Vision 2030.

2.4 A COMPARISON OF OTHER AIRPORTS DEVELOPMENTS

Most of the airports in the African continent are undertaking new developments and/or expansion, as evidently provided by Table 2.1 on page 26. The investments being made into African airports are to enable the African continent to respond to the swift increase in passengers, aircrafts and cargo traffic volumes. Tourism has increased, and the renewed interest of foreign entities to invest in Africa has led to the majority of African countries enhancing their airport capacity (Kiganda, 2015).

Airport developments allow each country access and enable countries to compete internationally in universal marketplaces, which will inevitably contribute to their economic development, irrespective of their population size. It is not only passenger air transportation that is vital to many industries (Button and Taylor, 2000), but aviation is critical for Africa to compete in the emerging global economy, as it serves to increase trade, attract investment, grow tourism industry, and weave together a modern society (Goldstein, 2001).

2.4.1 JOHANNESBURG'S O.R. TAMBO INTERNATIONAL AIRPORT

O.R. Tambo International Airport is Africa's biggest and busiest airport, facilitating approximately 19 million passengers a year (Airports Company South Africa [ACSA], 2016). According to ACSA (2016), O.R. Tambo International Airport services airlines from five continents and plays a vital role in serving the local and regional air transport needs of South African and international travellers. In 2010, O.R. Tambo International Airport was upgraded and extended. Agence Française de Développement ("AFD") indicated on its website that it provided a loan of ZAR950 million (€85 million) in December 2008 for the project. The work on the airport included:

- A new central passenger terminal building;
- Reconfiguration and upgrade of the existing international terminal building;
- Additional structural car parking;

- Additional fuel tanks; and
- Runway and taxiway shoulders' widening required for the Airbus A380, the latest jumbo airliner from Airbus.

AFD reported that the new terminal allowed a 'Gautrain' station to be integrated within the airport complex and the railway linked the airport to Sandton (business area) and Pretoria (the administrative capital of South Africa). In February 2016, the Citizen newspaper reported that O.R. Tambo International Airport was undergoing major refurbishments in its Terminal A retail duty-free mall at the international terminal departures. The airport has been modernised and its retail duty-free mall revitalised to enhance ambience and passenger experience (Citizen, 2016).

On its website, South Africa Info provides that the terminal development has been accompanied by upgrades of adjacent aprons and the road network feeding the airport, and that the upgraded terminals offer an array of restaurants and shops, a retail duty-free mall for international travellers, and a conference centre and business support facility. South Africa Info further indicated on its website that the terminals were designed to encourage natural movement of passengers, as well as to cater for the needs of disabled people, with lifts placed in the centre of the terminal for easy wheelchair access. According to ACSA (2016), the airport currently processes 19 million passengers per annum and 60 000 passengers per day, with 42% departing internationally on a daily basis.

2.4.2 OTHER UPGRADES OF AFRICAN AIRPORTS

The World Bank states, in its June 2009 report on Africa infrastructure country diagnostic, that the air transport market in Sub-Saharan Africa presents a strong dichotomy. In Southern and East Africa, the market is growing: three African carriers and three strong hubs of Johannesburg, Nairobi, and Addis Ababa dominate international and domestic markets, which are becoming increasingly concentrated (the World Bank, 2009).

Everyone sees that the economy in African countries is growing, and there are more people coming in - and suddenly, the lack of investment in airports over the years is catching up with them (the Guardian newspaper, 2013). There are many unviable small state-owned operations that depend on subsidies and have a monopoly over the domestic market; however, there are also some promising signs: growth in air traffic has been buoyant, the number of routes and the size of aircrafts are being adapted to the market, and a number of large carriers are viable and expanding (the World Bank, 2009).

Africa's need is not just for an adequate, efficient and viable infrastructure stock, but for transformational infrastructure that will spur it to the next level of development and reposition the continent as a recognised player in the global economy (Wog, de Almeida, Kanza, Mbesherubusa and Mayaki, 2013). The World Bank (2009) indicated that North African countries planned and developed their airports for expected increases in passenger traffic, with capacities now well capable of handling current and future numbers of travellers, whilst Sub-Saharan airports show clear constraints, even at main airports such as John Kenyatta International Airport in Nairobi, Kenya (the World Bank, 2009).

The construction of the Senegalese's Blaise Diagne International Airport ("AIBD") brought socio-economic benefits such as higher income generation and revenue collection, economic transformation of the project area and accompanied amelioration of household livelihoods; emergence of small and medium enterprises; attraction of national and regional businesses, investors, and a rise in Senegal's tourism potential (AfDB, 2010).

The Guardian newspaper (2013), the Mail & Guardian Africa (2015) and the Citizen (2016) published, on separate occasions, articles about several African states' new airport projects:

- Burkina Faso's existing airport is expected to run out of terminal capacity by 2017, as it has outgrown its infrastructure. Thus, Burkina Faso is building a brand new airport which was expected to be completed in 2017 in order to increase capacity and capability to

handle larger aircrafts. The construction of the new airport is estimated to cost at least US$450 million, with funders including the Kuwait Fund for Arab Economic Development, the World Bank and a swathe of other investors.

- Sudan's new airport is planned after a US$700 million contract was signed in 2013. The new airport will expand the runways to allow handling of larger aircrafts. The project is further expected to strengthen Sudan's international ties, which have suffered due to sanctions and a poor aviation safety record. The project is believed to result in the increase of the exportation of the country's goods to Gulf countries and Africa. The project will be funded by a loan from China, with the two main contributors being the Export-Import Bank of China and China Harbour Engineering Company.

- Djibouti is also expecting a new airport, estimated to cost US$599 million, and to be completed by 2018. This is to enhance the growth of the country's economy. The project will also result in the setting up of runways that will cater for modern commercial jets.

- Somaliland, frustrated by its association with Somalia, has been giving a lot of attention to its Hargeisa airport, which has recently undergone upgrading to serve a number of Ethiopian Airlines carriers in a bid to generate economic growth in Somaliland. The project was designed to improve security and create runways that are able to host large carriers.

- The government of Sierra Leone announced that it will build a new US$200 million international airport with financing from China's Export – Import Bank. The project will be undertaken in order to enhance economic growth, job creation, and easy access at all times to and from the airport. The project is also expected to open doors of trade and direct foreign investment into the country.

The Namibian airport development projects are quite unusual when compared to other African countries that have embarked on similar developmental projects. The major difference in the

airport development and funding of the HKIA project when compared to other African countries is that Namibia chose to upgrade its HKIA in phases, whereas other countries undertook one bigger project to upgrade or develop their airports at once.

All other African countries, as noted in Table 2.1, undertook the development of their respective airports as single projects with enormous amounts of capital invested into such developmental projects. The 2013/2014 HKIA project cost only USD9.0 million and plans exist for the next phase of the HKIA development project to commence in the near future. In comparison, countries such as Angola and Burkina Faso spent USD2,100 million and N$450 million respectively for their single airport development projects. It is also important to note that the HKIA project was not financed with a loan but rather with capital provided by the NAC and inevitably the Namibian government. The major development parts of the HKIA project were due to an audit finding and yet improvements have not enabled the HKIA to reach the top 20 African airports. Table 2.1 below highlights the GDP, population and latest available cost of upgrading/developing the airports of different African countries.

Table 2.1: GDP, Population and cost of airports

Annual Real GDP USD (Billion)						Population (Million)	Cost of building and/or expandin (USD Million)	Cost per population (USD Million)
Country	2011	2012	2013	2014	2015	15-Dec		
Algeria	200,00	204,33	209,04	213,59	166,84	40.40	$ 952	$ 23.56
Angola	104,11	115,40	124,91	126,77	102,64	25.79	$ 2,100	$ 81.43
Burkina Faso	10,73	11,17	12,11	12,54	11,10	18.11	$ 450	$ 24.85
Djibouti	1.24	1.35	1.46	1.58	0	0.89	$ 599	$ 673.03
Egypt	236,00	276,35	286,00	301,50	330,78	83.40	$ 387	$ 4.64
Ethiopia	31,95	43,31	47,64	55,61	61,54	99.39	$ 340	$ 3.42
Kenya	41,95	50,41	55,10	61,40	63,40	44.40	$ 612	$ 13.78
Libya	34,70	81,91	65,51	41,14	29,15	6.28	$ 2,100	$ 334.39
Namibia	12,41	13,02	12,72	12,84	11,55	2.30	$ 9	$ 3.83
Nigeria	411,74	460,95	514,97	568,50	481,07	182.00	$ 1	$ 0.01
Rwanda	6.41	7,22	7,52	7,91	8,1	11.61	$ 650	$ 55.99
Senegal	14,44	14,05	14,95	15,66	13,78	15.13	$ 483	$ 31.92
Sierra Leone	2,98	3,85	4,96	5,00	4,47	6.45	$ 200	$ 31.01
South Africa	416,60	397,39	366,06	349,90	312,80	54.96	$ 194	$ 3.53
Sudan	67,33	62,69	66,48	73,82	84,07	40.24	$ 700	$ 17.40
Tanzania	33,88	39,10	44,34	48,03	44,90	48.80	$ 40	$ 0.82
Uganda	20,26	23,24	24,66	27,00	26,37	39.03	$ 400	$ 10.25
Zambia	23,73	24,94	26,82	26,97	22,06	15.47	$ 522	$ 33.74

Note: USD Exchange rate used as at 31 December 2015

Source:

Trading economics website: GDP and population

Construction review (A Kiganda, 2015): Airport projects costs

2.4.3 INFRASTRUCTURE INVESTMENT DECISIONS IN THE DEVELOPMENT OF THE SINGAPORE CHANGI AIRPORT

As established by Phang (2003), Changi International Airport in Singapore is a major air transport hub. A strong national airline, liberal air policy, and bold airport infrastructure investment decisions have made Singapore a popular base for international airline companies. In 2001, the airport was served by 59 airlines operating over 3250 weekly services linking 139 cities in 50 countries (Phang, 2003). It handled 28.2 million passengers and 1.5 million tons of airfreight. Changi has consistently won numerous awards for best airport (20 best airport awards in 2001), and these numbers are despite its small domestic market. Changi Airport has had to overcome the tremendous hurdle of a lack of hinterland population to develop as the hub airport in Southeast Asia (Phang, 2003).

Contrary to other airports' development strategies around the world, Phang (2003) indicates that Changi Airport has become known for its policy of investing in infrastructure capacity ahead of demand. Within three years of its operation, although the first terminal showed no sign of approaching capacity, the government approved the construction of a second passenger terminal at Changi in 1984 (completed in 1990) and doubled its passenger handling capacity (Phang, 2003). Singapore has built upon Changi Airport's distinctiveness in three dimensions: its capacity, its efficiency, and its appeal to the traveling public (Bowen, 2000).

2.5 CONCLUSION

This chapter brought perspective on how infrastructure development fits into a country's development plans, particularly focusing on Namibia. The fourth NDP (2012) identified the basic economic development enablers which include public infrastructure. Namibia strives to have a well-functioning, high quality transport infrastructure connected to major local and regional markets as highlighted in the NDP4.

It is thus important that funds are invested and value is added to the country's infrastructure for the economic benefit of the nation, and to allow the country to become a logistics and

distribution hub as stipulated in the country's Vision 2030. A comparison was also made with other African countries that are currently undertaking airport infrastructure development. Additionally, a virtual view on the African continent and a universal viewpoint in terms of airport developments was provided.

3. AN APPROACH TO FINANCING OF AIRPORT INFRASTRUCTURE: LITERATURE REVIEW

3.1 INTRODUCTION

The literature review is a critical discussion and summary of statistical literature that is of `general' and `specialised' relevance to the particular area and topic of the research problem (Research gate website, 2016). The literature review explains how the suggested study is linked with previous studies.

This chapter outlines the connection between airport infrastructure projects and economic and social development or growth. Financing for sustainable development is explained, and context, in terms of economic development, is provided. The perspective and background of the investments into airports infrastructure projects is also provided as well as the effects of airports development on an economy. The chapter further provides context in terms of a cost benefit analysis that can be used in evaluating investments in airports infrastructure projects. Lastly, a brief summary of the challenges faced by many countries with regard to airport infrastructure projects concludes the chapter.

3.2 OVERVIEW

In their article on airport design and development, Lee, Yoo and Park (2012) established that airport development and construction are very large and capital intensive projects that require much advanced planning, with serious consideration for growth in air transport demand, availability of required capital, national transport system integrity, and environmental protection. Sheard (2012) indicates that airport improvements are usually intended to increase capacity or to make travel to or from the airport more convenient. Sheard (2012) further states that airport improvements may also be part of efforts to persuade airlines to operate flights to and from the airport, particularly as a hub of operations.

However, airports must be able to attract sufficient revenues to finance their operations and investments while maintaining a satisfactory quality of service for both their primary clients: airlines and passengers, and also maintaining their role of economic driver in a sustainable manner (Capitanul, Cosenza, Moudani and Camino, 2014). Twomey and Tomkins (1995) pointed out that the linkages between airports and industry infrastructure are important to our understanding of the way in which this form of transport facility interfaces with other elements of the business community and of the potential role played by such facilities in regional economic development as an inward investment catalyst. Doganis (1992) illustrated that airports are complex industrial enterprises as they act as a forum in which disparate elements and activities are brought together to facilitate, for passengers and freight, the interchange between air and surface transport. As the International Air Transport Association (IATA) (2016) indicates, "it is essential that airport planning and infrastructure development encompasses safe, functional, capacity balanced and user-friendly airports". The economic significance of airports is, however, potentially far greater than their role as a purely commercial establishment (Twomey and Tomkins, 1995).

The Tourism Competitiveness Policy brief (2016) illustrates air transport infrastructure as the main indicator of tourist arrivals in a country, as it provides easy access to and from countries, as well as movements to a destination of interest within a country. Furthermore, for its operation, the aviation industry is dependent on an extensive network of airports that host take-offs and landings, the storage and maintenance of aircraft, and the transition of passengers to other modes of transport (Sheard, 2012). In addition, transport infrastructure and services remain crucial for generating economic growth, alleviating poverty, reducing the scourge of inequality and increasing domestic and international competitiveness; hence the need to ensure its development and sustainability (Informante, 2014). Therefore, airport construction and expansion are often justified on the basis of the improved accessibility being a positive factor in employment (Sheard, 2012). It is worthy to note that the results presented in this study support this justification, as they indicate that the upgrades to the HKIA resulted in a creation of new jobs within the NAC and also many stakeholders. According to Calderon and Serven (2008), political

stability and sound economic management have helped anchor economic growth and poverty reduction in Namibia.

CAPA (2014) states that African national governments recognise the essential need for facilities that meet international standards as well as handling expected increases in passenger numbers and aircraft movements. On the other hand, Forsyth (2007) provides that airport infrastructure around the world has to cope with a range of changing demands and Beri and Presteena (2015) offers that developing countries all over the world are facing inadequate and poor infrastructure facilities to support their developmental requirements. Beria and Scholz (2010) highlight that decision makers generally see expansion of airport capacity as the main solution to coping with increasing demand.

Capitanul, Cosenza, Moudani, and Camino (2014) provide that the starting point of any airport planning project and its financing is the potential demand forecast and its evolution. This forecast generally covers the time horizon of the project and includes potential demands for the annual volumes of international and domestic scheduled and non-scheduled passenger, freight and aircraft movements, and also, daily and monthly traffic distributions are required in order to identify traffic trends and peaking patterns, along with the fleet mix (Capitanul, Cosenza, Moudani, and Camino, 2014). The airports of the future, according to Lee, Yoo and Park (2012), should accommodate new aircrafts and air navigation technologies, while simultaneously addressing growing concerns about environmental protection.

According to Dillingham (2014), airports generate revenues from aviation activities such as aircraft landing fees and terminal rentals, and non-aviation activities such as concessions, parking, and land leases. Dillingham (2014) further provides that airports also fund development projects from revenues generated directly by the airport. The location of airports within regional and national economies, particularly in relation to other transport networks, the predominance of tourism over business and freight customers, and operation as an international hub or as a maintenance centre for airlines collectively determine the nature and extent of employment directly created within the airport site (Twomey and Tomkins, 1995).

Airside projects (infrastructure to process aircraft) are geared to increase the capacity of the airport to handle aircraft movements and these projects involve new runways, the widening or lengthening of existing runways; taxiways to increase runway capacity; apron space to expand aircraft parking capacity; or improvements in air traffic control in the airport or in the airport's vicinity (Jorgea and de Rus, 2004). Additionally, Jorgea and de Rus (2004) state that landside projects (infrastructure to process passengers or cargo) aim at expanding the airport's capacity to handle passenger and freight, and these projects can involve expanding the capacity of cargo or passenger terminals, improving access to terminals through parking facilities or rail stations, and enhancing product quality through increased use of jet-ways to access aircraft.

Forsyth (2007) argues that increasing demand puts pressure on facilities, which cannot be expanded much in the short term. With phenomenal growth in traffic, the importance of air transport in the whole economy has increased considerably (Paul, 2003). The history of the development of an airport is therefore one of rapid growth in demand, placing constant pressure upon the airport infrastructure which, to date has been accommodated through expansion within the existing operational area (Twomey and Tomkins, 1995).

On the safety side, Wright (2001) illustrated that improved firefighting training, techniques, and equipment are needed to support airport safety and certification programmes. Therefore, firefighting equipment requirements for large aircrafts such as the B-747X and A380 models, must be developed (Wright, 2001), as lack of effective airport rescue and firefighting at an airport is a threat to the aviation industry (Mbaneme and Ukaegbu, 2013).

3.3 INVESTMENT IN DEVELOPMENTAL PROJECTS

According to Mezui and Hundal (2013), investments in developmental infrastructure projects are vital for sustained economic growth in Africa. Airports must be capable to attract sufficient revenues to finance their operations and investments while maintaining a satisfactory quality of service for both their primary clients: airlines and passengers, and also maintaining its role of

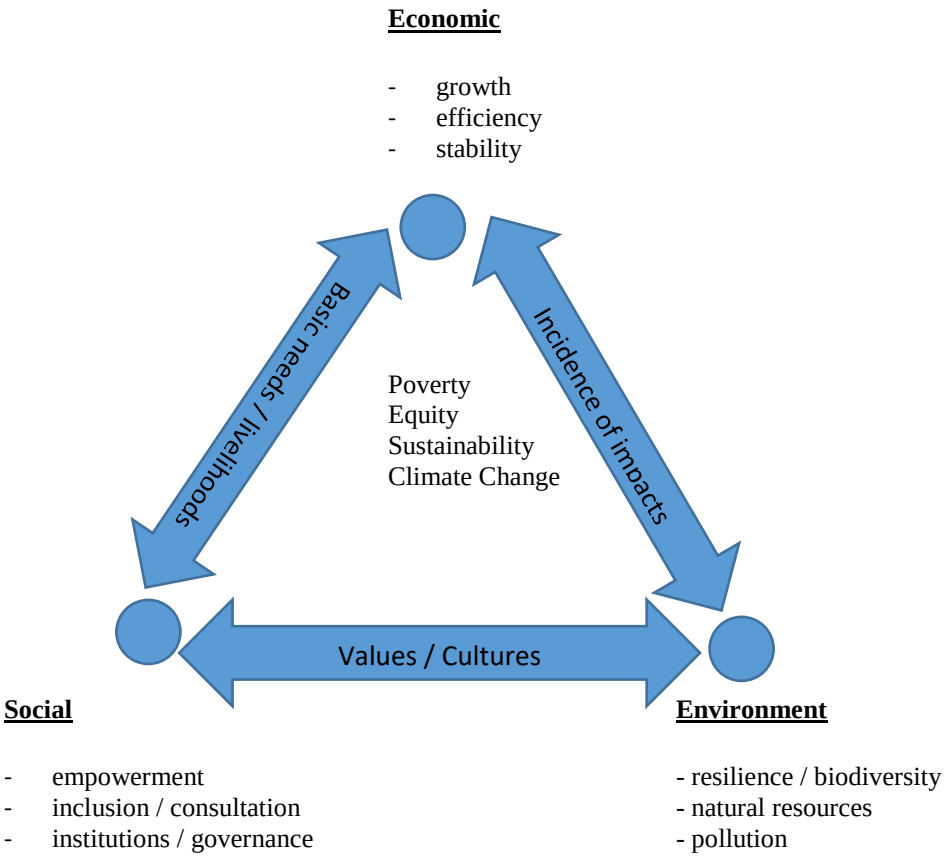
economic driver in its local community in a sustainable manner (Capitanul, Cosenza, Moudani, and Camino, 2014).

Consequently, sustainable development has become central to the programmes of most governments and business entities, as well as non-governmental organisations ("NGOs") around the world. It requires a balance in the use and exploitation of environmental resources for economic development in order to protect the interests of the future generations (Rao, 2003). Accordingly, Mezui and Hundal (2013) indicate that development finance institutions and multilaterals remain some of the most important funding sources for many African countries. However, Rao (2003) argued that the role of development finance needs to be carefully integrated with the principles of sustainable development, and this involves due recognition in the design of policies and their implementation.

Developmental projects are expected to be economically and financially viable, environmentally sound, and should incorporate social issues for sustainability purposes. Financing for development must therefore recognise the complementary roles of both public and private commercial financing (Schmidt-Traub and Sachs (2015).

Munasinghe (2007) provides a sustainable development triangle which was presented at a conference in Rio de Janeiro. When analysing a project for sustainable development, all three dimensions should be considered.

Figure 3.1: Sustainable development triangle



Source: Munasinghe, 2007

3.4 ECONOMIC DEVELOPMENT

There are a number of literatures which indicate an opinion that a greater contribution to infrastructure financing for investment is key to economic growth and development. There is also an increasingly widely accepted school of thought arguing that economic growth, once started in a region, becomes self-sustaining and may accelerate (Button and Taylor, 2000). Calderon and Serven (2008) also argue that an adequate supply of infrastructure services has long been viewed by both academics and policy makers as a key ingredient for economic development. This supports the observed evidence that investment into infrastructure can be seen as a promoter for greater economic growth in a particular area. Therefore, infrastructure investment is vital for sustained economic growth in Africa.

An airport is a strategic asset to regional and national economy, both facilitating and promoting economic growth and providing a gateway to international markets (Twomey and Tomkins, 1995). However, Ansar, Flyvbjerg, Budzier and Lunn (2016), found that where investments are debt-financed, overinvesting in unproductive projects results in the build-up of debt, monetary expansion, instability in financial markets, and economic fragility.

According to Sentance (2014), airports infrastructure is important for improving air connectivity as it provides access required for a modern economy, enabling businesses to capture overseas opportunities and facilitating the coming and going of tourists – all of which fuel economic growth. IATA (2011) estimates 16 billion passengers and 400 million tonnes of cargo will have been transported by aviation by the year 2050 and airports have to be able to meet the growing demand for aviation (Suarez-Aleman and Jimenez, 2016). Therefore, as Sentance (2014) states, the aviation sector does not operate in isolation; on the contrary, it is inextricably linked to globalisation, regional economic development, tourism and national competitiveness.

It is worth noting the economic importance and social benefits of air transport, with reference to the Air Transport Action Group (ATAG) as follows:

i. Aviation provides the only worldwide transportation network, which makes it essential for global business and tourism;
ii. Aviation transports close to 2 billion passengers annually and 40% of interregional exports of goods (by value);
iii. 40% of international tourists now travel by air;
iv. The air transport industry generates a total of 29 million jobs globally (through direct, indirect, induced and catalytic impacts);
v. Aviation's global economic impact (direct, indirect, induced and catalytic) is estimated at US$2,960 billion, equivalent to 8% of the world's Gross Domestic Product (GDP);
vi. The world's 900 airlines have a total fleet of nearly 22,000 aircraft. They serve approximately 1,670 airports through a route network of several million kilometres managed by around 160 air navigation service providers; and

vii. 25% of all companies' sales are dependent on air transport. 70% of businesses report that serving a bigger market is a key benefit of using air services.

ATAG further stated on its website that "aviation brings the world's people and cultures together like no other form of transport. Fast, reliable and safe services with greater value allow more people to experience the world and support the world's number one industry – tourism".

Brueckner (2003) states that small-town business leaders and government officials sometimes complain that inadequate airline services are an obstacle to local economic development. Calderon and Serven (2008) argue that sub-Saharan Africa ranks consistently at the bottom of all developing regions in terms of infrastructure performance, and an increasing number of observers point to deficient infrastructure as a major obstacle for growth and poverty reduction across the region. However, CAPA (2014) indicated that in some economists' estimation, Africa has grown in emphasis as the world's next major destination for both business and tourism, thereby offering opportunities to create regional and international travel hubs.

Public infrastructure development can be a driver for economic growth. Infrastructure projects generate large-scale expenditure for public works and thus increase aggregate demand (Ayogu, 2007). However, Lee, Yoo and Park (2012) indicate, in their article on airport design and development, an airport should be developed when benefits surpass disadvantages. Berts (1990) indicates that public infrastructure provides the basic foundation for economic activity, and it generates positive spillovers: that is, its social benefits far exceed what any individual would be willing to pay for its services. Under the right conditions, infrastructure development can play a major role in promoting growth and equity – and, through both channels, help reduce poverty (Calderon and Serven, 2008).

Dos Santos, Mendes-Ribeiro, Marques, and Pereira (2015) recognised that the addition of a single international flight can have a discernible impact on receipts and employment in the tourism sector, with positive spillover effects throughout the broader economy. According to Button & Taylor (2000), international air transportation is an essential ingredient for the success

of tourism in many countries and regions. Tourism bears a particularly close relationship with the airline industry (Bowen, 2000). To achieve economic development, complementary decisions and a facilitating environment must be in place, otherwise the impacts may be counterproductive (Banister and Berechman, 2001). Included in this group of factors are the sources of finance, the level of investment (local, regional or national), the supporting legal, organisational and institutional policies and processes, and any necessary complementary policy actions (e.g. grants, tax breaks and training programmes) (Banister and Berechman, 2001).

Sentance (2014) argues that aviation generates significant benefits for the global economy, and in 2012 aviation contributed US$2.4 trillion to the global GDP (3.4%). Banister and Berechman (2001) state that there has been a close correlation between the growth in demand for freight and passenger traffic, and economic growth as measured by GDP. Direct benefits (i.e. employment and economic activity generated by the air transport industry) are estimated at about US$606 billion; indirect benefits (generated by employment and economic activity of suppliers of the air transport industry) at US$697 billion (Sentance, 2014). According to Brueckner (2003), the level of airline traffic is assumed to affect metro-area employment in the same year, rather than boosting employment growth over subsequent years. While airline traffic may affect employment, traffic itself depends partly on the contemporaneous level of employment in a metro area, which helps to determine the volume of business travel (Brueckner, 2003). Brueckner (2003) further argued that high traffic as indicative of frequent airline service to many destinations was presumed to stimulate employment growth by attracting new firms and helping existing firms to prosper.

AfDB (2013) in its comment to the World Economic Forum, highlights that the Programme for Infrastructure Development in Africa ("PIDA") assumes the average economic growth rate for African countries to be 6% per annum between 2010 and 2040, driven by a surging population, increasing levels of education and technology absorption, and greater demand for goods and services, as well as industrialisation. AfDB (2013) further indicates that this growth implies that over the three decades up to 2040, the GDP of African countries will multiply six-fold, the average per capita income will rise above US$10,000 for all countries, and demand for

infrastructure will swell. The link between infrastructure availability and economic productivity or growth is still subject to considerable uncertainty and debate (Straub, 2011), while Paul (2003) established that airports have become the key nods in the production and commercial systems and engines of local economic development. Ansar, Flyvbjerg, Budzier and Lunn (2016) indicate that uncertainty surrounding costs, time, and benefits parameters, results in a typical infrastructure project failing to deliver a positive risk adjusted return.

Brueckner (2003) established that intercity agglomeration economies, which are fostered by air travel, may also be important and because poor airline service limits the extent of these economies, it could constitute an impediment to urban economic development. The consensus among economists is therefore that public infrastructure stimulates economic activity, either by augmenting the productivity of private inputs or through its direct contribution to output (Berts, 1990). In addition to providing immediate economic stimulus, public infrastructure investment also has a significant, positive effect on output and growth (Munnell, 1992). Paul (2003) argues that airports are recognised, not only to provide infrastructure for airlines, but also to contribute to the economy of the region.

3.5 THE EFFECTS OF AIRPORT DEVELOPMENT

Airport improvements are usually intended to increase capacity or to make travel to and from the airport more convenient (Sheard, 2012). Khadaroo and Seetanah (2007) illustrate that the transport infrastructure base of a country, which provides the vital base for transportation services, is presumed to be an important determinant of the attractiveness of a tourism destination. Airport improvements may also be part of the efforts to persuade airlines to operate flights to and from the airport, particularly as a hub of operations (Sheard, 2012).

Public spending on airports is motivated by a belief that improved air travel services will have a positive effect on economic growth in the areas that they serve (Sheard, 2015). However, Ansar, Flyvbjerg, Budzier and Lunn (2016) argued that unproductive projects carry unintended pernicious macroeconomic consequences, such as sovereign debt overhang, unprecedented

monetary expansion, and economic fragility. Furthermore, Ansar, Flyvbjerg, Budzier and Lunn (2016) posited that poorly managed infrastructure investments are a main explanation of surfacing economic and financial problems.

According to Gillen and Lall (1997), airports are subject to peak demands because in order to have perfectly satisfied customers (the airlines and their passengers), airports would need to supply sufficient runway and terminal capacity to avoid delays at even the busiest periods, allowing the airlines to maximise fleet utilisation and improve load factors by providing service when their customers most desire. However, airports face uncertainty in demand growth due to changes in the overall economy but infrastructure investments increase an airport's ability to capture growth opportunities in the industry (Smit, 2003). Sheard (2012) pointed out that the effects of an airport on the wider economy have not been reliably quantified, due to the difficulty in solving the obvious endogeneity problem that results from airports being developed in response to demand.

The study on airports and economic performance in China by Gibbons and Wu (2017) found that there is relatively little solid evidence that the opening of airports and expansion of airport capacity really stimulate economic development, and no evidence was found in the context of developing countries. Ansar, Flyvbjerg, Budzier and Lunn (2016) concluded that infrastructure investments do not typically lead to economic growth, public investment comes before the pickup in economic activity and serves as a base, but much more work is required to spell out the specifics of the link between public capital and economic performance. However, countries that invest more in infrastructure tend to have greater output, more private investment, and more employment growth (Ansar, Flyvbjerg, Budzier and Lunn, 2016).

The effects of infrastructure improvements are therefore interpreted in terms of their effects on air traffic, which in turn reflects air connections (Sheard, 2012). According to Cidell (2014), increases in air traffic and air traffic capacity have generally been shown to attract more firms to a region rather than the reverse, leading to more jobs. Therefore, airport expansion proponents commonly claim it to be in the region's best interest to go ahead with such expansions because

of the overall benefits (Cidell, 2014). Furthermore, it is believed that tourists value the availability of efficient, reliable and safe travel to relatively unknown destinations (Khadaroo and Seetanah, 2007).

3.6 COST BENEFIT ANALYSIS OF INVESTMENTS IN AIRPORT INFRASTRUCTURE PROJECTS

Infrastructure can deliver major benefits in economic growth, poverty alleviation and environmental sustainability – but only when it provides services that respond to effective demand, and does so efficiently (World Bank, 1994). The economic benefits of air service in terms of professional and administrative employment accrue for a different segment of the metropolitan area's population than those who suffer local economic and quality of life costs (Cidell, 2014). According to Twomey and Tomkins (1995), the measurement of benefits is not a particularly straightforward task and can take a number of forms. Investopedia explains a cost-benefit analysis as a process by which business decisions are analysed, whereby the benefits of a given situation or business-related action are summed up and then the costs associated with taking that action are subtracted. Accordingly, Lee, Yoo and Park (2012) argued that an airport should ideally be developed when benefits exceed shortcomings.

There are several reasons why airport managers and governments measure airport performance: to measure efficiency from a financial and an operational perspective (Doganis, 1992), to evaluate alternative investment strategies, to monitor airport activity from a safety perspective and to monitor environmental impact (Francis, 2002). The benefits of having an airport in an area would logically be greater when it offers more services and access to a wide range of destinations (Button and Taylor, 2000). Jorgea and de Rus (2004) argue that airport investments are to be assessed as transport infrastructure improvements aimed at addressing a demand for transportation. Jorgea and de Rus (2004) further indicate that this analysis focuses on both the impact of the investment on the generalised cost of travel for users and on the costs of supplying the transportation service, including both airport and airline costs. In addition, the emphasis is

placed on the consistency across projects in deciding whether a given project is a good or bad investment, rather than on the accuracy of project return estimates (Jorgea & de Rus, 2004).

Banister and Berechman (2001) propose a twin approach to the assessment of a project if a transport investment is to take place, where a conventional cost-benefit analysis is carried out on the project to determine the user benefits and costs of investment. According to Jorgea and de Rus (2004), a cost–benefit analysis approach is devised to conduct project evaluation in conditions of limited analyst time, research budget and data availability. A practical approach is to measure such benefits in projects involving the expansion of passenger capacity and, subsequently, those aimed at expanding aircraft capacity (Jorgea and de Rus, 2004).

Banister and Berechman (2001) provide three steps that need to be satisfied in order to achieve a given rate of return which may account for some or all the necessary returns:

Step 1: A complementary analysis needs to take place if there is a shortfall that takes a wider view of the investment proposal, including the contribution of the project to the transport network as a whole through network analysis;

Step 2: The value added of the project should be assessed through its contribution to local employment, the potential for increases in productivity and the environmental impacts; and

Step 3: The distributional impacts in terms of the spatial effects on the regional and local distribution of services and facilities, and the social impacts should be investigated.

3.6.1 The economic benefits of airport infrastructure projects

The economic benefits derived from investment in airport infrastructure do not correspond with the revenues obtained by the airport authority and retail firms with commercial operations in the airport (Jorgea and de Rusb, 2004). Wei and Hansen (2006) categorised the passengers' benefits resulting from airport capacity expansion, which can be derived from investment on the landside, into two categories:

1) Direct benefits gained through airport expansion, without considering the airlines' adaptation in scheduling or services. For the same number of passengers travelling through a hub airport, if airport capacity is increased, passengers will enjoy greater punctuality of flights and will experience less congestion; and

2) Indirect benefits obtained through airlines' adaptation and service improvements after expansion. Airlines provide more flights and more connection opportunities for passengers due to increased runway capacity. Passengers then experience less waiting time in a trip, and believe it is more convenient to take a flight.

Jorgea and de Rus (2004) provide two potential benefits which can be produced by investment on the airside:

a. Enhanced airside capacity will enable an increase in both the frequency of departure and the range of routes available from the airport. This will yield the benefit of reducing the frequency delay, as well as potentially the trip duration, both of which contribute to a reduction in the generalised cost of transport; and
b. Airside investments may speed the processing time for aircraft, reducing operating costs to airlines.

3.7 CHALLENGES FACED IN AIRPORT DEVELOPMENT PROJECTS

Mezui and Hundal (2013) demonstrate that infrastructure development is a priority for Africa, although the availability of affordable long-term finance is a key constraint. Infrastructure projects yield relatively low returns and have long payback periods compared to typical commercial projects (Dammu, Bharaktiya, Sud, Mukherjee, and Limje, 2000).

According to Capitanul, Cosenza, Moudani, and Camino (2014), the construction of a new airport or the extension of an existing one requires huge investments, and many times public private partnerships were considered in order to make such projects feasible. Mezui and Hundal (2013) emphasised that an effective collaboration of the public and private markets is therefore

needed, as the infrastructure financing gap cannot be tackled by the public or private sectors in isolation.

One characteristic of infrastructure projects, as stated by Capitanul, Cosenza, Moudani, and Camino (2014), is uncertainty with respect to the financial and environmental impacts on the medium to long term, and another one is the multistage nature of these types of projects. Rao (2003) stated that unforeseen disturbances could arise from a variety of economic, environmental, social and political changes. Therefore, Rao (2003) argued that there is a need for a built-in mechanism for adjustments that do not entail sacrificing the human capital, environment, and economic stability of a borrower country system.

In its Strategic Infrastructure in Africa report of May 2013, the World Economic Forum outlined infrastructure financing challenges. The World Bank assessment is that Africa needs to invest to close its infrastructure gap, as only under half of its required investment is currently financed, with major sources being African governments, multilateral and bilateral sources of finance, Official Development Assistance (ODA) and the private sector. The World Bank estimates that US$95 billion will be required from 2012 up to 2020 on an annual basis. Consequently, Kortekaas (2015) indicates that traditional sources of finances (eg. national governments, the private sector, official development assistance, and so on) have contributed approximately US$45 billion per annum to infrastructure development and this leaves a deficit or gap of US$48 billion per annum. However, the World Bank (2009) argues that revenues from airports and air traffic are probably high enough to finance the necessary investments, but are not currently captured by the sector. Domestic capital markets can also contribute to funding some of the most important local and regional infrastructure projects, thereby contributing to closing the identified financing gap (Mezui and Hundal, 2013).

In the report on the Airport sector in Vietnam, Lamond (2011) outlined that Vietnam's long-term development plan will need approximately US$20.5 billion in investment by the year 2030 for the country's aviation sector to meet the surging demands for air transport. Of this, approximately 40% will be spent on infrastructure. As at 2011, the Vietnam government budget

could only meet about 20% of the total investment required for the aviation sector, therefore, raising sufficient funds for this development, at the time, was an immense challenge for Vietnam (Lamond, 2011).

The landside infrastructure of airports in Sub-Saharan Africa shows signs of needing large capital investments (the World Bank, 2009). Wog, de Almeida, Kanza, Mbesherubusa and Mayaki (2013) further argue that while infrastructure demand is growing, public infrastructure financing has become more difficult to obtain, as public budgets are strained. According to Wog, de Almeida, Kanza, Mbesherubusa and Mayaki (2013), since the crisis of 2008, it has become more difficult for banks to lend (e.g. as a result of the Third Basel Accord), even as the use of risk-mitigation tools (such as collateralised debt obligations) has been curtailed. Particularly in the developing world, private capital will need to play a larger role in infrastructure financing if development is to keep pace with demand and private-sector investors will need tools to help them analyse and accelerate worthwhile projects (Wog, de Almeida, Kanza, Mbesherubusa and Mayaki, 2013).

In Namibia, the NDP4 (2012) provides that there is a need to be more innovative in the funding mix of the public investments, including making greater use of public private partnership (PPP) financing mechanisms, and with respect to the kind of infrastructure that is provided. The Namibian Vision 2030 policy framework for national development has identified the promotion of PPP in infrastructure development and operation as one of the main challenges faced by the transport sector.

Another challenge will be to maintain or upgrade existing infrastructure, use it optimally, and extend it effectively and efficiently, in line with the demands of the economy (NDP4, 2012). The NDP4 (2012) further states that large investments will be needed to safeguard and propel economic activity, and significant trade-offs will have to be made with respect not only to specific types of economic infrastructure, but in general. However, global financial institutions and their counterparts at the national levels need to address relevant issues more systematically than has been done in the past (Rao, 2003).

The World Bank (2009) contends that infrastructure is not at the heart of the sector's problems. The 2009 World Bank report on air transport challenges to growth stated that the number of airports is stable, and there are enough runways to handle traffic in the near future with better scheduling and relatively modest investment in parallel taxiways and some terminal facilities (World Bank, 2009). According to the World Bank (2009), the safety problem is more a case of pilot capability and safety administration than unsafe aircraft, though air traffic control facilities are admittedly poor.

Furthermore, the World Bank (2009) reported that runway capacity in Africa is not a limiting factor for traffic; but limiting factors for traffic include the ability to enter or leave the runway via taxiways, the amount of apron space for parking, and the amount of terminal space for processing passengers. Therefore, developing countries need to focus on aspects of hard infrastructure such as airports in order to ensure fundamental services exist to support the industry (Mezui and Hundal, 2013). Mezui and Hundal (2013) further state that there is no single solution to Africa's infrastructure financing gap. Therefore, Mezui and Hundal (2013) argue that the most effective approach, for policy makers and development partners, lies in creating a series of initiatives which help to catalyse a response from a broad spectrum of players in the financial markets. Policy makers should have an explicit focus on long-term planning and requirements by developing an integrated, efficient and affordable transport system which is sustainable from social, economic and environmental points of view (Khadaroo and Seetanah, 2007).

3.8 CONCLUSION

In this chapter the relevant literature was discussed. Background information was provided on the sustainable infrastructure development and financing thereof. Transport infrastructure and services have been identified as crucial for generating economic growth. Although airports generate revenues from aviation activities and non-aviation activities, capital projects still require external funding in order to see projects through. The airport, as an entity, has to ensure that it raises adequate capital to finance such infrastructure growth from public or private sources, or a

combination of both. Furthermore, the available literature suggests that it is not easy to quantify the economic advantages from airport investments.

The challenges for new investments in airport infrastructures are numerous. However, the researcher for this particular study concurs that e airport infrastructure investment is a necessity for the African continent to move to the next level of development in order to compete globally as a recognised player. Therefore, there is a growing need for airports to be upgraded and maintained well and also resourcefully alongside the demands of the economy.

4. RESEARCH METHODOLOGY

4.1 INTRODUCTION

The previous chapter presented the literature review. It highlighted the independent variable as well as the dependent variable. The general background, explicit specifics that are required and the research studies that have been conducted thus far concerning each variable were explored.

In this chapter, the prominent themes of the research will be incorporated into a research methodology and the research approach will be discussed. The population and the sample will be explained, and the sampling method as well as the data collection tool designed will be clarified. The chapter will further discuss the research reliability and validity, and highlight the limitations presented by this research.

4.2 RESEARCH APPROACH AND STRATEGY

The design of the research is the conceptual arrangement where the study would be undertaken, and it provides for the collection of relevant information. This study was performed as a case study because the research was designed to build a case out of data. The research comprehended a qualitative research methodology (primary data) which was collected through a survey questionnaire and various information gathered from relevant stakeholders. A quantitative research method (secondary data) was also incorporated as secondary statistical data was analysed in this study.

The data collection methodologies utilised followed multiple sources of data. The study made use of a questionnaire, which the researcher disseminated to a selected number of key individuals (respondents) to ascertain the usefulness of the HKIA upgrades. Statistical secondary data was obtained from the NAC and the Ministry of Environment and Tourism. The data was analysed to establish whether the upgrades to facilities at HKIA resulted in improved air traffic flow. When different methods in the research analysis development are used, the study can shape the strength

of each type of data collection and diminish the flaws of a single approach. This enhances the legitimacy and trustworthiness of the data collected, and assists the researcher in understanding the research findings (Research gate website, 2016). A brief description for each methodology is provided below.

i. Research Questionnaire

A structured survey questionnaire was developed for the purpose of this study. A questionnaire is a list of carefully structured questions chosen after considerable testing, with a view to eliciting reliable responses from a sample of respondents, (Collis and Hussey, 2014). A questionnaire anticipates instituting what certain groups of partakers think and/or feel. The main purpose for conducting the survey questionnaire was to explore whether participants perceived that the funds invested in the 2013/2014 HKIA project were well spent. The questionnaire was sent to a sufficient sample of staff members at:

- Namibia Airports Company; and
- Menzies Aviation

The sample survey questionnaire that was used and completed by respondents is captured under Appendix A.

ii. Analysis of statistical data

This study is supported by a desk top analysis of statistical data on the number of tourists entering the country through HKIA, and passenger and aircraft movements for before and after the said upgrade and renovations. Statistical analysis is an element of data analytics, as it involves collecting and scrutinizing every data sample in a set of items from which samples were drawn (explained by Business Intelligence on its website). The aim of conducting statistical analysis is to detect trends. The analysis done was to evaluate changes, if any, in the air traffic movements (both passengers and aircrafts) as well as in the number of total tourists entering the country at HKIA per annum. The statistical data population in this study was not too large. Therefore, the study used the entire population for the years from 2010 to 2015 in order to make

a meaningful conclusion of the analysis of the statistical data. These data were also backed with financial data analysis and economic growth analysis where applicable.

4.3 POPULATION

The population or sampling frame, in this research study comprised of all the employees of the NAC at the HKIA, Menzies Aviation, Air Namibia, and the Ministry of Works and Transport. However, the Air Namibia entity chose not to participate in this study and therefore no data from Air Namibia was available for analysis. Structured interviews were also due to be conducted with relevant officials within the Ministry of Works and Transport. However, the Ministry's officials remained unavailable for the interviews during the research period. A schedule recording the attempts made by the researcher to these officials is recorded in Appendix B. The statistical secondary data obtained from the NAC and the Ministry of Environment and Tourism also constituted a population.

4.4 SAMPLE

A representative sample is a subset of a population of interest, which enables inferences to be made about the target population within resource, operational, and cost constraints, (Msulwa, 2015). Sampling is very useful due to issues of feasibility and costs associated with studying the entire population, (Motelle, 2015). Therefore, it is imperative to understand that the usefulness of any assessment depends upon how sound the sample is to reflect the relevant features of the population, and not necessarily the size of the sample considered.

4.4.1 Questionnaire and interview respondents

Purposive sampling methodology particular to the expert sampling method was chosen for the survey questionnaire. This is because the respondents were chosen in a non-random manner based on their expertise, and therefore, could provide good insight into the subject. Dissertation Laerd explained on its website that expert sampling is a non-probability method that is used when the study needs to glean knowledge from an individual with particular expertise. Although

the ideal way of sampling is by probability sampling (random selection of targets), it is not always possible. The disadvantage of the expert sampling methodology is that it could result in selection bias, as a consequence of the model not sufficiently apprehending certain parts of the targeted populace. In addition, Leacock, Warrican and Rose (2015) state that sampling errors may be encountered because the methodology used in the study uses a sample as an alternative to the entire population. It is therefore important to note that sampling bias cannot be measured and cannot be corrected once the data is collected, (Leacock, Warrican and Rose, 2015).

4.4.2 Secondary statistical data

There was no sampling performed for the statistical secondary data which was analysed. The study applied a survey of data (full sampling method for the relevant years) in analysing the statistical data, as obtained from the NAC and the MET. The relevant years were determined to be from 2010 to 2015. The full sampling method confirms that the entire population of the secondary data available was analysed, and that it provides additional assurance of the results.

4.5 DATA ANALYSIS METHODS

The purpose of data analysis is to find answers to the research questions that were formulated when the study was conceptualised (Leacock, Warrican and Rose, 2015). The vital and significant phase for research is the structure of the data gathering apparatuses or research mechanism since the outcomes and/or conclusions of the study are established in line with the nature of the data collected. The data that is gathered is exclusively based on the questions that were posed to the respondents. Therefore, the quality and legitimacy of the findings are dependent on the tools used to obtain statistics.

The main objective of this research was to establish whether funds that were invested for the upgrade and renovation of the HKIA facilities in the 2013/2014 year resulted in improvements that fuel economic and social development in Namibia; and to explore whether participants perceived that the funds invested were well spent. In achieving this objective, it is important to gain an understanding of the value earned from the 2013/2014 HKIA upgrade project.

4.5.1 Qualitative Data Analysis

Descriptive and inferential statistics were used to analyse the collected data. Descriptive statistics attempts to systematically describe a situation or problem. This is a branch of statistics that is useful for collecting, grouping and analysing a known set of data, called population (Vergura, Acciani, Amoruso, Patrono, and Vacca 2009). Inferential statistics will also be incorporated to make inferences about the whole population.

The analysis was conducted using the Microsoft Excel programme as well as the Statistical Package for the Social Sciences (SPSS) programme. Data from the survey questionnaire was collected through an online Google programme that sent the questionnaire to participants, received the completed questionnaires and consolidated the data.

4.5.2 Quantitative Data Analysis

Statistical data was evaluated using certain statistical analysis tools, which offered the researcher a chance to interrogate the data and seek a better understanding. An analysis of trends was done by examining every category in terms of months and years.

4.6 RESEARCH RELIABILITY AND VALIDITY

Validity of research relates to the extent to which the research findings and conclusions are based on fact or evidence (Leacock, Warrican and Rose, 2015). Thus, the research conclusions should be justified based on the evidence collected. It is of utmost importance for the research to draw attention to both internal validity and external validity. Leacock, Warrican and Rose (2015) define these terms as follows:

- *Internal validity* is concerned with the extent to which the results of the research can be interpreted accurately and with confidence.
- *External validity* is concerned with the extent to which the research results can be generalised to other populations and conditions.

This study involves triangulation, as data was collected from multiple sources in order to enhance the trustworthiness of the study. Hence, a combination of both qualitative (survey questionnaire) and quantitative (statistical data) methodologies was used in this research study. Respondent selection and participant charting were completed prior to the research questionnaire being sent out. This was done in order to be acquainted with the potential range of participants targeted and to find the arrangement each potential respondent had with the study. The survey questionnaire was backed with a desktop statistical analysis.

This study used expert opinion to establish the content legitimacy of the assessment in the research. Content validity indicates the extent to which a test represents the universe of items from which it is drawn, and it is especially helpful when evaluating the usefulness of achievement tests or tests that sample a particular area of knowledge (Sireci and Faulkner-Bond, 2014).

4.7 RESEARCH LIMITATIONS

The study faced reluctance by the identified respondents due to their busy schedules, lack of time to answer the questionnaire and availability for interview meetings. The response rate for the survey research was not 100 percent, and the researcher had no control over who answered and who did not answer.

The study cannot guarantee whether the sample that was chosen fully represents the population because a non-probability sampling approach was used. Selection bias was an issue as a consequence of the model not sufficiently apprehending certain parts of the targeted populace and this may affect the findings which may not be representative of the HKIA stakeholders.

The research was also faced with some key stakeholders who could have had valuable and relevant information and data that could enhance the results of the study, but who showed no interest in partaking in the study. Therefore, the results and findings may be affected, and could be inaccurate.

4.8 CONCLUSION

This chapter provided the methodologies for the data collection that was assumed in this study. The study made use of different sources of data: a survey questionnaire (primary data) and statistical secondary data. The benefits of using different methods in the research analysis process were discussed. The population, as well as the sampling method, were also provided. The expert sampling method was chosen for the study in order to allow only individuals with relevant expertise to provide their view or opinion. Furthermore, the chapter discussed the data collection methods that were employed when analysing the different types of data. The research limitations that the study was exposed to were also highlighted.

Chapter five will present the assessment and testing of the statistics / data that were collected from both sources (survey questionnaire and the statistical data). The analysis will be done in order to establish whether funds that were invested for the upgrade and renovation of the HKIA facilities in the 2013/2014 year resulted in improvements that fuel economic and social development in Namibia; and to explore whether participants perceived that the funds invested were well spent. The findings and/or conclusions will be centred on the data and statistics that were collected and analysed.

5. RESEARCH ANALYSIS, FINDINGS, AND DISCUSSION OF RESULTS

5.1 INTRODUCTION

This chapter presents the findings of the results from the research of the investment of funds into the upgrade and enhancement of the facilities at HKIA. The analysis is aimed at establishing whether there are any national economic and social benefits derived from the project and/or whether the investment of funds into the HKIA project resulted in improvements that will fuel economic and social development in Namibia. The analysis of the research results is arranged around the research question that was posed in the first chapter and the advanced methodology presented in chapter four.

The composed data is examined and illustrated in a logical way. The first part of the analysis provides the descriptive statistics that explore various dimensions of the capital project that is examined in this study. The researcher compiled a questionnaire survey which was distributed to the relevant employees of the Namibia Airports Company and Menzies Aviation, in order to explore whether participants perceived that the funds invested were well spent. This part of the analysis particularly presents the respondents' views and opinions on the investment of funds into the 2013/2014 HKIA project. In addition, the researcher obtained information and data from the Ministry of Works and Transport as the sole shareholder of the NAC, the Namibian Statistics Agency, and the Ministry of Environment and Tourism. The data obtained from the Ministry of Works and Transport formed part of the research findings.

The trend in the secondary statistical data was analysed in the second part of the analysis to note any significant movements before and after the upgrades, and was supported by financial and economic data. Moreover, a benefit cost analysis was incorporated in the analysis to a certain degree, where applicable. The correlations and standard errors of the applicable variables pertinent in the analysis are also provided. Thus, this chapter is to provide a link to chapter six, which summarise the study and provides conclusions and recommendations based on the research findings.

5.2 SURVEY RESPONSE RATE

The respondents to the survey questionnaire consisted of managers, supervisors, and subordinates employed by the NAC, and also a manager at Menzies Aviation. In total, fifteen (15) questionnaires were dispersed to the NAC employees at the airport and only thirteen (13) were completed and returned to the researcher. The other two employees did not complete the questionnaire, probably because they did not find the time to do so. The response rate is recorded to be 87 percent and is considered to be within the required validity for the purposes of this study, as it denotes the majority of the estimated sample number. One questionnaire was dispersed to an employee representative of Menzies Aviation, and the representative's response was received and added to the overall questionnaire responses.

5.3 INTERPRETATION OF DATA

The findings that resulted from the research problem and this study are presented and interpreted in three sections, namely: the first section which covers the results of the questionnaire survey and information obtained from the Ministry of Works and Transport, because the two complement each other. The second section which analyses and interprets the statistical data so as to demonstrate the trend, growth, and any relationship identified. The third and last section which presents additional findings that were observed.

5.3.1 Survey results

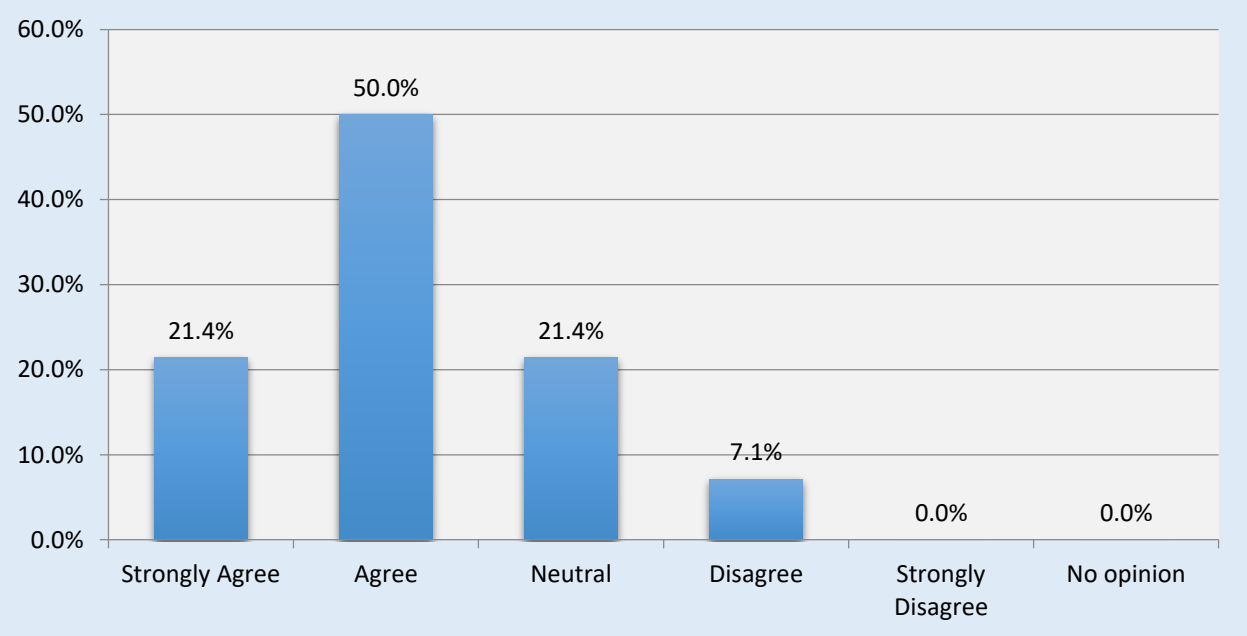
The results from the survey questionnaire were primarily analysed to answer the question on whether participants perceived that the funds invested in HKIA were well spent. A survey questionnaire was appropriate for this study as the researcher could use it to measure the participants' perceptions and assess thoughts and opinions of the participants. Pinsonneault & Kraemer (1993) describe a survey as a means of gathering information about the characteristics, actions, or opinions of a large group of people. The survey questionnaire for this study is included under Annexure A. The findings and opinions that were gathered are integrated with the relevant components from the literature review as presented in chapter three. With regard to all

the respondents, only 21.4 percent were non-managerial staff members of NAC and Menzies Aviation. Thus, the majority of the respondents held managerial positions.

i. The upgrades to HKIA resulted in the creation of new jobs.

The participants pointed out that new job opportunities were not only created within the NAC, but that indirect employment opportunities were created for many stakeholders. This is particularly the case with aircraft operators who engaged a large number of employees such as check-in personnel, ground handling officers, security officers, etc. The majority of the respondents (71.4 percent) thus believe that the upgrades to the HKIA facilities created new permanent and temporary jobs, which also include the recruitment of more Airport Rescue & Fire Fighting (ARFF) and Safety personnel. Chart 1 indicates that only 7.1 percent of the respondents felt that the upgrades did not result in the creation of more jobs, whilst the remaining 21.4 percent opted to remain neutral and not express an opinion on the matter.

Chart 1: The upgrades to HKIA resulted in the creation of new jobs.

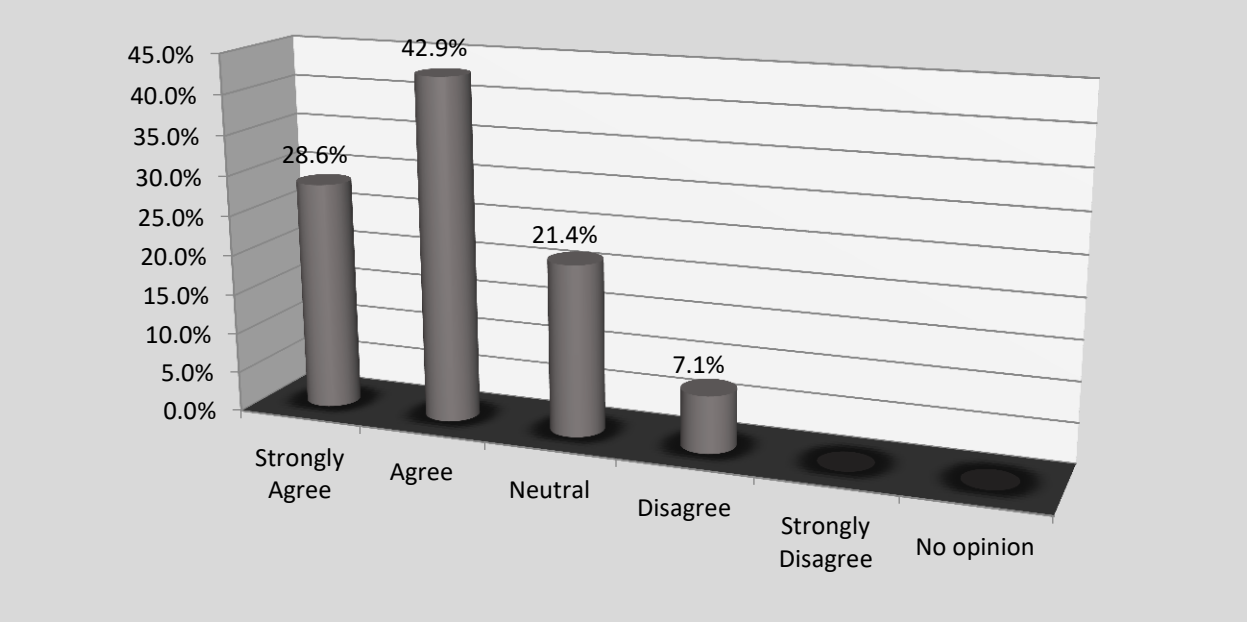


ii. The upgrades to HKIA resulted in an increase in traffic at the airport.

The traffic at any international airport can fluctuate based on the seasonality and interest of passengers to travel to certain international destinations. Therefore, with regard to changes in traffic at HKIA, some respondents felt that the area which was upgraded had nothing to do with the changes in traffic, and therefore traffic was not influenced by the upgrades.

Chart 2 illustrates that 66.5 percent of the respondents are certain that there is an increase in traffic flow at the HKIA which stemmed from the upgrades of the facilities at the airport. However, 7.1 percent of the respondents disagreed with the view that the traffic flow did in fact increase subsequent to the upgrades of the facilities at HKIA. This view is because, as the respondents stated, the HKIA statistics show that there was a decline in the number of passengers after the upgrades in comparison to 2012/2013. Nevertheless, the perception from respondents was that looking into the future a huge increment in the number of passengers is expected due to the four new airlines, including Qatar Airways, coming to Namibia. However, most of the respondents believed that there is a serious challenge with the facilities of the HKIA. The facilities may not be sufficient to respond to the increased traffic at the airport which is anticipated.

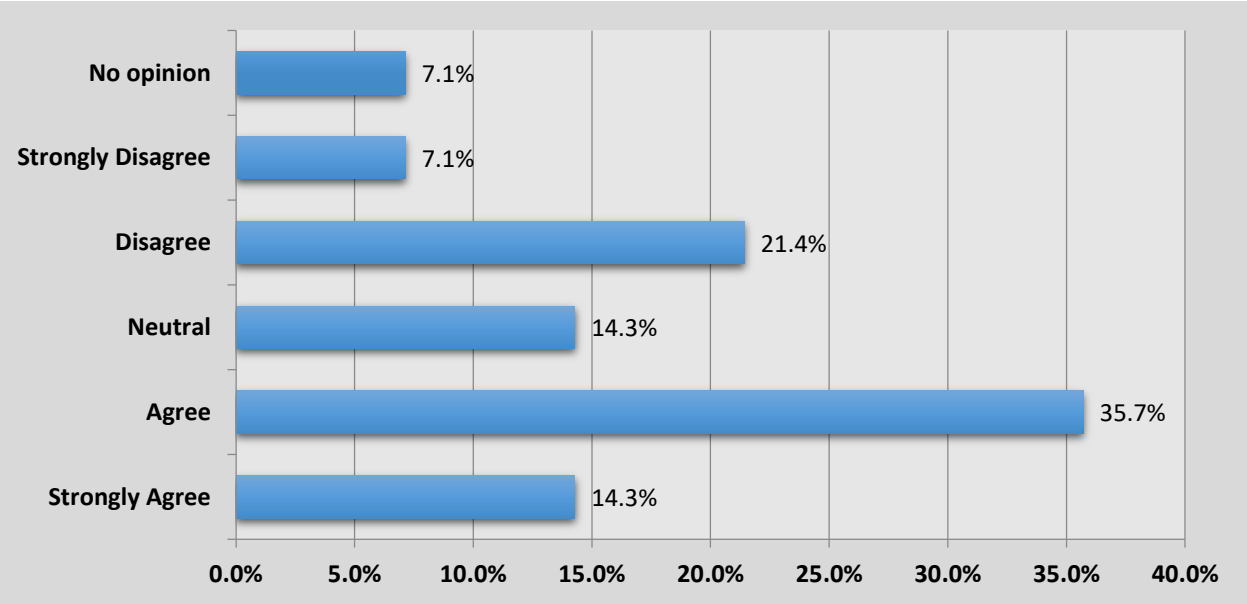
Chart 2: The upgrades to HKIA resulted in an increase in traffic at the airport.



iii. The available airline services are now better able to meet the air traffic flow & cargo demand.

The researcher observed that 50 percent of the respondents acknowledged that the airlines are now better able to meet the air traffic flow, as illustrated in Chart 3. However, disparities in responses were noted, as the results indicate that 46.2 percent of respondents agreed with the said statement, whilst 28.5 percent disagreed and 21.4 percent opted not to give an opinion and/or chose to remain neutral.

Chart 3: The available airline services are now better able to meet the air traffic flow & cargo demand.

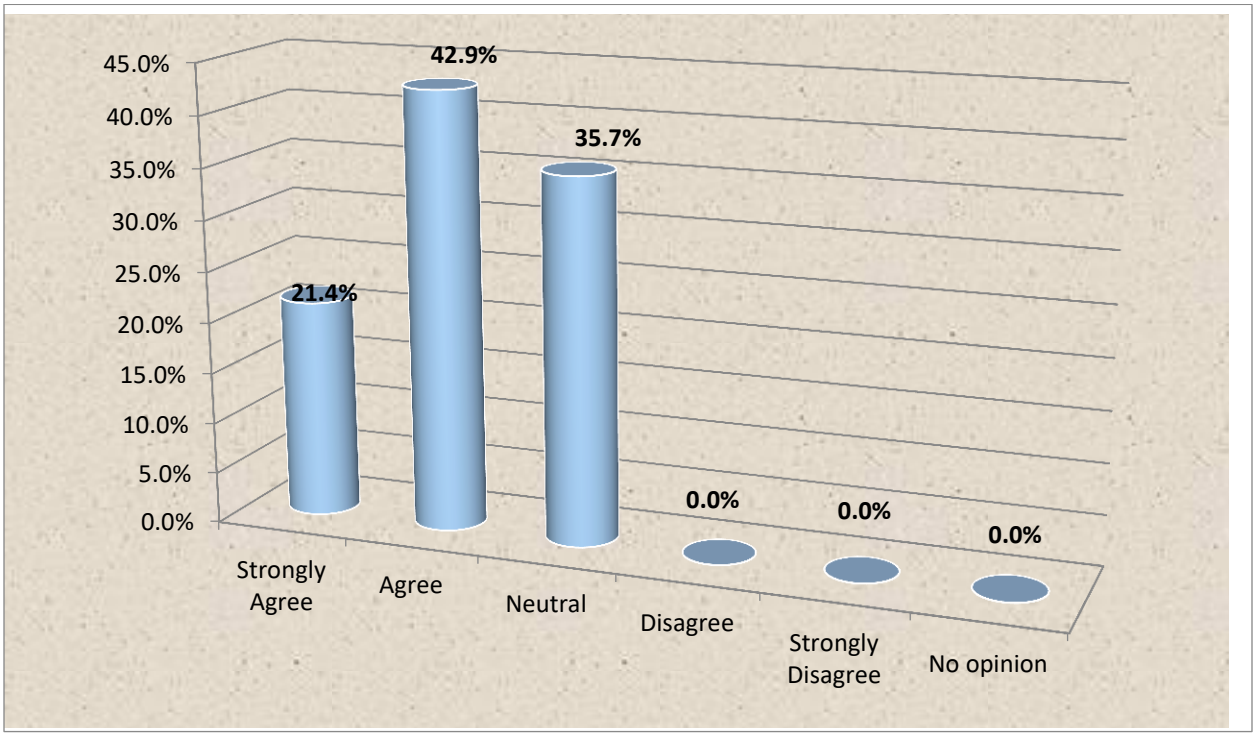


iv. The project resulted in the enhancement of the airport's performance.

The quality of air transport services is measured by the number of available seats, departures, airport density, the number of operating airlines and the quality of air transport infrastructure. According to the Tourism Competitiveness Policy brief of 2016, the HKIA rating worsened in 2013/2014 due to factors such as the airport not meeting international standards (downgrading of the HKIA from Category 9 to Category 5) that may have contributed to the air transport infrastructure being less competitive, and that resulted in the temporary closure of HKIA during

the year 2014. There is no respondent that disagreed with the statement of whether the upgrades to the HKIA facilities resulted in the enhancement of the airport's performance. However, 38.5 percent of the respondents chose to remain neutral and not to pronounce themselves, and 61.5 percent of the respondents all agreed that the project created an enhancement to the performance of the airport.

Chart 4: The project resulted in the enhancement of the airport's performance.

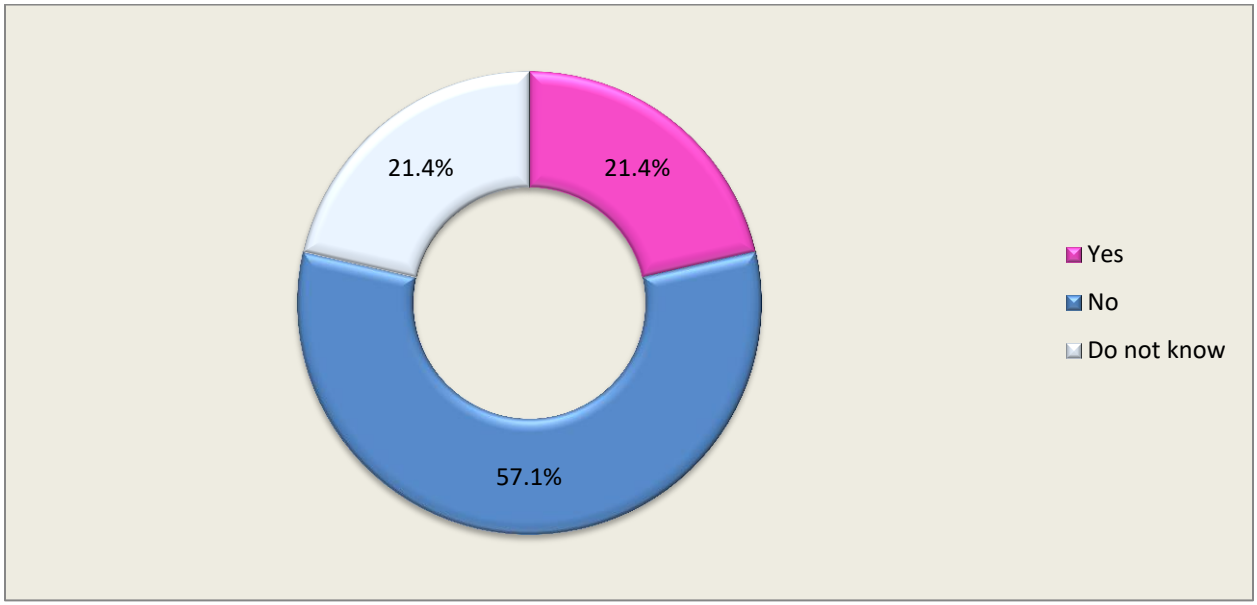


In addition, a few respondents felt that the performance of the airport is mainly driven by the number of airlines making use of the airport. The percentage of services created or improved through projects is not necessarily significant to drive and measure airport performance. The respondents felt that the upgrades of the HKIA led to improved passenger facilitations, and improved airport safety and security. However, some respondents said the NAC still faces challenges in accommodating the increased traffic effectively and there are infrastructure limitations at HKIA. Another view is that the airport has had major "unforeseen" growth in traffic inflows, and the terminal building at HKIA cannot handle this growth. Lastly, some respondents felt that the airport apron is not sufficient and requires expansion.

v. Did the Namibian government provide subsidy to the HKIA 2013/2014 project?

The researcher noted anomalies in the responses to this question. The majority of the respondents indicated that the Namibian government does not provide subsidy to the NAC but rather provides funds for specific capital projects only. However, the Directorate of Civil Aviation (DCA) within the Ministry of Works and Transport stated that the NAC receives an annual budget allocation from the Ministry of Works and Transport which is transmitted through the DCA budget. Moreover, the DCA indicated that they have no direct involvement in how the NAC uses the funds that are allocated to the company, and/or how the NAC determines its investment needs for large scale capital projects. The DCA said it only transfers funds and ensures that the NAC submits its monthly projected tranches as required by the Ministry of Finance.

Chart 5: Did the Namibian government provide subsidy to the HKIA 2013/2014 project?



5.3.2 Assessment of airport traffic flow

The researcher divided the effects (benefits and costs) of the upgrades to the HKIA facilities that were undertaken between the June 2013 and March 2014 year into two categories: monetary and physical effects. Monetary cost effects amount to the N$158.2 million investment into the HKIA

facilities, whilst the benefit cost effects are in the physical form, and these are provided in the number of aircrafts and passengers entering Namibia per annum.

Fluctuations in passenger growth and contrary results in aircraft movements were observed. The airport experienced growth in both passengers and aircrafts up to the year 2012. The number of passengers and the number of aircrafts both declined during the year 2013, by 6.1 percent and 21.9 percent respectively. However, the number of passengers increased by 3.8 percent in 2014, whereas the number of aircrafts increased by 5 percent during the same year. The airport experienced another decline of 2.6 percent in passengers during the year 2015, a change that was not affected by the movement in aircrafts, as the number of aircrafts increased by 3.9 percent in the same year.

The loss of the firefighting Category 9 status for the HKIA in July 2014 to Category 5 was expected to lessen the traffic flow at the HKIA. This is due to the fact that the downgrade typically meant that bigger aircrafts such as A330 airbus would no longer be allowed to land at HKIA. However, the movement in the traffic flow required an application of a statistical test that compares the available data for the period before and after the airport upgrade. The data was, therefore, tested using a T-test model. The null hypothesis tested was that the upgrade and renovations of the HKIA facilities did not result in improved air traffic flow (incoming and outgoing aircrafts / passengers). The T-test outputs presented in Figure 5.1 and 5.2 below illustrate that the difference in means is statistically significant at 0.012 and 0.009 p-value levels; hence the null hypothesis is rejected. The results also imply that there is a relationship between passengers / aircrafts and the investment made to the airport. Therefore, the T-test results strengthen the perception that the investment made for the improvement and development of the airport was worthy.

Figure 5.1: T-test output for passengers

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
TotalPassengers_pre	6	762919.83	46280.309	18893.857
TotalPassenger_Post	2	784250.5000	14890.96171	10529.50000

One-Sample Test

	Test Value = 0					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
TotalPassengers_pre	40.379	5	.000	762919.833	714351.63	811488.04
TotalPassenger_Post	74.481	1	.009	784250.50000	650460.5172	918040.4828

Period used:

Pre	2010 - 2013
Post	2014 - 2015

Figure 5.2: T-test output for aircrafts

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
TotalAircraft_pre	4	15307.75	1598.803	799.401
TotalAircraft_Post	2	14654.00	400.222	283.000

One-Sample Test

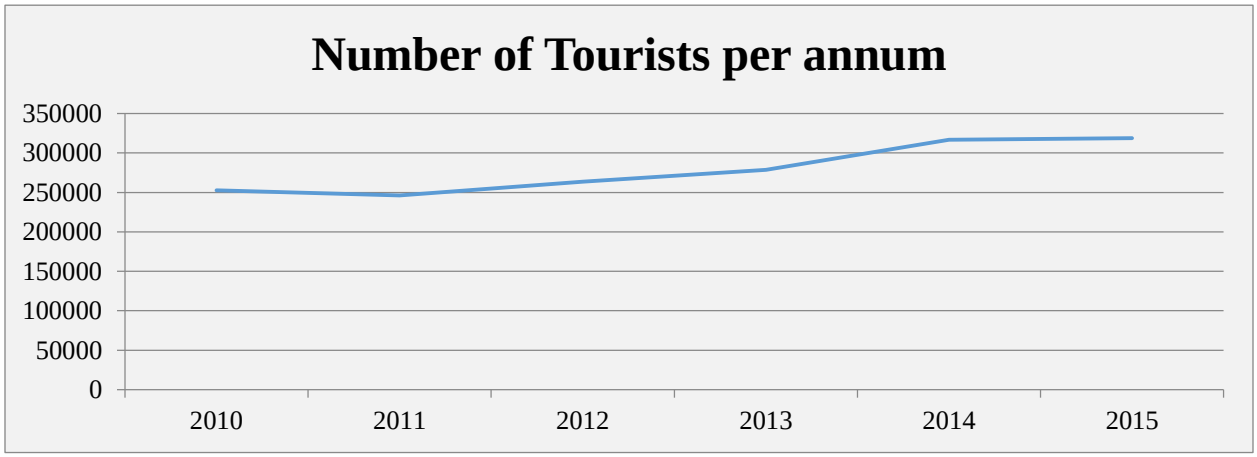
	Test Value = 0					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
TotalAircraft_pre	19.149	3	.000	15307.750	12763.70	17851.80
TotalAircraft_Post	51.781	1	.012	14654.000	11058.14	18249.86

Period used:

Pre	2010 - 2013
Post	2014 - 2015

Consequently, the tourism industry grew by 4.1 percent during 2015 [10.8 percent: 2014] as per the data obtained from the Namibia Statistics Agency. The data from the Ministry of Environment and Tourism indicates a growth of 0.7 percent in the number of tourists who entered the country through the HKIA during the same period. Chart 6 below shows the number of tourists who entered the country through the HKIA annually.

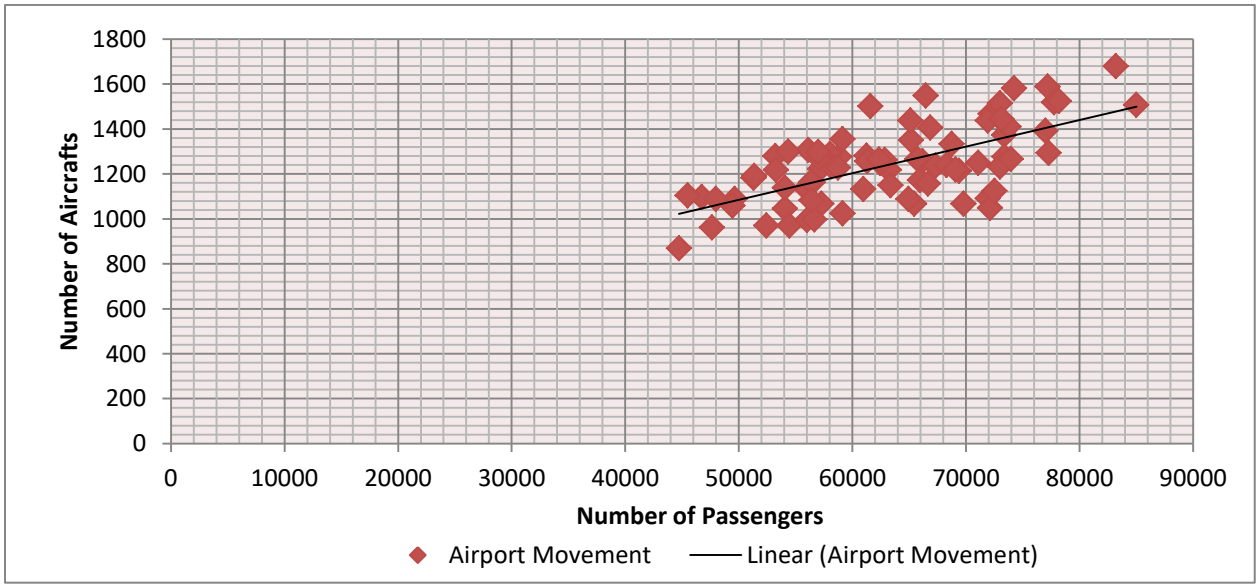
Chart 6: Number of Tourists entering Namibia through the HKIA per annum



Source: Ministry of Environment and Tourism

Although an overall growth of 13.5 percent in the number of passengers and a decline of 0.3 percent in the number of aircrafts was recorded during the five year period (2010 – 2015), the scatter plot chart as illustrated in chart 7 below indicates a positive relationship between passenger movements and aircraft movements during the 2010 – 2015 periods. This indicates that the two variables move in tandem, meaning when the number of aircraft increases, the number of passengers is inclined to rise as well.

Chart 7: Relationship between passengers and aircraft movements



5.3.3 Additional findings

i. DCA audit findings and new airlines operating at HKIA

Although the NAC had a few scheduled upgrades lined up, most of the upgrades that were performed on the HKIA between June 2013 and March 2014 were as a result of the DCA audit findings, and as such the NAC managed to close many gaps as per the DCA findings. Eleven (11) firefighting trucks, new scanners, and metal detectors were purchased and installed. Firefighting staff were also able to undergo an up-to-date firefighting training in Singapore. One of the benefits derived from the upgrading of the airport was that the HKIA was able to demonstrate its firefighting capabilities, which subsequently resulted in the airport being re-graded to Category 9, and as such bigger aircrafts were allowed to land at the HKIA again.

In addition, four new airlines commenced operations at the HKIA during the 2016/2017 financial year. It is, therefore, expected that the aeronautical revenue will increase at a higher rate in 2016/2017 due to the four new airlines that commenced operations at HKIA during that financial year, bringing the total number of airlines operating at HKIA to nine (9).

During the period of this study, the researcher requested the four new airlines to indicate if they would have considered commencing services to Windhoek prior to the upgrades of the HKIA facilities that ended in March 2014. Three of the new airlines answered yes, and one airline indicated that it is still too early for them to give an experience of HKIA and/or to compare the current HKIA facility with the previous facility, as they do not have any experience of the previous facility. One of the NAC managers at HKIA, however, believes that the new airlines came on board due to the increased demand, safety of the airport, viability of the route, and political stability of the country.

Overall, an airport performance is highly reliant on airline operations. The airport now inevitably services more airlines as a result of the four new airlines that came on board during the 2016/2017 financial year. These airlines brought about additional flights and further connection prospects for travellers. Passengers can now experience more convenience and flexibility, as

there is a range of airlines to service air travellers. The additional airlines may offer less waiting time in a journey, flexibility, and may be more appropriate. However, HKIA may be faced with infrastructure challenges which could result in the airport's inability to handle the increased capacity and volume should this challenge not be addressed timeously.

Lastly, the observation from an economic point of view was that the passenger travel movements at HKIA have been fluctuating and there was a decreased number of passengers during the year 2015. This is contrary to the results of the research questionnaire where the respondents actually thought that there were more passengers after the completion of the 2013/2014 upgrades to the HKIA facilities. Total passengers increased by 3.8% during 2014 and declined by (2.6%) in 2015 differing from the contribution made by the tourism industry to the overall Namibian GDP during the same periods. The contribution made by the tourism industry to the annual GDP increased by 0.2% to 1.8% in 2014 and by 0.3% to 2.1% in 2015.

ii. Cost benefit analysis

From its development roles, the aviation industry offers the ability to stimulate tourism, expedite international trade, craft high-paying jobs, a hi-tech complexity of state economy, and encourage a sense of national pride. An airport investment is also aimed at addressing transportation demand which may impact both the airport and airline costs.

Other socio-economic benefits derived from the upgrades of the HKIA are the project's contribution towards poverty eradication through the employment opportunities it created. In addition, the airport may generate more revenue from both aeronautical and non-aeronautical activities. The HKIA also has the capacity to develop an economic transformation of the airport, attract national and regional investors, and contribute to a potential increase in Namibia's tourism. However, these accomplishments require additional capital investments into the development and expansion of the current HKIA infrastructure.

Furthermore, the researcher did not find any information regarding the pre and post assessment of the 2013/2014 HKIA project detailing the cost-benefit analysis. These types of assessments

are necessary in order to institute user benefits (direct and indirect) and costs of the investment as well as the value add of the project. As stated by Banister and Berechman (2001), "the distributional impacts in terms of the spatial effects on the regional and local distribution of services and facilities and the social impacts of a project should be investigated as well."

iii. Revenue collection by NAC

The enhancement of the HKIA long term parking led to an increase in the non-aeronautical revenue. The non-aeronautical revenue increased from N$34.6 million collected during the year ended 31 August 2010 to N$52.1 million collected during the year ended 31 March 2015. Whilst aeronautical revenue increased from N$111.5 million reported during the year ended 31 August 2010 to N$157.0 million reported during the year ended 31 March 2015. Tables 5.1 and 5.2 below indicate the revenue collected over the years 2010 – 2015.

Table 5.1: Annual non-aeronautical revenue received

Revenue	31.08.2010	19 months ended 31.03.2012	31.03.2013	31.03.2014	31.03.2015
Non-aeronaetical revenue	34,588,321	73,362,578	42,401,432	50,339,545	52,121,974

Source: Namibia Airports Company Annual Reports

Table 5.2 illustrates the aeronautical revenue for the years 2010 – 2015.

Table 5.2: Annual aeronautical revenue received

Revenue	31.08.2010	19 months ended 31.03.2012	31.03.2013	31.03.2014	31.03.2015
Aeronaetical revenue	111,492,406	198,146,141	148,731,745	150,196,795	157,019,337

Source: Namibia Airports Company Annual Reports

iv. Air transport policy

During the study, the researcher learned that there is no policy in Namibia that guides the aviation industry. Although the Ministry of Works and Transport is tasked with the formulation of appropriate transport related policies and regulating the quality of transport services and the

level of safety, the Ministry is yet to implement an aviation policy in the country. This is contrary to the principles of sustainable development, which emphasises the importance of both the design and implementation of policies. However, the Ministry has indicated that the policy exists in draft format, but it is yet to be finalised and approved.

5.4 CONCLUSION

This chapter provided an analysis of the research results and presented the observed findings based on the key variables that were used in the study. As highlighted by Banister and Berechman (2001), one of the major unresolved research issues in transport is whether or not transport infrastructure investment promotes economic growth. This study was aimed at investigating whether the project resulted in improvements that fuel economic and social development in Namibia.

Based on the findings and the analyses done in this chapter, a conclusion for the study will be drawn and recommendations made under chapter six.

6. RESEARCH CONCLUSIONS AND RECOMMENDATIONS

The impact and benefits of the investment of funds into the upgrades of Namibia's largest international airport (HKIA) were investigated in this study. The study also provided a theoretical context that responded to the research objective: *To establish whether funds that were invested for the upgrade and renovation of the HKIA facilities in the 2013/2014 year resulted in improvements that fuel economic and social development in Namibia; and to explore whether participants perceive the investment as money well spent.* The study has the capacity to enlighten the relevant stakeholders concerning what return on investment has been derived from the project, in what way challenges fronting airport developments can be lessened, and the airport investment arrangement that is advocated.

It is imperative to note that generally, investment into transport infrastructure should be seen as a supporting role to other additional fundamental conditions, so as to realise advanced economic growth. However, as Banister and Berechman (2001) recognised, there has been a close correlation between the growth in demand for freight and passenger traffic and economic growth as measured by GDP. The 2013/2014 investment into the HKIA project did not only enhance the airport infrastructure but also complemented other core elements, which could be maximised to grow economic development further. These upgrades to the HKIA facilities created some temporary and permanent jobs. The jobs were not only created within the NAC but also by many other stakeholders. Job creation contributes largely to poverty eradication in Namibia, and this is highlighted in the NDP4 as one of the economic development enablers.

The four new airlines that commenced operations at the HKIA during 2016/2017 will not only contribute to the income of the NAC but to the economy at large, through the tourists that will enter the country using these airlines. Tourism remains an unlimited economic enhancer of the country, and thus contributes essentially to the Namibian GDP.

From the research findings, the researcher established that the 2013/2014 HKIA project lacked involvement by the Namibian government, which is the sole shareholder of the NAC and a financier of the HKIA capital project. This is both in terms of pre and post project benefit cost analysis, as well as the evaluation of the project. Monitoring and evaluation of a project enables the government to assess whether the project has achieved its objective and also establish the value-add derived from the project.

The statistical T-test results strengthened the perception that the investment made for the improvement and development of the airport was worthy as the results indicated a relationship between passengers / aircrafts and the investment made to the airport. The results indicated that the upgrade and renovations of the HKIA facilities did in fact cause an improvement in the air traffic flow.

The researcher recognised that the investment levels at the HKIA were too low. The airport is currently faced with insufficient terminal building infrastructure, which is unable to complement the increased growing demand at HKIA and the project that was studied in this research rather concentrated more on enhancing equipment than the actual infrastructure facilities at the airport. Therefore, there is a need for the HKIA to respond to the high demand experienced at the airport because if the airport capacity is not sufficient, it can affect the traffic flow as travellers and airline operators may experience high congestion. As the World Bank indicated in its 1994 paper, "infrastructure can deliver major benefits in economic development, poverty alleviation and environmental sustainability – but only when it provides services that respond to effective demand, and does so efficiently."

It is eminent that in order to achieve sustainable development goals, sufficient financing and a properly designed long-term financing framework are required, but this was not prominent in the 2013/2014 HKIA project. It was further noted that Namibia is the only African country, amongst those that it was compared to in Table 2.1, that opted to develop its airport infrastructure in multiple projects and it is not clear why the said methodology was used as arrangements of this nature could be expensive and consequently take longer to complete. The 2013/2014 upgrades

were mainly due to an audit finding but were also not able to grant the HKIA a rating into the top 20 African airports. However, the airport was re-graded to airport Category 9 as it complied with the airport firefighting equipment and management requirements.

As noted in the literature review chapter, an airport would normally adjust its infrastructure due to technological progressions so as to keep up with new aircrafts which would gain popularity in a far more accelerated pace than the particular airport infrastructure. As such, HKIA may want to address this challenge by constantly improving its airport infrastructure. It is thus concluded that the investments made thus far on the HKIA facilities lacked, to a certain degree, sustainable development features. More airlines have come on board, however, it is not clear if the current infrastructure at the airport can sustain and service these airlines efficiently and effectively. Although the NDP4 provided the sustainable development goals which include the development of the HKIA, without financing, the design for a sustainable development financing framework cannot be attained.

Furthermore, the HKIA is a gateway for tourists and investors into the country, and therefore, requires excessive strategic planning and transformation in terms of its infrastructure. The Namibian government alone may not afford to be a sole investor of the airport infrastructure to sufficiently finance the infrastructure expansion and/or development of HKIA. Hence, there is a need for a funding mechanism that is sustainable in order to develop the airport and consequently the economy further.

Consideration should be made in terms of public/private sector partnership (as an example) to ensure availability of adequate funding for HKIA infrastructure development activities. Powerful agreements may offer the HKIA prospects to reach a larger and more diverse market, but also volatility within can considerably obscure forthcoming airport improvement plans. Namibia could benefit from funding sources such as development finance institutions, bilateral donors, multilateral donors, global funds, NGOs, and private commercial industry to finance large capital projects such as the airport development and not only rely on government for funding of projects. HKIA should thus undertake crucial steps to lessen interruptions that affect the aviation industry.

The current HKIA infrastructure should allow the NAC to incorporate all insignificant/significant investments to preserve the prevailing airport capability and infrastructure so as to avoid the airport degrading into inoperability.

Lastly, it became apparent that there is no aviation policy in the country. The researcher acknowledges that the government indicated that it has a draft aviation policy. Although the industry has been operating without an aviation policy, the policy is required, as it can address issues of economic needs and international standards.

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Appendix A: Letters & Questionnaire

24 August 2016

The Chief Executive Officer

Namibia Airports Company

154 Independence Avenue

Windhoek

REQUEST FOR PERMISSION TO CONDUCT RESEARCH SURVEY ON THE HOSEA KUTAKO INTERNATIONAL AIRPORT UPGRADES

Dear Sir

My name is Aune Nyanyukweni Emvula, and I am a student at the University of Cape Town Graduate School of Business in Cape Town enrolled for a Masters of Commerce in Development Finance Degree. The research I wish to conduct for my Master's dissertation involves **'an evaluation of the impact of the 2013 / 2014 upgrades to the facilities at Namibia's Hosea Kutako International Airport ("HKIA")'**. The study aims to assess the usefulness of the upgrades and whether the financing of the upgrades and terminal building renovations, and the extension of the taxi runway and the public parking at HKIA resulted in a greater efficiency and/or improved business climate. The project will be conducted under the supervision of Associate Professor Dr. Glen Holman (University of Cape Town ("UCT"), South Africa).

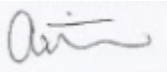
There are no known risks or dangers to respondents associated with this study. The Researcher will not attempt to identify respondents with the responses to the questionnaire, or to name them as participants in the study, nor will she facilitate anyone else's doing so.

I am therefore hereby seeking your permission to conduct a one (1) page questionnaire with any relevant staff members of the Namibia Airports Company ("NAC") as well as to collect data from NAC for analysis purposes.

I have attached a copy of my dissertation proposal which includes a copy of the approval letter that I received from the UCT Research Ethics Committee. Upon completion of the study, I undertake to provide the NAC with a bound copy of the full research report.

Should you require further information, please do not hesitate to contact the Researcher on cell phone number 081 124 5499 and/or email address nezaune@gmail.com. Thank you for your time and consideration in this matter.

Yours sincerely,



Aune N. Emvula

Masters Candidate, Development Finance

Graduate School of Business

University of Cape Town

24 August 2016

To Whom It May Concern

RESEARCH SURVEY ON THE HOSEA KUTAKO INTERNATIONAL AIRPORT UPGRADES

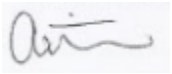
Dear Respondent

My name is Aune Nyanyukweni Emvula, and I am a student at the University of Cape Town Graduate School of Business in Cape Town enrolled for a Masters of Commerce in Development Finance Degree. The research I wish to conduct for my Master's dissertation involves **'an evaluation of the impact of the 2013 / 2014 upgrades to the facilities at Namibia's Hosea Kutako International Airport ("HKIA")'**. The study aims to assess the usefulness of the upgrades and whether the financing of the upgrades and terminal building renovations, and the extension of the taxi runway and the public parking at HKIA resulted in a greater efficiency and/or improved business climate.

There are no known risks or dangers to you associated with this study. The Researcher will not attempt to identify you with the responses to the questionnaire, or to name you as a participant in the study, nor will she facilitate anyone else's doing so. I am therefore hereby seeking your consent to conduct a one (1) page questionnaire, as attached, with yourself for research purposes.

Should you require further information, please do not hesitate to contact the Researcher on cell phone number 081 124 5499 and/or email address nezaune@gmail.com. Thank you for your time and consideration in this matter.

Yours sincerely,



Aune N. Emvula

Masters Candidate, Development Finance

Graduate School of Business

University of Cape Town

Dear respondent,

You are kindly requested to participate in this academic research conducted by Aune N. Emvula, a Masters in Development Finance student at the GSB of the University of Cape Town. The research aim to evaluate the impact of the 2013/2014 upgrades to the HKIA facilities. As the NDP4 states, the government took a decision to invest in infrastructure developmental project that creates long term economic benefit to Namibia. Consequently, the NAC said it values the importance of developing and maintaining good infrastructure facilities at its airports for world class standards. The information you provide will be treated confidential. Please answer all question by marking the applicable answer with a cross (X) and were necessary, fill in the answer and provide your opinion.

SECTION: A		**ASSESSMENT OF THE PROJECT**				
1. The upgrades to HKIA resulted in a creation of new jobs	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No opinion
Anything else you would like to add						
2. The upgrades to HKIA resulted in an increase in traffic at the airport	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No opinion
Anything else you would like to add						
3. The available airline services are now better able to meet the air traffic flow & cargo demand	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No opinion
Anything else you would like to add						
4. The project resulted in the enhancement of the airport's performance	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No opinion
Anything else you would like to add						
5. Did the Namibian government provide subsidy to the HKIA 2013/2014 project?	Yes		No		Do not know	
If yes, please provide details						

6. What were your expectations regarding the impacts of the investment into the HKIA project of 2013/2014? In your opinion, did the project meet the expectations? (**if space is not sufficient, you may write on the next page**)

SECTION : B	**PERSONAL INFORMATION**				
a. Indicate your position	Non-Managerial		Managerial	EXCO	
b. The number of years in service	0 – 2 years	3 – 5 years	6 – 10 years	11 – 15 years	More than 15 years

1 October 2016

The Regional Director

Condor Airlines

P O Box 731

Windhoek

REQUEST INFORMATION FOR RESEARCH SURVEY ON THE HOSEA KUTAKO INTERNATIONAL AIRPORT UPGRADES

Dear Sir or Madam

My name is Aune Nyanyukweni Emvula, and I am a student at the University of Cape Town Graduate School of Business in Cape Town enrolled for a Masters of Commerce in Development Finance Degree. The research I wish to conduct for my Master's dissertation involves **'an evaluation of the impact of the 2013 / 2014 upgrades to the facilities at Namibia's Hosea Kutako International Airport ("HKIA")'**. The study aims to assess the usefulness of the upgrades and whether the financing of the upgrades and terminal building renovations, and the extension of the taxi runway and the public parking at HKIA resulted in a greater efficiency and/or improved business climate. The project is conducted under the supervision of Associate Professor Dr. Glen Holman (University of Cape Town, South Africa).

There are no known risks or dangers to respondents associated with this study. The Researcher undertakes to keep confidentiality to the responses, and will not name respondents in the study, nor will she facilitate anyone else's doing so.

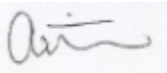
I am therefore hereby seeking your response to a one (1) question. Please mark the applicable answer with a "x".

Question:

Would you have considered commencing services to Windhoek prior to the upgrades of the HKIA facilities?	Yes	No	Do not know
Anything else you would like to add			

Should you require further information, please do not hesitate to contact the Researcher on cell phone number 081 124 5499 and/or email address nezaune@gmail.com. Thank you for your time and consideration in this matter.

Yours sincerely,



Aune N. Emvula

Masters Candidate, Development Finance

Graduate School of Business

University of Cape Town

Appendix B: Attempts to conduct interviews at the Ministry of Works & Transport

Official	Date	Time	Call or email	Outcome
1	12.10.2016	19h30	email	no response
	28.10.2016	09h50	call	no response
	28.10.2016	10h05	call	call back after 2 weeks
	28.10.2016	10h45	sms	no response
2	28.10.2016	12h00	call	no response
	28.10.2016	12h09	email	no response
	31.10.2016	15h05	call	no response
3	28.10.2016	12h25	email	no response
	01.11.2016	10h15	call	no response
	03.11.2016	11h45	office visit	not available