

UNIVERSITY OF KWAZULU-NATAL

**ASSESSING THE TRANSITION OF THE DURBAN INTERNATIONAL AIRPORT TO
KING SHAKA INTERNATIONAL AIRPORT: IMPLICATIONS FOR THE
ESTABLISHMENT OF AN AIRPORT CITY**

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DECLARATION

I **William Nhlanhla Mpondi** declare that:

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ABSTRACT

The reason for the transition of airports from one area to another is to create either a positive impact on economic growth or a negative impact on stimulation of economic activities. The transition of the Durban International Airport to King Shaka International Airport (development as airport city/ aerotropolis) was a plan that was facilitated by KwaZulu-Natal democratic government. The purpose of this transition was to facilitate the growth of economic development in a province which is faced with poverty, unemployment and inequality (Robins et al, 2011). Airlines that were operating at the Durban International Airport were those airlines with short haul but the long haul could not be accommodated by the airport due to the short runway and there was no space to develop the airport further (Van Turenhout, 2012). The study aims to assess the transition of the Durban International Airport to the King Shaka International Airport: Implications of the airport city/aerotropolis. The study will gather the information which underlines the importance of the transition; the impact of the development of the airport city/aerotropolis and the role it played in economic development of the province. Data was collected through face to face interviews with the stakeholders that were and still are involved in the transition of the Durban International Airport to the King Shaka International airport and development of the airport city/aerotropolis. The results show that the transition has benefited the province by growing the economy of the province and the creation of Special Economic Zones (SEZ's) which are accommodating different forms of industry (DTP Annual Report, 2017/18). The results will assist in the development of the body of knowledge and there is a huge possibility for further development of the study in the areas of SEZ's.

LIST OF ACRONYMS

| | |
|-------|--|
| ACSA | Airport Company South Africa |
| AMP | Airport Master Plan |
| BRICS | Brazil, India, China and South Africa |
| DIA | Durban international office |
| DTP | Dube TradePort |
| EDTEA | Economic Development Tourism and Environmental Affairs |
| FDI | Foreign Direct Investments |
| IATA | International Air Transport Association |
| GDP | Gross Domestic Product |
| KSIA | King Shaka International Airport |
| KPMG | Klynveld Peat Marwick and Goerdeler |
| KZN | KwaZulu-Natal |
| MAG | Manchester Airport Group |
| MEC | Member of the Executive Council |
| ORTIA | Oliver Tambo International Airport |
| SAA | South African Airways |
| SEZ | Special Economic Zone |
| WTTC | World Travel Tourism Council |

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CHAPTER ONE

INTRODUCTION

1.1 Preamble

Airports are vital for the economy because they facilitate the movement of goods and services, workers, investments and ideas. Furthermore, they connect consumers with industries and bring tourists to their destinations (Wilson, 2010)

This importance of airports has brought about improving the infrastructure and expanding airports so that countries can participate in the global economic platform. The purpose of airports' has been redefined by the contribution to tourism and growth of domestic products. Airports are regarded as a gateway function that relates to the realm of the transportation sector such as tourism and urban development which increases demand facilitating the expansion into economic activities (Ergas and Felsenstein, 2012). The role played by the airports is significant in the world economy, as it enables people to connect, enablers of international value chains and economics are enabled to ensure that trade speeds as a gateway for cities that are landlocked (Orellana, 2017). Airports provide worldwide transportation network, which is essential for tourism and global business.

There are four factors that contribute to the development of airports (Kasarda, 2008b).

Firstly, larger metros as well as with metros similar individual cultural occupations and, warmer winters, assist in attracting tourists throughout the year and those airports are more likely to be busy throughout the year. Airports participate in the regional economic development by creating employment. The hospitality areas, retail, air hostesses and other areas of entertainments are important in the creation of employment. Thirdly, the role of airports used as a mode of moving people and cargo in the regional development is the most important factor. Lastly, the activities within the airport and its size contribute to the development of the regional economic development. Part of the reasons of transition of the Durban International Airport to the King Shaka International Airport was to build big runways so that long haul airlines could land (Ahmed, 2016)

The pursuit of the regional economic development using factors like human capital, population size, high technology, population size industry structures are important in the context of airports. (Holgersson, Florida and Mellander, 2015). The new model of regional

economic development is using airports to be economic competitive (Kasarda and Lindsay, 2011). The economic activities inside and outside the airport show that their role in the global world is important

The role played by manifestation and acceleration of aviation which link urban forms and functions views airports as the 21st century process of globalisation (Kasarda, 2013). This manifestation resulted in airports to airport city developments. The new development of airports enables to change airports to develop centres of entertainments, head offices, hold conferences, facilities of trade and exhibition cultural and recreation centres of intertwinement's (Kasarda, 2008b). Airports in the past were used as places for landing and departing of airlines from and to the next destination, the business thinking of using airports and development of economic activities was not in the thinking of airport plan.

Airports have grown from a mere departing and landing space into mega structures, cities within the airport where tourist can even do shopping and be entertained in myriad ways.

The concept of airport city has been defined as including air as new commercial activities which business activities on and within its surroundings (Guller and Guller, 2003). "Inside the fence" that includes areas like terminals, apron, and runways, also with cargo, logistics, office retails and a hotel is the airport city (Kasarda, 2008). The concept is centred within the airports and its surrounding airport space where business takes place without being confined to a city centre.

An Airport city is at the core of the aerotropolis serving as the centre of the new urban development emerging next to big airports (Zamanov, 2017).

Four basic drivers have emerged in an airport city (Kasarda, 2008):

- There is need to create new non-aeronautical revenue income in the airports of today to compete and to be efficient in serving standing aviation functions.
- The land that is affordable and accessible for the pursuit of commercial business must be available.
- The increased passengers' gateway and baggage volumes must be increased by airports.
- Airports are viewed as playing a stimulating business opportunities role and fertile ground for landside business development. These are the key standards for evolving the airport city on the availability of land in order for development to take place

Airports have developed into airport cities synonymous with an aerotropolis developed by Kasarda as the results of his perception on airports gaining a new significance in the modern economy (Charles, Paul, Neal and Julia. (2007). Cities with largest airports pose as points of exchange in the global economy as the majority of air travellers are business people and tourists (Stevens,et al, 2010). The concept of an aerotropolis as it is known today increased its prominence in the 1990's with the main aim of commercializing, expansion of airports' sphere and the diversification of activities which occurs in the airport and its surrounding areas (Kasarda, 2008b).

The term aerotropolis is derived from the Greek words '*Aero meaning Air*' and '*Tropolis meaning city*'. The biggest airports in the world are changing from being a local arrivals and domestic departures; they are being transformed into "mini-cities" within large cities. The 21st century airport-centred development is what highway exchanges were to the 20th century economic development, what railways were in the 19th century and what waterborne connections were to the 18th century (Kasarda, 2008b). An aerotropolis as an airport-centred economic development, it is a sub-region within the urban area that has a well-developed space useable and economic opportunities next to the airport (Kasarda and Appold, 2008b). The linking of aviation business including cargo, logistics and commercial facilities in a space dominated by tourism facilities like food and beverages, hotels, conference centres and entertainment areas resembles aerotropolis.

The research will focus on assessing the impact of the transition from the old to the new established airport as an aerotropolis and the impact on tourism, routes establishment, cargo volumes and the role of foreign direct investment.

1.2 Problem statement

The study assessed the transition of the old airport to the new airport and establishment of an Airport City. The decision of the transition Durban International airport was inspired by the government of the province to create employment and attraction of investors (Ahmed, 2016). The airport was developed as part of establishing the broader special economic zone named the Dube TradePort, in order to facilitate economic growth in the province (Van Turehout, 2012).

Additionally, the new airport was built upon the on the realization that there was no space to expand the old airport as it was closer to the sea (Robbins, 2011). The limitations of the old airport were seen as constraints on the regional ambitions of developments. The runways

were short and could not be expanded as there was no land for further development. There was also a consensus that a new airport would have a significant impact and assist in re-positioning the region to become competitive in a fast-changing global world. For many years, the Durban International airport had been situated at Isipingo South of Durban. However, with the changing global competitiveness and economic development trends, the airport was unable to accommodate the new routes and volumes of cargo necessary to attract direct foreign investors and increase tourism numbers.

The new airport, now situated north of Durban, is called King Shaka International Airport (Ahmed, 2016). The move presents the opportunities of Greenfield development and essentially allows for an opportunity to put in place a comprehensive plan that responds to and capitalises on the new location on the edge of the eThekweni Municipality (Luthuli, 2018:107). There was a need to further expand the airport, this was the results of Dube TradePort was being developed as the business area within the airport hence the start of the aerotropolis (KZN government, 2008).

The intention of the study is, therefore, to answer the question: what has been the impact of the transition of the airport into an airport city in light of tourism, cargo volumes, route development and attraction of investments. The importance of conducting the study is to assess the impact of an airport city development in growing the economy of the region.

1.3 Motivation or Rationale of the study

The study is motivated by the need to contribute to the growing subject of airport cities in Africa. The study is also motivated by the desire to contribute to the pursuit of alternative solutions to regional economic development using aviation as a mode of fast tracking movement between regions. Airports are bringing opportunities to change the outlook of cities by developing cities next to the airports, sourcing foreign direct investments and to be economic competitiveness and grow local economic (Roberson, 1995). This particular study is, therefore, important in that it will provide an account of how transition from an airport to an airport city has impacted the many facets of economic development and specifically route development, cargo volumes, and tourism and investor attraction. In the airport, retail, transporting of cargo, catering and hospitality are among the industries that modern airports are providing in addition to infrastructure that makes it easily accessible to other destinations (Ergas and Felsenstein, 2012).The development of airports increases the number of businessman travelling so that economic growth can be stimulated, improve gross domestic

product, increase local and regional revenue and job creation through visitors for leisure landing at the airport,. They increase accessibility for tourists and minimise the distance travelled, shorter time spent for travelling and easy to reach destination of their choices.

Tourism is undergoing exponential growth and airports have to find the means to extend their carrying capacity to facilitate this economic growth (Bruckner and Zhang, 2001). Airports may decide to change their physical position in order to sustain competitive advantage. In 2014, the Hammad International Airport in Qatar replaced the New Doha International Airport for passenger and cargo operations in order to cope with increasing number of passengers. It has been already documented that the transition of the airport was to facilitate t landing of larger aircraft as part of a plan and have capacity to accommodate tourist during the 2010 soccer world cup (Ahmed, 2016).The new airport was going to ensure that tourism in the province increases and even after the soccer games that it would remain a tourist destination

1.4 Aim: The study seeks to assess the impact of the transition of the Durban International Airport to the King Shaka International Airport and its implications for establishing an Airport City.

The specific research objectives are as follows:

1.4.1. To determine the impact of the transition on the tourism industry in KwaZulu Natal (KZN).

1.4.2. To examine ways in which the transition has improved attraction of foreign direct investment (FDI).

1.4.3. To explore how the transition has aided growth of freight within the airport precinct.

1.4.4. To ascertain the extent to which the transition has impacted on route development

1.5 Study Location

The new airport is the chosen area of study; it is located between the south and the north sides of the province. The place where the airport is between these regions reflects the significance of KwaZulu-Natal province, both at regional and global levels.

The KSIA currently accommodates commercial and trade related flights to and from multiple destinations in six continents around the world. It facilitates connection in 320 destinations within a 24-hour travel time. An aerotropolis plan to be built around an airport has to offer

easy connectivity to businesses so that their suppliers, customers and enterprise partners both national and international will easy to communicate (50 Year - Durban Aerotropolis Master Plan, 2015). The plan was founded on a series of different research ranging from 1-hour travel distance from the airport to a series of Satellite Zones to the aerotropolis core which is also referred to as the aerotropolis city.

In addition, Dube Trade Port (DTP) and numerous business activities associated with cooperation bring about added value to the study area. DTP is in a important place uses as an advantage to facilitate the combination of Africa and international airports, by having a dedicated cargo terminal, warehousing, offices, hotels and agro-processing zones (DTP, 2017).

The range of facilities and infrastructure that fall under the DTP contribute to the current significance of the study area. The DTP cargo terminal is able to accommodate 10000 tons of cargo annually. However, it is projected that this can increase to 1 million tons by 2060. The AgriZone is currently considered to be Africa's first integrated perishables supply chain and the most technologically advanced future farming platform on the continent.

1.6 Overview of the chapters in the study

- Chapter One: The Introduction chapter has outlined the study and detailed the aim and objectives. The motivation and the thinking of the study was outlined.
- Chapter Two: Reviewing the Literature. The chapter provides a general overview of the state of the transition of the airport and the theoretical context into which the transition took place.
- Chapter Three. Is the methods of the study that were be used to reach the conclusion and the outcomes of the results.
- Chapter Four. Findings and Discussions from the data sources and formulation of findings.
- In Chapter Five. Conclusions, contributions and recommendations to the study

CHAPTER TWO

The review of Literature

2.1. Introduction

This chapter looks at the development of the airport and how it has impacted on economic growth using available literature. Further to this, the chapter explores the role of airports on tourism, the importance of route development and the role of airports in foreign direct investment and freight logistics. The discussions will also consider the transition from airport to airport city development. The chapter will provide an overview of literature on airports and airport city development and on what is known as an aerotropolis. Lastly, it will look at how the aerotropolis facilitates route development, tourism, air cargo and foreign direct investment.

2.2. Understanding the role of airports

Before the developments of airports, the Wright brothers (1903) designed the first aeroplane. The development of aircraft and airports happened as the results of how they perform and their and geometrical characteristics. In the 21st century airports have started to be core utilities of development and business (stated in chapter one) (Kadza and Caves, 2007). It emerged that airports were growth pole and attract large sums of investments. The current airports are becoming special areas for economic developments and including tourist, companies and many businesses. Major airports are a source of economic growth thanks to business activities within the airport and surrounding areas, leading to the development of basic services such as housing development, health facilities and food services (Prosperi, 2007). Airports have been transformed into metropolitan growth nodes (Kasarda, 2008). Since the 1960's, their functions and duties are totally different, particularly in Europe. The role of airports has been influenced by political and economic realities of globalisation (Kadza and Caves, 2007). This is supported by the fact that when new airports are developed by governments of that particular country which ensures that there is infrastructure which will be suitable for the development of the airport. Airports make provision for international business opportunities and significant feature of any country's infrastructure (Kasarda and Appold, 2008). This has made it easy for business people to travel and in some countries there are even head offices next to the airport.

Airports are now perceived as new developments or growth poles for various regions (Cristureanu and Borcica, 2007). There is a growing view that airports present potential

benefits for economical and regional developments. The infrastructure of airports serves as an enabler to give tourist accessibility and shortens the connecting routes, by reducing the travel times as compared to the other transport modes (Ergas and Felsenstein, 2012). The tourism significance of airports and their contribution to the economy of the country have redefined the new role of modern airports. Airports are important in the development of tourism to such an extent that convenient transportation is a deciding factor when tourist selects a destination to visit and when they recommend destinations to other tourists through word of mouth (Vujic and Wickelgram, 2011). Air transportation cannot exist without tourism. Airports change the economic landscape by increasing the number of passengers and boosting gross domestic product. Airports have become attractive places for corporate entities, economic growth, and tourism and leisure entertainment. Airports have multiple interactions with other sectors, providing employment, generating local economies and stimulating other activities on site (Dwyer, 2012). In most large airports in the world, numerous people are employed in different sectors within the airport.

2.3 The impact of airports in the regional economic growth and development

The role of airports as a major player in facilitating world trade by opening gates for countries to participate in the global market has been long documented (Orellana, 2017). One of the key functions of airports with regards to economic benefits, through international fairs, conferences like world economic forums, big sport events are the spinoff effects on international trade, are regarded as the catalyst in growing economy of different countries as certain levels of development (Robertson, 1996). It is evident that airports directly contribute to economic growth and development through support of the tourism sector. They also contribute to job creation through access to other countries and spending money.

A well-developed airport creates links that influence where global companies choose to invest. According to a survey 56% of companies consider international airports to be links in influencing business locations (Healey and Baker, 2003). Airports play a significant role in the world economy as connectors of people, enablers of international value chains and economies of speed and trade gateways for landlocked cities. Airports also are important in stimulating regional productivity due to the positive externalities that stem from the agglomeration economies that develop around these locations (Rosenthal and Strange, 2004).

Between 2009 and 2014 airports were handling about 952 million international passengers. By 2015 it's recorded that 3,3 billion air travellers world-wide used airlines (Air Transport Association, 2016). Given this exponential growth, there has been a demand for efficient

airport services to maximise the movement of aircraft, thus facilitating growth in the tourism industry (Pabedinkaite and Askstinate, 2014). The demand of increasing tourist coming to airports, has forced a number of changes experienced by the airport industry. The deregulation of airline industry in 1978 was a significant change in the industry resulted in rise of newly low cost carriers (Psaraki and Abacoumkin, 1978). Governments lost control on air fares, routes and new entrants global competitiveness's and play a major role in economic business.

As a result of deregulation, airports needed to provide airlines that assisted in growth and competitiveness. The role of airports over the past two decades and the role of the 1978 Airline Deregulation Act has been examined and it has been found that airline traffic has a significant impact on regional population, income and employment growth, but that the effects differ depending on regional size and industry structure (Blonigen and Cristea, 2012). Airports as hubs of economic activity and networks has been advanced (Button and Stough, 2000 and Button and Lall, 1999) and airport hubs connect places globally and are critical components of "city connectedness" (Neal, 2010). The regional economic impact of airports depends on regional size and passenger numbers. Airports create "favoured positions" in the global economy, which provide "superior access to global flows of people, goods, money and information" (Bowen, 2002).

The growth of airlines destinations has become more dependable as a key contributor to destination attractiveness and as an income generator (Ahmed, 2016). Airports are aiming more than just income and infrastructure at a destination, though they are complex, dynamic areas where critical elements of competitive advantage can be achieved (Romero et al., 2015). Airports are seen as key assets to cities to increase revenue generated and serve as catalysts for investment opportunities (Conventz and Thierstein, 2014). Airports shrink distances and facilitate interactions across distances for the purpose of global competitiveness. The importance of interaction with air travel can spur innovation and the generation of new ideas (Audretsch and Feldman, 1996). Airports facilitate world trade, enabling countries to participate in the global market by increasing access to main markets and allowing globalisation of production (Rochat, 2004).

In some airports there are conference centres well positioned to host international conferences to market their cities and airports. In 2014 King Shaka International Airport held an international airport conference on route development so that the airport can attract new

international airlines and to become a global player. Some airports are able to extend their products offering in order to keep up with market needs at the site that they are located in (Ahmed, 2016).

2.4 What role do airports play in increasing inbound tourism?

This next section of the chapter will look at the role the airports play in increasing tourism, secondly the role of airports and freight logistics, aerotropolis and foreign direct investment and lastly the impact of air routes.

Airports are now considered as representatives of the new model of regional economic development in the competitive global village (Kasarda and Lindsay, 2011). Airports are among the largest investments in a city and region and play a key role in connecting the places serving global economy (Kasarda, 2011). Connectivity between airports has made it easy for tourist to travel anywhere in the world.

A statistical study found that there is a correlation between growth in airports passengers and the growth in the tourism sector (Green, 2007). Further studies indicate that there is a relationship of employment growth between airport passengers in metros versus regional passengers; this could results in an employment increase of ten percent resulting in this movement (Brueckner, 2003). The regional economic impact of airports is largely dependent on the regional size and the demands passengers have on the airport (Halpen and Brathen, 2011). It is stated that tourism employment contributes indirectly to 11 sectors of the economy worldwide (Ladkin, 2011). This is supported by the fact that tourism is becoming an important contributor to economic growth and development. Air travellers have increased from 901 174 in 2014 to 925 759 in 2015 in South Africa (Stats SA, 2014 and 2015). There is an ever-growing need for suitable well-equipped airports because of increasing airlines capacity as a result of increasing number of passengers travelling by air (Mitchell, 2014). The efficiency of interaction between airports and airlines contributes to the passenger's value experience.

Africa has enjoyed the fastest growth of tourist arrivals from all over the world, as reflected in countries like Tanzania, Senegal and Ghana through their nature-based tourism has been promoted globally (WTTC, 2004). The largest of growth domestic product, has been noticed in countries like Tunisia, Mauritius, Morocco, and Egypt; this has increased economic expansion and employment opportunities through tourism (WTTC 2004). The capability of

airports in bringing crowd of people is not confined in providing glittering infrastructure, competitiveness rates and spending, their destinations become the main focus of the airline and the passenger's objective (Bashir, 2014). Tourist wants to experience a total new environment which is safe and secure, especially after the American attack that happens in September 2011.

Airport cities are increasingly seen as economic engines galvanizing growth, as economic enclaves, destinations in their own right, where passengers eat, shop, stay in hotels, enjoy cultural activities and conduct business meetings (Bridger, 2018). Airports have changed their role and characteristics, going from being non-places to business centres, for living and working, true drivers for economic development, no longer acting as an area for transit and waiting (De Groof, 2013).

A direct contribution from travel and tourism includes accommodation, transportation, entertainment and attractions plus service providers supplied by accommodation providers, food and beverages services, retail and many more. WTTC data showed that travel by air combined with tourism contributes billions of dollars (WTTC, 2016). The new King Shaka International Airport faced a similar challenge. It had to stimulate the interest of travellers by changing the features of the airport to be attractive and entertaining. The airport also had to be part of the Dube TradePort, contributing to the global competitiveness of the province, enhancing development and as well increasing traveller (tourist) numbers and creating new trade opportunities, once it is within the aerotropolis (ACSA, 2013).

2.5 The role of airports in attracting foreign direct investments (FDI)

This next section of chapter will look at the foreign direct investments especially investments within the airport and its surrounding areas.

New airport transitions are on the rise, presenting a host of new opportunities for investments around the world. Investors must understand how the landscape is changing in terms of who the biggest players are and what they are after (Chow and Smith, 2011). Investors used to see airports primarily as means of travelling from one deal to another, now they are looking at airports as deals themselves (Burns, 2013). A great integration of the international business behaviour analysis with the insights of economic geography is required (Dunning, 2009). It has been further argued that global connectivity is a critical aspect in this context (Acs and McCann 2011). There is a linkage between air traffic and regional characteristics, among which its degree of internationalisation and the geography of large multinationals companies

to easily access the main international airports (Carod, 2010). The test in the section will the role airports have in influencing FDI's from, the whole world and how this is related to the desire of foreign companies to directly access international airports.

Most studies have shown that air connectivity has a significant impact on GDP, employment levels and investment growth (Carod, Seller and Nagal, 2010). Good airline services have been found to be an important factor in regional economic development and frequent series to variety of destinations resulting, among others in attracting new firms. In particular air travel is more important for service-related businesses, young and high tech (Brueckner, 2003). Such companies will be able to conduct their businesses and interpersonal relationship which can be possible only with quality transport. The emergence of low-cost carries has implications for firms' investments and regional economics (Balaz and William, 2009).

England the geography of FDI has shown how it relates to the airports accessibility (Hoare, 1975). International investors, when looking for markets destination, they want value for their investments and return of investments by employing cheap labour and ensure that the airlines are easily available and convenient (Hong, 2007). The availability of direct non-stop flights is major determinants in the location of large European firms (Bel and Fageda, 2008). This reduces the flying times and makes life easy for the traveller. This shows the importance of the empirical evidence that face to face contact and convenient travelling is important. Due to the widespread organizational framework of multinationals, air travel is often required as a means to engage in face to face contacts within the group, especially from and to the head office location by board members, managers and entrepreneurs (Hoare, 1975).

The movement of people assists in achieving industrialisation strategies and firms transferring of skill, this is seen by industries as mobilising professionals being innovative and flexible for organisation achieving its objectives (Aguilera, 2008). The spatial network structure offered by the global airline system ultimately determines the cost, the ease and frequency with which managers, entrepreneurs and staff are able to engage in direct contact within multinational groups (Acs and McCann, 2011 Aguilera, 2008). The acquiring of Stansted Airport by Manchester Airport Group (MAG), resulted other in European airport sale like Hochtief's airport by PSP investments division in 2013 (Behan, Orphanides and Radia, 2011). These deals alone show that there is still strong interest in the airport sector. Financial investors in airports as infrastructure or pension funds are keen on stable cash flows which airports offer (Burnes, 2015). Trade buyers such as airport operators have engaged in

improvement of operational efficiencies by increasing commercial yields and expanding airport route networks (Burnes, 2015)

South Africa, because of its location on the southern tip of the continent as well as its partial industrialization, attracts investment from multinationals and offers the best return on investments (Hoosen, 2017). The attractive index ranks South Africa in first position in an index that measures resilience in the face of current macroeconomics pressures and progress in long term development because of governance, diversification and infrastructure (Ernst Young, 2017). In the case of King Shaka International Airport 130 million rand was invested with aircraft services facilities as part of landmark deal with JSE listed international airline operator Comair, a London based company (Naidoo, 2011). This foreign direct investment to King Shaka International Airport has resulted in the recently signed 2018 route agreement between the airport and a direct flight to London's Gatwick International Airport.

2.6 The relationship between Airports and Air Cargo

This section will discuss the importance of cargo volumes in airports in the context of Airport.

In the 1970s the first all-cargo airline was formed under the belief that carrying everything, both passengers and freight, was more ineffective than serving them separately (Hao, 2008). Today the U.S. industry is served by two major cargo airlines, United Postal Services and Federal Express. The first practical demonstration of air freight began in 1910, when a department store shipped silk from Dayton to Columbus, Ohio, an early example of the potential of commercialisation of air freight to shorten the distances between manufactures, business and consumers. The global cargo brings a revenue of almost 100 billion ton-miles through transport sector which is estimated to the value of USD 452 billion revenue alone in 2005 (Kasarda, Appold and Mori, 2006). Market analysts indicate that the air cargo industry brings approximately 29,9 percent of transportation in international trade and 34,6 percent of non-land-based trade with an annual turnover of USD 2,7 trillion in 2004 (Kasarda, Appold and Mori, 2006). Across the whole world, the transport of commercial air cargo is a key economic indicator of international trade as well as thermometer for the state of global economy

The cargo side of the air transport is a phenomenal industry which has become even more important not only to the success of airlines but also to every consumer and business leader around the world (Branson, 2013). The growth of air cargo as compared to the gross domestic

product has grown at a faster rate and it has even surpassed the revenue for passengers measured in freight tonne kilometres since 1970s (IATA, 2013). It is recorded that in 2012, worldwide airline net profit accumulated to USD 2.56 per departing passenger while cargo and other revenue accumulated USD 34.26 per departing passenger (IATA, 2013).

There is high interdependence between air cargo and GDP development, with air cargo development usually preceding GDP growth (Kasarda and Green, 2005). Since the airline net profit is low, this means that cargo revenues can contribute to the growth of economy. There is evidence that air cargo operations supports the growth of regional economic development positively (Buton and Yuan, 2013). The development of Airport Master Plan (AMP) is used as a process to plan to identify the short, medium and long term development plans for the future of the airport (Dube TradePort Master Plan, 2010). This master plan must consider key steps that must be followed for the development of a new airport, which includes conditions that are existing, aviation forecasts, and required facilities, develop and evaluate alternatives and present the findings and Airport Layout Plan for the future (DTP Master Plan, 2010). This means that the plan must ensure that all aviation demands are included, like projection for a number of passengers, tons of goods shipped or a number of air transport movements. The airports that are well developed and well planned make it easy for air cargo to be transported and they become successful airports (De Neufville and Odoni, 2003). The cargo design facilities must provide a large degree of flexibility due to on-going changes in technology and traffic (Ashford et al, 2011). When planning for air cargo, a consideration of regional economic development goals and strategies must be taken into account so that there should be separation of functions with airport management (Landrum and Brown, 2006). The emphasis on multimodal transport operations and on greater integration of transport with other logistics must be included in the planning of new airports (Kiso and Deljanin, 2009).

Airports are an important link in the air cargo system that provides an interface between surface transport and activities and aircraft operations (Morrell, 2011). While most airports in the world are small regional airports that see little cargo throughout, other airports are highly dependent on air cargo operations (Sale, 2013). Air cargo among the top airports is more concentrated than passenger numbers (Mayer, 2016). The top 15 cargo airports account for about 40% of cargo tonnage of the 150 largest cargo airports while on the passenger side, the top 15 passenger airports only make about 20% of the passenger numbers at the top 150 passenger airports (ACI, 2014). Facilities that are required for passenger operations are also

supporting cargo operations, but in addition air cargo requires storage facilities, handling equipment and access to major roads (Morrell, 2011).

There are three areas where airports act as nodes in air cargo system, firstly local air cargo aimed for domestic consumption and catering for exports from local area passes through the airport. Secondly, airports act as a gateway, with cargo generated for the manufacturing sector in the airport hinterland and finally airports function as transshipment hubs for “hub cargo” i.e. air to air flow that is loaded from one aircraft to another with destinations outside the immediate region of the airport (Mayer, 2016).

The transportation of goods by air cargo is gradually increasing and air transport cargo is becoming revenue for airlines. The increased of cargo volumes has caused rapid growth of global trade, high demand for fast and timely delivery and for firms to keep low inventory through frequency replenishment (Li et al, 2009). Airline provides freight forwarding and shippers with the understanding that they will provide services which include consultation, capacity, bookings, pickup, receiving, packaging, sorting, loading, transportation, dispatching and cargo tracking and tracing. Once cargo reaches its destination airport it is moved to the warehouse for it to be delivered by the local freight forwarder or picked up. The transportation of commercial cargo is a key economic indicator of international trade as well as a thermometer for the state of global economy (Burnes, 2015).

Development in airport regions and the increase in air traffic in recent years have resulted in many new challenges for airports (Boloukian and Seigman, 2016). It has become increasingly important specifically within the context of the air cargo industry and related logistics challenges to plan effectively and manage air cargo at airports and look afresh to challenges of air cargo industry and airport regions (Boloukian and Siegmann 2016). The authors argued that the planning and development of airports on the African continent has not been receiving the attention it deserves comparing with international airports with the exception of South Africa (Coetzee and Swanepoel, 2017).

Airports are becoming important in the global movement network and this has caused a high pressure demand for the land required for cargo-related business areas designated for cargo within the (Coetzee and Swanepoel, 2017). The increase of air cargo has the ability to increase the geographical influence of airports and the logistics industry will become specialised, resulting in specific land use and transport requirements within the airport surroundings (Merkert et al, 2017). The nature of logistics is becoming an industry on its

own, which has resulted in specialised logistics and there are a number of logistics companies who are assisting major clients as third parties. The influence of low weight air cargo such as medical goods, perishables and time-sensitive goods such as biological items contributes to the air cargo volumes (Walcott and Zhang, 2017).

Clustering logistics and related air cargo industries with specific references to agglomeration benefits, collaboration, training and business benefits air cargo (Rivera et al, 2016). The major evolutions in the air freight market and heterogonous environment is where the air cargo is performed (Merkert et al, 2017). When it comes to the use of airports by air cargo operators, integrators usually prefer secondary airports, characterised by low passenger numbers and little congestion, while network airline are driven by their passenger operators (i.e. combining passenger and cargo operations in one location (Morell, 2001). The non-integrated carriers at major airports have been identified as combination carriers aiming to co-locate passenger and cargo operations (Gardiner and Ison, 2008). A good example of the role of secondary airports in air cargo is the alignment of UPS's US network strategy with the network of low-cost airlines, i.e. creating regional hubs at secondary airports near the major cities (Boquet, 2009).

2.7 The relationship between Airports & Routes and Development.

Airports play a big role in economic growth, transporting more than 1.7 billion passengers all over the world with approximately USD 1 trillion and it's expected to increase the number of passengers by 2025 (Neville and Odoni, 2003). Customer-focus and secure airports are important in economic growth and increasing accessibility for passengers in order to maximise economic advantage from global connections (Smyth, 2007).

Airports represent the face of economy and play an important role in a country as it is welcoming tourists. Because of deregulation and liberalisation in the airline industry, global competitiveness in the airline industry has increased within the airports (Pestana and Dieke, 2010). Most airports in the world are becoming a place of entertainment; shopping and even retailing has become a major attraction.

There is full-service carrier growth, with the evolution of low-cost carriers that has forced increasing demand for the infrastructure capacity within airports. There is a change in demand of building new airports and different airline business models to accommodate new aircraft technologies (Forsyth, 2007). There is a huge evolution of building new airports, main airports being expanded and regional airports are fulfilling the mandate of increasing

regional economic development. Neufville and Odoni (2003) define airports' revenue into two categories, aeronautical which is revenue generated through operational aircraft facilities, non-aeronautic are those produced by commercial airport facilities. The new airline business model increased airlines and airport operational costs (Gillen and Ashih, 2004).

There are landing fees, runways and taxiways charged in order to maximise the take-off charges and landing weight on the airport. There are two aviation economic systems, is the aviation sector's related to the economic footprint and the second to economic connectivity benefits (Oxford Economics, 2012). The transportation of passengers, air freight, and ground based infrastructure and employment economic benefits is related to the aviation sector's economic footprint. On the air connectivity it's indirect (for example the whole supply chain) and induced (employment related to spending).

This next section of the study will discuss and define the concepts of Aerotropolis and related concepts.

2.8 The concept of (airport city) Aerotropolis

This section of the chapter will discuss and contextualize concepts such as Airport city development (aerotropolis).

Although the concept of aerotropolis emerged in the 1900s, this has created an understanding of aerotropolis as why there are cities that are more successful than others especial their spatial agglomeration and the clustering of air cargo related businesses (Alkaabi and Debbage, 2011). This portion of the study focuses on the air cargo component, related logistics and land users which is described as dependent industry category (Wang and Hong, 2011). It is evident that there is an increase in international trends towards the use of air cargo and expansion of global logistics industry (Alkaabi and Debbage, 2011).

An aerotropolis is a strategy that is based on the upgrade of airports, creation of employment, expand air routed development, attract foreign investments, boasting aviation related businesses and represents a set of coordinated infrastructure, commercial real estate and government intervention (Kasarda, 2008). This is in line with the development of Dube TradePort with areas designated for business and the strategy of provincial government. It consists of the airport's aeronautical, logistics and commercial elements connecting surface transportation infrastructure and outlying corridors and clusters of aviation oriented

businesses and residential developments that feed off each other and their accessibility to the airport (Kasarda, 2015).

This space that consists of full set of logistics and commercial facilities, cargo areas, corporate headquarters and millions of passengers that pass through the airport in support of aviation business is called aerotropolis (Kasarda, 2015). Dube TradePort next to the King Shaka International Airport resembles the characteristics of the space. There is an increasing number of aviation oriented business to airport areas and their associated business residential development clusters in the vicinity of the airport. It is a new urban phenomenon that relies on the airport and its related surface transportation infrastructure to speedily connect high-value, time sensitive to their suppliers, entrepreneurs and customers (Kasarda, 2014). The aforementioned definitions provided by Kasarda will provide us with a foremost understanding of what the global community defines as an aerotropolis.

There are forces of commercialisation, corporatisation, privatisation and globalisation that interplay to impel all airports to diversify their operations in search of sustainable profitability (Graham, 2008). The international trend of building aerotropolis gives an opportunity to introduce business centres and big corporations' offices as players in the regional and local economy. It consists of an airport city and outlying corridors and cluster aviation businesses and associated residential developments that feed off of each other and their accessibility to the airport (Kasarda, 2011).

Airports are becoming attractive, places of entertainment, vibrant, places of weddings, contributing to the regional and local economy (Kasarda, 2011). The major challenge for an aerotropolis is proper planning, if the planning is poor it may lead to spontaneous, haphazard, economically, inefficient and unsustainable environment (Kasarda, 2011). The objectives of airport city to be used for creating economic opportunities will not succeed.

The 21st century airport city does not exist for the sole purpose of providing essential services, they are perceived as sources of economic growth and prosperity for neighbouring countries (Edelman, 2014). The process of globalisation in the 21st century is linked to the aviation and manifested by acceleration of urban form and functions (Kasarda, 2016). Many airports around the world have a challenge of dealing with increasing number of travellers and are looking at ways of ensuring that the process of travelling is the one that satisfies tourist (Simjee, 2015). Most airports are becoming commercialised in order to increase their profits and ways of satisfying consumers. The design of airports in nowadays has the traveller

in mind in order to make their experiences enjoyable, and there is a large space which is allocated to retail and facilitate easy flow of passengers (Belardini, 2013).

The proposed 21st century airports are selling more than just airport transportation, they are selling an “Airport Experience” (McNell (2014). There is a need for commercial revenues in the airports in order for them to expand and to be globally competitive. In the 21st century, airports are regarded as one of the most significant forms of urbanisation. (Appold and Kasarda, 2010).

2.9 Aerotropolis in the South African context

The first aerotropolis in Africa has been developed at the City of Ekurhuleni (Auckland Park) just 30km from OR Tambo international airport (ORTIA, 2011). All stakeholders involved in the project considered this development as being a game changer in South Africa in relation spatial planning, economic development and social transformation. They further posit that it is envisaged to create more than 250 000 direct and indirect jobs, which is a national priority for the South African government. It will be used like all international aerotropolis as a special economic hub to develop different industries in line with global standards of aerotropolis goals and objectives.

South Africa is a global player and competitive in the space of economy and is the biggest economy in Africa. Aerotropolis is defined as urban complex that consists of appropriate airport layout, infrastructure, and economy that is centred on the airport and is described as physical manifestation that links a particular metropolis to the entire global economy (Balasubramaniam, 2013). It is further defined as an airport-centric economic development, it is a sub-region within the urban area that infrastructure, land use and an economy that is centred upon airport (Appold and Kasarda, 2014). When an airport is extended into an aerotropolis it should not only focus on spatial growth but also on addressing economical needs such as employment creation and the available infrastructure which will be utilised in a way in which maximise efficiency and growth.

A modern aerotropolis has a similarity to a metropolis in that it consists of core and outlying areas (Mthombeni, 2017). The picture of a metropolis is a central city core is supported by commuter-linked suburbs, while an aerotropolis is made up of a fixed airport city core, outlying areas of aviation-linked business and interrelated mixed land use and residential development (Kasarda, 2008b).

The figure below is an ideal picture of how aerotropolis looks by Kasarda, J. (2008)

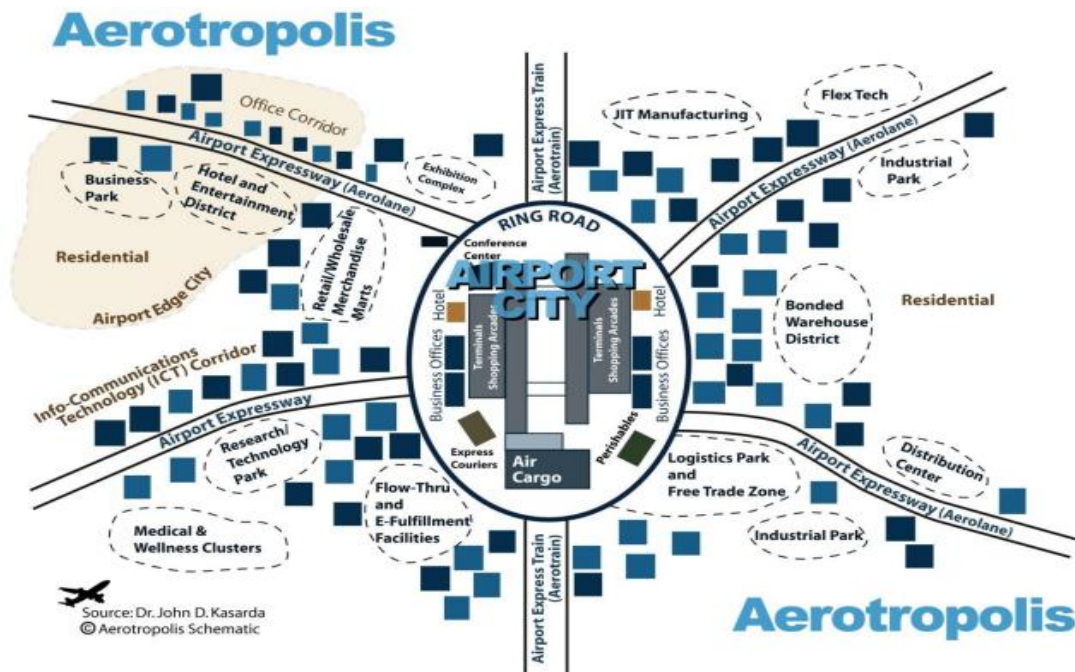


Figure 1

The development of an aerotropolis is not only confined to the airport and it varies from country to country. It's evident from the establishment of office and retail spaces, hospitality and leisure facilities as well as conference venues and exhibition venues within proximity of the airport (Kasarda, 2008b).

The structure of aerotropolis depends on the amount of land available and if there is more, most commercial developments will take place (Mthombeni, 2017). Old airports like Durban International Airport were not ideal for an aerotropolis, hence the move to a location north of the city with more space for expansion.

An aerotropolis development need not exactly follow the structures set out by Kasarda, look as long as it accommodates the international standard to be globally competitive with the aim of stimulating regional economic growth. It is essential to conduct research in order to determine if the place is suitable for development of an aerotropolis (Balasubramaniam, 2013).

Whilst aerotropolis can be different, there are generic elements which must exist, like special elements, functional elements, and connectivity (Kasarda and Canon 2016). In the case of

Ekurhuleni, the development of Destiny Hotel and Conference Centre are classified as spatial element of the ORTIA aerotropolis development. The elements of connectivity consists of internal and external oriented transport with good infrastructure which links the spatial and functional forms of the aerotropolis (Kasarda, 2016). For example the highways in Ekurhuleni that links with Johannesburg and Pretoria and rail arteries e.g. Gautrain are example of connectivity.

Functional aspects refer to the non-spatial defined aspects of aerotropolis such as frequent air travellers (Kasarda, 2016). The three mentioned elements above form the base of a successful aerotropolis and have a relationship to the economic growth and the development of the region. There is a belief that an aerotropolis should be dynamic and change with times so that it can meet the demands of its users and changing technology.

It is estimated that between 2010 and 2030 there will be a rise in air passengers of between 5 billion to 11 billion per year (EMM, 2013). The development of aerotropolis both at Ekurhuleni and Dube TradePort are motivated by the growing number of passengers between the two airports. There are approximately 18 million passengers passing through O.R. Tambo international airport and approximately 5 million passengers passing through King Shaka International Airport (ACSA report, 2014).

The development of the Ekurhuleni aerotropolis master plan, which will be implemented for a period of 30 years, is the result of a growth path aimed at repositioning the economy of the entire Gauteng province and distributing economic activities (Gungubele, 2011). It is believed that the development of aerotropolis in Ekurhuleni will increase commercial and industrial development both inside and outside the airport.

The development of aerotropolis must have the ability and capacity to connect with national and global markets. The Ekurhuleni aerotropolis model was adopted by the Mayor Mr Gungubele in 2011 and incorporated in the municipality's development and growth strategy of 2025.

Airports like Dubai World Centre, Amsterdam Airport Schiphol and Malaysia International Airports have adopted the aerotropolis model of development (Kasarda, 2008b). The successes of these airports have inspired the development of Ekurhuleni as an aerotropolis. The decision to develop OR Tambo International Airport (ORTIA) was influenced by the changing of global airports into aerotropolis. There are five principles which are pillars and the foundation of their potential (EMM, 2012).

They apply to the Ekurhuleni aerotropolis as follows:

- Community- building sustainable communities where members can unleash their potential
- Collaboration- effective governance and partnerships
- Concentration- development that takes into consideration and complement existing communities
- Connectivity- the ability to move goods, services and people efficiently, connecting Gauteng to other provinces and South Africa with the continent and the rest of the world
- Compete- identify competitive advantages, maximise their strengths and increase dominance of South Africa globally

Municipalities use aerotropolis to develop strategies to re-position the regional economy within Gauteng and aimed at creating a half million formal employment opportunities in the city (EMM, 2015a). The development of Ekurhuleni aerotropolis economic activities should not only benefit affluent areas within the municipality but should also reach the townships surrounding the city (Mthombeni, 2017). There were three elements in the Ekurhuleni aerotropolis that were identified to foster growth in economy which included industrial infrastructure, human settlement and transport infrastructure.

Dube TradePort, situated on a 2040 hectare of greenfield land site 30km north of Durban, with King Shaka International airport at the centre, has attributes of an aerotropolis. It is a special economic zone that forms the heart of the purpose-planned aerotropolis in Africa and impacts on the north coast which will offer ease of access that will prompt investors in the region (Erskine, 2016). Dube City, a new urban hub, Dube Cargo Terminal supported by logistics component and adjacent Dube TradeZone and Dube AgriZone all backed by Dube iConnect, a dedicated IT and telecommunications provider they exist within the aerotropolis of Dube TradePort which is the centre of the business (EDTEA ,2013).

The 60 year controlled and planned development comprising a number of nodes and as a broad airport city with aerotropolis including the development of corridors, linking UMhlanga, Ballito, Dube TradePort and Tongaat as land owners (Master Plan,2015). This is positioned as an economically efficient, sustainable and eco-sensitive aerotropolis shaping the business of South Africa and becoming the engine-room for development and growth. The King Shaka International Airport in future will be linked with industrialised areas of

Richards Bay and Pietermaritzburg using rail with Durban and Pietermaritzburg (MEC Mabuyakhulu, 2016). The linking of OR Tambo International Airport, Johannesburg City and Pretoria using Gautrain it's an example that it is possible to happen in KZN. In 2015 the airport is gradual gaining ground being boosted by four new international airline , namely Qatar, Turkish Airlines, Ethiopian Airlines and Proflight Zambia, had added the airport to their daily routes. The landing of British Airways in 2017 show confidence to the international route developers that transition to King Shaka International Airport is playing an important role in the global economic development.

KSIA resulted in the birth of the second aerotropolis in South Africa. It is located in the northern part of EThekweni within KwaZulu Natal province and has been touted to be leading airport in the country. This aerotropolis model is to be built as part of special economic zone called the Dube TradePort. The function of this special economic zone serves as a catalyst for attracting investment to the economic zone by providing critical infrastructure and logistical platforms (Luthuli, 2013).The ORTIA and KSIA are considered the only aerotropolis in Africa. Approximately 24 million air passengers travelled between the two aerotropolis this include people who are departing and landing using domestic flights and international airlines and there is a possibility of numbers to be increased (ACSA,2015).

There is strategic infrastructure that underpins the development of airport city in order to be business sites through urban planning. Luthuli (2013) argues that Africa is lacking development in building airports in order to become aerotropolis and airport city developments. There are few countries in Africa that have started the aerotropolis; this is due to poor economic infrastructure and political conflicts.

2.9.1 The concept of Aerotropolis impacting on the transition

The section of the study will shortly discuss the relation between aerotropolis and tourism, aerotropolis and foreign direct investments, aerotropolis and cargo volume, lastly aerotropolis and route development.

2.9.1.1 Aerotropolis and tourism

To be perceived as an aerotropolis the airport must have the ability and capacity to connect national and globally and promote tourism through aviation means (Mthombeni, 2017). The transition airport has resulted in the aerotropolis. The commercial development which takes

place because of the transition of the airport is a vehicle of economic transformation, a tourist destination and industrial development within and outside the airport. Airport development is cited to be one of the most significant urban phenomena of the 21st century (Appold and Kasarda, 2010). The design of airports nowadays considers the travellers and making their experience enjoyable, with larger spaces allocated to retail and facilitating easy flow of passengers (Belardini, 2013).

The addition of other business that is not aviation related within and around the airport, contributes to the diversification strategies adopted by the airports (Kasarda, 2013). Another way that makes airports interesting for tourists are the events such as product launches for key brands (Belardini, 2013). There are airports in the world that have adopted aerotropolis economic model, like Schiphol, Dubai and Malaysia (Kasarda, 2008b). The global influence of aerotropolis model and its role in economic development has resulted to the transition of the airport. The airport development and expansion is a strategy to increase the carrying capacity of the destination which is essential in the country so that the number of tourists will increase (O'Reilly, 1986). Airport expansion creates other opportunities, such as the Johannesburg and Pretoria linkage that resulted from the Gautrain and buses that make it easy for tourists to reach their destination.

2.9.1.2 Aerotropolis and foreign direct investment

Companies that want fast access to the international markets and attracted in international cities, build business parks with leisure and residential areas attached to airports are becoming increasingly prominent throughout the world (Murray, 2014). In Europe, Squire at Frankfurt Airport is the head offices of KPMG and the business park at Amsterdam Airport Schiphol is the home of Microsoft. In the age of globalisation, the fostering of innovation and competitiveness needs a higher velocity of transporting cargo, passengers and innovation and development of airports into cities becomes an investment arm (Florida, 2014). The 21st airports are the shapers of business direction and urban development landscape as during the 20th century highways were city builders and 19th railways defined the mode of transport in the cities. (Kasarda, 2008B). Hence there is a special economic zone designated within the aerotropolis of Dube TradePort.

Aerotropolis would bring in manufacturing jobs; help farmers and fisherman sell their produce and even connect them with foreign markets (Kasarda, 2008). Aerotropolis development is a process that will be used to lure investments, increase trade, and improve

number of traveller's passengers and baggage (Kasarda, 2013). The development around the airport and foreign companies that are investing at DTP signifies the drive for global economic competitiveness.

2.9.1.3 Aerotropolis and cargo volumes

The development that exist within the aerotropolis comprises of the aviation –linked business, logistics facilities, tourist departing and arrivals at the airport, commercial sites and volumes of goods (An International Airport Review, 2017). The inclusion of forwarding goods, with other elements which supports the development in the vicinity of the airport add value to the aerotropolis development (Steven, John et al, 1999). Technological and traffic volumes are challenging the design of cargo facilities in order to provide a large degree of flexibility (Ashford et al, 2011). The high-tech, biomedical and advanced business services sectors and firms in the aerotropolis are time sensitive and depend on distant suppliers and customers than those located in their own metropolitan region (www.aerotropolis.com). In such organisation time is of importance which means that connecting time must be short and less costly. High value products benefit from the speed of distribution or better stock availability provided by air cargo shipping (Webber, 2015),

Within the aerotropolis there should be proper planning that takes into account the strategies to develop regions and taking into account the integrated economic plans (Brown and Landrum, 2006). There is a need for airport planning practitioners to better understand methods for conducting specific air cargo planning studies and collecting cargo data (Webber, 2015). The growth of high value, low weight production would seem to bode well for demand for cargo (Kasarda, 2008). Between 1950 and 2008, air cargo grew from 730 million ton kilometres to 156,309 million ton- kilometres and the signs suggest that aerotropolis development has influenced air cargo growth (Kasarda and Appold, 2008). The introduction of wide body aircraft over the years has contributed to the growth in scale and cargo competitiveness (Kasarda, 2008).

2.9.1.4 Aerotropolis and route development

The business methods are becoming global and economic networks are changing and moving at fast pace (Friedman, 2006). The digitalisation, information technology, related air transport, easy connectivity, accessibility, time based and fourth industrial revolution are changing the rules (Kasarda, 2008). International airline routes are the quintessential manifestation of 21st century globalization. The evolution of internet, easy movement of

people, availability of product online shopping are making business life easy. The new urban form –aerotropolis uses airports routers to attract time-critical and global oriented businesses of all types (Kasarda, 2008). Everything moves with speed, agility and connectivity is becoming the globally way of moving cargo. Air route operates as physical internet connectivity in cargo movement, business and tourist across the world (Kasarda, 2008).

Airports are international gateways that have moved beyond the 20th century with the mass transit hubs of the 21st strategic business infrastructure and attracting commercial activities found in urban centres (Kasarda, 2014). The most important reasons for development of routes, is the seeking of economic diversity, attracting investments, ensuring that potential visitors arrive in their place of destination on time and the fact that business has become global. International gateways airports, with their strong aviation networks and connectivity, have increasingly shaped economic development (Kasarda, 2014). The best-connected locations have always attracted and are able to grow business (Kasarda, 2014). Access to and development of new routes is an important consideration for multinationals looking for locations for their corporate headquarters. This is supported by the fact that more than half of 500 Fortune headquarters are located within 10 miles of US hub airports (MIT, 2008). This shows that aerotropolis and route development have an impact on doing business globally and makes it easy for business people to have their office closer to the airport. Corporate headquarters rely extensively on airports for their business operations (Kasarda, 2014)

The dual of airlines play are dual function in the development of routes through economic facilitation and secondly bringing the world together using easy connectivity for tourists and business people (Kasarda, 2014). This relates to companies and industries that are able to connect easily passengers and transportation of cargo. Aerotropolis makes it easy for business executives and professionals to frequently travel to a short meeting and go back to their countries without spending on accommodation.

2.10. CONCLUSION

In this chapter the researcher has provided four areas which are mostly important that has influenced the transition as a case of aerotropolis: tourism, airports and routes, airports and foreign direct investments and airports and cargo. These stimulate economic growth and development, sustainable development and global competitiveness for the regional economic development.

Secondly a clear definition of aerotropolis which is globally accepted has been discussed, along with its role in creating economic development within the region and aerotropolis concept in a South African context, highlighting its programs in particular through the examples of the Dube TradePort and Ekurhuleni aerotropolis.

The rise of an airport city has incorporated the expansion of shops, leisure and business support, venues into passenger terminals and airports keep on developing their public access to hotels, entertainment and recreation clusters, exhibition centres facilities for processing time sensitive-goods (Kasarda, 2010). The creation of aerotropolis has crated business activities with a racketing effect that assists in the accelerating growth of the economy within the airport surroundings Kasarda, 2010). Within the development of Dube TradePort, there is agri-processing which support the processing of sensitive goods within the airport surroundings.

CHAPTER THREE

Research Design and Methodology

3.1 INTRODUCTION

This chapter provides the methods that were be applied in the research study. It will offer the theoretical underpinning for understanding the methods that were utilized and why. Methods of research are quite varied as are numbers settings and situations within which investigations occur (Edmonds and Kennedy, 2013). The methods are both qualitative and quantitative research and it depends which one is chosen for the study or can be mixed in a research.

Qualitative methods of research produce information that is narrative or textual description phenomenon of the study, the involvement of variables with specific numerical assignment to research study is defined as quantitative methods (Vanderstoep and Johnson, 2009 : Edmonds and Kennedy ,2013). This study used qualitative methods, because the study wants to assess the transition of the Durban International Airport to the King Shaka International Airport: The implications of the Airport City. The previous chapter provided the literature review on the impact of the transition from Durban International Airport to King Shaka International Airport.

3.2 Data sources

This section discusses secondary and primary data sources used in the study. The need for the study is normally justified through secondary data. Using various data sources facilitates the reliability of the study findings (Creswell, 2009). Research design is described as a set of deliberately planned steps for the collection and data analysis (Welman, Kruger and Mitchell, 2015). This will be discussed below.

3.2.1 Secondary Data Sources

The data collected information by individuals, agencies or institutions to be used by another rather than similar research study is called secondary data (Welman, Kruger and Mitchell, 2005). It is data used in a specific study, although collected by a different researcher, for purposes of addressing a different research study (Bless, Higson-Smith & Kagee, 2000). Secondary data used in this study was collected from state owned publications and other non-

government publications. These publications included policy documents, journals (published and unpublished), books, articles, internet and commissioned research projects reports. The objective of using secondary data in this study was to gather information to help the researcher to develop a theoretical support to the framing of the research questions and interpretation of the data.

3.2.2 Primary Data Sources

The information acquired and collected by the researcher is to be used to answer the research questions is called primary data (Kumar, 2008). Because of the qualitative nature of the study, the study used face to face interviews to source primary data. Interviews were chosen as data collection tools to provide the researcher with an in-depth understanding the impact of transition of the Durban Airport to the king Shaka international airport: The case of aerotropolis. According to DiCicco-Bloom and Crabtree (2006), interviews are the most commonly used methods of collecting data.

The primary data were sourced from interviews conducted with individuals from the Economic Development & Tourism department, Dube TradePort, Airports Company South Africa (ACSA), and provincial department of transport. The data collected was able to inform the study objectives as set out in chapter one. The researcher sourced other primary data from documents, such as annual reports, government publications, non-published and published journals so that the reliability of the study will increase.

3.3 Research Design

Social research operates within paradigms of reality, knowledge and methodology (Luthuli, 2013). Knowledge and reality are regarded as two worldviews of research (Vanderstoep and Johnson, 2009). Reality is defined as ontology (Blance et al, 2006), while knowledge is called epistemology, (Newton and Benz, 1998). Methodology is defined as specific as to how the researchers go about studying what they believe should be known (Blance, et al.2006). The study used the qualitative research approach, because it makes assumptions that knowledge about the subject enquiry is constructed through communication and interaction (Luthuli, 2013).

Qualitative research is characterized by its aims which relate to the understanding of some aspects of social life and its methods which (in general) generate words rather than numbers as data for analysis (Quinn and Michael, 2002). Qualitative research is not concerned with

numerical representatively but with deep understanding of the problem. It is concerned with specifications that cannot be quantified, focusing on the understanding and explanation of social dynamics of social relations (Queiros, Faria and Almedia, 2017). This type of research advocates work with the universe of meanings, motives, aspirations, beliefs, values and attitudes which corresponds to a deeper space of relationships, processes and phenomenon that cannot be reduced to the operationalization of variables (Maxwell, 2013). Large sample populations are considered as the representative of the population, and then the results are taken as if they constitute a general and sufficiently comprehensive view of the entire population (Martin and Bridgman, 2012). Qualitative research is a form of data collection and analysis which focuses on the understanding and places emphases on a meaning (Luthuli, 2013). The data collected using qualitative research methods it explains clearly reasons and the outcomes of the study.

Qualitative research is defined as an emerging theory out of collecting data and analysis rather than data test theory (Bell, 2014). The involvement of trying to identify inherent patterns rather than imposing and focusing on meaning of experiences by exploring how people define, describe and metaphorically make sense of these experiences is called qualitative data analysis (Vanderstoep and Johnson, 2009). The voices of the participants therefore become the basis from which the phenomena are understood (Edmonds and Kennedy, 2013). The examination phenomena, using words as data is called qualitative research (Edmonds and Kennedy, 2013)

3.4. Primary data collection techniques

Kumar (2008) contends that research methods may be understood as methods or techniques that are used for conducting research. This section entails the population and sample as well as data collection tool method.

3.4.1 Population and Sampling

Sampling can be defined as taking a representative section of the population collecting data from them to formulate findings and draw conclusions (Frey et al, 2000). A sample is a part of population statistics whose characteristics are representative and used to gain insight to the broader research population (Mthombeni, 2017). The reason why most researchers use sampling is lack of financial resources and as well as time to conduct research to a broader population.

In this study there are four population groups targeted. The first population group is managers at the Department of Economic Development, Tourism and Environmental Affairs who are driving the development of Dube TradePort from a policy perspective of the government. These managers are responsible for ensuring that the airport master plan is implemented at a strategic level and assisting Dube TradePort.

The second group are senior executive from Dube TradePort; these managers are involved in attracting foreign direct investments, handling of cargo logistics within the area designated for all forms of cargo and the senior manager responsible for all operations at Dube TradePort. This group has been working at Durban International Airport and they are well vest with the history of both airports.

The third group is the head of corporate affairs at Airport South Africa. This group has been employed in the airport since the transition of the Durban International Airport before it transited to King Shaka International Airport. Part of their responsibility is to look at monitoring the developments of tourism before the transition and during transition within the KZN province. The last was from the Provincial Department of Transport who is a member of the route development committee. They have been in the committee pre and post 1994 understanding all the challenges of losing and gaining new routes.

The study has used a non-probability sampling method, a sample group was selected within non-probability sampling using a purposive sampling strategy .The part of a statistical population whose properties are studied to gain information about the whole is called a sample (Webster, 1985).The purpose of sampling is to enhance the experience and understanding of the selected individuals. The use of purposive sampling was to select the sample size that will enables the researcher to use his own judgement and to select cases that best enable to answer the research question and meet the objectives (Devers and Frankel,1999) The researcher identified key stakeholders who directly and indirectly were involved in assessing the transition of the Durban International Airport to the King Shaka International Airport: The implications of the establishment of Airport City, to serve as participants in the interviews and who were best suited to provide information on the impact of transition as well as the implications thereof.

3.4.2 Data collection

The in-depth face-to-face interviews were used to conduct the study. Interviews may be defined as “conversation with a purpose”. Interviews are a method of data collection in which

one person an (interviewer) ask questions to another person a (respondent) (Berg, 2009). Interviews are conducted either face to face or telephonically. With both of these processes there is flexibility on how the interviewee understands issues and events (Beck and Polit, 2006).

The researcher developed four different interview schedules before undertaking the interviews. These were for the Economic Development & Tourism department, Dube TradePort, Airports Company South Africa (ACSA), and department of transport. The objective of creating different interview schedules was to pose questions that were relevant to the stakeholders as opposed to taking a generic approach to interviews. This was done to optimize the interview process to get maximum information.

3.5 Data Analysis and interpretation

The study employed a thematic analysis technique to analyse the data, which will be used as a descriptive presentation of qualitative data. The researcher identified key themes that were relevant to the subject under enquiry (Anderson, 2007). The process used to inspect, clean, transform and remodel data to reach a certain conclusion for a given situation is called data analysis (Kalpesh, 2013). The data collected through interviews was categorized and interpreted to develop a full understanding of the transition from the Durban Airport to the King Shaka International Airport.

A combination of literature, interviews and documentary evidence, collected and conducted was used with the objective of producing results from the study and to show that the research results can be relied on and valid. Qualitative data analysis proceeds by extracting themes from evidence and synthesizing data to present a coherent and consistent picture. Further, data analysis will enable the researcher to draw conclusions that reflect the interest, ideas and theories that initiate the inquiry (Neumann, 2004).

The data reduction process was undertaken by the researcher done through the process of transcribing each interview and notes that were derived from the interviews will be kept. The process of summarising data is called first level coding (Luthuli, 2013). The involvement of identification of clusters and hierarchies of information and a deeper analysis during which the researcher identifies patterns and relationship in the first level codes is regarded as second level coding (DeWet and Erasmus, 2005). It is during this level that reduction of data comes in the form of relating to one another and helps the researcher to draw conclusions and findings. This is called the data displaying stage (Miles and Huberman, 1994).

Literature review was used as a base to follow the process of data analysis allowed for the interpretation of findings and added to the interpretation of themes which become study findings (Luthuli, 2013). During the data analysis and interpretation the researcher is searching for the answers to the research problem and the existence of the interpretation.

3.6 Knowledge trustworthiness

The establishment of good quality study in qualitative research will be reliable and valid provided that the trustworthiness of research report lies at the heart of issues conventionally discussed as validity and reliability (Seale, 1990). The research report depends on the issues of qualitative, validity and reliability which sustains its trustworthiness (Lincoln and Cuba, 1985). The idea of discovering truth through measures of reliability and validity has replaced the idea of trustworthiness (Mishler, 2000). Trustworthiness can be maximised or tested then more credible and defensible results (Johnson, 1997).

Validity of the research is the extent to which data is presently accurate (Welman et al, 2005). There are factors that may weaken validity of the study data. They include defective procedures, poor population sample and inaccurate data collection. What the researcher determines whether truly the researcher measures that which it was intended to measure and how truthful the results of the researcher are is called validity (Joppe, 2004). This means that the researcher must ask a number of questions and then look for answers from the participants in the study. Construct validity is the instrument chosen to be used to collect data must be suitable designed to effectively meet the objectives of the study (Welman et al, 2005). This study considered that validity should not be compromised.

The study looked at the interviewing questions on the impact of transition of Durban International Airport to King Shaka International Airport: The case of aerotropolis. This was to ensure the participants to the study are part of the intended target population. The participants to the study are from different stakeholders, which have been mentioned in the study. All the participants in the study were informed about its intention.

The results from a study that is consistency, certainty and credibility is defined as reliability (Welman et al, 2005). This means that the study refers to the extent to which the study can be repeated and can produce the same results (Golafshani, 2015). In terms of reliability, the questions asked all the participants are the same. Questions for interviews for research on transition of Durban International Airport to Durban International Airport were repeatedly asked to all participants and were the same. The questions for interviews were done face to

face and directly derived from the objectives of the study. The interview questions were simple and straight forward to comprehend for all the participants.

3.7 Ethics

Ethics play an important role in qualitative research, so as to avoid using information gained confidential to mislead people, pretending to be genuinely and betraying their confidence (Henn,et al,2009).The researcher in this study ensured that ethical conventions are kept confidential. The participants to the study were respected as well as the information which was derived from the researchers who have done a study similar to this one. All the participants in the study were informed about the purpose. The respondents were requested to consent to the study and were given a gate keeper's letter which was granting the researcher the permission to conduct the study. All the participants agreed by responding differently and were aware that participating in the study would not harm them. They were informed that should they wish to withdraw from the study and remain anonymous, nothing would stop them from doing so.

3.8 Conclusion

This chapter has discussed the methodology which underpins the understanding of the method to be utilized and why it was considered appropriate for the study. It has emerged that qualitative research was used because the essence of reliability is dependent on the consistency in which the methods of conducting the research is used. The information used in this chapter as secondary data was from different sources, starting from literature review, books, research papers, online journals, internet sources and other documents.

The primary data was collected through the form of interviews and were answering the objectives of the study. The researcher had to choose the methods and instrument of collecting data that were best suited to and most appropriate for the study. The chapter elaborated on the, data sources (secondary data and primary data), population sampling, data collection tools, data analyses, knowledge trustworthiness, ethical and considerations.

The next chapter will provides the data interpretation discussion of data findings and well conclusions which was obtained through the results of the analysis.

CHAPTER FOUR

FINDINGS AND DISCUSSIONS

4.1 INTRODUCTION

The chapter presents the research findings and discussions obtained from the research study. The broad aim of the study was to critically assess the transition of the Durban International Airport to the King Shaka International Airport and the implications of establishing an airport city.

The previous chapters have discussed subjects that are aligned and related to the study objectives. Chapter 2 is the literature relevant to the context of the study reviewed. It is followed by the data analysis which was collected from the participants in the form of interviews and secondary data. The interviews were conducted with the objective of fulfilling the study aim which is to critically assess the impact of transitioning the airport from Durban International Airport to the King Shaka International Airport.

There were four objectives that were translated into questions in order to determine the impact of the transition from Durban International Airport to King Shaka International Airport. The four objectives were discussed based on the data collected and analysed.

4.2 Themes

This section of the chapter will discuss the impact of the transition on the various themes developed from the interview process. The themes are about inbound and outbound tourism, foreign direct investment (FDI), cargo and freight logistics as well route development. The themes were developed with the aim of meeting the study objectives outlined in chapter one. The themes are highlighted below

- Impact of the tourism
- Impact of the transition of foreign direct investments (FDI's)
- Impact of the transition on freight logistics
- Impact of the transition on route development

4.2.1 Impact of the Tourism

This section of the study will discuss the impact of the transition on inbound and outbound tourism into Kwa Zulu Natal (KZN).

Tourism is increasingly growing faster industry the in the 21st century and an important economic development phenomenon in many developing countries and developed countries (Willson, 2009).

The participants that were interviewed all agreed that part of the challenges that were facing the erstwhile Durban International Airport was limited land for expansion of the airport in order to attract international airlines to grow tourism in Durban so long-haul planes could land easily. This was the primary reason which inspired the transition of the airport from the south to the north of Durban. As airports began to commercially develop land outside the airport landside, new urban forms came into being (Freestone 2009). The idea of the King Shaka International Airport (KSIA) was first conceptualised in the 1970's. The need to improve the destination networks was influenced by the desire to increase the destination's accessibility and ultimate attractions of tourist within KZN (Ahmed, 2016).

The transition of the Durban International Airport created development which resulted in the renaming to the King Shaka International Airport which was then opened in 2010 and located 35km north of Durban City (Mitchell, 2014). The reason for this transition of the airport was to increase capacity and the features of the airport to enhance the increase of travellers through the airport. The investors are attracted by the closeness of the airport closer to the market and creation of a friendly environment (Ahmed, 2016). Post 1994 the provincial government took the process of building the airport forward to accommodate tourist that were to come during 2010 FIFA World Cup Soccer.

Interviewee Five, (February 2019) agreed that the runway area at the Durban International Airport was not feasible to attract big international carriers so that international tourist could be attracted. *Interviewee One, (February, 2019) stated "The department is looking at the other regional airports that are uMgungundlovu to stimulate tourism and ecotourism"*. This means that the department wanted to attract tourist who have interest in ecotourism focusing on international tourist in places like Hluhluwe, Drakensburg and many more. Furthermore, the airport needed a long runway and there was no room for further economic development interviewee Five (February, 2019). Airports are no longer planning for aviation only – there

are other related business operations inside the airport, leisure districts outside the airport fence, also for residential, business (special economic zones) (Guller and Guller, 2003).

According to interviewee One (January, 2019), interviewee Five, (February 2019) and interviewee Six (April, 2019), there is agreement that there has been slow development of bringing international airlines as compared to the Durban International. This has a direct impact on international tourist which has moved King Shaka International Airport to be third after Cape Town International Airport on arrival of international tourist. (Interviewee One, January 2019). Between 2010 and 2014 since the opening of the King Shaka International airport, five new international airlines have landed in the airport. These are Air Namibia, Qatar, British Airways, Air Malawi and Seychelles', excluding two that are defunct. In the old Durban International Airport it was Emirates, Zimbabwe Airline (defunct) and Air Mauritius (Interviewee Four, January 2019).

The benefit of the transition in tourism was experienced by the 2010 FIFA Soccer World Cup where a number of tourists landed in King Shaka International Airport. This meant that transition had to be expedited in order to meet the standards of hosting of 2010 FIFA Football World Cup interviewee Four, (January 2019). Because of the transition of the Durban International Airport, Durban has hosted a number of international events including the airline route development, Cope 17 and many international events.

Interviewee Two (January, 2019) mentioned that the number of passengers that were landing at Durban International Airport never exceeded four million per annum but now they have exceeded way above that. In support of the statement above, there has been more than six million passengers (Airport Company South Africa (ACSA), 2017). Interviewee Seven (May, 2019), that passengers that were landing at the Durban International Airport never exceeded 3,5 million as compared to the King Shaka International in 2017, which has exceeded six million passengers.

King Shaka International Airport has a capacity of 7.5 million passengers per annum and at the end of financial year (April, 2017) it recorded 5.2 million passengers landed at the airport. ACSA (2019). Part of this increase in international passenger capacity has ensured the growth of local exports, international cargo volumes by 25% from January to July 2017. Interviewee Two (January, 2019) said *"With the existence of King Shaka International Airport there has been 5.6 million passengers landing in this airport both domestic and international passengers"*.

There have been international airlines like British Airways that is landing at King Shaka International Airport which has revived the arrival of international tourist and it's impacting a positively on tourism. Interviewee Five (February, 2019), argued that the reason why international tourist at Durban International Airport dropped was the rule that was forcing all airlines to land at OR Tambo International Airport first before they fly to their destinations. The airport's most important function is to reduce long distance movement of passengers and improve utilization of region and making connectivity easy hence these developments of new international airlines at King Shaka International Airport. This did not exist at the old Durban International Airport since all airlines were to land at OR Tambo which did not help in the shortening of distances travelled by passengers (Interviewee Five, February 2019).

Interviewee Three (January, 2019) who headed the aerotropolis research group for the department of Economic Development Tourism and Environmental Affairs (EDTEA) stated that tourism in Durban is not influenced by the transition, it is always booming irrespective of position of the new airport. Interviewee Three (January, 2019) is of the opinion that Durban beaches and tourist attraction sites like the King Shaka monument, events during festive season and other tourist attractions position around Durban and KZN is a viable tourist destination. The transition of the airport expanded the attractiveness of the city rather than created it as new destination as most local tourist does not use the airport (interviewee Three January 2019).

Tourism's economic contribution is not the only indicators of beneficial impact, but travel and leisure activities are also social factors (Bobirca and Cristureanu 2007). Interviewee Three (January, 2019) further state that tourism is no longer an activity for the privileged few, but rather a widespread experience for the great majority of South Africans, this does not mean that for people to enjoy touring South Africa must fly or sleep in a hotel as there are alternatives that can be used to experience tourism. Durban attracts the greatest number of local tourists in the country and is the number three destination after Cape Town for international tourists because of Cape Town's international direct flights as compared to those landing at King Shaka International Airport, places like Robben Island, Table Mountain and other areas cannot be copied anywhere in the world like (Interviewee Three, January 2019).

All seven participants interviewed in the study said there is a steady growth in tourism owing to the new airport - mostly international tourists. Airports play a major role in the economic

development and the attraction of inbound tourist (Bobirca and Cristureanu, 2007). The development of King Shaka International Airport created an opportunity for the development of regional airports in the province and easy connectivity for those who want to travel to ecotourism destination like Mkuze, Hluhluwe and Drakensburg as well as important tourist areas within the province like Blood River (Interviewee Two, January 2019).

The revived airport has been used as a gateway to the southern part of Africa in areas like Swaziland, Mozambique, Angola and Botswana as they are close to the northern part of KZN (Interviewee Two, January 2019). The previous Durban International Airport was closer to the more rural areas of the Eastern Cape with no attractions and its proximity to the sea meant it did not have space to develop. There is evidence that the selection of a final destination for tourists is related to airport facilities, air transport performance, connectivity and transport infrastructure (Brahmasrene and Benedetti 2013). This is echoed by Interviewee Three (January 2019) who said that people visiting the province through the new airport have increased from 3 million to 5.3 million tourist per year and resulted that there must be a move to the new airport and its proximity to the beaches of Durban. The increasing passenger numbers have resulted in several international airlines operating from King Shaka International Airport the likes of Emirates, Qatar Airways, Turkish Airlines, Air Mauritius and Air Namibia. Basnet (2015) postulates that air transportation has made significantly shortened the time it takes to travel to far flung destinations, thereby increasing the demand for long distance trips.

The existing routes and linkages are being strengthened by airport authorities and policy makers, including looking for new routes, establish easy connectivity and seek more passengers landing at the airports. (Bilotkatch, 2015). The development of new routes is important because it helps the sustainability of the economy and increasing tourism development. Though Interviewee Five (February 2019) believes that the reduction of international flights in the old Durban international airport was caused by the rules of Airport Company South Africa (ACSA), resulting in Durban becoming the third largest international tourist attraction in the country and lost a number of tourist. Interviewee Seven (May, 2019) echoed this: *“There were eleven international airlines and seven domestic airlines most of the international airlines pulled out of Durban. We never understood the role of airport to airlines on tourism. Airlines were doing their own ways and there was no direction whether we promote Durban or KwaZulu Natal province or South Africa”*.

There was lack of understanding as to why airlines fly to Durban International airport. As per interviewee Seven (May, 2019), and they learned that political leadership plays a big role in tourism decision. Other challenges that affected the reduction of international tourist was Tourism KwaZulu Natal and EThekweni tourism unit who were working in different directions but with the same objectives of bringing tourist to Durban through Durban International Airport (Interviewee Five, February 2019 and Interviewee Seven, May 2019). Most of the participants agreed that Durban is a local tourist destination as per interviewee Seven (May, 2019) and is ahead of Cape Town.

The frustration at Cape Town being ahead of Durban for international tourists forced political leadership in 1994 to set up a steering committee aimed at reversing this state of affairs (interviewee Seven, May, 2019). Cape Town had already a packaged tourist guide, as well as attractions like Robben Island and Table Mountain. Interviewee Seven (May, 2019), said *“we had to dig deep, there was a list of tourist attractions, Zulu heritage culture, heritage sites like Hluhluwe and Drakensburg, Nobel Prize winners. This was coined the Kingdom of the Zulu and tourists from Britain and Germany who loved history came in great numbers”*. The strategy of the Kingdom of the Zulu did not resonate with all tourists like Americans, people from Asia, Australians and others (interviewee Seven, May, 2019). Tourist will fly to Durban for a day and go to Cape Town without getting benefits of Durban, hence the steering committee took a decision that Durban International Airport must be built along the north coast and renamed as King Shaka International airport.

There were land challenges between Airport South Africa and Department of Economic Development Tourism and Environmental Affairs, but later it was agreed that King Shaka International Airport must be built within the vicinity of Dube TradePort. This was the birth of airport city/aerotropolis (interviewee Seven, May, 2019). There was a general acceptance from all the participants that Durban needed a new airport as there was no further space to develop Durban International Airport. The new airport and its surrounding business area is viewed as the new 21st century, “the way we’ll live next” (Lindsay and Kasarda, 2011).

The fact that the airport has been built close to predominantly middle class and higher income areas does have impact on tourism and regional economic growth of the province, as most of development is taking place towards the north coast and it attracts a number of local and international tourists. The current airport is easy accessible as compared to the old airport , as

it is close to areas like uMhlanga, Durban and Ballito where most of economic developments are taking place.

Interviewee Four (January, 2019) states *“The Durban International Airport was just an airport “This means that “there was nothing that attracted tourists except to land and take a plane back with no future prospects to develop the airport as its boundaries were the sea.”* Comparing it with King Shaka International airport, there is no doubt that tourism is becoming an economic drive and the growth domestic product of the province. This has impacted positively as per interviewee three (February, 2019) who said that the number of people employed towards the north of Durban is increasing as there is huge development taking place there.

The activity generating economic caused by air travel is estimated to have reached 3.4% of the global GDP by 2013 Airline Transport Group (2014). The number of people touring the KSIA a does have a huge impact on stimulating economic growth. This is echoed by the World Travel and Tourism Council (WTCC) (2014) which said that in 2013 travel and tourism’s total contribution is 9.5% of the GDP (approximately USD7 trillion), not only outpacing the wider, but also growing faster than other significant sectors such as financial business services and transportation and manufacturing.

This has prompted the discussions on investment opportunities and on building a hotel which will have facilities that will be able to attract international events. According to Interviewee Two (January, 2019) tourism has stimulated economic growth up to a contribution of 0, 5 % to the province growth domestic product (GDP). It has helped the province to revive its regional airports so that the tourist can utilize them easily. In some regional airports there is more than one local airline that are landing as the results of improving connectivity within the local airports, according to Interviewee Two, (January, 2019).

The impact of tourism has created income generation and job creation at a regional scale and is regarded as major player in economic development in many cases and is key in generating income and jobs at a regional scale (Kim, 2006). The landscape of a number of employment opportunities has increased because there is more than one international event taking place in Durban per year which makes it easy for international tourists to land at KSIA.

Interviewee Three and Four (January, 2019) believed that the cultural influence and Zulu brand is an opportunity for tourism stimulation and growth. They said that is has not been used sufficiently as an attraction. The rich history, music, and food of the Zulu culture can be

used as a tool to attract tourists using the current airport as a way of connecting them to the tourist destinations in the province which are unique compared with other parts of the country - Interviewee three, (January, 2019).

As per Interviewee Four (February, 2019) *“Domestic tourism in Durban has improved not because of the transition of the airport. However there is an increase of domestic flight coming to Durban and leaving Durban to Cape Town and Johannesburg”*. Interviewee Four (February, 2019), said there is a change though it's not much as was expected to attract international tourist and place the airport where it should be leading destination but still struggles behind Cape Town International Airport. According to Interviewee Two (February 2019), the advantage of the just built airport, is the fact that as per load factor, which measures the capacity of passengers in an airline, it is between 80-90%. . This is confirmed by airlines like Emirates which since 2010 has been running daily and creates hope that there are more tourists to come in future, mostly international. Prior to 2010, Durban International Airport, despite the name, was predominantly a domestic airport, with the exception of a few airlines like Air Mauritius and Seychelles 'Airline landing there.

Interviewee Five, (February 2019), asked *“Are you aware of the hub and spoke perspective, which was mostly driven by ACSA and partly SAA which forced the airlines to fly via OR Tambo rule?”* Though this rule applied during the Durban International Airport prior to the transition it contributed to the reduction in international tourists, after the transition with King Shaka International Airport the rule does not apply. The impact of non-application of the hub and spoke rule perspective has been demonstrated by increasing number of tourist landing at King Shaka International Airport. Tourism has impact as the result of the transition, all the participants concur that the existence of the airport has made huge changes in attracting international tourists and its growth is being highly visible with the numbers of passengers mentioned in the study.

4.2.2 Impact of the transition on attraction of Foreign Direct Investments (FDI's)

The success of economic transformation in Africa requires economics models that are inclusive, foreign direct investment is important (Interviewee Two, January 2019). Dube TradePort covers a wide variety of investments including buildings, commercial buildings and transport system, all of which stimulate economic growth and expansion of companies. This also attracts investors looking for space to build their own factories - Interviewee Six (April, 2019). Tourism does also influence foreign direct investments within Dube Trade Port

as it has defined itself as one stop shop on the special economic zone. Interviewee Six (April,2019), *“for example when Turkish airline lands at King Shaka International Airport, we receive calls from Turkey with people who want to invest at Dube Trade Port, even want assistance of housing, meaning government people and visiting embassy’s the foreign direct unit becomes everything in assist them”*.

Dube TradePort Special Economic Zone is ensuring a prosperous and sustainable future economic development (DTP strategy, 2015/16-19/20). The airport is a facilitator of economic development both regional and international and air transport partially influences where companies choose to invest (IATA, 2005). The location of the airport and being surrounded by areas designated for Special Economic Zone (SEZ) is an opportunity to attract foreign direct investment and economic growth (Aviation News, 2016). This has been part of the reasons that there is a need to develop the economy of the province in order to make an area around the airport to be globally economically competitive.

Better transportation infrastructure provides more FDI’s which resemble our results co-integration test (Hong, 2007). The transition has brought huge infrastructure investments on building in and around the airport to enable investors to come. Airports have becoming a key contributor that attracts domestic and foreign direct investments (IATA, 2005). All seven interviewees that participated in the study agreed that there has been growth in international investors and interviewee One (January, 2019) specifically stated that there are currently 44 companies that have invested both in the airport and around the airport (DTP annual report 2017/18).

The Special economic Zones around the airport comprises five business zones: Dube City is set aside for office space, retail, hospitality and leisure space close to the airport, Dube TradeZone is the first of such it’s in the world where freight forwards and shippers are located within a single facility- Dube TradeHouse, Dube Cargo Terminal (will be discussed later), Dube AgriZone designed for perishable supply chain and technologically advanced future farming platform on the continent and Dube iConnect offering metro Ethernet work, world class telecommunications voice and broadband ITC platform.

A survey conducted on behalf of IATA (2005), found that fifty six percent of companies consider international airport links to be important for business investments. Interviewee Three (January, 2019), said *“Special Economic Zone offers a number incentives by DTI*

(Department of Trade and Industries) and there is a greater focus on the agribusinesses linked to the airport.”

Interviewee Six (April, 2019), said because of global trade and rapid economic development of the infrastructure, the term Special Economic Zones is used. These areas are designated to drive industrial development of South Africa by attracting both domestic and foreign direct investments (www.dubetradeport.co.za). They stimulate the manufacturing value products and measures that support in assisting building good conditions for business investments.

Within Dube TradePort Zone, there are four assigned for economic activities, i.e. Dube City a business and hospitality precinct, Dube TradeZone industrial precinct, Dube Cargo Terminal, handling facility and Dube AgriZone, a cutting edge agricultural precinct. In the past, terms like industrial development zones, free trade zones and export processing zones have been used. In the Dube TradePort Special Economic Zones, there are targeted sectors like aerospace and aviation linked and related services, agriculture and agro-processing, including horticulture, aquaculture and floriculture, electronics manufacturing and assembly, clothing and textile and automobile component manufacturing.

There are also sectors defined as supplementary, like forwarding and aviation services, warehousing, logistics distribution, high tech, renewable industries and cold storage. According to Interviewee Six (April, 2019), *“Dube TradePort Special Economic Zone has become a one stop shop and has been developed to provide support to business operating or planning to operate with the special economic zone. This serves as a single point of contact for clients, acting as their interface with various government agencies and departments”*.

The transition of the Durban International Airport to the King Shaka International Airport has even increased the number of shops inside the airport from three at the previous airport to 30 at the current airport and one restaurant to five. All these developments are inside the airport and never existed before - interviewee Six (April, 2019).

There are about 11 international companies that have invested in Dube TradePort Special economic Zones over a period of three years that is within the vicinity of King Shaka International Airport - Interviewee Six (April, 2019). This growth of companies investing at Dube TradePort has created more than 3000 jobs just in phase one of the development. At Durban International Airport, there was not even a single international company that invested within the airport area. An aerotropolis plays a huge role in bringing foreign direct investment as it is a well planned development which requires a number of stakeholders,

including government, municipalities and even private investors to ensure that it will enable to assist in the attraction of foreign investors.

The airport transition has created an opportunity for greenfield developments targeting sectors like technology, hospitality, aviation (interviewee Six April, 2019). The advent of attracting foreign direct investments has created an opportunity to develop skills that are needed by foreign companies and hence brought the working together of Dube Trade Port with institutions of higher learning like University of KwaZulu Natal and others (Interviewee Six, April, 2019).

There are a number of Special Economic Zones.

- An industrial development zone is defined as a purpose built industrial estate linked to an international seaport or airport that leverages fixed investments in value added and export-oriented manufacturing industries (Department of Trade and Industry, 2006).
- Export processing zone is defined as a territorial or economic enclaves in which goods may be imported, stored, repacked, manufactured and reshipped with the reduction in duties and or minimal intervention by customs officials (Madani, 1990).
- Free trade zones are used to attract investments into a port area in order to establish a self-critical mass and attract further business investments and shipping and cargo (United Nations, 2005).
- Free ports are the part of a trade designated by the state at which imported foreign goods are not subject to customs and are permitted to enter freely (Park, 1997)
- Industrial parks are defined as facilities that are set apart for production and business services to attract new businesses by providing integrated infrastructure in one location and localised environmental control that is specific to the needs of the industrial area (Luthuli, 2013).

Most of the interviewee's that participated in the study stated that initially it was just building an airport and the development of the infrastructure for Special Economic Zones was not yet anticipated. Inside the Durban International Airport there were few retail stores and food outlets. At King Shaka International Airport there are many international retail store and places of entertainment and hospitality. The King Shaka International Airport has become an attractive and a shopping place which never existed in the old airport.

However there were industries which were closely associated with the old airport, particularly the automotive industries, companies like Toyota, Dunlop Tyres, as well as the likes Mondi Pulp and Uniliver. The unavailability of land around Durban International Airport became a challenge to develop the airport into an aerotropolis, hence transition was inevitable.

The environment of foreign direct investments works better close to the airports (Hoare, 1975). Interviewee One (January 2019) said that the land value of FDI's at the new airport is approximately R1, 4 trillion, including infrastructure and about R10, 4 billion on pipeline investment. Industries within the Special Economic Zones vary from technology, manufacturing, transport and tele-communication, agriculture and agro processing, retail, health and pharmaceutical, alternative energy, electronics and even property development as they have been categorised above.

Since the opening of the airport there has been huge success in attracting foreign direct investment which is supported by the ever increasing number of airlines that are landing there. This is in stark contrast to the previous airport where there was no land which could be allocated to investors. This is supported by the documental evidence in the annual report (2017/2018) of DTP and (2015/16-19/20) strategy document its objective to create world class Special Economic Zone which will be effective and complaint manner around the airport. In the same report (2017/18) of DTP 85% was the annual target foreign direct investments and 94% was achieved. On the very same strategy document is clear that its targets relevant to international investors to assist identified markets activities of DTP SEZ. A plan of bringing together foreign investments which will analyse environment of the business and its challenges is necessary (Dunning, 2009).

It emerged from all the five interviews that 44 companies (see appendix 1) are now stationed at the Dube TradePort/King Shaka International Airport area. The industries mentioned above are the part of the foreign direct investments companies within the Special Economic Zone at Dube TradePort. At the previous Durban International Airport, the automotive sector of Toyota and Dunlop Tyres were international companies and there were South African industries like Albany Bread (food and beverages), Ijuba (Zulu beer), South African Breweries, Plascon and mostly shipping sector as part of the maritime industry which was both local and international. The mentioned local industries were within the vicinity of the airport directly and indirectly had an impact.

Interviewee Two (January 2019) reveals that the 44 companies within Dube Trade Port have created employment for more than 4000 people, excluding those who work in the airport which can add up to 6000 employees. This is according to interviewee Two (January 2019), who said *“The very first time the move impacted on the study in 2010 conducted by Global Incite contributed 0.5% GDP in the KwaZulu Natal Economy”*. Since the starting use of the airport, the cargo volumes at Dube Cargo Terminal have reached the 138 percent of cargo within seven years of the airport existence (Press Statement February 2018).

4.2.3 Impact of the transition on Freight logistics

In order for countries to facilitate air freight and become major exporters, there is a need to improve operations in their airports and liberalise access for foreign airlines. If that has not been achieved most air cargo will move as belly cargo on passenger airlines (World Bank Report, 2009). This has been confirmed by all participants in the study who said that most of air cargo moved through passenger airlines. However, interviewee Two (February, 2009) said that at the old Durban International Airport there was no space allocated for cargo, it was South African Airways alone that had a dedicated cargo space.

There has been a significant improvement at King Shaka International Airport, with dedicated air cargo operations and the proximity to Dube TradePort within an area allocated for cargo and logistics support (Annual Report, 2017/18).

Interviewee One (January, 2019) argued that there is a shortage of skills for handling cargo, including high value goods as well as high tech equipment for ground handling. As there have been significant changes in handling cargo since the September 2011 terrorist attacks in the US. The solution to this is skilling of employees within Dube TradePort (Interviewee Three, January 2019). The great opportunity that has been brought by the transition of the airport and implications of airport city, created an avenue where the airport works with universities in the province to develop skills that are needed for the effectiveness within the airport (Interviewee Six, April, 2019).

Interviewee Two, (February, 2019) said that when the airport was opened in 2010 only 5000 tons of cargo was handled both international and local. Prior to this, there

are no tonnage of figures mentioned by participants in the study because at the Durban International Airport, cargo tonnage was not managed as it was SAA which had cargo facilities. Interviewee Two, (February, 2019), said Dube TradePort handles about 1000 tons a month on average approximately 13 000 tons per year. According to the DTP annual report (2017/2018) there was a significant improvement of 1600 tons which exceeded the set targets. Interviewee One, (January, 2019) relates that the proximity to the airport and cargo terminal has benefits and has impacted positively to the transition of the airport for Durban International Airport to King Shaka International Airport.

Interviewee Two (February 2019) said “ *Investing on a new specialised outsized cargo handling facility has significantly contributed to our ability to handle shipments such as large pipes, machinery, vehicles, large animals even ocean going 20 foot containers*”. This is supported by interviewee Three (January 2019) who said that in the past most international horses participating in the Durban July horse race flew into OR Tambo and transported to Durban by road. Now, because of King Shaka International’s improved capacity for handling cargo, they are flown directly here.

According to all participants there has been a big challenge to attract airlines specifically dedicated for cargo handling. There has been an ad hoc cargo airline landing. Press Statement (8 September 2010) Emirates’ Sky Cargo Boeing 747-400F was the first international cargo airline to land at DTP in 2010. Boeing 747-4000ERF freight owned by Air BridgeCargo Aircraft landed in Durban with 30 tons of heavy duty payload of seafix marine hose (Press Statement 1 February 2018). According to interviewee Five (February, 2019) since 2010 there has been an increase in international airlines at King Shaka International Airport from five to nine, with a corresponding and steady increase in the volumes of cargo.

An aerotropolis has a huge influence on the success of an air cargo business as it is influenced by closeness to the cargo terminal and the airport (Alkaabi and Debbage, 2011). The growth of air cargo creates a competitive advantage for the airport in the global environment for the sustainability of the airport being carried by passenger airlines (Coetzee and Swanepoel, 2017).

Agencies like Trade and Investment KwaZulu Natal (TKIZN) are responsible for attracting airline and air cargo specifically to land at airport. The transition of the airport has changed how the airport handle cargo and logistics has improved. A Press Statement (4 April 2017) indicates that there has been major breakthrough in the largest aircraft landing at Dube TradePort, with a super jumbo Antonov An-124 cargo plane delivering 80 tonnes from Germany of specialized spools to be used in a local refinery for furnace (DTP Annual Report 2017/18) which forms part of the furnace at a local oil refinery. Commenting on this, Interviewee One, (January, 2019) said that *“The infrastructure to handle outsized cargo allows us to be flexible in enabling more specialized charter flights as well as growing cargo throughput by facilitating sea to air connections via increased cargo capacity from the air service that already fly direct to Durban”*. All the interviewees in the study believe that Dube TradePort Cargo Terminal has not yet reached a level of attracting flights specializing in cargo only, though there is infrastructure and skills to handle such. Interviewee One (January, 2019) believes that route development must have a turnaround strategy coupled with incentives to attract particular international airlines specialized on cargo than currently relying on passenger airline cargo.

Interviewee Five (February, 2019) who is part of route development said *“We have an airport that is able to handle major aircraft and the fact we have received an Antonov An-124 is a really major achievement. Durban has more than enough potential and capacity to see and successfully handle many more freighter charters in the years to come”*. The operations of Dube Cargo terminal are focusing on providing high levels of customer services and efficiencies in the airline industry. Cargo volumes are gradually growing and this has been demonstrated by the increase of cargo volume tonnages per annum DTP Annual Report, 2017/18).

4.2.4 Impact of the transition on route development

The purpose of acquiring new airline is done through the process of promoting an airport by agencies or airport management by designing strategies which includes meeting with airline shareholders, inviting them to a conference, offering some incentives and produce reports about achievements of the airport is called route (Thelle et al, 2012). It includes the attraction, initiation, expansion, retention, or any improvement of air services and can include changes in pricing, frequency, capacity, hub connectivity or a number of nonstop destinations served (Martin, 2009).

The above definitions demonstrate that route development is a huge effort to get the airlines to fly to a new destination altogether. Route development can have a number of different purposes including attracting new routes with new airlines, growing existing routes, attracting new airline with the existing routes, retaining the existing routes and influencing change to existing routes (Graham, 2014). There are two objectives of route development, are those related to connectivity (number of destinations served, frequency and capacity) and the other objective are those related to traffic (number of passengers departing, arriving and transiting, cargo value, weight and volume), (Strair,2005). A service offered by route development varies; it can be considered by airline destination, domestic, regional, cargo airlines or international.

Airports are competing aggressively for new routes from a variety of airlines with significant business models, but it is difficult to convince an airline on the merits of a new route (www.aviasolutions.com, 20101). Interviewee Five (February, 2019) is of the belief that King Shaka International Airport is able to compete for more routes at a global level and it's infrastructure is of a global standard. The five interviewees that participated in the study believe that the fact that there are runways that are long enough as compared to the previous airport has influenced the number of international long haul flights that are landing to King Shaka International Airport. The number of direct long haul routes to and from South Africa is nowhere near the high watermark witnessed in the mid-late 1990's, where a record 64 carriers serviced South Africa, including some from Eastern Europe, West Africa, Russia and Latin America (Brophy,2017).

Interviewee 1 (January ,2019) believe King Shaka International Airport next to Dube TradePort and the development of the land by Tongaat Hulletts has attracted international flights and created further development of the regional airport that assist in tourism and also cargo carriers.

According to Interviewee Five, (February 2019) the name of the airport was changed in 1994 to Durban International Airport from Louis Botha. Interviewee Five (February 2019) further stated that the airport was serving a domestic market, the international airlines which resulted to a low number of tourists and the short runway made it difficult for a fully laden to Boeing 747 to take off. Interviewee Five personal communications alludes *“Because of the short runway and the hub and spoke rule that was adopted either by ACSA or SAA which favors OR Tambo International Airport as the first destination of landing before an airline*

reach its final destination, Durban International Airport most international airlines pulled out of this route”.

Interviewee Five (February 2019) reveals that the National Development route committee has changed its attitude towards the provincial route developments to allow for international flights to be negotiated directly. As at the present moment there are negotiations between airlines in America and China to add to the international flights landing to King Shaka International Airport.

The challenge for international airlines that fly direct its connectivity. There are international airlines that are cheap but their connectivity becomes a problem due to the long wait at the airport (interviewee five, February 2019). The transition of Durban International Airport to King Shaka in April 2010 has seen an increase in the number of international airlines landing in Durban.

Comparing the two airports under discussion there were two international flights, three regional flights and domestically the scene was dominated by the triangle of Cape Town International Airport, OR Tambo and Durban. Interviewee Two (January 2019) said that there are now eight domestic destinations, four regional route and five international routes for airlines currently landing at airport. According to Interviewee One (February 2019) *“Emirates was there before but they have changed the size of the airplane, Air Mauritius, Airlink to Mozambique, Turkish Airline, Qatar Airline, British Airways, Proflight Zambia, Air Seychelles (no longer operating) Air Ethiopian (No longer operating) and SA Express (this was grounded no longer flying to Lusaka and Harare) we have attracted eleven international airlines at an average of one per year”*. This has proven beyond reasonable doubt that there are benefits that have been experienced by the transition of Durban International Airport to King Shaka International which would not have been experienced if the airport remained in the south of Durban.

The quintessential manifestation of 21st century is globalization and international airlines (Kasarda, 2013). Airports are its routers, attracting time critical, globally-oriented businesses (Kasarda, 2013). Interviewee Two (February, 2019) believes the increase of international flight has not been influenced by the airport being an aerotropolis; it's because of the demand that was untapped and airlines saw the opportunity. Interviewee Two (February, 2019) said *“It's only when airlines come in great numbers when they realized that it is an airport city, they don't come because you are planning an airport city”*.

During the interview, Interviewee two (February, 2019), mentioned the fact that Durban is mostly popular with its ports and sugarcane. Interviewee Two (February, 2019) further argued that airports are important due the economic dynamics which resulted in the demand for international and economic global competitiveness. This century is on the verge of being led by the airline industry in transporting passengers local and international, with cargo volumes being increased (Charles, 2007).

South Africa joined Brazil, Russia, China and India UBM Aviation Worldwide Limited (2013) to initiate the 2015 route development conference in order to grow the connectivity destination routes and create new partnerships within domestic and international airlines. Three years later, in October 2018, it was clear one of the objectives of that conference had been achieved, when British Airways launches a new route from London to Durban. The future and current international airlines that land at the airport strengthen the economic development of Durban and as well make it the tourist destination of choice. This is in stark contrast to the old airport where a first world country airline of that magnitude never landed. All the participants in the study are of the view that new routes, especially international airlines, increase the number of tourist and create opportunities for foreign investors to consider Durban for future investment opportunities.

There is a greater need by airlines throughout the whole world of adding new route to increase their share in the globe (Bernier, 2007). Interviewee Two (February 2019) said that *“there are four key considerations that airlines look for: new demand forecasts, hub connectivity, aircraft availability and other competitors and the airlines that are landing at King Shaka International Airport domestically, regionally and internationally are providing suitable opportunities for attracting more airlines”*.

A survey that was conducted on 100 airports found that within Europe, over 74 percent of airlines are looking for route developments on a short haul service and 49 percent focused on a long haul service (ASM, 2009). In the rest of the world, 66 percent of airports concentrated on long haul services and 54 percent concentrated on short haul services (Graham, 2014). It is for this reason that interviewee five (February, 2019) stated that there are negotiations with some American and China airlines at the highest level that will be landing directly at the airport. Looking back at the old airport, it was not suitable at all to attract direct and long haul airlines as the airport did not meet the criteria for expanding new routes. Part of attracting

international airlines is that the airport must incentivize the airline, for example reducing the parking rates or any form that can be short term or long term incentives.

Interviewee One (January, 2019) said that there has been about nine international airlines that have landed at KSIA after 2010 world cup. Interview Five (February, 2019) believes that shorter flying times are important for international flights: Interviewee Five (February, 2019) concurred: *“When they look for a new airport they always consider the connecting airports which cut the flying times and reduction of flying cost”*.

Priorities of airport route development can be observed on business to business and in some case more incentives for intercontinental or long haul services. Whatever the objectives are, airport route development should be realistic in terms of the demand that can be generated at the airport, the airport infrastructure and services that are offered and availability of airlines that are willing and able to operate the services being proposed (Graham.2014).

4.4 Conclusion

This chapter has focused on discussions and findings that were obtained through data collected from primary and secondary data, it discussed four objectives of the study and the implications of the assessment on the airport city development.

The study is centered on the accessing of transition and implications of the airport city. The broader economic platforms has shifted the aerotropolis boundaries of the airport in South Africa, to collaborate in planning and including geographic regions (Mekgoe, 2015). This means that aerotropolis of this country must be able to attract tourists, foreign investors, airport development and new international routes, as well as and increase cargo volume to stimulate economic growth.

- **Assessing the impact on tourism of the transition of the Durban International to the King Shaka International Airport and the implications of airport city:**

Tourism has been the main attraction of Durban as a city; however the Durban International Airport had been struggling to attract international tourists prior to 1994. Challenges that were facing the airport were the limited runways to attract long haul airlines, lack of space to develop the airport, the size of the airport and lack of corroborative effort to market Durban (and KZN) as tourist destination. For a period of time there were (11) international airlines but they started to pull out of the route

due to the fact that there was lack of understanding of their role and the forcing them to go via OR Tambo International Airport.

This transition to the of airport has changed the status of passengers landing, from fewer than 3,5 million passengers flying to the airport annually to almost 6,2 million within a period less than ten years since the airport was opened in 2010. This is close to its capacity of seven million passers per annum. The number of airlines flying to Durban from within South Africa, from Africa and abroad has grown. This has created a positive economic impact on the gross domestic product of the province with a contribution of 0,5 percent.

The building of the airport as Airport City has changed even the experience inside the airport, with the number of shops increasing from three at the old airport to thirty at King Shaka international Airport. Tourist landing at King Shaka International Airport can even do shopping at the airport until the last flight landing or departing, an experience that never existed at the Durban International Airport. A variety of entertainment including food and beverages, entertainment with music and Zulu dance has given an airport a new flavor.

King Shaka International Airport as airport city has increased the number of possible connections with other airlines and even locally the regional airports in the province have been resuscitated so that they can link tourists with areas of interest in the province like ecotourism destination and world heritage sites. The transition impact has changed the landscape of tourism, with the recent landing of British Airways directly from London. Big international events hosted by Durban as a result of new international Airport since the 2010 FIFA World Cup include Cope 17, international route development conference, BRICS, Africa Cup of Nations and others. This has increased the tourism in Durban and the province as well as boosting its reputation as one of the best tourist cities in the world.

- **Assessing the impact on foreign direct investment on transition of the Durban International Airport to the King Shaka International Airport and implications airport city:**

Through the data collected from Durban International Airport it come out that the airport had never driven foreign direct investments as it was not taken as the responsibility of the airport to drive investments. Though there were companies that were close to the Durban International Airport like chemical plants, automotive

manufacturers, pulp and paper plants and others, they were not directly linked to the airport as part of any form of investments.

The fact that land was unavailable for the development of the Durban International Airport into an aerotropolis or airport city limited the airport's potential to attract foreign direct investments and lack of interest from government and airport management added to the poor use of the airport as an investment site.

Foreign direct investments are attracted to the accessibility to the airports, this is revealed by literature and airports are becoming economic game changers. Next to the airport, there is a demarcated geographical area which has rules that allow them to deal with investment business and foreign direct investments. These demarcated areas are for attracting foreign investments are called Special Economic Zones and exist next to the airport to fulfill the implications of the airport city. Their purpose is to attract investments around the airport, alleviate unemployment, development and diversification of export and experiencing of new policy development.

Dube TradePort as a special economic zone has been able to attract foreign direct investments categories as targeted sectors (technology, AgriZone, clothing and textile, pharmaceutical and others) and supplementary sector (freight forwarding, warehousing, high tech and others). Because of the special economic zone within the airport 44 companies have invested at Dube TradePort of which 11 are foreign direct investments.

The special economic zone is achieving its objective of creating employment as per data collected. Three thousands new jobs have been created which has exceeded the expectations of the management of Dube TradePort. The foreign direct investments in industries and infrastructure within the airport city amount to more than R1, 4 trillion.

There is a correlation between airlines landing at airport and the attracting of direct foreign investment. Landing of international airlines at the airport create an investment opportunity. Tourists that visit Durban get to be exposed to the investment opportunities through the management of Dube TradePort One Stop Investment Services. Though there are challenges that have affected the economy since 2008, foreign direct investment opportunities targets that were set by Dube TradePort are being achieved. The skills development that are taking place at Dube TradePort are influenced by the development of an airport city and created the opportunity of working with institutions like University of KwaZulu Natal in the

development of Aerotropolis Institute Africa which would not have existed if there was no transition.

The development and the growth of the economy in the province depends on the contribution of Dube TradePort and infrastructural projects that take place from King Shaka International Airport northwards to the port of Richards Bay.

- **Assessing the impact on cargo volumes of the transition of the Durban International Airport to the King Shaka International Airport and implications of the airport city:**

At the Durban International Airport cargo or freight logistics was not in their interest because it was handled by South African Airways. There was also an independent company that was responsible for logistics and handling of cargo. Most of the cargo was transported and hence there was no strategy plan to develop logistics movement. Because of the transition, the development of the airport city, an infrastructure within Dube TradePort has been developed so that business can be done better. There are four development zones within Dube TradePort: the Dube AgriZone, Dube Trade Zone, Dube City and Dube Cargo Terminal.

Dube Cargo Terminal is managed by a single handler with freight forwarding and shippers in close proximity. The Dube Cargo Terminal is able to assist manufacturing and exporters operating within KwaZulu-Natal, and even importers to impact on the economic growth of the province. Dube Cargo Terminal assists in providing air-to-road and road-to-air logistics so that they meet the demands of delivery services.

The Dube Airoad is responsible for the logistics fleet so that collections and delivering cargo to other parts the country and Maputo. The Dube Cargo Terminal has managed to handle cargo of 1000 tons per month which never before existed, thereby increasing the revenue of the country. The increase of international airlines landing at airport has added to the cargo that is being handled there. This has boosted the competitiveness of the airport in the global environment and made it more sustainable.

Tourist airline attraction and cargo volumes co-exist, because bringing new airline routes means attracting more tourists, which adds to the cargo volumes. Most of the cargo volumes is brought through tourist and is handled in a manner that nothing gets lost or gets broken. The airport city development influences the air cargo business

due to the close proximity of the cargo terminal to the airport. There are other stakeholders that are used to influence the attraction of new airlines and cargo so that they can land at the airport. Because most of the cargo being handled at Dube Cargo Terminal is of high value, cargo handlers have acquired skills through training that make them globally competitive.

The handling of cargo at Dube Cargo Terminal becomes difficult to separate from airport as both operate in the same space of airport city. The handlers of cargo at Dube Cargo Terminal are highly competent and skilled in handling cargo because of security threats in the airline industry. There are multi cargo carriers which operate at Dube Cargo Terminal, most of them international and regional. Preparations are in place to develop new runways so that future cargo airlines can land at King Shaka International Airport.

Accessing the impact on route development of the transition of the Durban International Airport to the King Shaka International and the implications of the airport city:

Durban International Airport has been considered as a public utility focused largely on the safety of passengers departing and arriving at the airport safely rather than commercial considerations. There was a passive approach in marketing Durban International Airport and encouraging tourists to visit Durban and the province. The marketing approach that was used at Durban International Airport was to furnish information through printed material, advertising on radios and television, electronic boards, events support, fund raising programs and air shows. It was discovered that number of international airlines operating at Durban International Airport before 1994 (11) was declining. A failure to understand the relationship between tourism and airline industries caused Durban to be a shadow of Cape Town and Johannesburg when it came to tourism attraction.

The 1994 post-apartheid era brought about a change in how airports are considered and the role played by the new government dispensation started by showing how important it is to align tourism and the airline industry. The post-apartheid transition ensures that the airport transition to airport city, became an agenda for the economic development of the province. The 2010 soccer tournament provided motivation to bring the plans for the airport to the table for discussions. The fact that the old airport had lost many international flights and local carriers, a turnaround strategy of bringing back the international airlines to the new airport was needed.

Route development underpins targeted approach as a process of demonstrating to airline carriers that the route is profitable to operate there is demand and the infrastructure of the airport has suitable facilities. There is sufficient demand and suitable airport facilities to profitably operate a route from the airport. The management of the airport and trade port had to adapt to a new era of route development intelligence based on the proactive approaches with a team and activities focused on selling and marketing the airport to the prospective international airlines. The route development team managed to turn around the number of international airlines to 11 within a period of less than ten years of the airport existence.

The selling point of an airport is it's based on well-developed infrastructure how big is the airport, geographical location, connecting routes and business opportunities in the vicinity of the airport. It was also important that route development team of Dube TradePort link the airport with tourism and selling of the special economic zone within the airport. The strategy of aligning a one stop shop of selling Dube TradePort to the world covering tourism, special economic zones, foreign direct investment, cargo volume and route development demonstrates that an airport within an airport city becomes much more attractive and key to economic development.

The objective of route development is a work in progress and continues to seek for new airlines to land at the airport. The landing of British Airways is an indication that there is an impact of transition and positive implications of airport city.

- ❖ There is a huge opportunity for increasing volumes of air cargo. This could be in line with the airport route development as they negotiate the new routes. It must also find a means of increasing the head office for industries operating within the Dube TradePort as an opportunity to boost manufacturing.
- ❖ The route development committee need to find a method of bringing international airlines from countries which have a strong business relationship with South Africa like China and the United States of America

Summary on the impact of the transition of the Durban International Airport and the implications of the airport city.

The transition has yielded positive developments in KwaZulu-Natal province. The tourism sector is benefiting from the international events that EThekweni is capable of hosting successfully. However there are areas which tourism has not been able to tap, including the

fact that this province has people who have been awarded the Nobel Prize, prominent and renowned leaders of the struggle and academics, as well as uniqueness of the Zulu culture.

On foreign direct investments Dube TradePort has achieved huge success, despite the global economic meltdown. However because of the Fourth Industrial Revolution there is a need for a study that will be able to determine the skills that are relevant for this new era of digital disruption.

Despite huge fluctuations in air freight at Dube TradePort, there is an opportunity for the market to continue to grow. This will depend on activities such as good handling skills, safe storage and delivery at destination. This area of air freight is highly volatile, so constant research on improving air freight safety is important. Lastly, route development there must be guided by constant research, surveys and benchmarks that will identify the weakness and the strength of the strategy used for bringing new entrants to the airline industry..

CHAPTER FIVE

RECOMMENDATIONS AND CONTRIBUTIONS

5.1 Introduction

This chapter will focus on the recommendations and contribution to the existing knowledge of the study including addressing the gaps in the research study, of assessing the impact of the transition of the transition and the implications of the Airport City. The previous chapter focused on the findings and discussions.

Airports are seen as key assets for global competitiveness, to accelerate economy and bring ca investments (Conventz and Therstein, 2014). The debate of combining tourism, foreign direct investments, cargo volumes and route development as part of the airport city development makes sense as it is difficult to separate them. It is for this reason that the transition of the airport so that it would be able to tap into new markets, thereby attracting investors, increasing tourists, introducing new routes and transforming the airport into a city or aerotropolis. Included in this chapter will be the interpretation and each objective taking into account the impact of the transition and the implications of aerotropolis or airport city.

5.2 To determine the impact of the transition on the tourism industry in KwaZulu Natal (KZN)

Ahmed, (2016), argued that tourism is becoming an instrument which is used in the world to grow employment and economic development of the 21st century (Ahmed, 2016). The study found that the transition of the airport has yielded more positive impact in growing tourists landing. If the the airport is well developed and suitable and capable of attracting international airlines so that tourism can flourish. With regard to the findings, this objective is supported by the fact that more than six million passengers have landed at King Shaka International Airport as compared to those passengers to 3, 5 million passengers landed at Durban International airport.

The layout inside the King Shaka International Airport with a number of retail shops and entertainment areas of food and beverages has made it an Airport City within the airport where passenger or tourist can do their shopping without going into the city centre. The activities that are taking place inside the airport like music, Zulu dancers, advertisement of

tourist attractions, big events and multinational companies displaying their products, demonstrate the implications of the airport city.

Recommendations and contribution

- ❖ Though there are developments that are taking place within the aerotropolis, there is a need for conference centre and hotel that will make it easy for the people who are coming to King Shaka International airport to hold meetings or sleep at the hotel rather than travelling another 15km to a hotel or conference. This can even grow travellers and leisure tourism that are visiting Durban as it can be easy for them to go to the beaches that are closer to the airport and visit the north coast of the province to experience the Zulu culture.
- ❖ Easy access to public transport to the airport and from the airport need to be available as it is not everybody who is travelling to the airport who has a car or has money to use taxis. The issue of public transport to and from the airport requires the involvement of all the stakeholders that participated in the transition of the airport.
- ❖ The alignment of tourism, cargo volumes, foreign direct investments and route development as one strategy is vital as it is not easy to separate them.

5.3 To examine ways in which the transition has attracted foreign direct

The development of a Special Economic Zone around the airport within the trade port has achieved the objective of growing gross domestic product with the contribution of 0.5 percent resulting in 6000 people being employed in the airport city environment.

Recommendations and contributions

- ❖ Although there are signs that investments around Dube TradePort are increasing even after the 2008 world economic crisis, foreign direct investments are needed as well as the skilling of unemployed youth so that they can participate in the development of the airport city by bringing innovation and creativity
- ❖ Government investment promotion intermediaries should focus on making efforts to attract investors which will be interested in the aerotropolis area and with attractive investment incentives including why investors should come at Dube TradePort
- ❖ South Africa is taken as an investment destination in Africa however there is a negative perception that the country is among corrupt countries in the world. This needs all stakeholders (including government leaders, particularly the African

National Congress) that are involved in promoting foreign direct investments to assure investors that they are fighting corruption and their investments will be safe.

5.4 To ascertain the extent to which the transition has impacted on route development

It is becoming an international trend that there is a need to increase air cargo and expansion of global industries next to the airport (Appold and Kasarda, 2011). This has been proven by number of global companies that are operating towards the King Shaka International Airport while there was nothing in Durban International Airport.

Reflecting on the growth of air cargo, air transport is becoming the mode that is leading in use of the airports in the competitive world village and may increase pressure to airport transition in order to have a land allocated or cargo to be close to the airport (Coetzee and Swanepoel, 2011). This has increased the areas of geographical connectivity for the King Shaka International airport to ensure that high value cargo arrives in at their destinations. As pointed out by participants in the study that there are more than 700 points of connectivity for the airport.

Recommendations and contributions

- ❖ It is important for the airport to increase the volumes of cargo, both high value cargo and dirt cargo, by introducing incentives to industries around the world to use the airport as the regional and international connecting route for cargo. The fact that the airport is close to the ports means there must be strong linkages to be developed to ensure that most volumes that are from the port are transported through the airport. Dube TradePort cargo has demonstrated that it has capacity and specialised equipment to offload any form of cargo, as has been mentioned in the study.

5.5 To ascertain the extent to which the transition has influenced the number of international routes

Route development is a process that is essential for both airports and airlines, by generating economy through number of flights, passengers, cargo and as well as improving quality of air service network (to70, 2013). This has been proven through King Shaka International Airport by number of tourists, the increase of cargo volumes and the number of international flights as compared to Durban International Airport. The flights that are landing at the airport comprise local destinations, regional destinations and international airlines are increasing.

Due to the good infrastructure of runways the airport is able to accommodate all sizes of airlines.

Recommendations and contributions

- ❖ There is a need for combination of all factors mentioned above as a vehicle to expand the number foreign airlines landing at airport. The Tourism sector is becoming a global business and the climate of Durban is suitable throughout the year. All stakeholders involved in the route development must have a plan to attract more airlines.
- ❖ Durban has been working hard to attract international tourists and it has hosted a number of conferences including a route development conference. There is a need to conduct a study to examine whether the alliance of South Africa, Brazil, India, China and Russia (BRICS) has increased the number of tourists who are landing in Durban.

5.5 Conclusion

The study results demonstrate that the transition of Durban International Airport to King Shaka International Airport has had a positive impact on tourism as it has shown that the number of passengers landing at the airport has increased. Because of Dube TradePort Special Economic Zone, companies that are investing there has increased. Even the number of employees working in and around the airport has doubled compared to Durban International Airport. Thirdly, though there has been worldwide recession, foreign direct investments by international companies like Samsung demonstrate that the transition was important.

Every year from 2010, when the airport was opened, the volumes of cargo have doubled, though the Dube TradePort has not yet manage to attract an airline dedicated for cargo. Lastly the landing of British Airways is a demonstration that international airlines have confidence in the transition of the airport and the development of the airport city implications and this places the airport as a global player in economic development.

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