CRITICAL SUCCESS FACTORS FOR AIRLINES IN SOUTHERN AFRICA

by

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Thesis submitted in fulfilment of the requirements for the degree

Doctor of Technology: Tourism and Hospitality Management

in the Faculty of Business and Management Sciences

at the Cape Peninsula University of Technology

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Cape Town

November 2018

DECLARATION

I, OSWARD MHLANGA, student number 215297369, declare that this thesis, ***CRITICAL SUCCESS FACTORS FOR AIRLINES IN SOUTHERN AFRICA,*** submitted to the Cape Peninsula University of Technology for the Degree DOCTOR TECHNOLOGIAE: TOURISM AND HOSPITALITY MANAGEMENT, represents my own unaided work, and that the thesis has not previously been submitted for academic examination towards any qualification.

Furthermore, it represents my own opinions and not necessarily those of the Cape Peninsula University of Technology.

_____ _____

Signature of student **Date**

DEDICATION

I dedicate this thesis to my daughter, Isiphosethu.

I made the comment that if a capitalist had been present in 1903, he should have shot the Wright brothers. He would have saved his progeny money. But seriously, the airline business has been extraordinary. It has eaten up capital over the past century like almost no other business because people seem to keep coming back to it and putting fresh money in. You've got huge fixed costs, you've got strong labour unions and you've got commodity pricing. That is not a great recipe for success. I have an 800 number now that I call if I get the urge to buy an airline stock. I call at two in the morning and I say: "My name is Warren and I'm an aeroholic." And then they talk me down.'

- *Legendary investor Warren Buffett*

ACKNOWLEDGEMENTS

I wish to express my sincere appreciation and gratitude to the following people without whom this thesis would not have been possible:

Professor Steyn, my supervisor, for his excellent, consistent and kind mentorship. I am very appreciative for his advice, guidance and motivation and his role in making this journey a challenging, yet edifying and an extremely enriching experience. His immense insight and passion for research inspires me. This is as much my study as it is his. Thank you.

Professor Spencer, my co-supervisor, for his generous time, patience, assistance and guidance throughout the most challenging learning process of my life. One thing I will always carry with me is your passion for perfection. Thank you.

My parents, who raised me to believe that anything is possible and attainable through hard work and education; to my dad, who never doubted that this document would become a reality; and to my mom, whose undying support and encouragement led to the completion of this study. I acknowledge the love and care and devotion shown towards us and the discipline to strive for excellence.

My family and friends, who were there to support, motivate, listen, and provide assistance, show interest and who were my cheerleaders from day one up until the very end. Thank you for your patience while this study became my life. To my brothers, Norman and Plows – for your unwavering belief in my research abilities and for all your motivation, I am eternally grateful. You have both been, and continue to be, an inspiration to me on a daily basis!

I am greatly indebted to Dr Corrie Uys, for her time and invaluable input in assisting me with statistical analysis of this study.

Cheryl Thomson, for language and technical editing of my thesis – your thoroughness and constant willingness to assist me at all times is greatly appreciated.

The Research Directorate of the University of Mpumalanga for their support.

To God, who has throughout my life provided me with wonderful opportunities to learn, grow and make an impact on others.

ABSTRACT

The airline industry is structurally challenged by its very nature, facing high fixed costs, cyclical demand, intense competition and vulnerability to external shocks. This is exacerbated further by other endogeneous and exogeneous challenges in the operating environment, which make it difficult to operate airlines successfully. Consequently, structural, endogeneous and exogeneous challenges produce thin profit margins for airlines, thereby prompting airline managers to identify critical success factors to these challenges. However, operating airlines in southern Africa has proved to be fraught with difficulties resulting in several airlines terminating their services after short periods of operation, thereby disrupting travellers. The purpose of this research is to identify critical success factors to overcome challenges facing airlines in the region. A mixed-methods research design and an extensive literature review on critical success factors for airlines was employed, followed by several interviews with key personnel at eight southern African airlines. Purposive sampling was used to collect data from 54 respondents from eight different airlines.

From the study, it is clear that the ability for airlines to survive financially is seriously threatened by organisational, industry, and environmental success factors. Within the organisation management inefficiency, labour inefficiency, use of aged fleets and management turnover significantly affected negatively the performances of state carriers, whilst alliances and the use of a standardised fleet significantly affected positively the performances of private airlines. The following environmental success factors namely, political, economic and technological factors, significantly affected negatively the performances of all airlines. Furthermore, national airlines received preferential treatment, which often distorted any prospect of a level playing field, thereby preventing privately owned carriers from competing effectively.

The following industry success factors namely, rivalry amongst existing competitors, the bargaining power of suppliers and the bargaining power of customers significantly affected negatively the performances of airlines. As such, the following industry success factors were identified, namely the low threat of substitutes and new entrants, which are not enough to mitigate intense rivalry and the high bargaining power of customers and suppliers. Several suppliers can squeeze airlines, and even though the threat of new entrants is low, wherever there is potential, there will be new entrants, creating overcapacity and reducing yields. Consequently, to overcome challenges in the region the following organisational success factors were identified, namely management efficiency, the use of a modern fleet, fuel efficiency, labour efficiency, alliances, aircraft choice and customer satisfaction.

Keywords: Challenges, airline industry, state carriers, critical success factors, southern Africa

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LIST OF ABBREVIATIONS AND ACRONYMS

AASA	Airlines Association of Southern Africa
ACSA	Airports Company of South Africa
AFCAC	African Civil Aviation Committee
AFRAA	African Airlines Association
AHP	Analytical Hierarchy Process
AMU	Arab Maghreb Union
ANOVA	Analysis of Variance
APM	Aircraft Performance Methods
ASAs	Air Service Agreements
ATN	Air Transport News
BA	British Airways
BAG	Banjul Accord Group
BASAs	Bilateral Air Service Agreements
BEE	Black Economic Empowerment
BRICS	Brazil, Russia, India, China and South Africa
CAA	Civil Aviation Authority
CAPA	Centre for Aviation
CATHSSETA	Culture, Arts, Tourism, Hospitality and Sports Sector Education Training Authority
CEMAC	Economic and Monetary Community of Central Africa
Comair	Commercial Air Services
COMESA	Common Market for Eastern and Southern Africa
CPI	Consumer Price Index
CPUT	Cape Peninsula University of Technology
CRS	Central Reservation System
CSF	Critical Success Factor
CSFs	Critical Success Factors
DCA	Directorate of Civil Aviation
DCMUs	Decision Making Units
DEA	Data Envelope Analysis
DSR	Design Science Research
EA	Ethiopian Airways
EAC	East African Community
EC	European Commission
ECA	Economic Commission for Africa
EU	European Union
FFP	Frequent Flyer Programme
FSCs	Full Service Carriers

GAAP	Generally Accepted Accounting Practice
GDP	Gross Domestic Product
GDS	Global Distribution System
GVA	Gross Value Added
IATA	International Air Transport Association
IDC	Industrial Development Corporation
KPI	Key Performance Indicator
LCCs	Low Cost Carriers
LSM	Living Standard Measure
OAU	Organisation of African Unity
OBG	Oxford Business Group
PESTEL	Political, Economic, Socio-cultural, Technological, Ecological and Legal
PWC	Price Waterhouse Coopers
REC	Regional Economic Community
RPK	Revenue Passenger Kilometres
RSA NDT	Republic of South Africa National Department of Tourism
SAA	South African Airways
SAAG	South African Airways Group
SACAA	South African Civil Aviation Authority
SADC	Southern African Development Community
SAPSE	South African Post-Secondary Education
SARHA	South African Railways and Harbours Administration
SAX	SA Express
SSA	Statistics South Africa
SWOT	Strengths, Weaknesses, Opportunities and Threats
TSA	Tourism Satellite Account
UN	United Nations
USA	United States of America
WAEMU	West African Economic and Monetary Union
WTTC	World Travel and Tourism Council
YD	Yamoussoukro Declaration (later called the Yamoussoukro Decision)

CHAPTER ONE

BACKGROUND TO THE STUDY

1.1 INTRODUCTION

This chapter identifies challenges affecting airlines in southern Africa and is followed by a discussion on the background and context to develop an understanding of the study. The chapter also provides a brief discussion on critical success factors (CSFs) followed by a problem statement, the aim and objectives of the study, research questions and limitations of the study. The chapter concludes with a presentation on the structure of the thesis.

The airline industry is structurally challenged by its very nature, facing high fixed costs, cyclical demand, intense competition, and vulnerability to external shocks (Tolkin, 2010:8). This is further exacerbated by other endogeneous and exogeneous challenges in the operating environment, which make it difficult to operate airlines successfully (Mhlanga, Steyn & Spencer, 2018:389). Consequently, structural, endogeneous and exogeneous challenges produces thin profit margins for airlines thereby prompting airline managers to identify critical success factors to overcome these challenges (Ssamula, 2014:22).

Travellers flying at OR Tambo International Airport (in Johannesburg, South Africa) on the easterly Benoni runway, will have regular sight of parked dead aeroplanes with decaying tail-planes of Zambezi, Nationwide, Velvet Air, Air Malawi, Skywise and many other defunct airlines (Mhlanga, 2017:1). This, according to Paelo (2016), bears testimony to the challenges facing airlines in southern Africa. Consequently, because of a myriad of challenges in southern Africa many airlines have failed whilst those that are still in operation are traversing through turbulent times and fighting for survival (Eze, 2016).

However, despite a difficult operational environment in the region, the industry has not been able to develop and implement necessary organisational and sustainable strategic changes (Heinz & O'Connell, 2013:78). Consequently, a clearer identification of the CSFs to overcome challenges affecting airlines will help management devise strategies to strategically manoeuvre out of these challenges and thereby boost tourism growth (Bissessur, 1996:43). Alshubaily (2017:34) underscores that in the airline industry there are CSFs, which can give an airline high success rates and competitive advantages over other airlines. However, before identifying CSFs, airlines should first identify challenges facing the industry (Brandt, 2016).

According to Njoya (2016:8), the fundamental challenge in the southern African aviation industry is fragmentation due to the lack of a single aviation policy to make southern Africa a single market. Airlines within the region do not treat the southern African airspace as a single market (Paelo, 2016). A single aviation policy will make it possible for regional airlines to have full freedom of the air within

southern Africa and when it comes to air services agreements negotiation between member states of southern Africa and other countries outside the region, southern Africa will act as a single market (Pearson & Merkert, 2014:23).

For instance, Pöyhönen (2014:9) avers that European Union (EU) member states treat the European airspace as a single market. Tolkin (2010:8) affirms that EU member states have full freedom of the air for their airlines within the EU but when it comes to air services agreements negotiation between member states of the EU and other countries outside the EU, the EU acts a single market. Therefore, according to the Centre for Aviation (CAPA, 2016), if one of the EU member country airlines wants to fly to any country in southern Africa as per the air services agreement, there will be a clause mandating the European airline to fly to that country through any other European country.

To illustrate the above point, British Airways (BA) can fly to Johannesburg through Paris with the EU community clause, but unfortunately South African Airways or Air Zimbabwe or Air Namibia cannot fly to European countries through other southern African countries, which do not have an airline (Indetie, 2015:3). Consequently, this fragmentation in the southern African airline industry makes it difficult to achieve the necessary scale to compete with international airlines (The Sunday Times, 2015).

According to Kilinc, Oncu and Tasgit (2012:331) because of this fragmentation, the airline environment in southern Africa faces the challenge of competitors from Europe and the Middle East who are actively penetrating the local and regional markets and securing larger market shares, and taking advantage of ill-prepared southern African operators. The uneven playing field places significant strain on southern African airlines in their own markets and threatens their long-term survival (Safrudin, Mathiesen & Lescarcelle-Evin, 2013:1).

Another challenge is the exorbitant aviation-related taxes and fuel costs in the region relative to those in other regions, as well as landing and take-off charges (Pearce, 2015). Kuuchi (2016) avers that the cost of aviation fuel and tax in southern Africa is highly prohibitive. Fortin (2016:12) claims that globally, fuel accounts for approximately 36% of an airline's operational costs but in southern Africa, this ranges between 45% and 55%. Therefore, airlines in southern Africa pay higher fuel and ticket tax, which significantly increases their expenses (Lohmann & Koo, 2013:8).

According to Eze (2016), southern African airlines face higher leasing costs than other carriers do. It costs southern African airlines more to lease aircraft than airlines in other regions (The Economist, 2016). Oosthuizen (2013) affirms that while it might cost a European airline US$180 000 per month to lease a five-year old Boeing 737, it costs a southern African airline US$400 000 for the same aircraft. This is linked to the region's poor safety record and delays in dealing with bankruptcies (Campbell, 2014).

The success of airlines in southern Africa is further hampered by the use of old fleets (Mandizha, 2016). According to Fortin (2016:12), as of 2015 only 2.3% of all aircraft in the world flew within southern

Africa, and of older aircraft 10% flew within southern Africa. Due to their high operating costs, old fleets cannot compete effectively with new generation aircraft, which are fuel efficient, reliable and require limited maintenance resources and time (Smith, 2015). Replacing older aircraft with new adds other challenges that many southern African airlines need to overcome (Muli & Pellissier, 2014:10).

Poor safety records add to the challenges that compound the difficulties of southern African airlines, such as TAAG Angola Airlines (Rupp, 2015). There are many accidents in southern Africa and there is still poor regulatory oversight in many areas (Brandt, 2016). According to the International Air Transport Association (IATA, 2016a), in southern Africa accidents happen every 135 000 flights. The region's safety record is 12 times worse than the global average (Chattopadhyay, 2015:147).

Protectionist policies favouring national airlines at the expense of private airlines remain abundant in southern Africa (Brandt, 2016). Most governments in the region believe that a national carrier is one of the three visible symbols that encapsulate sovereignty and self-determination, along with a national flag and national anthem (Chattopadhyay, 2015:147). Some research endeavours (Tafirenyika, 2014; Rupp, 2015; Merkert & Hensher, 2011:690) therefore argue that because a national airline is taken as a grand gesture that asserts a country's status symbol, governments in southern Africa constantly bail out national carriers, thereby creating an uneven playing field with private airlines and rendering the industry uncompetitive.

Political interference is a common issue preventing most national airlines in southern Africa from making the correct commercial and strategic decisions (Africa Review, 2015). Managers of national airlines are often not able to implement new strategies and structures that would make the airlines more competitive and cost efficient (Nenem & Ozkan-Gunay, 2012:46), for example, lower-fare tickets, better use of internal resources, outsource units when necessary without taking into account the wishes of the governments concerned (O'Connell, 2011:341). The best of many examples of this is South African Airways (SAA), which once again, in 2016 had to be helped out by government injecting R5 billion to keep it afloat (eNCA, 2017).

According to the African Airlines Association (AFRAA, 2016), another challenge is related to air transport liberalisation. Rupp (2015) claims that much of southern Africa's international traffic continues to be strictly governed by bilateral services agreements (BASAs) anchored on the principle of reciprocity and this is not conducive for tourism development. Brophy (2016) concurs that as one of the fastest growing aviation markets, southern African carriers' abilities to optimise the benefits of the growing traffic is hampered by the lack of market access, especially on intra-Africa routes, yet southern African countries are reluctant to give cabotage rights to other southern African carriers. Cabotage rights are airline rights to operate within the domestic borders of another country (AFRAA, 2016). The overall purpose of cabotage rules are to prohibit foreign aircraft from one country travelling into another country and picking up citizens of the other foreign country and providing transportation to and between points within that foreign country (Getachew, 2014:9).

It can be noted from the preceding points that the success of airlines in southern Africa is determined by how fast they identify CSFs to overcome challenges posed by the environment (Fu & Oum, 2014:26). While many propositions may be raised, it is broadly contended that a sound business strategy that identifies CSFs to overcome challenges is at the very heart of attaining a sustainable competitive advantage and consequently an above-industry-average bottom line performance for airlines in southern Africa (Pearce, 2015).

1.2 BACKGROUND AND CONTEXT

Tourism is one of the fastest growing industries around the world (Moolman, 2011:136). The WTTC (2016) reports an increase in the global travel and tourism industry's contribution towards gross domestic product (GDP) from 8.6% in 2011 to 10% in 2015. The WTTC (2016) furthermore expects an increase in global employment by the travel and tourism industry from over 108 million jobs in 2010 to more than 126 million people by 2024. According to RSA NDT (2011:1), the South African tourism industry is regarded as one of the fastest growing sectors of the country's economy. SSA (2015) reports that the tourism industry in South Africa recorded growth of 6.6% between 2013 and 2014, exceeding the average global growth in the sector while the direct GDP from tourism rose from R93.5 billion in 2012 to R103.6 billion in 2013. Tourism contributed 9% to South Africa's GDP in 2015 (SSA, 2016).

According to CATHSSETA (2016), in South Africa tourism directly employs more people than the mining, communication services, automotive manufacturing and chemicals manufacturing sectors. To illustrate this point, of the total employment in South Africa, including both formal and informal sectors, 1 in 25 individuals work in the tourism sector (SSA, 2016). To be precise, 4.5% of the total workforce was directly employed in the sector during 2014 (CATHSSETA, 2016). This is an increase from the 3.8% recorded for 2005 (SSA, 2016). The growth in tourism is driven by changing lifestyles and higher disposable incomes (WTTC, 2016).

The airline industry is classified as one of the subsectors of the South African tourism industry (CATHSSETA, 2016). The Tourism Satellite Account (TSA) for 2013 estimated that the subsector constituted 2.1% of the South African GDP, which is about R51 billion a year and provided 227 000 jobs or 2.6% of the South African workforce in 2014 (SSA, 2015). The annual value added (or GVA) by each employee in air transport services in South Africa was R721 132, over four times higher than the South African average of R163 901 in 2014 (SSA, 2016). The tourism spin-off is even more significant because approximately 20% of all tourism-related jobs in South Africa are supported by international visitors arriving by air. The airline industry is therefore a small segment of the tourism industry with an economic effect higher than that of the sport, recreation and fitness subsector (CATHSSETA, 2016).

According to OBG (2017), the TSA only reports on airlines' contribution of 51% towards aviation's total domestic supply and therefore excludes the 49% contribution by other aviation-related subsectors

such as airports, ground services and aerospace. SSA (2015) estimates that the airline industry employed almost 343 000 jobs employees in 2014, while the total income generated by airlines, airports, ground services and aerospace in 2014 was R50.9 billion (2.1%) towards the South African GDP.

Furthermore, the airline subsector pays nearly R6.0 billion in tax (SSA, 2016). Taxes paid by aviation firms and employees contribute approximately R3.5 billion towards this figure, with passenger departure taxes, including VAT, contributing a further R2.4 billion (SSA, 2015). It is estimated that an additional R5.0 billion of government revenue is raised via the aviation sector's supply chain and R2.3 billion through taxation of the activities supported by the spending of employees of both the aviation subsector and its supply chain (CATHSSETA, 2016). The airline subsector therefore plays a significant role in the economy as a modern day engine of economic growth (SSA, 2016).

According to PWC (2016), the airline industry is regarded as one of the largest sectors in Western economies. It is one of the largest private sector employers in the United States of America (USA), directly employing nearly 255 000 full- and part-time workers in 2013 (IATA, 2016a). Including indirect, induced, and enabled effects, general aviation in total, supported 1.1 million jobs and US$219 billion in output (IATA, 2016b). The airline industry also generated US$69 billion in labour income (including wages and salaries and benefits, as well as proprietors' income) and contributed US$109 billion to US GDP in 2013 (PWC, 2016). Overall, total GDP effect attributable to general aviation amounted to US$346 per person in the United States in 2013 (IATA, 2016b). At the national level, each direct job in the general aviation industry supported 3.3 jobs elsewhere in the economy (PWC, 2016).

Measured by revenue, the aviation industry has doubled over the past decade, from US$369 billion in 2004 to US$746 billion in 2014 (IATA, 2016a). The growth in the aviation industry over the past years is mainly attributable to three key demand drivers: living standards, population and demographics, and price and availability (Brophy, 2016). Although the global airline industry continues to grow, the failure rate of airlines is very high in Africa, with southern Africa being the hardest hit (PWC, 2016). To survive, airlines should identify CSFs to overcome challenges and thereby improve the financial performance in a sustainable way (Evans, 2011:236; Brandt, 2016).

1.3 CRITICAL SUCCESS FACTORS (CSFS)

According to David (2011:31), CSFs are those characteristics, conditions, or variables that when properly sustained, maintained or managed can have a significant effect on the success of an airline competing in the aviation industry. O'Connell (2011:341) argues that CSFs are not goals or objectives, but are a combination of activities that contribute to the attainment of the goals and objectives of an organisation. David (2011:31) claims that CSFs determine those performance fields that managers must constantly manage. These factors have the utmost importance in strategy execution (Barney & Hesterly, 2010:341). Therefore, by identifying CSFs, airlines converge towards 'comparative parity', thereby enhancing their chances of survival (Evans, 2011:236).

The concept of CSFs is essentially confused with the idea of key performance indicators (KPI) (David, 2011:31). Although both being elements determinative of the success of a company, they are inherently different and very diverse ideas (Ittner & Larcker, 2001:382). Key performance indicators make up benchmarks, which point to the improvements of certain aspects in the operation of the organisation (Jenatabadi, 2013:82). These are essentially concepts, which measure the overall capacity of the organisation with the effects provided by the CSFs of the firm (Evans, 2011:236). However, David (2011:31) claims that due to the increase in the demand of the business environment, these two distinct concepts should work hand in hand and must complement each other in aiding the company to ultimately realise its goals.

Nonetheless, various scholars (Epstein, Kumar & Westbrook, 2000:57; Ittner & Larcker, 2001:382; Nissi & Rapposelli, 2011:740) have studied the importance of CSFs for any organisation. Although there is a vast amount of literature on airline business models with CSFs, there is a general lack of research into the applicability of those models, traditionally defined in European and North American contexts, to the African scene (Jenatabadi, 2013:82; Rhoades & Curtis, 2013:250).

Implicit in this study is the hypothesis that the aviation environment in southern Africa is unique enough to warrant its own CSFs, which may be distinctive enough to form part of a new strategic template or business model. This study will fill in the gaps by critically articulating CSFs from a developing context, where such findings could mirror similarities and differences and inform airline operators of strategic implications which could be useful for operational and management endeavours.

1.4 PROBLEM STATEMENT

The airline industry in southern Africa is paradoxical and dichotomous (Mutegi, 2016). Nowhere is the potential for aviation growth greater than in southern Africa where there is the fastest burgeoning middle class income group (AFRAA, 2016) and air traffic growth (CAPA, 2016). However, despite air traffic growth, profitability has been elusive with the profitability of airlines in southern Africa having plummeted to unprecedented low levels with all national carriers (South African Airways, Air Namibia, Air Zimbabwe and Botswana Airways) struggling with colossal losses, whilst private airlines tend to have a very short lifespan, which explains the dichotomy (The Herald, 2016). Consequently, various scholars (Ssamula, 2012:23; Roese & Smith, 2015:17; Saranga & Nagpal, 2016:171) have long pondered the enigmatic question of why southern Africa has become an airline graveyard.

According to Indetie (2015:3), the major problem is the poor financial performances of airlines in southern Africa, which does not seem to match the growth in demand. Consequently, the collapse of carriers such as Zambian Airways, Flitestar, Phoenix and Fly Africa underscores the grim financial reality that the industry faces (Smith, 2015). Some research endeavours (Riwo-Abudho, Njanja & Ochieng, 2013:85; Merkert & Pearson, 2015:269; Saranga & Nagpal, 2016:168) argue that identifying CSFs could significantly unlock the industry's potential for future financial sustainability.

However, research on aviation has focussed on the challenges posed by the operating environment in the region but no explicit link made to any recommendation on CSFs for airlines on which to focus to overcome such challenges (Merkert & Pearson, 2015:269). As such, a study to identify CSFs to overcome challenges facing airlines in southern Africa was visualised. Identifying CSFs to overcome challenges facing the industry can help airlines to recalibrate their business models and thereby halt the industry's downward financial trajectory (Njoya, 2016:9).

Furthermore, improving airline perfomances could improve tourism development as Page and Ge (2009:371) argue that air transport is a fundamental driver of the tourism industry, since it facilitates mobility and the movement of tourists from their place of origin to their destination and back. Therefore, the identification of CSF for airlines could improve the reliability and dependability of airlines in southern Africa (Heinz & O'Connell, 2013:78).

1.5 AIM AND OBJECTIVES OF THE STUDY

The aim of this study was to identify the CSFs to overcome challenges faced by airlines in southern Africa and to offer suggestions for their continued and future success. In order to achieve the aim of the study, the following objectives were formulated:

- To explore the development of the airline industry in southern Africa.
- To critically examine through a literature review, the sources of critical success factors for airlines operating in southern Africa, and
- To examine and identify critical success factors to overcome challenges facing airlines in southern Africa.

To conduct this study effectively, the following questions needed to be answered:

- What is the development of the airline industry in southern Africa?
- What are the sources of critical success factors for airlines operating in southern Africa?
- What are the critical success factors to overcome challenges facing airlines operating in southern Africa?

1.6 SCOPE AND LIMITATIONS OF THE STUDY

The scope of this study encompasses the identification of CSFs to overcome the challenges that affect airline performances in southern Africa, as perceived by a relevant sample of experts in the aviation industry. The study focuses on eight airlines (South African Airways, South African Express, SA Airlink, Comair, Mango, Air Zimbabwe, Air Namibia and Air Botswana) and provides limited perspectives, which remain important, given that this is the first study that identifies CSFs for airlines in southern Africa.

1.7 STRUCTURE OF THE THESIS

This thesis is structured in seven chapters. Each chapter is introduced to the reader by outlining how it is organised and concludes with a summary that recaps salient points made in the chapter.

1.7.1 Chapter One: Introduction to the study

Chapter One introduces the study by providing a background and context to the study, the problem statement, the research objectives and research questions of the study, the rationale for the study and the benefits of the study.

1.7.2 Chapter Two: Development of the airline industry in southern Africa

This chapter discusses the development of the airline industry in southern Africa and identifies factors affecting airlines. In this regard, the chapter identifies successful airlines and airlines that have failed and provides an analysis of the possible reasons why some airlines failed and why some were successful.

1.7.3 Chapter Three: Sources of critical success factors for airlines in southern Africa

Chapter Three identifies sources of critical success factors and critically examines the effects of the organisation, industry and environmental success factors on airline operations in southern Africa. To give comprehensive insight into these environments, the chapter identifies organisational strengths and weaknesses, and opportunities and threats posed by environmental, industry and organisational success factors on airlines. The chapter also discusses models of identifying critical success factors and previous research on CSFs. The chapter concludes with a reference framework on the effects of the organisation, industry and environmental success on the performance of airlines.

1.7.4 Chapter Four: Research methodology and techniques

This chapter discusses the research methodology and techniques employed for this study, including the objectives, the research instrument, the population and sampling, data sources, data analysis, and research ethics.

1.7.5 Chapter Five: Results of the effects of environmental and industry success factors on airline performances

This chapter presents the results obtained in the study and the discussion thereof. The chapter starts by presenting the response rate of respondents and the demographic profile of the respondents from different airlines before describing the profiles of the participating airlines. The chapter uses descriptive statistics to present the effects of environmental success factors on airline performances by performing t-tests and one-way ANOVA. The chapter concludes by presenting the effects of industry success factors on airline performances by performing t-tests and one-way ANOVA.

1.7.6 Chapter Six: Results of the effects of organisational success factors on airline performances

This chapter continues to present the results of the study by presenting results on the effects of organisational success factors on airline performances. The chapter starts by presenting the effects of organisational success factors on airline performances by performing t-tests and one-way ANOVA. The chapter performs one-way ANOVA to identify challenges affecting airlines in southern Africa, before performing one-way ANOVA to identify CSFs to overcome challenges affecting airline performances. Since load factors and airline yields are significant metrics in measuring the performance of airlines, the chapter offers correlation coefficient and regression analysis to investigate the relationship of passenger load factors with CSFs, and the relationship of airline yields with CSFs and passenger load factors. Finally, the chapter concludes by evaluating the reliability of the results.

1.7.7 Chapter Seven: Conclusions, recommendations and evaluation of the study

This chapter revisits the research objectives to indicate how each was achieved and summarises the main findings of the study. Based on these findings, recommendations are made. The chapter concludes with an evaluation of the study in terms of limitations, contributions to the airline industry and research ethics.

1.8 SUMMARY

This introductory chapter provided the background to challenges facing airlines in southern Africa and outlined the central issues of this research. It is evident from this chapter that to overcome these challenges there is a need to identify CSFs for airlines in southern Africa. The problem statement, objectives and research questions of this research were stated. Finally, the structure of the research, delineated by chapter, guides the reader through the dissertation.

The next chapter, Chapter Two, examines the development of the airline industry in southern Africa.

CHAPTER TWO

DEVELOPMENT OF THE AIRLINE INDUSTRY IN SOUTHERN AFRICA

2.1 INTRODUCTION

The development of the airline industry in southern Africa from a South African context, is investigated. The development of the industry is divided into four stages, namely early aviation history, development of the airline industry, growth of the airline industry, and the entry of low cost carriers into the airline industry. The factors that affect airlines are identified and both successful airlines and airlines that have failed are examined. The chapter concludes with an analysis of the reasons why some airlines failed and why some were successful during the development of the airline industry in the region.

Developments and trends in the international aviation industry continue to change the modus operandi of the airlines (Brits, 2010:27). With the USA and Europe already in their third economic cycle of a deregulated regime and the Asia-Pacific region airlines becoming commercial bulwarks, it is only instructive to assume that there could be a global fall-out from these developments (Jarvis, 2016). Compared to other regions of the world, southern African airlines are the least prepared for the developments in the international aviation scene (Gavin, 2013:9) because of the absence of a united southern African airline network (Gordon, 2015).

According to Roese and Smith (2015:17), the fundamental problem in the southern African aviation industry is fragmentation and protectionism of national airlines. This fragmentation in the industry makes it difficult to achieve the necessary scale to compete with airlines from outside the region (Gordon, 2015). Consequently, southern Africa's fragmented global strategy will have to be controlled or jettisoned as southern African carriers grapple with the challenges of:

a) How to derive the advantages that national carriers can deliver without placing a huge financial burden on the State;

b) What changes, if any, to make in the operating environment to position their airlines to overcome operational problems unique to the southern African air transport market;

c) How to respond competitively and effectively against stronger foreign carriers without government subsidies; and

d) How to find a strategic fit in view of the developments in the international civil aviation industry (Campbell, 2015).

However, to compete successfully with airlines from outside the region in such a fragmented industry it is important to understand the development of the airline industry in the region (Brits, 2010:27). To understand the development of the airline industry in southern Africa, one country in the region is used

as a case study since southern African countries share more or less the same history (Pirie, 2006:9). According to Gavin (2013:9), the history for southern African countries is the same in that prior to their independence most southern African countries' air services were primarily based on European relationships and agreements. However, after independence, most of the newly independent southern African states created their own, mostly government-owned, national air carriers, many of which failed or are currently struggling (OBG, 2017).

In this study, the development of the airline industry in southern Africa is explored using South Africa as a microcosm. Historical and recent developments indicate that the western world and the Pacific Rim countries view South Africa as the conduit through which tourism flows to southern Africa (OBG, 2017).

The next section outlines the chronological development of the airline industry in South Africa.

2.2 DEVELOPMENT OF THE AIRLINE INDUSTRY IN SOUTHERN AFRICA

Historically, the South African aviation industry was the centre of a focus for discussions related to history, change, challenges and strategies in southern Africa (Ssamula, 2014:27). The main reason for this is that South Africa has traditionally been at the forefront of evolvement in the aviation industry in southern Africa (Federico, 2013:721). The other reason why the bulk of reference material on aviation industry is heavily concentrated on the South African airline industry is because South Africa has the biggest aviation market, not only in southern Africa but on the continent as a whole (OBG, 2017).

2.2.1 Early aviation history in South Africa (1929-1949)

In 1929, Major Allister Miller founded the Union Airways in Port Elizabeth after being awarded a government contract to fly mail between Cape Town and the major centres in South Africa (Pirie, 1990:237). The airline was registered on 24 July 1929 and airmail operations began on 26 August 1929. On 3 September 1929, Union Airways started carrying passengers (Ssamula, 2008:11).

As both mail and passenger traffic increased Miller bought three more aircraft on 29 May 1930 (Gavin, 2013:9). However, in 1931 two of Union Airways' aircraft crashed and were written off (Pirie, 1990:237). This marked the beginning of the airline's struggles (Ndlovu, 2001:92). By 1932, Union Airways were struggling to make ends meet and little help was forthcoming from the South African government (Pirie, 1990:237).

The final nail in the Union Airways' coffin came in 1933 when one of the remaining Union Airways' aircraft crashed (Gavin, 2013:9). This was a major blow to the airline and forced Miller to approach the South African government to take over the operation (Ndhlovu & Ricover, 2009:17). The South African government took over the assets and liabilities of Union Airways on 1 February 1934 (Ndhlovu &

Ricover, 2009:17). The airline was named South African Airways (SAA) and was controlled by the South African Railways and Harbours Administration (SARHA) (Ssamula, 2008:11).

Pirie (2006:9) posits that from 1934 the air transport environment in South Africa was lightly regulated, though the powerful SARHA sought to protect railway services at the expense of air travel. As a signatory (as part of the British Empire) to the Paris Convention of 1919, the South African air transport regulatory environment was based on the principle of air sovereignty (Ssamula, 2008:11).

Gavin (2013:9) avers that during the Second World War (1939-1944) all aircraft employed for civil aviation transport purposes in South Africa were transferred to military authorities and the country became totally dependent on foreign airlines for the provision of domestic air transport services. Pirie (1990:238) claims that foreign airlines provided domestic services at very reasonable rates during the war, but fares increased quite substantially when SAA resumed air services after the war. Consequently, the economic conditions that prevailed after the war could not support these fares and slight decreases were announced in March 1946 (Ssamula, 2008:11).

In 1946, a new private airline, Comair, was established and started operations (Goldstein, 2001:230). However, to protect SAA (as the flag carrier) from private airlines such as Comair, the International Air Services Act Number 20 was promulgated in 1949. According to the Act, airlines that wished to compete against SAA on the main domestic routes had to prove, amongst other things, that a need existed and that the incumbent airline was not delivering an adequate service (Brits, 2010:27). These requirements were outlined in Section 20 of the Act and were virtually impossible to meet in the presence of the dominant SAA (Ssamula, 2008:11). The result was that SAA had complete monopoly on the high-density routes and controlled airports and landing slots (Gavin, 2013:9). According to Ensor and Baumann (2011) there is a positive relationship between peak-hour slots and profitable business class opportunities, whilst off peak-hour slots (bad landing slots) tend to be associated with unprofitable economy class travellers. Subsequently, Comair was relegated to feeder routes (Goldstein, 2001:230).

Bennett (2005:419) asserts that since 1948, economic regulation protected SAA's position on the main trunk routes (trunk routes are profitable routes with a high demand) in South Africa similar to the protection of railway services provided by the South African Railways and Harbours (SAR&H). SAA was further left to develop the domestic air transport on its own.

> SAA was part of South African Railways. The Railways was entrusted with the development of a transport infrastructure for South Africa. As such, it was an instrument to carry out government policy. Its business objective was not profitability but meeting the growing transport needs of a fast developing country. The government protected this investment by shielding it against competition and uneconomical overlapping of services.
>
> This meant that SAA was not a true business concern. Certain uneconomical services were maintained for strategic reasons and for reasons of national economy. Private airlines were not willing to operate these routes, until they were subsidised. The principle of cross-subsidisation was accepted and the major routes were required to subsidise the less profitable ones.

> SAA obtained the rights to most of the major routes automatically because it was the only scheduled domestic airline. The development of air transport took place under these conditions and led to SA Airways' domination in the domestic air travel market (Vlok, 1992:20).

2.2.2 The apartheid era (1949-1991)

According to Pirie (1990:238), domestic air services within South Africa were regulated in 1949 through the Air Services Act (Act No. 51 of 1949). As the flag carrier, SAA was protected from competition for over 40 years following the promulgation of the International Air Services Act, also known as the Air Services Act (Act No. 51 of 1949). In 1978 and 1979 two airlines were established, namely Link Airways (later known as SA Airlink) and Bop Air (later known as Sun Air) respectively, with both airlines focusing on secondary routes, bringing the number to four airlines that were active in the domestic market (Gavin, 2013:9). However, in the period between 1978 and 1984, SAA experienced cost pressures as airports, airlines and air spaces (in Zimbabwe, Angola and Mozambique) became part of a political strategy to cripple the government of the last minority white-ruled state in South Africa, and the Rand weakened against foreign currencies (Pirie, 1990:238).

During this period, South Africa was increasingly isolated because of the apartheid policies and economic prospects were not good, and to make matters worse, both domestic and international market perceptions were unfavourable (Ryan, 1992:9). Due to international condemnation of the apartheid regime during the 1980s, SAA itself faced hostility, with its offices being attacked; SAA's London office was daubed with red paint, while in Harare (Zimbabwe) its offices were badly damaged after protesters went on the rampage (Galli, 1997:18). The US Comprehensive Anti-Apartheid Act of 1986 banned all flights to and from the USA by South African-owned carriers, including SAA.

In November 1986, due to economic sanctions, flights to New York were suspended (Ryan, 1992:9). The following year, in 1987, SAA services to Perth and Sydney in Australia were ended due to the Australian government's opposition to apartheid (Ndhlovu & Ricover, 2009:17). The Australian airline, Qantas, also stopped flying to South Africa, landing instead in Harare.

After SAA was banned from flying over Africa, it made various strategic adjustments to reach certain European destinations (Pirie, 1990:238). Firstly, SAA bought Boeing 707s that could fly around the west coast of Africa en route to London and other European destinations (Pirie, 2006:9). The aircraft made a refuelling stop at Ilha do Sal in Cape Verde (Figure 2.1). These flights made SAA's routes to Europe longer than their competitors who were allowed to overfly Africa (Vlok, 1992:8).

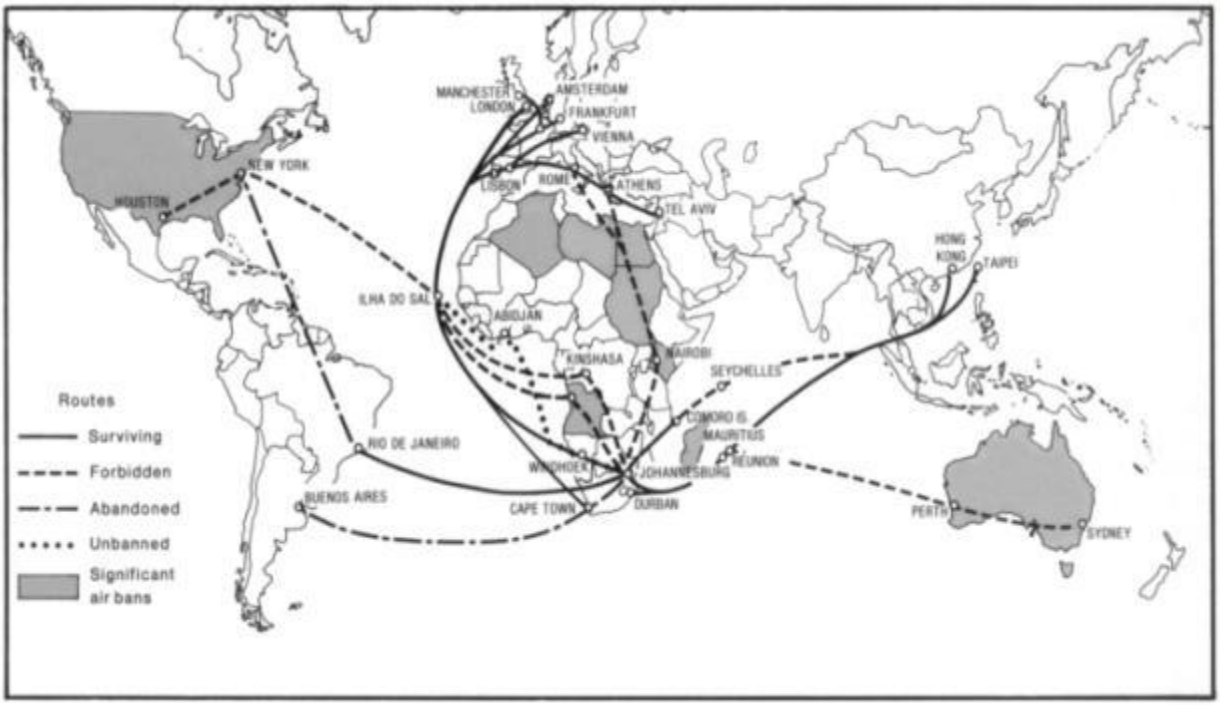

Figure 2.1: The changing world network of SAA under apartheid (Source: Pirie, 2006:9)

Secondly, SAA made structural adjustments to reduce longer flying hours by forming alliances with Luxembourg Air to establish Luxavia airline, which could fly over Africa (Pirie, 2006:9). By forming an alliance with Luxembourg Air, SAA avoided flying around the west coast of Africa, thereby reducing flying hours and fuel costs (Lunsche, 1997:9).

Vlok (1992:8) asserts that in 1986 due to economic sanctions domestic fares were increasing faster than the Consumer Price Index (CPI). Air travel was becoming an expensive mode of transport and the possibility existed that market share could be lost to cheaper modes of transport (Ndhlovu & Ricover, 2009:17). The contribution from domestic air services had to be increased in order to subsidise the international routes and achieve the financial objectives of the airline (SAA) as a whole (Federico, 2013:721). In the short term, a strategy needed to be formulated to produce immediate financial results, with the long-term prospect being the possible deregulation of the domestic air transport market (Galli, 1997:18).

In order to improve the performance of SAA, overseas airlines and their unique situations were studied carefully, in order to find innovative ways of increasing market share in a market where no real competition existed. A new marketing strategy was developed, based on discounted fares to sell underutilised capacity and revised operating schedules to improve utilisation of aircraft (the load factor used in timetable planning was increased from 65% to 75%).

In addition, discounts were rationalised with two new discount fares being introduced, namely, flexi-fare, which was a 40% discount to travellers who reserved to travel on a particular day, but allowed the airline to indicate the specific flight within 48 hours before departure. The ‘see South Africa’ fare, which

allowed 4 000 kilometres of air travel for only R360 but was limited to international visitors buying tickets outside South Africa for travel in South Africa (Vlok, 1992:4).

To further improve airline performance, SAA's timetables were replanned, thus limiting the number of underutilised and non-profitable flights. The popular late night or early morning flights were increased as these had proved to be a new niche in the travel market. Business class services were introduced. The decision to adopt this travel class was based on research which revealed that a certain sector of the market was willing to pay for an increased level of service above that of Economy Class, and the Frequent Flyer Programme (FFP), now known as Voyager, started in 1984. This was done to provide some form of individual recognition for frequent users of the airline, thereby creating loyalty and forming a database to communicate with this important segment of the airline's market. SAA's FFP was officially launched to the public in July 1987.

In 1987, the White Paper on Privatisation and Deregulation advocated that the air travel industry be deregulated, based on the American experience (Goldstein, 2001:230). The thinking was that competition would lead to more efficient airlines and lower passenger fares, while also benefiting the country's economy in the long term (Ssamula, 2009:7). Furthermore, airline sanctions against South Africa eased from 1990 when the country's last minority government abolished statutory apartheid (Ndlovu, 2001:91). The step ended South Africa's political isolation and its status as a world pariah. International diplomatic, commercial, cultural and sporting links were resumed (Pirie, 2006:9). However, in 1989 a new airline, Intensive Air commenced operations (Guttery, 1998).

Pirie (2006:9) asserts that 1990 marked a period of political transition that featured withdrawal of bans on cross-border aviation between South Africa and her continental neighbours, and between South Africa and many overseas countries. Several carriers (such as Air Zimbabwe, Lufthansa, Brussels Airlines, Air France and BA) landed in the Republic for the first time, or after a long absence (Bennett & George, 2004:117). Re-equipment and maintenance of national flag-carrier aircraft became less problematic while South African orders for custom-built sanctions-busting ultra-long-range wide body jets ended (Ssamula, 2008:11), and airline sales offices were reopened beyond the country's borders (Pirie, 1992:345). Consequently, this period of political transition marked the beginning of liberalisation for both the domestic and the South African intra-African markets (Bennett, 2005:419).

This period coincided with overseas airlines such as KLM and BA serving South Africa, being confronted with deregulation, privatisation, mergers, alliances, technological shifts and route reconfiguration (Pirie, 2006:4). In 1991, South Africa's domestic aviation market was deregulated, providing a level playing field for airlines to compete against SAA (Pirie, 1992:345). There was to be free entry into markets, promotion of choice and competition, and the encouragement of private airlines (Shaw, 2011:35). In the airline industry deregulation is the removal of economic regulations such as entry and exit control, tariff regulation, route protection and the tightening of the control over quality factors such as safety (Abate, 2013:49). The aim with deregulation in general, is to remove unnecessary

restrictions and government interference in the market (which also includes the air transport industry), with the main objective being to promote economic activity and expose it to market forces, that is, the working of supply and demand (Njoya, 2013:15).

The first phase of deregulation saw the creation of several new start-up airlines (Ssamula, 2008:11). The first airline to enter the market after deregulation was Flitestar in October 1991 (Chingosho, 2005:17). Flitestar chose to challenge SAA and to price its services similar to those of SAA; the airline targeted the business market and the upper end of the leisure market (Harris, 2001:19). Comair, however, held back and operated on the trunk routes, leaving Flitestar to challenge SAA on its home ground (Bennett, 2005:419).

However, with a long-standing influence in the industry, strong existing relationships with airports and suppliers, plus the unseen hand of government ownership, SAA was somewhat insulated from the worst effects of deregulation on its bottom line (Ssamula, 2008:11). Therefore, SAA continued to 'bully' private airlines in services for which it had a monopoly (Bennett, 2005:419). Deregulation also affected South Africa's air travel market (Williams, 2016). Introducing competition on domestic and international routes, and in particular on the highly popular routes of the Golden Triangle (Johannesburg, Cape Town and Durban routes), resulted in lower and more affordable fares and substantial growth in passenger numbers (Luke & Walters, 2013:121). Adeyeye (2016) claims that between 2002 and 2015, the percentage of South Africans travelling by air is estimated to have almost doubled from 4% to 7.4%.

Although South Africa's domestic aviation market was deregulated in 1991, SAA continued to control airports and allocated landing slots to other airlines, which made it very difficult for new airlines entering the market (Pirie, 1992:345). Ssamula (2014:22) concurs that access to air transport infrastructure and related facilities was identified as an advantage to SAA, due to the airline's dominant position in the domestic market for so many years. New entrants had to be satisfied with less than ideal positions, for example, the allocation of landing slots (Chalmers, 2001:7). Furthermore, SAA was the only airline that had a licence to operate the luggage conveyer belts at South African airports (Bennett, 2005:419). This meant that Flitestar's luggage would not be handled more quickly than that of SAA. Flitestar also shared the SAA Saafari central reservation system (Bennett, 2005:9).

Galli (1997:18) claims that in 1991 various allegations of unfair pricing were made by Flitestar against SAA. Lunsche (1997:9) posits that the provision of aviation infrastructure and supporting services at airports (for example, CRS and ramp handling services) by SAA to new entrants was not done on the basis of cost-related pricing, but was rather seen as a way of SAA providing an over-priced service to such airlines (when compared with prices charged in the international market). At the time Flitestar entered the domestic market, SAA was the only airline authorised to conduct ground handling services at airports (Galli, 1997:18). New entrants, like Flitestar, had no choice but to enter into an agreement with SAA for the ramp handling of all its A320 flights (Smith, 1998). Therefore, SAA overcharged these services to airlines like Flitestar to increase the airlines' operating costs (Kemp, 2001).

According to Smith (1998), following a survey by Flitestar in Europe to determine the relationship of costs to ramp handling for different aircraft types, like Boeing 737s, Airbus A320s and Airbus A300s, it was found by Flitestar that SAA was particularly expensive as far as the specific aircraft operated by Flitestar (the Airbus A320s) was concerned. With the approval of the licence application of Safair, an agreement was entered into with Safair for the handling of Flitestar's Airbus A320 aircraft at a cost of approximately R72 400 per round trip, which was much lower than that required by SAA. This amount equated to a monthly saving of nearly R600 000 for Flitestar, while Safair was achieving its desired returns (Vermooten, 1995:17).

Similarly, other airlines felt that SAA was not operating autonomously, without any government interference; neither was it operating as an economically viable business entity either (Lunsche, 1997:9). According to Bennett (2005:419), SAA's financial results were published as part of the Transnet group, without the detailed explanations normally required in terms of the Generally Accepted Accounting Practice (GAAP). This made it almost impossible to determine whether any cross-subsidisation had taken place between other departments or sections of Transnet and SAA, or between the airline's international and domestic services (Goldstein, 2001:230). SAA also scheduled Boeing 747 aircraft from their international fleet for domestic services, thereby achieving a cost advantage over other operators (Gleeve, 2014).

2.2.3 Growth of the airline industry (1992-2000)

This era was characterised by the entry, as well as the exit, of many air transport service providers (Pirie, 1990:238). In May 1992, Link Airways ceased operations, paving the way for the formation of SA Airlink, which began operations in 1992 following the collapse of an alliance between Magnum Airlines, Border Air and City Air, that operated as Link Airways, but was liquidated after failing to compete with SAA, which, according to Smith (1998), charged unreasonably low airfares. In 1991, South African Historic Flight commenced operations whilst Charlan Air Charter started operating in 1992 and in 1994 Alliance and InterAir South Africa were formed (Guttery, 1998). In 1995, Tramon Air and Avia Airlines commenced operations whilst Air World South Africa started operations in 1996. Avia Airlines also started operations in April 1995 before unfolding in September 1995. In 1997, Interlink Airlines and Nature Link Aviation commenced operations (Guttery, 1998).

In 1992, Flitestar filed a complaint with the Competition Board accusing SAA of unfair competition (Grobler, 1996:1). The Competition Board found that since Flitestar's entry into the market the pricing policy of SAA appreciably affected Flitestar's profitability and viability (Lunsche, 1997:9). This had the effect of restricting Flitestar's entry into the market and therefore restricting effective competition between the two airlines (Bennett, 2005:419). According to Ryan (1992:1), SAA reduced airfares to below levels where its competitors could operate profitably.

Furthermore, SAA did not decrease its seating capacity but increased the number of flights that were scheduled in close proximity to those of Flitestar (Galli, 1997:18). This excess capacity created by SAA was also regarded as anti-competitive behaviour (Ssamula, 2008:11). Consequently, in April 1994 Flitestar ceased to operate mainly due to high costs caused by a weakening exchange rate since the aircraft lease agreement was settled in US dollars (Federico, 2013:721).

After the demise of SA Airlink and Flitestar, four new airlines, SA Express (SAX started by SAA), Sun Air, Phoenix Airways, and Nationwide Airlines started operations in April, November and December 1994 and December 1995, respectively (Galli, 1997:18). In 1996, three privately owned domestic airlines (Sun Air, Phoenix Airways and Nationwide Airlines) filed a complaint with the Competition Board against SAA, accusing the airline of predatory behaviour (De Waal, 2001). The three airlines argued that SAA's large capacity increases on a number of domestic routes, combined with pricing policies, were clearly below cost and constituted predatory behaviour on the part of a dominant market shareholder (Ssamula, 2008:11).

The airlines charged that on the Johannesburg-Durban route, SAA increased flight capacity by 50% and charged prices that could not even cover its costs (De Waal, 2001). Phoenix Airways began services in December 1994 using elderly Boeing 727-100s (Orlek, 2010). Without the start-up capital of Flitestar, unviable low fares, obsolescent equipment and foreign dollars for lease payments, Phoenix survived less than a year and the result was a take-over by the charter service airline Atlantic Airways in August 1995 (Bennett, 2005:419). After a few months in operation, Atlantic Airways also ceased operations due to rising fuel costs (Ndhlovu & Ricover, 2009:17). Furthermore, Sun Air could also not sustain its operations and was wound up in 1999, which according to Antoinette (2004), was because of the wrong business model pursued.

However, Comair remained undaunted by the events that saw SA Airlink and Flitestar close down primarily because of deficient management, route restrictions, landing slot allocations, and competition with Government-owned airlines, such as SAA and SA Express (Bennett, 2005:419). Comair had operated a small collection of scheduled routes since 1945 and was initially wary of entering the trunk routes. Instead, it kept to its core business of secondary scheduled services and only operated new routes where they could be profitable (Ssamula, 2009:9). It focused on low cost travel and grew progressively from 1992 to 1997, carrying 100 000 passengers in 1992 to over 1 million in 1997. To summarise, Comair identified CSFs, concentrating on the routes which had profit potential, and which did not cause too much trouble (Ndlovu, 2001:92).

According to Ssamula (2012:25), in 1992 it was noted that the control of air transport infrastructure and related facilities by SAA was giving the airline an unfair advantage over its competitors. It was therefore recommended that these facilities and services be transferred to a separate company that would be in a more 'neutral' position to provide such services to both SAA and other private sector participants on an unbiased/equal basis (Federico, 2013:721). The result was the introduction of the Airports Company of

South Africa (ACSA) in 1993 (Ssamula, 2014:22). The objectives of ACSA were the acquisition, establishment, development, provision, maintenance, management, control and/or operation of an airport, or part of an airport, or a facility or service at an airport crucial to the functioning of such an airport. SAA eventually lost control of the major airports when the Airports Company Act of 1993 established ACSA in 1993 (Pirie, 2006:9).

In 1996, Comair signed a franchise agreement with BA, one of the leading international airlines (Luke & Walters, 2013:126). This agreement for a franchise operation with BA proved to be a shrewd move, giving it access to BA's transit passengers, whilst enabling it to have a sound financial base from which to grow (Ssamula, 2009:9). In terms of the franchise agreement, Comair was entitled to use the BA livery on all its aircraft, while staff uniforms and the interior of the aircraft were also changed to those of BA (Cochrane, 2001:11). The two companies worked closely together in the areas of marketing, sales and yield management.

After the Comair/BA alliance, SAA lodged a complaint with the Domestic and International Air Services Licensing Councils, stating that the agreement violated the right of a national carrier to operate on domestic and regional routes. However, Piet van Hoven, Managing Director of Comair, defended the legality of the Comair/BA agreement as follows:

> The arrangement is nothing other than a marketing alliance with BA and the company has in no way changed its management operating philosophies or shareholding, and it must therefore be seen exactly similar to a franchise such as Coca-Cola, McDonalds and KFC (Federico, 2013:721).

Of critical importance was the fact that the alliance now provided BA with direct access to the domestic market via Comair, while Comair now had a firm link to international routes (Ndhlovu & Ricover, 2009:17). In so doing, the two airlines avoided the restrictions of being denied the right to operate domestically or internationally. In February 1997, a strategic alliance governed by a franchise agreement was formed between SAA, SA Express and SA Airlink (Luke & Walters, 2013:123). In March 1997, SAA unveiled a new corporate identity with its aircraft tail designed to reflect the colours of South Africa’s new national flag: red, blue, gold, black and green (Pirie, 2006:9).

In 1997, Nationwide Airlines, like Comair, signed a strategic partnership with a European airline, SABENA World Airlines of Belgium (Chingosho, 2005:17). Consequently, by the turn of the century, of the seven airlines that had the potential to challenge SAA's dominance three had failed, two were in alliance with it and only Comair and Nationwide remained to provide real competition both on international and domestic route networks (Ndhlovu & Ricover, 2009:17).

2.2.4 The entry of low-cost carriers in the airline industry (2000-2016)

The deregulation of the South African airline industry in 1991 paved the way for the entry of a number of low cost carriers (LCCs) in the domestic air transport environment (Business Day, 2012). The first low-cost carrier to enter the market was Kulula.com, established by BA/Comair. Kulula.com began

operations in August 2001 (Bennett & George, 2004:117). In 2001, Rovos Air and Pelican Air Services started operating, respectively (Guttery, 1998). In 2002, Sun Air was revived and started operating (Ndhlovu & Ricover, 2009:17), while in October 2006, SAA launched its own low cost airline, Mango Airlines. In 2002, Qwila Air commenced operations and unfolded in 2009 whilst Tramon Air ceased operations in 2006 (Guttery, 1998). In pursuance of the African market, SAA acquired a minority 49% share in the privatisation of Air Tanzania early in 2003 (Chalmers, 2003:19). In 2002, Intensive Air unfolded whilst a new airline, Qwila Air commenced operations the same year. In 2003, Nationwide Airline, the other full service independent airline, began international services (Mondliwa, 2015).

In 2004, another low cost airline, 1Time, started operations while Sun Air was liquidated, which Antoinette (2004) attributes to cut-throat competition from low-cost airlines and the wrong destinations chosen. In 2005, Stars Away Aviation commenced operations before unfolding in 2013. In March 2006, CemAir started operations (Shaw, 2011:35), while in April 2008 Nationwide was forced to cease all flight operations, which Stratis (2015) attributes to the high fuel costs coupled with a decrease in passenger load factors. In March 2011, another low cost airline, Velvet Sky, started operations, before being forced into liquidation in February 2012 after less than a year of operation, citing critical cash-flow levels as the instigator (Shaw-Smith, 2012).

In February 2012, Fly Go Air started operations, while in November 2012 1Time collapsed which Makalang (2016) attributes to high fuel prices, weak demand and fierce competition on its routes. In October 2014, another low cost airline, FlySafair, started operations. Previously FlySafair operated as a freight, charter and aircraft-leasing company in South Africa between 1970 and 2012 (McLennan, 2015). In 2014, Rovos Air ceased operations after it was sold to Tim Holdings Private Limited. Skywise and Fly Blue Crane started operations in March and September 2015 respectively. However, a few months later, in December 2015, Skywise ceased operations which Young (2015) attributes to the wrong aircraft choice opted for by management.

According to CAPA (2016), the entry of low-cost airlines intensified competition in the industry as these LCCs adopted low pricing strategies to the detriment of airlines such as Comair, SAA and Mango (McLennan, 2015). This negatively affected the performance of airlines in South Africa as airfares declined along each of the 10 routes on which FlySafair and Fly Blue Crane entered (McLennan, 2015). Markman (2016) claims that before deregulation in 1990 SAA controlled more than 95% of the domestic airline market. However, after deregulation in 1991 SAA lost market share to airlines such as BA/Comair, which in 1990 had 1% or 2% of the market, and other LCCs (Mondliwa, 2015). According to CAPA (2016), in 2016 SAA was estimated to control only 36% of the domestic airline market (see Figure 2.2).

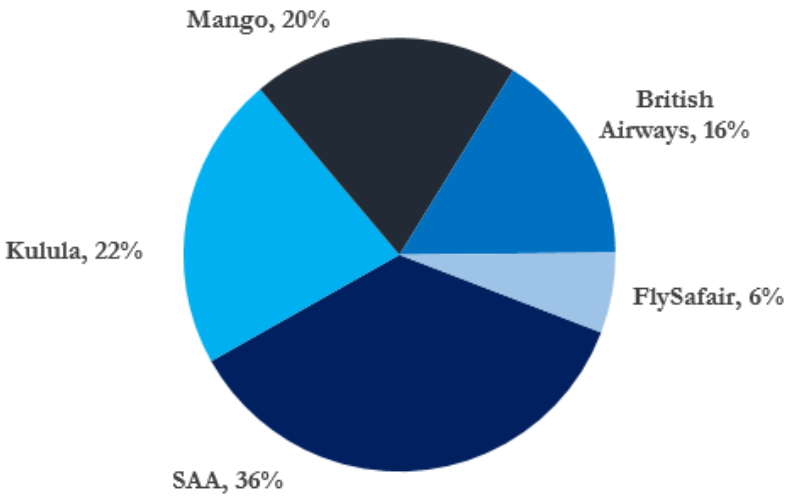

Figure 2.2: South Africa domestic capacity share (% of seats) by brand: January 2016 to November 2016
(Source: CAPA, 2016)

Kuuchi (2016) posits that passengers benefitted enormously from the increase in competition arising from the deregulation because prices of air travel reduced dramatically and frequencies improved. To illustrate the effect of deregulation on airfares, Gleeve (2014) argues that deregulation led to a reduction in air prices, especially when considering that the cost of intra-regional travel in southern Africa is relatively higher than in other international regions, such as the EU. This was the experience in the South African domestic market following the entry of low cost-carriers such as FlySafair, where there was a reduction in prices along each of the 10 routes on which the airline entered (McLennan, 2015).

Since the launch of low-cost, no frills airlines in South Africa (such as Kulula, Mango and FlySafair), enabled by deregulation, the domestic air travel market has grown by more than 50% (Njoya, 2016:6). The effect on a tourist route such as Johannesburg to George was significant, with passenger numbers doubling since 2000 (Christidis, 2016:109). On a sample in March 2016 of domestic flights, the budget carriers on average charged less than half the price of full-service airlines, and the latter's prices also came down since the launch of low-cost flights (Williams, 2016).

On the Johannesburg to East London route, the entrance of LCCs such as Kulula, enabled by deregulation, increased air traffic by 52% between 2010 and 2015 (Sokana, 2015). This was a major factor in revitalising the Eastern Cape's tourism industry and resulted in a more than 50% increase in holiday packages (Paelo, 2016). As one of the poorest regions in South Africa, tourism is a key contributor to the Eastern Cape's economy (Sokana, 2015). Estimates are that the 52% increase in foreign tourists translates into 62 000 additional tourists per year, resulting in R65.8 million (US$10 million) in tourism expenditures (Paelo, 2016).

Although deregulation broke the monopoly held by the state-owned carrier and reduced its market share from approximately 95% in 1990 to 36% in 2016, state-funded support for SAA is seen by many to have skewed the market and to have provided the airline with a competitive advantage (Paelo, 2016).

According to Shaw-Smith (2012:6), the net effect of deregulation (from 1991 to 2012), was a 73% airline failure rate. To illustrate the effect of deregulation in the South African airline industry, of the eleven airlines to enter the industry between 1991 and 2012, only one (Kulula) is still in operation. Other privately-owned airlines such as Nationwide, Velvet Sky and 1Time, operating from 1995-2008, 2011-2012 and 2004-2012, respectively, have exited even after remaining in the market for significant periods (Mondliwa, 2015). This is indicative of a high degree of rivalry, enabled by deregulation, amongst existing competitors, which has significantly affected the performance of airlines (Speckman, 2015).

According to Steyn and Mhlanga (2016:7), out of the 15 airlines to enter the industry between 1991 and 2016, only seven are still in operation. Other privately owned airlines such as Nationwide, Velvet Sky and 1Time, operating from 1995 to 2008, 2011 to 2012, and 2004 to 2012 respectively, had exited even after remaining in the market for significant periods (Mncube, 2014). The national carrier, SAA, had also suffered losses over the past decade, requiring several government bailouts and guarantees, including one in January 2015 and the most recent in September 2016.

Table 2.1 below illustrates the history of airlines in the domestic market in South Africa on a timeline.

Table 2.1: The history of airlines in the South African domestic market on a timeline

	AIRLINE	OPERATIONAL		REASONS FOR THE DEMISE
		FROM	UNTIL	
1	Union Airways Ltd	August 1929	February 1934	High operational costs
2	SAA	February 1934	Still operating	N/A
3	Comair	February 1946	Still operating	N/A
4	Link Airways	April 1978	May 1992	Fierce competition on its routes
5	Intensive Air	March 1989	July 2002	Financial challenges
6	SA Airlink	March 1992	Still operating	N/A
7	Bop Air	July 1979	September 1992	Rising fuel costs and low load factors
8	Flitestar	October 1991	April 1994	Rising operating costs
9	South African Historic Flight	September 1991	May 2007	Rebranded to Skyclass
10	Charlan Air Charter	February 1992	August 2006	Financial challenges
11	SA Express (SAX)	April 1994	Still operating	N/A
12	Sun Air	November 1994	August 1999	Wrong business model pursued
13	Phoenix Airways	December 1994	August 1995	Use of old fuel-inefficient aircraft
14	Atlantic Airways	August 1995	October 1995	Rising fuel costs
15	Avia Airlines	April 1995	September 1995	High operation costs
16	Alliance	October 1994	June 1999	Rising operation costs
17	Interair South Africa	August 1994	March 2015	Ceased after the death of its chairperson
18	Nationwide Airways	December 1995	April 2008	Decrease in passenger load factors
19	Tramon Air	April 1995	August 2006	Financial challnges
20	Interlink Airlines	October 1997	November 2010	Rising fuel costs
21	Naturelink Aviation	June 1997	August 2011	Merged into NAC Charter
22	AirQuarius Aviation	March 1999	May 2012	Rising fuel costs
23	Kulula.com	August 2001	Still operating	N/A
24	Pelican Air Services	April 2001	July 2009	Rebranded to Federal Air
25	Sun Air	July 2001	October 2004	Rebranded to Millionair Aviation
26	Rovos Air	May 2001	August 2014	Sold to Tim Holdings Private Limited
27	Qwila Air	February 2002	September 2009	Rising fuel costs
28	Stars Away Aviation	March 2005	October 2013	High operation costs
29	1Time	February 2004	November 2012	Fierce competition on its routes
30	CemAir	March 2006	Still operating	N/A
31	Mango	October 2006	Still operating	N/A

32	Velvet Sky	March 2011	February 2012	Cash flow problems
33	Fly Go Air	February 2012	Still operating	N/A
34	FlySafair	October 2014	Still operating	N/A
35	Skywise	March 2015	December 2015	Wrong aircraft choice
36	Fly Blue Crane	September 2015	Still operating	N/A

*N/A means not applicable

Source: Researcher's construct

From Table 2.1 above it is clear that during the development of the airline industry in South Africa from 1929 to date (early 2018), only two airlines, namely SAA and Comair, have been operating for a lengthy period while the majority each had a very short lifespan, some of them surviving for only a matter of months. Various factors contributed to the failure of many airlines and the successes of few, as discussed below. For the purpose of this study, five defunct airlines (namely, Flitestar, Phoenix, Nationwide, 1Time and Skywise) and six airlines that are still in operational (namely, South African Airways, SA Express, Mango, Comair, Kulula.com and SA Airlink) will be discussed in detail below due to literature availability on the factors that affect(ed) these airlines' performances.

2.2.4.1 Flitestar

Flitestar was the first privately owned airline to enter the domestic market following deregulation. It began operations during October 1991 with newly leased Airbus 320s. It initially focused on the Johannesburg–Cape Town route, with the Johannesburg–Durban–Port Elizabeth routes following shortly thereafter. The completion of the 'Golden Triangle' was achieved in January 1992 with its entry into the Durban–Cape Town routes (Smith, 1998). In April 1994 the airline ceased operations after only 30 months mainly due to high costs because of a weakening exchange rate and the fact the aircraft lease agreement was settled in US dollars (Smith, 1998). The airline failed because of a variety of other reasons.

Firstly, Flitestar assumed that local passengers would desert SAA en masse since it offered lower fares than SAA but this did not materialise, perhaps in part due to SAA's Frequent Flyer/Voyager programmes. The airline was therefore unable to achieve the load factors required to break even or to operate profitably (Bennett, 2005:419). The economic recession in 1992 took its toll on growth in local passenger levels. A depreciating Rand made spares increasingly expensive and companies cut back on travel expenses, insisting that Frequent Flyer benefits should go to the company and not to the individual. The Rand's slide against the US dollar and the fact that Flitestar leased its Airbus A320s and ATR 72 aircraft from Ireland's GPA and thus had to settle monthly rentals in US dollars, was one of the major reasons for the airline's downfall (Ndhlovu & Ricover, 2009:17).

Flitestar, targeting the growing peak-period business travel market between 07:00 and 09:00 in the mornings, made a critical operating error, either caused by gross mismanagement or SAA squeeze or a combination of the two. Flitestar missed the peak period with its 6:50 and 8:15 flights, which should leave on the hour at peak times (preferably 7am, 7:30 am and 8am) and Flitestar did not have enough aircraft to meet these time slots (Bennett, 2005:419). The allocation of landing slots by SAA, who controlled airports at the time, was also a critical factor leading to the demise of Flitestar, simply because it could not compete for the business class market.

From within Flitestar there was mounting criticism of mismanagement. As this was compounded by shareholder dissent, many people believed that no clear management was evident. In the month preceding the closure, employees considered striking about being kept in the dark – a pay increase had not been granted during the past two and a half years despite assurances that passenger and baggage figures were up. Salaries were late and stalling tactics became the order of the day as management cancelled meetings at the last minute (Bennett, 2005:419).

One report claimed that the demise of Flitestar could, ironically, be attributed to the poor financial performance of Luxavia. After many years of satisfactory financial performance, Luxavia succumbed to increased competition on the international route to and from South Africa. This occurred just as Flitestar was starting to record load factors in excess of 64%, which were required to break even. The report claimed that Flitestar had reached the turning point and that it was heading for better times (Bennett, 2005:419).

Allegations of delays on landings and take-offs, and delays because security staff arrived late for inspections, were also levelled at Flitestar. Other airlines were allegedly forced to use distant parking bays. A well-known joke in the pilot fraternity was that if one did not have an orange tail (the SAA colour), one would have to wait (Bennett, 2005:419).

Although its fares were similar to those of SAA, Flitestar had to bear additional costs for equipment and services provided by SAA, its main competitor (Bennett, 2005:419). Some SAA executives furthermore argued that Flitestar chose to compete with the national carrier with the wrong strategy. Flitestar went all out for the lucrative business side of air travel, however the competition was just too much (Bennett, 2005:419).

Flitestar's grounding confirmed the economically risky nature of the airline industry. When airlines succumb the ultimate losers are the passengers, both with regard to freedom of choice and the reduction of rivalry that helps keep fares to a minimum. Bad landing slots also contributed to the demise of Flitestar (Bennett, 2005:419).

2.2.4.2 Phoenix

This airline began operations in December 1994 and focused on the Johannesburg, Durban and Cape Town routes (Smith, 1998). When entering the domestic market, Phoenix Airways aimed its service at the market that could not normally afford to fly, by introducing services at very low fares; the airline even undercut SAA, Sun Air, and Comair by up to R400 on flights between Johannesburg, Durban, and Cape Town. Although the airline was a small player, it entered the industry amidst controversy and opposition because of its rock-bottom fares. The airline later discovered that in order to remain competitive it had to upgrade its service, schedule a morning flight to Cape Town to target the businessperson, and increase its prices. The airline's low fares resulted in a perception by the public that Phoenix was an unsafe travel choice (Smith, 1998).

On 7 August 1995, Phoenix was taken over by Atlantic Airways, an airline that had operated air-taxi services for almost nine years, which wanted to 'rescue the ailing discount carrier' but which went out of business a few months later. The airline ceased business in 1995 (Smith, 1998). The airline failed because of a variety of reasons.

A lack of proper financial planning and management. The airline used old aircraft with high operating costs. The oldest aircraft dated back to 1965. Unrealistically low fares charged. The low fares charged by the airline also created the perception of low service standard. Strong competition from both Comair and Sun Air made things even worse for the airline. Bad landing slots (times and bays) also contributed to the demise of Phoenix.

Poor yield management. Phoenix offered too many discounted tickets on its domestic routes, for example, a return flight of Phoenix from Johannesburg to Cape Town was priced at R604. Linden Birns of Plane Talking commented "You couldn't drive a bus to Cape Town for that price, let alone a Boeing 727" (Mncube, 2014). The weakness of the Rand against foreign currencies made it difficult to realise a profit, bearing in mind that services were offered at very low prices (in Rands), while the cost of providing these services (for example, the cost of leasing the aircraft) was in US dollars.

2.2.4.3 Nationwide

Nationwide Airlines was founded in 1995 by Chief Executive Vernon Bricknell and began operating charter services within Africa for the United Nations and the World Food Programme, as well as ad hoc passenger and cargo charters (Weavind, 2015). The airline operated scheduled domestic and international services to Livingstone (Zambia) and London (England) (Mbanjwa, 2016). Domestic scheduled operations started in December 1995 as Nationwide Airlines, which was one of four companies within the group, including Nationwide Air Charter, Nationwide Aircraft Maintenance and Nationwide Aircraft Support (Leitch, 2012).

The airline primarily catered for the corporate market. Nonetheless, Nationwide was a loss-making airline that only posted a profit twice between 1995 and 2008. Consequently, on 29 April 2008 the Airline halted operations and was provisionally liquidated (Mbanjwa, 2016). The airline failed because of a variety of reasons.

Weavind (2015) avers that Nationwide failed because of the use of an aged fleet. The business model used by Nationwide saw it lease the oldest, cheapest fleet of aircraft possible, but these aircraft had high operating costs and were less fuel efficient (Rabkin, 2016). Most of Nationwide's fleet were BAC1-11 (Weavind, 2015). In this regard Nationwide's cash flow problems illustrated a clear correlation with an increase in fuel costs, a consequence of operating BAC1-11 aircraft (Leitch, 2012). The government had also passed a decision to prohibit BAC1-11 aircraft from flying above 25 000 feet meaning that all of Nationwide's BAC1-11 aircraft had to be replaced (Mbanjwa, 2016). Therefore, it was no surprise that Nationwide's biggest trade debts of R10 million were to the ACSA and to its fuel company (Weavind, 2015).

Rabkin (2016) opines that another cause of the airline's demise was the lack of proper financial planning and management. Nationwide's debts were about four-and-a-half times its assets, which did not include aircraft (Weavind, 2015). The airline's assets were R48 million and debt was R217 million. Assets included 'property, plant and equipment' worth R12.6 million, about R28 million owed to Nationwide and other unspecified assets amounting to R7.3 million. The debt included loans of R14.9 million, a bank overdraft of R10 million, a claim by Nationwide Air Charter for R60 million–apparently for aircraft rental–and claims by trade creditors for R133 million. The R133 million included "a contingent liability known as unutilised ticket liability" of R71 million. Consequently, the airline had a negative gearing ratio and had a negative balance sheet (Rabkin, 2016).

According to Mbanjwa (2016), a further contributing factor to the airline's financial problems was inefficient management in implementing a clear strategy for the airline. In January 2007, Nationwide stopped serving free meals on their local flights but they never quite made the transition to low-cost carrier in the minds of the South African public (Rabkin, 2016). Leitch (2012) argues that it was not that their flight prices were not low–in fact they were by some distance the cheapest airline in South Africa in 2007–but the airline never advertised itself as a low cost carrier in the same manner that Kulula and Mango did. The fact that they retained their full service status on their long-haul flights between London and Johannesburg and Livingstone and Johannesburg, made it harder for the airline to advertise the fact that they were low cost inside South Africa (Weavind, 2015).

A further cause of Nationwide's financial problems was the lack of effective labour cost and control mechanisms (labour efficiency) (News24, 2008). The airline had a high employee-to-aircraft ratio, which was the highest among its peers at 222:1 compared to the global average, which according to Saranga and Nagpal (2016:172) is 150:1. The salary bill which represents the major cost for many airlines needs to be managed as it can become a risk for business sustainability, such as in the case of

Nationwide (Mbanjwa, 2016). The leasing cost of the airline's fleet from Nationwide Charters (a completely separate company) was just too high and added to the airline's failure (News24, 2008).

A further factor which contributed to Nationwide's demise was its failure to comply with Civil Aviation Authority's (CAA) safety standards (Mbanjwa, 2016). The airline had a poor safety record with recurrent technical faults (Leitch, 2012). Numerous non-compliance issues raised by safety inspectors remained open, despite repeated inspections and audits and recommendations by safety inspectors (Ssamula, 2008:11). For instance, on 7 November 2007 a Nationwide Airlines Boeing 737-200 lost its right engine a few seconds after liftoff from Cape Town International Airport en route to Johannesburg OR Tambo International Airport. The official CAA report found that the Nationwide Aircraft Maintenance, the airline's air maintenance company, had failed to implement the mandated service directive to inspect the rear engine mounting on the 737-200 series aircraft every 700 cycles and that this omission hid the existence of a stress fracture in one of the engine retaining bolts which failed at rotation (Leitch, 2012). Mbanjwa (2016) claims that bad landing slots also compounded the financial problems of Nationwide.

2.2.4.4 1Time

In 2004 another low cost airline, 1Time, started operations. However, even after remaining in the market for a significant period, 1Time collapsed in November 2012 and filed for liquidation (Henama, 2014:5). The airline failed because of a variety of reasons.

During its period of operation the rising cost of jet fuel surpassed staffing as the major cost in airlines (Henama, 2014:5). According to Magwaza and Speckman (2012:32), the first sign of trouble with 1Time was that it reported a loss of R43.5 million in 2012 compared with R33.9 million loss in 2011. The airline had been trying to institute a business rescue after failed attempts to find a resolution to the debt of approximately R320 million that it had to repay. From August 2012 the airline was forced to seek protection from creditors, but after six months of unsuccessful negotiations with its creditors, the airline was forced to stop operations.

According to Pauw and Dommisse (2012:5), in 2012 the airline had made a loss of R43.5 million as the costs of doing business had gone up, and the price of jet fuel was the biggest influence on the loss. The business rescue process on which 1Time embarked under the new Chief Executive officer (CEO), Blacky Komani, was to appease the creditors. Henama (2014:5) argues that it emerged later that whilst under business rescue, the airline was presented with a plan to turn the six month loss of R18 million into a six month profit of R40 million by Christo Ebersöhn who was appointed by the union, Solidarity. This plan was not considered by 1Time as it presented restructuring of certain functions and highlighted the mistakes by the management of 1Time.

Henama (2014:5) argues that 1Time operated an old and fuel-inefficient fleet that saw the commercial viability of the entity compromised during times of escalating fuel prices. In this regard 1Time's

financial fortunes indicated a clear correlation with movement in energy costs, a consequence of operating technology that was four decades old (Makalang, 2016).

Another cause for 1Time's failure was poor management decisions. 1Time generated R224 million in cash from operations for the 2009 fiscal but management opted to use the funds generated to establish a maintenance facility as opposed to upgrading its fleet (Makalang, 2016). Therefore, the demise of 1Time can be attributed to poor management decisions, taking cognisance of the opportunity cost of capital investment decisions taken by management without taking sustainable business decisions (Pauw & Dommisse, 2012:5).

2.2.4.5 Skywise

Skywise commenced in March 2015 but a few months later, in December 2015, the airline ceased operations (Malik, 2015). The airline failed to continue operations due to unpaid debts to various creditors including ACSA for parking and other service fees. The airline failed because of a variety of reasons.

Young (2015) claims that the main cause of the airline's demise was the wrong aircraft choice. Worldwide, successful low cost airlines operate with one of two aircraft, either the Boeing B737-800 or the Airbus A321 series (Malik, 2015). Both brands of aircraft compete in the same category and offer similar seating capacity in low-cost, high-density configurations. They offer similar fuel consumption figures and operating costs. The two airliners offer seating for between 180 and 190 passengers (Henama, 2014:11), in the specific case of the Boeing model, 189 to be exact. Both Comair brands (Kulula and BA operated by Comair) and SAA's subsidiary Mango, make use of the Boeing 737-800 (Malik, 2015).

Skywise, at the outset, leased a single Boeing 737-500 model which can only seat up to 140 passengers in its highest density configuration (Young, 2015); the Skywise operations had a 136 configuration. The passenger capacity difference between the Boeing 737-500 and the 737-800 meant that on every flight on the Cape Town/Johannesburg route, even if sold at a similar price for each seat (and taking the lowest advertised price), Skywise would realise (in round numbers) roughly R31 000 less revenue than any of its competitors. Taken on its initial six flights per day schedule, that meant the carrier was always going to be at least R190 000 per day, or R5.3 million per month, behind any rival flying the 737-800 model (Young, 2015).

These figures assume a 100% capacity on each flight but realistically many flights operated at only 50-70% capacity (Malik, 2015). Another aspect which the airline's management failed to realise is that the leasing costs for the B737-500 are much lower than those for a B737-800 (Henama, 2014:11). While that is true, it does not alter the fundamental issue that the airline's opportunity to generate revenue when it was most needed during its startup phase was compromised by opting for a single B737-500 and not a couple of B737-800s (Malik, 2015).

A cause for the airline's demise was the lack of capital and contingency aircraft. Young (2015) claims that to have had any hope of competing with the established carriers Skywise needed to budget for a lease on at least two B737-800s or two Airbus A321s. Therefore four aircraft were needed to run a reliable and responsive airline on the Johannesburg/Cape Town route given the airline's proposed flight schedule. A lack of appropriate aircraft was a flaw in the basic plan and contributed to the demise of the airline (Malik, 2015).

Furthermore, if an aircraft had a technical issue the airline needed to have a contingency plan on hand in the form of a reserve aircraft with which to maintain the service (Henama, 2014:11). Not to do so in a timely manner invited customer anger and an unrecoverable loss to the airline's reputation. However, Skywise had too many 'technical' no-fly instances (Malik, 2015). Consequently, Skywise attracted low passenger numbers because of negative word-of-mouth from stranded passengers (Young, 2015).

Another cause of the airline's demise was the planned use of a Boeing 737-200 (Malik, 2015). After their initial grounding in October 2015, Skywise started operating again but then the unpaid bills to the aircraft leasing company became too high for the lessor to bear and the Boeing 737-500 was recalled (Young, 2015). Skywise acquired an older generation Boeing 737-200, with even fewer seats and this was another major problem. On the Cape Town/Johannesburg route the B737-200 uses up to 2 000 litres more A1 jet fuel than the B737-800 (Henama, 2014:11). According to Young (2015), each flight cost Skywise R12 000 more than any Kulula or Mango flight (using an average of ruling fuel prices at the two airports). The increase in fuel costs for Skywise became R72 000 or up to R2 million per month using the same six flight schedule per day (Malik, 2015).

A further contributing factor to the airline's demise was that Skywise senior executives lacked aviation experience (Henama, 2014:11). While it is not vital for senior executives to know how to run an airline, or fly the aircraft in detail (such experience can be hired) it is important to have someone well-schooled in the industry at the helm so as to understand the operational issues and the needs of the front-line staff when they need assistance or have to make decisions affecting the company (Malik, 2015). According to Young (2015), Skywise executives lacked aviation knowledge and experience.

The Rand's depreciation, the hike in interest rates, and a generally poor trading environment negatively affected the costs of operating an airline because the cost of providing these services (for example, the cost of leasing the aircraft) was in US dollars. Skywise pursued a wrong business model because it operated only between Johannesburg and Cape Town; this route is over-serviced by airlines, leading to low profit margins. Competing airlines use other routes to cross-subsidise the low margins on the Johannesburg/Cape Town route. Johannesburg/Bloemfontein and Johannesburg/East London are some of the more expensive routes where airlines charge higher prices because of lower competition. This reflected poor management decisions.

2.2.4.6 South African Airways

South African Airways was established on 1 February 1934 after the South African government took over the assets and liabilities of the Union Airways. The airline flies to 38 destinations worldwide from its hub at Johannesburg's OR Tambo International Airport, using a fleet of 54 aircraft. Figure 2.3 illustrates the African route map of SAA.

Figure 2.3: Route map for SAA African services (Source: OBG, 2017)

SAA proved unprofitable and became a fiscal black hole into which billions of taxpayer-Rands had been ploughed with negative results (Raborife, 2016). The airline lost R18 billion over the past decade (2006-2016) and needed a R5 billion guarantee from government to continue operations (OBG, 2017). SAA had more than doubled its net loss for the 2015 financial year to R2.5 billion from R1.17 billion in 2014. However, there was increasing pressure for the state-owned airline to improve its operational efficiency and profit levels in an environment characterised by calls for privatisation, rationalisation through alliances with foreign airlines, and increasingly stringent operating, environmental and economic regimes (Ssamula, 2014:23). There are various reasons for the airline's financial problems.

Due to political interference, SAA has a history of appointing inefficient managers and has hence been unable to reach operational efficiency and profitability (Ssamula, 2014:23). In 1998, SAA appointed an American, Coleman Andrews, as CEO and charged him with putting the airline back on the road to profitability (Vermeulen & Williams, 2001). Andrews bought 737-800s to renew the domestic fleet, sold off 20% of the airline to Swissair and did some clever internal restructuring (Birns, 2009). In 2000 many thought he had turned SAA around after the airline reported profits of R350 million, but an investigation of the financial statements revealed that this figure was swelled by the once-off sale of obsolete aircraft (Flottau, 2013). If the aircraft sales were stripped from the financial statements, SAA indicated a loss (Vermeulen & Wiliams, 2001).

Furthermore, during Andrews' time, SAA had a fleet of its own aircraft and those aircraft were sold and leased back to SAA (CAJ News, 2015). Cordeur (2015:9) argues that by selling its aircraft SAA depleted its own asset base on the balance sheet and started losing money. Maqutu (2015a) claims that a particularly spectacular bungle during Andrews' tenure had to do with the acquisition of new aircraft. Andrews ordered 21 new Boeings, but incorrect specifications on avionics and cabin interiors were transmitted to the suppliers (Vermeulen & Williams, 2001). The result was a dramatic cost increase and a lengthy delay while the aircraft were refitted (Kemp, 2008). These decisions still negatively affect SAA's profitability in 2017.

Under the leadership of Andrews SAA paid out more than R1 billion without making sustainable profits (Vermeulen & Williams, 2001). Andrews' salary was more than US$1 million (about R8 million at the time) a year, excluding perks such as a yearly bonus of 125% of his salary and options on 18 million SAA shares at one cent each (Birns, 2009). In total, Andrews earned more than R220 million during his 20 month stay at SAA (Oosthuizen, 2013). Consequently, he was accused of manipulating an excessive profit on his salary (Vermeulen & Williams, 2001) and failing to deliver on his promise of returning SAA to a profitable position.

After the departure of Andrews, Andre Viljoen took charge as the CEO in 2001 (Maqutu, 2015a). Viljoen cancelled Andrews' order for the Boeings albeit some had already been delivered and placed a new order with Airbus in Europe (Oosthuizen, 2013). The Airbuses were reportedly cheaper than the Boeings, but considering the initial bungle on the interiors, the cancellation fees to Boeing, and the pilot and service retraining costs (almost all of SAA's fleet were currently Boeings) the cost of this series of misadventures was considerably greater than if the airline had stuck with Boeing (Cordeur, 2015). Viljoen also signed an agreement to bring SAA into the Star Alliance group but when Swissair failed the government had to buy back the stake in that airline (Kemp, 2008).

Maqutu (2015a) claims that as a result of pressure from the SAA Board (SAA board members were political appointees), Viljoen had to pursue a black political agenda, promoting Affirmative Action policies where SAA systematically replaced whites with black employees (Maqutu, 2015a). This included lowering the compulsory retirement age for pilots to 50 years, down from the industry standard

of 60 (Ismael, 2015:11). This policy was an attempt to move whites out of the command chain as quickly as possible. SAA also deliberately established a policy of not hiring white trainee-pilots if there were (suitable) non-white candidates (CAJ News, 2015). The criteria followed for appointing pilots was very stringent for whites, and less so for other racial groups (Meyer, 2015).

SAA also offered white technical staff retirement packages to withdraw and make way for black technicians (Birns, 2009). Many whites accepted, particularly after the Australian airline, Qantas, and the Spanish airline, Iberian Air, heard about the offers and set up recruiting offices in Johannesburg (Kemp, 2008). Consequently, SAA was stripped of many of its experienced repair and service personnel overnight, which resulted in recruiting and (re) training of new staff at increased costs, and higher salaries (Maqutu, 2015a). SAA had also closed its crew training centre which had previously trained pilots.

The result was that SAA suffered an increasing number of equipment failures (Kemp, 2008), including navigation or communication equipment-breakdowns (called snags) which are supposed to be fixed before an aircraft is flown. It became common for SAA aircraft to fly even long-haul with significant snag lists, which had either not been repaired, or had been 'repaired' but were still broken (CAJ News, 2015). In April 2001, a London flight had to be aborted twice in 12 hours because of engine malfunctions on take-off (Birns, 2009). The faulty engine was removed, serviced by SAA technical staff and put back–only to fail once again as the aircraft was attempting to take off (Meyer, 2015). In August 2002 two separate flights suffered engine failures on the same day, stranding nearly 600 passengers (Birns, 2009). By October 2002 the Affirmative Action program at SAA had ensured that 51% of all staff were black, with cabin attendants having the highest black complement at 64% (Kemp, 2008). At one point, all cabin crew were 'fired' under cover of a 'restructuring' process, and had to reapply for their positions. This was an opportunity to shed another 500 white staff members by simply not reappointing them and cabin crew for international services at considerable revenues and prestige for SAA (CAJ News, 2015). At the beginning of 2003, there were some 2 400 cabin crew at SAA, and the sudden increase in black staff had, what cynics would suggest, were predictable results (Cordeur, 2015).

Political interference continued, creating instability and making it impossible for the airline to turn the corner to profitability (Maqutu, 2015a). The SAA Board apparently regarded reaching Affirmative Action targets as more important than operational efficiency. Eventually, after constant clashes with the SAA Board and other setbacks to his operational plans, Viljoen left in 2004 (Birns, 2009). The requirement of profitability necessitates an efficient and a supremely focused CEO who is suitably qualified, experienced and prepared to raise his/her collective head above the parapets (Oosthuizen, 2013). It is little wonder then that SAA, with a history of unsuitable and ill-qualified individuals holding key positions at board and executive level, was unable to reach operational efficiency and profitability (The Economist, 2013). Respected and capable executive leadership attracts good managers and, like the proverbial rot starting in the fish's head, the appointment of inefficient leadership at SAA permeated

to almost all areas of senior and middle management, leading to operational inefficiency and losses for the airline (Ensor, 2016c).

Another cause of SAA's financial problems was the frequent turnover at CEO and Board level (McKune, 2015:23). According to Mantell (2015), any airline that has had five changes of CEOs in three years has a problem. The airline's revolving door of CEOs began with Khaya Ngqula. With the airline still losing money, Ngqula offered his turnaround plan in 2007 (McKune, 2015:23). The idea was to spin off subsidiaries, reverse some incorrect fleet decisions and to retrench a lot of staff since the airline was overstaffed. He grounded the 747s and did save a lot of costs but swiftly took the 747s out of retirement to fly them on routes within Africa. His downfall quickly came when he was found to be engaging in a series of personal advancements to the detriment of SAA (Mantell, 2015).

According to McKune (2015:23), Ngqula apparently treated the airline as his personal playground. He enriched his friends with retention bonuses, and sponsored golf and tennis events so he could travel with his friends. He also awarded jet fuel contracts to companies in which he had an interest. Ngqula was sacked in 2009, but SAA went back to him and tried to get him to repay US$4 million to recoup the money he had swindled from the airline. After Ngqula left, Chris Smyth came in on a temporary basis in 2009 (McKune, 2015:23) but was replaced by Siza Mzimela in 2010 before he could implement any of his turnaround plans. Mzimela finally retired the 747s for good, but the airline still remained unprofitable. Mzimela, together with eight Board members, resigned in October 2012 in a move airily dismissed in a company statement as "turbulence of a temporary nature" (McCann, 2015).

When Mzimela left, Vuyisile Kona took over as acting-CEO, however, a couple of months later, in February 2013, he was suspended. Nico Bezuidenhout (former CEO of Mango) took over as acting-CEO until April 2013 when Monwabisi Kalawe was appointed CEO. At that time South African Airways was operating in the Department of Public Enterprises. The Public Enterprises Minister, Lynne Brown, removed six directors on the Board of the airline. With the Board of Directors gone, the Board Chair, Dudu Myeni, suspended Kalawe at the end of October 2014 after only 16 months at the helm. Nico Bezuidenhout was brought back again as acting-CEO. Bezuidenhout drafted a new strategic turnaround plan but was unable to implement it due to government resistance and political infighting (Ismael, 2015:11).

In August 2015 Thuli Mpshe was appointed CEO and Bezuidenhout was moved back to Mango. Mpshe became the sixth CEO at SAA in three years, if Bezuidenhout's two stints in the position are counted separately. In March 2016 Mpshe, together with chief financial officer Wolf Meyer and the head of commercial enterprises Sylvain Bosc, fell out with the SAA Board Chair Myeni and they resigned. The cause of conflict was that Mpshe, Meyer and Bosc were critical of Myeni's attempts to renegotiate a contract with Airbus to lease five A330 aircraft in a deal that the Treasury had warned would have negative financial consequences (Paton, 2015).

In November 2015 SAA had its seventh CEO in three years when Musa Zwane was appointed as an acting CEO (Rabkin, 2016). As of May 2017 SAA did not have a substantive CEO and the absence of a permanent CEO has been cited as one of the issues contributing to the instability of the airline. Furthermore, the Chair of the Board, Dudu Myeni lacks aviation experience. However, despite serious criticism and serious attempts to remove her, Myeni remains Chair of the Board, supported specifically by the SA President, Jacob Zuma (Rabkin, 2016). Management issues at Board level certainly contributed significantly to the financial problems of SAA.

Since mid-2015, almost the entire SAA management team had left, resulting in further instability for an airline that had already seen a large succession of CEOs over the last decade (CAPA, 2016). With such a high turnover of executives it was therefore difficult for SAA to set a long-term vision. For instance, in 2015, the airline announced its ninth turnaround plan in 15 years, the so-called long-term turnaround strategy (LTTS). Consequently, because of high turnover of executives SAA had many rescue operations to try to restore profitability and stability (McKune, 2015:23).

Mazzone (2016) claims that Myeni tried to set up SAA routes between Cape Town and Port Elizabeth and Cape Town and Durban which would have resulted in a further loss of R256 million per year, if former Finance Minister, Nhlanhla Nene had not rejected this idea (which ultimately cost him his job). In this, Myeni ignored SAA management and executives who did not support this proposal. The request for these new routes was at the behest of several ANC MP's who did not want to fly on low-cost economy flights that already travel these routes (Raborife, 2016).

Furthermore, Ensor (2016c) claims that Myeni wanted to instate a direct flight route between Cape Town and Durban (at a huge loss of R200 million a year) so that ANC MPs from KwaZulu-Natal could travel in style. Myeni allegedly submitted her plan directly to Treasury without the knowledge of SAA's executive committee and the group executive committee after both these committees had rejected the proposal (Raborife, 2016). This is indicative of the skewed priorities that Myeni has (Ensor, 2016c). Comfort and patronage outweighed proper financial management under Myeni (Mazzone, 2016).

A further contributing factor to SAA's financial problems was a legacy contract with Airbus. According to McCann (2015), SAA had been due to take delivery of 10 A320 narrow-body aircraft from Airbus in 2017, part of a legacy contract dating back to 2002. SAA had to make pre-delivery payments to Airbus in advance of delivery (Paton, 2015). More than a decade after the contract was signed the terms had become onerous for SAA (McKune, 2015:23). Price escalations meant SAA was being forced to buy the aircraft at higher than market rates, fast eroding its already weak balance sheet, according to SAA documents (Mantell, 2015). SAA ran out of cash in 2015 so it could not afford to make the payments to Airbus, some of which were already overdue (McKune, 2015:23). For every month payments were overdue Airbus could set back the delivery date and charge interest (Cordeur, 2015). This contract is one of the critical factors driving SAA to bankruptcy (Paton, 2015).

A further cause of SAAs financial problems is the lack of effective labour costs and control mechanisms (labour efficiency) at SAA (McCann, 2015). In terms of labour productivity, headcount and aircraft movement, SAA benchmarks itself against its best period, 2009, when it underwent a cash conservation process and business restructuring (Ismael, 2015:11). By that measure the airline, which employs more than 11 000 people, has 1 300 more staffers than it did in 2009 (Paton, 2015). However, some authors claim that SAA would have to get staff levels down to 8 500–9 000 employees to operate optimally in the long term (Ensor, 2016c).

Headcount in 2015 reflected a 4% increase in staff numbers to more than 11 000 (Maqutu, 2015a). In 2014, SAA had more than 11 000 employees and when divided into the R5.5 billion salaries and benefit bill equates to R478 000 per employee (Mantell, 2015). McCann (2015) claims that salaries at SAA are way above what is market-related. Therefore, trimming 2 000 employees off the headcount will result in a cost saving of R1 billion or more a year (Cordeur, 2015).

Similarly, Cordeur (2015) posits that SAA has high labour costs with an employee to aircraft ratio of 184:1, higher than the global average which according to Saranga and Nagpal (2016:172) is 1:150 forcing the airline to spend R4.7 billion on salaries and benefits in 2014, its second-largest single expense after fuel. According to Maqutu (2015a), in November 2015 SAA had 23 pilots more than it required and could save R75 million by renegotiating excessive pilot contracts. SAA pilots clock up nowhere near maximum flying hours and are allowed multiple stopovers even though there is no legal requirement for this (Mhlanga & Steyn, 2016:6). Pilots are also allowed 35 to 40 days leave a year but do not take it (Maqutu, 2015a). This results in the airline having to pay out leave in excess of the accumulation every year, costing it R17.8 million annually (Ensor, 2016c).

Poor route optimisation strategies are another cause of SAAs financial problems (McCann, 2015). All the airline's international routes are loss-making yet it continues to fly them (Maqutu, 2015a). For example, the carrier reported a R1.6 billion loss on its international flights in its 2014 financial results, up from R1.4 billion the previous year (Ensor, 2016c). SAA was losing R300 million per annum since the Johannesburg-Beijing route was launched in 2012 (McKune, 2015:23). In August 2012 SAA cancelled the London/Cape Town route in favour of the less lucrative Beijing route that plays a strategic role in growing economic relationships and dependencies between the BRICS countries (Brazil, Russia, India, China and South Africa) (McCann, 2015), and this, according to McCann (2015), is a direct result of a politically motivated process favouring stronger relations with BRICS countries at the expense of traditional European connections, but without due consideration to the financial implications there-of. Consequently, it is difficult to see a future where SAA turns a profit while serving a strategic role and a commercial mandate in a competitive industry (Mhlanga & Steyn, 2016:6).

Finally, SAA's catering division was cited as another cause of the airline's losses (Ismael, 2015:11). In a draft forensic report by Ernst and Young it was noted that Air Chefs has a wastage of R5 million on food per month (McKune, 2015:23), adding to the airline's financial losses (McCann, 2015).

2.2.4.7 SA Express

South African Express Airways (SOC Ltd) known as SA Express (SAX), is a state-owned airline that was established in late 1993 and began operations in 1994 (SA Express, 2013a). Initially SAA owned 20% of SAX, but later the entire shareholding was taken over by Transnet, which was then the holding company of SAA (Smith, 1998). In 2007, this shareholding was transferred from Transnet to the Department of Public Enterprises. Although the airline is operationally independent of South African Airways, its flights are incorporated within the strategic alliance with SAA, where SAX still operates lower-density domestic routes (for example, Johannesburg, Cape Town and Durban to Bloemfontein, Kimberley and East London) and regional routes (SA Express, 2013b). SA Express provides an extensive feeder network in support of its alliance partnership with SAA to the majority of destinations in South Africa and regionally (SA Express, 2013a).

However, given that SAX services some of the destinations serviced by SAA and other carriers, the government's objectives with SA Express remains unclear, especially given its poor financial performance (Ssamula, 2014:23). SA Express made a net loss of R132 million in 2014/15 and operating expenses of R2.6 billion. As at end of March 2015, the airline had accumulated losses of R733 million and its total liabilities exceeded its assets by R126 million (Ensor, 2016a). The airline was struggling financially and relied heavily on government bailouts for survival. In March 2016 the government announced that SAX would be 'sold off' to the public (in March 2017 this has still not been done). There are various reasons for the airline's financial problems.

According to Capazorio (2015) the main cause of SA Express' financial problems is an aged fleet, which is at least 18 years old (Ensor, 2016b), where there is a direct relationship between the age of aircraft and the maintenance costs–the older the aircraft the higher the maintenance costs. An aged fleet also increases the ground time required for maintenance, as well as maintenance costs, thereby affecting the airline's on-time performance and reliability. Aircraft older than 17 years are so far behind modern design ideas and operational efficiencies that they place the airlines that operate them at a severe disadvantage compared to those that run modern fleets (Ensor, 2016b).

Ensor (2016a) notes that another reason for the airline's financial problems was high catering costs. Internationally, a two hour flight does not serve food but serves water or a coke from a two-litre bottle but SA Express serves food, which adds extra costs to the airline. In 2015 the airline spent R20 million on-board food (Ferreira, 2016).

Poor route optimisation strategies is another contributing factor to SA Express' financial problems (Ensor, 2016a). A misalignment on the choice of routes (see Figure 2.3) SA Express and SAA choose to fly has led to SA Express losing ground to competitors, only later to see one or the other opt out of that route leaving SA Express the inenviable task of trying to recover lost ground from its competitors

(Heinstein, 2014). Furthermore, the airline has high labour costs at 23%, higher than the 20% global labour costs for the airline industry (Baumann, 2010).

Like SAA, SA Express was not immune to political interference (Ensor, 2016a). In August 2012, the then-Public Enterprises Minister Malusi Gigaba dissolved the whole SAX Board and replaced it with a new one, so continued government interference has affected the implementation of the airlines' turnaround plans. In 2012 a forensic investigation revealed further irregularities in SAX's accounting policies, which spiralled into a war of words between the Board of SAX and its auditors, Nkonki (which jointly audits SAA), resulting in Gigaba deciding that the only way to resolve the impasse was to remove the Board and Nkonki, handing over the task of determining who was correct to the Auditor-General (still unresolved).

A further cause of SAX's financial problems was the frequent turnover at senior managerial level (Christodoulou, 2012). Resignations and the rotation of the Board dominated the headlines since November 2010. Furthermore, the airline appointed four different CEOs within two years after the departure of Siza Mzimela to SAA. On the 31st of March 2017, SAX CEO, Inati Ntshanga resigned. Ntshanga had been CEO of SAX from September 2010 (eNCA, 2017). As of May 2017 SAX did not have a substantive CEO. Consequently, SAX, like SAA with unstable senior management, cannot set a long-term vision.

According to Maqutu (2015a) another cause of the airline's financial problems was due to inefficient management. For instance, the airline purchased larger-gauge aircraft for the lucrative Johannesburg/Skukuza route but had to cancel the route because the aircraft were not compatible to land at Skukuza airport. This represented a huge opportunity cost and the airline lost a lot of revenue (Ensor, 2016a).

A further reason for SAX problems is that the leased aircraft have a 10-year lease agreement (Capazorio, 2016). The airline has 25 aircraft, of which 13 are owned and 12 leased. The Rand's depreciation, the hikes in interest rates and a general poor trading environment have negatively affected the costs of operating an airline because of the Dollar/Rand exchange rate, while the cost of providing these services (for example, the cost of the 12 leased aircraft) are in US Dollars (Ensor, 2015).

Another reason for the airline's financial problems is the poor safety record. SAX was forced to suspend operations after the South African Civil Aviation Authority (SACAA), on Saturday, April 30 2016, suspended its operating license because of safety concerns (Capazorio, 2016). According to Ferreira (2016), SACAA inspections revealed that the carrier was non-compliant with several local aviation regulations, in addition to possessing unsatisfactory safety monitoring systems. The suspension left many passengers stranded and had negative financial implications for the airline (Capazorio, 2016). Between January 2016 and January 2107, SAX relied on chartered planes to fly its scheduled flights after its fleet of aircraft was grounded (eNCA, 2017)

Finally, the lack of proper financial planning and management was another cause of the airline's financial problems (Heinstein, 2014). SAX depends on SAA for many core services, such as fuel purchases, the reservation systems, airline codes, the Frequent Flyer programme and emergency response services, which are all managed by SAA on behalf of SAX and not always at competitive prices (Bauman, 2010:26). As such, confusion in invoicing for fuel, an unutilised ticket liability and other accounting mishaps have, over the years, cost SA Express hugely in operating costs and legal expenses (Ensor, 2016a).

However, in the 2016 budget speech, Finance Minister Pravin Gordhan announced that the government was exploring the possible merger of SAA and SAX, under a strengthened board, with a view to engaging with a potential minority equity partner to create a bigger and more operationally efficient airline (Ferreira, 2016).

2.2.4.8 Mango

Mango Airlines is a South African Government-owned internet-based (book on-line) low-cost airline that was launched by the subsidiary company of SAA, Tulca Pty Ltd, on 31 October 2006 (Maposa, 2007). The start of Mango was seen as a new multi-brand strategy for the SAA Group, which at the time faced increasing low cost carrier (LCC) competition and recognised the huge opportunities at the bottom end of the market (Flottau, 2013). LCCs and other competitors had been taking market share from high cost and state-owned SAA, which had lost about 5% market share per annum for three years (Birns, 2009). Therefore, Mango commenced services with the objective of winning back market share for its owner, South African Airways (Mantell, 2015).

Mango's previous CEO, Nico Bezuidenhout, pointed out that in setting up Mango in 2006 the SAA Group was careful not to repeat the mistakes in Europe and North America, where full-service carriers established new LCCs as divisions rather than independent subsidiaries, resulting in cost structures which were too similar to the parent. SAA instead adopted the more successful Jetstar-type approach that had been used over many years across the Asia-Pacific region (Mantell, 2015). Consequently, Mango took on classical LCC subsidiary characteristics and operated separately from SAA, having its own Board and management, and leases aircraft from SAA (Mtshali, 2007).

Mango was profitable for eight out of the last nine full fiscal years (to 2015) and its operating margins are the highest in South Africa (Mantell, 2015). While SAA serves 45 routes, Mango serves nine, including four that are on the same two city pairing of Johannesburg-Cape Town/Durban, but served from both OR Tambo and Lanseria airports. Despite a smaller number of routes, Mango covers 93% of South Africa's domestic traffic. The airline was successful because of a number of reasons.

Mango's success is attributed to its distribution channels. Mango is the first carrier to retail flights through grocer Shoprite-Checkers, the first to offer booking and payment facilities via a mobile application, and remains the only airline in the world to accept store charge cards (for example,

Edgars/Jet) as payment online and through a call centre (Mantell, 2015). The distribution network was particularly important as Mango recognised it needed to pursue alternatives to attract first-time flyers in Africa, where credit cards and internet usage is not universal (CAPA, 2015). Mango offers more distribution channels and payment options than any competitor (Mantell, 2015). Mango has the broadest distribution network on the African continent in terms of non-traditional connections (Bezuidenhout, cited by The Economist, 2013).

Almost half of the ticket sales are done online compared to airlines such as EasyJet, Ryan Air and Air Asia where over 80% of their ticket sales are done online (CAPA, 2015), and Internet selling is undoubtedly the biggest advance and most significant operating cost-saver the industry has experienced over the past decade. Distribution costs, on average, can account for as much as 17% of an airline's total operating costs (Dron, 2015). Consequently, by cutting out or severely limiting the involvement of travel agents to distribute their products, Mango has enormously reduced the distribution costs and this was one of the CSFs of Mango (CAPA, 2015).

Mango's success is also attributed to the standardisation of its fleet. Having the same type of aircraft can have a significant reduction in training and maintenance costs and also increases efficiency by giving greater flexibility for the aircraft crew (News24, 2008). Fleet utilisation is a direct measure of efficiency and this can be almost 80% higher than legacy carriers (CAPA, 2015). The high utilisation rates are achieved by quick turnarounds at the airport therefore increasing the number of sectors each aircraft can operate daily (Boesch, 2005).

Mango operates a fleet of new generation Boeing 737-800 aircraft with a seating capacity of 186 and aircraft are maintained by South African Airways Technical Division (Dron, 2015). Mango prefers this transaction as the aircraft are already on South Africa's register, and Mango is familiar with the maintenance history of the aircraft, according to former CEO Bezuidenhout (Gleeve, 2014). Mango takes aircraft off balance sheet, and prefers them aged about 6-15 years (Cordeur, 2015).

Mango's success is also attributed to the remarkable stability in the top management team (Mantell, 2015) and from its inception until July 2016 Mango has had only one CEO, Nico Bezuidenhout. Mantell (2015) argues that because of the low turnover of CEOs, the airline has always been able to focus on the future, to look at new trends in global aviation, identify potential focus on the future, threats to business, and determine how best to change the organisation in response to new environments and new opportunities. Consequently, because of the management stability it is possible for Mango to set a long-term vision and implement it (Dron, 2015). However, in July 2016 Bezuidenhout resigned from Mango and as of May 2017 Mango did not have a substantive CEO (eNCA, 2017).

Mango's success is further attributed to effective labour cost control (labour efficiency). Airlines that can control labour cost have the ability to gain superior profits compared to competitors (Francis, Humphreys, Ison & Aicken, 2005:88). Airlines effectively implementing technological improvements

will increase worker productivity and decrease labour cost (CAPA, 2013a). All Mango staff were employed on a contract basis and required to multi-task, and there was no hierarchy among them. Good control of labour costs and increasing gain in market share, all add to better margins according to Bezuidenhout (Gleeve, 2014).

Outsourcing certain operating functions can also improve labour efficiency (Doganis, 2013:19). There are significant reductions in labour cost at Mango on aspects such as ground handling, since it outsources to other companies (Boesch, 2005). Consequently, having effective labour cost controls tends to increase profit by decreasing operating costs (Doganis, 2013:19).

The success of Mango can also be attributed to what is called a low-cost focus strategy adopted by the airline (Gavin, 2013:9). According to Flouris and Oswald (2006:19) the goal of a low-cost focus strategy is to contain the costs to the lowest relative to industry rivals and, in essence, to create a sustainable cost advantage over the competition. Therefore, Mango's recipe for success can be captured in the simple equation "lower fares = more passengers = lower costs = lower fares" (Dron, 2015).

By offering low prices and traditionally focusing on leisure travellers, Mango entered a huge and virtually unlimited market (Dron, 2015). For example, in 2007 Mango offered a one-way flight between Johannesburg and Cape Town for less than R250 yet luxury intercity buses for the same trip cost between R300 and R550. Therefore, Mango entered the South African travel market and changed the traditional business models of major airlines (SAA, Comair and Nationwide), as well as undercut the prices of the other low-cost carriers quite significantly, hereby causing dissonance in the industry (Flightsite, 2012). By making flying a real bargain Mango created new markets made up of people who previously would not have considered to fly as means of travelling (Mantell, 2015).

Mango is relentlessly focused on keeping its costs low and well below SAA's bloated levels (Mantell, 2015). This is a key component of the multi-brand strategy as the SAA Group continues to use Mango to compete against LCCs. While Kulula in some areas may have higher costs than Mango since it relies on the full service carrier, there are significant group savings by not duplicating all functions, as had to be done at Mango (CAPA, 2015). Mango faced the challenges of fierce low-cost carrier competition, differentiating itself by being cost effective, accessible, a price leader and offering value (CAPA, 2015).

Finally, Mango is operated as a private sector venture, unlike its parent company SAA, but it enjoys preferential treatment from SAA in terms of maintenance and leasing agreements, which further reduces costs to the airline (Juice, 2016). Business principles are more important than Affirmative Action and staff are contractual appointments–against all the labour policies driven by the SA government (Dron, 2015).

2.2.4.9 Comair

Comair is the oldest privately-owned domestic airline in South Africa and has been operating charter and low-density route services since 1946. Following deregulation, it began operating on the main domestic routes on 3 August 1992 with a service between Johannesburg and Cape Town, and the Johannesburg to Durban route followed in September 1993 (Luke & Walters, 2013:122). Figure 2.4 illustrates the route map of Comair.

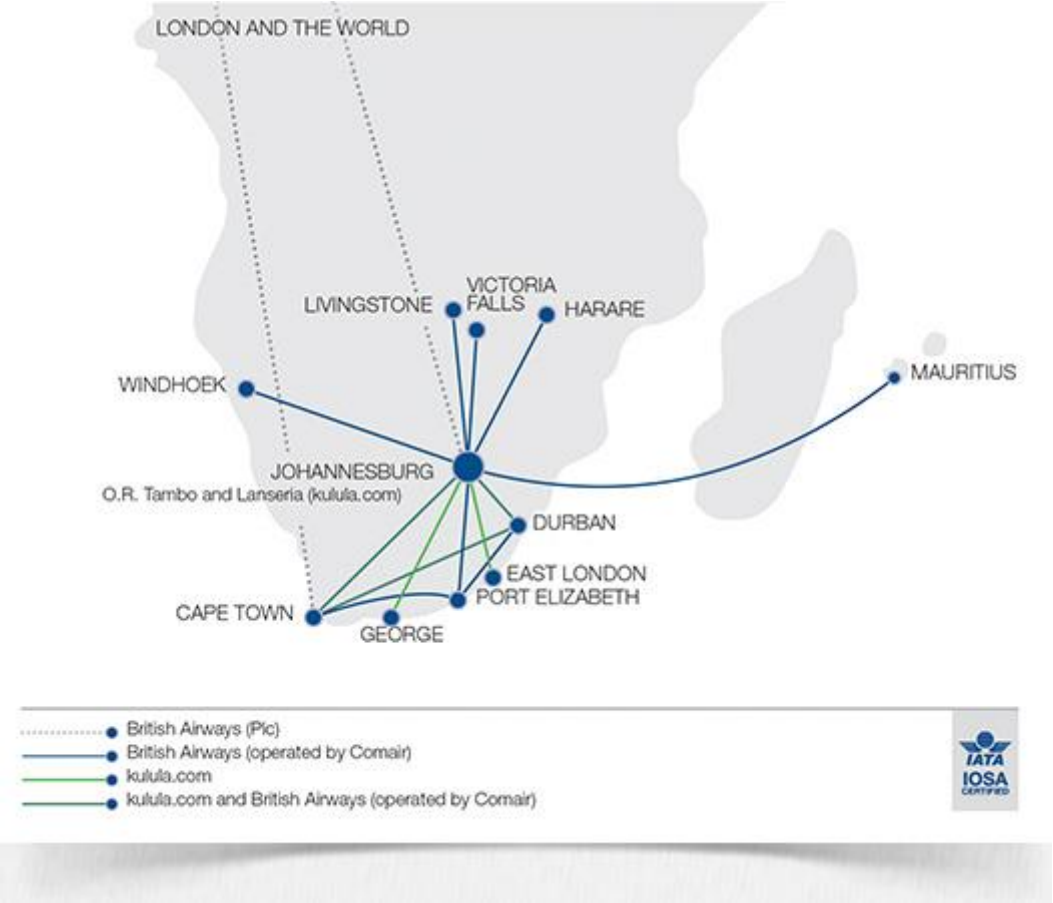

Figure 2.4: Route map for Comair (Source: Ferreira, 2016)

In October 1996 Comair became a franchise holder of BA and became known as British Airways Comair (BA/Comair) (Campbell, 2015). In early 2000, British Airways Plc. acquired a minority shareholding in Comair (Africa News Service, 2000). Instead of supplementing and supporting SAA as it had done in the past, Comair became its major competitor in 2000. In September 2014 Comair reported a 3% increase in passenger numbers over the previous fiscal year, achieving this increase despite ACSA reporting that the domestic market had contracted by 4% over the 2013/2014 financial year (Luke & Walters, 2013:122).

To date (2017), Comair remains the oldest privately owned airline in South Africa and owns the most successful low cost airline (Kulula.com) in the domestic market in South Africa, managing to achieve a

10% higher occupancy over their closest competitor (Ferreira, 2016). Comair is thought to be the only airline to have achieved operating profits for 69 consecutive years (Luke & Walters, 2013:122). The airline is successful because of a number of reasons.

When the local market was deregulated, Comair wisely elected not to take SAA head-on. Instead of focusing on the business market, which is known to be less sensitive to prices and generally very concerned about flight availability (that is, more frequent flights to allow a busy executive to choose the most convenient flight), Comair decided to target the more price-sensitive holiday traveller (Walters, 2010:38).

Comair's success is attributed to a lower employee to aircraft ratio of 80:1 compared to its competitors like SAA (eNCA, 2016). This increases the productivity per employee for the airline and also helps keep the wages bill low. Consequently, Comair's revenue per employee was approximately 40% higher than that of other airlines, and the simple service model also allows Comair to have only three flight attendants per flight, compared to the five attendants that most major carriers required (Heinstein, 2014).

Comair's success is further attributed to the remarkable consistency in the top management team (Speckman, 2015). The company chair and deputy chair, who played key roles in getting Kulula off the ground, have been with the organisation for over 40 years, and in 65 years Comair has had only four CEOs. Maqutu (2015b) claims that because of the low turnover of CEOs, the airline has always been able to focus on the future, to look at new trends in global aviation, identify potential threats to business, and determine how best to change the organisation in response to new environments and new opportunities.

Comair's success is also attributed to its history of appointing chief executives with pedigrees, who combine relevant experience with solid business qualifications (Speckman, 2015). For instance, the company's current (in 2017) CEO joined Comair in 1996 as financial manager, and has held various positions within the company including commercial manager, commercial director, and financial director. Venter is a Chartered Accountant (South Africa) and currently (2017), the airline has two competent joint CEOs, with one focusing on public relations and marketing while the other concentrating on operations.

In 2012, Comair purchased four new Boeing 737-800s which had a 24% improvement in fuel costs compared to the Boeing 737-400s they replaced (Speckman, 2015). The new aircraft are more fuel-efficient, technologically advanced, require lower maintenance and are more eco-friendly through reduced carbon emissions. According to Comair joint CEO, Gideon Novick, the new fleet is an essential part of the airline's efficiency drive, which will not only give Comair a cost-leadership position in the airline industry, but also provide customers with exceptional levels of reliability and comfort with the spacious new interior (eNCA, 2016).

The franchise agreement between BA and Comair enabled Comair to benefit in the form of skills transfers, as all staff are progressively trained in the details of how BA handles the various aspects of its business (Bennett & George, 2004:36). The BA/Comair alliance allows Comair a 'seamless' transfer for passengers arriving on international BA flights to South Africa (Speckman, 2015). Comair's passengers also benefit in the form of improved service since all staff were retrained to comply with BA standards (Walters, 2010:38). Through Comair's participation in the One World Alliance, customers have access to 15 of the world's leading airlines and approximately 30 affiliates, all of which have reputations for quality service (Speckman, 2015).

2.2.4.10 Kulula.com

On 1 August 2001 Kulula.com became the first real low-cost carrier to enter the South African market (Pirie, 2006:9). Kulula offers a network of flights to South Africa's most popular cities: Cape Town, Durban, Johannesburg, George, Port Elizabeth and East London. Figure 2.5 illustrates the route map for Kulula.

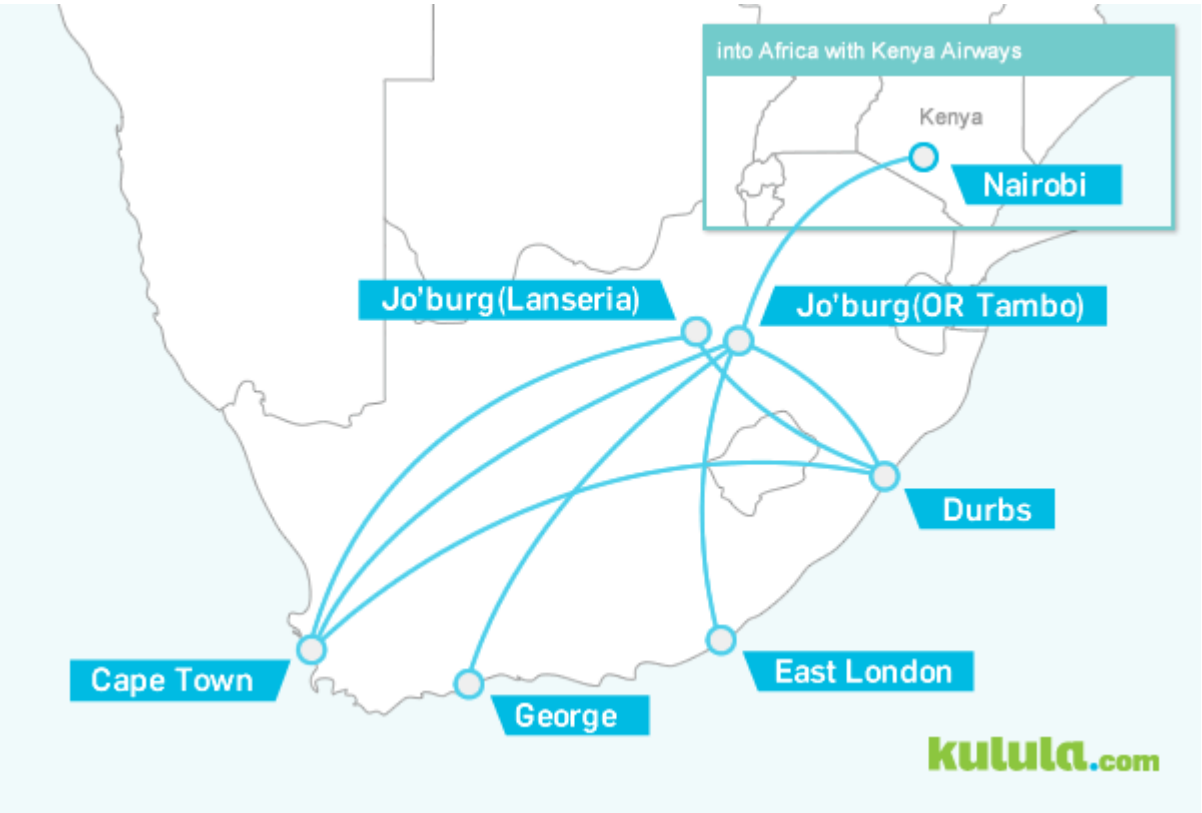

Figure 2.5: Route map for Kulula.com (Source: Pillay, 2016:4)

The idea of Kulula.com arose from three observations regarding the market at the time. Firstly, there was a sector of the market that was not being served by any other airline (Bennett, 2005:19). This was the bottom end of the travel market that could not afford to fly and probably travelled only when

absolutely necessary (Walters, 2010:38). Secondly, because of the economic downturn in 2001, consumers were definitely price sensitive (Defenceweb, 2012). Thirdly, the success of low-cost carriers in Europe, the US and Australia indicated that the low-cost model was a viable option, especially as they had actually grown the markets in which they operated (Defenceweb, 2012). Two years after the airline entered the local market it managed to capture 20%. Kulula.com has never made a loss since its listing in 1998 (Pillay, 2016). The airline was successful because of a number of reasons.

Kulula's success is attributable to a combination of low prices which are 40% lower than traditional airlines (Matthias, 2016). The low fares resulted in a higher percentage of seat-sales. Since Kulula is a no-frills airline, most of the normal value-added services are excluded (Pillay, 2016). Costs are reduced by only offering, for example, sold meals to passengers. The removal of the frills has meant that fewer cabin crew are needed on board to provide service, which means another reduction in costs to the airline (Matthias, 2016).

The biggest cost saving for Kulula.com comes from their internet booking system, which allows the airline to avoid the cost associated with using electronic distribution systems like Amadeus or Galileo (Pillay, 2016). This saving is particularly significant because these systems are US dollar-based. Removing this dollar cost from the equation has given Kulula its biggest saving in the South African market, particularly given the instability of the Rand, which has depreciated against the US dollar (Moores, 2015:11), and has depreciated more than 100% since Kulula commenced operations. Low cost operators in Europe or the US earn their money in the stronger currencies, and for them this saving is not as great when compared with other cost savings, as it is for Kulula (Matthias, 2016).

Kulula has also reduced costs by making use of an Internet booking system and not relying on travel agents (Moores, 2015:11). The Internet booking system was based on the success of European models such as the one used by Ryanair, which take 80% of their bookings online. Pillay (2016) claims that 80% of all bookings on the BA products are done through travel agents. Therefore, it is a crucial area and virtually eliminates all distribution costs, a huge saving (Moores, 2015:11).

The management style of Kulula is another factor in its success (Moores, 2015:11). Management treats employees with freedom and the way the crew is treated and the freedom they are given in how they perform their jobs is based on the Southwest Airlines model. Employees at Southwest Airlines love their jobs because they can go to work as themselves. The same environment was created at Kulula. Happy employees are employees who do not strike or take other action that could significantly add to an airline’s costs.

A further contributing factor to its success is the standardised fleet. Kulula operates a fleet comprising Boeing 737-800 aircraft (Defenceweb, 2012). This focus on standardisation is a key feature in keeping the costs of the airline low (Baumann, 2010). Flying a standard fleet has the advantage of simplifying the maintenance function of the aircraft, and reducing training requirements for pilots and cabin crew,

as they have to only learn to operate a single type of aircraft (Moores, 2015:11). Since it is part of Comair, Kulula benefits from the franchise agreement with BA in the form of skills transfer, as all staff are progressively trained in the details of how BA handles the various aspects of its business (Pillay, 2016).

2.2.4.11 SA Airlink

SA Airlink began operations in 1992 following the collapse of an alliance between Magnum Airlines, Border Air and City Air, operating as Link Airways, due to financial problems (Smith 1998). Airlink evolved into SA Airlink because of a tripartite agreement concluded on 1 July 1994, which initiated the development of a 'rationalised regional air transport system' involving three airlines, namely, SAA, SAX and SA Airlink. According to the agreement, SAA serviced all the main routes, SAX the smaller or secondary routes, while SA Airlink is the entry-level partner servicing even smaller routes with its 30-seater aircraft (Airlink, 2013). Figure 2.6 illustrates SA Airlink's route map.

Figure 2.6: Route map for SA Airlink (Source: Rabkin, 2016)

Each of the three airlines works to support it and its two business partners by dominating specific niche markets. The agreement also makes provision for cross-investment between the three airlines, whose services are aimed at both the tourist and business sectors of the market, but specifically within smaller community markets (Jennet, 2010). The relationship between SAA, SAX and SA Airlink was strengthened in April 1997 with SA Airlink becoming a full code-sharing partner in the alliance, which

provides for a full spectrum of commercial services provided by SAA, that is, reservations, sales and marketing, airport handling, as well as yield management and revenue accounting (Campbell, 2015). Despite fluctuations in the country's economy the airline has grown in every year of its existence. Airlink's operation appears to be a success because of a number of reasons.

Tristan (2015) avers that the main reasons for SA Airlink's success is that the airline has the monopoly of most of its routes, namely from Johannesburg to Nelspruit, from Cape Town to Upington, from Wonderboom National Airport to Cape Town, from Johannesburg to Skukuza, Johannesburg to Polokwane, Johannesburg to Phalaborwa and many other routes. The lack of competition allows the airline to charge high fares on these routes, for instance a one-way 45 minute flight from Johannesburg to Nelspruit/Kruger costs R1 800 (in 2017). The monopoly on these routes helps in keeping the costs of the airline low while realising high revenues, hence ensuring high marginal returns (Tristan, 2015).

Another reason for the airline's success is its strategic use of secondary airports (Mbaskool, 2016) to keep costs low (Christodoulou, 2012). Using airports located in small cities or towns saves costs for the airline as secondary airports have relatively lower landing charges. The airline also has routes to airports in Sishen, Upington, Mthatha, George, Phalaborwa and Pietermaritzburg (Skywise, 2016:13).

The transaction between Nedbank Capital and SA Airlink, which enables the airline to expand its network of feeder routes within South Africa, is a success factor (Tristan, 2015). Nedbank financed Airlink to acquire the Cessna aircraft to grow the airline's well established feeder-flight network by adding flights directly to a number of the most popular game lodge destinations in South Africa (Ferreira, 2016). Another success factor for Airlink is the franchise agreement with SAA (Luke & Walters, 2013:122) which means that visitors travelling to the four connected Sabi Sands lodges are able to use the SAA flight reservations facility to book their entire trip, effectively removing the hassle of having to arrange separate road shuttle services or complicated secondary aircraft charters from the main centres to their end destinations.

A further success factor is that Airlink's flight routes are primarily the shorter distance routes to smaller communities in sub-Saharan Africa (Mbaskool, 2016). By flying shorter distance routes it avoids the non-viable long-haul routes which are more costly and unprofitable. Eighty five per cent of Airlink's passenger's fly on these routes with the passenger profile split 70:30 between business and leisure (Luke & Walters, 2013:122). With fewer options for Airlink's customers to switch carriers, the risk of significant volume declines is minimised. Finally, SA Airlink's success is also attributed to the remarkable consistency in the top management team (Mbaskool, 2016). The CEO has been in the organisation for over 13 years (2017). Therefore, because of low turnover of CEOs, the airline can set a long-term vision (Luke & Walters, 2013:122).

2.3 AIRLINE INDUSTRY IN ZIMBABWE

The airline industry in Zimbabwe dates back to September 1967 when Air Rhodesia commenced operations. The airline later changed to Air Zimbabwe Rhodesia and Air Zimbabwe in 1979 and 1980, respectively (Shoko, 2011). Affretair commenced operations in 1970 whilst Avient Aviation commenced operations in 1993. Zimbabwe Express Airlines, Expedition Airways and Air Zambezi commenced operations in 1994, 1997 and 1998, respectively. However, Zimbabwe Express Airlines ceased operations in 1999 while Affretair, Expedition Airways and Air Zambezi ceased operations in 2001, 2002 and 2002, respectively. First African Airways and Zimbabwe Airlink commenced operations in July and September 2001, respectively (Shoko, 2011).

However, Zimbabwe Airlink ceased operations in 2003 while Fly Kumba commenced operations in 2010 before ceasing operations in 2011. Solenta Aviation commenced operations in 2009 before ceasing operations in 2012 while Fresh Air (Zimbabwe) and Bumi Air commenced operations in 2012 before both airlines ceased operations in 2013. Zimbabwe flyafrica.com, Fly Africa Zimbabwe and Fastjet Zimbabwe commenced operations in 2013, 2014 and 2015, respectively (All Africa, 2016). However, Fly Africa Zimbabwe ceased operations in October 2015 and in January 2017 Rainbow Airlines commenced operations. Table 2.2 illustrates the history of airlines in the Zimbabwean domestic market on a timeline.

Table 2.2: The history of airlines in the Zimbabwean domestic market on a timeline

	AIRLINE	OPERATIONAL		REASONS FOR THE DEMISE
		FROM	UNTIL	
1	Air Rhodesia	September 1967	June 1979	Rebranded to Air Zimbabwe Rhodesia
2	Air Zimbabwe Rhodesia	June 1979	April 1980	Rebranded to Air Zimbabwe
3	Air Zimbabwe	April 1980	Still operating	N/A
4	Affretair	February 1970	April 2001	Use of old unsafe aircraft
5	Avient Aviation	March 1993	August 2013	High operational costs and strong competition
6	Zimbabwe Express Airlines	October 1994	May 1999	Financial and operational challenges
7	Expedition Airways	May 1997	February 2002	Declining passenger numbers
8	Air Zambezi	March 1998	February 2002	High operational costs
9	First African Airways	July 2001	November 2006	Financial challenges
10	Zimbabwe Airlink	September 2001	July 2003	Declining passenger numbers
11	Solenta Aviation (Zimbabwe)	August 2009	March 2012	Financial challenges

12	Fly Kumba	March 2010	January 2011	Financial challenges
13	Fresh Air (Zimbabwe)	January 2012	October 2013	High costs and low load factors
14	Bumi Air	June 2012	April 2013	High fuel and operational costs
15	Zimbabwe flyafrica.com	September 2013	Still operating	N/A
16	Fly Africa Zimbabwe	August 2014	October 2015	High operational costs and strong competition
17	Fastjet Zimbabwe	February 2015	Still operating	N/A
18	Rainbow Airlines	January 2017	Still operating	N/A

*N/A means not applicable

Source: Researcher's construct

From Table 2.2 above it is clear that the survival rate of new entrant domestic airlines was low in Zimbabwe and the national carrier was not spared (All Africa, 2016). Various factors contributed to Air Zimbabwe's financial problems, as discussed below:

2.3.1 Air Zimbabwe

At Independence in 1980 Air Zimbabwe had 18 aircraft and was a major player on the regional and international scene (Mutambirwa & Turton, 2000:71). Today (in 2017), Air Zimbabwe has 10 aircraft with only four of these in use while the remaining six aircraft are on care and maintenance. Air Zimbabwe faced perennial losses since 1994 (Malaba, 2016). There are various reasons for the airline's financial problems.

The main cause of Air Zimbabwe's financial problems was the lack of stable management at Board and top management level (Chibamu, 2016). For three years (from 2013 to 2016) there had been an acting CEO without any substantive experience to provide strategic leadership and direction. The airline has had five different Board chairpersons in seven years (from 2010 to 2016) (Mananavire, 2016).

Furthermore, the airline suffered huge losses brought about by declining passenger numbers and mounting debt (Zhou, 2012). After the controversial Zimbabwean land reform policies many European countries issued travel warnings about Zimbabwe and this slowed down the number of tourists travelling to that country. Consequently, passenger numbers dwindled as tourist numbers declined (Malaba, 2016).

Air Zimbabwe's financial problems were compounded by the appointment of inefficient managers (Chibamu, 2016). Most of the Board members were incompetent political appointees without any aviation knowledge and experience. An airline with a Board of Directors consisting of professionals has a greater chance of being managed prudently than an airline whose board of directors does not have

professional management competencies (Zhou, 2012). Therefore, Ndlovu (2016) warns that an overhaul of the management and operations structures and systems at Air Zimbabwe is desperately needed.

Accusations of mismanagement and corruption have long been associated with Air Zimbabwe, resulting in its placement under judicial management in 2012. A forensic audit in 2016 pointed to alleged fraudulent activity by the airline's management. Findings released revealed that between 2009 and 2013, five executives prejudiced the airline to the amount of €5895 695.49 and US$1 298 827.88, totalling approximately US$10 million (Chibamu, 2016). The fraud contributed to the financial problems the airline is facing (Malaba, 2016).

According to Ndlovu (2016), another cause of Air Zimbabwe's financial problems is an aged fleet. Air Zimbabwe operates an antiquated fleet with an average age of 25 years and this has greatly compromised quality and increased costs, rendering the airline uncompetitive (New Zimbabwe, 2016). There is a direct relationship between the age of aircraft and the maintenance costs–the older the aircraft the higher the maintenance costs. An aged fleet also increases the ground time required for maintenance, thereby affecting the airline's on-time performance and reliability. According to Malaba (2016) the airline spends between 15 and 25% of its budget on maintenance. Consequently, in May 2017 the European Commission (EC) banned Air Zimbabwe from its airspace over safety concerns due to its aged aircraft (eNCA, 2017).

The world economic crisis caused and compounded foreign currency shortages, and the lack of fuel increased the operational difficulties of Air Zimbabwe. Therefore, Air Zimbabwe's financial problems were also attributed to the volatile economic environment which was characterised by the shortage of foreign currency as well as hyperinflation which was above 100% in 2010 (Zhou, 2012).

Political interference compounded Air Zimbabwe's financial problems (Mananavire, 2016). The Zanu PF government continues to abuse the transport parastatals for populist gain while failing to ameliorate their viability problems (Malaba, 2016). On commercial routes scheduled flights are often cancelled at short notice to accommodate the wishes of the political leadership (News Day, 2014).

A further cause of Air Zimbabwe's financial woes is the lack of effective labour cost and control mechanisms (labour efficiency) (Mananavire, 2016). Air Zimbabwe has a monthly wage bill of US$1.2 million with more than 700 employees. Although the airline concedes that it is overstaffed it is struggling to lay off a planned 234 workers as it does not have funds to pay them out (New Zimbabwe, 2016).

Lack of advanced/new technology has also negatively affected Air Zimbabwe's performance. According to Ndlovu (2016), Air Zimbabwe makes use of old and outdated technology in comparison to other airlines. The airline's equipment is so old that customers doubt the safety of the aircraft. Lack of adoption of new technology is due to their inability to meet the costs of procuring the technology (Ndlovu, 2016). This has led Air Zimbabwe to buying substandard goods. An example is in 2014 when management of Air Zimbabwe cancelled the order for new interiors from Avis and ordered secondhand interiors from

American general suppliers (Malaba, 2016). This lack of adaptation to new technology prevents the airline from being competitive in the market (New Zimbabwe, 2016).

2.4 AIRLINE INDUSTRY IN NAMIBIA

Air transport in Namibia dates back several decades, symbolised perhaps by South West African Airways in operation since 1930 (Asheeke, 2016). The airline was later acquired by South African Airways in 1935. In 1946 Air Namibia started operations while Nomad and Westair Aviation started operating in 1989 and 1991, respectively. In 1999 Kalahari Express Airlines started operating before ceasing operations in August 2000. In 2003 Comav Aviation started operations before ceasing operations in May 2006. In September 2015 Namibia flyafrica started operating but ceased operations in November 2015 after its operating licence was revoked by the Directorate of Civil Aviation (DCA) (Asheeke, 2016). Table 2.3 illustrates the history of airlines operating in the domestic market in Namibia on a timeline.

Table 2.3: The history of airlines in the Namibian domestic market on a timeline

	AIRLINE	OPERATIONAL		REASONS FOR THE DEMISE
		FROM	UNTIL	
1	South West African Airways	March 1930	April 1935	Acquired by South African Airways (SAA)
2	Air Namibia	June 1946	Still operating	N/A
3	Nomad	March 1989	Still operating	N/A
4	Westair Aviation	September 1991	Still operating	N/A
5	Kalahari Express Airlines	April 1999	August 2000	High operational costs and strong competition
6	Comav Aviation	March 2003	May 2006	Use of old unsafe aircraft
7	Namibia flyafrica	September 2015	November 2015	Operating licence revoked

*N/A means not applicable

Source: Researcher's construct

Although Namibia experienced an increase in tourist arrivals, reaching 1 million and contributing US$11.5 billion to Namibia's economy in 2009, the airline industry in Namibia was fraught with challenges and the national airline, Air Namibia was not spared (Asheeke, 2016), as discussed below.

2.4.1 Air Namibia

Air Namibia is the national airline of Namibia, headquartered in the Trans Namib Building in Windhoek. Air Namibia was founded in November 1946 (Konjore, 2013). In addition to domestic services, the carrier also operates regional and international passenger and freight services to destinations in Africa and Europe. The carrier's international hub is at Windhoek Hosea Kutako International Airport with a

domestic services hub at the smaller Windhoek Eros Airport. Air Namibia is wholly-owned by the Namibian government (Masawi & Halwoodi, 2014).

Since inception, Air Namibia had been making losses and survived on perennial bailouts through taxpayers' money. The airline has over the past three years alone (2014 to 2016) received N$2.4 billion from Treasury and it is projected that the airline will receive further bailouts of over N$2 billion in the next three years (2017 to 2019), including N$730 million for 2017/18 and N$756 million for the 2018/19 financial years. There are various reasons for the airline's financial problems.

In terms of Air Namibia (Pty) Ltd the demand for its services is limited due to a small population in comparison to other countries such as South Africa and Angola (Joseph, 2016). Namibia's population is made up of young and aged people who do not use air travel (Kahiurika, 2016). This significantly affects the performance of the airline, particularly in the domestic market.

According to Asheeke, (2016), competition from road transport is negatively affecting the performance of Air Namibia since 70% of Namibia's arrivals are by road and only 27% use air transport. Another cause of Air Namibia's financial problems is the constant legal tussles with aircraft service providers (Kahiurika, 2016). In January 2015 Air Namibia was forced to pay millions of Namibian dollars after it lost a case against Challenge Air, a company which leased aircraft to Air Namibia. After 15 years of delay, the case was concluded through arbitration and Air Namibia was ordered to pay N$337 million (Kahiurika, 2016). In March 2016, Air Namibia was forced to pay lease and maintenance fees amounting to N$17 million to Intrepid Aviation for two aircraft.

In 2015 Air Namibia was embroiled in lawsuits of US$77 million (N$1 billion) with a company called BCI Aircraft Leasing Incorporated. Air Namibia sued BCI in a British court during the last quarter of 2015 for US$13 million (N$174 million), after the Irish company allegedly breached their contract in the delivery of two A340-300s (Joseph, 2016). In return, however, BCI issued a counterclaim of N$1 billion for the two aircraft, alleging that Air Namibia failed to return the aircraft as required (Kahiurika, 2016).

According to a draft audit report by Deloitte and Touche, Air Namibia had originally entered an agreement with Gie Lara in 2005, for the lease of two A340-300 aircraft. This agreement was for a period of seven years and it cost the airline N$14 million per month for the two aircraft (Sasman, 2016). BCI and Air Namibia's disagreement revolved around technicalities about the delivery and return of the aircraft (Joseph, 2016). A report by the airline's manager for operations, Jonas Sheelongo, stated that Air Namibia had no prospect of winning the BCI case since there was no delivery certificate signed by either party and there was no evidence that the hand-over was found acceptable by either Air Namibia or BCI (Kahiurika, 2016).

A further cause of the airline's financial problems is the high operational and salary costs (Julho, 2016). Air Namibia has approximately 30 managers who, according to Joseph (2016) take up nearly 30% of

the wage bill, and the company has at least three levels of management leading to high salary costs. Sasman (2016) avers that the airline is sitting with some aircraft without a valid lease agreement and this is costing the airline a lot of money until this situation is remedied. A breakdown of the payments indicates that Air Namibia had been paying US$530 000 (approximately N$5.3 million) each for two aircraft and an additional US$2 million for the two other aircraft at a rate of US$1 million (approximately N$11 million) each per month for nine months during 2013 (Konjore, 2013). The airline also paid out an astounding US$6.5 million (approximately N$65 million) to the leasing company authorised by the acting General Manager and Chief Operations Officer, Rene Gsponer, a Swiss National who was handed the reins by the Air Namibia Board to steer the company's turnaround (Masawi & Halwoodi, 2014).

Air Namibia had lost about US$27 million (N$270 million) in leasing and maintenance fees, plus an additional US$40 million (approximately N$400 million) of depositors' fees for a period of between 3 to 12 months for aircraft that they were not using, (Konjore, 2013). This comes after the airline failed to acquire an Aircraft Technical Record (ATR) for the four aircraft that they are leasing but not using (Julho, 2016). The state-owned airline is leasing two aircraft which are grounded in Europe because their lease license expired, while it also had two more A340 aircraft owned by the government, and two A330 airliners which were acquired to replace an aged fleet. Investigations reveal that Air Namibia's first lease agreement expired on 30 April 2013 before being extended by nine months, while the other lease agreement expired on June 2013 and was also renewed for only nine months (Sasman, 2016).

In 2014 the airline was caught in a predicament because the Board chairperson extended the engagement with Lufthansa by 36 months but could not get a sovereign guarantee from the State and the financier, RMB bank of South Africa, bailed out of the engagement with the Airline (Masawi & Halwoodi, 2014). The fact that while the airline would have benefited from a nine month engagement, Lufthansa carried over the old agreement without amendments, taking into consideration that the airline now had new aircraft (Sasman, 2016). This resulted in the airline losing more money and failing to access a discount that was initially negotiated (Julho, 2016).

The airline also has the latest A330 aircraft leased from Intrepid Aviation. Ironically, the two leased A319 aircraft are the cause of Air Namibia's financial troubles as they were grounded elsewhere in Europe and are forcing the state-owned company to continue paying leasing fees until they are returned to Intrepid Aviation (Sasman, 2016). Sasman (2016) further claims that Air Namibia sourced the services of a consultant company to facilitate management transition, which did not come cheaply. The airline failed to do that in time and was liable to pay leasing and maintenance fees for aircraft that they are not using (Konjore, 2013). Air Namibia finally contracted Lufthansa Techniques, a German company, to do their management transition.

Furthermore, the airline pays monthly rental and maintenance on leased aircraft in US$. The depreciating and weak Namibian currency is making spares increasingly expensive, while the airline has high labour costs; 23%, higher than the 20% global labour costs for the airline industry (Joseph,

2016). In addition, there is still concern over the falling load factors on international flights and the cost implications thereof over the medium to long term (Joseph, 2016).

Accusations of mismanagement and fraud also contributed to the airline's financial problems (Sasman, 2016). A major audit discovery (in 2015) by auditors Price Waterhouse Coopers (PWC) unearthed a fraud case in the cargo department amounting to US$2.5 million (Joseph, 2016). This and several other discrepancies resulted in staggering losses and airline debts amounting to US$29 million (Joseph, 2016). Its over-bloated highly remunerated top-heavy structure gobbled over 30% of the airline company's total annual wage bill (Sasman, 2016). In 2016, the Malaysian-recruited Managing Director, Jaafar bin Ahmad, was said to be earning over US$12 000 per month while ordinary senior managers are in receipt of not less than US$4 000 monthly (Joseph, 2016).

Despite its constant financial problems, Air Namibia reportedly spent about N$11 million for the lease of a Portuguese aircraft and crew in 2012 (Cruywagen, 2013). A 'wet lease' arrangement is where a company leases its aircraft and flight crew to another airline. Air Namibia spent US$736 330 (about N$11 million) to pay Hi Fly for the leasing of its aircraft and a complete crew between 13 and 29 May 2016. According to the agreement, US$368 165 (about N$5.7 million) was due to be paid to Hi Fly on 12 May 2016 and the remainder on 19 May 2016. Air Namibia claimed that the lease was necessitated by the illness of some of its senior pilots, who reportedly all fell ill at the same time (Joseph, 2016).

2.5 AIRLINE INDUSTRY IN BOTSWANA

While the history of air travel in Botswana dates back to as early as 1919, air transport operations started in earnest in 1984 with the opening of the country's first international airport, Sir Seretse Khama International Airport (Kaboyakgosi, 2016). However, the first airline in Botswana, Bechuanaland National Airways, started operations in 1965 before being taken over by Botswana National Airways in December 1966. The airline was later acquired by Botswana Airways Corporation in November 1969 before ceasing operations in September 1971. In May 1972 Air Botswana, the country's national flag carrier, was established (Kaboyakgosi, 2016). Table 2.4 illustrates the history of airlines in the Botswana domestic market on a timeline.

Table 2.4: The history of airlines in the Botswana domestic market on a timeline

	AIRLINE	OPERATIONAL		REASONS FOR THE DEMISE
		FROM	UNTIL	
1	Bechuanaland National Airways	October 1965	December 1966	Taken over by Botswana National Airways
2	Botswana National Airways	December 1966	November 1969	Acquired by Botswana Airways Corporation
3	Botswana Airways Corporation	November 1969	September 1971	Use of old fuel-inefficient aircraft
4	Air Botswana	May 1972	Still operating	N/A

*N/A means not applicable

Source: Researcher's construct

Similar to other state carriers, Air Botswana has struggled financially (Kaboyakgosi, 2016) as explained below.

2.5.1 Air Botswana

Air Botswana is the country's state-owned national flag carrier, with its headquarters located in Gaborone (Thatayamodimo, 2016). It operates scheduled domestic and regional flights from its main base at Sir Seretse Khama International Airport (Baatweng & Kologwe, 2014). Air Botswana has been running at a loss for several years (Sunday Standard, 2009). There are various reasons for the airline's financial problems.

The main cause of Air Botswana's financial problems was the poor safety record (Majube & Newel, 2013). Due to its poor safety record the airline was suspended from IATA and also failed IATA Operational Safety Audits (IOSA) since 2007 (Baatweng & Kologwe, 2014). According to the Sunday Standard (2009), when IATA audited Air Botswana they discovered some gaps regarding safety standards. The airline has had a high number of accidents. In June 2012 passengers escaped unhurt when the engine of a Johannesburg-bound aircraft blew apart soon after take-off (Bapotlhale, 2015). The incident was the third in a period of six months. In 2011 another Air Botswana aircraft had to make an emergency landing after its engine exploded. That incident occurred a week after another one had experienced a similar problem (Majube & Newel, 2013). Such a poor safety record has significantly affected the airline's performance.

Another cause of Air Botswana's financial problems was the use of an aged, fuel-inefficient fleet (Balise, 2007), and maintenance problems have affected aircraft availability to support the published schedule. A number of aircraft in the airline's fleet were old and going through heavy airframe maintenance checks, with most of the fleet eventually being grounded for good (Majube & Newel, 2013).

A further contributing factor to Air Botswana's financial problems is the lack of effective labour costs and control mechanisms (labour efficiency) (Bapotlhale, 2015). According to Lute (2016a), Air Botswana has an organisational structure that requires only 350 employees as opposed to the current headcount of 522. Political interference also compounded Air Botswana's financial problems (Majube & Newel, 2013). Hamel (2015) claims that every time a new minister of Transport and Communications is appointed in Botswana a new Board is announced at Air Botswana. For example, Tshenolo Mabeo (the then-newly appointed Transport and Communications minister) got rid of Air Botswana Board members that former Transport and Communications minister Johnnie Swartz had appointed. Due to political interference, Air Botswana had a tendency of appointing inefficient managers. In March 2016 the Transport and Communication minister fired the General Manager and dissolved the whole Board

even though the then-General Manager was lauded for steering the airline in the right direction when he took over (Business Weekly, 2016).

In April 2016 the airline appointed less experienced former Botswana Defence Force Commander, Lieutenant General Tobogo Masire, as the Chairman of the airline (Lute, 2016b). Such political interference caused instability at Board level and adversely affected the performance of Air Botswana (Lute, 2016b). Poor customer service coupled with delayed flights has compounded the airline's financial problems (Balise, 2007). The airline has a bad reputation due to constantly delayed flights and poor customer service. On several occasions Air Botswana passengers at various airports across the country were left confused due to delayed or cancelled flights (Baatweng & Kologwe, 2014).

Further factors which contributed to the airline's financial problems were a lack of proper financial planning and management resulting in the leasing of aircraft at exorbitant prices, complicated contracts devoid of exit clauses, shortage of pilots and a host of problems emanating from the unclarified status of the privatisation process (Balise, 2007). The airline constantly suspends its flights due to a shortage of pilots simply because its pilots' flying time expires (Bapotlhale, 2015).

The airline's financial problems were exacerbated by the frequent turnover of senior managers (Baatweng & Kologwe, 2014). The airline operated for five years without a permanent General Manager (Thatayamodimo, 2016). The airline has never been stable since the departure of Joshua Galeforolwe as all the past substantive General Managers resigned before the end of their contracts. With the departure of Galeforolwe, the then-Finance Manager, Cornwell Muleya was appointed on an acting basis. This was shortly before the appointment of Willie Mokgatle who later resigned.

Other subsequent appointees include Beatrice Selotlegeng, who was also appointed on an acting basis before she paved the way for Lance Brogden. It was after Brogden left Air Botswana that the then-Finance Manager Mphi Tlhomelang and Maemo Bantsi (Head of Human Resources) were appointed in acting capacities. The Air Botswana Board was later to appoint a British national, Mike Higgins. Higgins resigned within three months of his appointment and was replaced with Reiling but after just under two years at the helm, Reiling, who was also the first female head of the airline in 2011, resigned in March 2013 (Baatweng & Kologwe, 2014). The airline has an acting-general manager, making it difficult to turn the airline around (Thatayamodimo, 2016). Competition from foreign airlines, such as South African Airways (SAA), Ethiopian Airlines and Kenya Airways, have flooded Botswana skies, slowly taking over the opportunities in the local market (Thatayamodimo, 2016).During the development of the airline industry in southern Africa, some airlines were successful and some failed, while state airlines relied mainly on government bailouts to remain operational. Various factors affected the performances of private and state-owned airlines in southern Africa. Tables 2.5 and 2.6 provide a summary of the factors that have affected the performance of private and state-owned airlines in southern Africa.

Table 2.5: Factors affecting the performances of private airlines in southern Africa

Factors affecting the viability of airlines (Success/Failure)	Private airlines						
	Flitestar	Phoenix	Nationwide	1Time	Skywise	Comair	SA Airlink
Efficient management	X	X	X	X	X	√	√
Aircraft standardisation						√	√
Fuel efficiency	X	X	X	X	X	√	√
Labour efficiency	X	X	X	X	X	√	√
Bad landing slots	X	X			X		
Route monopoly							√
Aged fleet	X	X	X	X	X		
Alliances						√	√
Effective distribution							
Use of secondary airports							√
OUTCOME	F	F	F	F	F	S	S

√ indicates a positive effect; X indicates a negative effect; S indicates successful airlines; F indicates failed airlines

Source: Researcher's construct

It is evident from Table 2.5 above that the factors that negatively affected the performance of Flitestar, Phoenix and Skywise were inefficient management, use of an aged fleet, bad landing slots, lack of fuel and labour efficiency, while 1Time was negatively affected by inefficient management, use of an aged fleet, lack of fuel and labour efficiency. Nationwide was negatively affected by inefficient management, use of an aged fleet, and lack of fuel and labour efficient mechanisms.

The table further indicates that the factors that positively affected the performance of Comair and SA Airlink are efficient management, management stability, the use of standardised aircraft, the use of modern aircraft, and fuel and labour efficiency. SA Airlink's position is further positively affected by its monopoly on its routes and the use of secondary airports, while Comair has strategic alliances to add on its menu of positive factors.

Table 2.6: Factors affecting the performances of state-owned airlines in southern Africa

Factors affecting the viability of airlines (Success/Failure)	State-owned airlines					
	SAX	SAA	Mango	Air Zimbabwe	Air Namibia	Air Botswana
Efficient management	X	X	√	X	X	X
Aircraft standardisation			√			
Fuel efficiency	X	X	√	X	X	X
Labour efficiency	X	X	√	X	X	X
Political interference	X	X		X	X	X
Management turnover	X	X		X	X	X
Aged fleet	X			X	X	X
Poor route optimisation	X	X				
Poor safety record	X			X		X
Effective distribution			√			
OUTCOME	D	D	S	D	D	D

√ indicates a positive effect; X indicates a negative effect; S indicates successful airlines; D indicates airlines in financial distress

Source: Researcher's construct

It is evident from Table 2.6 that the factors that negatively affected the performance of SAA and SA Express are inefficient management, political interference, poor route optimisation, high management turnover, and fuel and labour inefficiency. Further contributing to SA Express' financial problems are the use of an aged fleet and a poor safety record. Table 2.6 illustrates that the factors negatively affecting the performance of Air Zimbabwe, Air Botswana and Air Namibia are inefficient management, lack of fuel and labour efficiency, political interference, management instability and use of an aged fleet. The table further indicates that the factors that positively affected the performance of Mango are efficient management, management stability, the use of standardised aircraft, the use of modern aircraft, effective distribution channels and fuel and labour efficiency.

2.6 SUMMARY

It is evident from this chapter that inefficient management, bad landing slots, political interference, high management turnover, an aged fleet, high catering costs, poor route optimisation and poor safety records have a negative effect on the positioning of airlines. It is also evident that the following factors have a positive effect on the positioning of airlines, namely efficient management, standardisation of aircraft, labour efficiency, route monopoly, alliances, effective distribution and the use of secondary airports. The chapter highlights that to improve the performance of airlines in southern Africa there is a need to identify organisational, industry and environmental success factors affecting airline performances.

The next chapter, Chapter Three, discusses the sources of critical success factors for airlines in southern Africa.

CHAPTER THREE

SOURCES OF CRITICAL SUCCESS FACTORS FOR AIRLINES IN SOUTHERN AFRICA

3.1 INTRODUCTION

This chapter discusses the nature and extent of critical success factors. This chapter also identifies the sources of critical success factors for airlines and critically examines the effects of the organisation, industry and environmental success factors on airline operations in southern Africa. To give comprehensive insight into these environments, the chapter identifies organisational strengths and weaknesses, and opportunities and threats posed by environmental, industry and organisational success factors on airlines. The chapter also discusses models of identifying critical success factors and previous research on CSFs. The chapter concludes with a reference framework on the effects of the organisation, industry and environmental success on the performance of airlines.

3.2 THE NATURE AND EXTENT OF CRITICAL SUCCESS FACTORS

The concept of critical success factors (or factors that are critical to success) was first mentioned by Daniel (1961:117). Daniel's (1961:117) main thrust was the need for the elimination of issues not directly related to the success of the firm in the planning process of management information systems. Since the identification of "success factors" first proposed by Daniel (1961:117) in an article on Management Information Crisis.

However, other researchers went on and refined this concept the most quoted being Rockart (1979:89) who used the term Critical Success Factors (CSF) to mean "The limited number of areas in which results, if they are satisfactory, will ensure successful competitive performance in an organization". Other definitions include Bruno and Leidecker (1984:24) who defined CSFs as "those characteristics, conditions or variables that when properly managed, can have a significant impact on the success of an organization competing in a particular industry". Later, Pinto and Slevin (1987:24) regarded CSFs as "factors which, if addressed, significantly improve project implementation chance".

The themes of both Daniel (1961:117) and Rockart's (1979:89) approaches were the provision of better information to management for more effective planning and control. The important contribution of their work was the focus on critical areas, rather than a vague attack on all problem areas. However, while this early work on critical success factors widened the view beyond the traditional view of factors that decide the success of the firm, their approach was also limited by the view that success factors could be applicable only to the firm itself. Critical success factors for an industry were considered peripheral to the need for planning and control within the firm.

Hofer and Schendel (1978:77) suggest that the critical success factors concept could be used to analyse the relative competitive positions of the firms in an industry. Their definition reflects this expanded view:

> Critical success factors are those variables that management can influence through its decisions that can affect significantly the overall competitive positions of the various firms in an industry. These factors usually vary from industry to industry. Within any particular industry, however, they are derived from the interaction of two sets of variables, namely the economic and technological characteristics of the industry involved … and the competitive weapons on which the various firms in the industry have built their strategies…

This definition introduces the key feature that makes business strategy different from other kinds of business planning – the focus on competitive advantage. Another important aspect of this definition is the acknowledgement that the characteristics of the industry affect the critical success factors of the firms in that industry.

In the years that followed Hofer and Schendel's (1978) definition, many organisations used the critical success factor approach as a framework for strategic planning. Definitions found in the literature study reflecting this approach are given in Table 3.1 below.

Table 3.1 Selected definitions of critical success factors

Critical success factors are "characteristics, conditions, or variables that, when properly sustained, maintained or managed, can have a significant impact on the success of a firm competing in a particular industry" (Bruno & Leidecker, 1984:29).
Critical success factors are "events, conditions, circumstances or activities. Specifically, they are the limited number of areas in which results, if they are satisfactory will ensure the successful competitive performance of the organisation" (Jenster, 1987:102).
Critical success factors are "sub-goals, end statements, characteristics, conditions or variables that are critical for the attainment of the organisation's mission and ultimate success" (Hardaker & Ward, 1987:114).
Critical success factors are "the limited number of areas in which results, if they are satisfying, will ensure the competitive performance of the organisation" (Daft, 1988:618).
"The most important factors governing the success are those which are consistent with the company's goals and objectives" (Pollalis & Grant, 1994:12).
"The critical success factor method directs managers to determine those things that must go right in order to succeed in achieving goals and objectives. The ultimate value that the CSF method brings is the

ability to focus management's attention on what needs to be done well to achieve success" (Bullen, 1995:13).

"Critical success factors are those product features that are particularly valued by a group of customers and therefore, where the organisation must excel to outperform competition" (Johnson & Scholes, 2002:151).

"Critical success factors are the resources, skills and attributes of an organisation that are essential to deliver success in the marketplace" (Lynch, 2003:102).

While the definitions and views provided by the above authors differ, there appear to be a few common characteristics that help to explain the nature and extent of critical success factors, namely:

i) Critical success factors are the sub-goals and/or success outcomes that are directly related and critical to the attainment of the vision, mission and long-term goals of the organisation.
ii) Critical success factors can be internal areas like resources, skills, competences, attributes, conditions or market related areas like product features and profitable market segments.
iii) Critical success factors are limited areas of success that will ensure the successful **c**ompetitive performance of the organisation.
iv) Critical success factors are result areas in which success can be measured.

However, Esteves (2004:11) among other researchers, underlined that Rockart (1979:88) has so far been the most comprehensive. The later definitions failed to address the concept with the comprehensiveness that Rockart (1979:88) gave it. Rockart (1979:87) seeks to identify a link between the environmental conditions and the business characteristics for a particular company (Amberg, Fischl & Wiener, 2005:9). Rockart identifies sources of CSFs as industry based, from environmental situations, geographical locations, temporal factors, or strategic situations. This approach to CSFs focuses on information needs for purposes of management control and seeks to identify data which can be used to monitor and improve existing areas of business (Amberg *et al.*, 2005:9).

Each industry, by its very nature, has a set of critical success factors determined by the industry itself (Hove, 2017:44). Each organisation in the industry will pay attention to these factors and use them as benchmarks for competitive performance. Organisations in the same industry would however, have different critical success factors as a result of differences in geographic location, strategies, product features and internal resources and competences (Bullen, 1995:14). For the purpose of this study, critical success factors refer to, those limited result areas that are critical for the attainment of the airline's vision and competitive position and when properly sustained and managed, will have a significant impact on the competitiveness and performance of the airline. Identification of critical success factors allows a firm to develop strategy (Leidecker & Bylwo, 1984:29), effectively manage, and control the key

variables of success towards one direction (Wang, Mo & Wang, 2014:153). However, critical success factors may be endogeneous or exogenous, depending on their source (Auruskeviciene, Salciuviene, Kazlauskaite & Trifanovas, 2006:328) and may have a positive or negative effect on airline performances.

3.3 SOURCES OF CRITICAL SUCCESS FACTORS

To explicate and formalise critical success factors it is necessary to identify sources of critical success factors. Understanding the source of CSF helps an organisation know whether the CSFs are shared or unique and how they may persist or evolve over time (Rockart, 1979:88). However, an analysis of the literature (Khodaveysi, Mobarakabadi & Slambolchi, 2016:26; Ofori-Kuragu, Baiden & Badu, 2016:857; Pakseresht & Asgari, 2012:389) indicates that, while the views provided by authors of the sources of critical success factors differ, there appears to be agreement on the following three sources, namely, environmental factors, industry factors and organisational factors. Each of these factors are briefly outlined below.

3.3.1 Environmental success factors

Environmental factors refer to integrated, dynamically developing macro environmental factors that are exogenous in relation to the organization and influence airline performance in the long-term (Kuznetsova, 2015:27). Environmental factors include a complex of socio-cultural, technological, economic, political and legal factors that are beyond the control of business and impose their limitations on the activities of the organization and these factors are harder to predict (Nataraja & Al-Aali, 2011:482). These factors may not have a direct effect on the daily operations of the organisation but will indirectly influence it (Franke & John, 2011:22). The survival and success of an airline depends on the skilful interaction of the airline's management with environmental factors and timely responses to changes in this environment, analysing and accounting for its impact on the airline (Kuznetsova & Alekseeva, 2016:420). Therefore, an airline should consider them when identifying critical success factors (Addepalli, Pagalday, Salonitis & Roy, 2017:6).

An analysis of the environmental factors is considered critical in decision-making, an assertion supported by Bunz and Maes (2010:165) who argue that the analysis of an organisation’s environmental factors reveal opportunities and threats that may positively or negatively affect airline performances. To reduce threats, airlines must determine environmental factors critical to their success by ascertaining the relative importance of each environmental factor. The higher the likelihood of a change occurring and the greater the impact of a factor the more critical it is. According to O'Connell (2011:341), environmental factors provide the overall depiction of the appeal and attractiveness of the airline industry. Consequently, an understanding of environmental factors is crucial to the survival of airlines as it affects their performance (Sze, In, Ngai & Yan, 2015:130).

3.3.1.1 Political factors

Political factors affecting the airline industry refer to a variety of government interventions that may hinder or enhance the operations of air transport (Heracleous *et al.*, 2009:15). Political factors also relate to the pressures and opportunities brought by political institutions and the degree to which government policies affect airline performances. Considering the vast regions in which many airlines operate, the political atmosphere in a particular market (Pratap, 2016) often regulates the business environment. Some research endeavours (Doganis, 2001:22; Barrett, 2006:158; Taneja, 2010:36; Shepherd, 2012) argue that political factors significantly affect the performance of airlines. Njoya (2013:19) re-affirms this when he found a significant difference between the means of political factors and the performances of airlines. According to Njoya (2013:19) the significant difference between the means of political factors and the performances of airlines is attributed to government interference in the airline industry. Consequently, political factors significantly affect airline performances (Rivers, 2015).

A typical illustration of the effect of political factors on the performance of airlines is SAA, which according to Oosthuizen (2013) bears all the scars of a government-owned legacy carrier in terminal decline, accelerated by continued political fumbling and interference. Smith (2015) re-affirms that political interference coupled with inept interventions caused SAA considerable upheaval, provoking a series of mass resignations of top executives, including the CEO in September 2012, thereby negatively affecting the airline's performance. Rivers (2015) opines that every time a new minister of Public Enterprises is appointed in South Africa a new Board is announced at SAA and SAX, a strategy used by politicians to fill the Board with people aligned to the new minister's interventionist take on the management of state-owned enterprises. For example, Malusi Gigaba (the then-newly appointed minister of Public Enterprises) in August 2012 got rid of SAX Board members that former Public Enterprises minister Barbara Hogan had appointed. Such political interference caused instability at Board level and adversely affected the performance of SAA (Mwanza, 2015).

In similar vein, Doganis (2001:22) claims that due to political interference, state airlines tend to be characterised by the elements of substantial losses, over-politicisation, overstaffing, lack of a clear development strategy, and bureaucratic management. These elements epitomise Air Zimbabwe, Air Botswana, Air Namibia and SAA, hence these airlines have not been able to reach operational efficiency. According to Mananavire (2016), governments in southern Africa retain veto power over their airline's commercial decisions, including route networks, fleet acquisition and, most significantly, payroll cuts. Consequently, Air Zimbabwe, Air Botswana, Air Namibia and SAA completely failed to compete with other local carriers, largely because of the strong influence exerted by their respective governments (Pressly, 2016).

Mwanza (2015) avers that due to political interference many carriers in southern Africa are obliged to maintain loss-making domestic routes to please politicians. For example, due to political interference SAA had to introduce non-viable routes that play a strategic role in growing economic relationships and

dependencies between the BRICS countries of Brazil, Russia, India, China and South Africa (McCann, 2015). This was a direct result of a politically-motivated process favouring stronger relations with BRICS countries at the expense of traditional European connections, but without due consideration to the financial implications thereof (McCann, 2015). Consequently, SAA has seen its dominant control of the South African market eroded by nimbler, privately-held start-ups, like FlySafair, whose acquisition and deployment of aircraft is dictated by sound commercial analysis rather than political vanity (Shepherd, 2012).

Similarly, government interference at Air Zimbabwe, Air Botswana, Air Namibia and SAA has continuously affected the implementation of the airlines turnaround plans thereby negatively affecting the airlines performances (Maqutu, 2015a). In Zimbabwe, the Zanu PF government continues to interfere in Air Zimbabwe's operations hindering the financial sustainability of the airline (Malaba, 2016). For example, on commercial routes, scheduled flights are often cancelled at short notice to accommodate the wishes of the political leadership (Muzulu, 2016a). Furthermore, Air Zimbabwe aircraft are often used as private ambulances for Robert Mugabe and his family's medical trips overseas (News Day, 2014). In state carriers' political processes supersede airline operating interests in a market of substantial government influence (government airline or monopolistic market) (Chattopadhyay, 2015:147). A volatile political environment in Zimbabwe was the cause of dwindling tourist arrivals to Zimbabwe, which has significantly affected the load factors for the national carrier (Bhebhe, 2016). Consequently, political interference has significantly affected the performance of airlines (Mananavire, 2016).

Perpetual government bailouts to state carriers has enabled state airlines to charge unviable rates to the detriment of private players (Maromo, 2015). SAA, the apartheid era dinosaur, is a case in point. Over the last decade (from 2006 to 2016), SAA has relieved the South African taxpayers of at least R12 billion, in conservative terms (Nolutshungu, 2013). According to Nolutshungu (2013), the government's perennial habit of throwing substantial taxpayer funds at SAA translates into unfair competition against its rivals. Mhlanga and Steyn (2017:7) affirm that this economically burdensome, morally objectionable, highly protected and privileged status, places SAA in a position to undercut prices charged by private airlines. Therefore, it is not surprising that over the years several private airlines (such as 1Time and Nationwide) have been forced to close (Gernetzky, 2016). In southern Africa state carriers are invariably protected from economic realities, yet in Europe it is against regulations to bail out airlines (Mhamedi, 2014). According to Brock (2015), in Europe airlines get knocked out of IATA if they receive state bailouts.

Mwanza (2015) avers that although nine national airports in South Africa have been commercialised and partially privatised, ACSA is not immune to political interference as ACSA, under pressure from government, tends to allocate peak-hour landing slots to state airlines whilst allocating bad landing slots to private airlines. Smith (2015) affirms that this has skewed commercial operations and negatively

affected private airlines in a supposedly deregulated domestic market. McCann (2015) concurs that this support to state airlines serves only to distort any prospect of a level playing field, preventing privately-owned carriers from competing effectively. Therefore, political interference resulted in an un-level playing field in the airline industry and served to destabilise rival operators and, in most cases, is considered to have been a contributing factor to the demise of several private airlines such as 1Time (Gernetzky, 2016).

3.3.1.2 Economic factors

Economic factors relate to economic policies, economic structures and the degree to which the economy factors affect airline performances (Pratap, 2016). According to Davis (2013), the airline industry is subject to changes in the world economy. The aviation industry is not immune to economic pressures because, according to Demydyuk (2011:47) it has from time to time, been forced to adjust per changing economic conditions. Cederholm (2014) found a significant difference between economic factors and the performance of airlines, whilst McCann (2015) found that economic factors such as the oil price, Rand/Dollar exchange rate and GDP growth, significantly affected the airline industry. Gernetzky (2016) concurs, claiming that for every 10% increase in South Africa's GDP, the volume of air passengers rose by 8.4% and that of air cargo by 14.8% in 2015. Consequently, economic factors significantly affect the performance of airlines (Shah, 2016).

To illustrate the aforementioned point, Bhoola (2016) claims that due to the depreciation of the Rand airfares in South Africa have increased by roughly 20 to 40% in a three-year period (from 2014 to 2016). The 20 to 40% increase is well above the CPI as well as the GDP growth of the economy over the same period (OBG, 2017). This disproportionate increase in pricing without a relative growth in the wealth of the country means that the consumer base for airline passengers has not increased, yet the cost of flying has increased. This, according to Vecchiatto and Cohen (2016:6), out-priced passengers, making flying expensive. As a consequence, this negatively affected the performance of legacy carriers such as SAA as more people in South Africa have become budget conscious and led to increased demand for low cost carriers such as FlySafair and Kulula (Maqutu, 2015a).

Since it is difficult to forecast exchange rates with certainty, the depreciation of the Rand has negatively affected fuel prices in South Africa (The Economist, 2016). According to IATA (2015), the exchange rate variation contributes to the fluctuations in fuel prices, which constitutes 31% of total costs. Campbell (2014) also argues that foreign currency exchange rate fluctuations, along with changing prices of fuel and interest rate fluctuations, significantly affect the profitability of airlines. To illustrate the effect of the depreciation of the Rand on the performance of airlines Mahlaka (2015) claims that in February 2015 Comair reported a near 50% decline in interim profits due to the weakening Rand offsetting gains from a lower oil price.

Maqutu (2015b) notes that the depreciation of the South African Rand significantly affected ticket sales because the sales volume and cost structure of airlines is dependent on foreign exchange fluctuations which implies that unfavourable fluctuations significantly affect airline performance. According to OBG (2017), a 13% weakening of the Rand against the US Dollar over a three year period (from 2014 to 2016) negatively affected the value of ticket sales internationally and when translated back into the South African currency this cost SAA R800 million. This has a substantial effect on operational costs, which can only be recouped by an increase in ticket prices (Vecchiatto & Cohen, 2016:6).

The volatility of the Rand contributed to Comair's unrealised exchange losses of R73 million on the revaluation of a US$24.8 million loan on one aircraft (Flyafrica, 2016). As a result, profits after taxation for 2016 declined by 12% to R193 million, yielding earnings per share of 41.5c, compared to 47.5c in 2015. Headline earnings per share were 36.5c in 2016 compared to 47.9c in 2015. Comair also suffered a R71 million pre-tax loss on dollar-oil hedges contracted in mid-2014 (Flyafrica, 2016).

Other economic factors that have had an effect on the airlines in South Africa include fuel levies and airport taxes placed on the consumer, as well increased tolling on drivers, such as the introduction of e-tolls in Gauteng. These factors all increase the cost of travelling by road, in which case air travel is preferred (OBG, 2017).

Bronkhorst (2016) on the depreciation of the Rand, reports that in January 2016 US$1 was equivalent to R17.99). According to Sheppard (2017), this made travelling to South Africa quite affordable; a one-way trip between most city pairs in 2016 typically cost US$80, making South Africa an exceptionally cheap tourist destination. Zhou (2012) found that the hyperinflationary economic environment in Zimbabwe, characterised by a shortage of foreign currency, increased the operational difficulties of Air Zimbabwe. Consequently, the lethal cocktail of economic recession, high oil prices, currency instability and a drop in demand for expensive seats, has significantly affected the performance of airlines in southern Africa (OBG, 2017). The importance of economic factors in the airline industry cannot be overlooked (Pratap, 2016).

3.3.1.3 Socio-cultural factors

Socio-cultural factors relate to the cultural aspects, attitudes and beliefs that affect the demand for airlines and airline performances (Pratap, 2016). This explains the relationship between society and the industry (Chandrappa, 2014). Pratap (2016) points out that socio-cultural factors have an effect on the attitudes of consumers towards air transport. Lohmann and Koo (2013:8) affirm this, finding a significant difference between socio-cultural factors and the performance of airlines. Consequently, the industry affects, and is affected by, socio-cultural forces (Heracleous *et al.*, 2009:15).

The growing income of the black middle class in South Africa has increased the demand for air travel (Hermann, 2012). Oosthuizen (2013) attributes the increase in the black middle class to South Africa's Black Economic Empowerment (BEE) programme, which was initiated after the end of apartheid to

reduce the inequality of the country's black population. Based on the Living Standard Measure (LSM), the black middle class increased by 48% between 2001 and 2013 (Botha, 2014). Consequently, the rise in the black middle class led to an increase in the national disposable income and significantly affected consumer travelling patterns.

In similar vein, the changing travel preferences for baby boomers (those born between 1946 and 1964) significantly affected legacy carriers as the baby boomers' business travel spending habits declined (Walters, 2010:9). Baby boomers are economically-minded passengers opting for airlines that provide more service for less money (LCCs) (Chandrappa, 2014). That means an increase in numbers for budget carriers at the expense of full service carriers.

Furthermore, Bennett and George (2004:117) claim that the language used by SAA for in-flight announcements had a significant effect on the performance of the airline. The same authors argue that SAA dropped in-flight announcements in Afrikaans (contrary to Comair) in 1996 and this had an effect on product loyalty. During the apartheid era SAA used both Afrikaans and English for in-flight announcements (Bennett, 2005:19). However, post-apartheid SAA started using English only and many Afrikaans-speaking customers changed allegiance to other airlines and this had a significant effect on SAA's profitability because Afrikaans customers constituted a huge market to SAA (Ssamula, 2012:25). Socio-cultural factors as a result acquire a major value in the context of the aviation industry (Pratap, 2016).

3.3.1.4 Technological factors

Technological factors relate to the technological aspects, innovations, barriers and incentives, and the degree to which they affect airline performances. The effect of technological factors on airline performances can be understood from the extensive use of technology in aviation (Porter & Kramer, 2011:66). Technology means speed but also convenience and safety. Whether it is air traffic or passenger safety, the role of technology is critical (Truxal, 2013:9). Hartman and Boscoianu (2015:102) confirmed this when they found a significant difference between the means of technological factors and the performances of airlines. Shankman (2014) found that technological factors significantly affected the performance of airlines due to improved communication facilities, which reduced the need to fly for meetings, leading to fewer people flying to business destinations because they can simply hold a conference call or Skype meeting.

Technology, in the form of teleconferencing, web-conferencing and video-conferencing, allows everyone to be in the room at the same time or to participate asynchronously (Sengun & Sarilgan, 2005:20). Technology makes it possible for meetings to be designed so that participants actually experience their colleagues as being on the other side of the same table they are sitting at, despite the fact that they are on the other side of the world (Morrell, 2013:30). Monies that were spent on travel can instead be put to individual laptops, continuous updating of content offerings, and technology

infrastructure that an individual can link to in Europe, America, Asia or Africa with equal ease (Serpen, 2014).

Technology means speed but also convenience and safety. Technology increased the ability of airlines to reach a wider consumer base, and especially the increased use of the internet has made it possible for customers to purchase tickets from their homes (Heracleous *et al.,* 2009:18). Whether it is air traffic or passenger safety, the role of technology is critical. One of its greatest effects is to offer transparency of options to passengers and to reduce search costs (Georgieva, 2016). Given that price is a key factor in a purchase decision, combined with the transparency of information, these two aspects led to pricing pressure for airlines with a consequent reduction in yields (Pratap, 2016).

Many airlines strategically use information technology to market their services to a large number of consumers throughout the globe. Networked technologies gave airline companies instant access to consumers (Hartman & Boscoianu, 2015:102). Consumers can book flight tickets online with the click of a button (Truxal, 2013:9). Many airline companies are adopting unique technologies to gain a competitive advantage in the highly turbulent industry (Davis, 2013). The ability to reach a large number of customers provides airlines with competitive advantages (Porter & Kramer, 2011:66).

Similarly, the internet provides a wide dissemination of advertising, while other technologies enable the quick design and production of these advertisements (Georgieva, 2016). Many airlines are increasingly making use of technology to facilitate their customers, for example, airlines have introduced mobile phone applications to facilitate customers (Truxal, 2013:9). Furthermore, socio-cultural media has made it possible for airlines to interact with customers (Shankman, 2014). Aircraft are becoming more fuel efficient day by day, helping airlines to reduce travelling costs, while new technology has also enabled airlines to introduce more safety measures (Mulder, 2015).

Technology has increased competition in the airline industry because it is available to every airline in the industry (Shankman, 2014). If only a single airline had access to technology, it would have a remarkable advantage (Mulder, 2015). However, in an industry that is saturated with technology, the outcome is a marketing race in which every airline is struggling for a competitive advantage over its rivals. According to Porter and Kramer (2011:66), this level of competition significantly affects airline performances.

However, lack of new technology is affecting Air Zimbabwe's financial performance. According to Ndlovu (2016), Air Zimbabwe is operating with old and outdated technology in comparison to other airlines. Its equipment is so old and unattractive that customers doubt the safety of the aircraft, leading to them board other aircraft and to shun Air Zimbabwe. Lack of implementation of new technology is due to their inability to meet the costs of procuring the technology. This lack of adaptation to new technology has caused the airline to be uncompetitive in the market (New Zimbabwe, 2016). As a result,

in May 2017 the European Commission (EC) banned Air Zimbabwe from its airspace (its most lucrative route) over safety concerns due to its aged aircraft (eNCA, 2017).

3.3.1.5 Ecological factors

Aircraft, as do other forms of transport, contribute to polluting the environment (Cederholm, 2014). Environmental effects of aviation occur because aircraft engines emit heat, noise, particulates and gases which contribute to climate change and global dimming (Forsyth, 2011:29). Among others, aircraft emit particles and gases such as carbon dioxide (CO_2), water vapour, hydrocarbons, carbon monoxide, nitrogen oxides, sulfur oxides and black carbon which interact among themselves and with the atmosphere (Owen, Lee & Lim, 2010:2257). Despite emission reductions from automobiles and more fuel-efficient and less polluting turbofan and turboprop engines, the rapid growth of air travel in recent years contributes to an increase in total pollution, climate instability and extreme weather attributable to aviation (Anderson & Bows, 2008:3870).

In addition to the CO_2 released by most aircraft in flight through the burning of fuels such as Jet-A (turbine aircraft) or Avgas (piston aircraft), the aviation industry contributes greenhouse gas emissions from ground airport vehicles and those used by passengers and staff to access airports. Further greenhouse gas emissions are generated by the production of energy used in airport buildings, the manufacture of aircraft and the construction of airport infrastructure (Reay, 2004:793). In the face of the management of the global warming crisis, airlines are under stricter control to ensure that aircraft have minimum carbon emissions, or face hefty penalties (Moreira, O'Connell & Williams, 2011).

However, governments have been trying to reduce the environmental effect of aviation by constraining demand for air travel, through increased fares in place of expanded airport capacity (Anderson & Bows, 2008:3870). Global warming through high carbon emissions has resulted in the addition of taxes on ticket prices or aviation fuel, which has in turn affected the performance of airlines (Fageda, Suau-sanchez & Mason, 2015:290). For instance, in 2011 the South African government introduced a tax of up to R120 per tonne on carbon dioxide emissions (Styan, 2011). However, all that carbon taxes do is to significantly increase transport costs and thereby significantly affect airline performances (Business Day, 2013).

3.3.1.6 Legal factors

Legal factors relate to the laws, regulation and legislation that affect airline performances. Roche (2011) claims that legal factors significantly affect the performance of airlines. Mulder (2015) affirmed this when he found a significant difference between legal factors and the performances of airlines. Air transport is regulated by several laws and regulations that are becoming increasingly stricter (Georgieva, 2016). Consequently, legal factors negatively affect the performance of airlines (Mulder, 2015).

To illustrate the above, SAA was ordered to pay more than R104 million in damages to Nationwide by the South Gauteng High Court following the ruling of the Competition Tribunal in 2016 that SAA abused its dominance in the local market and played a major role in the demise of Nationwide (Slabbert, 2016). In February 2017 the South Gauteng High Court awarded a R1.16 billion-settlement to Comair in its case against SAA in respect of its travel agent incentive schemes, which was found to be anti-competitive (eNCA, 2017). In terms of the judgment, SAA was ordered to pay Comair R554 million plus interest at 15.5%, and costs amounting to about R1.16 billion for simultaneously increasing capacity and reducing prices on the major routes between 2001 and 2005 (eNCA, 2017).

Similarly, Air Namibia also lost several lawsuits from aircraft service providers (Kahiurika, 2016). For example, in January 2015 Air Namibia was forced to pay N$337 million after it lost a case against Challenge Air. In March 2016, Air Namibia was forced to pay lease and maintenance fees to Intrepid Aviation, payments amounting to N$17 million, for two aircraft and currently, (2017) Air Namibia is embroiled in a lawsuit of US$77 million (N$1 billion) with a company called BCI Aircraft Leasing Incorporated. Air Zimbabwe is separately embroiled in a legal battle with about 400 sacked workers who are demanding US$1.3 million in severance pay awarded to them by an independent arbitrator (Bhebhe, 2016).

The high importance placed on safety in aviation makes the legal environment very stringent for the players (Franke & John, 2011:22). Different countries have different legal norms for aviation and the penalties are usually high (Gomes Eller & Moreira, 2014:5). This increased the costs for many airlines and they have to maintain certain levels of service and standards. It is also difficult for new airlines to obtain operating licences in some countries due to different legal restrictions and requirements (Franke & John, 2011:22). The rules on the nationality of owners limit the pool of potential owners (and of potential managers) that could acquire and run an airline. Consequently, airlines have to demonstrate commitment towards law-adhering practices in all their business operations (Fageda & Flores-Fillol, 2012:1171).

In an effort to combat human trafficking, South Africa introduced strict visa regulations in June 2015. These visa regulations required tourists to apply in person at a visitor centre for travel documents, which needed to be in English, and all children were required to have a birth certificate with full details of both parents (Mtongana, 2015). Eventually, international tour operators and travel agents removed South Africa from their destination brochures due to the new regulations (Mtongana, 2015). Consequently, these regulations significantly affected airline performances in South Africa as passenger numbers dwindled (Wakefield, 2015).

Furthermore, airlines are widely affected by regulations and restrictions related to international trade, tax policy and competition, which significantly affect their performance (Mulder, 2015). Airlines pay tax twice, in South Africa and away due to southern African governments' failure to expedite the signing of bilateral agreements with other countries (Georgieva, 2016).

According to CAPA (2016), southern African countries do not treat the southern African airspace as a single market hence there are over-fly and landing bans among airlines in the region. According to Abate (2013:1), the ability of southern African airlines to access foreign markets remain hindered by restrictive regulatory policies (Abate, 2013:1). This fragmentation in the region makes it difficult for southern African airlines to achieve the necessary scale to compete with international airlines (The Sunday Times, 2015). Surovitskikh and Lubbe (2015:9) claims that southern African countries continue to artificially restrict international air travel by limiting the number of flights to their cities as well as the number of airlines that may fly to them. These restrictions make it more expensive to travel to southern Africa, thereby reducing the number of tourists who visit the region (Bilotkach & Hüschelrath, 2012:79). This protectionist approach has hampered the liberalisation of southern African skies and reduced opportunities for airlines to become pan-southern African airlines, which would reduce airfares, attract investment and brt tourism (Niewiadomski, 2013). According to Steyn and Mhlanga (2016:5), it follows that the ability of airlines to survive financially is seriously threatened by a multitude of international agreements generated in the external environment.

3.3.2 Industry success factors

Lynch (2003:102) defines industry success factors as, "those skills and attributes of the organisations in the industry that are essential to deliver success in the marketplace". Industry factors refer to micro environmental factors that affect firms within a specific industry (Thompson & Martin, 2005:172). This involves the customer, supplier, competitors, new entrants and substitutes that affect the operations of the organisation (Nwachukwu, Udeaja, Chileshe & Okere, 2017:326). Porter (1980:35) coined these elements collectively as the Five Forces of competition. Each industry has a set of critical success factors that are determined by each industry's specific features and characteristics (Auruskeviciene *et al.*, 2006:328). Consequently, a fit between between competitive advantages and critical success factors of a particular industry may form a firm foundation for a firm's successful performance in that industry.

Thompson and Strickland (2002:81) view industry success factors as the major determinants of financial and competitive success in a particular industry. They show that the identification of the success factors in an industry is a top strategic issue as these factors normally serve as cornerstones for building an organisation's strategy. Therefore, different industries will have unique, industry-specific CSFs and an industry's set of characteristics define its own CSFs.

3.3.2.1 Rivalry among existing competitors

Porter (1980:34) conceptualised rivalry within an industry as existing on a continuum from low to high. However, some research endeavours (Stonehouse & Campbell, 2004; Thompson & Martin, 2005:177; Moiseiwitsch, 2014:11) argue that rivalry among existing competitors significantly affects airline performances. Moiseiwitsch (2014) concurs that rivalry amongst existing competitors tends to be high, especially in a deregulated industry, leading to price wars which significantly affect the performance of

airlines. For example, the deregulation of the South African airline industry in 1991 paved the way for the entry of a number of LCCs, which significantly affected the performance of airlines (Luke & Walters, 2013:122). Consequently, of the eleven airlines to enter the industry in South Africa between 1991 and 2012, only one is still in operation (Luke & Walters, 2013:122).

Other privately-owned airlines such as Nationwide, Velvet Sky and 1Time, which operated from 1995 to 2008, 2011 to 2012 and 2004 to 2012 respectively, exited even after remaining in the market for significant periods (Mncube, 2014). The national carrier, SAA, also suffered losses over the past decade requiring several government bailouts and guarantees, including one in September 2016 (Ensor, 2016c). This suggests intense rivalry amongst existing competitors, which has significantly affected airline performance (Gernetzky, 2016).

Furthermore, an increase in the number of airlines on particular routes in South Africa has intensified rivalry amongst existing competitors, thereby affecting airline performance (Eller & Moreira, 2014:10). To illustrate this point, Ensor (2016) notes that the entry of LCCs (FlySafair and Fly Blue Crane) resulted in overcapacity in the South African domestic market because the South African market is not large enough to support three LCCs. Maqutu (2015b) affirms that three LCCs are not sustainable in the long term because South Africa's domestic market is too small and too seasonal to provide the scale that an independent LCC would need to thrive over the long term in a lacklustre economic environment.

According to OBG (2017) similar sized domestic airline markets have two or fewer LCCs; for example, Vietnam has two LCCs, Saudi Arabia one and Chile does not have any. Even much larger Australia, which is about four times the size of South Africa, has only two LCCs (Maqutu, 2015b). Maqutu (2015b) cautions that approximately 17 million people fly in South Africa each year and the market is served by nine domestic carriers, which is far more airlines-per-person than there are in the US, Europe or China.

Mondliwa (2015) further argues that South Africa does not possess the requisite attributes of more developed markets that allow multiple LCCs to thrive. In Europe, competing LCCs such as EasyJet and Ryanair do not fly on the same routes or serve the same city pairings (Wood, 2016). However, in South Africa, LCCs cover the main domestic routes, since there are few commercially viable secondary routes to fly (Gernetzky, 2016). For instance, in South Africa, only Johannesburg has a secondary airport (Lanseria) (Wood, 2016).

Due to intense rivalry among existing competitors in the South African domestic market airfares have dropped by as much as 39% on each of the 10 routes which FlySafair and Fly Blue Crane have entered (McLennan, 2015). To illustrate the affect of intense rivalry among competitors, in October 2015 Comair reported stagnation in its revenues and a 17% decline in profits due to competition with the new airlines (Sokana, 2015). Comair's profits dropped from R265 million in 2015 to R219 million in 2016, while Mango recorded its first loss in 10 years in the 2015/16 financial year (Mungadze, 2016).

In Zimbabwe, the national carrier (Air Zimbabwe) faces intense rivalry after the Zimbabwean government opened the skies. According to Chipunza (2013), three South African airlines, namely SAA, Comair and Airlink, now control over 90% of the market share on the Harare to Johannesburg, Johannesburg to Victoria Falls and Johannesburg to Bulawayo routes, against Air Zimbabwe's 10% and this has significantly affected Air Zimbabwe's performance.

3.3.2.2 The threat of new entrants

This aspect of the Five Forces refers to the extent to which new entrants can be accommodated within the industry (Porter, 1980:34). However, Bryson (2012:29) claims that the threat of new entrants does not significantly affect the performance of airlines. Hitt, Ireland and Hoskisson (2010:52) concur that in the airline industry new entrants cannot enter and compete on the same level as long established airlines. The South African airline industry is a case in point. According to Nolutshungu (2013), in South Africa it is difficult for new entrants to acquire prime time or peak hour landing slots at major airports because established airlines fiercely guard their landing slots and gates, and with little spare capacity in the business, it is tough for prospective entrants to gain a foothold. Subsequently, the slot's right to take off or land at a designated time, particularly prime time slots, becomes an essential commodity for airlines in South Africa (Mncube, 2014).

Moreover, in southern Africa a new entrant would require a considerable amount of capital to penetrate a market characterised by a number of structural barriers, primary of which are high cost of entry, access to finance and poor cash flow management (OBG, 2017). Jarvis (2016) opines that new entrants also face the problem of accessing effective distribution channels that tend to favour established carriers. Therefore, new entrants often have to bypass distributions channels and create their own, as gaining access to the same sales channels as those used by established airlines is often costly. For instance, in South Africa new entrants (such as FlySafair) tend to avoid using travel agents who often favour established higher fare carriers such as SAA because of the rates of sales commission received (McLennan, 2015). As such, new entrants often encourage their passengers to book directly with the airline via the Internet (OBG, 2017). These barriers tend to reduce the threat of new entrants and according to Young (2015) this is one of the main reasons for the demise of new entrants such as Skywise.

However, although these barriers significantly affect the performance of new or prospective entrants they do not appear to have deterred entry as airlines such as FlySafair, Fly Go Air and Fly Blue Crane have entered the market (McLennan, 2015). Gernetzky (2016) cautions that although these barriers are substantial, they do not appear to prevent entry but rather restrict sustained entry. Nonetheless, new entrant Fly Blue Crane is traversing turbulent times. Launched in September 2015, the airline's future hangs in the balance and the airline reportedly sought business rescue of R240 million from the Industrial

Development Corporation (IDC) in July 2016 (Gernetzky, 2016). This is indicative of the challenges new entrants face in the airline industry in southern Africa.

Williams (2012) opines that as entry barriers are lower in a deregulated market such as South Africa, the market is an attractive prospect for new entrants. However, to set up an airline in South Africa, a prospective entrant must overcome legal barriers and comply with strict rules and legislation (Makhaya, 2015). SACAA requires a new airline to apply for an operating certificate prior to operation and it has to meet the minimum 75% South African ownership requirement before being issued with a licence to operate by the Air Service Licensing Council (Makhaya, 2015). In 2013 Fastjet failed to acquire defunct operator 1Time when it could not meet South Africa's ownership regulations, which limit foreign companies to a 25% stake in a domestic airline (Brock, 2015).

Furthermore, prospective entrants tend to be discouraged from entering the market in southern Africa because of retaliatory strategies from established carriers (Bryson, 2012:29). Any strategy employed by a new entrant is likely to attract a retaliatory reaction from existing airlines (Nolutshungu, 2013). Serpen (2014) stresses that newcomers should expect retaliation based on previous reactions to new entrants, excess cash and unused borrowing power of existing firms, available productive capacity, existing relationships within the industry between customers, suppliers, buyers and competitors, and industry growth rate at the time of entry.

When a new entrant enters a market it changes the competitive dynamics (Bryson, 2012:29). Airlines already serving the market have little choice but to respond and the most basic competitive response is to match price (Serpen, 2014). One of the reasons airfares decreased in the years after liberalisation in South Africa is the practice of established carriers aggressively fighting for customers by meeting the competitive challenge of new rivals in the marketplace (Campbell, 2014). Major airlines used this retaliatory strategy to guard against new entrants (Serpen, 2014).

Established airlines often tend to exhibit complacency and arrogance in the face of newcomers, especially when the new entrant moves into untapped and undeveloped markets on the fringe of the existing market (Porter, 2008:95). This is the case in South Africa where, for instance, following Fly Go Air’s entry into the Johannesburg to Pietermaritzburg and Johannesburg to George routes, the entrant experienced substantial competition from SAA associates Airlink and Mango (Paelo, 2016). Airlink and Mango dropped prices on these routes, increased the frequency of their flights and moved their time slots to those close to Fly Go Air (Wood, 2016). The increased capacity and competition forced Fly Go Air to reduce its total number of weekly flights on these routes (Winsen, 2016). Paelo (2016) avers that SAA has the exclusionary conduct of increasing capacity by donating or leasing old aircraft to Mango whenever it acquires new aircraft.

According to Nolutshungu (2013), predatory pricing is a common retaliatory strategy used by airlines in South Africa to prevent new entrants from making profits. Predation is characterised by a drop in

price to match that of the new entrant that is below average variable costs and increase capacity or flights on the route (Mahlaka, 2015). For instance, following entry by new airlines SAA and its subsidiaries Mango and SA Airlink dropped their ticket prices on all the routes of the new entrants (Travelstart, 2015). According to Spooner (2015), when 1Time entered the market in 2004, prices were reduced by as much as 35%. Following the entry of Kulula and 1Time in 2001 and 2004 respectively, SAA retaliated by launching Mango as a fighting brand in an effort to undermine entry into the LCC market. Consequently, this significantly affected the performance of new entrants with 1Time eventually being forced out of the market in 2012 (Wood, 2016).

Although the airline industry in southern Africa is rather attractive in terms of deregulation, the factors of bureaucracy, slot problems, retaliatory strategies from established carriers and large financial outlay required to start a new airline, reduce the threat of new entrants to established airlines (The Herald, 2016). The airline industry has a number of structural barriers, primary of which are high cost of entry, high operational costs and legal barriers. However, while substantive, these barriers do not seem to discourage entry and for the most part can be overcome (Wood, 2016). The more significant barriers to entry appear to be related to competing on the same level with established airlines as well as the relationship SAA as the dominant player has with other smaller airlines on secondary routes, as well as its access to state funds and support (Paelo, 2016).

3.3.2.3 The threat of substitute products or services

This aspect of the Five Forces refers to the extent to which the product or service offered by an industry incumbent can be replaced by a similar service (Porter, 1980:34). Doganis (2010:17) posits that time, cost, personal preference and convenience determine the threat that substitute products pose to the airline industry. However, Walters (2010:11) argues that airlines outperform other forms of transportation when it comes to cost and convenience. Clark (2011:37) claims that because airlines outperform other forms of transportation when it comes to cost and convenience the threat of substitute products does not significantly affect the performance of airlines.

According to Porter and Kramer (2006:41), substitute products have the potential of diminishing profits within an industry by placing a ceiling on prices. The threat of substitutes is highest if the alternative product offers an attractive price performance trade off or if the buyer's cost of switching to the substitute is low (Porter & Kramer, 2011:66). In a competitive industry a producer's product is replaceable by that of another and no producer can influence price such that it increases the income of only one producer (Mohr & Fourie, 2004:289). It is therefore essential in business to remain alert to changes in other industries that may make them attractive substitutes (Bryson, 2012:29).

In southern Africa, transportation by road and rail are forms of substitutes for air travel (Mondliwa, 2015). Potential travellers can choose other means of transportation such as cars, buses or trains to go to other destinations (Gernetzky, 2016). Intercity train services in South Africa run between cities, for

instance between Johannesburg, Cape Town, Durban and other towns (Travelstart, 2015). However, the major cost to switch is time. For instance, although travelling by train is cheaper, most journeys may go overnight (Gernetzky, 2016), whilst bus operators such as Greyhound, Translux and Intercape arrive at inconvenient times and travel overnight. In contrast, despite the time taken to reach the airport and check in for flights, the overall journey time by air is much shorter than other travel substitutes (Wood, 2016). Therefore, there is low propensity to substitute, given that for most routes the substitute's cost/benefit ratio is weak compared with air travel (Travelstart, 2015).

3.3.2.4 The bargaining power of suppliers

This aspect of the Five Forces refers to the extent to which suppliers can negotiate with businesses over materials and equipment (Porter, 1980:35). Porter (1980:35) argues that where suppliers have strong bargaining power, the relative position of businesses is relatively weak. However, according to Pandey (2010) suppliers in the airline industry tend to be in a relatively strong bargaining position because fleets to the industry are supplied by what is effectively a duopoly (Boeing and Airbus), while an oligopoly exists in the supply of engines (General Electric, Pratt and Whitney, and Rolls Royce). With so few suppliers in operation, manufacturers are able to unilaterally establish prices and set delivery times (Bryson, 2012:29).

Furthermore, airlines usually engage in long term contracts in the production or leasing of aircraft over a period of time (Olienyk & Carbaugh, 2011:8); therefore, switching suppliers after signing a contract is a breach of the contract, which often results in financial penalties. According to Campbell (2014) the supplier switching costs for airlines is extremely high due to significant levels of expenses involved associated with pilot retraining needs. Therefore, airline pilots have a strong bargaining power because there is no abundant supply of highly qualified and experienced pilots (Kamau & Stanley, 2015:91).

Nhuta (2012:459) argues that the suppliers of airline fuel have a higher bargaining power because airlines have little control over fuel prices. Eller and Moreira (2014:10) concur that since there is no substitute for jet fuel this further increases supplier power. In turn, this reflects a difficulty in finding substitutes for the airlines inputs (Campbell, 2014).

Airports and ground-handling companies are local monopolies with significant power charging fees for gate usage as well as for take-off and landing slots (Wyman, 2010). Airport services are concentrated in a small number of firms but they have low switching costs (Porter & Kramer, 2011:66). Privatisation has led to the entry of private companies, some of which operate airports around the world (Uwagwuna, 2011). The competitive timing of flights into particular airports is controlled by airport authorities thereby giving them direct control of the profitability and competitiveness of airlines operating from their stations (Jenks, 2013). Therefore, the bargaining power of aircraft manufacturers is high, as there is a limited number of suppliers (Kamau & Stanley, 2015:91).

3.3.2.5 The bargaining power of customers

According to Porter (1980:34), where buyers have strong bargaining power, the relative position of suppliers of goods and services is weak. In such industries, product and service providers must be particularly cognisant of the needs and demands of their customer base if they are to develop and maintain their market share (Heracleous *et al.*, 2009:18). However, Clark (2011:37) found a significant difference between the bargaining power of customers and the performance of airlines. The reason for the significant difference is attributed to the increased level of price sensitivity of customers, which contributes to their bargaining power (Clark, 2011:37).

Mondliwa (2015) claims that in the airline industry the bargaining power of customers is relatively high since most airlines are forced to cut costs by aggressive competitors. Ismael (2015:11) re-affirms that the bargaining power of customers in the airline industry is relatively high because airlines are very vulnerable to any price reduction measures introduced by their competitors due to the lack of brand loyalty associated with the airline industry. Therefore, customers enjoy high bargaining power because switching to another airline is simple and is not associated with additional expenses (Winsen, 2016).

According to Nolutshungu (2013), there are a large number of airlines in southern Africa and hence passengers tend to be highly price-sensitive which increases buyer power. Mondliwa (2015) argues that since buyers have no switching costs when switching from one airline to another, as such they are free to compare prices at no cost, which further increases buyer power. Spooner (2015) opines that the bargaining power of consumers is marginally increased by the presence of online booking sites, allowing customers to compare prices. Therefore, aggregator websites, which focus on price comparisons, significantly increased the transparency of airfares across airlines and concentrated the buying power of consumers (Ferreira, 2016).

Furthermore, travel agencies are able to influence the travelling public not only on the mode of transport to use but also on the particular airline to use (Kamau & Stanley, 2015:91). Travel agents who operate a supermarket of services in the travel and transport field, including hotel accommodation, sightseeing trips, airline bookings, car rentals, vacation tours and buses and cruise lines, represent most large corporate clients with significant power to shift demand across carriers. Therefore, buyers are becoming more informed and this has given them power over the airlines (Mawson, 2015). When buyers are informed, they are in a position to know about differences in prices among competitors and availability of substitutes (Travelstart, 2015).

From the above, it is clear that the only opportunities for the airline industry in southern Africa are the low threat of substitutes and new entrants, which are not enough to mitigate intense rivalry and the high bargaining power of customers and suppliers. Even though the threat of new entrants is low, wherever there is potential there will be new entrants, creating overcapacity and reducing yields (as was the case

in South Africa). It is therefore clear why there is such a high failure rate in the airline industry in southern Africa relative to other industries.

3.3.3 Organisational success factors

Organisational factors include all elements that are endogenous to the airline, and are influenced to a great extent and totally controlled by it (Srimuk & Choibamroong, 2014:44). Each organisation in the industry is in a unique situation determined by its history and current resources, competences and competitive strategy (Shieh & Wang, 2010:403). Just as differences in industry position can dictate critical success factors, differences in geographical location, resources, competences and strategies can lead to differing critical success factors from one organisation to another (Kotas, 2015:91). Each organisation within an industry is in an individual situation determined by its history and current competitive strategy. An organisation's current position in the industry (where it is relative to other competitors in the industry and also the market leader), its strategy, and its resources and capabilities will define its CSFs (Meibodi & Monavvarian, 2010:128).

An analysis of organisational factors is considered critical in decision-making, an assertion supported by Ramon-Rodriguez., Moreno-Izquierdo & Perles-Ribes (2011:112) who argue that the analysis of organisational factors reveals strengths and weaknesses that may positively or negatively affect airline performan ces. To reduce weaknesses, airlines must determine organisational factors critical to their success by ascertaining the relative importance of each factor. Examples of organisational factors of the airline include management efficiency, fleet homogeneity, fuel and labour efficiency, alliances, distribution channels, age of fleet and management turnover.

3.3.3.1 Management efficiency

The key to the success of any airline is the efficiency of its management team (Laudon & Laudon, 2007:58). In order to make the shrewd decisions that can help it outperform its peers, an airline must have efficient management so that it can maximise opportunities to boost revenue and contain costs (Barros & Peypoch, 2009:530). Rajasekar and Fouts (2009:101) confirm that management efficiency has a significant effect on the performance of airlines. Porter and Kramer (2011:66) concur that where airline management is not efficient, losses can be huge. Without efficient management an airline cannot attain its organisational goals (CAPA, 2013b). Therefore, management efficiency has a huge effect on the financial performance of airlines (Duvenage, 2016).

To illustrate the afore-mentioned point, Duvenage (2016) attributes the poor financial performance of SAA to inefficient management. According this author, because of appointing inefficient, unsuitable and ill-qualified individuals in key positions at Board and executive level, SAA was unable to reach operational efficiency and profitability. Similarly, Chibamu (2016) also attributes Air Zimbabwe’s financial problems to the appointment of inefficient managers who lack aviation experience and

knowledge. According to Bhebhe (2016), most of the Board members at Air Zimbabwe are incompetent political appointees without aviation knowledge and experience.

A typical example in Air Zimbabwe is the appointment of an inexperienced chief operating officer in October 2016. Muzulu (2016a) claims he was appointed simply because he is President Robert Mugabe's son-in-law and this happened at a critical time when the airline needed an experienced individual to turn the airline around. The poor performance of Air Botswana and Air Namibia is also attributed to inefficient, politically-appointed managers (Lute, 2016b). According to CAPA (2013b), the appointment of inefficient managers in airlines in southern Africa has led to operational inefficiency and losses for these airlines.

Airlines require people with credible management experience, preferably from within the industry, to be successful and compete in this cutthroat sector (CAPA, 2013b). At the helm of the airline there should be a group of talented executives with proven track records in their fields of expertise (Wong & Chen, 2005:761). Rajasekar and Fouts (2009:101) claim that inefficient airline management can cause huge losses. It is no surprise therefore that many airlines in southern Africa, such as Skywise, Nationwide and Velvet, were unable to remain in business, and in most cases it is agreed that the demise of these airlines is attributable to inefficient management (CAPA, 2013b).

3.3.3.2 Standardisation of aircraft

Aircraft standardisation refers to the similarities and differences in the technical and operational characteristics of aircraft in a particular fleet (Jennings, 2002:28). According to Kilpi (2007:85), aircraft differs in terms of their payload capabilities at different ranges, fuel consumption, maintenance requirements and reliability. It is therefore important to understand how fleet composition affects airline performances because costs associated with operating and maintaining aircraft accounts for a significant portion of operating expenses (Barros & Wanke, 2015:96).

In light of the above, some research endeavours (Jennings, 2002:28; Kilpi, 2007:83; Merkert & Hensher, 2011:692) argue that the standardisation of aircraft significantly affects the performance of airlines. To illustrate the effect of the standardisation of fleet on airline performance, Kilpi (2007:85) found a positive correlation between fleet uniformity and airline operating profit and a negative relationship between fleet diversity and airline operating profit. Brüggen and Klose (2010:300) also found a positive correlation between fleet standardisation and sales returns, whilst West and Bradley (2008:134) note that as fleet complexity decreased the airline's operating profit margin increased.

Kulula, operated by Comair, is a case in point, where the use of a standardised fleet is a key feature in keeping the costs of the airline low, thus allowing the airline to offer low fares (Gross & Luck, 2016:17). Kulula operates a fleet comprising entirely of Boeing 737s (Planespotters, 2017). Kulula does not have to stock spares for different types of aircraft and this has simplified the maintenance function of the

aircraft (Gross & Luck, 2016:17). As spares and other aircraft parts can be purchased in bulk, it has resulted in economies of scale for Kulula.

According to Brüggen and Klose (2010:301), the use of a standardised fleet reduces training requirements for the pilots and the cabin crew, as they have to learn to operate only a single type of aircraft. This ensures interchangeability of crews, spares and furnishings between aircraft, which makes operations easier (Merkert & Hensher, 2011:692). Having a single type of aircraft in a fleet also allows an airline to identify a suitable flight crew when aircraft need to be replaced on short notice due to technical glitches, ensuring fewer delays and cancellations, which encourages customer satisfaction (Saranga & Nagpal, 2016:172). Consequently, the use of a standardised fleet positively affects the performance of an airline (Barros & Wanke, 2015:96).

3.3.3.3 Fuel efficiency

According to Pindyck and Rubinfeld (2009:45), fuel represents approximately one-seventh of an airline's total expenses and is a significant driver of airline expenses and profitability. David (2011:26) concurs that fuel efficiency makes an airline more profitable because it decreases costs. Manuela (2011:20) confirms that using fuel efficiently is important to profitability in the airline industry because of the volatility of fuel prices. Therefore, fuel costs significantly affect the performances of airlines (David, 2011:26).

Since the cost of fuel is largely dependent on the price of oil, an airline can optimise its expenditure on fuel by purchasing more fuel-efficient aircraft, buying forward contracts, installing more efficient engines on existing aircraft, reducing short-haul flights and increasing load factors (Popova, 2016). Newer aircraft have greater fuel-burn efficiency than older models (Abda, Belobaba & Swelbar, 2011:23). However, in southern Africa most airlines have older fuel-inefficient aircraft that significantly affect their performance (OBG, 2017). Air Zimbabwe, Air Botswana and Air Namibia are examples of airlines operating old fuel-inefficient fleets, which significantly detracts from the airline's performance (Mananavire, 2016).

An air carrier using newer aircraft will tend to use less fuel than a carrier with relatively antiquated aircraft (Popova, 2016). To reduce fuel costs, a new biofuel made from tobacco plants is being developed in South Africa and it is envisaged that this biofuel will significantly lower fuel costs and thereby improve the performance of airlines in South Africa (Panday, 2015).

3.3.3.4 Labour efficiency

According to Doganis (2001:101), labour costs represent the single largest threat to airline unit costs and therefore significantly affect airline performances. Alves and Barbot, (2007:118) concur with this notion and found that labour efficiency had a significant effect on the performance of airlines. Saranga and Nagpal (2016:172) re-affirmed this when they found a positive relationship between the staff/plane

ratio and the performance of airlines, therefore, the higher the staff/plane ratio the lower the profitability and the lower the ratio the higher the profitability. Therefore, labour costs significantly affect airline performances (Cordeur, 2015).

To illustrate the effect of labour costs on airline performance, SAA, with over 11 000 employees and 63 aircraft according to its 2016 annual report, has 184.6 employees per aircraft (South African Airways Group, 2016), higher than the global average which according to Saranga and Nagpal (2016:172) is 150:1. This is also higher than its competitors, for instance, Kenya Airways has 104.7 employees per aircraft, Ethiopian Airlines has 126, Qantas in Australia has 109, American Airlines has 86.7 and United Airlines has 71. Comair, which operates BA and kulula.com in South Africa, has 80 staff per aircraft (Mazzone, 2016).

According to Cordeur (2015), because of such a high staff/plane ratio, SAA spent R4.7 billion on salaries and benefits in 2014, its second largest single expense after fuel. Compounding the problems are the high salaries paid to top officials, with the airline having reportedly paid hefty salaries of R4.5 million and R3.6 million to its CEO and chief financial officer respectively, during its 2014/2015 financial year (Duvenage, 2016).

Similarly, labour inefficiency significantly affects Air Zimbabwe's financial performance (Mananavire, 2016). According to Bhebhe (2016), with a staff/plane ratio of 200:1, higher than the global average of 150:1, labour costs have negatively affected Air Zimbabwe's financial performance. Therefore, labour efficiency has a significant effect on airline profitability (Saranga & Nagpal, 2016:172).

3.3.3.5 Alliances

'Alliances' is a broad umbrella term which includes a variety of inter-firm co-operation agreements ranging from equity ownership in a partner to the co-ordination of Frequent Flyer programmes (Wang, 2014:10). Sheehan (2003:17) opines that strategic alliances are the key to survival of most airlines. Alliances are an important competitive weapon as they allow different carriers to integrate their operational and marketing platforms (Martín-Consuegra & Esteban, 2007:383). According to Air Transsport News (ATN, 2016), alliances are essential building blocks for airlines to achieve stronger and more effective market presence. This strengthens their competitive positions and provides an opportunity to reduce costs through areas such as joint purchasing, whereby a group of carriers can negotiate much more favourable terms than a single carrier (Wang, 2014:10).

Alliances are established to create global networks of seamless air travel (Amankwah-Amoah & Debrah, 2010:42). Alliances are an important competitive weapon as they allow different carriers to integrate their operational and marketing platforms and provide means of expanding more rapidly both internationally and domestically (ATN, 2016). The alliance between Comair and BA is a case in point. This alliance gives BA direct access to the domestic market in South Africa via Comair, while Comair has a firm link to international routes (Luke & Walters, 2013:126). In so doing, the two airlines avoided

the restrictions of being denied the right to operate domestically or internationally respectively. Another example of a franchise agreement is between SAA, SA Express and SA Airlink where SA Airlink and SA Express all use SAA's code for their operations and the two airlines act as feeder airlines for SAA (Luke & Walters, 2013:123). The international code share alliance between SAA and other international airlines (such as Singapore Airlines and Air Canada) provides seamless travel for passengers (ATN, 2016).

3.3.3.6 Distribution channels

Distribution channels significantly affect the performance of airlines (Doganis, 2013:34) because distribution costs, on average, can account for as much as 17% of an airline's total operating costs (Dron, 2015). Distribution channels include, for example, relations with travel agents, global distribution systems, online ticket distribution channels, travellers' mileage plans, sales agreements with major businesses and promotions, and alliances and code sharing (Jainchill, 2015). Therefore, by using effective distribution, the intermediary (the travel agent) can be cut out and thus the 5-25% commission charged by the intermediaries can be either passed on to the customer in savings or retained by the airline as profit (Dron, 2015).

Mango is a case in point where its distribution channel has positively influenced its performance. Mango is the first carrier in South Africa to retail flights through grocer Shoprite-Checkers, the first to offer booking and payment facilities via a mobile application, and remains the only airline in the world to accept store charge cards (for example, Edgars/Jet) as payment online and through a call centre (Mantell, 2015). By accepting store charge cards (Edgars/Jet) as payment online Mango has managed to attract first-time flyers in Africa, who do not have credit cards and have no access to Internet usage (CAPA, 2015). Consequently, by severely limiting the involvement of travel agents to distribute their products, Mango has enormously reduced its distribution costs (CAPA, 2015).

3.3.3.7 Age of fleet

According to Ballantyne (2001:12), older, less fuel efficient aircraft has a negative effect on operating profitability. Taumoepeau and Kissling (2008:379) argue that although old aircraft are relatively cheap to buy their full operating and maintenance costs tend to be high. Rosenstein (2013:11) concurs that due to their high operating costs, unreliability and long ground time (for servicing), old fleets cannot compete effectively with new generation aircraft which are more fuel-efficient, reliable and require limited maintenance resources and time. According to Merkert and Pearson (2015:269) another benefit derived from newer, modern aircraft is enhanced passenger appeal, which is hard to quantify.

Taumoepeau and Kissling (2008:379) claim that aircraft older than 20 years are so far behind modern design ideas and operational efficiencies that they place the companies that operate them at a severe disadvantage compared to those that run modern fleets. However, most southern African airlines operate

an aged fleet, typically older than the global average (Hartman & Boscoianu, 2015:107). A commercial aircraft has an operating life span of 20 to 30 years (Forsberg, 2015) yet some airlines in southern Africa, for instance Air Zimbabwe, Air Namibia and Air Botswana have fleets of aircraft with an average age above 20 years (Mananavire, 2016).

According to Malaba (2016), due to an aged fleet, Air Zimbabwe and Air Botswana's performance was adversely affected, as travellers perceive these aircraft to be unsafe. Furthermore, according to McKune (2015:19), in 2014 SAA's fleet was 34% older than its major direct competitors and this significantly contributed to an 800 million Rand impairment loss in the 2014 financial year, while most of the SAX's aircraft were about 18 years old and were costly to maintain. Therefore, the age of the fleet significantly affects the performance of airlines and to improve their financial performances, southern African airlines have to invest in a new and modern fleet (Rosenstein, 2013:11).

3.3.3.8 Management turnover

According to Sheehan (2003:7), an airline cannot be successful without a stable leadership. Johnson, Scholes and Whittington (2008:41) agree that management turnover affects the performance of airlines. Ssamula (2014:22) confirms that a high management turnover significantly affects the performance of airlines.

To illustrate the afore-mentioned point, McKune (2015:23) claims that SAA was set back by frequent turnover at the chief executive and Board level and this has significantly affected the financial performance of the airline. For example, in March 2016 SAA had its seventh CEO in three years (Rabkin, 2016). With such a high turnover of executives it is difficult for SAA to set a long-term vision (McKune, 2015:23). Similarly, South African Express lost four financial executives in the 2011/2012 financial year, and the government subsequently fired the airline's entire board (Christodoulou, 2012). In March 2017, SAX CEO, Inati Ntshanga resigned (eNCA, 2017). As of May 2017, Mango, SAX and SAA did not have a substantive CEO. Consequently, because of a high turnover of executives SAA has had many different rescue operations to try to restore profitability and stability (Gernetzky, 2016).

Furthermore, Chibamu (2016) claims that one of the causes of Air Zimbabwe's financial problems was the lack of stable management at Board and top management level. For three years (from 2013 to 2016) there was an acting-CEO without any substantive CEO to provide strategic leadership and direction. The airline has had five different Board chairpersons in seven years (from 2010 to 2016) (Mananavire, 2016). Air Botswana's financial problems were exacerbated by the frequent turnover of senior managers (Baatweng & Kologwe, 2014). The airline has been operating for five years without a permanent General Manager (Thatayamodimo, 2016).

To illustrate the magnitude of high management turnover in state carriers, in 2010, 2011 and 2015, 50% of the state-owned airlines belonging to AFRAA lost their CEOs after less than one year in office (OBG, 2017). When new management comes to the helm of an airline it gives a different direction, not giving

existing strategies time to reach their objectives (Gernetzky, 2016). Therefore, a high management turnover has significantly affected the performance of airlines in southern Africa (Chibamu, 2016). The next section discusses some of the models used to identify critical success factors.

3.4 MODELS TO IDENTIFY CRITICAL SUCCESS FACTORS

According to Auruskeviciene *et al.* (2006:337), although researchers have varied on the methods of identifying CSFs there is no universal method for critical success factor identification. Therefore, different scholars have used different methods to identify critical success factors (Koutsikouri, Austin & Dainty, 2008:220), some of which are briefly described below.

3.4.1 Analytic Hierarchy Process (AHP) methodology

AHP is a mathematical tool for multi-criteria decision-making (MCDM) method that was introduced by Saaty (1980:28) in 1980 to solve complex problems possessing both qualitative and quantitative parameters. It deals with complex problems by fragmenting them into a hierarchical structure. Consequently, some scholars (see works by Lam & Chin, 2005:769; Herrero & Salmeron, 2005:103; Isiklar & Buyukozkan, 2007:271) have applied AHP to identify and rank the critical success factors of airlines.

Step 1. Define and state the objectives of the complex and ambiguous problem clearly.

Step 2. The multifaceted problem is decomposed into a hierarchal structure with the help of group decision or survey technique. The hierarchal structure is divided into multiple levels. The top level hierarchy represents the goal of the problem. This goal is sub-divided into various criteria in the next level. The criteria are further divided into sub-criteria levels which highlight the details of the criteria. This decomposition of the hierarchy takes place until no more decomposition of sub-criteria is possible.

Step 3. To illustrate the importance of one criterion over other, a pairwise comparison can be made through decision matrix. With the help of decision makers and experts, the decision making matrix is constructed on the basis of Saaty's (1980) nine-point scale shown in Table 3. In the hierarchal structure, the elements which underlie the common node are compared with the other elements of the same node. For example, if there are "n" elements under the node, then n (n -1)/2 comparisons takes place under that node.

Table 3.2: Saaty's (1980:28) nine-point scale for AHP analysis

Level of preference	Explanations
1	Preferred equally
3	Preferred moderately
5	Preferred strongly
7	Preferred very strongly
9	Preferred extreme strongly
2,4,6,8	Intermediate preferred values

Let there be $X_1 \quad X_2 \quad ... \quad X_n$ elements under the node "M" and their numerical weights are w1, w2, w3...wn. The pairwise comparisons of these elements in accordance to their relative weights are shown in the form of a matrix, where Z is comparison matrix (n×n) which represents the pairwise comparisons among the elements $X_1 \quad X_2 \quad ... \quad X_n$

$$Z = \begin{array}{c} X_1 \\ X_2 \\ . \\ . \\ . \\ X_n \end{array} \begin{bmatrix} w_1/w_1 & w_1/w_2 & . & . & . & w_1/w_n \\ w_2/w_1 & w_2/w_2 & . & . & . & w_2/w_n \\ . & . & . & . & & . \\ . & . & . & . & & . \\ . & . & . & . & & . \\ w_n/w_1 & w_n/w_2 & & ... & & w_n/w_n \end{bmatrix}$$

$$Z = \begin{array}{c} X_1 \\ X_2 \\ . \\ . \\ . \\ X_n \end{array} \begin{bmatrix} a_{11} & a_{12} & . & . & . & a_{1n} \\ a_{21} & a_{22} & . & . & . & a_{2n} \\ . & . & . & . & & . \\ . & . & . & . & & . \\ . & . & . & . & & . \\ a_{n1} & a_{n2} & & ... & & a_{nn} \end{bmatrix}$$

Where $a_{ij} = w_i/w_j \ (i, j = 1, 2...n)$ represents the quantified comparative importance among the pair of elements of X_i and X_j. If $i = j$ then $a_{ij} = 1$ and $a_{ij} = 1/a_{ji}$ for $a_{ij} > 0$.

Step 4. After the formation of decision-making matrix, the next step is to identify the priority weights of the elements through the maximum eigenvectors and eigenvalues. According to Saaty (1980:28):

$$\lambda_{\max} = \sum_{j=1}^{n} a_{ij} \frac{W_j}{W_i}$$

The eigenvectors can be computed with the formula:

$$Z.W = \lambda_{\max} .W$$

Step 5. The consistency of the pairwise comparisons is checked in this step. In the pairwise comparison, the inconsistency is measured by consistency index (CI) and the coherence is measured by consistency ratio (CR) and is computed with the help of the formulae given below:

$$CI = \frac{\lambda_{\max} - n}{n-1} \qquad CR = \frac{CI}{RI}$$

where, n is the rank of the matrix and random index (RI) which is the CI of the matrices which are generated randomly. The maximum acceptable limit of CI and CR is 0.1 (Saaty, 1980:28). If the values are more than 0.1 it will highlight that the pairwise comparison is inconsistent and hence discarded.

Step 6. After identifying the priority weights of each element, i.e. local weights of element, the next step is to identify the global weights of all elements with respect to the goal defined in the AHP model.

Step 7. Finally, after calculating the global weights, all the elements are rearranged in the decreasing order according to the global prioritisation.

3.4.1.1 Criticisms of the Analytic Hierarchy Process (AHP) methodology

Despite the popularity of the AHP, some scholars (see work by Salmeron & Herrero, 2005:8; Lam & Chin, 2005:767; Isiklar & Buyukozkan, 2007:271; Singh, Garg, Deshmukh & Kumar, 2007:237) have expressed concern over certain issues in the AHP methodology. These scholars have long observed some cases in which ranking irregularities can occur when the AHP or some of its variants are used. This rank reversal is likely to occur, for example, when a copy or a near copy of an existing option is added to the set of alternatives that are being evaluated. The AHP method can be considered as a complete aggregation method of the additive type. The problem with such aggregation is that compensation between good scores on some criteria and bad scores on other criteria can occur. Detailed, and often important, information can be lost by such aggregation. With AHP, the decision problem is decomposed into a number of subsystems, within which and between which a substantial number of pairwise comparisons need to be completed. This approach has the disadvantage that the number of pairwise comparisons to be made, may become very large (n(n−1)/2), and thus become a lengthy task. Another disadvantage of the AHP method is the artificial limitation of the use of the 9-point scale (Singh *et al.*, 2007:237).

3.4.2 Data Envelopment Analysis Model

Data Envelopment Analysis (DEA) is a non-parametric linear programming technique used to measure the production efficiency of decision making units (DMU's) (Charnes, Cooper & Rhodes, 1978:437). DEA calculates the relative performance of DMUs as the ratio of the weighted sum of outputs to the weighted sum of inputs (Zhu, 2003:39). Some research endeavours (Barros & Peypoch, 2009:529; Merkert & Hensher, 2011:692) have used DEA, to identify and evaluate the critical success factors in the airline industry. The weights are not pre-determined, but rather allocated by the model. The basic specification for envelopment models includes distance, orientation and returns to scale.

In DEA, the radial distance function is used to measure the necessary proportional improvements of relevant factors (inputs and outputs) for the DMU under evaluation to reach the frontier of '1'. A DEA production frontier can be obtained (non-parametrically) either with an input orientation or an output orientation, each of which can be assumed to be either Constant Returns to Scale (CRS) or Variable Returns to Scale (VRS) returns to scale (Merkert & Hensher, 2011:692). While the CRS model assumes that there is no advantage to scale, VRS allows for a relaxation of this assumption (Banker, Charnes & Cooper, 1984:1085).

According to Merkert and Hensher (2011:692), airlines have a higher influence on the inputs than on the outputs (e.g. economic factors tend to induce high consumer demand and therefore a potentially high output RPK), and hence the input orientation is used in this study. The underlying premise in an input oriented model is that the primary objective of the airline under evaluation is to gain efficiency by reducing excess inputs while continuing to operate with its current technology mix. Consequently, DEA adopts an input-oriented VRS model with each airline acting as a separate DMU. The VRS model assigns an efficiency score between 0 and 1 for each DMU after evaluation and a DMU is found to be efficient only if it is assigned a score of 1.

DEA considers each of the n (j =1,…n) DMUs (that is, airlines) use a set of m inputs x_{ij} (i = 1,2 …. m) to produce s outputs y_{rj} (r = 1,2 …. s). The following input oriented VRS model helps develop a piecewise linear approximation to the efficiency frontier and the area dominated by it.

$$\theta^* = \min \theta \quad (1)$$

$$\sum_{j=1}^{n} \lambda_j x_{ij \leq \theta x_{i0}} \quad \text{i = 1,2, m;} \quad (2)$$

$$\sum_{j=1}^{n} \lambda_j y_{rj \geq y0} \text{ r = 1,2, … s;} \quad (3)$$

$$\sum_{j=1}^{n} \lambda j = 1 \quad (4)$$

$$\lambda j \geq 0 \; j = 1,2,...n; \quad (5)$$

For DMU_0 under evaluation, x_{i0} and y_{r0} are the i th input and r th output respectively. θ^* represents the input oriented efficiency score of DMU_0. To estimate efficiency scores, inputs and outputs are used in DEA. A two way random effects model (which includes an airline as well as a year dummy) is used in order to include airline level effects since differences across entities have some influence on the dependent variable. Random effects allow for time-invariant variables to play a role as explanatory variables. The following model is therefore used in DEA:

$$Y_{it} = \alpha + \beta \; X_{it+u_i+\varepsilon_{it}} \quad (6)$$

Where Y_{it} is the efficiency score of the individual airline i in the relevant year t, X_{it} is the independent or explanatory variable value (listed in the table below) for DMU i in year t, a is the intercept, b is the estimate for a particular variable, u_i is the between-entity error which is assumed same in every period and ε_{it} is the within-entity error which is uncorrelated across periods.

3.4.2.1 Criticisms of the Data Envelopment Analysis Model

DEA only measures efficiency relative to best practice within the particular sample (Chiu & Huang, 2011:2159). Thus, it is not meaningful to compare the scores between two different studies because differences in best practice between the samples are unknown. DEA scores are sensitive to input and output specification and the size of the sample. Increasing the sample size will tend to reduce the average efficiency score, because including more airlines provides greater scope for DEA to find similar comparison partners. Conversely, including too few airlines relative to the number of outputs and inputs can artificially inflate the efficiency scores. Increasing the number of outputs and inputs included without increasing the number of airlines will tend to increase efficiency scores on average (Liu & Lu, 2012:1160). According to Liu and Lu (2012:1160), this is because the number of dimensions in which a particular airline can be relatively unique (and, thus, in which it will not have similar comparison partners) is increased.

3.4.3 PESTEL analysis model

A PESTEL analysis or PESTLE analysis (formerly known as PEST analysis) is a framework or tool used to analyse and monitor environmental factors that may have a profound impact on an organisation's performance (Lohmann & Koo, 2013:8). Some research endeavours (see works by Alshubaily, 2017:34; Loh & Ching, 2014:3446; Wang & Jin, 2014:474) have used PESTEL analysis to identify environmental critical success factors for organisations. PESTEL is an acronym that stand for Political, Economic, Socio-cultural, Technological, Ecological and Legal factors. Each factor is discussed below:

a) Political factors

Political factors affecting the airline industry refer to a variety of government interventions that may hinder or enhance the operations of air transport (Heracleous *et al.*, 2009:15). Considering the vast regions in which many airlines operate, the airline environment is often regulated by the political atmosphere in a particular market (Pratap, 2016). This can include government policy, political stability or instability, corruption, foreign trade policy, tax policy, labour law, environmental law and trade restrictions. Some research endeavours (Doganis, 2001:22; Barrett, 2006:158; Taneja, 2010:36; Shepherd, 2012) argue that political factors significantly affect the performance of airlines. Njoya (2013:19) re-affirms this when he found a significant difference between the means of political factors and the performances of airlines. According to Njoya (2013:19) the significant difference between the means of political factors and the performances of airlines is attributed to government interference in the airline industry. Consequently, political factors significantly affect airline performances (Rivers, 2015).

b) Economic factors

Economic factors are an important influence on the airline industry (Pratap, 2016). According to Davis (2013:19), the airline industry is subject to changes in the world economy. The aviation industry is not immune to economic pressures (Demydyuk, 2011:47). Factors include economic growth, exchange rates, inflation rates, interest rates, disposable income of consumers and unemployment rates. These factors may have a direct or indirect long term impact on a company, since it affects the purchasing power of consumers and could possibly change demand/supply models in the economy (Bitzan & Peoples, 2016:29). Consequently, economic factors also affect the way airlines price their products and services.

c) Socio-cultural factors

Airlines create socio-cultural value, as do other businesses (Pratap, 2016). This dimension of the general environment represents the demographic characteristics, norms, customs and values of the population within which the organization operates. This includes population trends such as the population growth rate, age distribution, income distribution, career attitudes, safety emphasis, health consciousness, lifestyle attitudes and cultural barriers. This explains the relationship between society and the industry (Chandrappa, 2014). Pratap (2016) points out that socio-cultural factors have an effect on the attitudes

of consumers towards air transport. Lohmann and Koo (2013:8) affirm this, finding a significant difference between socio-cultural factors and the performance of airlines. Consequently, the industry affects, and is affected by, socio-cultural forces (Heracleous *et al.*, 2009:15).

d) Technological factors

These factors pertain to innovations in technology that may affect the operations of the airline industry and the market favorably or unfavorably (Lim & Hong, 2014:38). This refers to technology incentives, the level of innovation, automation, research and development (R&D) activity, technological change and the amount of technological awareness that a market possesses. The effect of technological factors on airline performances can be understood from the extensive use of technology in aviation (Porter & Kramer, 2011:66). Technology means speed but also convenience and safety. Whether it is air traffic or passenger safety, the role of technology is critical (Truxal, 2013:9). These factors may influence management when identifying factors that may critically impact on airline performances.

e) Ecological factors

Aircraft, as do other forms of transport, contribute to polluting the environment (Cederholm, 2014). Ecological effects of aviation occur because aircraft engines emit heat, noise, particulates and gases which contribute to climate change and global dimming (Forsyth, 2011:29). Ecological factors have come to the forefront only relatively recently. They have become important due to the increasing scarcity of raw materials, pollution targets and carbon footprint targets set by governments. These factors include ecological and environmental aspects such as weather, climate, environmental offsets and climate change which may especially affect industries such as tourism, farming, agriculture and insurance (Diaconu, 2012:344). Furthermore, growing awareness of the potential impacts of climate change is affecting how companies operate and the products they offer (Bachwich & Wittman, 2017:161).

f) Legal factors

Just like the political or economic factors, the legal factors are of special importance in the context of airlines industry (Rastogi & Trivedi, 2016:386). Legal factors pertain to the legal environment in which airlines operate. There are several laws related to air traffic and passenger safety. Particularly passenger safety is an important area. In this regard, the airlines are held liable for air crashes or any other kind of disaster. Air transport is also regulated by several acts that are of importance. The airline industry is widely impacted by regulations and restrictions related to international trade, tax policy and competition (Gupta, 2013:39). Although these factors may have some overlap with the political factors, they include more specific laws such as competition laws, antitrust laws, employment laws, consumer protection laws, copyright and patent laws, and health and safety laws (Button, 2012:214). Moreover, international flights are more heavily regulated than the domestic flights.

However, the aviation industry is global and spans the entire globe and this is particularly important in the airline industry in southern Africa where airline operations are regulated by bilateral regulations (Bachwich & Wittman, 2017:161). A bilateral regulation is a regulation undertaken jointly by two

parties, most typically by two states, although one or both parties might also be a group of states, a supra-state (a community or other union of states acting as a single body under authority granted to it by its member states), a regional governmental body or even two airlines (Kuuchi, 2016). These are agreements that one state can have with another for granting carriers from the other country specific air traffic freedoms (Warnock-Smith & O'Connell, 2011:269), where the purpose of such agreements is to control market access (Oluwakoya, 2011:6).

Bilateral arrangements enable countries to safeguard their sovereignty and traffic rights (Alves & Forte, 2015:129). This means that countries are able to control the flow of air traffic from its airports. However, bilateral deals constrain airlines from exercising traffic rights. They limit an airline's ability to operate freely by servicing routes between two countries. "Bilateral air services arrangements are effectively trade agreements between governments, not between airlines" (Doganis, 2006:28). The intra-Africa air services are subjected to intense regulation through the system of bilateral air service agreements (Gavin, 2013:9). This means the airline's route network largely begins and ends in their country of origin unless the carrier is able to enter into alliance with other foreign carriers as a means of entering new markets (Shaw, 2011:19).

3.4.3.1 Criticisms of the PESTEL model

Goyal and Negi (2014:299), claim that the PESTEL model is only based on an assessment of the external environment hence the results obtained from this model are not useful or complete. According to these authors, to assess the external environment and to enhance the operational capability of the organization, it is important to consider organisational success factors affecting airline performance. Furthermore, Eller and Moreira (2014:16) argues that PESTEL is subjective in nature implying that different people will view external factor differently. The other disadvantage of PESTEL analysis is that the six factors keep changing rapidly and any action by the company on the basis of this analysis may not profit the company if the factor due to which company has taken the decision changes and the whole exercise of doing PESTEL analysis will be futile. Therefore, rapidly changing factors make PESTEL analysis difficult task (Eller & Moreira, 2014:16).

3.4.4 Porter's Five Forces model

Porter's five forces model is usually applied to identify general industry critical success factors and is not appropriate for individual company critical success factor identification. Analysis of the kind is usually based on Porter's five forces of competition framework, comprising the following five components: entry barriers, substitutes, bargaining power of buyers and suppliers, and rivalry among existing firms. Analysis of each of these factors and their interrelationship may provide an organisation with a lot of useful data for critical success factors identification.

According to Kotler and Armstrong (2006:36), the industry environment is made up of factors that have a direct effect on an airline's ability to achieve its goals. This involves the customer, supplier, competitors, new entrants and substitutes that affect the operations of the organisation (Porter, 1980:35). Porter (1980:35) coined these elements collectively as the Five Forces of competition (see Figure 3.1). According to Demydyuk (2011:46) the model has proved a veritable tool in analysing the impacts of industry factors on organisational performance. Consequently, various scholars (Doganis, 2010:19; Heinz & O'Connell, 2013:76; Barros & Wanke, 2015:97) have since used Porter's (2008:95) model to identify industry success factors and to gauge industry attractiveness.

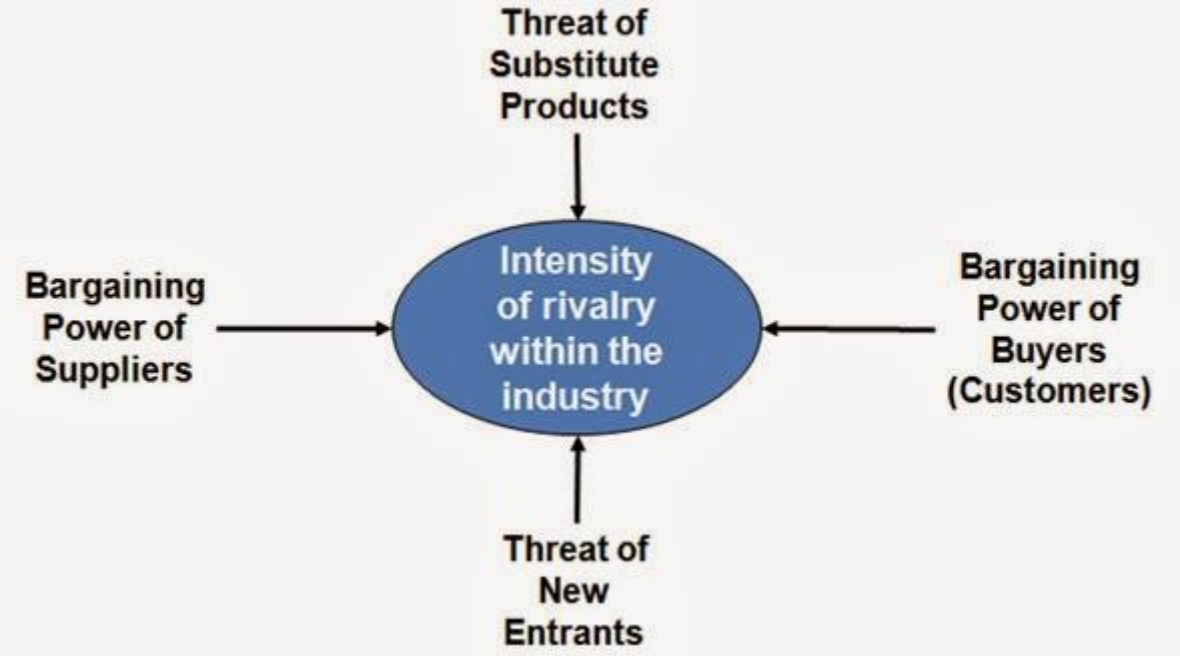

Figure 3.1: Porter's Five Forces model (Source: Porter, 1980:12)

Porter (2008:98) proposed this framework to help organisations understand the underlying structural elements that influence industry profitability. The framework suggests that the higher the intensity of each force, the lower the potential for industry profitability (Demydyuk, 2011:47). Therefore, it is important to analyse the effects of the Five Forces on airline performances, namely the threat of new entry, the buyer's bargaining power, the supplier's bargaining power, and the threat of substitute and competitive rivalry that affect the performance of airlines. Porter's (1980:35) Five Forces model is analysed below, as pertinent to the airline industry in southern Africa.

a) Competitive rivalry within the industry

The competition between firms determines the attractiveness of a sector (Allen & Helms, 2006:450). Rivalry among competitors takes place when competitors feel the pressure or see the opportunity to

improve their position. Companies are struggling to maintain their power. The competition changes based on sector development, diversity and the existence of barriers to enter (Mohapatra, 2012:52). In addition, it is an analysis of the number of competitors, products, brands, strengths and weaknesses, strategies and market shares.

b) Threat of new entrants

It is in a company's interest to create barriers to prevent its competitors from entering its market (Hemmatfar, Salehi & Bayat, 2010:158). The competitors are either new companies or companies, which intend to diversify. These barriers can be legal (patent regulations, etc.) or industrial (products or single brands, etc.), etc. The arrival of new entrants also depends on the size of the market (economy of scale), the reputation of an already established company, the cost of entry, access to raw materials, technical standards and cultural barriers. Prices and investment structures are influenced by the threat of new entrants. It depends on the entry barriers and reaction of incumbent competitors if new entrants have an opportunity to enter the existing market (Subramanian, 2010:11).

c) Threat of substitute products

All firms in the industry are competing with industries producing substitute products (Porter, 2008:12). Substitutes limit the potential returns of an industry by offering replacement for the product offered by the industry in question. Substitutes are particularly dangerous if they can serve the needs as well as the product of this industry at a lower price. Substitute products can be considered as an alternative compared to the current supply on the market. These products appear due when the current state of technology or innovation evolves. The products of existing companies are thus replaced by different products. These products often have a better price/quality relation and come from sectors with higher profits (Mohapatra, 2012:52).

d) Bargaining power of suppliers

The bargaining power of suppliers is very important in a market (Hemmatfar *et al.*, 2010:158). Powerful suppliers can impose their conditions in terms of price, quality and quantity. On the other hand, if there are a lot of suppliers their influence is weaker. One has to analyse the number of realised orders, the cost of changing the supplier, the presence of raw materials, etc.

e) Bargaining power of customers

Buyers compete in the industry by pushing down prices, bargaining for higher quality and more service and placing competitors against each other. If the bargaining power of customers is high, they influence the profitability of the market by imposing their requirements in terms of price, service, quality, etc. Choosing clients is crucial because a firm should avoid to be in a situation of dependence. The level of concentration of customers gives them more or less power. Generally, their bargaining power tends to be inversely proportional to that of the suppliers (Subramanian, 2010:11).

3.4.4.1 Criticisms of the Five Forces model

Although the Five Forces model is one of the most known and widely spread management models in practice nowadays, the criticism became increasingly severe in the recent years (O'Shaughnessy, 1984:24; Dulčić, Gnjidić & Alfirević, 2012:1081). The most detractors illustrate that economic conditions chanced fundamentally in the last decades (Conklin & Tapp, 2000:65). One of the first criticisms is the fact that Porter (1980:93) had no justification for the choice of the five environmental forces, which prove the validity of his choice (O'Shaughnessy, 1984:24). A further criticism is that the model only generates snap-shots. According to Thurlby (1998:21), the Five Forces model of Porter (1980:94) is static and does not take account of time. Thus, it is much more difficult to determine markets with higher competition dynamic because they can change very quickly. Furthermore, making use of the Five Forces framework does not guarantee a competitive advantage that is inviolable and sustained (Aktouf, 2004:36). The reason for this lies in the fact that Five Forces framework is a static model, which does not include consistently changes of the competitive environment (Karagiannopoulos, Georgopoulos & Nikolopoulos, 2005:72).

3.4.5 SWOT analysis model

When analysing a company and its strategy one should consider its organisational strengths and weaknesses and its opportunities and threats in the environment and this is done through the SWOT analysis. Ken Andrews was the first strategic theorist to build to publish work on the strategic fit between the company's resources and capabilities with the external environment. The internal factors of the analysis, strengths and weaknesses, are related to the resource based model analysed earlier and the company's core competence(s) can be identified here. The external factors, opportunities and threats, are related to other environmental models such as the PEST analysis and Porter's Five Forces and will therefore, in large, be used to summon up sub conclusions already drawn earlier in the thesis by using the other modes of analysis.

The SWOT approach is useful as it provides an overview of the company's position and its environment within one framework, but it can also be difficult to ascertain whether a certain factor is a strength/opportunity or a threat/weakness. For instance, rising oil prices may be a threat to the airline industry and a whole but an opportunity for some airlines as it may lead to consolidation within the industry as weaker airlines cannot survive the increased costs. Consequently, some scholars (see works by Zuidberg, 2014:92; Whyte & Lohmann, 2015:145; Poon & Waring, 2010:208) have used SWOT analysis to identify organisational critical success factors for organisations.

Yüksel (2012:64) recommended the following five-step process for assessing an organisation's strengths and weaknesses.

Step 1: Identify "strategic advantage factors". These are the keys to competitive advantage in an industry, located within the firm's functional areas, such as marketing (efficient and effective market

research or an efficient and effective sales force, e.g.); research and development (such as process or product design, or scientist capabilities); production and operations management (including efficient inventory control systems or the ability to control raw material costs); corporate human resources and management practices (getting and keeping top-quality employees, good relationships with trade unions, controlling labour costs); and finance and accounting management. It is the analyst's job to determine which of these factors are most critical to organizational success. A comparable process has been recommended as a way to identify organizational core competencies.

Step 2: Identify capabilities and competencies through an audit of each of the functional areas of the firm [by collecting data about] the firm's activities and competencies in executing specific tasks so as to develop a profile of its capabilities, resources, and skills -- or lack of them. Such an assessment must be conducted by someone who can be independent and objective, such as a team of consultants or a multidisciplinary team of the firm's executives.

Step 3: Analysis and evaluation. With the available data, analysis proceeds to isolate strengths and weaknesses. This begins by identifying the attributes of the strategic factors that are most critical for success, followed by comparative assessments based on three different standards: historical comparisons with the firm's past results; competitive comparisons with direct and indirect competitors; or normative comparisons using some provided standard.

Step 4: Finding strengths and weaknesses. Strengths are those areas in which the firm has a comparative advantage. A weakness would be where it does not.

Step 5: Assigning priorities. The list of strengths and weaknesses should be rated and prioritized in terms of their impact on overall strategic organizational objectives. They can then be compared and rank ordered. In summary, reports on SWOT methodology show a variety of techniques. Often, executive opinions without any corroborating evidence are gathered as the raw data for the assessment. Other methods solicit the criteria used by consumers, rely on the organisational life-cycle to identify key factors, or attempt to apply a critical event technique to isolate operating strengths or weaknesses. Many recognize the importance of actually using the emergent list of factors to compare the firm in question with its competitors. At its best, factors are prioritized or given causal significance in understanding the relative importance of purported SWOT factors.

3.4.5.1 Criticisms of SWOT analysis model

According to Coman and Ronen (2009:5682), there is a lack of prioritisation of factors, there being no requirement for their classification and evaluation. There is no rational correlation with the implementation phases of the exercise. Moreover, there are risks of inadequate definition of factors and over-subjectivity in the generation of factors (compiler bias) (Sevkli, Oztekin, Uysal, Torlak, Turkyilmaz & Delen, 2012:20).

The next section discusses previous research on critical success factors in the airline industry

3.4.6 Previous research on critical success factors in the airline industry

In spite of the growing international interest in the performance of airlines, limited research has been undertaken on this topic in southern Africa. International studies on the performance of airlines might not be applicable to the southern African context, since Heinz and O'Connell (2013:72) emphasise that the performance of airlines should be interpreted in the light of their regional context and should not be generalised to other regions. Previous research studies focusing on critical success factors in the airline industry are briefly discussed below.

As a point of departure, Kalappa (2006:9) studied the performance of Southwest Airlines and attributed the airline's success to a team spirit approach, marketing and its short versus long-haul strategy. Chan and Yeoh (2011:41) conducted research that focused on the success of Singapore Airlines and concluded that the success is attributable to structure, culture, strategic alliances, planning and forecasting, technology, marketing and branding and outsourcing. Ssamula (2009:22) assessed state-owned airlines in Africa and concluded that their success lies in their ability to operate cost effectively and prudently to adopt low risk capital and operational business models. Yang (2007:310) concluded that the success of a carrier will be determined not only by how much they are able to strategically respond to these challenges but by how fast they respond to these constantly changing forces. Brinkmann (2013) studied the success of Kulula and attributed the airline's success to good leadership, collaboration, communication, passion, innovation and creativity.

Barlow (2016) studied the performance of Ethiopian Airways (EA) and attributed the airline's success to management efficiency, management stability, minimal political interference and labour efficiency. Further, EA employs the industry average number of staff needed on board each flight whereas SAA employs twice that number (Barlow, 2016). Subagyo (2002:43) studied the operations of the South East Asian Airline's CSFs and concluded that their success is attributable to technology usage and management, reward systems, teambuilding, benchmarking, interdepartmental interaction, customer-oriented motivation, process improvement technique, quality demand awareness, manager-staff communication, improvement programme evaluation, customer feedback handling, and employee participation.

Turinawe (2015:6) conducted research that touched on the success factors of airlines in Uganda. McCabe (2006:23) investigated the factors that render American airlines successful, including customer satisfaction, operational efficiency (managing its fleet), good management of staff and financial performance managing finances, while Riwo-Abudho *et al.* (2013:84) conducted similar research on the identification of CSFs in UK airlines. Studies by Turinawe (2015:6), McCabe (2006:23) and Riwo-Abudho *et al.* (2013:84) are discussed in detail in the following paragraphs.

According to Turinawe (2015:6), the airline industry has six important CSFs that airlines must be good at in order to have superior profitability. These CSFs focus on efficiency as the airline industry has high fixed costs and low margins. The six CSFs for the airline industry are the following:

i) Optimum capacity utilisation: This is the ability of airlines to utilise every seat on the aircraft before departure without delaying the flight (Moreira, 2013). The more seats that are filled on a flight, the more profitable the flight will be for the airline. According to Turinawe (2015:6), because of the high fixed costs that are inherent in the airline industry, the ability of airlines to utilise every seat on the aircraft is crucial. This means that the airline must acquire a fleet–appropriate size and combination of aircraft–for optimum capacity utilisation. Therefore, this CSF increases profitability because it increases sales quantity and average price (Zott, Amit & Massa, 2011:1036).

ii) Fuel efficiency: This refers to an airline's ability to utilise fuel consumption more efficiently compared to its rivals. Turinawe (2015:6) posits that an airline's fuel costs may constitute up to 40% of its total costs. This means any cuts in this area will have a substantial effect on the profitability of the airline. The cuts may be realised through actual enjoyment of low fuel price increases, or having a cost-saving uplift management plan of acquiring fuel efficient modern aircraft (Moreira, 2013). Utilising the newest fuel-efficient aircraft and having maximum enplanements allows airlines to use fuel efficiently (Lim & Mohayidin, 2011:26).

iii) Labour efficiency: Ideally, an aircraft should remain in the air because an aircraft on the ground does not earn income (Moreira, 2013). Therefore, aircraft maintenance is about the capability to efficiently repair aircraft when there is a problem and return them into flight as quickly as possible (Lim & Mohayidin, 2011:26). Airlines that can control labour cost have the ability to earn superior profits compared to competitors (Zott *et al.*, 2011:1036). According to Doganis (2013:19), airlines that effectively implement technological improvements will increase worker productivity and decrease labour costs. Consequently, being successful on this CSF will increase profits by decreasing operating costs (Moreira, 2013).

iv) Effective maintenance capabilities (jet utilisation): According to Turinawe (2015:6), the faster a carrier can get its aircraft back into revenue service, the more profitable it will be. Jet utilisation is the number of hours the aircraft is in service (Coelho, 2010). Airlines successful on this CSF can increase sales quantity by reducing repair time and increasing the number of flights (Lim & Mohayidin, 2011:26).

v) Prompt delivery to market: In aviation, time is of the essence (Turinawe, 2015:6). This means the frequency and reliability of flights are CSFs for competing airlines in airline choice (Beria, Niemeier & Fröhlich, 2011:217). As the airline industry is highly competitive, the ability to deliver services on time will reduce the loss of customers to rivals (Aguirregabiria & Ho,

2010:381). On-time performance builds brand loyalty, which translates into sales and profitability (Barros & Couto, 2013:12).

Turinawe (2015:6) states that no airline can survive in the 21st century environment without appreciable reliable services. Part of the consideration in the interline decision-making considers reliability because of its relationship to perceived service quality. For airlines, this critical success factor can be addressed through deliberate financial outlays in staff training and aircraft ground handling capability. The frequency and reliability of flights are critical factors for competing airline companies (Aguirregabiria & Ho, 2010:381). This CSF builds brand loyalty, which increases sales quantity and profit (Barros & Couto, 2013:12).

vi) Customer service and satisfaction: Each airline differs from other competitor airlines in that they may strive to build brand loyalty through good customer service (Douglas, 2010:208). Customer service and satisfaction is measured according to, for example, mishandled baggage, customer complaints, delayed flights and overbooked flights (Barros & Couto, 2013:12). According to Turinawe (2015:6), airline industry customer service performance is improving, primarily due to airlines recognising that customer service matters to consumers. Therefore, the ability to provide good customer service builds brand loyalty (Douglas, 2010:208).

McCabe (2006:23) conducted similar research to determine CSFs in the airline industry. A computer model of an airline was constructed and then simulated the operations of the eight airlines examined over specific periods, most of the airlines for a five-year period. According to McCabe (2006:23) to be successful, an airline must be effective in four general areas:

i) Attracting customers: McCabe (2006:22) used two factors of measurement with regard to customers: 1) the attractiveness of the airline's service and 2) the effectiveness of the airline's promotional expenditures. According to McCabe (2006:22) the attractiveness of an airline's service includes the factors of infrastructure convenience, scope of service and the attractiveness of ticket prices. In McCabe's (2006:20) study the relative price of tickets was the most significant factor in attractiveness. A relative price was found to be more attractive to most travellers. McCabe (2006:20) noted a measure of ticket sales per dollar of promotion expense used, with higher sales per promotion dollar being advantageous.

ii) Managing the fleet: McCabe (2006:20) claims that aircraft utilisation in hours-per-day indicates how well a company's major assets (aircraft) are used as a group. The load factor relative to the industry average indicates how well the average aircraft is used (Lim & Mohayidin, 2011:26). The load factor is that proportion of an aircraft's seats that are sold and actually filled at departure (Tavassoli, Faramarzi & Saen, 2014:152).

iii**)** **Managing people**: McCabe (2006:20) used two factors (productivity and morale) with respect to how airline management should manage its employees. Productivity, in airline capacity per

employee, is a measure of how effectively the employees work together in providing the physical service of getting passengers from one place to another. Morale is a measure of how committed employees are to providing good service to the airline's customers (Lim & Mohayidin, 2011:26).

iv) Managing finances: Unit revenue and unit cost are important by themselves, but their relationship is also important. Therefore, McCabe (2006:17) compared unit revenue and unit cost as well as the unit margins among the airlines. Lim and Mohayidin (2011:26) assert that a measure of capacity to normalise these factors is used since the airlines fly all their available seats, not just those that are occupied. Better unit revenue may not be an advantage for an airline whose unit costs are out of line. In addition to unit revenues and unit costs, funding for growth is an important factor for an airline's long-term success (Lim & Mohayidin, 2011:26).

Riwo-Abudho *et al.* (2013:84) conducted similar research to determine CSFs in the airline industry. According to these authors, the general strategy of the airline is to scan the environment, forecast, and come up with strategies that may counter the negative effects from the environment to achieve specific targeted CSFs. Riwo-Abudho *et al.* (2013:84) opine that to be successful, an airline must be effective in seven general areas:

i) Structure: Organisational structures have become an effective management tool, unlike in the past where the management focused more on technical and governmental issues (Dobruszkes, 2013:79). Organisational structures are patterns of relationship that define the way work is done by clearly structuring positions, responsibilities, authority, power and the bases, from which they originate and a communication system placement of human resources in the organisation (Riwo-Abudho *et al.*, 2013:84).

Dobruszkes (2013:79) found that the organisational chart for continental airlines is arranged along functional lines, that is marketing, finance and operations, which allow the firm to operate on a clear chain of command and focus on its strategies building competitive advantage. With the different types of structures, a firm can pick on a type of organisation structure and tailor it to fit in with its operations (Heinz & O'Connell, 2013:79). The best structures are those that maximise effectiveness of communication and break down barriers between people and hierarchies (Moreira *et al.*, 2011:89).

Airlines could have structures that focus on strategies that help them build competitive advantages and, according to Heinz and O'Connell (2013:79), functional structures focus on functional excellence, divisional structures are for market place responsiveness, and horizontal structures are for value chain processes. Structure is a CSF that unifies the airline's system and how it caters to the market it serves (Lim & Mohayidin, 2011:26).

ii) Culture: With the airline industry having its focus on customers the one internal element that can unify all employees and their actions towards the goal of satisfying customer-need is a common organisation culture (Riwo-Abudho *et al.*, 2013:84). Culture is a fundamental set of assumptions, values and ways of doing things that was accepted by most of its members (Heinz & O'Connell, 2013:79). The set of values and attitudes practised are translated into business processes and these are reflected on the end product, which is felt by the customers (Heinz & O'Connell, 2013:79). Policies and programmes can be used to deeply root a culture. With an effective culture in place, employee commitment can translate to tangible results and even reflect on financial statements (Lim & Mohayidin, 2011:26).

Heinz and O'Connell (2013:77) conclude that the Southwest perspective of an excellent corporate culture stems from Southwest's employee motivation and the cultivated attitude that steered towards teamwork. Further, from a customer experience point of view, consumers often see the front-line staff as the airline itself and therefore the kind of culture displayed during customer service will earn the airline its image. According to Dobruszkes (2013:79) Singapore Airlines employs various forms of rewards and recognition, including symbolic actions, performance-based shared options and pay components that have earned the airline the 'best airline' and 'best cabin crew service' over the years, which is evidence enough that culture can be a strong source of motivation. The history and culture of an airline may contribute to its strategic capabilities, but may also give rise to strategic drift as its strategy develops incrementally because of influence and failing to keep pace with a changing environment (Lim & Mohayidin, 2011:26).

iii) Strategic alliances: Riwo-Abudho *et al.* (2013:84) identified three sequential strategies of collaborating. Airlines are in search of size by first ensuring a dominant position within their own markets, then gaining a foothold in other major regional markets, and finally establishing a global presence. Strategic alliances make these possible by bringing in various advantages (De Wit & Zuidberg, 2012:20). Heinz and O'Connell (2013:79) state that the benefits of alliances range from code sharing, hub co-ordination, reciprocal sales agreements, joint ventures including catering and maintenance, increased traffic levels from new market development, ease of baggage transfer, single check-in for multiple trips, and a combination of Frequent Flyer programmes. All these lead to cost savings with differentiation that is substantial to build competitive advantages (Alderighi, Cento & Piga, 2011:371).

iv) Planning and forecasting: According to Riwo-Abudho *et al.*, (2013:84) being able to communicate one's products effectively to its target market is what every business focuses on as it not only informs but builds strong relationships between the product and the consumer. Planning is a vital management tool in airlines as it helps in forecasting and building scenarios

for contingency planning due to their very dynamic and unstable environments, which subject them to both planned and emergency changes (McGrath, 2010:250).

v) Technology**:** Technology is used by airlines to increase convenience and reduce costs as carriers incur high levels of cost from labour, inefficiencies and fuel (Riwo-Abudho *et al.*, 2013:84). According to De Wit and Zuidberg (2012:20), technological innovations kept Southwest Airlines in the front line of the industry where process innovations involving people made them legendary, including maintenance. Computer systems enhance decision-making, building both customer service activities and executive decision-making (Alderighi *et al.*, 2011:371). Customer profiles can be used to design products and make decisions on the most profitable products, customer loyalty programs, the most cost effective routes and management of human resource (Heinz & O'Connell, 2013:79).

vi) Marketing and branding: Torlak, Sevkli, Sanal and Zaim (2011:3400) argue that airlines should provide the right service and the right product ahead of the customer's request. The authors further state that this can be done through Customer-centric Revenue Management, which is a combination of Revenue Management and Customer Relations Management. This level of customer focus builds identity and therefore a strong brand name as a carrier differentiates its products by using the available information on the customer profile and buying history to tailor-make products for its market (Lim & Mohayidin, 2011:26). With well-differentiated products carriers can build advantages over their low-cost rivals. As Moreira *et al.* (2011:89) state, there are many customers who consider service and other merits more valuable than low pricing.

vii) Outsourcing: Airlines need to focus on their core activities to build excellence (Riwo-Abudho *et al.*, 2013:84). Supportive activities that are not supported by in-house capabilities should be outsourced as the provider is in a better position to deliver his services of specialty. Lim and Mohayidin (2011:26) state that strategic outsourcing ensures that the airline concentrates its resources on a set of core competencies that can achieve definable pre-eminence and provide unique values for customers. This might include advertisements and catering. Beria *et al.* (2011:218) opine that service industries like airlines need to be strategic due to complex operations.

Benefits of outsourcing are pegged on the fact that the airlines incur high costs of labour, fuel and capital investment (Torlak *et al.*, 2011:3402), so it is only logical to look for ways of cutting costs. Strategic outsourcing benefits include cost reduction because the service provider has access to superior cost drivers, economies of scale and learning (Heinz & O'Connell, 2013:79). Outsourcing also increases focus due to reduction in the functional scope of the organisation, which increases market responsiveness (Heinz & O'Connell, 2013:79). Carriers also get the benefit of flexibility from outsourcing whereby there is less risk and uncertainty (transfer of risk to service provider) to deal with

in the dynamic changing environments (Riwo-Abudho *et al.*, 2013:84). Consequently, despite the existence of many studies, there is no consensus on which factors affect success in the airline industry.

3.4.7 Framework on the effects of organisational, industry and environmental success factors on airline performances

Based on the literature presented above, a framework (see Figure 3.2) that will be used for the research methodology (in Chapter 4) has been developed to portray the effects of organisational, industry and environmental success factors on airline performances. The performance of airlines (success or failure) is influenced by the alignment of organisational strengths and weaknesses with environmental opportunities and threats. A cursory glance at the framework will help to give a clearer understanding of the impacts of critical success factors on airline performances.

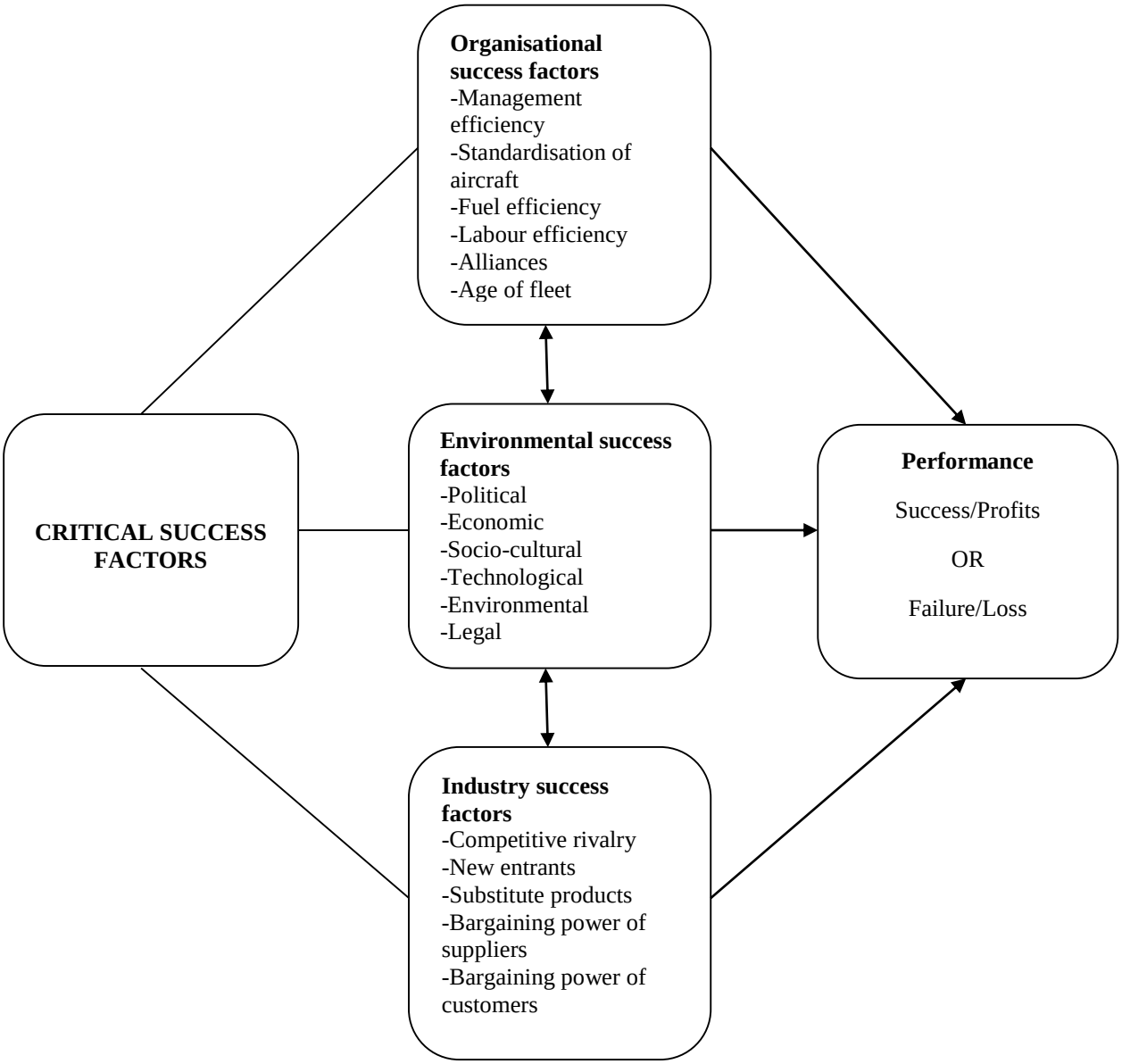

Figure 3.2: Framework of the effects of organisational, industry and environmental factors on airline performances (Source: Researcher's construct)

3.5 SUMMARY

This chapter presented a theoretical background on the nature and extent of critical success factors were discussed. Furthermore, the sources of critical success factors were critically examined and three sources of critical success factors were discussed, namely, environmental, industry and organisational success factors. In this regard, literature was reviewed on how environmental, industry and organisational success factors have affected airline operations in southern Africa. The chapter points out that organisational success factors comprises of controllable factors while the externalal and industry success factors comprises of uncontrollable factors that are outside the airline and are harder to predict and control. The chapter concludes that the only opportunities in the industry environment of the airline industry in southern Africa are the low threat of substitutes and new entrants. These are not enough to

mitigate intense rivalry and high bargaining power of buyers and suppliers, hence there is such a high failure rate in the airline industry relative to other industries. The chapter also discussed various models of identifying critical success factors and previous research on CSFs. Finally, the chapter presented a framework to portray the relationship between critical success factors and airline performances. To this effect, this chapter has not only provided theoretical and conceptual frameworks that guide this study, but also put previous research into context.

In the following chapter, Chapter Four, the research methodology and techniques are discussed.

CHAPTER FOUR
RESEARCH METHODOLOGY AND TECHNIQUES

4.1 INTRODUCTION

This chapter presents the methods that were used to gather and analyse information from the relevant population groups, in order to address the research objectives as stated in Chapter One. The methodology employed in this study is discussed, which includes conceptualisation, operationalisation, sampling, data collection and data analysis. The concepts used in this study are explicated and the measuring instruments and how these were administered to ensure reliability and validity of the results, is discussed. The chapter also discusses the sample of this study in terms of airlines and respondents and how they were selected and approached. Data collection is examined and data are analysed to facilitate answering of the research question. Finally, the ethical considerations of the study are considered. It is clear that the point of departure in this study was the aim of the study, hence it is addressed first in this chapter.

4.2 RESEARCH QUESTIONS AND SUB-QUESTIONS

It is clear from the aim of the study in Chapter One that this study attempts to identify CSFs to overcome challenges faced by airlines in southern Africa. To elicit comprehensive answers to this question, the researcher posed the questions below:

- What is the development of the airline industry in southern Africa?
- What are the sources of critical success factors for airlines operating in southern Africa?
- What are the critical success factors to overcome challenges facing airlines operating in southern Africa?

Based on the defined research questions, the study objectives are:

- To explore the development of the airline industry in southern Africa.
- To critically examine through a literature review, the sources of critical success factors for airlines operating in southern Africa, and
- To examine aand identify critical success factors to overcome challenges facing airlines in southern Africa.

4.3 RESEARCH DESIGN

A research design is a plan of how to proceed in determining the nature of the relationship between variables (Bless & Higson-Smith, 2000:46). It is a master plan that identifies the specific techniques and procedures used to collect and analyse data about a problem (Zikmund & D'Amico, 2001:133). In order

to meet the researcher's aim, the research design must be carefully compared to the research objectives to ensure that the sources of data, the data collected and the scheduling and costs involved are relevant (Bless & Higson-Smith, 2000:46). For the purpose of this study the discussions are divided into research approach and research technique.

4.3.1 Research approach

In accordance with the objectives of the study a mixed-methods research design (qualitative and quantitative) was followed. According to Venable (2006:22) a mixed methods approach involves the incorporation of one or more methodological strategies, or techniques drawn from a second method, into a single research study, in order to access some part of the phenomena of interest that cannot be accessed by the use of the first method alone (Venable, 2006:22). When qualitative and quantitative research methods are combined various combinations are possible based on the theoretical drive and point of interface factors (Leedy & Ormrod, 2013:92).

In quantitative research, an investigator relies on numerical data to test the relationships between the variables (Charles & Mertler, 2002:11). Quantitative research attempts to measure the precise count of some behaviour, knowledge, opinion or attitude (Cooper & Schindler, 2003:216). It involves looking at numbers or quantities of one or more variables of interest (Leedy & Ormrod, 2013:94). Quantitative measures (survey) were used to gather data to test the responses to questions (Creswell, Ebersohn, Eloff, Ferreira, Ivankova, Jansen, Nieuwenhuis, Pietersen, Plano Clark & van der Westhuizen, 2007:255). In quantitative research, the data are collected using existing or pilot-tested, self-developed instruments (surveys, tests, scales) intended to yield highly reliable and valid scores (Creswell *et al.*, 2007:256).

Wilson (2006:105) defines qualitative research as an unstructured research approach with a small number of carefully selected individuals with the intention of providing non-quantifiable insights into behaviour, motivations and attitudes. It involves examining and reflecting on perceptions in order to gain an understanding of socio-cultural and human activities (Collis & Hussey, 2003:13). Brewerton and Millward (2001:199) argue that although the main aim of qualitative research is to explore a specific issue in order to generate new theory, this method can also be effectively used to supplement and enrich quantitative research.

Quantitative research is a more structured approach, using a sample of the population to produce quantifiable insights (Wilson, 2006:135). It involves collecting and analysing numerical data and applying statistical tests to it (Collis & Hussey, 2003:13). The aim of quantitative research is to generalise information about a specific population based on results from a representative sample, which is interpreted to forecast possible future results under different or similar conditions (Tustin, Ligthelm, Martins & Van Wyk, 2010:89).

Collis and Hussey (2003:78) define the use of both a quantitative and qualitative methodology of data collection as methodological triangulation. The same authors argue that a combination of methodologies

in the study of the same phenomenon leads to greater validity and reliability than a single methodological approach. Qualitative and quantitative methods are suitable at different stages of a research. For instance, qualitative research can be used to build hypotheses and explanations at the beginning of a research then quantitative methods can be used to accept or reject these hypotheses in a logical and consistent manner (Collis & Hussey, 2003:88).

Brewerton and Millward (2001:61) argue that in many cases it is valuable to undertake preliminary qualitative research to generate detail-rich information that can feed into a subsequent quantitative research. Saunders, Lewis and Thornhill (2009:153) identify two advantages of the mixed methodology, that is, different methods can be used for different purposes in a study and since each analysis procedure has its own strengths and weaknesses the use of different methods cancels out the 'method effect' thereby placing greater confidence on conclusions arrived at.

Therefore, a mixed methods research design was employed in this study to gain an in-depth understanding as well as information about the general representativeness of that understanding. To incorporate content validity, a tentative meeting (qualitative) was scheduled by the researcher in April 2016 with eight airline CEOs (namely, SAA, Comair, SAX, Air Zimbabwe, Air Botswana, SAX, Mango and FlySafair), to discuss the purpose of the study and for their inputs on the study. Content validity connotes the extent to which a measurement instrument is a representative sample of the content area being measured (Leedy & Ormrod, 2013:19). They were given the opportunity to raise their expectations and concerns about the study. After the interviews, two suggestions were made by airline CEOs. These suggestions guided the research design of the study. Initially, the CEOs suggested that only airline managers should be targeted. Secondly, the CEOs suggested that the questionnaire should not be too long. They proposed that the questionnaire should be less than four pages in length and easy to comprehend.

From the above points, in-depth interviews provided qualitative insights and illuminations, accompanied by a questionnaire survey that was advantageous in taking a broader and complimentary view of the research problem (Collis & Hussey, 2003:76-79). Qualitative research was used to explore and understand attitudes and behaviours to gain confidence that challenges facing airlines were addressed in the research. Furthermore, quantitative research centred on determining the extent of these attitudes and behaviours to provide statistical conclusions to identify CSFs to overcome challenges facing airlines (Babbie & Mouton, 2001:80-81).

Qualitative data gathered from in-depth interviews provided a basis for judgment on whether or not a line of thought was worth including in the quantitative instrument in terms of importance and answering of the research objectives, as well as identifying options for structuring purposes of the structured survey questions (Schensul, Schensul & Le Compte, 2012:54). The qualitative research was therefore used to strengthen the design of the quantitative study through maximisation of both the appropriateness and utility of the research instrument (Zhao, 2009:88).

4.3.2 Research technique

McMillan and Schumacher (2010:602) define survey research as the assessment of the current status, opinions, beliefs and attitudes by questionnaires or interviews from a known population. In survey research, researchers select samples of respondents before administering questionnaires or conducting interviews to collect information about their attitudes, values, habits, ideas, demographics, feelings, opinions, perceptions, plans and beliefs (McMillan & Schumacher, 2010:601). A field survey was used to collect data for analysis and interpretation.

Surveys are performed to generate original information from a sample (Dooley, 1990:130; Babbie & Mouton, 2001:232). The purpose of a survey is to generalise from a sample to a population so that inferences can be made about some characteristic, attitude or behaviour of the population (Creswell, 2003:154). Several researchers (Barros & Peypoch, 2009:529; Merkert & Hensher, 2011:691; Ramanathan, 2013:434) found surveys to be a powerful technique for eliciting information on the performance and efficiency of airlines.

The section below discusses the research methodology of this study.

4.4 RESEARCH METHODOLOGY

Research methodology can be defined as the analysis of the principles of methods, rules and postulates employed by a discipline (Creswell *et al.*, 2007:256). It is the systematic study of methods that are, can be, or have been applied within a discipline and the study or description of methods (Tustin *et al.*, 2010:162). It is a way to systematically solve the research problem, and is generally a guideline for solving a problem, with specific components such as phases, tasks, methods, techniques and tools (Creswell *et al.*, 2007:256).

Below are specific components that were employed in the research methodology of this study.

4.4.1 Conceptualisation

Figure 3.2 in Chapter Three depicts the conceptual framework of this study. This framework and the research question attempt to portray sources of critical success factors, namely (1) environmental success factors (2) industry success factors and (2) organisational success factors and their effect on airline performances. Therefore, this section conceptualises the terms *environmental success factors*, *industry success factors* and *organisational success factors* to enable the researcher to draw factors that are critical to the success of airlines.

Organisational success factors in this study include all elements that are endogenous to the airline, which are influenced to a great extent and totally controlled by it (Srimuk & Choibamroong, 2014:46). Each organisation in the industry is in a unique situation determined by its history and current resources, competences and competitive strategy (Shieh & Wang, 2010:403). The effects of organisational success

factors on airline performances was measured on the dimensions as detailed by some authors (Porter & Kramer, 2011:66; Haider, 2015), namely the age of the fleet, management turnover, use of standardised fleet, labour efficiency, management efficiency, fuel efficiency, alliances and distribution channels. The effect of environmental success factors on airline performances was measured using the SWOT analysis model.

Industry success factors in this study refer to the skills and attributes of the organisations in the industry that are essential to deliver success in the marketplace. This involves the customer, supplier, competitors, new entrants and substitutes that affect airline performances. The effect of industry success factors on airline performances was measured using Porter's (1980:33) Five Forces model, namely the threat of substitute products, the bargaining power of suppliers, the bargaining power of customers, rivalry amongst existing competitors and threat of new entrants.

Environmental success factors in this study include all elements that are endogenous to the airline, which are influenced to a great extent and totally controlled by it (Srimuk & Choibamroong, 2014:46). These include a complex of socio-cultural, technological, economic, political and legal factors that are beyond the control of business and impose their limitations on the activities of the organization and these factors are harder to predict. The effect of environmental success factors on airline performances was measured using the PESTEL model.

4.4.2 Operationalisation

According to Babbie and Mouton (2001:98), operationalisation is the development of specific research procedures that result in empirical observations that represent concepts in the real world. As such, it involves the identification of characteristics making up the concept for purposes of measurement. Operationalisation deals with the question "How will the researcher actually measure the concepts (variables) under study?" (Babbie & Mouton, 2001:98). Operationalisation, therefore, delineates the measuring instruments used, namely questionnaires and a checklist for observations.

4.4.2.1 Questionnaire

Although two standard surveys, namely the Data Envelopment Analysis (DEA) (proposed by Charnes, Cooper & Rhodes, 1978:434, based on the earlier work of Farrell, 1957:267) and the Analytical Hierarchy Process (AHP) (developed by Saaty in 1980:23) have been applied in previous airline research, they were deemed unsuitable for this study for the following reasons.

The Data Envelopment Analysis (DEA) was not able to address the objectives of this study since it is a non-parametric method that is used to estimate the production frontier of Decision Making Units (DMUs) with multiple inputs and multiple outputs (Rai, 2013:42).

Although the AHP questionnaire could address the objectives of the study, it required subjective data on airlines based on experience, knowledge and judgment of the researcher (Yusuff & Poh Yee,

2001:423) and hence it had an element of bias resulting from subjective data. Consequently, a self-administered questionnaire was customised to address the objectives and setting of the study.

Development of the questionnaire

To incorporate face validity, a self-administered questionnaire based on three models, namely, Porter's five forces model, PESTEL framework and SWOT analysis framework since the extensive literature review identified these models as the frameworks that measure the sources of critical success factors for airlines. Face validity is the extent to which, on the surface, an instrument looks like it is measuring a particular characteristic (Leedy & Ormrod, 2013:19). Using measures that have been used in previous research also ensured the reliability of the questionnaire. Leedy and Ormrod (2013:19) posit that one way to help ensure reliability in getting information from people is to use measures that have proven their reliability in previous research.

A questionnaire was developed bearing in mind the research aim and questions of this study. The questionnaire consisted of both open-ended and closed-ended questions (Appendix C). Open-ended questions were included to allow respondents to give their views, opinions and recommendations about challenges and CSFs for airlines (Creswell & Plano Clark, 2007:161). The advantages of open-ended questions are that they permit an unlimited number of possible answers and respondents can answer in detail and qualify and clarify responses (Cohen, Manion & Morrison, 2001:9).

Open-ended questions were included to:

a) assess organisational success factors that affected airlines operating in southern Africa;

b) examine environmental factors (PESTEL), and industry factors (customer, supplier, competitors, new entrants, substitutes) that affected airlines operating in southern Africa;

c) critically assess challenges facing airlines in southern Africa;

d) identify and critically examine critical success factors to overcome challenges that affeted airlines operating in southern Africa; and

e) suggest recommendations for improving the performance of airlines in southern Africa.

Closed-ended questions were used because data obtained from the administration of closed questions was easier to analyse since they guaranteed uniform responses (Creswell *et al.*, 2007:161). Closed-ended questions are structured questions that provide for a set of responses from which the respondent has to choose one or sometimes more than one response, whilst in open-ended questions, a question is asked and space is provided for a word, phrase or even a comment (Creswell *et al.*, 2007:105). Bell (2005:17) distinguishes between the following six types of closed-ended questions: list, ranking, category, quantity, grid and scale, all of which were used in this study.

Airline managers were requested to rate the effects of various factors on airline performances. A PESTEL framework (Political, economic, socio-cultural, technological, environmental and legal

factors) was used as an exogenous variable since some research endeavours (see works by Alshubaily, 2017:34; Loh & Ching, 2014; Wang & Jin, 2014) identify these six dimensions as the sources of environmental success factors for airlines. Furthermore, Porters' (1980:12) five-forces model (namely, rivalry among existing competitors, the threat of new entrants, the threat of substitute products or services, the bargaining power of suppliers and the bargaining power of customers) was used as an exogenous variable since various scholars (Doganis, 2010; Heinz & O'Connell, 2013; Barros & Wanke, 2015) identify these forces as the identify these five forces as the sources of industry success factors for airlines. Seven organisational success factors (namely, management efficiency, standardisation of aircraft, fuel efficiency, labour efficiency, alliances, age of fleet and management turnover) were used through SWOT analysis, to identify airline strengths and/weaknesses since some research endeavours (see works by Zuidberg, 2014; Whyte & Lohmann, 2015; Poon & Waring, 2010) identify these factors as critical to the success of an airline. Airline performance was treated as an independent variable. This method of testing the relationship between environmental, industry and organisational factors and airline performance is comparable to the technique used by Alshubaily (2017:34), who also used sources of critical success factors as exogenous variables and airline performance as an independent variable.

To identify critical success factors, managers were requested to rate the effects of environmental, industry and organisational success factors on airline performances. A five-point Likert scale was used. Since each point in the Likert scale had a descriptor, a fully anchored rating scale (Johnson & Christensen, 2004:171) was applied. The questionnaire included seven questions to identify organisation critical success factors namely; *management efficiency*, *standardisation of aircraft*, *fuel efficiency*, *labour efficiency, alliances, age of fleet* and *management turnover*. The five response alternatives for measuring the effects of the organisational factors on airline performances ranged from 'very negative - (1)', 'negatively - (2)', 'neither negative nor positive - (3)', 'positively - (4)' to ' very positive - (5)'.

Furthermore, the questionnaire included 26 questions to identify environmental critical success factors based on the PESTEL framework. The questions included five items to measure *political factors*, five to measure *economic factors*, four to measure *socio-cultural factors*, five to measure *environmental* factors and three to measure *legal factors*. The five response alternatives for measuring the effects of the environmental factors on airline performances ranged from 'very negative - (1)', 'negatively - (2)', 'neither negative nor positive - (3)', 'positively - (4)' to 'very positive - (5)'.

Finally, the questionnaire included 28 questions to identify industry critical success based on the Porter's (1980) Five forces model. The questions included six items to measure the bargaining power of customers, five to measure the *bargaining power of suppliers*, eight to measure the *threat of new entrants*, four to measure the *threat of substitutes* and five to measure *rivalry amongst existing airlines*. The response alternatives ranged from 'strongly disagree - (1)', 'disagree - (2)', 'neither agree nor disagree - (3)', 'agree - (4)' to 'strongly agree - (5)'.

To identify challenges facing airlines and CSFs, a five-point Likert scale was used. The five response alternatives for identifying challenges which affect airline performances ranged from 'not challenging - (1)', 'less challenging - (2)', 'indifferent - (3)', 'challenging - (4)' to 'and very challenging - (5)' whilst the five response alternatives for identifying CSFs ranged from 'not critical - (1)', 'less critical - (2)', 'indifferent - (3)', 'critical - (4)' to 'and very critical - (5)'.

The five-point Likert-type scales for measuring the effects of the internal and external environment on airline performances and to identify challenges and CSFs were drawn from DeVellis (1991:68-70). DeVellis (1991:68) emphasises that the response options in a Likert-type scale should be worded in such a way that the difference in agreement between any adjacent pair of response options should be about the same as for any other adjacent pair of response options. Several authors (Barbot, Costa & Sochirca, 2008:272; Ouellette, Petit, Tessier-Parent & Vigeant, 2010:219; Sjogren & Soderberg, 2011:231) found a Likert-type scale to be a useful tool in measuring CSFs also in airlines.

The questionnaire items were phrased in English, not only because the majority of airline managers are expected to be conversant in English but also because it is one of the common languages spoken in southern Africa, apart from IsiZulu, IsiXhosa, IsiNdebele, Shona, Tswana and Afrikaans. The questionnaire items formulated were clear, precise and short. Struwig and Stead (2001:38) point out that the questionnaire should be phrased in the language that the respondents will easily understand and should be precise, to maintain interest and to ensure reliability of the responses. Respondents can read and comprehend these items quickly and select or provide an answer without difficulty (Babbie & Mouton, 2001:237; Struwig & Stead, 2001:38).

Due to the use of the questionnaire positivism components were incorporated. Positivism sees socio-cultural science as an organised method for combining deductive logic with precise empirical observations of individual behaviour in order to discover and confirm a set of probabilistic causal laws that can be used to predict general patterns of human activity (Neuman, 2000:66).

Validity

The validity of a measurement instrument is the extent to which the instrument measures what it is actually intended to measure (Leedy & Ormrod, 2013:92). It refers to the degree to which a study accurately reflects or assesses the specific concept that the researcher is attempting to measure (Babbie & Mouton, 2001:81). In this study, three forms of validity–face, content and interpretive validity–were incorporated into the questionnaire.

To incorporate face validity, the questionnaire was compiled based on the framework of this study and with reference to questionnaires used in previous studies (Sjogren & Soderberg, 2011:231; Tavassoli *et al.*, 2014:149). Face validity is the extent to which, on the surface, an instrument looks like it is measuring a particular characteristic (Leedy & Ormrod, 2013:92). Face validity was useful in ensuring the co-operation of managers who participated in the study.

To incorporate content validity, the questionnaire was submitted to two subject experts in the Department of Tourism and Event Management at Cape Peninsula University of Technology (CPUT) after which it was pilot-tested with two airline CEOs and five managers at FlySafair and Fly Blue Crane to ensure readability. The pre-test subjects were people to whom the questionnaire would at least be appropriate to ensure content validity of the questionnaire (Babble & Mouton, 2001:244-245). Content validity connotes the extent to which a measurement instrument is a representative sample of the content area being measured (Leedy & Ormrod, 2013:92). By utilising the content validity approach, the researcher measured the validity of the possible results obtained during the study by determining whether the questionnaire measured the characteristics it was supposed to measure.

Interpretive validity was incorporated by integrating expertise from the Department of Statistics at the Cape Peninsula University of Technology (CPUT) during data analysis and interpretation. Interpretive validity, according to Struwig and Stead (2001:144), refers to whether the information for a study is accurately analysed and reported.

Reliability

The reliability of a measurement instrument refers to the consistency with which a measuring instrument yields a certain result when the entity being measured has not changed (Cooper & Schindler, 2003:235). It is the extent to which an experiment, test or any measuring procedure yields the same result on repeated trials. Without the agreement of independent observers able to replicate research procedures, or the ability to use research tools and procedures that yield consistent measurements, researchers would be unable to satisfactory draw conclusions, formulate theories or make claims about the generalisation of their research (Leedy & Ormrod, 2013:92).

The researcher ensured reliability by using measures that have proven their reliability in previous research (Oum & Yu, 1995:188; Assaf, 2009:918). Babbie and Mouton (2001:122) posit that one way to help ensure reliability in getting information from people is to use measures that have proven their reliability in previous research.

Babbie and Mouton (2001:122) contend that the use of multiple sources of data collection or triangulation in research is likely to increase the reliability of the study. The underlying assumption is that, because various methods complement each other, their respective shortcomings can be balanced out (Babbie & Mouton, 2001:122). Reliability was built in through use of more than one method of data collection, being questionnaires, interviews and observations.

Reliability was also ensured by computing the Cronbach Alpha, which is a numerical coefficient of reliability (Gliem & Gliem, 2003:82). Cronbach's Alpha is a test reliability technique that requires only a single test administration to provide a unique estimate of the reliability for a given test (Gliem & Gliem, 2003:83). Alpha coefficient ranges in value from 0 to 1 and the higher the value, the more reliable the generated scale is. In this study, it was used to describe the reliability of factors extracted from

dichotomous questions (that is, questions with two possible answers) and/or multi-point formatted questions or scales (for instance, 1 = strongly disagree, 5 = strongly agree).

4.4.2.2 Pilot study

A pilot study is an excellent way to determine the feasibility of a study in order to test particular procedures, measurement instruments or methods of analysis (Leedy & Ormrod, 2013:111). However, the right size for a pilot study depends on how novel the research design and measure is (Katz, 2006:128). Even small pilot studies can be invaluable in designing a full-scale project (Wiid & Diggines, 2009:17).

For this study, the clarity of the instructions, ease of completing the questionnaire, and time taken to complete the questionnaire (Leedy & Ormrod, 2013:188) were piloted on two CEOs at FlySafair and Fly Blue Crane, and five managers at FlySafair for their input. No changes were made to the questionnaire. The pilot study saved time by allowing the researcher to identify the most effective approach to solve the overall research problem (Leedy & Ormrod, 2013:111).

In this regard, the respondents were requested to complete the draft questionnaire and identify CSFs and challenges in a specific airline. The respondents were requested to indicate whether or not they understood the instructions, the meaning of the questions and the meaning of words in the questionnaire. The suggestions made on the draft questionnaire were implemented in the final questionnaire. Below are assumptions that were employed with regard to the completion of the questionnaire.

4.4.2.3 Assumptions made regarding the completion of the questionnaires

Firstly, the researcher assumed that the respondents would be honest and that they would understand the questionnaire items and provide accurate responses. To this effect, the researcher assumed that the respondents would be well conversant in English and the aviation terminology used in the questionnaire. Secondly, the researcher assumed that the questionnaire, which was compiled based on questionnaires of previous studies (conducted in other developed countries), would be applicable to southern Africa, which is a developing region. Thirdly, the researcher assumed that different respondents would evaluate the effects of environmental, industry and organisational success factors on airline performances similarly, where applicable.

4.4.2.4 Personal interviews

To complement the self-administered questionnaires, the researcher conducted personal interviews with several key personnel in each airline. The data was collected manually through face-to-face interviews. This data was recorded manually using pen and paper, and with the permission of the interviewees. However, respondents did not allow the researcher to voice record the interviews.

Interviews may be useful as follow-up to certain responses to questionnaires, and to further investigate their responses (Hollowitz & Wilson, 1993:47). Interviews are a far more personal form of research than questionnaires because the interviewer works directly with the respondent. Interviews are generally easier for respondents, especially if opinions or impressions are sought. Pawlas (1995:63) asserts that there are four types of interviews, namely informal conversational interviews, general interview guide approaches, standardised open-ended interviews and closed fixed-response interviews.

During informal, conversational interviews no predetermined questions are asked, in order to remain as open and adaptable as possible to the interviewee's nature and priorities; during the interview the interviewer "goes with the flow" (Campion, Campion & Hudson, 1994:1000). With the general interview guide-approach the intention is to ensure that the same general areas of information are collected from each interviewee; this provides more focus than the conversational approach, but still allows a degree of freedom and adaptability in getting the information from the interviewee (Hollowitz & Wilson, 1993:47).

In a standardised, open-ended interview the same open-ended questions are asked to all interviewees; this approach facilitates faster interviews that can be more easily analysed and compared (Kvale, 1996:31). With closed, fixed-response interviews all interviewees are asked the same questions and asked to choose answers from the same set of alternatives. This format is useful for those who are not practised in interviewing. For this study, a general interview guide approach was used.

4.4.3 The sample

A sample is a small group of objects or individuals selected or drawn from a population in such a manner that its characteristics represent the population characteristics (Orodho, 2009:23). It is that part of the research plan that indicates how cases are to be selected for observation (Kombo & Delno, 2011:16). According to McMillan and Schumacher (2010:11), a sample is a group of subjects or respondents from whom the data are collected, often representative of a specific population. It is a special subset of a population observed for making inferences about the nature of the total population itself. As such, a description of the sampling of airlines and sampling of the respondents is presented below.

4.4.3.1 Airlines

A list of southern African airlines was obtained from the Airlines Association of Southern Africa (AASA). There were 18 airlines with AASA membership at the time of the study (2015-2017) and the selection of survey airlines was based on the type of service offered, that is, only passenger airlines were selected. Furthermore, the airline had to have offices in Johannesburg.

For the purpose of this study, a passenger airline refers to a commercial airline that carries passengers; it is an airline dedicated to the transport of passengers. Passenger airlines usually operate a fleet of

passenger aircraft that, rather than being owned outright, are usually leased from commercial aircraft sales and leasing companies.

Of the 18 AASA member airlines, 15 complied with the selection criterion of being passenger airlines, of which two (Fly Blue Crane and Fly Safair) were used for the pilot study. The remaining 13 airlines formed the population of the main study.

Of the study population of 13 airlines, eight airlines met the selection criterion of having offices in Johannesburg, namely Comair, SAA, SA Express, Mango, SA Airlink, Air Botswana, Air Namibia and Air Zimbabwe. These airlines met both selection criteria and were the eight airlines that participated in the study. However, the other five airlines refused to participate and were therefore excluded in the study.

Johannesburg was selected as the case study centre due to proximity to the researcher, time available for research and budgetary constraints. The office of the CEO of each selected airline was approached for permission to conduct the study among managers at their premises. This was supported by a letter of introduction to the study (see Appendix A). It must be emphasised that it was agreed that the identity of the airlines would be revealed.

4.4.3.2 Respondents

In line with Babbie (2010:53), the principles of purposive sampling were used to determine the sample size for the study and to select respondents. According to O'Reilly and Parker (2012:194) there is no commonly accepted sample size or number of participants in purposive sampling; the research goal is in-depth strategies and understanding, and not sampling strategies. Dworkin (2012:1320) recommends between 5 and 50 participants as an adequate number for purposive sampling.

However, Bernard (2011:25) argues that the ideal sample size in purposive sampling is to select respondents until saturation is reached. Saturation means the researcher gathers data to the point of diminishing returns, or when additional respondents do not add anything new to data already collected (O'Reilly & Parker, 2012:194). Consequently, a sample size of at least 50 managers was deemed appropriate for this study.

Purposeful sampling is a non-probability sampling method that enables researchers to gain deeper insights and corroborate sources of evidence from knowledgeable participants (Leedy & Ormrod, 2013:214). Participants of the study must have the relevant knowledge and experience to provide useful data. Purposeful sampling allows researchers to sample intentionally a group of people who have the best information about the problem under investigation (Robinson, 2014:37).

Purposive sampling was used to select respondents who were deemed to have sufficient relevant knowledge to participate in the interview sessions. Suri (2011:69) stipulates that purposeful samples require participants to meet specified criteria. The participants for the study must have germane

experiences to provide useful data, which constitutes a purposeful sample (Robinson, 2014:38). Purposeful selection ensured that only airline managers who could divulge the expert information required to answer the research question for the study were selected. This criterion was used to ensure that selected respondents provided insightful answers to the questions that were asked (Wiid & Diggines, 2009:17). According to Babbie (2010:53), the main advantage of purposive sampling is that when the most appropriate people for the study are selected, the process becomes a lot less time consuming.

4.4.4 Data collection

A questionnaire instrument and a series of personal interviews with several key personnel in each airline were used for data collection. As the research involved executives who were difficult to access, respondents were first contacted by email for consent and to schedule an appointment for data collection. Invitation letters were sent to all of the listed airlines in the sampling frame and questionnaires were only distributed to those who agreed to participate in the study.

The researcher explained the purpose of the survey and indicated that participation was voluntary. Respondents were assured that all data would be treated as confidential and their anonymity would be retained. Respondents were asked to complete the questionnaires before interviews were held, thus ensuring that all interviews followed the same general format and that interviewees provided relevant informative data. Managers who were willing to participate in the study received a questionnaire.

Questionnaires were distributed by the researcher until 54 fully completed questionnaires were received. This corresponds with the sample size of 50, which was deemed appropriate for this study (see section 4.4.3.2).

Completed questionnaires were collected, checked and discussed with the respondents in case of queries. After collection of the completed questionnaires, interviews were conducted. The personal nature of face-to-face interviews resulted in a higher volume of data being collected. In order to avoid interviewer burnout and bias only one interview lasting approximately 45 minutes was conducted per day. Even though detailed interviews provided depth of data because a close rapport encouraged a free flow of conversation, the small sample limited generalisation of the population.

Airlines were visited for data collection from Tuesdays to Thursdays, after 12:00, during June and July 2016. These days, as well as the specific time of the day, were considered less busy and as such, these days best suited the programmes of airline managers.

4.4.5 Data coding and analysis

The process of data analysis involves data clean-up and explanation, after which the data are coded and checked for any errors and omissions (Kothari, 2012:18). Data analysis pertains to examining, categorising, tabulating, testing or otherwise recombining both quantitative and qualitative evidence to address the research question(s). The completed questionnaires were coded and the data were entered

on a spreadsheet and screened for errors by the researcher. Creswell *et al.* (2007:105) define coding as marking the segments of data with symbols, descriptive words or unique identifying names. Coding enables researchers to quickly retrieve and collect together all the text and other data that they have associated with some thematic idea so that the sorted bits can be examined together and different cases compared in that respect (Creswell *et al.*, 2007:105). The statistical analysis software Statistical Package for the Socio-cultural Sciences (SPSS 24, 2016: version 22) was used to analyse the data.

Mayan (2001:21) provides the following explanation of data analysis:

> ...the process of observing patterns in the data, asking questions of those patterns, constructing conjectures, deliberately collecting data from specifically selected individuals on targeted topics, confirming or refuting those conjectures, then continuing analysis, asking additional questions, seeking more data, furthering the analysis by sorting, questioning, thinking, constructing and testing conjectures.

Data entry and analysis was conducted by the Department of Statistics at the Cape Peninsula University of Technology, Cape Town, South Africa.

Descriptive statistics are commonly used in socio-cultural science research to present quantitative and design science research data (Vaughan, 1998:5; Babbie & Mouton, 2001:459; Struwig & Stead, 2001:58). The numerical data was described by frequency-distribution using measures of central tendency (mean, median and mode scores and standard deviations). Each of these represented a summary of many individual observations that enabled the researcher to have a convenient and simple way to plan and present data (Struwig & Stead, 2001:158). This means that descriptive statistics are an appropriate method of analysis in this study since the results obtained would not be generalised following the use of the sampling criteria (Vaughan, 1998:5).

According to Malhotra and Birks (2006:31), frequency distribution is a mathematical distribution with the objective of obtaining a count of the number of responses associated with different values of one variable, expressed these counts in percentage terms. A frequency distribution is a convenient way of looking at different values of a variable. A frequency table is easy to read and provides basic information, but sometimes this information may be too detailed and the researcher must summarise it by using descriptive statistics (Malhotra & Birks, 2006:31).

In order to determine whether organisational, industry and environmental success factors significantly affected airline performances, one-way ANOVA and t-tests for organisational, industry and environmental success factors were calculated. The ANOVA is used to determine whether there are any statistically significant differences between the means of three or more independent (unrelated) groups (Leedy & Ormrod, 2013:214).

Since passenger load factors and airline yields are significant metrics in measuring the performance of airlines, Pearson's product-moment correlation coefficient and regression analysis were used to investigate the relationship of passenger load factors (dependent variable) with the identified CSFs (independent variables) and the relationship of overall yields (dependent variable) with the identified

CSFs and passenger load factors (independent variables). Correlation analysis quantifies the degree of correlation between two or more variables and is normally performed to test the association/relationship of the joint frequency of two or more variables in a study (Creswell *et al.*, 2007:220).

4.5 ETHICAL CONSIDERATIONS

Whenever human beings, or other creatures with the potential to think, feel and experience physical or psychological distress as the focus of investigation there is a need to look at the ethical implications of what is proposed to be done (Leedy & Ormrod, 2013:101). This study was conducted according to the research ethical guidelines stated by Leedy and Ormrod (2013:101) and approved by the Ethics Committee of the Faculty of Business and Management Sciences of CPUT (see Appendix F). The following ethical issues were considered: protection from harm, informed consent, right to privacy, and honesty with professional colleagues.

4.5.1 Protection from harm

The researcher did not expose research participants to unnecessary physical or psychological harm. When a study involves human beings, the general rule of thumb is that the risk involved in participating in a study should not be appreciably greater than the normal risks of day-to-day living. Respondents should not risk losing life or limb, nor should they be subjected to unusual stress, embarrassment or loss of self-esteem (Leedy & Ormrod, 2013:101). Thus, during the study the researcher endeavoured to be honest, respectful and sympathetic towards all respondents. Furthermore, the study did not include sensitive questions that could cause embarrassment or make respondents feel uncomfortable.

4.5.2 Informed consent

Respondents were intentionally recruited for participation, and they were informed of the nature of the study to be conducted and given the choice of either participating or not participating. Participation in the study was voluntary and verbal consent was obtained from all the airline managers. Therefore, the airlines and respondents engaged were only those who expressed interest to participate in this study.

4.5.3 Right to privacy

Any research study involving human beings should respect a respondent's right to privacy (Leedy & Ormrod, 2013:102). Both the researcher and respondent had a clear understanding regarding the confidentiality of the results and findings of the study. All respondents were assured of anonymity and that information and responses shared during the study would be kept confidential.

4.5.4 Honesty with professional colleagues

The researcher reported the findings in a complete and honest fashion, without any misrepresentation or intentionally misleading others about the nature of the findings. Under no circumstances did the researcher fabricate data to support a particular conclusion.

4.6 SUMMARY

The research methodology and techniques used in this study were explained. In terms of the research techniques, the chapter points out that the survey technique and interviews were employed to elicit answers to the research questions. This study employed mixed methodology that combined empirical (qualitative and quantitative) and design science research methods. As regard research methodology, this chapter conceptualised the salient concepts of this study and described the instruments (questionnaire and interview process) that were used. In addition, the chapter explained the data collection process and analysis of data. The salient concepts of this study were presented, as well as the conceptualisation, operationalisation, data collection and data analysis to be able to draw meaningful conclusions. The chapter is concluded by a discussion on the ethical considerations applied in this study

The next chapter, Chapter Five, presents an analysis of results of the effects of environmental and industry success factors on airline performances.

CHAPTER FIVE

RESULTS OF THE EFFECTS OF ENVIRONMENTAL AND INDUSTRY SUCCESS FACTORS ON AIRLINE PERFORMANCES

5.1 INTRODUCTION

This chapter presents the results obtained in the study and the discussion thereof. The chapter starts by presenting the response rate of respondents and the demographic profile of the respondents from different airlines before describing the profiles of the participating airlines. The chapter uses descriptive statistics to present the effects of environmental success factors on airline performances by performing t-tests and one-way ANOVA. The chapter concludes by presenting the effects of industry success factors on airline performances by performing t-tests and one-way ANOVA.

The results are presented in the form of frequencies and percentages as well as mean and standard deviation scores, as applicable. The frequencies and percentages of the results are presented in data table format. Data tables are often convenient and helpful to present and clarify information (Leedy & Ormrod, 2013:41). They allow the reader to rapidly identify what information is available and quickly see where important results are located (Durbin, 2004:1234).

The names of the eight participating airlines are exposed because six of the eight are public companies (South African Airways, South African Express, Mango, Air Zimbabwe, Air Botswana and Air Namibia) whilst permission was granted to mention the names of the two private airlines (Comair and SA Airlink). In this study, the following acronyms/abbreviations are used: SAX (South African Express), SAA (South African Airways), Airlink (South Africa Airlink), Air Zim (Air Zimbabwe), Air Nam (Air Namibia) and Air Bots (Air Botswana).

5.2 RESPONSE RATE

In total 68 respondents completed the questionnaires of which 54 were deemed usable (fully completed questionnaires), while 14 respondents returned incomplete questionnaires. In this regard, the results of this study are based on 54 questionnaires which correlates to the targeted sample size of 50 (see section 4.4.3.2).

Table 5.1 below depicts the response rate of the different airlines.

Table 5.1: Response rate per airline

Airline	Number of questionnaires distributed	Number of responses	Response rate (%)
Comair	12	11	92
Mango	10	8	80
Airlink	8	6	75
SAX	8	7	88
SAA	15	11	73
Air Zim	5	4	80
Air Nam	5	4	80
Air Bots	5	3	60
TOTAL	68	54	78.5

Source: Researcher's construct

The researcher distributed the questionnaires and was therefore in a position to obtain first-hand information from participants. Fourteen respondents were unwilling to complete the questionnaires. The reasons for the reluctance to complete the questionnaires were because respondents were either too busy or because they felt the questionnaire was too long, despite the fact that it was explained to them that it could be completed in about eight minutes, as established in the pilot study.

In addition, some respondents argued that some of the information requested was confidential and therefore did not complete the questionnaire. Other respondents argued that they could not complete the questionnaire because some of the information requested could only be obtained from specific departments. For instance, information on the number of staff employed could only be obtained from the Human Resources department, whilst financial statements could only be obtained from the Finance department.

5.3 EMPLOYEE PROFILE

5.3.1 Profile of the respondents from different airlines

The profile of airline managers could influence the financial performance of the airline (Newcomer, Marion & Earnhardt, 2014:9). As such, when trying to identify factors critical to the success of airlines it is important to be familiar with the profile of airline managers in order to identify possible causes of failure or losses (Haase, 2009:294). Table 5.2 below reflects the employee profiles of the respondents. The table also reflects the means and standard deviations for respondents from different airlines.

Table 5.2: Employee profiles of the respondents from different airlines

EMPLOYEE PROFILE	N	%	AIRLINES							
			Comair	Mango	Airlink	SAX	SAA	Air Zim	Air Nam	Air Bots
			n	n	n	n	n	n	n	n
Position held in the airline										
Junior employee	28	52	4	5	3	3	6	2	3	2
Middle management	18	33	5	2	2	2	3	2	1	1
Senior management	8	15	2	1	1	2	2	0	0	0
Years of service in the position										
0-1 year	11	20	1	1	0	2	5	1	1	0
2-4 years	21	39	3	2	1	4	5	3	1	2
5-7 years	13	24	2	3	3	1	1	0	2	1
8-10 years	6	11	3	2	1	0	0	0	0	0
> 10 years	3	6	2	0	1	0	0	0	0	0
Years of service in the airline										
0 to 5 years	21	39	2	1	2	3	5	3	3	2
6 to 10 years	17	32	4	4	1	3	2	1	1	1
11 to 15 years	11	20	2	2	2	1	4	0	0	0
16 to 20 years	5	9	3	1	1	0	0	0	0	0
>20 years	0	0	0	0	0	0	0	0	0	0
Level of education										
No schooling	2	4	0	0	0	0	2	0	0	0
Primary school	5	9	0	1	1	1	2	0	0	0
High school	8	15	2	1	1	0	2	0	1	1
Tertiary Diploma/Degree	17	31	5	2	2	2	3	1	1	1
Other postgraduate qualification,	22	41	4	4	2	4	2	3	2	1
All	**54**	**100**	**11**	**8**	**6**	**7**	**11**	**4**	**4**	**3**

Source: Researcher's construct

Descriptive statistics form the basis of quantitative data analysis and describe subject data information in a manner that can be less subjectively evaluated by others (Durbin, 2004:1234). They also provide a powerful summary that can enable comparisons across airlines (Leedy & Ormrod, 2013:41). In this study, of the 54 respondents, 52% (n=28) held junior management positions, whilst 39% (n=21) had 2 to 4 years of service in their current positions. Of the total respondents, 39% (n=21) had between 0 to 5 years of service in the airline, whilst 41% (n=22) had other postgraduate qualifications.

Table 5.2 above further depicts that most managers in state-owned airlines had less than eight years of experience in their positions whereas managers in private airlines had more than 10 years of service in their positions. This is indicative of more experienced managers in private airlines than in state carriers. Airlines require people with credible management experience, preferably from within the industry, to be successful and compete in this cutthroat sector (CAPA, 2013b). Therefore, at the helm of the airline

there should be managers with proven track records in their fields of expertise (Wong & Chen, 2005:761).

Table 5.2 further reveals that there were no managers in any state carriers (except Mango) with more than 15 years of service in the same airline, and even less service for Air Zimbabwe, Air Namibia and Air Botswana, where there were no managers with more than 10 years of service in the same airline. This is indicative of management instability or turnover in state carriers. However, in private airlines some managers had more than 11 years of service in the same airline, which is an indication of management stability.

According to Sheehan (2003:7), an airline cannot be successful without a stable leadership. When new management comes to the helm of an airline they give it a different direction, not allowing the existing strategies time to reach their objectives (Gernetzky, 2016). As of May 2017 all three state carriers in South Africa, namely, Mango, SAX and SAA did not have a substantive CEO (eNCA, 2017). Consequently, because of high turnover of executives SAA has had many (failed) rescue operations to try to restore profitability and stability (McKune, 2015:23).

Table 5.2 also reveals that some managers at SAA had no schooling or primary education, which is indicative of ill-qualified managers in state-owned airlines. Five managers at Comair had a tertiary diploma or degree and four managers had other postgraduate qualifications. In order to make the shrewd decisions that can help it outperform its peers, an airline must have qualified management so that it can maximise opportunities to boost revenue and contain costs (Barros & Peypoch, 2009:530). Without qualified management, an airline cannot attain its goals (CAPA, 2013b).

Therefore, some research endeavours (Haase, 2009:299; Paraschivescu & Radu, 2011:118; Walsemann, Bell & Hummer, 2012:560; Robinson, 2013:318) argue that there is a positive correlation between the qualification of managers and the performance of airlines, whilst Swartz (2008:26) found that stability and earned value among aviation managers was of high importance. It is therefore not surprising that Comair was more profitable than SAA, which has a history of ill-qualified and inefficient individuals holding key positions at Board and executive level (Duvenage, 2016).

The next section presents the profiles of participating airlines.

5.4 PROFILES OF PARTICIPATING AIRLINES

The profiles of the airlines presented here are based on the interviews with CEOs and include the number of aircraft owned, aircraft type in terms of homogeneity or diversity, the average age of aircraft, the number of staff employed and the financial results for 2013, 2014 and 2015. Some of the financial results of airlines were obtained from the company website, particularly for public companies or state-owned airlines.

Table 5.3: Profiles of participating airlines

AIRLINE	Owner	Aircraft			Employees		Financial results		
		Number	Types	Average age	Total	Per aircraft	2013	2014	2015
SAA	State	63	5	12	11 591	184	(R2.6bn)	(R5.6bn)	(R4.67bn)
SAX	State	24	3	18	1 136	47	R0.7m	(R206m)	(R132m)
Mango	State	10	1	7	598	60	R39.1m	(R16m)	-
Air Bots	State	6	2	22	567	95	(R96.73m)	(R127.6m)	(R211m)
Air Zim	State	10	4	25	799	200	(R585m)	(R346m)	(R200m)
Air Nam	State	10	2	21	618	62	R69m	R20m	
Comair	Private	25	1	5	2 011	80	R331m	R265m	R301m
Airlink	Private	39	3	19	2 720	70	R94m	R77m	R53.4m

(figures in brackets represent a loss)

Source: Researcher's construct

From the table above it is clear that two state-owned airlines had a high staff/plane ratio compared to the global average, which according to Saranga and Nagpal (2016:172) is 150:1. For instance, SAAG (2016) reports that SAA had a staff/plane ratio of 184, whereas Air Zimbabwe had a staff/plane ratio of 200. The ratios are high when compared to private airlines, particularly Comair, which had 80 employees per aircraft (Mazzone, 2016). The ratios are also higher compared to other competitors, for example, Ethiopian Airlines had 126 employees per aircraft, Qantas in Australia had 109, American Airlines had 86.7 and United Airlines had 71 (Saranga & Nagpal, 2016:172).

There is a relationship between the staff/plane ratio and the profitability of airlines–the higher the staff/plane ratio the lower the profitability, and the lower the ratio the higher the profitability (Saranga & Nagpal, 2016:172). Therefore, it is not surprising that state-owned airlines have a higher staff/plane ratio since most state-owned airlines are used as a generator for labour by their respective governments

The findings revealed that most state-owned airlines had an aged fleet. For instance, Air Botswana had a fleet with an average age of 22 years (Kaboyakgosi, 2016), Air Zimbabwe had a fleet with an average age of 25 years (Mananavire, 2016), and Air Namibia had a fleet with an average age of 25 years (Trans Namib Holdings Limited, 2016). SAX had a fleet with an average age of 18 years (SAX, 2016:3). The average age of these fleets is old compared to private airlines, particularly Comair, whose fleet has an average age of five years (Comair Limited, 2016:9).

There is a direct relationship between the age of aircraft and maintenance costs–the older the aircraft the higher the maintenance costs (Ensor, 2016b). An aged fleet also increases the ground time required for maintenance, as well as maintenance costs, thereby affecting the airline's on-time performance and

reliability. Aircraft older than 17 years are so far behind modern design ideas and operational efficiencies that they place the airlines that operate them at a severe disadvantage compared to those that run modern fleets (Ensor, 2016b). Consequently, it is not surprising that all state-owned airlines have been struggling financially.

However, to survive in the 21st century's evolving environment there is a need for airlines to constantly scan organisational, industry and environmental success factors and thereby catapult the industry into a new, more profitable era (Georgieva, 2016). Finding a balance between what the company needs and establishing the exact demands of the market is one of the CSFs of airlines (Shah, 2016).

The next section discusses the effects of environmental success factors on airline performances since an analysis of the environment is the first step of environment scanning.

5.5 ENVIRONMENTAL SUCCESS FACTORS

To make strategic decisions, it is vital for airline managers to understand environmental factors and their potential effect on airline performance (Sze *et al.*, 2015:130). Environmental factors comprise uncontrollable factors that affect airline performances on a long-term basis (Hartman & Boscoianu, 2015:102) and those factors may not have a direct effect on the daily operations of the airline but will indirectly influence it (Franke & John, 2011:22). According to Kotler and Armstrong (2006:36), environmental factors have a direct effect on the airline's ability to achieve its goals, and pertain to the elements of the airline environment that affect the success of the airline (Kotler & Armstrong, 2006:36).

5.5.1 Effects of environmental success factors on airline performances

To conduct a comprehensive analysis of the effects of environmental success factors on airline performances, the PESTEL framework was used to correlate the political, economic, socio-cultural, technological, environmental and legal factors that influence airlines and pose potential threats and offer opportunities for the airline (McLennan, 2015). O'Connell (2011:341) argues that PESTEL is used in the airline industry to analyse the influence of non-controllable external factors that affect the performance of airlines because it provides an overall portrayal of the appeal and attractiveness of the airline industry (Klophaus, Conrady & Fichert, 2012:56) (see section 2.22).

By assessing the PESTEL factors, the challenges that may face an airline could be identified and CSFs based on these challenges could be ascertained (Moiseiwitsch, 2014). By understanding sources of critical success factors, airlines can align organisational success factors (i.e. strengths and weaknesses) with environmental success factors (i.e. opportunities and threats) (Shah, 2016)

Table 5.4 illustrates the effects of environmental success factors on airline performances in southern Africa. The table also reflects the variable mean scores and standard deviations for political, economic,

socio-cultural, technological, ecological and legal factors that affect airline performances in southern Africa.

Table 5.4: Mean (M) and standard deviations (SD) for the effects of environmental success factors on respective airlines

Environmental success factors	Airlines															
	Comair		Mango		Airlink		SAX		Air Zim		Air Nam		Air Bots		SAA	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
POLITICAL																
Political interference	3.82	0.67	3.46	0.79	3.72	0.89	1.23	0.73	1.27	0.92	1.22	0.79	1.38	0.93	1.14	0.83
Regulation	1.73	0.81	3.14	0.95	2.58	0.43	2.89	0.91	4.02	1.07	2.80	1.03	3.35	1.03	4.08	0.76
Deregulation	3.67	1.06	2.67	1.26	2.46	0.70	2.65	0.69	2.31	0.83	3.01	0.56	2.76	0.82	2.31	0.94
Landing slots	1.25	0.47	4.49	0.67	3.38	0.57	4.16	0.45	4.26	0.76	4.05	0.46	4.37	0.65	4.87	0.53
Route monopoly	2.86	0.68	4.01	0.54	4.79	0.58	4.58	0.75	4.59	0.81	4.67	0.61	4.59	0.97	4.83	0.92
ECONOMIC																
Rising fuel costs	1.56	0.71	1.44	1.14	1.37	1.03	1.37	0.99	1.37	1.29	1.29	0.68	1.42	0.62	1.36	0.62
Depreciating Rand	1.39	0.63	1.19	0.73	1.21	0.58	1.42	1.27	1.93	0.64	1.43	0.71	3.20	0.81	1.21	0.51
High operation costs	1.63	0.51	1.66	0.88	1.69	0.66	1.84	0.60	1.72	0.52	1.57	0.58	2.41	0.53	1.58	0.87
High disposable income	4.02	0.89	4.37	0.65	4.28	1.25	4.09	0.87	3.11	0.92	4.07	0.92	4.28	0.79	4.09	1.27
Recession	2.78	0.96	1.73	0.68	2.32	0.64	2.87	0.61	1.07	1.31	2.43	1.21	3.39	0.88	2.73	0.58
SOCIO-CULTURAL																
Changing demographics	4.27	0.72	3.62	0.51	4.18	0.43	3.89	0.45	3.51	0.70	3.86	0.82	3.87	1.13	2.97	0.49
Lifestyle changes	4.14	0.58	4.01	0.59	3.90	0.51	4.03	0.68	3.64	0.57	3.24	0.69	4.09	0.61	2.86	0.62
Income distribution	4.20	0.69	4.13	1.07	3.81	0.63	4.28	0.52	3.92	0.66	3.90	0.71	3.76	0.52	4.07	0.91
Socio-cultural mobility	4.32	0.89	4.26	0.63	4.03	0.76	4.23	1.27	4.43	0.41	4.07	0.92	3.95	0.85	4.01	0.65
TECHNOLOGICAL																
Online ticket booking	4.71	1.03	4.86	1.31	4.31	0.83	4.30	0.61	4.17	0.92	4.08	1.23	4.39	0.45	4.58	0.76
Efficient aircraft	4.76	0.67	4.23	0.77	3.44	0.81	2.94	0.94	2.79	0.97	3.36	0.87	2.17	0.91	3.26	0.42
Video-conferencing	2.94	0.86	3.62	0.58	2.36	0.74	2.71	0.65	2.21	1.21	2.91	0.53	2.52	0.56	2.49	0.68
Surface transport	3.25	0.52	3.08	0.71	2.94	0.96	3.38	0.42	3.66	0.61	2.88	0.62	2.96	1.33	3.14	0.89
Safety features	4.15	0.83	4.07	0.51	2.89	0.54	1.32	0.92	1.70	0.87	3.47	0.91	2.51	0.84	3.66	1.32
ECOLOGICAL																
Disposal of materials	3.38	0.55	3.68	0.89	3.49	0.79	3.22	0.78	3.43	1.32	3.56	0.75	3.83	0.62	3.86	0.67
Ecological consequences	3.15	0.43	3.83	0.63	3.67	0.46	3.37	0.81	3.59	0.89	3.31	0.61	3.91	0.79	3.40	0.71
Emissions	3.89	0.71	3.28	0.48	3.86	0.65	3.53	0.47	3.31	0.75	3.83	0.49	3.55	0.53	3.62	0.55
Cyclical weather	3.20	0.91	3.72	0.61	3.43	0.78	3.68	0.70	3.48	0.83	3.14	1.20	3.32	0.72	3.87	0.62
LEGAL																
Regulatory bodies	3.84	0.87	3.92	0.91	3.58	0.52	2.17	0.68	3.27	0.91	3.39	0.69	3.82	0.56	2.09	0.93
International agreements	4.06	1.24	3.43	0.76	4.08	0.81	3.93	1.21	4.23	0.84	4.13	0.91	4.17	0.83	4.14	0.86
Taxation	2.42	0.81	3.38	0.52	3.58	1.11	3.44	0.51	2.83	0.59	3.03	0.46	2.91	0.48	2.54	0.71

Overall	3.28	0.76	3.43	0.76	3.28	0.72	3.14	0.75	3.07	0.85	3.18	0.77	3.34	0.76	3.18	0.76

*SD: Standard deviation p<0.05; 1-Very negative; 2- Negatively; 3- No effect; 4- Positively; 5- Very positive.

Source: Researcher's construct

Table 5.4 illustrates the mean scores and standard deviations calculated for the effects environmental success factors on airline performances. The data reveals that the effects of environmental factors on the performance of airlines differed between different airlines. For instance, the use of efficient aircraft (under technological) had the highest positive effect on the performance of Comair (4.76). Route monopoly (under political) had the highest positive effect on the performances of Airlink (4.79) and all national airlines–Air Zimbabwe (4.59), SAX (4.58), Air Namibia (4.67) and Air Botswana (4.59). Furthermore, online ticket bookings (technological factor) had the highest positive effect on the performance of Mango (4.86) whilst good landing slots (political factor) had the highest positive effect on the performance of SAA (4.87).

The fact that route monopoly and good landing slots had the highest positive effect on the performance of state carriers is indicative of the preferential treatment and privileges state carriers have in southern Africa. For instance, SAA controlled airports for a long time, benefited from peak landing slots, and by allocating off-peak landing slots to private airlines, made it very difficult for new airlines entering the market (Pirie, 1992:345). Although the control of airports was given to ACSA through the unforeseen hand of the government, SAA still benefits from peak-hour landing slots at the expense of private carriers (Mwanza, 2015). This, according to Ssamula (2014:226), is a strategy of protecting state carriers through regulatory interventions, which either prohibit direct competition to state carriers or make it impossible for private carriers to compete.

Table 5.4 further reveals that bad landing slots had the highest negative effect on Comair (1.25) whilst political interference had the highest negative effect on SAA (1.14), SAX (1.23), Air Namibia (1.22) and Air Botswana (1.38). A possible reason for the high negative effect of political interference on state airlines is that governments in southern Africa retain veto power over their airline's commercial decisions, including route networks, fleet acquisition and, most significantly, payroll cuts (Mananavire, 2016).

For instance, due to the South African government's veto power over SAA's commercial decisions SAA had to drop the lucrative London/Cape Town route and introduce non-viable routes that play a strategic role in growing economic relationships and dependencies between the BRICS countries (Brazil, Russia, India, China and South Africa) (McCann, 2015). This was a direct result of a politically motivated process favouring stronger relations with BRICS countries at the expense of traditional European connections, but without due consideration given to the financial implications thereof (McCann, 2015). Consequently, SAA has seen its dominant control of the South African market eroded by nimbler,

privately held start-ups like FlySafair whose acquisition and deployment of aircraft is dictated by sound commercial analysis rather than political vanity (Shepherd, 2012).

The depreciation of the Rand (economic) had the highest negative effect on Mango (1.19) and Airlink (1.21) whilst economic recession had the highest negative effect on Air Zimbabwe (1.07). A possible reason for the depreciation of the Rand having the highest negative effect on Mango and Airlink is that the depreciation of the Rand in South Africa has increased airfares by 20 to 40% in a three-year period (from 2014 to 2016) (Bhoola, 2016). The 20 to 40% increase is well above the CPI as well as the GDP growth of the economy over the same period (OBG, 2017).

This disproportionate increase in pricing without a relative growth in the wealth of the country means that the consumer base for airline passengers has not increased, yet the cost of flying has. According to Vecchiatto and Cohen (2016:6), this out-priced passengers and made flying expensive.

The responses from Comair indicated that bad landing slots had the highest negative effect on the airline. This correlates with the findings of Ensor and Baumann (2011) who found a positive relationship between peak-hour slots and profitable business class opportunities, whilst off-peak-hour slots (bad landing slots) were associated with unprofitable economy class travellers. It is no surprise that bad landing slots had the highest negative effect on Comair since as a strategy to artificially restrict competition from private carriers the South African government ensures that ACSA allocates off-peak landing slots to private airlines (Mwanza, 2015).

It is clear from the preceding points that national airlines received preferential treatment at the expense of private operators. However, such preferential treatment often lulls state carriers into a false sense of robustness of their sources of competitive advantage and they become less attentive to ever changing environmental success factors (Luke & Walters, 2013:126). Such preferential treatment in state carriers also removes the need for reforms and allows inefficiency to thrive. Therefore, private carriers, although not recipients of such preferential treatment, can overcome some of the challenges in the airline environment through technological factors, particularly online ticket bookings and use of efficient aircraft (Ssamula, 2014:226).

In order to determine whether environmental success factors significantly affected airline performances, one-way ANOVA for political and economic factors, and t-tests for socio-cultural, technological, environmental and legal factors were calculated. Table 5.5 below reflects the t-tests and one-way ANOVA performed to determine whether there were any significant effects ($p<0.05$) on the performances of Comair, Mango, Airlink, SAX, Air Zimbabwe, Air Namibia, Air Botswana and SAA due to various environmental success factors.

Table 5.5: Effects of environmental success factors on airline performances

Airlines	p-values					
	Political	**Economic**	**Socio-cultural**	**Technological**	**Ecological**	**Legal**
Comair	0.0265*	0.0104*	0.4317	0.0234*	0.1357	0.1108
Mango	0.0308*	0.0085*	0.1095	0.0109*	0.2173	0.4232
Airlink	0.0043*	0.0277*	0.2438	0.0145*	0.4195	0.1354
SAX	0.0481*	0.0093*	0.3790	0.0011*	0.1018	0.466
Air Zimbabwe	0.0079*	0.0028*	0.1212	0.0402*	0.3030	0.0173*
Air Namibia	0.0065*	0.0467*	0.0489*	0.0318*	0.1206	0.0205*
Air Botswana	0.0176*	0.0230*	0.1007	0.0268*	0.2485	0.1087
SAA	0.0042*	0.0304*	0.0170*	0.0153*	0.3104	0.0053*

*Indicates a significant difference ($p<0.05$)

Source: Researcher's construct

a) Political factors

Table 5.7 reveals that political factors significantly affected negatively the performances of Comair (p=0.0265), Mango (p=0.0308), Airlink (p=0.0043), SAX (p=0.0481), Air Zimbabwe (p=0.0079), Air Namibia (p=0.0065), Air Botswana (p=0.0176) and SAA (p=0.0042). The results are corroborated by previous scholars (Doganis, 2001:22; Barrett, 2006:162; Taneja, 2010:36; Shepherd, 2012) who found that political factors significantly affect the performance of airlines.

A possible reason for the significant effect of political factors on the performance of state carriers is that governments in southern Africa retain veto power over their airline's commercial decisions, including route networks, fleet acquisition and, most significantly, payroll cuts (Mananavire, 2016). For example, scheduled flights of Air Zimbabwe on commercial routes are often cancelled at short notice to accommodate the wishes of the Zanu PF political leadership (Muzulu, 2016b). Air Zimbabwe aircraft are often used as private ambulances for Robert Mugabe and his family's medical trips overseas (News Day, 2014). The Botswana and Namibian Governments often use their national airlines to generate employment for populist gains, thereby over-manning the airlines and this has negatively affected the financial performance of airlines (Njoya, 2013:19).

Another possible reason for the significant effect of political factors on the performances of SAA and SAX is the constant interference in these two airlines by the South African government. To illustrate this point, Smith (2015) claims that political interference, coupled with inept interventions, has caused considerable upheaval in SAA, provoking a series of mass resignations of top executives, including the CEO in September 2012, thereby negatively affecting the airline's performance.

Rivers (2015) opines that every time a new minister of Public Enterprises is appointed in South Africa a new Board is announced at SAA and SAX, a strategy used by politicians to fill the Board with people aligned to the new minister's view on the management position of state-owned enterprises. For example,

Malusi Gigaba (the then-newly appointed minister of Public Enterprises) in August 2012 fired SAX Board members that former Public Enterprises minister Barbara Hogan had appointed (Mwanza, 2015).

Another possible reason for the significant effect of political factors on the performance of Comair is the perpetual government bailouts of SAA, which enabled the state airline to charge unviable rates to the detriment of Comair (Maromo, 2015). Over the last decade (from 2006 to 2016), SAA has relieved the South African taxpayers of at least R12 billion, in conservative terms (Ensor, 2016c). According to Nolutshungu (2013), this economically burdensome, morally objectionable, highly protected and privileged status, places SAA in a position to undercut prices charged by private airlines. The South African government again in the 2017/18 Budget promised SAA further financial support (Paton, 2017).

Another possible reason for the significant effect of political factors on the performance of Comair is the political interference in slot allocation at ACSA to allocate peak-hour landing slots to state airlines whilst allocating off-peak-hour landing slots to private airlines (Mwanza, 2015). McCann (2015:7) confirms this, noting that the support for state airlines serves only to distort any prospect of a level playing field, preventing privately-owned carriers from competing effectively. Therefore, political interference has resulted in prejudice in the airline industry and significantly affected the performance of private airlines (Gernetzky, 2016).

b) Economic factors

Table 5.5 reveals that economic factors significantly affected negatively the performances of Comair (p=0.0104), Mango (p=0.0085), Airlink (p=0.0277), SAX (p=0.0093), Air Zimbabwe (p=0.0028), Air Namibia (p=0.0467), Air Botswana (p=0.0230) and SAA (p=0.0304). The results are corroborated by Cederholm (2014) who found that all economic factors significantly affected airline performances. A possible reason for the significant effect of economic factors on the performances of Comair, Mango, Airlink, SAX and SAA is the negative effects that economic factors such as oil price, Rand/Dollar exchange rate, and GDP growth rate, have had on the airline industry in South Africa.

According to Bhoola (2016), due to the depreciation of the Rand, airfares in South Africa have increased by roughly 20 to 40% in a three-year period from 2014 to 2016. The 20 to 40% increase is well above the CPI as well as the GDP growth of the economy over the same period (OBG, 2017). This disproportionate increase in pricing without a relative growth in the wealth of the country means that the consumer base for airline passengers has not increased, yet the cost of flying has (OBG, 2017). As a consequence, this has negatively affected the performance of legacy carriers such as SAA as more people in South Africa have become budget conscious and this led to increased demand for low cost carriers such as FlySafair and Kulula (Bhoola, 2016).

Since it is difficult to forecast exchange rates with certainty, the depreciation of the Rand has negatively affected fuel prices in South Africa (The Economist, 2016). According to IATA (2015), the exchange rate variation contributes to the fluctuation in fuel price, which constitutes 31% of total costs. Campbell

(2014) argues that foreign currency exchange rate fluctuations, along with changing prices of fuel and interest rate fluctuations, negatively affect the profitability of airlines. For instance, in February 2015 Comair reported almost a 50% decline in interim profits due to the weakening Rand offsetting gains from a lower oil price (Mahlaka, 2015).

Maqutu (2015b) notes that the depreciation of the South African Rand has negatively affected ticket sales because the sales volume and cost structure of airlines is influenced by foreign exchange fluctuations, which implies that unfavourable fluctuations have a significant negative affect airline performance. According to the OBG (2017), a 13% weakening of the Rand against the US Dollar over the three-year period from 2014 to 2016 negatively affected the value of ticket sales internationally. When translated back into the South African currency this cost SAA R800 million. This has a substantial effect on operational costs, which can only be recouped by an increase in ticket prices (Vecchiatto & Cohen, 2016:6).

The volatility of the Rand contributed to Comair's unrealised exchange losses of R73 million on the revaluation of a US$24.8 million loan on one aircraft (Flyafrica, 2016). As a result, profits after taxation for 2016 declined by 12% to R193 million, yielding earnings per share of 41.5c, compared to 47.5c in 2015. Headline earnings per share were 36.5c in 2016 compared to 47.9c in 2015. Comair also suffered a R71 million pre-tax loss on dollar-oil hedges contracted in mid-2014 (Flyafrica, 2016). Other economic factors that have had an effect on airlines in South Africa include fuel levies and airport taxes placed on the consumer, as well as increased tolling on vehicles, such as the introduction of e-tolls in Gauteng. These factors all increase the cost of travelling by road, in which case air travel is preferred (OBG, 2017).

A possible reason for the significant effect of economic factors on the performances of Airlink and SAX is the fact that the depreciation of the Rand made travelling to South Africa quite affordable (in January 2016 one US$ was equivalent to R17.99) (Bronkhorst, 2016). A one-way trip between most city pairs in 2016 typically cost US$80, making South Africa an exceptionally cheap tourist destination (Sheppard, 2017). As a consequence, the depreciation of the Rand positively affected the performances of Airlink and SAX (Sheppard, 2017).

The significant effect of economic factors on the performance of Air Zimbabwe might be the hyperinflationary economic environment in Zimbabwe. Characterised by a shortage of foreign currency, this has increased the operational difficulties of Air Zimbabwe (Zhou, 2012). Consequently, the combination of economic recession, high oil prices, currency instability, and a drop in demand for expensive seats has significantly affected the performance of airlines in southern Africa (OBG, 2017).

c) Socio-cultural factors

Table 5.5 reveals that socio-cultural factors significantly affected the performances of Air Namibia (p=0.0489) and SAA (p=0.0170). The results are supported by Lohmann and Koo (2013:8) who found that socio-cultural factors significantly affected the performance of airlines. A possible reason for the significant effect of socio-cultural factors on the performance of SAA is the growing black middle class in South Africa, which has increased demand for air travel (Hermann, 2012). Based on the LSM, the black middle class has increased by 48% between 2001 and 2013 (Botha, 2014). Consequently, the rise in black middle class has led to an increase in disposable income and positively affected consumers' travelling patterns.

Another possible reason for the significant effect of socio-cultural factors on the performance of SAA is the changing travel preferences of the baby boomers (those born between 1946 and 1964) which has significantly affected legacy carriers as the baby boomers' business travel spending habits had declined (Walters, 2010:9). Baby boomers have become economically-minded passengers opting for airlines that provide more service for less money (LCCs) (Chandrappa, 2014). That means increased numbers for budget carriers at the expense of FSCs.

A further possible reason for the significant effect of socio-cultural factors on the performance of SAA is that SAA discontinued in-flight announcements in Afrikaans (contrary to Comair) in 1996 and this could have had an effect on product loyalty. During the apartheid era, SAA used both the Afrikaans and English languages for in-flight announcements (Bennett, 2005:19). However, post-apartheid SAA changed to English only and many Afrikaans-speaking customers changed allegiance to other airlines. This had a significant effect on SAA's profitability because Afrikaans customers constituted a huge market for SAA (Ssamula, 2012:25).

A possible reason for the significant effect of socio-cultural factors on the performance of Air Namibia is the limited demand for air transport due to a small population in comparison to other countries, such as South Africa and Angola (Joseph, 2016). Namibia's population is made up of young people and ageing population who do not use air travel (Kahiurika, 2016). This has negatively affected the performance of the airline, particularly the domestic market.

d) Technological factors

Table 5.5 reveals that technological factors significantly affected positively the performances of Comair (p=0.0234) and Mango (p=0.0109), and negatively the performances of Airlink (p=0.0145), SAX (p=0.0011), Air Zimbabwe (p=0.0402), Air Namibia (p=0.0318), Air Botswana (p=0.0268) and SAA (p=0.0153). These results are supported by Shankman (2014) who found that technological factors significantly affect the performance of airlines.

A possible reason for the negative significant effect of technological factors on the performances of Airlink, SAX, Air Zimbabwe, Air Namibia, Air Botswana and SAA is the fact that technology, in the

form of teleconferencing, web conferencing and video-conferencing has reduced the travelling patterns of business people (Morrell, 2013:30). Monies that were spent on travel can instead be put to individual laptops, continuous updating of content offerings, and technology infrastructure that an individual can link to in Europe, America, Asia or Africa with equal ease (Serpen, 2014).

Another possible reason for the significant effect of technological factors on the performances of SAX, Air Namibia, Air Botswana and SAA is the fact that technology has increased competition in the airline industry (Shankman, 2014). However, in a technology-saturated industry the outcome is a marketing race in which every airline is struggling for a competitive advantage over its rivals. According to Porter and Kramer (2011:66), this level of competition negatively affects airline performances.

A possible reason for the significant effect of technological factors on the performance of Air Zimbabwe is the fact that Air Zimbabwe operates with old and outdated technology in comparison to other airlines (Ndlovu, 2016; New Zimbabwe, 2016). Their obsolete equipment caused the European Commission to doubt the safety of the planes and in May 2017, the airline was banned on European airspace (eNCA, 2017). This lack of adaptation to new technology has negatively affected the performance of the airline because the Harare-London route was Air Zimbabwe's most lucrative route.

A possible reason for the positive significant effect of technological factors on the performances of Comair and Mango is the increased use of the Internet which made it possible for customers to purchase tickets from their homes (Heracleous *et al.*, 2009:18). Consumers can book flight tickets online with the click of a button (Truxal, 2013:9). Many airline companies are adopting unique technologies to gain a competitive advantage in the highly turbulent industry (Davis, 2013). The ability to reach a large number of customers provides airlines with competitive advantages (Porter & Kramer, 2011:66).

Many airlines are increasingly making use of technology to facilitate their customers, for example, airlines have introduced mobile phone applications to facilitate customers (Truxal, 2013:9). Furthermore, socio-cultural media has made it possible for airlines to interact with customers (Shankman, 2014). Aircraft are becoming more fuel efficient, helping airlines to reduce travelling costs while new technology has enabled airlines to introduce more safety measures (Mulder, 2015). Therefore, technology has also positively affected the performances on airlines.

e) Ecological factors

It is evident from Table 5.5 that ecological factors did not significantly affect the performance of different airlines. However, the results differ from those of Cederholm (2014) who notes that ecological factors do significantly affect airline performances. A possible reason for the non-significant effect of ecological factors on the performance of any airline is the lack of strict controls in southern Africa to reduce, for example, carbon emissions. Although most countries in Europe and other regions have introduced hefty penalties for airlines with high carbon emissions, southern African governments have not yet enforced tight measures to reduce carbon emissions.

f) Legal factors

Table 5.5 reveals that legal factors significantly affected negatively the performances of Air Zimbabwe (p=0.0173), Air Namibia (p=0.0205) and SAA (p=0.0053), where these airlines faced numerous lawsuits. The results are similar to the findings of Mulder (2015) who notes that legal factors negatively affect the performance of airlines. A possible reason for the significant effect of legal factors on the performances of state-owned airlines is that state carriers are constantly bombarded with lawsuits from displeased clients, staff and competitors.

For instance, Air Namibia lost several lawsuits filed by aircraft service providers (Kahiurika, 2016). In January 2015 Air Namibia was forced to pay N$337 million after it lost a case against Challenge Air (Sasman, 2016) and in March 2016 Air Namibia was forced to pay lease and maintenance fees to Intrepid Aviation amounting to N$17 million for two aircraft. The airline was further embroiled in a lawsuit of US$77 million (N$1 billion) with a company called BCI Aircraft Leasing Incorporated (Joseph, 2016). Air Zimbabwe faced a legal battle with about 400 sacked workers who demanded US$1.3 million in severance pay, which was awarded to them by an independent arbitrator (Bhebhe, 2016).

Similarly, SAA was ordered to pay more than R104 million in damages to Nationwide by the South Gauteng High Court following the ruling of the Competition Tribunal in 2016, that SAA had abused its dominance in the local market and played a major role in the demise of Nationwide (Slabbert, 2016). In February 2017 the South Gauteng High Court ordered SAA to pay Comair R554 million plus interest at 15.5%, plus costs amounting to approximately R1.16 billion for simultaneously increasing capacity and reducing prices on the major routes between 2001 and 2005 (eNCA, 2017).

Another significant effect of legal factors on the performance of SAA is the strict visa regulations introduced by the Department of Home Affairs in South Africa in June 2015. This required tourists to apply in person at a visitor centre for travel documents and required all children to have a birth certificate with full details of both parents (Mtongana, 2015). Eventually, international tour operators and travel agents removed South Africa from their destination brochures (Wakefield, 2015). As a consequence, these regulations negatively affected SAA's performances as passenger numbers dwindled (Mtongana, 2015).

Finally, a further possible reason for the significant effect of legal factors on the performances of state carriers is that airlines are widely affected by regulations and restrictions related to international trade, tax policy and competition, which significantly affects their performance (Mulder, 2015). Airlines are paying tax twice, in southern Africa and destination countries, due to the failure of countries in southern Africa to expedite the signing of bilateral agreements with other countries. Consequently, double taxation continues to adversely affect airline profitability, negatively weakening airline's competitive edge in the region (Georgieva, 2016).

It is apparent that political, economic and technological factors significantly affected negatively the performances of all airlines. However, the performance of some state carriers was also significantly affected negatively by legal factors. According to Georgieva (2016), political interference in the guise of protecting state carriers tends to create conditions that foster inefficiencies, mediocrity and incompetence inherent in state carriers. Their unwillingness to deviate from the dogma has precipitated the failure of many state carriers (OBG, 2017). Consequently, the political links associated with state airlines has made it difficult for state carriers to adapt their operational models to changes in the market place (Mulder, 2015).

5.6 INDUSTRY SUCCESS FACTORS

To determine industry attractiveness, an understanding of the competitive pressure is vital (Thompson & Martin, 2005:172). Porter (2008:95) used theoretical frameworks derived from Industrial Organisation (IO) economics to derive the Five Forces that determine the competitive intensity and therefore attractiveness of a market. This theoretical framework, based on the Five Forces (threats of new entry, buyer's bargaining power, and supplier's bargaining power, threat of substitute, and competitive rivalry), describes the attributes of an attractive industry and thus suggests when opportunities will be greater, and threats less, in these industries (Thompson & Martin, 2005:172).

5.6.1 Effects of industry success factors on airline performances

Industry attractiveness in this context refers to the overall industry profitability and also reflects upon the profitability of the firm under analysis (Kotler & Armstrong, 2006:36). An 'unattractive' industry is one where the combination of forces acts to drive down overall profitability. A very unattractive industry would be one approaching 'pure competition', from the perspective of pure industrial economics theory. It is important to note that this framework is not for the analysis of individual firms but for the analysis of the industry. Nonetheless, the model has proved a veritable tool in the analysis of industry success factors (Demydyuk, 2011:47).

Table 5.6 below depicts the mean scores (M) and standard deviations (SD) calculated for the effects of industry success factors on the performance of airlines.

Table 5.6: Mean (M) and standard deviations (SD) for the effects of industry success factors on respective airlines

Airlines	Industry success factors									
	Rivalry amongst existing competitors		Threat of new entrants		Threat of substitute products		The bargaining power of suppliers		The bargaining power of customers	
	M	SD	M	SD	M	SD	M	SD	M	SD
Comair	4.52	0.67	2.86	0.79	2.72	0.89	4.43	0.73	4.79	0.92
Mango	4.63	0.81	2.14	0.95	2.38	0.43	4.39	0.91	4.85	1.07
Airlink	4.49	1.25	3.56	0.72	2.50	0.62	4.23	0.82	4.54	0.60
SAX	4.59	1.04	2.68	0.59	2.23	0.72	4.14	0.77	4.63	0.46
Air Zimbabwe	4.36	0.63	2.27	0.52	2.41	0.83	4.26	0.46	4.21	0.55
Air Namibia	4.01	0.59	1.84	0.71	1.28	0.76	4.41	0.59	4.38	0.72
Air Botswana	4.16	0.85	2.38	0.92	3.63	0.86	4.55	0.82	4.06	0.42
SAA	4.69	0.63	2.08	1.14	2.27	0.73	4.42	0.66	4.81	0.63
Overall	4.43	0.81	2.48	0.79	2.43	0.73	4.35	0.72	4.53	0.67

*SD: Standard deviation $p<0.05$; Strongly disagree (1); Disagree (2); Neither agree nor disagree (3); Agree (4); Strongly agree (5)

Source: Researcher's construct

The data contained in Table 5.6 above reveals that the intensity of each force varied from 2.43 for a threat of substitute products to 4.53 for the bargaining power of customers, with five being the highest possible score. Standard deviations between 0.67 (the bargaining power of customers) and 0.81 (rivalry amongst existing competitors) were calculated.

Table 5.6 further depicts that rivalry amongst existing competitors significantly affected the performances of Comair (4.52), Mango (4.63), Airlink (4.49), Air Zimbabwe (4.36), Air Namibia (4.01) and Air Botswana (4.16) whilst the bargaining power of customers significantly affected the performances of SAA (4.81) and SAX (4.63). The reason for rating rivalry amongst existing competitors as the highest force affecting the performances of Comair, Mango and Airlink might be the increase in the number of LCCs (FlySafair and Fly Blue Crane), thereby increasing capacity but negatively affecting profitability (Kulula, Mango and FlySafair) (Mondliwa, 2015).

Federico (2013:730) affirms that three LCCs (Mango, Kulula and FlySafair) are not sustainable in the long term because South Africa's domestic market is too small and too seasonal to provide the scale that an independent LCC would need to thrive over the long term in an economic environment that continues to be lacklustre. Similarly sized domestic airline markets have two or fewer LCCs, for example, Vietnam has two LCCs, Saudi Arabia has one and Chile has none (Capazorio, 2015). Even Australia, which is about four times the size of South Africa, has only two LCCs (McKune, 2015:19). Therefore, it is no

surprise that rivalry among existing competitors was rated as the highest force affecting the performances of airlines in South Africa because of high supply which seems to outweigh the demand (Walters, 2010:9).

The reason for rating rivalry amongst existing competitors as the highest force affecting the performances of Air Zimbabwe and Air Botswana might be the competition that these airlines face. In Zimbabwe, the national carrier (Air Zimbabwe) faced intense rivalry after the Zimbabwean government opened the skies. Competition from foreign airlines such as SAA, Ethiopian Airlines and Kenya Airways flooded the Botswana skies and slowly took over the opportunities in the local market (Thatayamodimo, 2016).

In order to determine whether industry success factors significantly affected airline performances, one-way ANOVA were calculated for the threat of substitute products, the bargaining power of suppliers and the bargaining power of customers and t-tests for rivalry amongst existing competitors and threat of new entrant-factors. Table 5.7 illustrates the t-tests and one-way ANOVA performed to determine whether there were any significant differences ($p<0.05$) on the performance of Comair, Mango, Airlink, SAX, Air Zimbabwe, Air Namibia, Air Botswana and SAA caused by the different industry success factors.

Table 5.7: Effects of industry success factors on airline performances

Airline	p-values				
	Rivalry amongst existing competitors	Threat of new entrants	Threat of substitute products	The bargaining power of suppliers	The bargaining power of customers
Comair	0.0321*	0.2516	0.2836	0.0203*	0.0087*
Mango	0.0092*	0.3280	0.1675	0.0159*	0.0142*
Airlink	0.0403*	0.5013	0.4080	0.0074*	0.0061*
SAX	0.0327*	0.2415	0.0390*	0.0480*	0.0243*
Air Zimbabwe	0.0108*	0.1318	0.3578	0.0039*	0.0104*
Air Namibia	0.0233*	0.3412	0.0102*	0.0261*	0.0119*
Air Botswana	0.0455*	0.1716	0.5163	0.0173*	0.0345*
SAA	0.0174*	0.2813	0.0446*	0.0304*	0.0158*

*Indicates a significant difference ($p<0.05$)

Source: Researcher's construct

a) Rivalry amongst existing competitors

It is clear from Table 5.7 above that that rivalry amongst existing competitors significantly affected negatively the performances of Comair ($p=0.0321$), Mango ($p=0.0092$), Airlink ($p=0.0403$), SAX ($p=0.0327$), Air Zimbabwe ($p=0.0108$), Air Namibia ($p=0.0233$), Air Botswana ($p=0.0455$) and SAA

(p=0.0174). The results are supported by Moiseiwitsch (2014) who found that in a deregulated industry rivalry among existing competitors negatively affected the performance of airlines.

A possible reason for the significant effect of rivalry amongst existing competitors on the performances of Comair, Mango, SAX and SAA is the increase in the number of low cost carriers, which negatively affected airline performances (Eller & Moreira, 2014:10). Comair, Mango, SAX and SAA are some of the more established airlines in South Africa. However, despite being established, the recent low-cost airlines (FlySafair and Fly Blue Crane), are both growing significantly faster (in terms of market share) than these airlines (Sokana, 2015). The rationale behind this significant growth is the low pricing strategies adopted by these carriers (McLennan, 2015). Subsequently, this suggests a growing trend of intense price competition among airlines in South Africa.

Although the high-end players greatly differentiate their offerings in terms of quality to out-manoeuvre one another, the fact that customers can now switch between airlines rather easily due to online price comparisons has resulted in high-end players having no choice but to abandon some of their more expensive services and provide low-budget alternatives to remain competitive (Mungadze, 2016). According to McLennan (2015), airfares have dropped by as much as 39% on each of the 10 routes on which FlySafair and Fly Blue Crane now operate.

To illustrate the effect of intense rivalry among competitors, in October 2015 Comair reported stagnation in its revenues and a 17% drop in profits due to competition with the new airlines (Sokana, 2015). Comair's profits plummeted from R265 million in 2015 to R219 million in 2016, while state-owned Mango recorded its first loss in 10 years in the 2015/16 financial year (Mungadze, 2016). Thus, these events imply a high degree of rivalry in the airline industry in South Africa.

Furthermore, the entry of LCCs (FlySafair and Fly Blue Crane) resulted in excess capacity in the South African domestic market because the South African market is not large enough to support three LCCs (Ensor, 2016b). Maqutu (2015b) agrees that three LCCs are not sustainable for the long term because South Africa's domestic market is too small to provide the scale that an independent LCC will need in order to thrive over the long term.

Mondliwa (2015) argues that South Africa does not possess the requisite attributes of more developed markets that allow multiple LCCs to thrive. In Europe, competing LCCs, such as EasyJet and Ryanair, do not fly on the same routes or serve the same city-pairings (Wood, 2016). However, in South Africa, LCCs cover the main domestic routes, since there are few commercially viable secondary routes to fly (Gernetzky, 2016). For instance, in South Africa, only Johannesburg has a secondary airport (Lanseria) (Wood, 2016).

A possible reason for the significant effect of rivalry amongst existing competitors on the performance of Air Zimbabwe is the fact that Air Zimbabwe faced intense rivalry on its traditional routes after the Zimbabwe government opened the skies. According to Chipunza (2013) three South African airlines,

namely SAA, Comair and Airlink, control over 90% of the market share on the Harare to Johannesburg, Johannesburg to Victoria Falls and Johannesburg to Bulawayo routes, compared to Air Zimbabwe's 10% and this has negatively affected Air Zimbabwe's performance.

A possible reason for the significant effect of rivalry amongst existing competitors on the performance of Air Botswana is the competition from foreign airlines such as SAA, Ethiopian Airlines and Kenya Airways, which have flooded Botswana skies and are slowly taking over the opportunities in the local market (Thatayamodimo, 2016). Therefore, the higher the intensity of competition, the lower the industry performance and attractiveness.

b) Threat of new entrants

This aspect of the Five Forces refers to the extent to which new entrants can be accommodated within the industry (Porter, 1980:34). It is clear from Table 5.9 that the threat of new entrants did not significantly affect the performances of existing airlines. The results are corroborated by Bryson (2012:29) who found that the threat of new entrants does not significantly affect the performance of existing airlines because it is difficult for new entrants to enter and compete on the same level as existing airlines.

Another possible reason why the threat of new entrants did not significantly affect the performances of existing airlines is the fact that in southern Africa it is difficult for new entrants to acquire primetime or peak-hour landing slots at major airports because existing airlines fiercely guard their landing slots and gates (Nolutshungu, 2013). Subsequently, the right to take off or land at a designated time, particularly in primetime slots, is an essential commodity for airlines in southern Africa (Mncube, 2014).

A further possible reason why the threat of new entrants did not significantly affect the performances of existing airlines is that in southern Africa, particularly in South Africa, new entrants face a problem in accessing effective distribution channels, which tend to favour existing carriers (Jarvis, 2016). For instance, in South Africa travel agents often favour existing higher fare carriers such as SAA because of the rates of sales commission received (McLennan, 2015). These barriers tend to reduce the threat of new entrants and, according to Young (2015); this is one of the main reasons for the demise of new entrants such as Skywise.

A further reason why the threat of new entrants did not significantly affect the performances of existing airlines might be the strict rules and regulations with which a prospective entrant has to comply to set up an airline in southern Africa (Makhaya, 2015). For instance, SACAA requires a new airline to apply for an operating certificate prior to start of operation. It has to meet the minimum 75% South African ownership requirement before being issued with a licence to operate by the Air Service Licensing Council (Makhaya, 2015). This is rather a complex process and creates the problem of generating revenue during the application period. For example, in 2013 Fastjet failed to acquire defunct operator

1Time when it could not meet South Africa's ownership regulations, which limit foreign companies to a 25% stake in a domestic airline (Brock, 2015).

Another reason why the threat of new entrants did not significantly affect the performances of existing airlines might be that prospective entrants tend to be discouraged from entering the market in southern Africa because of retaliatory strategies from existing carriers, particularly state-owned carriers (Bryson, 2012:29). Nolutshungu (2013) claims that predatory pricing is a common retaliatory strategy used by existing airlines in South Africa to deter new entrants from entry or making profits. Predation is characterised by a drop in price to match that of the new entrant, which is below average variable costs and increases capacity or flights on the route (Mahlaka, 2015). For instance, following the entry by new airlines FlyGo and Fly Blue Crane in South Africa, SAA and its subsidiaries Mango and SA Airlink, similarly dropped their ticket prices on all the routes new entrants had gone into (Travelstart, 2015). Therefore, the lower threats of entry of new competitors' increases industry performance and attractiveness.

c) Threat of substitutes

This aspect of the Five Forces refers to the extent to which the product or service offered by an industry incumbent can be replaced by a similar service (Porter, 1980:34). The data from Table 5.7 suggests that the threat of substitutes significantly affected positively the performances of SAX (p=0.0390) and SAA (p=0.0446) and negatively on the performances of Air Namibia (p=0.0102). The results differ from Doganis (2010:17) who found that in the airline industry the threat of substitutes did not significantly affect the performance of airlines because airlines outperform other forms of transportation when it comes to cost and convenience.

A possible reason for the positive significant effect of the threat of substitutes on the performances of SAX and SAA is the low propensity to substitute air transport in South Africa, where transportation by road, rail and water are forms of substitutes for air travel (Mondliwa, 2015). Intercity train services in South Africa run between some major cities, for instance between Johannesburg, Cape Town and Durban (Travelstart, 2015). However, the major cost to switch is time. For instance, although travelling by train is cheaper, most journeys may run overnight (Gernetzky, 2016), whilst bus operators, such as Greyhound, Translux and Intercape, arrive at inconvenient times and also run overnight.

In contrast, despite the time taken to reach the airport and check-in for flights, the overall travelling times by air is significantly shorter than other travel substitutes mentioned above, but it obviously comes with at a slightly higher price (Wood, 2016). However, with the intense competition in price, air travel may soon be as economically priced as its substitutes. Nevertheless, the factor of longer and overnight travels may present a drawback for these substitutes (Gernetzky, 2016). Therefore, the low threat of substitutes increases industry performance and attractiveness.

A possible reason for the negative significant effect of the threat of substitutes on the performances of Air Namibia is the competition from road transport, as 70% of Namibia's arrivals are by road while only 27% use air transport (Asheeke, 2016). Therefore, the high threat of substitutes lowers industry performance and attractiveness.

d) Bargaining power of suppliers

This aspect of the Five Forces refers to the extent to which suppliers can negotiate with businesses over prices of materials and equipment (Porter, 1980:35). It is evident from Table 5.7 that the bargaining power of suppliers significantly affected negatively the performances of Comair (p=0.0203), Mango (p=0.0159), Airlink (p=0.0074), SAX (p=0.0480), Air Zimbabwe (p=0.0039), Air Namibia (p=0.0261), Air Botswana (p=0.0173) and SAA (p=0.0304). The results are supported by Pandey (2010) who found that suppliers in the airline industry tend to be in a relatively strong bargaining position because switching suppliers after signing a contract often results in penalties, so airlines are sometimes locked into unfavourable contracts.

A possible reason for the significant effect of the bargaining power of suppliers on the performances of Comair, Mango, Airlink, SAX, Air Zimbabwe, Air Namibia, Air Botswana and SAA is that suppliers of airline fuel have very high bargaining power because airlines have little control over fuel prices (Nhuta, 2012:459). Eller and Moreira (2014:10) concur that since there is no substitute for jet fuel this further increases supplier power. In turn, this reflects in difficulties in finding substitutes for the airlines inputs (Campbell, 2014).

Airports and ground handling companies are local monopolies with significant power, charging fees for gate usage as well as for take-off and landing slots (Wyman, 2010). Airport services are concentrated in a small number of firms but they have low switching costs (Porter & Kramer, 2011:66). The competitive timing of flights into particular airports is controlled by airport authorities, thereby giving them direct influence over the profitability and competitiveness of airlines operating from their stations (Jenks, 2013). Therefore, the high bargaining power of suppliers lowers the industry performance and attractiveness.

e) Bargaining power of customers

From Table 5.7 it is clear that the bargaining power of customers significantly affected negatively the performances of Comair (p=0.0087), Mango (p=0.0142), Airlink (p=0.0061), SAX (p=0.0243), Air Zimbabwe (p=0.0104), Air Namibia (p=0.0119), Air Botswana (p=0.0345) and SAA (p=0.0158). These results are corroborated by Clark (2011:37) who states that in the airline industry the bargaining power of customers negatively affected the performance of airlines.

A possible reason why the bargaining power of customers significantly affected negatively the performances of Mango, SAX, Airlink, Air Zimbabwe, Air Namibia, Air Botswana and SAA is the excess supply in airlines against demand in southern Africa, hence passengers tend to be highly price-

sensitive which increases customer power (Nolutshungu, 2013). Mondliwa (2015) argues that since customers have no switching costs they can compare prices at no cost, which further increases customer power. Spooner (2015) opines that the bargaining power of consumers is increased marginally by the presence of online booking sites, allowing customers to compare prices. Therefore, aggregator websites that focus on price comparisons have significantly improved the transparency of airfares across airlines, and concentrated the buying power in consumers (Ferreira, 2016).

A possible reason why the bargaining power of customers significantly affected negatively the performance of Comair is the large number of travel agencies in supermarkets, with significant power to shift demand across carriers by influencing the travelling public, not only on the mode of transport to use, but also on the particular airline to use (Kamau & Stanley, 2015:91). Well informed customers are in a position to know the differences in prices among competitors and availability of substitutes (Travelstart, 2015). Being highly price-sensitive, the majority of customers are keen to find the cheapest ticket for their journey. Consequently, the high bargaining power of customers lowers the industry performance and attractiveness.

From above, it is clear that three forces, namely rivalry amongst existing competitors, the bargaining power of suppliers, and the bargaining power of customers, significantly affected negatively the performances of airlines. Furthermore, the threat of substitute products significantly affected negatively the performance of state carriers. However, no existing airline was significantly affected by the threat of new entrants.

5.7 SUMMARY

The chapter revealed that environmental success factors, namely political, economic and technological factors, significantly affected negatively the performances of all airlines. However, the performance of state carriers was also negatively affected by legal factors. The chapter further revealed that industry success factors, namely rivalry amongst existing competitors, the bargaining power of suppliers and the bargaining power of customers, significantly affected negatively the performances of airlines. Therefore, the only industry success factors for the airlines in southern Africa are the low threat of substitutes and new entrants, which are not enough to mitigate intense rivalry and the high bargaining power of customers and suppliers. Several suppliers can squeeze airlines, and even though the threat of new entrants is low, wherever there is potential, there will be new entrants, creating overcapacity and reducing yields (as was the case in South Africa). It is therefore clear why there is such a high failure rate in the airline industry in southern Africa relative to other industries.

The next chapter, Chapter Six, presents an analysis of results of the impacts of organisational success factors on airline performances.

CHAPTER SIX

RESULTS OF THE EFFECTS OF ORGANISATIONAL SUCCESS FACTORS ON AIRLINE PERFORMANCES

6.1 INTRODUCTION

This chapter presents the results of the effects of organisational success factors on airline performances. The chapter starts by presenting the effects of organisational success factors on airline performances by performing t-tests and one-way ANOVA. The chapter performs one-way ANOVA to identify challenges affecting airlines in southern Africa, before performing one-way ANOVA to identify CSFs to overcome challenges affecting airline performances. Since load factors and airline yields are significant metrics in measuring the performance of airlines, the chapter offers correlation coefficient and regression analysis to investigate the relationship of passenger load factors with CSFs, and the relationship of airline yields with CSFs and passenger load factors. Finally, the chapter concludes by evaluating the reliability of the results.

6.2 ORGANISATIONAL SUCCESS FACTORS

Organisational success factors are made up of controllable factors within the airline that the organisation may use to gain competitive advantages (Shieh & Wang, 2010:403). Within the organisation, there are strengths and weaknesses that the airline may have which may confront the organisation in the course of its business development (Ramon-Rodriguez *et al.*, 2011:112). Organisational success factors measure the airline's efficiency and effectiveness to acquire competitive advantage and it is through organisational success factors that an airline can respond to its environmental success factors (Porter & Kramer, 2011:66).

6.2.1 Effects of organisational success factors on airline performances

The next section discusses the effects of organisational success factors on airline performances to align strengths and weaknesses in the organisation with opportunities and threats in the environment. Consequently, Table 6.1 illustrates the results for the effects of organisational factors on airline operations. The table also reflects the mean (M) and standard deviations (SD) for organisational factors affecting airline performances.

Table 6.1: Mean (M) and standard deviations (SD) for organisational factors affecting airline performances

Airline	Organisational factors															
	Management efficiency		Labour efficiency		Fuel efficiency		Alliances		Distribution channels		Age of fleet		Management turnover		Standardised fleet	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Comair	4.52	0.67	4.16	0.79	1.86	0.89	4.83	0.73	4.57	0.92	4.12	0.79	4.38	0.93	4.75	0.83
Mango	4.28	0.81	4.14	0.95	2.08	0.43	3.69	0.91	4.68	1.07	4.03	1.03	4.35	1.03	4.62	0.76
Airlink	3.92	1.06	2.07	1.26	2.46	0.70	4.73	0.69	3.51	0.83	1.83	0.56	4.16	0.82	1.91	0.94
SAX	1.39	0.47	2.57	0.67	1.88	0.57	4.71	0.45	3.86	0.76	1.25	0.46	2.27	0.65	2.68	0.53
Air Zim	1.43	0.81	1.59	0.82	1.36	0.87	3.01	0.68	4.51	0.80	1.09	0.81	1.28	0.70	3.22	1.27
Air Nam	1.86	0.71	1.51	1.74	1.47	1.03	3.37	0.99	4.77	1.29	1.23	0.68	2.82	0.62	2.36	0.62
Air Bots	1.82	0.63	1.65	0.73	2.03	0.58	3.07	1.27	4.63	0.64	1.19	0.71	2.20	0.81	2.61	0.51
SAA	1.53	0.51	1.26	0.88	1.69	0.66	4.74	0.60	4.28	0.52	2.97	0.58	1.06	0.53	2.15	0.87
Overall	2.59	0.71	2.37	0.98	1.85	0.72	4.02	0.79	4.35	0.85	2.21	0.70	2.82	0.76	3.04	0.79

*SD: Standard deviation $p<0.05$; 1-very negative; 2- negatively; 3- no effect; 4- positively; 5- very positive.

Source: Researcher's construct

Table 6.1 depicts the mean scores and standard deviations calculated for the effects of organisational factors on airline performances. The data reveals that the effects of the organisational factors on airline performance vary from 1.85 (for fuel efficiency) to 4.35 (for distribution channels), with five being the highest possible score. Standard deviations between 0.70 (age of fleet) and 0.98 (labour efficiency) were calculated.

Table 6.1 further demonstrates that the effects of effects of organisational factors on airline performances on airline performances differed between airlines. For instance, distribution channels had the highest positive effect on the performances of Mango (4.68), Air Zimbabwe (4.51), Air Botswana (4.63) and Air Namibia (4.77), whilst alliances had the highest positive effect on the performances of Comair (4.83), SAA (4.74), SAX (4.71) and Airlink (4.73).

A possible reason for the highest positive effect of distribution channels on the performance of Mango is that Mango offers more distribution channels and payment options than any competitor does (Mantell, 2015). By severely limiting the involvement of travel agents in distribution of their products, Mango has greatly reduced its distribution costs (CAPA, 2015). Mango is also the first carrier to retail flights through grocer Shoprite-Checkers, the first to offer booking and payment facilities via a mobile

application, and remains the only airline in the world to accept store charge cards (for example, Edgars/Jet) as payment online and through a call centre (Mantell, 2015). Such distribution channels ensure that Mango attracts first-time flyers, where credit cards and Internet usage is not universal (CAPA, 2015).

Table 6.1 further reveals that fuel efficiency had the highest negative effect on the performances of Comair (1.86) and Mango (2.08), whilst the age of the fleet had the highest negative effect on the performances of Airlink (1.83), Air Namibia (1.23), Air Botswana (1.19), Air Zimbabwe (1.09), and SAX (1.25). However, management turnover had the highest negative effect on the performance of SAA (1.06).

A possible reason for the significant negative effect of the age of the fleet on the performances of Airlink and state carriers is that these airlines make use of an aged fleet (Table 5.3). Most state airlines in southern Africa operate an aged fleet typically older than the global average; hence, travellers tend to perceive these aircraft as unsafe (Malaba, 2016). Due to its use of an aged fleet, the European Commission (EC) banned Air Zimbabwe on its airspace (its most lucrative route) over safety concerns (eNCA, 2017). It is therefore no surprise that the performances of Air Namibia, Air Botswana, Air Zimbabwe and SAX were negatively affected by the age of the fleet.

'Management turnover' had the highest negative effect on the performance of SAA because of the frequent turnover at the chief executive and Board level at the airline (McKune, 2015:23). For example, in March 2016 SAA had its seventh CEO in three years (Rabkin, 2016). With such a high turnover of executives it is difficult for SAA to set a long-term vision McKune (2015:23). Consequently, because of this high turnover of executives SAA has undergone many different rescue operations to try to restore profitability and stability (Gernetzky, 2016).

From the above it is clear that the performance of state-owned airlines was negatively affected by the use of an aged fleet and a high management turnover, while the performance of private carriers was positively affected by alliances. However, as the competitive landscape changes through market reforms and new competition, it becomes increasingly difficult for state-owned airlines to maintain the status quo and sustain their competitive advantages. To ensure their survival, private operators need to make use of their organisational success, particularly alliances, to take advantage of weaknesses in state-owned airlines.

In order to determine whether organisational success factors significantly affected airline performances, one-way ANOVA for age of the fleet, management turnover, homogeneous aircraft and labour efficiency and t-tests for management efficiency, fuel efficiency, alliances and effective distribution were calculated. Table 6.2 reflects the t-tests and one-way ANOVA performed to determine whether there were any significant differences ($p<0.05$) on the performances of Comair, Mango, Airlink, SAX,

Air Zimbabwe, Air Namibia, Air Botswana and SAA, and whether their performances were affected by the different organisational success factors.

Table 6.2: Effects of organisational success factors on airline performances

Airline	p-values							
	Management efficiency	**Labour efficiency**	**Fuel efficiency**	**Alliances**	**Distribution channels**	**Standardised Fleet**	**Age of fleet**	**Management turnover**
Comair	0.2765	0.1094	0.0356*	0.0097*	0.0582	0.0335*	0.1370	0.1576
Mango	0.1408	0.3280	0.0075*	0.3579	0.0402*	0.0419*	0.3987	0.1849
Airlink	0.7046	0.1265	0.0304*	0.0445*	0.7924	0.3610	0.0051*	0.4036
SAX	0.0211*	0.0463*	0.0190*	0.3201	0.2116	0.4002	0.0275*	0.0239*
Air Zim	0.0074*	0.0058*	0.0012*	0.2687	0.5062	0.5215	0.0039*	0.0201*
Air Nam	0.0466*	0.0201*	0.0378*	0.1013	0.6001	0.2160	0.0413*	0.0064*
Air Bots	0.0083*	0.0060*	0.0081*	0.1872	0.1480	0.6407	0.0167*	0.0365*
SAA	0.0047*	0.0014*	0.0276*	0.4190	0.6953	0.1149	0.4684	0.0087*

*Indicates a significant difference ($p<0.05$)

Source: Researcher's construct

a) Management efficiency

Table 6.2 reveals that management efficiency significantly affected negatively the performances of SAX (p=0.0211), Air Zimbabwe (p=0.0074), Air Namibia (p=0.0466), Air Botswana (p=0.0083) and SAA (p=0.0047). The results are supported by Rajasekar and Fouts (2009:101) who found that management efficiency had a significant effect on the performance of airlines. A possible reason for the effect of management efficiency on the performances of SAX, Air Zimbabwe, Air Namibia, Air Botswana and SAA is the appointment of inefficient managers in state-owned airlines (Duvenage, 2016).

Due to the appointment of inefficient, unsuitable and ill-qualified individuals in key positions at Board and executive level, SAA was unable to reach operational efficiency and profitability (Duvenage, 2016). A typical example is Dudu Myeni, who despite lacking relevant experience and qualifications, is the Chairperson of SAA simply because she is supported by the ruling ANC party, specifically the SA President, Jacob Zuma (Rabkin, 2016).

Similarly, Chibamu (2016) attributes Air Zimbabwe's financial problems to the appointment of inefficient managers who lack aviation experience and knowledge. According to Bhebhe (2016), most of the Board members at Air Zimbabwe are incompetent political appointees without aviation knowledge and experience. A typical example is the appointment of an inexperienced chief operating officer in October 2016 who, Muzulu (2016a) claims, was appointed simply because he is President Robert Mugabe's son-in-law, at a critical time when the airline needed an experienced individual to turn the airline around.

The poor performances of Air Botswana and Air Namibia can be attributed to inefficient politically appointed managers (Lute, 2016b). In April 2016 Air Botswana appointed less experienced former Botswana Defence Force Commander, Lieutenant General Tobogo Masire as the Chairman (Lute, 2016b). Therefore, the appointment of inefficient managers in airlines in southern Africa has negatively affected their financial performances (CAPA, 2013b).

b) Labour efficiency

Table 6.2 reveals that labour efficiency significantly affected negatively the performances of SAX (p=0.0463), Air Zimbabwe (p=0.0058), Air Namibia (p=0.0201), Air Botswana (p=0.0060) and SAA (p=0.0014). The results are corroborated by the findings of Alves and Barbot (2007:118) who established that labour efficiency had a significant effect on the performance of airlines. A possible reason for the significant effect of labour efficiency on the performance of state carriers is that the government tends to use state carriers as a generator for labour thereby creating a high staff/plane ratio in these airlines.

For instance, SAA has a high staff/plane ratio of 184 employees per aircraft (see Table 6.2) compared to the global average which, according to Saranga and Nagpal (2016:172), is 150:1. According to Cordeur (2015), because of such a high staff/plane ratio, SAA spent R4.7 billion on salaries and benefits in 2014, its second largest single expense after fuel. Compounding the problems are the high salaries paid to top officials, with the airline having reportedly paid hefty salaries of R4.5 million and R3.6 million to its CEO and chief financial officer respectively during the 2014/2015 financial year (Duvenage, 2016).

A possible reason for the significant effect of labour efficiency on the performances of Air Zimbabwe, Air Namibia and Air Botswana is the lack of labour cost control mechanisms since these state-owned airlines are used as a generator for labour by their respective governments. For instance, Air Zimbabwe has a staff/plane ratio of 200 workers per aircraft, higher than the global average of 150:1 (Bhebhe, 2016). Air Namibia has approximately 30 managers who, according to Joseph (2016), account for nearly 30% of the wage bill, and the company has at least three levels of management, which leads to high salary costs. Finally, Air Botswana has an organisational structure with a headcount of 522 instead of 350 (Lute, 2016a).

c) Fuel efficiency

Table 6.2 illustrates that fuel efficiency significantly affected negatively the performances of Comair (p=0.0356), Mango (p=0.0075), Airlink (p=0.0304), SAX (p=0.0190), Air Zimbabwe (p=0.0012), Air Namibia (p=0.0378), Air Botswana (p=0.0081) and SAA (p=0.0276). The results are corroborated by David (2011:26) who reports that fuel costs significantly affect the performance of airlines.

A possible reason for the significant effect of fuel efficiency on the performances of Airlink, SAX, Air Zimbabwe, Air Namibia and Air Botswana is that these airlines have older fuel-inefficient aircraft that

negatively affect their performance (OBG, 2017). According to Chan (2000:502), for airlines to reduce fuel costs they have to utilise the newest fuel-efficient aircraft and have maximum enplanements, and thereby allow aircraft to use fuel efficiently. An air carrier using newer aircraft will tend to use less fuel than a carrier with relatively antiquated aircraft does (Popova, 2016).

d) Alliances

'Alliances' is a broad umbrella term which includes a variety of inter-firm co-operation agreements ranging from equity ownership in a partner to the co-ordination of frequent flyer programmes (Wang, 2014:56). It is clear from Table 6.2 that alliances significantly affected positively the performances of Comair (p=0.0097) and Airlink (p=0.0445). The results are supported by Martín-Consuegra and Esteban (2007:383) who note that alliances have a significant effect on airline performances because they create global networks of seamless air travel.

A possible reason for the significant effect of alliances on the performance of Comair is the fact that the BA/Comair alliance enables Comair to benefit in the form of skills transfers, as all staff are progressively trained in the details of how BA handles the various aspects of its business (Bennett & George, 2004:36). The alliance also enables the seamless transfer for passengers arriving on international BA flights to South Africa (Speckman, 2015). Comair's passengers benefit in the form of improved service since all staff were retrained to comply with BA standards (Walters, 2010:38). Through Comair's participation in the one-world alliance, customers have access to 15 of the world's leading airlines and approximately 30 affiliates, all of which have reputations for quality service (Speckman, 2015).

A possible reason for the significant effect of alliances on the performance of Airlink is the benefits Airlink accrues from its franchise agreement with SAA and SAX. Under the agreement, SAA services all the main routes, SAX the secondary routes, while Airlink is the entry-level partner servicing even smaller routes with its 30-seater aircraft (Airlink, 2013). Airlink benefits in that its passengers are able to use the SAA flight reservations facility to book their entire trip, effectively removing the hassle of having to arrange separate road shuttle services or complicated secondary aircraft charters from the main centres to their end destinations (Luke & Walters, 2013:122). Furthermore, SAA and SAX do not compete head-on with Airlink (Airlink, 2013).

e) Distribution channels

Table 6.2 further reflects that distribution channels significantly affected positively the performance of Mango (p=0.0402). The results are supported by Doganis (2013:29) who notes that distribution channels significantly affect airline performances. However, a possible reason for the significant effect of distribution channels on the performance of Mango is the fact that Mango is the first carrier in South Africa to retail flights through grocer Shoprite-Checkers, the first to offer booking and payment facilities via a mobile application.

Mango also remains as the only airline in the world to accept store charge cards (for example, Edgars/Jet) as payment online and through a call centre (Mantell, 2015). By accepting store charge cards as payment online Mango has managed to attract first-time flyers in Africa, who do not have credit cards and have no access to the Internet (CAPA, 2015). Consequently, by severely limiting the involvement of travel agents to distribute their products, Mango has enormously reduced its distribution costs (CAPA, 2015).

f) Use of standardised fleet

Table 6.2 reveals that the use of a standardised fleet significantly affected positively the performances of Comair (p=0.0335) and Mango (p=0.0419). The results are corroborated by the findings of various scholars (Jennings, 2002:28; Kilpi, 2007:83; Merkert & Hensher, 2011:692) who found that the standardisation of a fleet had a significant effect on the performance of airlines.

Comair and Mango operate a fleet comprised entirely of Boeing 737s (Gross & Luck, 2016:17). This means that the airline does not have to stock spares for different types of aircraft and has simplified the maintenance functions of the airline (Planespotters, 2017). According to Kilpi (2007:85), there is a positive correlation between fleet uniformity and airline operating profit, and a negative relationship between fleet diversity and airline operating profit. The use of a standardised fleet reduces training requirements for pilots and cabin crew, as they have to learn to operate only a single type of aircraft (Brüggen & Klose, 2010:301). Having a fleet comprising only a single type of aircraft also allows the airline to identify a suitable flight crew when aircraft need to be replaced on short notice due to technical glitches, ensuring fewer delays and cancellations (Saranga & Nagpal, 2016:172).

g) Age of the fleet

Table 6.2 further reveals that the age of the fleet significantly affected negatively the performances of Airlink (p=0.0051), SAX (p=0.0275), Air Zimbabwe (p=0.0039), Air Namibia (p=0.0413) and Air Botswana (p=0.0167). The results are similar to the findings by Ballantyne (2001:12) who reports that older aircraft had a negative effect on airline performances. Therefore, a possible reason for the significant effect of the age of the fleet on the performances of Airlink, SAX, Air Zimbabwe, Air Namibia and Air Botswana is that these airlines make use of an aged fleet (Capazorio, 2015).

According to Capazorio (2015), the main cause of SAX's financial problems is an aged fleet. Due to an aged fleet, SACAA on Saturday April 30 2016 suspended the airline's operating licence because of safety concerns (Capazorio, 2016). The suspension left many passengers stranded and had negative financial implications for the airline (Capazorio, 2016).

Similarly, Air Zimbabwe operates an antiquated fleet with an average age of 25 years and this has greatly compromised quality and increased costs, rendering the airline uncompetitive (New Zimbabwe, 2016), while Air Botswana operates an old fleet that is constantly undergoing heavy airframe maintenance checks (Majube & Newel, 2013). According to the Sunday Standard (2009) due to the use of an aged fleet Air Botswana has had a higher number of accidents than any other airline in southern Africa. For

instance, in June 2012 passengers escaped unhurt when the engine of a Johannesburg-bound aircraft blew apart soon after take-off (Bapotlhale, 2015).

The incident was the third in a period of six months. In 2011, another Air Botswana aircraft had to make an emergency landing after its engine exploded. That incident occurred a week after another one had experienced a similar problem (Majube & Newel, 2013). According to Bapotlhale (2015), these accidents were due to an aged fleet, hence Air Botswana's performance was adversely affected as travellers perceived these aircraft to be unsafe. Therefore, an aged fleet negatively affected the performance of airlines and to improve their financial performances, southern African airlines have to invest in new and modern fleets (Rosenstein, 2013:11).

h) Management turnover

Table 6.2 reveals that management turnover significantly affected negatively the performances of SAX (p=0.0239), Air Zimbabwe (p=0.0201), Air Namibia (p=0.0064), Air Botswana (p=0.0365) and SAA (p=0.0087). The results are supported by Ssamula (2014:22) who established that management turnover significantly affects airline performances. A possible reason for the significant effect of management turnover on the performances of state airlines is that these airlines have a high management turnover.

For instance, SAA was set back by frequent turnovers at chief executive and Board levels and this negatively affected the financial performance of the airline (McKune, 2015:23). According to Rabkin (2016), by March 2016 SAA had its seventh CEO in three years, each leaving SAA with a huge severance package. With such a high turnover of executives, it is therefore difficult for SAA to set a long-term vision McKune (2015:23).

Similarly, SAX's financial problems were compounded by the frequent turnover at senior managerial level (Christodoulou, 2012). Resignations and the rotation of the Board dominated the headlines since November 2010. The airline appointed four different CEOs within two years (from 2010 to 2012) after the departure of its then-CEO Siza Mzimela to SAA in February 2010. SAX lost four financial executives in the 2011/2012 financial year, and the government subsequently fired the airline's entire Board (Christodoulou, 2012). In March 2017, SAX CEO resigned and as of May 2017, the airline did not have a substantive CEO (eNCA, 2017). Consequently, SAX, like SAA, with an unstable senior management, cannot set a long-term vision.

Chibamu (2016) claims that the cause of Air Zimbabwe's financial problems was the lack of stable management at Board and top management level. For three years (from 2013 to 2016), there was an acting-Chief Executive Officer without any substantive CEO to provide strategic leadership and direction. The airline has had five different Board chairpersons in seven years (from 2010 to 2016) (Mananavire, 2016).

Finally, Air Botswana's financial problems were exacerbated by the frequent turnover of senior managers (Baatweng & Kologwe, 2014). The airline operated for five years, from 2012 to early 2016,

without a permanent General Manager (Thatayamodimo, 2016). With acting-general managers it was difficult to turn the airline around (Thatayamodimo, 2016). A similar situation applies to Air Namibia that had a high management turnover, which negatively affected its financial performance (Rabkin, 2016).

It is clear that management efficiency, labour efficiency, age of a fleet and management turnover negatively affected the performances of state carriers, whilst alliances and the use of a standardised fleet had a positive effect on the performances of private airlines. However, all airlines were significantly affected negatively by fuel efficiency. Therefore, private operators need to make use of their organisational success factors, particularly alliances, efficient management and their modern fleet to improve their performances against state carriers (Ssamula, 2014:226).

After identifying organisational success factors that affect airline performances, managers should identify challenges affecting airline performances and thereby align organisational strengths and weaknesses with environmental opportunities and threats (Shah, 2016).

6.3 CHALLENGES AFFECTING AIRLINES IN SOUTHERN AFRICA

The rapid expansion of southern Africa's aviation industry is hampered by a number of challenges. Identifying these challenges could significantly unlock the industry's potential for future growth. In this study, airline executives were requested to indicate the main challenges that affected the performance of their airlines. The results obtained are presented in Table 6.3 below, where a comparison of challenges affecting airline performances in the eight southern African airlines is provided.

Table 6.3: Means and standard deviations for the challenges affecting airlines

Airline	Challenges															
	Competition		High labour costs		High fuel costs		Aged fleet		Government interference		Lack of single aviation policy		Poor safety record		Protectionist policies	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Comair	4.52	0.67	4.16	0.79	4.6	0.89	1.43	0.73	3.89	0.92	4.62	0.79	1.08	0.93	4.83	0.83
Mango	4.79	0.81	4.09	0.95	4.73	0.43	2.19	0.91	3.02	1.07	4.29	1.03	1.36	1.03	1.26	0.76
Airlink	4.68	1.06	4.73	1.26	4.65	0.7	4.58	0.69	3.67	0.83	4.41	0.56	4.56	0.82	3.52	0.94
SAX	4.55	0.47	4.61	0.67	4.69	0.57	4.73	0.45	4.7	0.76	4.38	0.46	4.67	0.65	1.19	0.53
Air Zim	4.48	0.81	4.73	0.82	4.63	0.87	4.81	0.68	4.79	0.8	4.45	0.81	2.86	0.7	1.82	1.27
Air Nam	4.43	0.71	4.53	1.14	4.59	1.03	4.75	0.99	4.67	1.29	4.53	0.68	2.65	0.62	1.4	0.62
Air Bots	4.39	0.63	4.69	0.73	4.58	0.58	4.75	1.27	4.71	0.64	4.39	0.71	4.79	0.81	1.64	0.51
SAA	4.51	0.51	4.82	0.88	4.74	0.66	4.04	0.6	4.92	0.52	4.61	0.58	1.43	0.53	1.19	0.87
Overall	4.54	0.71	4.55	0.91	4.65	0.72	3.91	0.79	4.3	0.85	4.46	0.7	2.93	0.76	2.11	0.79

*M: Mean; *SD: Standard deviation $p<0.05$; 1-Not challenging; 2- Less challenging 3- Indifferent; 4- Challenging; 5- More challenging

Source: Researcher's construct

Table 6.3 above depicts the mean scores (M) and standard deviations (SD) calculated for the challenges affecting airlines in southern Africa. The data reveals that the overall mean scores for challenges affecting airline performances ranged from 2.11 (protectionist policies) to 4.65 (high fuel costs). Standard deviations between 0.70 (lack of single aviation policy) and 0.91 (high labour costs) were calculated.

Table 6.3 further illustrates that the challenges affecting airline performances differed between airlines. For instance, respondents at Comair rated protectionist policies (in favour of national carriers) (4.83) as the greatest challenge affecting the performance of the airline, whilst competition was rated as the greatest challenge affecting the performance of Mango (4.79).

Respondents at SAA rated government interference (4.92) as the greatest challenge affecting the performance of the airline whilst the use of an aged fleet was rated as the greatest challenge affecting the performances of Air Zimbabwe (4.81), SAX (4.73) and Air Namibia (4.75). Respondents at Airlink rated high labour costs (4.73) as the greatest challenge affecting the performance of the airline whilst respondents at Air Botswana rated poor safety record (4.79) as their greatest challenge.

The results regarding respondents at SAA rating government interference as their greatest challenge are corroborated by Mwanza (2015) who notes that government interference is a common issue preventing most national airlines in southern Africa from making the correct commercial and strategic decisions. Managers of national airlines are often not able to implement new strategies and structures that would make the airlines more competitive and cost efficient (Africa Review, 2015), for example, lower-fare

tickets, better use of internal resources, outsource units when necessary without taking into account the wishes of the governments concerned (O'Connell, 2011:341).

To determine challenges affecting airline performances in southern Africa an ANOVA was performed to determine whether there were any significant differences amongst the means of the airlines calculated for the eight challenges affecting all airlines (see Table 6.4 below).

Table 6.4: ANOVA results for the challenges affecting respective airlines

Source of variation	β-value	Sum of squares	Mean square	F-value	Significance (p-value)
Competition	-0.426	31.79	3.52	4.78	0.0057*
High labour costs	-0.126	33.05	2.78	4.93	0.0205*
High fuel costs	-0.105	29.18	2.51	3.01	0.0091*
Ageing fleet	-0.312	36.42	3.80	3.82	0.0104*
Government interference	-0.140	24.31	2.37	4.29	0.0386*
Lack of single aviation policy	-0.106	6.24	1.43	1.69	0.2718
Poor safety record	-0.253	11.25	0.78	1.55	0.1582
Protectionist policies and strategies	-0.278	9.36	1.24	1.87	0.0259*

*Indicates a significant difference ($p<0.05$)

Source: Researcher's construct

Significant differences ($p<0.05$) among the means were obtained for all sources except for the lack of single aviation policy and poor safety records, which indicates that airlines experienced significant differences in competition, labour costs, fuel costs, government interference, the use of an ageing fleet and protectionist policies and strategies, and face these as the main challenges.

The results are supported by Maqutu (2015b) who noted that increased competition from Fly Blue Crane and FlySafair had resulted in LCCs accounting for approximately half of the available seat capacity on domestic flights. Although consumers benefit from the increased competition, the South African market may be too small for a large number of LCCs, with two LCCs, 1Time and Velvet Sky, ceasing operations in 2012 due in part to overcapacity (Federico, 2013:730). Approximately 17 million passengers fly in South Africa each year and the market is served by nine domestic carriers, which is far more airlines per person than there are in the US, Europe or China (Maqutu, 2015b). Consequently, heightened competition has led to a drop in fares and market share as carriers grapple with shrinking margins and a challenging operating environment (Armoo, 2015).

Federico (2013:730) affirms that South Africa does not possess the requisite attributes of the more developed markets that allows multiple LCCs to thrive. In Europe, competing LCCs such as EasyJet and Ryanair do not fly on the same routes or serve the same city pairings. However, in South Africa, LCCs cover the main domestic routes since there are few commercially viable secondary routes to fly.

For instance, in South Africa, only Johannesburg has a secondary airport (Lanseria), and therefore it is no surprise that there have been so many airline failures in South Africa (Mhlanga, 2017:9).

There is also increasing competition, particularly from airlines from the Middle East (such as Fly Emirates, Etihad and Qatar Airways) which enjoy support from their governments via fuel pricing and infrastructure investment (Nataraja & Al-Aali, 2011:480). Added to these are the inherent geographical advantages enjoyed by the Middle Eastern and other airlines operating from the so-called mid-hemisphere hubs (Armoo, 2015). Geographical advantages allow airlines from the Middle East to easily access almost any major market (Kilinc *et al.*, 2012:331). This uneven playing field puts a great strain on southern African airlines in their own markets, and threatens their long-term survival (Safrudin *et al.*, 2013:1).

Protectionist policies and strategies put in place by various governments in favour of their loss-making national airlines add to the challenges private airlines face in southern Africa (Armoo, 2015:7). Mncube (2014) avers that the main challenge is not protection from foreign airlines but protection from, and discrimination against, local airlines. Federico (2013:730) attributes the failure of nine of the 11 private airlines that have tried to compete with SAA since deregulation of the domestic aviation market in 1991, as a clear indication of the effect that the policies and strategies have had in the market (Luke & Walters, 2013:120). With smaller, independent airlines entering the market, and with many of these types of airlines having failed in the past, such as 1Time, Nationwide Airlines and Velvet Sky, the importance of identification of CSFs to overcome these challenges cannot be overemphasised.

The next section presents CSFs for different airlines.

6.4 CRITICAL SUCCESS FACTORS FOR DIFFERENT AIRLINES

CSFs are used by airlines to give focus to a number of factors that help define its success. They help the airline and its personnel to understand the key areas in which to invest their resources and time. Ideally, these CSFs are observable in terms of the effect on the airline to allow it to have guidance and indications on its achievement of them.

A comparison of CSFs in respective airlines is illustrated in Table 6.5 below. This table depicts the variable mean scores and standard deviations calculated for the eight CSFs in the respective airlines.

Table 6.5: Means and standard deviations for the critical success factors for respective airlines

Airline	CSFs															
	Management efficiency		Standardised fleet		Use of a young fleet		Fuel efficiency		Labour efficiency		Alliances		Customer satisfaction		Aircraft choice	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Comair	4.73	0.91	4.88	0.52	4.67	0.71	2.89	0.76	4.08	0.78	4.92	0.8	4.58	0.69	4.39	0.62
Mango	4.69	1.05	4.76	0.76	4.34	0.64	2.71	0.53	4.06	0.66	3.76	0.76	4.67	1.07	4.82	0.91
Airlink	4.43	0.93	4.56	0.53	2.49	0.66	1.98	0.72	3.29	0.73	4.78	1.18	4.43	0.92	4.58	0.61
SAX	3.51	0.59	2.11	1.09	2.83	0.83	1.57	0.65	2.67	0.68	4.65	0.69	4.09	0.82	4.36	0.58
Air Zim	1.67	1.29	1.25	0.81	1.51	0.91	1.32	0.53	1.73	0.43	3.13	0.56	2.91	0.64	4.17	0.73
Air Nam	1.92	0.86	1.43	0.56	1.09	0.57	1.83	0.41	1.92	0.52	3.57	0.93	4.25	0.72	3.92	0.89
Air Bots	1.8	0.7	1.86	0.77	1.25	0.51	1.54	0.8	2.13	0.48	3.09	1.02	2.79	0.61	4.43	0.52
SAA	1.16	0.62	1.61	0.68	3.18	1.14	2.42	0.45	1.32	0.82	4.81	0.61	4.18	0.87	3.58	0.68
All	2.99	0.87	2.81	0.72	2.67	0.75	2.03	0.61	2.65	0.64	4.09	0.82	3.99	0.79	4.28	0.69

*M: Mean; *SD: Standard deviation $p<0.05$; 1-Not critical; 2- Less critical 3- Indifferent; 4- Critical; 5- Very critical

Source: Researcher's construct

Table 6.5 illustrates the mean scores (M) and standard deviations (SD) calculated for the CSFs for airlines in southern Africa. The data reveals that the overall mean scores for CSFs for airlines ranged from 2.03 (fuel efficiency) to 4.28 (aircraft choice). Standard deviations between 0.61 (fuel efficiency) and 0.87 (management efficiency) were calculated.

Table 6.5 further depicts that CSFs for airlines differed between airlines. For instance, Comair (4.92), Airlink (4.78), SAX (4.65), and SAA (4.81), rated alliances highly as the factor most critical to the success of their airlines, whilst respondents at Air Namibia rated customer satisfaction highly (4.25). However, respondents at Mango (4.82), Air Zimbabwe (4.17) and Air Botswana (4.43) rated aircraft choice as the factor most critical to the success of their airlines.

The findings in this study, where alliances were rated as the most critical success factor for Comair, agrees with Bennett (2005:10) who attributed Comair's success to its alliance with BA, one of the leading international airlines. The alliance with BA proved to be a shrewd move by giving Comair access to BA's transit passengers (Ssamula, 2009:9). In terms of the franchise agreement, Comair is entitled to use the BA livery on all its aircraft, while staff uniforms and the interior of the aircraft were also changed to those of BA (Cochrane, 2001:11). Comair benefits from the franchise agreement with BA in the form of skills transfer, as all staff are progressively trained in the details of how BA handles the various aspects of its business (Bennett, 2005:10). Therefore, it is no surprise that alliance was rated highly by Comair.

To identify CSFs for the overall airline industry in southern Africa an ANOVA was performed to determine whether there were any significant differences amongst the means of all airlines calculated for the eight CSFs for the airlines (Table 6.6).

Table 6.6: ANOVA results for the CSFs for respective airlines

Source of variation	β-value	Sum of squares	Mean square	F-value	Significance (p-value)
Management efficiency	0.508	21.53	4.37	5.08	0.0329*
Standardised fleet	0.176	3.86	0.86	1.26	0.2205
Use of a modern fleet	0.682	11.24	2.31	2.59	0.0145*
Fuel efficiency	0.815	33.12	3.39	4.65	0.0036*
Labour efficiency	0.994	27.45	2.64	3.70	0.0023*
Alliances	0.370	24.08	4.05	4.03	0.0425*
Customer satisfaction	0.473	39.25	4.58	4.21	0.0057*
Aircraft choice	0.601	18.78	2.93	3.42	0.0314*

*Indicates a significant difference ($p<0.05$)

Source: Researcher's construct

Significant differences ($p<0.05$) among the means were obtained for management efficiency ($p=0.0329$), the use of a modern fleet ($p=0.0145$), fuel efficiency ($p=0.0036$), labour efficiency ($p=0.0023$), alliances ($p=0.0425$), customer satisfaction ($p=0.0057$) and aircraft choice (0.0314). This suggests that airlines experienced significant differences in all factors except a standardised fleet, and therefore constitute the CSFs for airlines in southern Africa.

The key to the success of any airline is the efficiency of its management team (Laudon & Laudon, 2007:58). In order to make the shrewd decisions that can help it outperform its peers, an airline must have efficient management so that it can maximise opportunities to boost revenue and contain costs (Barros & Peypoch, 2009:530). Furthermore, fuel and labour efficiency are critical to the success of airlines because this represents approximately one-seventh of an airline's total expenses and is a significant driver of airline expenses and profitability (Pindyck & Rubinfeld, 2009:45). Therefore, fuel efficiency positively affects the performance of airlines (David, 2011:26).

There is a positive relationship between the staff/plane ratio and the performance of airlines, therefore the higher the staff/plane ratio the lower the profitability and the lower the ratio the higher the profitability (Saranga & Nagpal, 2016:172), so labour efficiency positively affects airline performances (Cordeur, 2015). Alliances are also essential building blocks for airlines to achieve a stronger and more effective market presence (ATN, 2016). Alliances are an important competitive weapon as they allow different carriers to integrate their operational and marketing platforms and provide means of expanding more rapidly both internationally and domestically (ATN, 2016).

The choice of aircraft also affects the success of airlines. Worldwide, successful low cost airlines operate with one of two aircraft, either the Boeing B737-800 or the Airbus A321 series, and the two aircraft offer seating for between 180 and 190 passengers (Malik, 2015). However, a Boeing 737-500 model can only seat up to 140 passengers in its highest density configuration (Young, 2015). Therefore, depending on the route density, an airline should make the right choice of aircraft, as this is crucial to the success of the airline (Young, 2015).

The use of a modern fleet is also critical to the success of airlines because newer, modern and fuel-efficient aircraft have a positive effect on operating profitability (Ballantyne, 2001:12). Another benefit derived from newer, modern aircraft is enhanced passenger appeal, which is hard to quantify (Merkert & Pearson, 2015:269). Finally, the importance of customer satisfaction cannot be overemphasised as it ensures repeat patronage.

In summary, management efficiency, use of a young fleet, fuel and labour efficiency, alliances, distribution channels and customer satisfaction were identified as the CSFs to overcome challenges southern African airlines faced.

The above findings are similar to the CSFs identified by various authors, as listed in Table 6.7 below.

Table 6.7: CSFs identified by various authors

	Author/s	**CSF**
1	Sonokpon (2016:9)	Reliability, good safety record, alliances, modern aircraft, aircraft choice and customer satisfaction
2	Chan & Yeoh (2011:41)	Structure, culture, alliances, planning and forecasting, technology, marketing and outsourcing.
3	Ssamula (2014:22)	Ability to operate cost effectively and prudently to adopt low-risk capital and business models.
4	Subagyo (2002:43)	Technology, Reward systems Team building, benchmarking, interdepartmental interaction, customer oriented motivation, process improvement technique, quality demand awareness, manager-staff communication, improvement programme evaluation, customer feedback handling, and employee participation.
5	Turinawe (2015:6)	Optimum capacity utilisation, fuel and labour efficiency, jet utilisation, reliability and customer service and satisfaction.
6	Riwo-Abudho *et al.* (2013:84)	Structure, culture, alliances, planning and forecasting, technology, marketing, and outsourcing.

Source: Researcher's construct

The next section presents the correlation coefficient and regression analysis of passenger load factors and airline yields.

6.5 CORRELATION COEFFICIENT AND REGRESSION ANALYSIS OF LOAD FACTORS AND AIRLINE YIELDS

Passenger load factors and airline yields are significant metrics in measuring the performance and profitability of airlines (Doganis, 2010:25). The load factor is a measure of the performance and efficiency of an airline (Kaul, 2009:18). It is the percentage of seats filled by passengers, or the ratio of

unit costs to unit yields, while airline yield reflects revenue per unit of output sold (Doganis, 2010:25). Therefore, it is important to analyse the relationship between passenger load factors, airline yields and CSFs through correlation coefficient and regression analysis of passenger load factors and airline yields (Kaul, 2009:18).

Since management efficiency, use of a modern fleet, fuel efficiency, labour efficiency, alliances, customer satisfaction, and aircraft choice were identified as the primary drivers of an airline's success, the separation of these factors is important when investigating the relationship of passenger load factors and airline yields with airline CSFs. Pearson's product-moment correlation coefficient and regression analysis were used to investigate the relationship of passenger load factors (dependent variable) with the seven CSFs (independent variables) and the relationship of overall yields (dependent variable) with the seven CSFs and passenger load factors (independent variables).

The results of the correlation analysis are illustrated in Table 6.8 below (refer to Appendix D for regression results of passenger load factors).

Table 6.8: Correlation results of passenger load factors and airline yields

Variables	Model 1: Passenger load factors		Model 2: Airline yields	
	Correlation coefficient (r)	Significance (p-value)	Correlation coefficient (r)	Significance (p-value)
Management efficiency	0.65	<0.001*	0.70	<0.001*
Use of modern fleet	0.58	<0.001*	0.49	<0.001*
Fuel efficiency	0.37	<0.001*	0.73	<0.001*
Labour efficiency	0.43	<0.001*	0.76	<0.001*
Alliances	0.74	<0.001*	0.62	<0.001*
Customer satisfaction	0.81	<0.001*	0.68	<0.001*
Aircraft choice	0.68	<0.001*	0.56	<0.001*
Passenger load factors	-	-	0.65	<0.001*

* indicates significant relation ($p<0.05$)

Source: Researcher's construct

The data revealed that all seven CSFs had a moderate to strong positive correlation ($r>0.5$) with passenger load factors. The strongest correlation with passenger load factors was customer satisfaction ($r=0.81$), followed by alliances ($r=0.74$) and making the right aircraft choice (0.68).

The results are consistent with Turinawe's (2015:6) findings that in airlines the strongest correlation with load factors is customer satisfaction. Rajasekar and Fouts (2009:101) also confirm that customer satisfaction and alliances are strongly correlated to passenger load factors. Airline passengers tend to expect high customer satisfaction more than any other attribute (Wong & Chen, 2005:761; Lee & Worthington, 2010:35).

However, Carney (2006:67) reports that alliances has the strongest correlation with passenger load factors. Barros and Peypoch (2009:530) suggest that management efficiency has the most significant effect on airline load factors. Zott and Amit (2010:220) opine that technology has the strongest relationship with airline load factors. Furthermore, it was well established by a number of scholars (Nhuta, 2012:459; Flottau & Buyck, 2013:37; Kamau & Stanley, 2015:91) that customer satisfaction is an antecedent of airline load factors.

The reason for the difference in results of this study when compared with other scholars might be the different airline business models researched. It might be that in FSCs the strongest correlation with load factors is customer satisfaction, whilst in LCCs the strongest correlation with load factors is the alliances. In FSCs, customers expect value for money in customer satisfaction, unlike in LCCs where price is the determinant factor (Petrova, 2011). Consequently, customer satisfaction plays a pivotal role in increasing passenger load factors (Morrell, 2013:30).

A similar examination of the relationship between the seven CSFs and passenger load factors revealed that all the factors had a weak to moderate ($r \leq 0.5$) positive correlation with airline yields. However, all seven independent factors had a significant positive correlation ($p<0.05$) with airlines yields. Labour efficiency had the strongest correlation with airline yields ($r=0.76$), followed by fuel efficiency ($r=0.73$) and management efficiency ($r=0.70$).

Based on the results of this research, which aligns with past research, labour efficiency had the strongest correlation with airline profits. For example, Sjogren and Soderberg (2011:229) state that labour efficiency had the strongest effect on airline profits, while Manuela (2011:9) and Demydyuk (2011:47) indicate that labour efficiency had the most significant relationship with airline profits. Alves and Barbot (2007:118) and Doganis (2001:101) note that labour efficiency had the strongest relationship with airline profits.

However, Assaf and Josiassen (2011:9) note that fuel efficiency had the highest relationship with airline profits. The reported differences might have occurred due to different sample characteristics, for example Assaf and Josiassen (2011:9) only researched LCCs, whereas in this study most of the airlines investigated were state-owned carriers. Another reason might be the different modifications of the questionnaires used in each of the studies mentioned.

Nonetheless, most research (Bissessur & Alamdari, 1998:340; Caralli, 2004:44; Clement Chow, 2010:322) found that labour efficiency had the strongest correlation with airline profits. Ramaswamay (2001:18) also found that labour efficiency had the strongest correlation with airline profits. This implies that the staff/plane ratio played a pivotal role in increasing airline profits (Lordan, 2014:1120). As such, to improve performance airlines should be labour efficient (Ramaswamay, 2001:18).

Full regression models were run for each of the two dependent variables (passenger load factors and airline yields). The first full model regressed the seven critical success variables against passenger load

factors, while the second full model regressed the seven critical success variables and passenger load factors against airline yields.

Both full regression models are depicted in Table 6.9 below (refer to Appendix E for regression results of airline yields).

Table 6.9: Regression results for passenger load factors and airline yields

Independent variables	Model 1: Passenger load factors		Model 2: Airline yields	
	t-value	p-value(p)	t-value	p-value(p)
Management efficiency	8.32	<0.001*	8.61	0.0386*
Use of a modern fleet	10.73	<0.001*	3.52	0.0274*
Fuel efficiency	1.88	<0.001*	8.70	0.1082
Labour efficiency	2.35	<0.001*	9.13	0.2419
Alliances	10.79	<0.001*	8.09	0.0315*
Customer satisfaction	12.41	<0.001*	7.44	0.0153*
Aircraft choice	9.05	<0.001*	5.05	0.2806
Passenger load factors	-	-	7.22	<0.001*

* indicates significant relation ($p<0.05$)

Source: Researcher's construct

The first full regression model revealed that all seven critical success variables were significantly related ($p<0.05$) to passenger load factors. The t-values in Table 6.9 indicate the significance of each variable to passenger load factors. Customer satisfaction was rated ($t=12.41$) as the most significant variable to passenger load factors, followed by alliances ($t=10.79$) and the use of a modern fleet (10.73).

The results are in line with previous researchers (Doganis, 2001:101; Alves & Barbot, 2007:118; Demydyuk, 2011:47; Manuela, 2011:9; Sjogren & Soderberg, 2011:229) who found that customer satisfaction had a significant effect on passenger load factors. However, a study by Carney (2006:67) found that alliances was the highest ranking factors that had an effect on passenger load factors, whilst Martín-Consuegra and Esteban (2007:383) found that customer satisfaction ranked third highest.

The model F-value was calculated at 33.64 ($p<0001$). The seven CSFs had a coefficient determination (R^2) of 0.5763 and thus explained more than 57% of the variability in passenger load factors. As such, the regression results of this study identified customer satisfaction, formation of alliances and making the right aircraft choice as significant predictors ($p<0.05$) of passenger load factors, which explains 57% of passenger load factors. This explanation of the variability in passenger load factors is high when compared to other studies. For example, the regression results of Doganis (2001:101) identified customer satisfaction, alliances and pricing strategy as significant drivers ($p<0.05$) of passenger load factors, which explained 55% of passenger load factors.

The second full regression model depicted in Table 6.9 reveals that all the critical success variables were significantly related ($p<0.05$) to airline yields. The t-values of the second model indicates that labour efficiency (t=9.13) was rated as the most significant driver of airline yields, followed by fuel efficiency (t=8.70) and management efficiency (t=8.61).

Previous research confirms the important role of labour efficiency, fuel efficiency and management efficiency in airline profits (Bissessur & Alamdari, 1998:340; Caralli, 2004:44; Alves & Barbot, 2007:118; Clement Chow, 2010:322; Demydyuk, 2011:47; Manuela, 2011:19; Sjogren & Soderberg, 2011:229). Although it might seem surprising that load factors were found not to be a significant contributor to airline profits, similar studies by Martín-Consuegra and Esteban (2007:383); Yang (2007:310) and Fethi and Jackson (2000:4) confirmed that passenger load factors is not a significant contributor to airline profits.

The model F-value was calculated at 39.54 ($p<.0001$). The seven CSFs and passenger load factors had an R^2 of 0.2706% and thus explained just more than 27% of the variability in airline yields. As such, the regression results of this study identified fuel efficiency, labour efficiency and overall load factors as significant determinants ($p<0.05$) of airline yields, which explains 27% of airline yields. However, the regression results of Doganis (2001:101) only identified labour efficiency as a significant driver ($p<0.05$) of airline yields, which explained only 12% of airline yields.

The reported differences in the study by Doganis (2001:101) might have been due to different sample characteristics. For example, Doganis (2001:101) only used FSCs from Europe whereas this study used both state carriers and LCCs from southern Africa. Furthermore, the other difference might have occurred due to different independent variables tested.

From the preceding points, to ensure success airlines in southern Africa should focus on management efficiency, fuel efficiency, labour efficiency, alliances, make the right aircraft choice and customer satisfaction. The strongest correlation with passenger load factors was customer satisfaction whilst the strongest correlation with overall profits was labour efficiency. Airline managers rated the level of customer satisfaction as the most critical factor for passenger load factors whilst labour efficiency was rated as the most critical factor to the success (profits) of airlines.

6.6 RELIABILITY

Reliability in quantitative studies can be defined as the extent to which test scores are accurate, consistent or stable (Struwig & Stead, 2001:130). Taking into account that McMillan and Schumacher (2010:186) regard the Cronbach α coefficient as the most appropriate method to investigate the reliability of survey research where there is a range of possible answers and not only a choice between two items, internal reliability was tested using this measure. Reliability analysis indicated that the internal consistency of

the constructs in this study was relatively high and considered acceptable because, according to Pietersen and Maree (2007:216), the alpha value should be 0.70 or higher.

The Cronbach α coefficient for the total index was high (0.8976), while moderate to high reliability coefficients were calculated for organisational success factors (0.82941), environmental success factors (0.8105), industry success factors (0.7893), overall challenges (0.7634) and CSFs (0.8359). The high alpha values indicate good internal consistency among the factors.

6.7 SUMMARY

The research findings strongly suggest that the following organisational factors, namely, management inefficiency, labour inefficiency, age of fleet and management turnover significantly affect negatively the performances of state carriers, whilst alliances and the use of a standardised fleet significantly affect positively the performances of private airlines. However, all airlines were significantly affected negatively by fuel efficiency. The findings further revealed that the main challenges facing airlines in southern Africa were competition, high labour costs, high fuel costs, and government interference, the use of an aged fleet, and protectionist policies and strategies against private carriers. To overcome these challenges, the following organisational success factors were identified, namely management efficiency, the use of a modern fleet, fuel efficiency, labour efficiency, alliances, aircraft choice and customer satisfaction. It was found that customer satisfaction (t=10.73) was the most critical organisational factor for passenger load factors whilst labour efficiency (t=7.51) was the most critical organisational factor for airline yields.

The final chapter, Chapter Seven, focuses on the conclusions drawn from the results presented and includes recommendations and an evaluation of the study.

CHAPTER SEVEN

CONCLUSIONS, RECOMMENDATIONS AND EVALUATION OF THE STUDY

7.1 INTRODUCTION

The previous chapters contained discussions on the development of the airline industry in southern Africa; critical examination through a literature review, of the sources of critical success factors for airlines operating in southern Africa; and research methodology. The previous chapters also contained an analysis of results of the effects of environmental and industry success factors on airline performances, the results of the effects of organisational success factors on airline performances and identification of CSFs to overcome challenges affecting airline performances. This chapter encompasses three subsections: research objectives, recommendations and evaluation. The chapter commences by revisiting the research objectives individually to indicate how each was achieved. Based on the research findings, recommendations are made regarding the dissemination of the findings, and recommendations to airline managers and future research opportunities emanating from this research are presented. The chapter concludes with an evaluation of the study in terms of limitations, contributions to the airline industry and research ethics.

7.2 RESEARCH OBJECTIVES REVISITED

The primary objective of this study was to identify the CSFs to overcome challenges facing airlines in southern Africa. To achieve this goal, secondary objectives were formulated. These objectives formed the backbone of the study, they guided the thinking in the study and had important implications on the unfolding of the study. In terms of the research objectives stated in section 1.3, the following objectives, all of which were met, emerged from the investigation,

Objective 1

To explore the development of the airline industry in southern Africa.

The first objective explores the development of the airline industry in southern Africa. The development was explored using South Africa as a microcosm. During the development of the airline industry in southern Africa, various factors affected the performances of airlines. It is evident from Chapter Two that inefficient management, bad landing slots, government interference, high management turnover, use of an aged fleet, high catering costs, poor route optimisation and poor safety records negatively affect airline performances. It is also evident from Chapter Two that the following factors positively affect airline performances, namely efficient management, standardisation of aircraft, capacity utilisation, labour efficiency, route monopoly, alliances/partnerships, effective distribution and the use of secondary airports.

Objective 2

To critically examine through a literature review, the sources of critical success factors for airlines operating in southern Africa.

The first objective aimed to contextualise the study. The contextualisation of the study was realised by means of a literature review (first part of Objective 1). The literature review in Chapter Three revealed that environmental success factors (namely political, economic, socio-cultural, technological, environmental and legal factors) and industry success factors (namely rivalry among existing competitors, the threat of new entrants, the threat of substitute products or services, the bargaining power of suppliers, and the bargaining power of customers) affect the performance of airlines (see section 2.1.4).

Chapter Three also revealed the effects of organisational success factors on airline performances (Table 7.1). It is evident that management efficiency, labour efficiency, age of fleet and management turnover significantly affected the performances of state carriers, whilst alliances and the use of a standardised fleet significantly affected the performances of private airlines. However, all airlines were significantly affected by fuel efficiency.

Table 7.1: Effects of organisational success factors on airline performances

Airline	Significant differences in means							
	Management efficiency	**Labour efficiency**	**Fuel efficiency**	**Alliances**	**Distribution channels**	**Standardised Fleet**	**Age of fleet**	**Management turnover**
Comair	X	X	√	√	X	X	X	X
Mango	X	X	√	X	√	X	X	X
Airlink	X	X	√	√	X	√	√	X
SAX	√	√	√	X	X	√	√	√
Air Zim	√	√	√	X	X	√	√	√
Air Nam	√	√	√	X	X	√	√	√
Air Bots	√	√	√	X	X	√	√	√
SAA	√	√	√	X	X	√	X	√

√ Indicates a significant difference X Indicates a non-significant difference

Source: Researcher's construct

Chapter Three also revealed the effects of environmental success factors on airline performances (Table 7.2). It is evident that environmental success factors, namely political, economic and technological factors, significantly affected the performances of all airlines. Environmental factors did not significantly affect the performance of any airline. However, the performance of some state carriers was also affected by legal factors.

Table 7.2: Effects of environmental success factors on airline performances

Airlines	Significant differences in means					
	Political	**Economic**	**Socio-cultural**	**Technological**	**Ecological**	**Legal**
Comair	√	√	X	√	X	X
Mango	√	√	X	√	X	X
Airlink	√	√	X	√	X	X
SAX	√	√	X	√	X	X
Air Zimbabwe	√	√	X	√	X	√
Air Namibia	√	√	√	√	X	√
Air Botswana	√	√	X	√	X	X
SAA	√	√	√	√	X	√

√ Indicates a significant difference X Indicates a non-significant difference

Source: Researcher's construct

The chapter further revealed the effects of industry success factors on airline performances (Table 7.3). It is evident that industry success factors, namely rivalry amongst existing competitors, the bargaining power of suppliers and the bargaining power of customers, significantly affected the performances of airlines. None of the existing airlines were significantly affected by the threat of new entrants. However, the threat of substitutes significantly affected the performance of some state carriers.

Table 7.3: Effects of industry success factors on airline performances

Airline	Significant differences in means				
	Rivalry amongst existing competitors	**Threat of new entrants**	**Threat of substitutes**	**The bargaining power of suppliers**	**The bargaining power of customers**
Comair	√	X	X	√	√
Mango	√	X	X	√	√
Airlink	√	X	X	√	√
SAX	√	X	√	√	√
SAA	√	X	X	√	√
Air Namibia	√	X	√	√	√
Air Botswana	√	X	X	√	√
Air Zimbabwe	√	X	√	√	√

√ Indicates a significant difference X Indicates a non-significant difference

Source: Researcher's construct

Objective 3

To examine and identify critical success factors to overcome challenges facing airlines in southern Africa.

Before identifying critical success factors, challenges facing airlines in southern Africa were identified (Table 7.4). It is evident that the main challenges affecting airline performances in southern Africa are competition, high labour costs, high fuel costs, government interference, the use of an aged fleet and protectionist policies against private carriers.

Table 7.4: ANOVA results for the challenges affecting airline performances

Influence	Significant differences in means							
	Competition	**High labour costs**	**High fuel costs**	**Aged fleet**	**Government interference**	**Lack of single aviation policy**	**Poor safety record**	**Protectionist policies**
Airlines	√	√	√	√	√	X	X	√

Source: Researcher's construct

Table 7.5 below provides a summary of the factors critical to the success of airlines. It is evident that the following are the organisational success factors for airlines in southern Africa, namely management efficiency, the use of a modern fleet, fuel efficiency, labour efficiency, alliances, customer satisfaction and aircraft choice.

Table 7.5: ANOVA results for the CSFs to overcome challenges affecting airlines in southern Africa

Influence	Significant differences in means							
	Management efficiency	**Standardised fleet**	**Use of a modern fleet**	**Fuel efficiency**	**Labour efficiency**	**Alliances**	**Customer satisfaction**	**Aircraft choice**
Airlines	√	X	√	√	√	√	√	√

√ Indicates a significant difference X Indicates a non-significant difference

Source: Researcher's construct

The research objectives attained in this study may help airlines to develop and implement necessary organisational and sustainable strategic changes that can catapult the airline industry out of the financial trajectory in which it currently finds itself. In this context, these objectives can help airline managers devise strategies to strategically out-manoeuvre these challenges and thereby boost tourism development.

In the following section the researcher makes recommendations on how airlines can overcome the challenges that affect them and thereby improve their performance. However, to reap the benefits associated with the recommendations, the results of the study need to be disseminated to airline executives in southern Africa.

7.3 RECOMMENDATIONS

The researcher wishes to make certain recommendations regarding (1) the dissemination of the research findings and (2) recommendations to airline managers.

7.3.1 Dissemination of the findings

As agreed with participating airlines (see section 3.5.3), an electronic copy of the research findings will be distributed to airlines/airline managers who participated in the study. The potential value of the findings towards the enhancement of the performance of airlines is described in the report. In order to enhance the dissemination of the research findings, the researcher is available to make presentations on the findings of the study to the airlines. Two of the participating airlines have already requested the researcher to make such presentations.

It is recommended that the research findings be presented at academic conferences, especially at aviation, tourism and hospitality conferences in southern Africa. The research findings could also be submitted to academic journals for publication, especially in South African Post-Secondary Education (SAPSE) accredited journals. Three manuscripts have already been published in the African Journal of Hospitality, Tourism and Leisure. In this way the research could make a valuable contribution towards improving the performance of airlines and thereby boost tourism growth in southern Africa and internationally.

7.3.2 Recommendations to airline managers

Based on the conclusions presented above, since fuel efficiency significantly affected the performance of all airlines the researcher recommends that airlines adopt fuel cost reduction policies in their operations. The following cost reduction policies could be adopted, namely optimising fleet dispatch, reducing the dead-weight of aircraft, and improving aircraft fuel saving performance. In order to optimise the fleet dispatch, airlines may monitor aircraft performance methods (APM) (Haacker, 2006) and dispatch different types of aircraft to execute long-haul and short-haul flights (Martin & Roman, 2008:128).

According to Pegrum and Kennell (2002:106), aircraft dead-weight can be reduced via relevant improvement of fuelling quantity accuracy, adjusting water supply to flight time, reducing the number of newspapers and magazines on flights, using lighter material for utensils and catering carts, and removing front seat footrests. Airlines may also reduce fuel costs by cleaning engines and the fuselage on a regular basis. This strategy will not only reduce fuel consumption, but will also improve aircraft performance by reducing flight drag. The researcher also recommends airlines to conduct fuel hedging strategies due to uncertainty caused by extreme oil price volatility. Airlines usually ‘lock-in’ the fuel cost in order to lower future fuel cost losses (Rao, 1999:42; Morrell & Swan, 2006:719).

Since labour efficiency also significantly affects the performance of state-owned airlines, the researcher recommends state carriers to reduce the staff/plane ratio of employees and to adopt employee productivity improvement strategies. Airlines can reduce airline labour costs and increase employee productivity by adopting strategies to schedule reasonable flight hours for flight crew, reduce cabin crew overtime, dispatch maintenance staff efficiently during direct working hours, and encourage employees to provide cost-control strategies.

To reduce the flight crew costs (which are always higher than those of other employees) airlines can monitor the working hours of flight crews by scheduling reasonable flight hours for flight crew in order to avoid overtime flight hour payments. According to Alamdari and Morrell (1997:59) and Tekiner, Birbil and Bulbul (2009:2042), airlines can reduce cabin crew overtime working hours by keeping a cabin crew's total flight hours reasonable and by also dispatching cabin crew efficiently and effectively. In order to reduce maintenance labour costs airlines can dispatch maintenance staff efficiently during direct working hours, monitor overtime working hours, and allocate manpower in accordance with the maintenance schedule to enable tasks to be accomplished within a reasonable time frame by avoiding excessive overtime pay (Candell, Karim, & Soderholm, 2009:941). In order to manoeuvre practical online operations, airlines can encourage employees to provide cost-control strategies via a suggestion system (Rapp & Eklund, 2007:86).

It is recommended that airlines reduce labour costs by keeping staffing as lean as possible and avoiding unionisation or limiting union influence if or when employees organise. Another option is to focus on achieving low total costs by increasing employee and aircraft productivity as well as the productivity of other costly assets, such as airport gates, for example, by speeding up the turnaround time of aircraft at the gate.

Since the age of fleet significantly affected the performance of state-owned airlines, the researcher recommends that state airlines replace their obsolete fleet with modern aircraft. Operating new generation aircraft would reduce operating costs, increase reliability and reduce ground time (for servicing) (Taumoepeau & Kissling, 2008:379). This would positively affect the balance sheet in the long term.

To improve their performance, LCCs should select the correct aircraft by making use of either the Boeing B737-800 or the Airbus A321, rather than the Boeing 737-500 or B737-200 models. A Boeing B737-800 or the Airbus A321 is more fuel-efficient than Boeing 737-500 and B737-200 models. Furthermore, a Boeing B737-800 or the Airbus A321 has a seating capacity of between 180 and 190 passengers whilst the Boeing 737-500 model can only seat up to 140 passengers in its highest density configuration. Therefore, to compete with the established carriers, LCCs need to use the Boeing B737-800 or the Airbus A321 model to run a reliable and responsive airline. Not having these aircraft is likely to result in higher fuel and operational costs and less load factors due to low density configuration.

Since management efficiency significantly affected the performance of state-owned airlines, the researcher recommends that state carriers hire efficient managers with aviation experience. It is not vital for the senior executives to know how to run an airline or fly the aircraft in detail as such experience can be hired, but it is important to have someone well-schooled in the industry at the helm so as to understand the operational issues and the needs of the front-line staff when they need assistance or have to make decisions affecting the company.

Airlines require people with credible management experience, preferably from within the industry, to be successful and compete in this cut-throat sector. As Eric Venter brutally puts it:

> The airline industry takes no prisoners and is highly competitive, everywhere in the world. To enter it thinking it will be a pleasant, affable place in which you can call on the finer aspects of human nature as you learn the ropes or when your own lack of acumen throws you a curved ball, is not only naive but immature (Venter, 2016).

To increase load factors in an increasingly competitive environment the researcher recommends that airlines improve the experience and value they deliver to passengers.. To improve airline performances the researcher recommends that airlines should form alliances, which are strong and likely to survive, with other international airlines (Njoya, 2013:14). In most parts of the world, airlines have entered into alliance agreements to strengthen and extend the scope of their business and enhance their competitive position. Rather than airlines complaining about the restricted market access, they can form alliances to overcome limitations to broaden their market access. Non-implementation of the YD does not prevent airlines from entering into code share arrangements, sharing capacity, signing Special Pro-rate Agreements (SPAs) and other commercial arrangements which are currently few and far between.

Airlines can identify customer needs and develop products and services that satisfy those needs while also providing a profitable return on investment. The researcher recommends airlines to identify key areas of importance to flyers. One approach does not fit all. Various customer segments, ranging from senior executives to budget-minded leisure travellers, have different ideas about what constitutes a satisfying flying experience. By studying the individual needs of flyer segments, airlines will be able to rank product and service features and identify additional opportunities for improvement and growth.

The researcher also recommends southern African countries to open skies and implement the YD. Southern Africa stands to benefit immensely from a liberalised regime of air services in the region. With a fast growing middle class, southern African airlines can contribute significantly more to the socio-economic development of the region if the market is fully liberalised and a level playing field created for all operators.

Given the large number of financial demands on the state, it is necessary to interrogate the wisdom of keeping state carriers in southern Africa through government-guaranteed commercial debt. While all state-owned airlines are perfect statehood symbols that define and represent their countries, most state carriers in southern Africa are plagued with menaces like excessive debts, over-staffing, political

interference and poor management. The researcher recommends policymakers to privatise state airlines. Many nationalised airlines have turned losses to profits in the run-up to privatisation. BA, once a large burden on the British taxpayer, is now one of the world's most profitable airlines. After the privatisation of Air France, Alitalia and Iberia, all three turned from loss-making concerns into profitable airlines. It therefore makes no sense for southern African countries to pit private airlines against a competition that is so heavily subsidised and otherwise protected. The very notion of competitiveness itself is at risk.

The next section provides an evaluation of the study.

7.4 EVALUATION OF THE STUDY

The evaluation of the study is presented in terms of the contribution of this study to the airline industry, as well as its limitations. The ethical considerations applied in this study are also addressed.

7.4.1 Value of the study

The contribution of this study to the airline industry in southern Africa cannot be underestimated. The study is of value to airline executives because it has identified CSFs that overcome challenges facing airlines in southern Africa. The findings can help airlines reshape industry's competitive landscape and thereby provide important direction for the participating airlines in their contemporary and future efforts to survive and be profitable. To survive, airlines have no choice but to change course. By adopting the CSFs identified, carriers can forge better relationships with customers, cut costs selectively, and improve their financial performance in a sustainable way. With a fundamentally lower cost structure, the large airlines would be far better positioned to become profitable, grow, and launch a marketplace offensive against low-cost carriers.

The study does not only identify CSFs to overcome challenges affecting airline performances, but also identifies the influence of organisational, industry and environmental factors on airline performances. The participating airlines can use this information to align their organisational success factors (i.e. strengths and weaknesses) with environmental success factors (i.e. opportunities and threats). Therefore, airlines should capitalise on their strengths and reduce their weaknesses to overcome challenges affecting their performance.

The study contributes towards valuable knowledge in the field of aviation and can help airline managers to increase the performance of their airlines and thereby boost tourism development. It could enable airline managers to improve profits of their airlines and thereby fight competition from other airlines, particularly those from the Gulf and the Middle East.

Furthermore, the study contributes to the current literature on the airline industry in southern Africa. In this regard, researchers in the airline industry in southern Africa can use this study as a point of reference in future, while tertiary institutions can use it in their future research programmes. In this context, results

can broaden the knowledge of CSFs for airlines in southern Africa and are suitable for international comparison. Following publication and presentation of the research findings, the research design and methodology followed in the study can form a valuable directive in the development of similar research studies, even internationally and for other disciplines. The CSFs are likely to be applicable and exportable to similar international airlines around the world.

A realistic evaluation of any study needs to consider limitations in the research leading to the final draft of the study. Below are the limitations of this study and suggestions for future research.

7.4.2 Limitations of the study

Although the researcher made great efforts to enhance the trustworthiness and the validity and reliability of the research process, as with any study, there remain certain limitations. These limitations expose weaknesses of this study, which could help researchers in future to design and conduct their research on CSFs and challenges in the airline sector more effectively. Firstly, obtaining permission from the airlines was time-consuming and some airline executives/managers refused to participate in this study. Their refusal to participate meant that their viewpoints were lost to this research.

Secondly, the research was based on identifying CSFs to overcome challenges faced by airlines in southern Africa. Caution is therefore required when generalising the findings of this study to other airlines in other geographic areas. Airlines from other geographic locations could have different challenges hence they might need different CSFs.

Thirdly, the researcher only interviewed airline executives/managers in airlines that are still in operation. Airline executives from now defunct airlines could have added further insight into the CSFs and challenges of airlines in southern Africa, specifically the reason(s) for their demise. It is assumed that the responses are truthful. However, the fact that all interviewees were more inclined to talk about their success factors rather than elaborate on their challenges could indicate their reluctance to detail the various challenges that could reflect negatively on them. The study is also limited in sample size (eight airlines) as a result of the scope. A larger sample size of a greater variety of airlines could possibly generate further insight.

Fourthly, the first regression model failed to explain 42% of the variation in passenger load factors, and the second regression model could only explain 73% of the variation in airline yields. Finally, the assessment of the effect of environmental success factors on the performance of airlines was limited to 26 factor attributes. Even though these attributes were included in other studies and the content validity of these attributes tested, there could be other relevant environmental success factors that are likely to influence the performance of airlines.

Despite the limitations of the study, the researcher has future research propositions that can serve as directives for identifying CSFs to overcome challenges facing airlines.

7.4.3 Future research

With regard to further investigations in this field, the following recommendations are made:

The research could be expanded to airlines of other countries of Africa and the findings could be compared with the current research to determine whether there are similarities in CSFs for airlines regardless of their location in Africa. Triangulation requirements could be considered by applying multiple methods (for example, individual interviews and focus group discussions) and multiple data and data sources in order to enhance the reliability and validity of the research (Cohen, Manion & Morrison, 2011:31; Leedy & Ormrod, 2013:92).

Furthermore, future research in airlines could attempt to increase the number of participating airlines. In this study, only eight airlines participated. As airlines operate in a constantly changing environment, future researchers could extend the time period of the research to identify CSFs to overcome long term challenges in the airline industry.

7.4.4 Research ethics

This study was conducted according to the research ethics guidelines suggested by Babbie and Mouton (2001:529). The research proposal of this study was submitted to subject experts in Tourism and Hospitality Management Department, and to the Research Committee of the Faculty of Business and Management Sciences at CPUT in Cape Town to obtain appropriate approval. The research was then conducted in accordance with the approved research proposal. Permission was obtained from the selected airlines and consent from airline managers who expressed interest in participating in this study. Therefore, the sample only included the airlines and respondents from whom permission and informed consent were obtained to collect data. Respondents' information and responses shared during the study were kept confidential and the results were presented in an anonymous manner in order to protect the identities of the respondents.

To this effect, the researcher conducted this research competently with due concern to the dignity of the participating airlines and individuals. The researcher constantly consulted the study leaders in connection with the progress of the research. Upon completion of data interpretation and report writing, the researcher intends to share the findings and conclusions of the research with the participating airlines. The research supports the strategic objectives of the National Tourism Sector Strategy (RSA NDT, 2011:12) to improve the reliability and dependability of airlines and thereby boost tourism development.

7.5 CONCLUDING REMARKS

The study was a challenging and enriching experience for the researcher, leading to a better understanding of the interdependency between air transport and tourism. The hope is expressed that the CSFs identified in this study will help to overcome the challenges faced by airlines and thereby improve tourism development in southern Africa. However, airlines operate in an environment that is constantly

changing, therefore new challenges will always evolve and the new challenges will require new CSFs. To be effective, airlines should constantly monitor their environmental success factors. Airlines that constantly monitor their environmental success factors often identify trends before others, thus giving them a competitive advantage.

In this regard, the researcher acknowledges that a study on CSFs to overcome challenges facing airlines cannot claim to be conclusive or all-inclusive. Further research is required to identify CSFs to overcome challenges facing airlines. The completion of this study therefore does not represent closure or the end of the quest to identify CSFs to overcome challenges facing airlines in southern Africa. The process is ongoing.

REFERENCES

Abate, M. 2013. The economic effects of progressive air transport liberalisation in Africa: The case of city-pair routes to or from Addis Ababa. Unpublished Master's thesis. Degree of Master of Art, School of Graduate Studies, Addis Ababa University, Addis Ababa.

Abda, M.B., Belobaba, P.P. & Swelbar, W.F. 2011. Impacts of LCC growth on domestic traffic and fares at largest US airports. *Journal of Air Transport Management*, 18(1):21-25.

Addepalli, S., Pagalday, G., Salonitis, K. & Roy, R. 2017. Socio-economic and demographic factors that contribute to the growth of the civil aviation industry. *Procedia Manufacturing*, 19(3):2-9.

Adeyeye, A. 2016. *Understanding Africa's slow growth in intra-regional air transport.* Africa Business. http://africabusiness.com/2016/06/01/africa-intra-regional-air-transport [20 June 2016].

African Airlines Association (AFRAA). 2016. *Annual report, AFRAA*. http/www.afraa.org [2 July 2016].

Africa News Service (ANS). 2000. *British Airways acquires 18 percent shares in Comair*. http://business.highbeam.com/3548/article1G1-59128624/british-airways-acquires-18-percent-shares-comair [16 March 2016].

Africa Review. 2015. *Turbulent state of African aviation*. https://asokoinsight.com/news/turbulent-state-of-african-aviation [16 July 2016].

Aguirregabiria, V. & Ho, C.Y. 2010. A dynamic game of airline network competition: Hub-and-spoke networks and entry deterrence. *International Journal of Industrial Organization*, 28(4):377-382.

Airlink. 2013. *Airlink profile*. http://www.flyairlink.com/about_airlink.php [16 March 2016].

Air Transport News (ATN). 2016. *The importance of airline alliances*. http://www.eturbonews.com/11798/importance-airline-alliances [28 December 2016].

Aktouf, O. 2004. The false expectations of Michael Porter's strategic management framework. *Revista Universidad and Empresa*, 6(6):9-41.

Alamdari, F.E. & Morrell, P.1997. Airline labour cost reduction: post-liberalisation experience in USA and Europe. *Journal of Air Transport Management*, 3(2):53-66.

Alderighi, M., Cento, A. & Piga, C.A. 2011. A case study of pricing strategies in European airline markets: the London - Amsterdam route. *Journal of Air Transport Management*, 17(8):369-373.

All Africa. 2016. *Zimbabwe: Chikumba's challenge*. http://allafrica.com/stories [16 January 2017].

Allen, R.S. & Helms, M.M. 2006. Linking strategic practices and organizational performance to Porter's Generic Strategies. *Business Process Management*, 12(4):433-454.

Alshubaily, A. 2017. Exploring the key success factors for young airlines. A focus on emirates airlines and its regional competitors' strategy for success. *Saudi Journal of Business and Management Studies*, 2(1):30-37.

Alves, C.F. & Barbot, C. 2007. Do low cost carriers have different corporate governance models? *Journal of Air Transport Management*, 13(2):116-120.

Alves, V. & Forte, R. 2015. A Cournot model for analysing the effects of an open skies agreement. *Journal of Air Transport Management*, 42(8):125-134.

Amankwah-Amoah, J. & Debrah, Y.A. 2010. The Evolution of alliances in the global airline industry: a review of the African experience. *Thunderbird International Business Review*, 53(1):37-50.

Amberg, M., Fischl, F. & Wiener, M. 2005. *Background of critical success factor research*. Nuremberg: Friedrich–Alexander University Erlangen–Nürnberg

Anderson, K. & Bows, A. 2008. Reframing the climate change challenge in light of post-2000 emission trends. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 366(8):3863-3882.

Antoinette, K. 2004. *Sun Air goes belly up*. http://mg.co.za/article/2004-03-03-sun-air-goes-belly-up [25 November 2016].

Armoo, C.N. 2015. *Challenge and prospects for the aviation industry in Africa: the case of Ghana*. http://thebftonline.com/features/piions/16164/challenges-prospects-for-the-aviation-industry-in-africa-the-case-of-ghana [14 October 2016].

Asheeke, J. 2016. *Air Namibia prepares for competition*. http://www.observer.com.na/air-namibia-prepares--for-competition [15 January 2017].

Assaf, A.G. 2009. Are US airlines really in crisis? *Tourism Management*, 30(6):916-921.

Assaf, A.G. & Josiassen, A. 2011. The operational performance of UK airlines: 2002-2007. *Journal of Economic Studies*, 38(1):5-16.

Auruskeviciene, V., Salciuviene, L., Kazlauskaite, R. & Trifanovas, A. 2006. A comparison between recent and prospective critical success factors in Lithuanian printing industry. *Managing Global Transitions*, 4(4):327-346.

Baatweng, V. & Kologwe, O. 2014. *Air Botswana continues to struggle despite cash injections by government*. http: //www.sundaystandard.info/air-botswana-continues-struggle-despite-cash-injections-gov [28 December 2016].

Babbie, E.R. 2010. *The basics of socio-cultural research*. 12th ed. Belmont, CA: Wadsworth Cengage Learning.

Babbie, E.R. & Mouton, J. 2001. *The practice of socio-cultural research.* South African edition. Cape Town: Oxford University Press.

Bachwich, A.R. & Wittman, M.D. 2017. The emergence and effects of the ultra-low cost carrier (ULCC) business model in the U.S. airline industry. *Journal of Air Transport Management*, (62):155-164.

Balise, J. 2007. *Air Botswana problems grow by the day*. https://palapye.wordpress.com/2007/05/10/air-botswana-problems-grow-by-the-day [28 December 2016].

Ballantyne, T. 2001. The global airline industry in crisis: where do we go from here? Paper presented by Chief Correspondent, Orient Aviation to the Association of South Pacific Airlines, 3-4 December: Brisbane.

Banker, R.D., Charnes, A. & Cooper, W.W. 1984. Some models for estimating technical and scale efficiencies in data envelopment analysis. *Management Science*, 30(9):1078-1092.

Bapotlhale, P. 2015. *A plot to fire the Air Botswana GM*. http://www.businessweekly.co.bw/a-plot-to-fire-the-air-botswana-gm [28 December 2016].

Barbot, C., Costa, A. & Sochirca, E. 2008. Airlines performance in the new market context: a comparative productivity and efficiency analysis. *Journal of Air Transport Management*, 14(5):270-274.

Barlow, A. 2016. *How a State-owned airline enterprise can succeed*. http://www.eturbonews.com/67651/how-state-owned-airline-can-succeed [28 December 2016].

Barney, J. & Hesterly, W. 2010. *Strategic management and competitive advantage: concepts and cases*. 3rd ed. Boston, MA: Prentice Hall.

Barrett, S.D. 2006. Commercialising a national airline – the Aer Lingus case study. *Journal of Air Transport Management*, 12(4):159-167.

Barros, C.P. & Couto, E. 2013. Productivity analysis of European airlines, 2000- 2011. *Journal of Air Transport Management*, 31:11-13.

Barros, C.P. & Peypoch, N. 2009. An evaluation of European airlines' operational performance. *International Journal of Production Economics*, 122(2):525–533.

Barros, C.P. & Wanke, P. 2015. An analysis of African airlines efficiency with two-stage TOPSIS and neural networks. *Journal of Air Transport Management*, 44(6):90-102.

Baumann, J. 2010. *SA Express appoints new CEO*. http://www.allafrica.com/stories/2010/08/12 [11 March 2016].

Bell, J. 2005. *Doing your research project*. New York: Open University Press.

Bennett, J.A. 2005. *Managing tourism services: a southern African perspective*. 2nd ed. Pretoria: Van Schaik.

Bennett, J.A. & George, R. 2004. *South African travel and tourism cases*. 3rd ed. Pretoria: Van Schaik.

Beria, P., Niemeier, H.M. & Fröhlich, K. 2011. Alitalia - The failure of a national carrier. *Journal of Air Transport Management*, 17(5):215-220.

Bernard, H.R. 2013. *Socio-cultural research methods: Qualitative and quantitative approaches.* 2nd ed. Thousand Oaks, CA: Sage.

Bhebhe, N. 2016. *Aviation: Zimbabwe shields struggling Air Zimbabwe from competition*. http://www.theafricareport.com/Southern-Africa/aviation-zimbabwe-shields-struggling-air-zimbabwe-from-competition.html [28 December 2016].

Bhoola, F. 2016. *How a weaker Rand hurts South Africa*. http://www.cnbcafrica.com/news/southern-africa/2016/01/25/explainer-how-currency-markets-work-and-why-the-south-african-rand-is-falling [29 December 2016].

Bilotkach, V. & Hüschelrath, K. 2012. Airline alliances and anti-trust policy: The role of efficiencies. *Journal of Air Transport Management,* 21(3):76-84.

Birns, H. 2009. *Mango will make profit despite SAAs woes*. http//:www.tourismupdate.co.za [5 March 2016].

Bissessur, A. 1996. The identification and analysis of the critical success factors of strategic airline alliances. Unpublished PhD thesis. Wharley End, Bedford: Cranfield University.

Bissessur, A. & Alamdari, F. 1998. Factors affecting the operational success of strategic airline alliances. *Transportation*, 25(5):331-355.

Bitzan, J. & Peoples, J. 2016. A comparative analysis of cost change for low-cost, full-service, and other carriers in the US airline industry. *Research in Transportation Economics*, 56, 25-41.

Bless, C. & Higson-Smith, C. 2000. *Fundamentals of socio-cultural research methods: an African perspective*. 3rd ed. Cape Town: Juta Education.

Boesch, F. 2005. The Ryan air model: success and impact on the European aviation market. Unpublished Bachelor Thesis in Business Economics. International University Bremen. http//:www.grin.com [5 March 2016].

Botha, J. 2014. *Measuring economic transformation: tracking the progress of an elusive South African dream*. http://wiredspace.wits.ac.za/xmlui/bitstream/handle [28 December 2016].

Bowen, J. 2010. *The economic geography of air transportation: space, time, and the treedom of the sky*. Abingdon: Routledge.

Brandt, E. 2016. *African airlines to lose N$8 billion in 2016. Air Namibia needs bold decisions to improve profitability*. http://www.newera.com.na/african-airlines-lose-n8-billion-air-namibia-bold-decisions-improve-profitability [28 June 2016].

Brewerton, P. & Millward, L. 2001. *Organisational research methods*. London: Sage.

Brinkmann, A. 2013. *Kulula.com – case study mini in class analysis*. http://www.slideshare.net/AmandaBrinkmann/kululacom-case-studyanalysis-having-a-bit-of-fun-with-an-historically-based-case-study-for-analysis [28 December 2016].

Brits, A. 2010. A liberalised South African airline industry: measuring airline total-factor productivity. *Journal of Transport and Supply Chain Management*, 6(4):22-38.

Brock, J. 2015. *Low-cost airlines confront national carriers in Africa*. http://www.timeslive.co.za/sundaytimes/businesstimes/2015/09/16/Low-cost-airlines-confront-national-carriers-in-Africa [28 December 2016].

Bronkhorst, Q. 2016. *How far the rand has fallen: from 2000 to 2016*. https://businesstech.co.za/news/business/108555/how-far-the-rand-has-fallen-from-2000-to-2016 [20 January 2017].

Brophy, S. 2016. *Lucrative Africa airline industry 88% outsourced to international carriers*. http://traveller24.news24.com/News/lucrative-africa-airline-industry-88-outsourced-to-international-carrier-20160510 [15 July 2016].

Brüggen, A. & Klose, L. 2010. How fleet commonality influences low-cost airline operating performance: empirical evidence. *Journal of Air Transport Management,* 16(5):299-303.

Bruno, A. & Leidecker, J. 1984. Identifying and using critical success factors. *Long Range Planning*, 17, 23-32.

Bryson, J.M. 2012. *Strategic planning for public and non-profit organizations* (Revised Edition). San Francisco, CA: Jossey-Bass.

Budd, L., Francis, G., Humphreys, I. & Ison, S. 2014. Grounded: characterising the market exit of European low cost airlines. *Journal of Air Transport Management*, 34(7):78-85.

Bullen, C.V. 1995. Re-examining productivity critical success factors. *Information Systems Management*, 12(3):13-18.

Bunz, U.K. & Maes, J. D. 2010. Learning excellence: Southwest Airlines' approach. *Managing Service Quality*, 8(3):163-169.

Business Day. 2012. 1Time failure raises questions. *Business Day*: 8, November 6.

Business Day. 2013. *Heavy carbon emitters will pass costs of new tax on to consumers*. http://www.egi-sa.org.za/tag/carbon-emissions-tax [28 December 2016].

Business Weekly. 2016. *Political interference in parastatals is the main reason they fail*. http://www.businessweekly.co.bw/political-interference-in-parastatals-is-the-main-reason-they-fail [28 December 2016].

Button, K.J. 2012. Low-cost airlines: a failed business model? *Transportation Journal*, 51(2):197-219.

CAJ News. 2015. *Skywise reacts to Mango expansion plans*. http//:www.metrosanews.co.za [5 March 2016].

Campbell, K. 2014. *African airlines face cost and political changes, need international partnerships*. http://www.engineeringnews.co.za/article/african-airlines-face-cost-and political-challenges-and-need-international-partnerships-2011-04-29 [29 July 2015].

Campbell, K. 2015. Cooperation important for African aviation . *Engineering News:*29 April.

Campion, M.A., Campion, J.E. & Hudson, J.P., Jr. 1994. Structured interviewing: a note on incremental validity and alternative question types. *Journal of Applied Psychology*, 79(8): 998-1002.

Candell, O., Karim, R. & Soderholm, P. 2009. E-maintenance-information logistics for maintenance support. *Robotics and Computer-Integrated Manufacturing*, 25(6):937-944.

Capazorio, B. 2015. *Maybe some pretzels could reduce SA Express costs: CEO*. http://www.timeslive.co.za/local/2015/05/14 [14 March 2016].

Capazorio, B. 2016. *Gordhan sets his sights on struggling state-owned entities*. http://www.dispatchlive.co.za/news/ [13 March 2016].

Caralli, R.A. 2004. The critical success factor method: establishing a foundation for enterprise security management. *Carnegie Mellon Software Engineering Institute*, July: 1-118.

Carney, M. 2006. Airline ownership and control: a corporate governance perspective. *Journal of Air Transport Management*, 12(2):63-75.

Cederholm, T. 2014. *External factors that influence the airline industry*. http://marketrealist.com/2014/12/low-entry-barriers-intensify-competition-airline-industry [28 December 2016].

Centre for Aviation (CAPA). 2013a. *South Africa's Mango, the often forgotten budget airline subsidiary starts to pursue faster growth*. http://centreforaviation.com/analysis/mango-taking-a-larger-role-in-south-african-airways-dual-brand-strategy-considering-premium-cabin-258896 [5 March 2016].

Centre for Aviation (CAPA). 2013b. *Airline CEOs: the increasingly important quest to find the ideal characteristics*. http://centreforaviation.com/analysis/airline-ceos-the-increasingly-important-quest-to-find-the-ideal-characteristics-139360 [28 December 2016].

Centre for Aviation (CAPA). 2015. *Mango taking a larger role in South African Airways' dual brand strategy. Considering premium cabin*. http://centreforaviation.com/analysis/mango-taking-a-larger-role-in-south-african-airways-dual-brand-strategy-considering-premium-cabin-258896 [5 March 2016].

Centre for Aviation (CAPA). 2016. *Ethiopian Airlines and Air Mauritius grow, but others face strong headwinds*. http://centreforaviation.com/analysis/africa-outlook-ethiopian-airlines-and-air-mauritius-grow-but-others-face-strong-headwinds-282282 [14 July 2016].

Chalmers, R. 2001. Kulula.com takes to the skies. *Business Day:* 7, August 2.

Chalmers, R. 2003. SAA could invest in rich Nigerian airline market. *Business Day:* 19, May 23.

Chan, D. 2000 .The Development of the airline industry from 1978-1998: a strategic global overview. *Journal of Management Development*, 19(6):489-514.

Chan, J. & Yeoh, E. 2011. Malaysian low-cost airlines: key influencing factors on customers' repeat purchase intention. *World Applied Sciences Journal*, 12:35-43.

Chandrappa, T. 2014. *Why socio-cultural and demographic factors influence air travel demand*. http://finance.yahoo.com/news/why-socio-cultural-demographic-factors-influence-130023280.html [28 December 2016].

Charles, C.M. & Mertler, C.A. 2002. *Introduction to educational research*. 4th ed. Boston, MA: Allyn & Bacon.

Charnes, A., Cooper, W.W. & Rhodes, E. 1978. Measuring the inefficiency of decision making units. *European Journal of Operational Research*, 2(6):429-444.

Chattopadhyay, C. 2015. Aviation industry: challenges and prospects. *Journal of Research in Business, Economics and Management*, 3(2):145-149.

Chibamu, A. 2016. *Pilots unpaid for months; say substantive management crucial for Air Zimbabwe's revival*. http://www.newzimbabwe.com/news-29580-Unpaid+Air+Zim+pilots+blast+CEOs,+planes/news.aspx [11 July 2016].

Chingosho, E. 2005. *African airlines in the era of liberalization*. *Surviving the Competitive Jungle*. E-Book, ISBN 9966-05-011.

Chipunza, V. 2013. *Foreign airlines drain US$100m per year*. http://www.financialgazette.co.zw/foreign-airlines-drain-us100m-per-year [28 December 2016].

Chiu, Y.H. & Huang, C.W. 2011. Evaluating the optimal occupancy rate, operational efficiency, and profitability efficiency of Taiwan's international tourist hotels. *Service Industries Journal*, 31(13):2145-2162.

Christidis, P. 2016. Four shades of open skies: European Union and four main external partners. *Journal of Transport Geography*, 50(6):105–114.

Christodoulou, C. 2012. *Merge SAA and SA Express to give them a chance of success*. http://www.bdlive.co.za/opinion/2012/10/01 [13 March 2016].

Clark, R. 2011. Unpredicted challenges: strategic choices for US airport operators. *Wall Street Journal*, 3(5):34-44.

Clement Chow, K.W. 2010. Measuring the productivity changes of Chinese airlines: the impact of the entries of non-state carriers. *Journal of Air Transport Management*, 16(7):320-324.

Cochrane, K. 2001. BA/Comair shrugs off competitor's war plans. *Travel News Weekly:* 11, July 25.

Coelho, L. C. 2010. *Strategies and competitive advantages.* Portal INBRASC, http://www.inbrasc.org.br/pesquisa/pesquisas_realizadas [30 June 2016].

Cohen, L., Manion, L. & Morrison, K. 2001. *Research methods in education*. 2nd ed. London: Routledge Falmer.

Collis, J. & Hussey, R. 2003. *Business research: a practical guide for undergraduate and postgraduate students*. London: Palgrave Macmillan.

Comair Limited. 2016. *Integrated annual report 2016*. www.flycomair.com [13 January 2017].

Coman, A. & Ronen, B. 2009. Focused SWOT: diagnosing critical strengths and weaknesses. *International Journal of Production Research*, 47(20):5677-5689.

Conklin, D.W. & Tapp, L. 2000. The creative web: a new model for managing innovation. *Ivey Business Journal*, 64(5):60-69.

Cooper, D.R. & Schindler, P.S. 2003. *Business research methods.* 7th ed. London: McGraw-Hill.

Cordeur, M. 2015. *Five reasons why SAA is experiencing turbulence*. http//:www.mg.co.za [3 March 2016].

Creswell, J.W. 2003. *Research design: qualitative, quantitative and mixed methods approach*. 2nd ed. Thousand Oaks, CA: Sage.

Creswell, J.W., Ebersohn, L., Eloff, I., Ferreira, R., Ivankova, N.V., Jansen, J.D., Nieuwenhuis, J., Pietersen, J., Plano Clark, V.L. & Van Der Westhuizen, C . 2007. *First steps in research*. Pretoria: Van Schaik.

Creswell, J.W. & Plano Clark, V.L. 2007. *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage.

Cruywagen, R. 2013. *Air Namibia cuts flights.* http://internationalflyerz.co.za/niewtopic [13 July 2016].

Culture, Arts, Tourism, Hospitality and Sports Sector Education and Training Authority (CATHSSETA). 2016. *Tourism and sport skills audit.* http://www.cathsetta.gov.za [22 December 2016].

Daft, L.R. 1988. *Management*. Chicago, IL: Dryden Press.

Daniel, D.R. 1961. Management information crises. *Harvard Business Review*, 39,110-121.

David, F. 2011. *Strategic management: concepts and cases*. 7th ed. Boston, MA: Pearson.

Davis, R. 2013. *Aviation industry: economy may have wings again*. http://www.dailymaverick.co.za/article/2013-06-04-aviation-industry-economy-may-have-wings-again/#.WEHjibDrml [28 December 2016].

Defenceweb. 2012. *Kulula receives new Boeing 737-800s*. //www.defenceweb.co.za [15 January 2017].

Demydyuk, G. 2011. Optimal financial key performance indicators: evidence from the airline industry. *Accounting and Taxation*, 3(2):39-51.

DeVellis, R.F. 1991. *Scale development: theory and applications*. Newbury Park, CA: Sage Publications.

De Waal, M. 2001. *No cheers for SAA*. http://www.inet.co.za [7 February 2016].

De Wit, J. & Zuidberg, J. 2012. The growth limits of the low cost carrier model. *Journal of Air Transport Management*, 21:17-23.

Diaconu, L. 2012. The evolution of the European low-cost airlines' business models. Ryanair case study. *Procedia-Socio-cultural and Behavioural Sciences*, 62,342-346.

Dobruszkes, F. 2013. The geography of European low-cost airline networks: a contemporary analysis. *Journal of Transport Geography*, 28(6):75-88.

Doganis, R. 2001. *The airline business in the 21st Century*. London: Routledge.

Doganis, R. 2006. *The airline business*. 2nd ed. New York: Routledge.

Doganis, R. 2010. *Flying off course: airline economics and marketing*. 4th ed. London: Routledge.

Doganis, R. 2013. *Strategies for survival – evolving airline business models*. Air Transport Management Seminar, Cranfield University, Cranfield, UK. 11 November 2013.

Dooley, D. 1990. *Socio-cultural research methods*. 2nd ed. Englewood Cliffs, NJ: Prentice-Hall.

Douglas, I. 2010. Long-haul market entry by value-based airlines: dual business models support product innovation. *World Review of Intermodal Transportation Research*, 3:202-214.

Dron, A. 2015. *South African Airways searches for sustainable future*. http//www.airwaysnews.com [2 March 2016].

Dulčić, Ž., Gnjidić, V. & Alfirević, N. 2012. From five competitive forces to five collaborative forces: revised view on industry structure-firm interrelationship. *Procedia Socio-cultural and Behavioural Sciences*, 58, 1077-1084.

Durbin, C.G. 2004. Effective use of tables and figures in abstracts, presentations and papers. *Respiratory Care Journal*, 49(10):1233-1237.

Duvenage, W. 2016. *SAA's woes the results of poor leadership*. http://city-press.news24.com/Business/saas-woes-the-result-of-poor-leadership-20160812 [28 December 2016].

Dworkin, S. L. 2012. Sample size policy for qualitative studies using in-depth interviews. *Archives of Sexual Behaviour*, 41(3):1319-1320.

Eller, R.A.G. & Moreira, M. 2014. The main cost-related factors in airlines management. *Journal of Transport Literature*, 8(1):8-23.

eNCA. 2016. *Comair to meet striking workers*. http://www.enca.com/money/comair-meet-striking-workers [22 December 2016].

eNCA. 2017. *SAA fined R1.16bn for anti-competitive incentive scheme*. http://www.enca.com/south-africa/comair-awarded-r116bn-in-saa-in-anti-competitive-travel-agent-incentive-schemes [6 March 2017].

Ensor, L. 2015. *State-owned SA Express's losses pile up*. http://www.bdlive.co.za/national/2015/05/13 [10 March 2016].

Ensor, L. 2016a. *SA Express still has not passed solvency and liquidity tests*. https://www.businesslive.co.za/bd/companies/transport-and-tourism/2016-12-01-sa-express-still-has-not-passed-solvency-and-liquidity-tests [28 December 2016].

Ensor, L. 2016b. *SA Express seeks new aircraft funds from state*. http://www.bdlive.co.za/business/transport/2016/02/17 [13 March 2016].

Ensor, L. 2016c. *SAA bleeding as competition hots up, its acting finance chief tells MPs*. http://www.businesslive.co.za/bd/companies/transport-and-tourism/2016-11-16-saa-bleeding-as-competition-hots-up-its-acting-finance-chief-tells-mps [28 December 2016].

Ensor, L. & Baumann, J. 2011. SA to host meeting over open skies demand. *Business Day:* 26, March 9.

Epstein, M., Kumar, P. & Westbrook, R. 2000. The drivers of customer and corporate profitability: modeling, measuring, and managing the casual relationships. *Advances in Management Accounting*, 9(2):43-72.

Esteves, J. 2004. *Definition and analysis of critical success factors for ERP implementation projects*. Barcelona, Spain: Universitat Politecnica de Catalunya.

Evans, N. 2011. Collaborative strategy: an analysis of the changing world of international airline alliances. *Tourism Management*, 22(3):229-243.

Eze, C. 2016. *Nigeria: airlines to earn U.S. $39.4 billion in 2016, Africa carriers to Lose U.S. $0.5 billion*. http://allafrica.com/stories/201606030928.html [9 July 2016].

Fageda, X. & Flores-Fillol, R. 2012. On the optimal distribution of traffic of network airlines. *European Economic Review*, 56:1164-1179.

Fageda, X., Suau-sanchez, P. & Mason, K.J. 2015. The evolving low-cost business model: network implications of fare bundling and connecting flights in Europe. *Journal of Air Transport Management*, 42:289-296.

Farrell, M.J. 1957. The measurement of productive efficiency. *Journal of the Royal Statistical Society Series A*, 120(3):253-281.

Federico, G. 2013. SAA II: abuse of dominance in the South African skies. *Journal of Competition Law and Economics*, 9(3):709-737.

Ferreira, E. 2016. *Gordhan moots SAA-SAX merger*. http://www.iol.co.za/business/budget/gordhan-moots-saa-sax-merger-1989253 [27 March 2016].

Fethi, M.D. & Jackson, P.M. 2000. *Measuring the efficiency of European airlines: an application of DEA and Tobit analysis*. EPRU discussion papers 2000 in Annual Meeting of the European Public Choice Society, Siena, Italy.

Flightsite. 2012. *Fly Mango airlines*. http://www.flightsite.co.za/flights/airlines/mango-airlines/[5 January 2016].

Flottau, J. 2013. South African Airways struggle to remain viable. *Aviation Week and Space Technology*, 7(2):11-39. http://www.aviationweek.com [7 March 2016].

Flottau, J. & Buyck, C. 2013. The hybrid way. Aviation. *Week Space Technology*, 175(1):33-41.

Flouris, T.G. & Oswald, S.L. 2006. *Designing and executing strategy in aviation management*. 6th ed. Farnham: Ashgate Publishing Limited.

Flyafrica. 2016. *Comair profits decline as Rand weakens*. http://www.flyafrica.info/forums/Comair-profits-decline-as-rand-weakens [22 December 2016].

Forsberg, D. 2015. *Aircraft retirement and storage trends, economic life analysis reprised and expanded*. http://avolon.aero/wp/Avolon-White-Paper-FInal-30-March-2015.pdf [16 January 2017].

Forsyth, P. 2011. Environmental and financial sustainability of air transport: are they incompatible? *Journal of Air Transport Management*, 17(6):27-32.

Fortin, J. 2016. African air travel: why are airlines in Africa so expensive, unsafe and impossible to navigate? *International Business Times:* 12, 4 May.

Francis, G., Humphreys, I., Ison, S. & Aicken, M. 2005. Where next for low cost airlines? A spatial and temporal comparative study. *Journal of Transport Geography*, 5(6):83-94.

Franke, M. & John, F. 2011. What comes next after recession? Airline industry scenarios and potential end games. *Journal of Air Transport Management*, 17(5):19-26.

Fu, X. & Oum, T. 2014. Air transport liberalization and its effects on airline competition and traffic growth: an overview. In Peoples, J. (ed). *Advances in Airline Economics*, 6(7):11-44.

Galli, P. 1997. 100% of SAA up for grabs, state reveals. *The Star:* 1, April 8.

Gavin, K. 2013. Operator preparedness is key to successful Africa flights. *Aviation International News*, 42(1):8-9.

Georgieva, A. 2016. *PESTLE analysis airline industry*. http://prezi.com/_wao8icmmatr/pestle-analysis-airplane-industry [28 December 2016].

Gernetzky, K. 2016. *No sunny skies for SA's aviation industry in 2017*. http://www.businesslive.co.za/bd/companies/transport-and-tourism/2016-12-06-no-sunny-skies-for-sas-aviation-industry-in-2017 [28 December 2016].

Getachew, K. 2014. Air transport in major airlines in Africa: challenges and prospects. Unpublished thesis, Addis Ababa University, Ethiopia.

Gleeve, S.D. 2014. *Opening up of aviation services in Africa – phase I review report*. Infrastructure Consortium for Africa (ICA). https://www.icafrica.org [20 November 2016].

Gliem, J.A. & Gliem, R.R .2003. Calculating, interpreting and reporting Cronbach's alpha reliability coefficient for Likert type scales. *Midwest Research to Practice Conference in Adult, Continuing and Community Education*. *The Ohio State University, Columbus*, 8(10):82-88.

Goldstein, A. 2001. Service liberalisation and regulatory reform in sub-Saharan Africa: the case of air transport. *World Economy*, 24(3):221–248.

Gomes Eller, R.A. & Moreira, M. 2014. The main cost-related factors in airlines management. *Journal of Transport Literature*, 8(1):1-7.

Gordon, G. 2015. *Africa's limited skies*. http://mg.co.za/article/2015-07-17-africas-limited-skies [2 July 2016].

Goyal, R. & Negi, D. 2014. Impact of global economic crisis on airline industry. *International Journal of Commerce, Business and Management*, 2(3):297-301.

Grobler, H. 1996. Comair en BA vat hande. *Vrydag:* 1, June 14.

Gross, S. & Luck, M. (eds). 2016. *The low cost carrier worldwide*. Farnham: Ashgate Publishing Ltd.

Gupta, A. 2013. Environment & PEST analysis: an approach to external business environment. *International Journal of Modern Socio-cultural Sciences*, 2(1):34-43.

Guttery, B. 1998. *Encyclopedia of African Airlines*. London: McFarland and Company. https://books.google.co.za/books?id=KBmGpaD36cMC&printsec=frontcover&source=gbsgesummaryr&cad=0#v=onepage&q&f=false [30 October 2018].

Haacker, J. 2006. *IATA Fuel Efficiency Campaign*. ICAO. http://www.icao.int [12 December 2016].

Haase, C. 2009. Global trends in salary, status, responsibilities and career progression: What does the future hold for the business continuity professional? *Journal of Business Continuity and Management*, 3(4):291-301.

Haider, Z. 2015. *Domestic airlines in the US: IBISWorld industry report 48111b*. http://www.IBISWorld database [28 December 2016].

Hamel, G. 2015. *Air Botswana; forever the toddler*. http://www.mmegi.bw/index.php? [28 December 2016].

Hardaker, M. & Ward, B.J. 1987. Getting things done. *Harvard Business Review*, 65, 112-120.

Harris, L. 2001. New blood could perk up the market. *Financial Mail:* 19, August 31.

Hartman, N. & Boscoianu, M. 2015. Single European sky- the transformation of the aviation industry based on the dynamic capabilities. *Incas Bulletin*, 7(1):97-109.

Heinstein, P. 2014. *Airline losses are a luxury taxpayers cannot bear*. http://www.iol.co.za/business/opinion/columnists [13 March 2016].

Heinz, S. & O'Connell, J.F. 2013. Air transport in Africa: toward sustainable business models for African airlines. *Journal of Transport Geography*, 31:72-83.

Hemmatfar, M., Salehi, M. & Bayat, M. 2010. Competitive advantages and strategic information systems. *International Journal of Business and Management*, 5(7):P158.

Henama, U.S. 2014. The demise of 1Time airline and the reaction of various interest groups. *African Journal of Hospitality, Tourism and Leisure*, 3(2):1-11.

Heracleous, L., Wirtz, J. & Pangarkar, N. 2009. *Flying high in a competitive industry: secrets of the world's leading airline*. 3rd ed. Singapore: McGraw Hill.

Hermann, D. 2012. *Rectify affirmative action*. http://stopkwotas.co.za/wpcontent/uploads/2012/08/Rectify-affirmative-action-Paper-by-Dr.pdf [28 December 2016].

Herrero, I. & Salmeron, J.L. 2005. Using the DEA methodology to rank software technical efficiency. *Communications of the ACM*, 48(1):101-105.

Hitt, M.A., Ireland, D. & Hoskisson, R. 2010. *Strategic management: an integrated approach*. 7th ed. Boston, MA: South-Western Cengage Learning.

Hofer, C.W. & Schendel, D. 1978. *Strategy formulation: analytical concepts*. St Paul, MN: West.

Hollowitz, J. & Wilson, C.E. 1993. Structured interviewing in volunteer selection. *Journal of Applied Communication Research*, 21(4):41-52.

Hove, G. 2017. Critical success factors for small business contractors in the construction industry in Zimbabwe. *Journal of Management and Administration*, 1(2):27-53.

Indetie, J. 2015. African airlines: focus on some challenges affecting profitability. *African Airlines Association*, 2(6):1-4.

International Air Transport Association (IATA). 2015. *Scheduled passengers carried.* http://www.iata.org/publications/Pages/wats-passenger-carried.aspx [14 October 2016].

International Air Transport Association (IATA). 2016a. *IATA air passenger forecast shows dip in long term demand, 26 November 2015*. http://www.iata.org/pressroom/pr/Pages.aspx [18 July 2016].

International Air Transport Association (IATA). 2016b. *Demand for air travel in 2015 surges to strongest result in five years*. http://www.iata.org/pressroom/pr/Pages.aspx [18 July 2016].

Isiklar, G. & Buyukozkan, G. 2007. Using a multi-criteria decision making approach to evaluate mobile phone alternatives. *Computer Standards and Interfaces*, 29(3):265-274.

Ismael, Z. 2015. SAA to get R6.5bn bailout. *iafrica.com:* Jan. 22.

Ittner, C. & Larcker, D. 2001. Assessing empirical research in management accounting: a value-based management perspective. *Journal of Accounting and Economics*, 32(8):349-410.

Jainchill, J. 2015. *Lufthansas' GDS fee, designed to cut costs, will penalise agents*. http://www.travelweekly.com/Travel-News/Travel-Agent-Issues/Lufthansa-GDS-fee-designed-to-cut-costs-will-penalize-agents [7 April 2016].

Jarvis, R. 2016. *The rise of low cost: mapping South Africa's domestic airlines*. http://www.travelstart.co.za/mapping-south-africas-domestic-airlines [15 January 2017].

Jenatabadi, H.S. 2013. Introduction latent variables for estimating airline assessment. *International Journal of Business and Management*, 8(18):78-86.

Jenks, R. 2013. *Spirit Airlines' growth: reasonable, risky, or reasonably risky*? http://seekingalpha.com [13 July 2016].

Jennet, S. 2010. *Is Airlink heading the same way as Nationwide?* http://www.avcom.co.za/phpBB3/viewtopic.php?t=122417 [11 March 2016].

Jennings, D. 2002. Strategic sourcing: benefits, problems and a contextual model. *Management Decision*, 40(1):26-34.

Jenster, P. 1987. Using critical success factors in planning. *Long Range Planning*, 20(4):02-109.

Johnson, B. & Christensen, L.B. 2004. *Educational research: quantitative, qualitative and mixed approaches.* 2nd ed. Boston, MA: Pearson Education Inc.

Johnson, G. & Scholes, K. 2002. *Exploring corporate strategy*. Hemel Hempstead: Prentice Hall.

Johnson, G., Scholes, K. & Whittington, R. 2008. *Exploring corporate strategy*. 8th ed. Maldon: Prentice Hall.

Joseph, G. 2016. *Air Namibia splashed N$11m on lease deal*. http://www.namibiansun.com/news/air-namibia-splashed-n11m-on-lease-deal [25 November 2016].

Juice. 2016. *Mango – Take me, I'm yours*. http://www.flymango.com [22 July 2016].

Julho, T. 2016. *Air Namibia battles for survival*. http://www.namibian.com.na/index.php?id=19595&page=archive-read [11 July 2016].

Kaboyakgosi, G. 2016. *Air and road transport in Botswana*. Botswana Institute for Development Policy Analysis, April 2016. http://www.tips.org.za/research-arhive [15 January 2017].

Kahiurika, N. 2016. *Air Namibia loses N$337 million lawsuit*. http://allafrica.com/stories/201509170546.html [5 July 2016].

Kalappa, V. 2006. *The evolution of LCCs*. A case study, presented at the Air Transport research Society, Nagoya, Japan.

Kamau, M.W. & Stanley, K. 2015. Factors affecting strategic choices in airlines in Kenya: a case study of Kenya Airways. *The International Journal of Business and Management*, 3(5):86-98.

Karagiannopoulos, G. D., Georgopoulos, N. & Nikolopoulos, K. 2005. Fathoming Porter's five forces model in the internet era. *Info*, 7(6):66-76.

Katz, M.H. 2006. *Study design and statistical analysis: a practical guide for clinicians*. 3rd ed. New York: Cambridge University Press.

Kaul, S. 2009. Yield management: getting more out of what you already have. *Ericsson Business Review*, 2(6):17-19.

Kemp, A. 2008. *The rapid decline of South African Airways*. http://www.neultra.blogspot.com/2008 [7 March 2016].

Kemp, S. 2001. *Airlines take on new cut-cost airline kulula.com*. Africa News Service, July 13. http://www.kulula.com/airlines-take-on-new-cut-cost-airline-kulula.com-11032001 [15 March 2016].

Khodaveysi, S., Mobarakabadi, H. & Slambolchi, A. 2016. An overview of critical success factors. *Advanced Socio-cultural Humanities and Management*, 3(2):22-28.

Kilinc, I., Oncu, M.A. & Tasgit, Y.E. 2012. A study on the competition strategies of the airline companies in Turkey. *Tourismos: An International Multidisciplinary Journal of Tourism*, 7(1):325-338.

Kilpi, J. 2007. Fleet composition of commercial jet aircraft 1952-2005: developments in uniformity and scale. *Journal of Air Transport Management*, 13(6):81-89.

Klophaus, R., Conrady, R. & Fichert, F. 2012. Low cost carriers going hybrid: evidence from Europe. *Journal of Transport Management*, 23(6):54-58.

Kombo K. & Delno, L.A. 2011. *An introduction: proposal and thesis writing*. Nairobi: Pauline Publication Africa.

Konjore, R. 2013. *Air Namibia haunts parliamentarians*. http://namibian.com.na [11 July 2016].

Kotas, M. 2015. Identifying of critical success factors of socio-cultural services organizations in the public sector. *The Business and Management Review*, 6(4):84-94.

Kothari, C.R. 2012. *Research methodology: methods and techniques*. 2nd ed. New Delhi: New International (Pvt) Ltd.

Kotler, P. & Armstrong, G. 2006. *Principles of marketing*. 13th ed. London: Pearson Prentice Hall.

Koutsikouri, D., Austin, S. & Dainty, A. 2008. Critical success factors in collaborative multidisciplinary design projects. *Journal of Engineering, Design and Technology*, 6(3):198-226.

Kuuchi, R. 2016. *Africa is slowly opening-up its market*. http://www.afraa.org/index.php/media-center/publications/articles-a-research-papers/2012-articles-and-research-papers/374-africa-is-slowly-opening-up-its-market-by-mr-raphael-kuuchi/file [10 July 2016].

Kuznetsova, N.V. 2015. Tools for assessing the external environment of public catering enterprises: PEST analysis. *Socio-sphere*, 3(4):25-31.

Kuznetsova, N.V. & Alekseeva, E.A. 2016. The role of the external environment in increasing the competitiveness of the organization. In the collection: *Achievements of modern science: a materials collection of the XIII International Scientific and Practical Conference*, 417-423.

Kvale, S.1996. *Interviews: an introduction to qualitative research interviewing*. Thousand Oaks, CA: Sage Publications.

Lam, P. & Chin, K. 2005. Identifying and prioritizing critical success factors for conflict management in collaborative new product development. *Industrial Marketing Management*, 34(2):761-772.

Laudon, K. & Laudon, J. 2007. *Management information systems: managing the digital firm*. Upper Saddle River, NJ: Pearson Prentice Hall.

Lee, B.L. & Worthington, A.C. 2010. *The relative efficiency of international, domestic and budget airlines: non nonparametric evidence*. Griffith Business School, Australia. Discussion paper Economics No. 2010-02.

Leedy, P.D. & Ormrod, J.E. 2013. *Practical research: planning and design*. 10th ed. Upper Saddle River, NJ: Pearson Education.

Leidecker, J. & Bylwo, V. 1984. Identifying and using critical success factors. *Long Range Planning*, 17(1):23-32.

Leitch, G. 2012. *Mango 'was direct cause' of demise of Nationwide and 1time*. http://www.bdlive.co.za/mango-was-direct-cause-of-demise-of-nationwide-and-1time [30 March 2016].

Lim, S.H. & Hong, Y. 2014. Fuel hedging and airline operating costs. *Journal of Air Transport Management*, 36, 33-40.

Lim, S.P. & Mohayidin, M.G. 2011. *Competitive pricing strategies of low cost Airlines in the perspective of game theory.* Kuala Lumpur. https://www.wbiconpro.com [10 January 2017].

Liu, J.S. & Lu, W.M. 2012. Network-based method for ranking of efficient units in two-stage DEA models. *The Journal of the Operational Research Society*, 63(8):1153-1164.

Loh, T. & Ching, S. 2014. Critical element for successful ERP implementations in SMEs. *International Journal of Production Research*, 42(17):3433-3455.

Lohmann, G. & Koo, T.T. 2013. The airline business model spectrum. *Journal of Air Transport Management*, 31:7-9.

Lordan, O. 2014. Study of the full-service and low-cost carriers network configuration. *Journal of Engineering and Management*, 7(5):1112-1123.

Luke, R. & Walters, J. 2013. Overview of the developments in the domestic airline industry in South Africa since market deregulation. *Journal of Transport and Supply Chain Management*, 7(1):117-128.

Lunsche, S. 1997. Transnet restructuring could pick up speed. *Sunday Times*: 3, April 13.

Lute, A. 2016a. *Air Botswana to retrench 200 workers*. http://www.weekendpost.co.bw/wp-news-details.php?nid=3057 [3 January 2017].

Lute, A. 2016b. *Will Masire rescue Air Botswana?* http://www.weekendpost.co.bw/wp-news-details-archive.php?nid=2214 [2 January 2017].

Lynch, R. 2003. *Corporate strategy*. 3rd ed. London: Prentice Hall.

Magwaza, M. & Speckman, A. 2012. JSE to investigate 1Time's closure announcement. *Business Report*, 05 November 2012.

Mahlaka, R. 2015. *Airfare price wars a drag on Comair earnings*. http://www.moneyweb.co.za/news/airfare-price-wars-a-drag-on-comair-earnings [3 January 2017].

Majube, B. & Newel, K. 2013. *Air Botswana plane crash scare*. http://en.africatime.com/botswana/articles/air-botswana-plane-crash-scare [3 January 2017].

Makalang, G.M. 2016. *Budget airline industry struggling: Leitch*. http://www.sabc.co.za/news/Budgetundefinedairlineundefinedindustryundefinedstruggling:undefinedLeitch [22 December 2016].

Makhaya, T. 2015. *Emirates and other SAA rivals should know SA's aviation policy*. http://www.rdm.co.za/business/2015/05/12/emirates-and-other-saa-rivals-should-know-sa-s-aviation-policy [28 December 2016].

Malaba, B. 2016. *Air Zimbabwe rejects rescue offer from Canadian group*. The Zimbabwe Mail. http://thezimbabwemail.com/air-zimbabwe-rejects-rescue-offer-from-Canadian-group [16 July 2016].

Malhotra, N.K. & Birks, D.F. 2006. *Marketing research: an applied approach*. 2nd ed. Harlow: Pearson Education.

Malik, J. 2015. *Those darkest days in Skywise's history*. http://www.iol.co.za/business-report/opinion/those-darkest-days-in-skywises-history-1939426 [24 December 2016].

Mananavire, B. 2016. *Air Zim seeks new synergies*. https://www.dailynews.co.zw/articles/2016/05/16/air-zim-seeks-new synergies [14 July 2016].

Mandizha, T. 2016. *Aviation industry could transform Africa - Air Zimbabwe boss*. http://www.thestandard.co.zw/aviation-industry-transform-africa-air-zimbabwe-boss- [17 July 2016].

Mantell, S. 2015. *SAAs problems are written large in its balance sheet*. http://www.rdm.co.za/business/2015 [7 March 2016].

Manuela, W.S. 2011. Factors affecting airline profits: evidence from the Philippines. *The Journal of Applied Business Research*, 27(6):17-22.

Maposa, S. 2007. *Raging air price war knocks road travel*. Cape Argus: Jan. 16. http://www.capeargus.co.za [2 March 2016].

Maqutu, A. 2015a. *SA Airways: mission impossible*. http://www.financialmail.co.za/coverstory/2015/03/19 [15 March 2016].

Maqutu, A. 2015b. Budget airlines send prices plummeting. *Business Day:* Apr. 7.

Markman, T. 2016. *Air transport and challenges for 2010*. http://www.repository.up.ac.za/bitstream/2263/5916/1/026.pdf [16 July 2016].

Maromo, J. 2015. *SAA bailouts unfair: Comair*. https://www.iol.co.za/business-report/companies/saa-bailouts-unfair-comair-1854229 [30 October 2018].

Martín-Consuegra, D. & Esteban, Á. 2007. Market orientation and business performance: an empirical investigation in the airline industry. *Journal of Air Transport Management*, 13(6):383-386.

Martin, J.C. & Roman, C. 2008. Airlines and their focus on cost control and productivity. *European Journal of Transport and Infrastructure Research*, 8(2):117-136.

Masawi, T. & Halwoodi, L. 2014. *Air Namibia bleeding N$627 for grounded planes*. http://www.thevillager.com.na/Air-Namibia-bleeding-N-627m-for-grounded-planes/ [6 July 2016].

Matthias, J. 2016. *Kulula.com selects SABRE's next-generation revenue management platform to enhance its retailing capabilities*. //www.magazine.airlineprofits.com [15 January 2017].

Mawson, N. 2015. *Airline price war can't last*. http://www.iol.co.za/business/companies/airlines/airline-price-war-cant-last [28 December 2016].

Mayan, M.J. 2001. *An introduction to qualitative methods: a training module for students and professionals*. University of Alberta: International Institute for Qualitative Methodology.

Mazzone, N. 2016. SAA: *Myeni's blatant compromise of finances further confirms her disregard for the taxpayer*. https://www.da.org.za/2016/01/saa-myenis-blatant-compromise-of-finances-further-confirms-her-disregard-for-the-taxpayer/ [8 July 2016].

Mbanjwa, X. 2016. *Nationwide fights SAA.* http://city-press.news24.com/Business/nationwide-fights-saa-20160207 [31 March 2016].

Mbaskool. 2016. *Airlink SWOT analysis, USP and competitors*. //www.mbaskool.com/brandguide/airlines/Airlink-SWOT-analysis-USP-and-competitors [15 January 2017].

McCabe, R.M. 2006. Airline industry key success factors: the ability for airlines to succeed today is measured according to several key success factors. *Graziadio Business Review*, 9(4):1-23.

McCann, J. 2015. *SAAs' Dudu Myeni in Nenes' crosshairs*. http:www.mg.co.za/article/2015-09-17-SAAs'-Dudu- Myeni–in-Nenes'-crosshairs [11 March 2016].

McGrath, R. G. 2010. Business models: a discovery driven approach. *Long Range Planning*, 43:247-261.

McKune, C. 2015. *Will Captain Gordhan steer SAA back on course?* http:www.mg.co.za/article [11 March 2016].

McLennan, E. 2015. *FlySafair and LCCs in South Africa*. http://www.emilemclennan.com/ [11 March 2016].

McMillan, J. H. & Schumacher, S. 2010. *Research in education: evidence-based inquiry* 7th ed. Boston, MA: Pearson.

Meibodi, L.A. & Monavvarian, A. 2010. Recognizing critical success factors (CSF) to achieve the strategic goals of SAIPA Press. *Business Strategy Series*, 11(2):124-133.

Merkert, R. & Hensher, D.A. 2011. The impact of strategic management and fleet planning on airline efficiency: a random effects Tobit model based on DEA efficiency scores. *Transportation Research Part A*, 45(7):686-695.

Merkert, R. & Pearson, J. 2015. A non-parametric efficiency measure incorporating perceived airline service levels and profitability. *Journal of Transport Economics Policy*, 49 (2):261-275.

Meyer, W.S. 2015. *A bird? A plane? Or an SAA death spiral?* http://www.iol.co.za/opinion/a-bird-a-plane-or-a-death-spiral [11 March 2016].

Mhamedi, A. 2014. *Aviation: Africa's sleeping giant*. htttp://www.howwemadeitinafrica.com/aviation-africas-sleeping-industry [28 December 2016].

Mhlanga, O. 2017. Sources of financial turbulence for private airlines in South Africa: an empirical study. *African Journal of Hospitality, Tourism and Leisure*, 6(2):1-13.

Mhlanga, O. & Steyn, J.N. 2016. The aviation industry in South Africa: a historical overview. *African Journal of Hospitality, Tourism and Leisure*, 5(4):1-13.

Mhlanga, O. & Steyn, J.N. 2017. Impacts of the macro environment on airline operations in southern Africa. *African Journal of Hospitality, Tourism and Leisure*, 6(1):1-15.

Mhlanga, O., Steyn, J. & Spencer, J. 2018. The airline industry in South Africa: drivers of operational efficiency and impacts. *Tourism Review*, 73(3):389-400.

Mncube, L. 2014. *Competition and regulatory issues in the civil aviation sector*. http://www.compcom.co.za [22 January 2017].

Mohapatra, S. 2012. IT and Porter's Competitive Forces model and strategies. *Information Systems Theory*, 5(78):265-281.

Information Systems Theory, 5(78):265-281

Mohr, P. & Fourie, L. 2004. *Economics for South African students*. Pretoria: Van Schaik.

Moiseiwitsch, J. 2014. *Budget airlines find Hong Kong a tough market to crack.* http://www.scmp.com/business/companies/article [9 January 2017].

Mondliwa, P. 2015. *Muted battle for the region's skies: competition in the airline industry*. Quarterly Review. http://www.competition.org.za/review/2015/5/25/muted-battle-for-the-regions-skies-competition-in-the-airline-industry [12 May 2016].

Moolman, H.J. 2011. Restaurant customer satisfaction and return patronage in a Bloemfontein shopping mall. *Acta Commercii*, 6(8):129-146.

Moores, V. 2015. *South African LCC Kulula revamps for business market*. //www.atwonline.com [15 January 2017].

Moreira, M.E. 2013. *Forecasting study of the demand of the domestic air transport of passengers in Brazil*. https://upcommons.upc.edu/bitstream/ [9 January 2017].

Moreira, M.E., O'Connell, J.E. & Williams, G. 2011. The viability of long-haul, low cost business models. *Journal of Air Transport Studies,* 2(1):69-91.

Morrell, P. 2013. *Airline finance.* 4th ed. Farnham: Ashgate Publishing Ltd.

Morrell, P. & Swan, W. 2006. Airline jet fuel hedging: theory and practice. *Transport Reviews*, 26(6):713-730.

Mtongana, L. 2015. *New visa laws are 'economic sabotage'*- Sacci. http://mg.co.za/article/2015-06-01-new-visa-laws-are-economic-sabotage-sacci [28 December 2016].

Mtshali, L.Z. 2007. *Low cost airlines still flying high*. The Times, 11 July. http://www.sundaytimes.co.za/Business/Article.aspx?id=513168 [2 March 2016].

Mulder, E. 2015. *A PEST analysis of external factors that affect the airline industry*. http://prezi.com/a-pest-analysis-of-external-factors-that-affect-the-airline-industry [28 December 2016].

Muli, M.G.S. & Pellissier, R. 2014. The impact of industry role players on the competitiveness and profitability of an entity in a volatile environment. *African Journal of Hospitality, Tourism and Leisure*, 3(1):1-15.

Mungadze, S. 2016. *Mango lowering fares 'contributed to loss'*. http://www.ann.com-lowering-fares-contributed-to-loss [28 December 2016].

Mutambirwa, C. & Turton, B. 2000. Air transport operations and policy in Zimbabwe 1980–1998. *Journal of Transport Geography*, 8:67-76.

Mutegi, M. 2016. *African airlines tipped to close year at $500 million net loss*. http://allafrica.com/stories/201606050199.html [18 July 2016].

Muzulu, P. 2016a. *Mugabe son-in-law gets top Air Zim post*. http://www.newsday.co.zw/2016/10/05/Mugabe-son-in-law-gets-top-airzim-post [28 December 2016].

Muzulu, P. 2016b. *New Zim-SA air services pact spells doom for Air Zim*. http://www.zimbabwesituation.com/news/zimsit-m-new-zim-sa-air-services-pact-spells-doom-for-airzim [17 December 2016].

Mwanza, K. 2015. *How State meddling makes South Africa's airlines industry unattractive*. http://afkinsider.com/96088/how-state-meddling-makes-south-africas-airlines-industry-unattractive [28 December 2016].

Nataraja, S. & Abdulrahman Al-Aali, A. 2011. The exceptional performance strategies of Emirate Airlines. *Competitiveness Review*: *An International Business Journal*, 21(5):471-486.

Ndhlovu, R. & Ricover, A. 2009. *Assessment of potential impact of implementation of the Yamoussoukro Decision on open skies policy in the SADC region*. (GS 10F-0277P). Gaborone: USAID Southern Africa.

Ndlovu, R. 2001. The views of African carriers on the major challenges facing air transport globally. *Proceedings of the AFCAC-WTO International Conference on Tourism and Transport in Africa*, Windhoek, Namibia, 28-31 May 2001. Madrid: UNWTO: 86-98.

Ndlovu, R. 2016. *Air Zimbabwe feels the heat*. http://www.financialgazette.co.zw/air-zimbabwe-feels-the-heat/ [11 July 2016].

Nenem, M.S. & Ozkan-Gunay, E.N. 2012. Determining hub efficiency in Europe, the Middle East and North Africa: the impact of geographical positioning. *Eurasian Economic Review*, 2(2):37-53.

Neuman, W.L. 2000. *Socio-cultural research methods: qualitative and quantitative approaches*. 4th ed. Boston, MA: Allyn & Bacon.

Newcomer, J.M., Marion, J.W. & Earnhardt, P.W. 2014. Aviation managers' perspective on the importance of education. *International Journal of Aviation, Aeronautics and Aerospace*, 1(2):1-31.

News24. 2008. *Failed airline is deeply in debt*. http://www.iol.co.za/news/south-africa/failed-airline-is-deeply-in-debt-398601 [30 March 2016].

News Day. 2014. *Air Zimbabwe woes pile*. https://www.newsday.co.zw/2014/09/29/air-zimbabwe-woes-pile [6 July 2016].

New Zimbabwe. 2016. *Air Zimbabwe seeks US$1 billion for recapitalisation, hunts for partners*. http://www.newzimbabwe.com/business-22610Ar+Zimbabwe+needs+US$1bn+says+Mpofu/business.aspx [28 December 2016].

Nhuta, S. 2012. An analysis of the forces that determine the competitive intensity in the airline industry and the implications for strategy. *International Journal of Physical and Socio-cultural Sciences*, 2(9):433-469.

Niewiadomski, P. 2013. *International airline groups in Africa*. *Capturing the gains, economic and social upgrading in global production networks*. http://www.capturingthegains.org [9 January 2017].

Nissi, E. & Rapposelli, A. 2011. Efficiency evaluation in an airline company: some empirical results. *Journal of Applied Sciences*, 4(9):737-742.

Njoya, E.T. 2013. Air transport and destination performance - a case study of three African countries (Ethiopia, Kenya and South Africa). Paper presented at the Aviation Research Workshop, 14-15 February 2013, Münster/Westfalen.

Njoya, E. 2016. Africa's single aviation market: the progress so far. *Journal of Transport Geography*, 50(3):4-11.

Nolutshungu, T.A. 2013. *Globally competitive African airline industries*. http://www.freemarketfoundation.com/article-view/feature-article-globally-competitive-african-airline-industries [28 December 2016].

Nwachukwu, C.V., Udeaja, C., Chileshe, N. & Okere, C.E. 2017. The critical success factors for stakeholder management in the restoration of built heritage assets in the UK. *International Journal of Building Pathology and Adaptation*, 35(4):304-331.

O'Connell, J.F. 2011. The rise of the Arabian Gulf carriers: an insight into the business model of Emirates Airline. *Journal of Air Transport Management*, 17(6):339-346.

Ofori-Kuragu, J.K., Baiden, B. & Badu, E. 2016. Critical success factors for Ghanaian contractors. *Benchmarking: An International Journal*, 23(4):843-865.

Olienyk, J. & Carbaugh, R. J. 2011. Boeing and Airbus: duopoly in jeopardy? *Global Economy Journal*, 11(1):4-19.

Oluwakoya, A.O. 2011. The impact of deregulation and liberalisation in Nigeria air transport industry, an overview. Paper presented at the Air Transport Research Society Conference, Sydney, 29 June to 2 July 2011.

Oosthuizen, M. 2013. *SAA and the South African airline industry: the next ten years - 2012-2020*. https://static1.squarespace.com [9 January 2017].

O'Reilly, M. & Parker, N. 2012. Unsatisfactory saturation: a critical exploration of the notion of saturated sample sizes in qualitative research. *Qualitative Research*, 13(5):190-197.

Orlek, J. 2010. *SAA speaks out on withdrawal from Durban-CT route*. http://www.cargoinfo.co.za/WebsectionNews.aspx? [7 January 2016].

Orodho, J.A. 2009. *Elements of education and socio-cultural science research methods*. Nairobi, Kenya: Kanezja Publishers.

O'Shaughnessy, J. 1984. *Competitive marketing: a strategic approach*. Boston, MA: Allen & Unwin.

Ouellette, P., Petit, P., Tessier-Parent, L.P. & Vigeant, S. 2010. Introducing regulation in the measurement of efficiency, with application to the Canadian air carrier industry. *European Journal of Operations Research*, 200(1):216-226.

Oum, T.H. & Yu, C. 1995. A productivity comparison of the world's major airlines. *Journal of Air Transport Management*, 2(3):181-195.

Owen, B., Lee, D.S. & Lim, L. 2010. Flying into the future: aviation emissions scenarios to 2050. *Environmental Science and Technology*, 44(7):2255-2260.

Oxford Business Group (OBG). 2017. *Growing number of carriers joining South Africa's aviation market*. http://www.oxfordbusinessgroup.com/analysis/race-skies-more-carriers-are-joining-market-cater-growing-number-air-passengers [13 January 2017].

Paelo, A. 2016. *Barriers to entry in the low cost airlines sector*. http://www.thedti.gov.za/ERPC/docs/ACPaelo.pdf [28 December 2016].

Page, S. & Ge, Y. 2009. Transportation and Tourism: A Symbiotic Relationship? *Transportation and Tourism*, 4(5):371-395.

Pakseresht A. & Asgari, G. 2012. Determining the critical success factors in construction projects: AHP approach. *International Journal of Contemporary Research in Business*, 4(8):383-393.

Panday, A. 2015. *High fuel costs give weight to SAA swap deal*. http://www.mg.co.za/high-fuel-costs-give-weight-to-saa-swap-deal [28 December 2016].

Pandey, M.R. 2010. *How Boeing defied the Airbus challenge: an insider's account*. Create space Independent Publishing Platform. http://www.boeing.com/news [27 December 2016].

Paraschivescu, V. & Radu, C.E. 2011. Higher education, a resource for sustainability. *Economy Transdisciplinarity Cognition*, 14(1):115-120.

Paton, C. 2015. Crisis-hit SAA dumps acting CEO. *Business Day Live.* http://www.bdlive.co.za [5 March 2016].

Paton, C. 2017. *SAA and Post Office in line for funds from Treasury*. https://www.businesslive.co.za/bd/companies/transport-and-tourism/2017-02-23-saa-and-post-office-in-line-for-funds-from-treasury [9 February 2017].

Pauw, J. & Dommisse, J. 2012. 1Time ignored plan that could have kept it flying. *City Press:* 5, November 11.

Pawlas, G.E. 1995. The structured interview: three dozen questions to ask prospective teachers. *NASSP Bulletin*, 79(4):62-65.

Pearce, B. 2015. *Airline industry has shown 'robust growth'*. http://www.enca.com/money/airline-industry-has-shown-robust-growth [29 March 2015].

Pearson, J. & Merkert, R. 2014. Airlines-within-airlines: a business model moving east. *Journal of Air Transport Management*, 38(11):21-26.

Pegrum, M. & Kennell, C. 2002. Fuel efficiency comparison between high speed sealift ships and airlift aircraft. *Marine Technology and Same News*, 39(2):105-108.

Petrova, A. 2011. *Dombrovskis: Air Baltic must remain national airline of Latvia*. http://www.baltic-course.com/eng/energy [9 January 2017].

Pietersen, J. & Maree, K. 2007. Standardisation of a questionnaire. In Maree, K. (ed.). *First steps in research.* Pretoria: Van Schaik: 215-224.

Pillay, T. 2016. *Kulula takes off with another best airline award*. http://www.themarketingsite.com./kulula-takes-off-with-another-best-airline-award [15 January 2017].

Pindyck, R. S. & Rubinfeld, D. L. 2009. *Microeconomics*. 7th ed. Upper Saddle River, NJ: Prentice-Hall.

Pinto, J. & Slevin, D. 1987. Critical factors in successful project implementation. *IEEE Transactions on Engineering Management*, 34, 22-27.

Pirie, G.H. 1990. Aviation, apartheid and sanctions: air transport to and from South Africa. *Journal of Geography*, 22(4):231-240.

Pirie, G.H. 1992. Southern African air transport after apartheid. *Journal of Modern African Studies*, 30(2):341-348.

Pirie, G.H. 2006. Africanisation of South Africa's international air links, 1994–2003. *Journal of Transport Geography*, 14(1):3-14.

Planespotters. 2017. *Kulula.com fleet details and history*. http://www.planespotters.net/airline/Kulula [2 January 2017].

Pollalis, Y. & Grant, J.H. 1994. Information resources and corporate strategy development. *Information Strategy: The Executive's Journal*, 11(1):12-17.

Poon, T. & Waring, P. 2010. The lowest of low-cost carriers: the case of Air Asia. *International Journal of Human Resource Management*, 21(2):197-213.

Popova, N. 2016. *Fuel prices - the airlines' achilles heel*? http://blog.euromonitor.com/2016/02/fuel-prices-the-airlines-achilles-heel.html [28 December 2016].

Porter, M.E. 1980. *Competitive strategy: techniques for analysing industries and competition*. New York: The Free Press.

Porter, M.E. 2008. The five competitive forces that shape strategy. *Harvard Business Review*, 3(8):86-104.

Porter, M.E. & Kramer, M.R. 2006. *Strategy and society: the link between competitive advantage and corporate socio-cultural responsibility*. https://www.ncbi.nlm.nih.gov/pubmed/17183795 [20 December 2016].

Porter, M.E. & Kramer, M.R. 2011. Creating shared value. *Harvard Business Review*, 89(1/2):62-77.

Pöyhönen, S. 2014. *Finnair case study*. http//:www.amadeus.com/airline IT [29 March 2015].

Pratap, A. 2016. *Airlines industry PESTEL*. http://www.cheshnotes.com/2016/10/airlines-industry-pestel [28 December 2016].

Pressly, D. 2016. *To 'protect' or privatise SAA*. http://www.capemessenger.co.za/2016/09/22/protect-privatise-saa [28 December 2016].

Price Waterhouse and Coopers (PWC). 2016. *2015 Aviation trends*. http://www.strategyand.pwc.com/perspectives/2015-aviation-trends [19 July 2016].

Rabkin, F. 2016. *Nationwide hits broke SAA with damage suits*. http://www.bdlive.co.za/business/transport/2016/02/02/nationwide-hits-broke-saa-with-damages-suit [29 March 2016].

Raborife, M. 2016. *We are investigating SAA, not Dudu Myeni, says Hawks boss*. http://city-press.news24.com/News/dudu-myeni-wanted-to-fly-pals-in-style-on-saa-at-a-yearly-loss-of-r200m-20160122 [13 July 2016].

Rai, A. 2013. Measurement of efficiency in the airline industry using data envelopment analysis. *Investment Management and Financial Innovations*, 10(1):38-45.

Rajasekar, J. & Fouts, P. 2009. Strategic alliances as a competitive strategy: how domestic airlines use alliances for improving performance. *International Journal of Commerce and Management*, 19(2):93-114.

Ramanathan, U. 2013. Aligning supply chain collaboration using analytical hierarchy Process. *Omega*, 41(2):431-440.

Ramaswamay, K. 2001. *Singapore Airlines: strategy with a smile*. Thunderbird, American Graduate School of International Management.

Ramon-Rodriguez, A. B., Moreno-Izquierdo, L. & Perles-Ribes, J. F. 2011. Growth and internationalisation strategies in the airline industry. *Journal of Air Transport Management*, 17(2):110-115.

Rao, V.K.1999. Fuel price risk management using futures. *Journal of Air Transport Management*, 5(7):39-44.

Rapp, C. & Eklund, J. 2007. Sustainable development of a suggestion system: factors influencing improvement activities in a confectionary company. *Human Factors and Ergonomics in Manufacturing*, 17(1):79-94.

Rastogi, N. & Trivedi, M.K. 2016. PESTLE technique - a tool to identify external risks in construction projects. *International Research Journal of Engineering and Technology*, 3(1):384-388.

Reay, D.S. 2004. New directions: flying in the face of the climate change convention. *Atmospheric Environment*, 38(5):793-794.

Republic of South Africa. National Department of Tourism (RSA NDT). 2011. *National Tourism Sector Strategy*. Pretoria: Department of Tourism.

Rhoades, D.L. & Curtis, T. 2013. The challenge of intervention to monetarily support or not support the national airline carriers: a case of the airline industry in Eastern Europe. *Marketing, Management and International Business: Contemporary Issues and Research in Selected Countries*, 4(7):241-253.

Rivers, M. 2015. *South African Airways: adapt or die.* http://africanbusinessmagazine.com/sectors/infrastructure/south-african-airways-adapt-or-die/#sthash.Am4hZxso.dpuf [28 December 2016].

Riwo-Abudho, M. M., Njanja, L.W. & Ochieng, I. 2013. Key success factors in airlines: overcoming the challenges. *European Journal of Business and Management*, 5(30):84-88.

Robinson, K. J. 2013. The high cost of education and federalism. *Wake Forest Law Review*, 48(5):287-331.

Robinson, O.C. 2014. Sampling in interview-based qualitative research: a theoretical and practical guide. *Qualitative Research in Psychology*, 11(2):25-41.

Roche, H.C. 2011. *The airline industry: a European perspective*. http://www.slideshare.net/the-airline-industry-an-european-perspective [28 December 2016].

Rockart, J. F. 1979. Chief executives define their own data needs. *Harvard Business Review*, 57(2):81-94.

Roese, B. & Smith, J. 2015. Global airlines and airports statement of capabilities. *Price Water House and Coopers*, 4(7):3-26.

Rosenstein, D.E. 2013. *The changing low-cost airline model: an analysis of Spirit Airlines*. Aviation Technology Graduate Student Publications. Paper 19. http://docs.lib.purdue.edu/atgrads/19 [10 July 2016].

Rupp, S. 2015. *African airlines:* l*ooking beyond the statistics*. http://www.consultancyafrica.com/index.php?option=com_content&view=article&id=1183:african-airlines-looking-beyond-the-statistics-&catid=57:africa-watch-discussionpapers [6 April 2015].

Ryan, C. 1992. SAA 'war' threat to be investigated. *Sunday Times:*1, June 14.

Saaty, T.L. 1980. *The analytical hierarchy process*. New York: MacGraw Hill.

SA Express. 2013a. *About us*. http://www.flyexpress.aero/about-us/ [16 March 2016].

SA Express. 2013b. *Route network*. http://www. Flyexpress.aero/route-network [15 March 2016].

Safrudin, N., Mathiesen, P. & Lescarcelle-Evin, S. 2013. Shifting the airline business model: current struggles of national carriers to become profitable passenger experience companies. *The Business Transformational Journal*, 6(2):1-14.

Salmeron, J.S. & Herrero, I. 2005. An AHP-based methodology to rank critical success factors of executive information systems. *Computer Standards and Interfaces*, 28, 1-12.

Saranga, H. & Nagpal, R. 2016. Drivers of operational efficiency and its impact on market performance in the Indian airline industry. *Journal of Air Transport Management*, 53(7):165-176.

Sasman, C. 2016. *Former manager challenges salary deductions*. http://m.sun.com.na/labour/former-manager-challenges-salary-deduction [11 July 2016].

Saunders, M., Lewis, P. & Thornhil, A. 2009. *Research methods for business students*. 7th ed. Harlow: Prentice Hall.

Schensul, S.L., Schensul, J.J. & Le Compte, M.D. 2012. *Initiating ethnographic research: a mixed methods approach*. Lanham, MD: Rowman and Littlefield.

Sengun, Y. & Sarilgan, E. 2005. Turkish air transports industry evolution and current outlook. The second World congress aviation in the XXI st century, Kiev, 19-21 September.

Serpen, E. 2014. *Strategic planning for airlines*. Intervista consulting group. http://www.theijbm.com/wp-content/uploads/2015/05/11.-BM1505-036.pdf [19 December 2016].

Sevkli, M., Oztekin, A., Uysal, O., Torlak, G., Turkyilmaz, A. & Delen, D. (2012). Development of a fuzzy ANP-based SWOT analysis for the airline industry in Turkey. *Expert Systems with Applications*, 39, 14-24.

Shah, S. 2016. *World airline industry expects profits of $36.3 billion in 2016*. https://www.thenews.com.pk/print/95957-World-airline-industry-expects-profits-of-363-billion-in-2016 [28 December 2016].

Shankman, S. 2014. *Three biggest challenges facing the global aviation industry*. http://skift.com/Three-Biggest-challenges-facing-the-global-aviation-industry [28 December 2016].

Shaw, S. 2011. *Airline marketing and management*. 7th ed. Farnham: Ashgate Publishing Ltd.

Shaw-Smith, P. 2012. South Africa's low-cost carriers face bumpy ride. http://www.ainonline.com/aviation-news/air-transport/2012-04-09/south-africas-low-cost-carriers-face-bumpy-ride [25 November 2016].

Sheehan, J.J. 2003. Business and corporate aviation management: on-demand air travel. New York: McGraw-Hill.

Shepherd, C. 2012. *South African Airways: smothered by politics*. http://venturesafrica.com/south-african-airways-smothered-by-politics [28 December 2016].

Sheppard, I. 2017. *South Africa again crowded with LCCs*. http://www.ainonline.com/aviation-news/air-transport/2015-03-17/south-africa-again-crowded-lccs [30 January 2017].

Shieh, C. & Wang, I. 2010. A study of the relationships between corporate core competence, management innovation and corporate culture. *International Journal of Organizational Innovation*, 2(3):395-411.

Shoko, T. 2011. *Private airlines battle for survival*. http://www.financialgazette.co.zw/private-airlines-battle-for-survival [16 January 2017].

Singh, R.K., Garg, S.K., Deshmukh, S.G. & Kumar, M. 2007. Modelling of critical success factors for implementation of AMTs. *Journal of Modelling in Management*, 2(3):232-250.

Sjogren, S. & Soderberg, M. 2011. Productivity of airline carriers and its relation to deregulation, privatisation and membership in strategic alliances. *Transportation Research Part E*, 47(4):228–237.

Skywise. 2016. Insight for executives on the move. *Airlink Freedom of the African Sky*: 13, May.

Slabbert, A. 2016. *SAA to pay huge damages to Nationwide*. http://tntnews.co.za/2016/08/saa-to-pay-huge-damages-to-nationwide [28 December 2016].

Smith, C. 2015. *Africa aviation faces four big challenges - IATA*. http://www.fin24.com/Companies/TravelAndLeisure/Africa-aviation-faces-four-big-challenges-Iata-20150610 [28 June 2016].

Smith, E. 1998. An evaluation of the impact of air transport deregulation in South Africa. Unpublished PhD Thesis (Transport Economics), Rand Afrikaans University, Johannesburg, South Africa. https://ujdigispace.uj.ac.za/handle/10210/6196 [5 March 2016].

Sokana, P. 2015. *FlySafair's new route, flight price bonanza*. http://www.dispatchlive.co.za/news/FlySafairs-new-route-flight-price-bonanza [28 December 2016].

Sonokpon, K. 2016. *Is ASKY airlines setting a new normal in Africa?* http://magazine.airlineprofits.com [5 February 2017].

South African Airways Group (SAAG). 2016. *Integrated Annual Report 2016*. www.flysaa.com [13 January 2017].

South African Express (SAX). 2016. *Annual Report 2016*. www.flyexpress.aero [13 January 2017].

Speckman, A. 2015. *Comair battles amid tough airline market*. http://www.timeslive.co.za/sundaytimes/Comair-battles-amid-tough-airline-market [11 August 2016].

Spooner, S. 2015. *Battle of the skies; it's dog-eat-dog out there, but some African airlines have raised their game*. http://mgafrica.com/article/2015-02-20-battle-of-the-skies [28 December 2016].

Srimuk, N. & Choibamroong, T. 2014. Developing supported health tourism cluster for high quality tourism of BRIC in Active Beach Group of Thailand. *International Journal of Economics and Business Administration,* 2(1):39-50.

Ssamula, B. 2008. Strategies to design a cost-effective hub network for sparse air travel demand in Africa. Unpublished PhD Thesis. University of Pretoria. http://upetd.up.ac.za/thesis/available/etd-07242008-093606 [28 December 2016].

Ssamula, B. 2009. Sustainable business models for the state owned African airlines. In: *Sustainable Transport: 28th Annual Southern African Transport Conference (SATC),* Pretoria, 6-9 July 2009.

Ssamula, B. 2012. Comparing air transport network operations in space networks in Africa. *Research in Transportation Business and Management*, 4(7):22-28.

Ssamula, B. 2014. Sustainable business models for the State-owned African airlines. *Transportation Journal*, 51(2):19-34.

Statistical Package for Socio-cultural Sciences. 2016. *SPSS programme Windows Version 24*. http://www.spss-sa-com [27 July 2016].

Statistics South Africa (SSA). 2015. *Tourism satellite account for South Africa, final 2011 and provisional 2012 and 2013.* Pretoria: Statistics South Africa.

Statistics South Africa (SSA). 2016. *Draft tourism satellite account, 2016.* Pretoria: Statistics South Africa.

Steyn, J.N. & Mhlanga, O. 2016. The impact of international air transport agreements on airline operations in southern Africa. *African Journal of Hospitality, Tourism and Leisure Volume*, 5(2):1-16.

Stonehouse, G. & Campbell, D. 2004. *Global and transnational business: strategy and management*. Chichester: Wiley Publications.

Stratis, T. 2015. *SA skies only for the brave*. http://www.fin24.com/Opinion/sa-skies-only-for-the-brave-20151208 [25 November 2016].

Struwig, F.W. & Stead, G.B. 2001. *Planning, designing and reporting research*. 2nd ed. Cape Town: Pearson Education.

Styan, J. B. 2011. *Carbon tax will hurt tourism and airlines*. http://www.fin24.com/Economy/Carbon-tax-will-hurt-tourism-airlines-20110404 [28 December 2016].

Subagyo, T.H. 2002. Quality management practices in the South East Asian airlines' operations function. Unpublished PhD Thesis, Cranfield University, UK.

Subramanian, V. 2010. *European airline industry, 1993–2009: flying into turbulence (A).* The Asia Case Research Centre. The University of Hong Kong, 1-38.

Sunday Standard. 2009. *Air Botswana faces tough times*. http://www.sundaystandard.info/air-botswana-faces-tough-times [28 December 2016].

Suri, H.2011. Purposeful sampling in qualitative research synthesis. *Qualitative Research Journal,* 11(9):63-75.

Surovitskikh, S. & Lubbe, B. 2015. The Air Liberalisation Index as a tool in measuring the impact of South Africa's aviation policy in Africa on air passenger traffic flows. *Journal of Air Transport Management*, 42(5):159-166.

Swartz, S. M. 2008. Managerial perceptions of project stability. *Project Management Journal*, 39(4):17-32.

Sze, C.M., In, L.W., Ngai, L. & Yan, O.W. 2015. Budget airline industry in Hong Kong. *International Journal of Trade, Economics and Finance*, 6(2):129-133.

Tafirenyika, M. 2014. *Air transport reforms needed to unlock full potential*. http://www.un.org/africarenewal/magazine/april-2014/africa-flies-wing-and-prayer [2 July 2016].

Taneja, K.N. 2010. *Looking beyond the runway*. Farnham: Ashgate Publishing Ltd.

Taumoepeau, S. & Kissling, C. 2008. Economic sustainability of airlines in the South Pacific. *31st Australasian Transport Research Forum*, 5(2):373-383.

Tavassoli, M., Faramarzi, G.R. & Saen, R.F. 2014. Efficiency and effectiveness in airline performance using a SBM-NDEA model in the presence of share input. *Journal of Air Transport Management*, 34(9):146-153.

Tekiner, H., Birbil, S.I. & Bulbul, K. 2009. Robust crew pairing for managing extra flights. *Computers and Operations Research*, 36(6):2031-2048.

Thatayamodimo, L. 2016. *Botswana: Air Botswana operates at loss*. http://allafrica.com/stories/201609200697.html [16 December 2016].

The Economist. 2013. *Airlines in Africa. Not ready for take-off*. http://www.economist.com/news/business/21579026 [12 December 2016].

The Economist. 2016. What's holding back Africa's low-cost airlines? http://www.economist.com/blogs [9 January 2017].

The Herald. 2016. *African airlines face 90% decline on airlines*. http://allafrica.com/stories/201603110113.html [2 July 2016].

The Sunday Times. 2015. *SAA overstaffed*. http:www.sundaytimes.co.za [11 August 2015].

Thompson, J. & Martin, F. 2005. Strategic management awareness and change. Boston, MA: South Western Cengage Learning.

Thurlby, B. 1998. Competitive forces are also subject to change. Management decision, 36(1): 19-24.

Tolkin, J. 2010. Airline bankruptcy: the determining factors leading to an airlines' decline. Unpublished Masters Dissertation. Claremont University, Claremont, USA. http://www.scholarship.claremont.edu/cmc_theses/88 [5 April 2016].

Torlak, G., Sevkli, M., Sanal, M. & Zaim, S. 2011. Analysing business competition by using fuzzy TOPSIS method: an example of Turkish domestic airline industry. Expert System Applications, 38(4):3396-3406.

Trans Namib Holdings Limited. 2016. Air Namibia presents financial statements. www.transnamib.com.na [12 December 2016].

Travelstart. 2015. *Local flight prices nose dive as airline competition takes off.* http://www.travelstart.co.za/lp/media/domestic-flight-pricesdecrease-2015 [29 December 2016].

Tristan, C. 2015. *Airline bolsters feeder routes*. http://www.transportworldafrica/airline-bolsters-feeder-routes [15 January 2017].

Truxal, S. 2013. *Competition and regulation in the airline industry: puppets in chaos*. Abingdon: Routledge.

Turinawe, D.D. 2015. *To revive or not to revive Uganda Airlines*? http://www.newvision.co.ug/mobile/Detail.aspx?NewsID=646384&CatID=4 [10 October 2015].

Tustin, D.H., Ligthelm, A.A., Martins, J.H. & Van Wyk, H.de J. 2010. *Marketing research in practice*. Pretoria: Unisa Press.

Uwagwuna, C. 2011. *Case study: how the macroeconomic environment of the airline industry affects the strategic decision of Boeing vs Airbus*. http://www.hausarbeiten.de/faecher [3 January 2017].

Vaughan, E.D. 1998. *Statistics: tools for understanding data in the behavioural sciences*. 3rd ed. Upper Saddle River, NJ: Prentice Hall.

Vecchiatto, P. & Cohen, M. 2016. *South African Air says competition, weak Rand lead to loss*. http://www.bloomberg.com/news/articles/south-african-air-says-competition-weak-rand-lead-to-2015-loss [28 December 2016].

Venable, J.R. 2006. The role of theory and theorising in design science research. In *Proceedings of the First International Conference on Design Science Research in Information Systems*, Claremont, CA. 24th-25th February 2006.

Venter, E. 2016. Interview with the researcher on 19 July 2016 at Comair Head Office, Johannesburg.

Vermeulen, A. & Williams, B. 2001. *SAA ran at a loss under Coleman Andrews*. http://www.iol.co.za/news/SAA-ran- at-a-loss-under-Coleman-Andrews [5 March 2016].

Vermooten, J. 1995. *An evaluation of domestic air transport policy*. Pretoria: Air Working Group.

Vlok, N. 1992. Views of South Africa Airways on the deregulated domestic market. Speech at the International Air Transport Conference in Midrand, August 1992.

Wakefield, A. 2015. *Visa regulations hurting tourism industry – report*. http://www.news24.com/SouthAfrica/Visa-regulations-hurting-tourism-industry [22 December 2016].

Walsemann, K.M., Bell, B.A. & Hummer, R.A. 2012. Effects of timing and level of degree attained on depressive symptoms and self-rated health at midlife. *American Journal of Public Health*, 102(3):557-563.

Walters, J. 2010. An overview of developments in the aviation industry in South Africa with special reference to the role of low cost carriers. Paper presented at the Leadership and Policy Seminar ITLS in March at the University of Sydney, Australia.

Wang, J. & Jin, F. 2014. Asia air passenger transport: an analysis of recent trends. *Eurasian Geography and Economics*, 48(4):469-480.

Wang, J., Mo, H. & Wang, F. 2014. Evolution of air transport network of China 1930-2012. *Journal of Transport Geography*, 40, 145-158.

Wang, S.W. 2014. Do global airline alliances influence the passenger's purchase decision? *Journal of Air Transport Management*, 37(1):53-59.

Warnock-Smith, D. & O'Connell, J. F. 2011. The impact of air policy on incoming tourist traffic: the contrasting cases of the Caribbean community and the Middle-East. *Journal of Transport Geography*, 19(2):265-274.

Weavind, T. 2015. *Low cost airlines: turbulence at Skywise*. http://www.financialmail.co.za/features/low-cost-airlines-turbulence-at-skywise [30 March 2016].

West, D. & Bradley, J. 2008. Airline flight networks, cycle times, and profitability: 2004-2006. *Operational Management Research*, 1(4):129-140.

Whyte, R. & Lohmann, G. 2015. The carrier-within-a-carrier strategy: an analysis of Jet Star. *Journal of Air Transport Management*, 42, 141-148.

Wiid, J. & Diggines, C. 2009. *Marketing research*. 5th ed. Cape Town: Juta.

Wijesinha, A. 2012. *Air services liberalisation in South Asia*. http://ris.org.in/images/RIS_images/pdf/7th_SAES [19 December 2016].

Williams, F. 2012. *Spotlight falls on SAA efficiency*. http://www.fin24.com/Companies/Spotlight-falls-on-SAA-efficiency [3 January 2017].

Williams, S. 2016. *Liberalisation of African skies to be achieved by January 2017*. http://thetravelport.com.ng/liberalisation-of-african-skies-to-be-achieved-by-jan-2017-says-chingosho-afraa-chief [6 July 2016].

Wilson, A. 2006. *Marketing research: an integrated approach*. Upper Saddle River, NJ: Prentice Hall.

Winsen, S. 2016. *New airline entrants struggle to combat market distrust*. http://www.tourismupdate.co.za/moving-conflict-over-UBC-into-the-Courts [23 December 2016].

Wong, J.T. & Chen, C.N. 2005. Efficiency and survivability of new entrant airlines. *Journal of the Eastern Asia Society for Transportation Studies*, 6(5):752-767.

Wood, A. 2016. *What is the state of South Africa's airline industry?* http://www.moneybags.co.za/what-is-the-state-of-south-africas-airline-industry [27 December 2016].

World Travel and Tourism Council (WTTC). 2016. *Travel and tourism economic impact summary*. http://www.wttc.org/bin/temp/exec-summary-final [3 January 2017].

Wyman, O. 2010. *Airline business design segmentation*. http://planestats.com/Files/Airline_Business_Design_20100422.pdf [5 July 2016].

Yang, H. 2007. Airlines' futures. *Journal of Revenue and Pricing Management*, 6(4):309-311.

Young, M.D. 2015. *Why Skywise was never going to fly*. Politicsweb. http://www.politicsweb.co.za/news-and-analysis/why-skywise-was-never-going-to-fly [20 May 2016].

Yüksel, I. 2012. Developing a multi-criteria decision making model for PESTEL analysis. *International Journal of Business and Management*, 7(24):53-66.

Yusuff, R.D. & Poh Yee, K. 2001. A preliminary study on the potential use of the analytical hierarchical process (AHP) to predict advanced manufacturing technology (AMT) implementation. *Robotics and Computer Integrated Manufacturing*, 17(9):421-427.

Zhao, F. 2009. The influence of selected elements of service quality provided by Chinese fine-dining restaurants in Port Elizabeth. Master's Thesis (Business Administration), Nelson Mandela Metropolitan University, Port Elizabeth.

Zhou, J. 2012. *Air Zimbabwe remains grounded*. African News. http://www.africanews.com/site/list_message/3754818 [3 July 2016].

Zhu, J. 2003. *Qualitative models for performance evaluation and benchmarking: date envelopment analysis with spreadsheets and DEA Excel solver*. London: Kluwer Academic Publishers.

Zikmund, W.G. & D'Amico, M. 2001. *Creating and keeping customers in an ecommerce world.* 7th ed. Cincinnati, OH: South-Western College Publishers.

Zott, C. & Amit, R. 2010. Business model design: an activity system perspective. *Long Range Planning, Special Issue on Business Models*, 43(3):216-226.

Zott, C., Amit, R. & Massa, L. 2011. The business model: recent developments and future research. *Journal of Management*, 37(4):1019-1042.

Zuidberg, J. 2014. Identifying airline cost economies: an econometric analysis of the factors affecting aircraft operating costs. *Journal of Air Transport Management*, 40, 86-95.

APPENDIX A: LETTER OF INTRODUCTION TO THE AIRLINES

Cape Peninsula University of Technology

27 April 2016

TO WHOM IT MAY CONCERN

LETTER OF INTRODUCTION: MR OSWARD MHLANGA

Mr Osward Mhlanga is a Doctoral student in the Tourism and Hospitality Department at the Cape Peninsula University of Technology (CPUT). For his script in the study area of Tourism and Hospitality Management he plans to focus his research on identifying challenges and critical success factors for airlines operating in southern Africa.

Mr Mhlanga will conduct the study under my supervision and he is currently busy with the preparation of his research questionnaire. The aim of his visit is to personally approach and contact the management of airlines to determine if they will be willing to participate in this study. The idea is to collect the relevant data by means of a structured questionnaire and interviews. The collected data will be made available to the participating airlines after the study.

I would hereby like to give you the assurance that all data collected will be treated confidentially and anonymously. In accordance with the policy of the Cape Peninsula University of Technology (CPUT), the final research proposal and questionnaire have to be submitted to the ethics committee of the Faculty and all researchers have to abide by the guidelines as stipulated. I can be reached at **(021) 460 4285** in case you need any further information.

Thank you for your time and allowing Mr Mhlanga to communicate your ideas to you.

Yours sincerely,

Prof Jacobus Steyn.

_____

Department Tourism and Events Management

School of Sports, Events, Tourism and Hospitality

Faculty of Business and Management Sciences

Cape Peninsula University of Technology

APPENDIX B: COVERING LETTER FOR THE QUESTIONNAIRE

Cape Peninsula University of Technology

Respondent number | | | |

Airline ----------

27 April 2016

Respected participant,

QUESTIONNAIRE ON IDENTIFICATION OF CHALLENGES AND CRITICAL SUCCESS FACTORS FOR AIRLINES OPERATING IN SOUTHERN AFRICA

I am Osward Mhlanga, a Doctoral student in the Hospitality Department at Cape Peninsula University of Technology (CPUT) in Cape Town. I plan to focus my research on identification of challenges and critical success factors for airlines operating in southern Africa. The idea is to collect the relevant data by means of a structured questionnaire and interviews to several key managers in various airlines.

Please assist me in the data collection by filling in the questionnaire. Take note of the following things before filling in the questionnaire:

- There are no correct or incorrect answers. Simply give your personal opinion.
- All the data collected will be treated confidentially and anonymously.

The questionnaire will take approximately 7 minutes to complete. Thank you for your esteemed co-operation. It is highly appreciated.

Yours sincerely,

Osward Mhlanga,

Student: Department Tourism and Events Management

School of Sports, Events, Tourism and Hospitality

Cape Peninsula University of Technology

APPENDIX C: SURVEY QUESTIONNAIRE

Respondent number

Airline **……**

The purpose of this survey is to identify challenges and critical success factors for airlines operating in southern Africa. You are not required to identify yourself. All responses will be treated with strict confidentiality. Please mark the appropriate block with an X, using a pen.

1. Please state your position in the airline (Please tick the most appropriate choice)

1	2	3
Junior Employee	Middle management	Senior management

2. For how long have you been in this position?

1	2	3	4	5
0-1 year	2-4 years	5-7 years	8-10 years	> 10yrs

3. How long have you been employed in this airline? (Please tick the most appropriate choice)

1	2	3	4	5
0 to 5 years	6 to 10 years	11 to 15 years	16 to 20 years	> 20 years

4. Highest level of education completed

1	2	3	4	5	6
No Schooling	Primary School	High School	Tertiary Diploma	Tertiary Degree	Other, Postgraduate qualification

SECTION A

How do the following organisational success factors affect the performance of your airline?

Tick ONE box only to indicate the degree of effect.

1=Very negative, 2=Negatively, 3=Neither negative nor positive, 4=Positively, 5= Very positive.

Organisational success factors

		1	2	3	4	5
5	Efficient management					
6	Standardisation of aircraft					
7	Fuel efficiency					
8	Labour efficiency					
9	Alliances					
10	Age of fleet					
11	Management turnover					
12	Other, specify					

How do the following environmental factors affect the performance of your airline?

Tick ONE box only to indicate the degree of effect.

1=Very negative, 2=Negatively, 3=Neither negative nor positive, 4=Positively, 5= Very positive.

POLITICAL

		1	2	3	4	5
13	Political interference					
14	Regulation					
15	Deregulation					
16	Landing slots					
17	Route monopoly					
18	Other, specify					

ECONOMIC

		1	2	3	4	5
19	Rising fuel costs					
20	Depreciating Rand					
21	High operational costs					
22	High disposable income					
23	Economic recession					
24	Other, specify					

SOCIO-CULTURAL

		1	2	3	4	5
25	Changing demographics					
26	Lifestyle changes					
27	Income distribution					
28	Socio-cultural mobility					
29	Other, specify					

TECHNOLOGICAL

		1	2	3	4	5
30	Online ticket booking					
31	Efficient aircraft					
32	Video-conferencing					
33	Surface transport					
34	Safety features					
35	Other, specify					

ECOLOGICAL

		1	2	3	4	5
36	Disposal of materials					
37	Ecological consequences					
38	Emissions					
39	Cyclical weather					
40	Other, specify					

LEGAL

		1	2	3	4	5
41	Regulatory bodies					
42	International agreements (e.g bilateral service agreements)					
43	Taxation					
44	Other, specify					

45. What are the political, economic, socio-cultural and technological factors that may provide opportunities for your airline?

_____

_____

46. What are the political, economic, socio-cultural and technological factors that may provide threats for your airline?

_____

_____

SECTION B

How do the following industry success affect the performance of your airline?

Tick **ONE** box only to indicate your degree of effect.

1=Strongly disagree, 2=Disagree, 3=Neither agree nor disagree, 4=Agree, 5= Strongly agree.

Bargaining powers of customers

		1	2	3	4	5
47	Are there a large numbers of customers relative to the number of airlines?					
48	Do you have a large number of customers, each with relatively small purchases?					
49	Does the customer face any significant costs in switching airlines?					
50	Does the customer need a lot of important information with regard to using this airline?					
51	Are customers highly sensitive to price?					
52	Is the airline unique to some degree? Do they have accepted branding?					

Bargaining powers of suppliers

		1	2	3	4	5
53	Inputs (labour, material, services) in this industry are standard rather than differentiated					
54	Airlines can switch between suppliers quickly and easily					
55	Airline suppliers would find it difficult to enter this industry					
56	There are many current and potential suppliers in this industry					
57	This business is important to the suppliers					

Threat of new entrants

		1	2	3	4	5
58	Do existing airlines have cost and /or performance advantage in this industry?					
59	Are there established brand identities in this industry?					
60	Do customers incur significant costs in switching airlines?					
61	Is a lot of capital needed to enter this industry?					

62	Does a new airline to the industry face difficulty in assessing distribution channels?					
63	Does experience in this industry help airlines to continually lower costs and/or improve performance? In other words, is there a 'learning effect' in this industry?					
64	Are there any licences, insurance and other qualifications required in this industry that are difficult to obtain?					
65	Can a new airline entering this industry expect strong retaliation from the existing airlines?					

Threat of substitutes

		1	2	3	4	5
66	Available substitutes (e.g. road, rail) have high performance limitations and /or high prices that do not justify their use as mainstream forms of transport					
67	Customers will incur costs in switching to substitutes					
68	There are no real substitutes for the airline company available in the industry					
69	Customers are not likely to go for substitutes					

Rivalry amongst existing airlines

		1	2	3	4	5
70	The industry is growing rapidly					
71	The industry does not have overcapacity at the moment					
72	There are significant product differences and brand identities among competitors					
73	Products on offer are highly complex and require significant customer-producer interaction					
74	Market shares in the industry are more or less equally distributed among competitors					

75. What is/are your airlines' strength/s that's gives the airline an advantage over its rivals?

_____

_____

76. What is/are the airlines' weakness/es that gives your competitors an advantage over your airline?

_____

_____

SECTION C

What are the challenges affecting the performance of your airline?

Tick **ONE** box only to indicate your degree of challenges.

1=Not challenging, 2=Less challenging, 3=Indifferent, 4=Challenging, 5= More challenging.

		1	2	3	4	5
77	Intense competition					
78	High labour costs					
79	High fuel costs					
80	Use of an ageing fleet					
81	Poor safety record					
82	Government interference					
83	Lack of single aviation policy					
84	Protectionist policies and strategies					
85	Other, specify					

86. What is the existing number of employees per aircraft?

1	2	3	4
Managerial	Technical	Support	Other, specify

87. How many different types of aircraft does the airline operate?

1	2	3	4
1-2	3-5	6-8	> 8

Profitability of the airline in the previous three (3) years		1	2	3
		2013	2014	2015
88				

Which of the following are critical success factors for your airline? (Please tick the factor/s)

What are the factors that are critical to the success of your airline?

Tick **ONE** box only to indicate your degree of critical success factors.

1=Not critical, 2=Less critical, 3=Indifferent, 4=Critical, 5= Very critical.

CRITICAL SUCCESS FACTOR

		1	2	3	4	5
89	Management efficiency					
90	Standardised fleet					
91	Use of a modern fleet					
92	Fuel efficient strategies					
93	Labour efficiency					
94	Alliances					
95	Customer satisfaction					
96	Aircraft choice					
97	Other, specify					

What are the effects of the critical success factors (identified above) on passenger load factors?

Tick **ONE** box only to indicate the degree effect.

1=Very low, 2=Low, 3=Indifferent, 4=High, 5= Very high.

Load factors

		1	2	3	4	5
98	Management efficiency					
99	Standardised fleet					
100	Use of a modern fleet					
101	Fuel efficient strategies					
102	Labour efficiency					
103	Alliances					
104	Customer satisfaction					
105	Aircraft choice					
106	Other, specify					

What are the effects of the critical success factors (identified above) on airline yields?

Tick **ONE** box only to indicate your degree of effect.

1=Very low, 2=Low, 3=Indifferent, 4=High, 5= Very high.

Airline yields

		1	2	3	4	5
107	Management efficiency					
108	Standardised fleet					
109	Use of a modern fleet					
110	Fuel efficient strategies					
111	Labour efficiency					
112	Alliances					
113	Customer satisfaction					
114	Aircraft choice					
115	Other, specify					

116. What areas do you need improvement on?

_____

_____

117. What is it that other airlines in southern Africa are doing wrong that your airline should avoid?

_____

_____

118. In your opinion what should airlines in southern Africa do to improve their success?

_____

_____

Thank you for your time and participation.

APPENDIX D: REGRESSION RESULTS OF PASSENGER LOAD FACTORS

Dependent variable:	Passenger load factors (used as a surrogate indicator)			
Independent variables: Seven orthogonal variables representing critical success factors impacting on airline load factors: Management efficiency (Variable 1), Modern fleet (Variable 2), Fuel efficiency (Variable 3), Labour efficiency (Variable 4), Alliances (Variable 5), Customer satisfaction (Variable 6) and Aircraft choice (Variable 7).				
Prediction: Goodness-of-fit				
Multiple R	0.7130			
R Square	0.5763			
Adjusted R Square	0.5762			
Standard Error	0.4580			
Analysis of Variance				
	Degree of freedom	**Sum of squares**	**Mean square**	
Regression	7	361.118	107.882	
Residual	617	149.883	0.305	
F=33.641	Sig. F=0.000			
Durbin-Watson	1.87			
Explanation: Variables in the equation				
Independent variable	**Unstandardised coefficients (β)**	**Standardised coefficients (β)**	**T-value**	**Sig.**
Management efficiency – Variable 1	0.001	0.653	8.319	0.001
Modern fleet – Variable 2	0.001	0.576	10.731	0.001
Fuel efficiency – Variable 3	0.001	0.374	1.880	0.001
Labour efficiency – Variable 4	0.001	0.428	2.346	0.001
Alliances – Variable 5	0.001	0.743	10.785	0.001
Customer satisfaction – Variable 6	0.001	0.812	12.407	0.001
Aircraft choice – Variable 7	0.001	0.679	9.054	0.001
Constant	4.650		204.370	0.000
Collinearity Diagnostics	**Tolerance**	**Variable inflation factor (VIF)**	**Condition Index**	
Management efficiency – Variable 1	0.999	1.000	1.000	
Modern fleet – Variable 2	0.999	1.000	1.008	
Fuel efficiency – Variable 3	0.999	1.000	1.010	
Labour efficiency- Variable 4	0.999	1.000	1.000	
Alliances- Variable 5	0.999	1.000	1.000	
Customer satisfaction – Variable 6	0.999	1.000		
Aircraft choice – Variable 7	0.999	1.000		
Constant			1.024	

APPENDIX E: REGRESSION RESULTS OF AIRLINE YIELDS

Dependent variable:	Airline yields (used as a surrogate indicator)			
Independent variables: Seven orthogonal variables representing critical success factors impacting on airline yields: Management efficiency (Variable 1), Modern fleet (Variable 2), Fuel efficiency (Variable 3), Labour efficiency (Variable 4), Alliances (Variable 5), Customer satisfaction (Variable 6) and Aircraft choice (Variable 7).				
Prediction: Goodness-of-fit				
Multiple R	0.4103			
R Square	0.2706			
Adjusted R Square	0.2705			
Standard Error	0.4580			
Analysis of Variance				
	Degree of freedom	**Sum of squares**	**Mean square**	
Regression	7	361.118	107.882	
Residual	617	149.883	0.305	
F=39.542	Sig. F=0.000			
Durbin-Watson	1.88			
Explanation: Variables in the equation				
Independent variable	**Unstandardised coefficients (β)**	**Standardised coefficients (β)**	**T-value**	**Sig.**
Management efficiency – Variable 1	0.001	0.704	8.614	0.0386
Modern fleet – Variable 2	0.001	0.487	3.521	0.0274
Fuel efficiency – Variable 3	0.001	0.729	8.701	0.1082
Labour efficiency – Variable 4	0.001	0.760	9.126	0.2419
Alliances – Variable 5	0.001	0.624	8.087	0.0315
Customer satisfaction – Variable 6	0.001	0.677	7.439	0.0153
Aircraft choice – Variable 7	0.001	0.562	5.053	0.2806
Constant	7.215		204.370	0.001
Collinearity Diagnostics	**Tolerance**	**Variable inflation factor (VIF)**	**Condition Index**	
Management efficiency – Variable 1	0.999	1.000	1.000	
Modern fleet – Variable 2	0.999	1.000	1.008	
Fuel efficiency – Variable 3	0.999	1.000	1.010	
Labour efficiency- Variable 4	0.999	1.000	1.000	
Alliances- Variable 5	0.999	1.000	1.000	
Customer satisfaction – Variable 6	0.999			
Aircraft choice – Variable 7	0.999			
Constant			1.024	

APPENDIX F: CPUT ETHICS COMMITTEE APPROVAL

Cape Peninsula
University of Technology

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Office of the Chairperson Research Ethics Committee	Faculty: BUSINESS AND MANAGEMENT SCIENCES

At a meeting of the Research Ethics Committee on 27 February 2017, Ethics Approval was granted to Oswald Mhlanga (215297369) for research activities

Related to the MTech/DTech: Dtech Tourism & Hospitality Management at the Cape Peninsula University of Technology

Title of dissertation/thesis/project:	IDENTIFICATION OF CRITICAL SUCCESS FACTORS TO OVERCOME CHALLENGES FACING AIRLINES IN SOUTHERN AFRICA Lead Researcher/Supervisor: Prof J.N Steyn

Comment:

Decision: APPROVED

	27 FEBRUARY 2017
Signed: Chairperson: Research Ethics Committee	Date

Clearance Certificate No | 2017FBRJBC424

APPENDIX G: GRAMMARIAN LETTER

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30 October 2018

EDITING & PROOFREADING

Cheryl M. Thomson

CRITICAL SUCCESS FACTORS FOR AIRLINES IN SOUTHERN AFRICA

This is to confirm that the language and technical editing of the above-titled doctoral thesis of OSWARD MHLANGA, student number 215297369, at the CAPE PENINSULA UNIVERSITY OF TECHNOLOGY, was undertaken by me, Cheryl Thomson, in preparation for submission of this thesis for assessment.

Yours faithfully

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