

**Barriers to entry for low cost carriers in the South African airline industry:
Competitive dynamics and the entry, expansion and exit of 1Time Airline****Anthea Paelo and Thando Vilakazi**antheap@uj.ac.za and thandov@uj.ac.za**Abstract**

This paper examines the barriers to entry and expansion of competitor airlines in South Africa. The exit of 1Time from the market as well as the experience of FlySafair, a recent entrant, are used to draw lessons about competitive conditions and constraints that new airlines face in the market. The assessment shows that while the exogenous barriers to entry are not prohibitively high in South Africa (partly evidenced by the number of entrants), a history of repeated anti-competitive conduct by the national carrier, South Africa Airways, has contributed to these challenges. The analysis of price data covering 2014 and 2015 and information drawn from detailed firm-level interviews demonstrates the positive effects of entry in the South African market, including through reducing prices and increasing frequencies to smaller routes which has benefits for local economies. There is preliminary evidence that the entry of LCCs has also contributed to increased passenger volumes, although there are limitations in the data which is available to assess this further.

JEL Classification

L1, L4, O1

Contents

Executive summary.....	4
1. Introduction	6
2. Benefits of competition and rivalry in South Africa's airline industry	6
2.1. Timeline of entry and exit of airlines in South Africa	7
2.2. Prices and demand in the airline market	10
3. 1Time's entry, financial performance and exit	20
3.1. Overview.....	20
3.2. Mode of entry	22
3.3. Fuel costs	24
3.4. Cost of entry and access to finance	25
3.5. Operational costs and taxes.....	27
3.6. Comparing key cost and revenue measures across airlines.....	29
3.7. Management decision making	30
3.8. Regulatory requirements for entry	31
3.9. Regional and international aspects	33
4. Competitive dynamics, entry and exit in the South African airline industry	36
4.1. Overview of competition concerns	36
4.2. The effect of changing market conditions.....	38
4.3. The nature of competition between airlines in the domestic market	39
5. Conclusions and recommendations	46
References	48
List of interviewees	53

List of figures

Figure 1: Market shares for domestic scheduled flights in South Africa, mid 2015	9
Figure 2: Total passengers for scheduled domestic flights in South Africa, 2006-2015	13
Figure 3: Passengers on scheduled domestic and international flights at O.R. Tambo.....	14
Figure 4: Percentage airline industry costs in Africa, 2013	20
Figure 5: Profit after tax for 1Time, Comair, and Mango	21
Figure 6: Crude oil price index	25

List of tables

Table 1: History of major airlines in South Africa	7
Table 2: Airline fleet size, destinations and performance, 2015.....	9
Table 3: Price changes on domestic routes, 2014 to 2015 (January and February)	11
Table 4: Total passengers by major airport, 2010 to 2015 (financial year end March)	12
Table 5: 1Time operational costs relative to passenger revenues (%), 2010 and 2011	29
Table 6: Comparison of airline performance, cost and revenue measures	29
Table 7: SAA revenue composition (millions)	35

Executive summary

This paper examines the barriers to entry and growth of competitor airlines in South Africa, comparing the effects on routes where there has and has not been entry. The 1Time case study as well as the experience of FlySafair are used here to draw lessons. A key emphasis of this research is to distil those factors relating to the competitive environment which, along with information about costs and management practices, contribute to *effective* entry and expansion in the industry. While the exogenous barriers to entry are not especially high (as evidenced by the number of entrants) there are strategic obstacles, including the conduct of the incumbent, which have led to a number of competition law cases.

The research demonstrates that entry and additional capacity for servicing 'smaller' domestic routes has brought gains to consumer welfare. Entry of low cost carriers (LCCs) operating multiple route pairs has had significant effects over time in terms of enhancing choice and price benefits. There is also an important effect of exit and entry on total market demand, with passenger volumes decreasing following the exit of airlines such as 1Time and Velvet Sky. The entry of FlySafair has had the apparent effect of reducing fares by up to 38% on some routes.

In this context, entry itself does not appear to be overly difficult as evidenced by the entry of several carriers since deregulation in 1991, notwithstanding the significant cost, time and regulatory compliance associated with it. The concern in the South African market is more to do with the challenges airlines face in remaining in the industry for lengthy periods of time as effective rivals. Kulula, 1Time, and Mango have stood out in this regard. The exit of 1Time took place after several years of growth and positive net incomes, and can be directly linked to a combination of certain exogenous factors such as rising fuel prices and difficult economic conditions affecting passenger demand patterns, along with poor management decisions and challenges in being able to respond with the necessary investments to upgrade its fleet.

The conduct of the main incumbent, SAA, in terms of various violations of competition laws has had an impact on smaller rivals and consumers. The airline has been prone to abuse its strategic position to coordinate with other airlines in the form of harmful cartel conduct, or to abuse its dominance domestically through various forms of exclusionary conduct which have been assessed and proven by the competition authorities. This is an important area of concern and raises questions about whether State Owned Companies (SOCs) that violate the competition laws should be held to harsher standards (including management accountability as is the case with criminalization in the Competition Act) if a negative effect on consumers is demonstrated by the authorities.

Through stimulating the domestic market several sectors of society benefit including individual consumers of air travel, local communities in airport cities and towns, the tourism sector and enterprises. This includes small- to medium-sized firms which potentially benefit from being able to expand their geographic market to a national one. This is particularly relevant in services sectors. Each of these benefits is linked to growth in domestic productive capacity in 'new' smaller destinations and drawing in new consumers that previously did not travel for business or leisure in the country.

Similar issues to those in the local market appear to apply to regional routes in southern Africa. Opening up to regional rivals, including the operation of South African LCCs on regional routes, will likely mean lower fares, increased frequency and a wider range of destinations being served. Passengers respond to the availability of lower fares and additional capacity as demonstrated by the growth of certain routes such as to Namibia, Zambia and Zimbabwe in recent years. The positive response of consumers to airlines such as FlyAfrica, Proflight from

Zambia, Fastjet, Kulula and 1Time when they have launched frequencies on regional routes traditionally serviced by national carriers, is indicative of the significant potential to integrate regional markets through more affordable air travel. It is particularly important to connect South African cities and consumers with fast-growing economic areas such as Dar es Salaam, Nairobi and the copperbelt of Zambia/DRC at more affordable fares.

While there are barriers to entry relating to the regulatory requirements, capital investment and industry experience, the number of entrants into the sector illustrates that these barriers are not necessarily high. Those interviewed in the study confirmed that they were readily able to bring on board individuals and teams with the requisite skills (in terms of contributing to the viability of the airline and meeting with regulatory requirements for entry) to support the launch of the various airlines. The key challenges have rather been the ability to sustain the businesses through the volatility associated with fluctuations in fuel prices and demand shocks. In this regard, there may be scope for increased support of domestic firms, perhaps through the development finance institutions, where it can be shown that their existence has and can bring sustained benefits to consumers.

To the extent that local ownership requirements are required to maintain sovereignty and control over carriers, a threshold of 51% local ownership can be maintained, as in some other countries. However, South Africa's threshold is some way above this. This in and of itself is not concerning given other political and economic incentives to maintain and grow local ownership of business enterprises. However, there is a clear trade-off in reducing this threshold to allow for foreign investors and rivalry (which is likely to benefit consumers directly over the short- and long-term). In the case of regional carriers, Ministerial discretion could be applied as per section 4 of the Air Services Licensing Act in approving the entry of airlines that do meet a lower local ownership threshold requirement and assist in linking South Africa to other countries in the continent at more affordable fares.

1. Introduction

Air travel in Africa has grown strongly and much faster than the rest of the world. The International Air Transport Association (IATA) projects that the airline industry in Africa will continue to grow in passenger numbers at an annual average rate of 4.7% by 2034, faster than regional markets in North America and Europe whose growth is forecast at 3.3% and 2.7%, respectively (IATA, 2014).

To meet this demand, there has been entry and expansion of a number of airlines. National carriers such as Kenya Airways and Ethiopian Airlines have been the most successful in terms of growth by number of routes but low cost carriers are also quickly entering the market and beginning to take up market share. A low cost carrier (LCC) is an airline that offers low fares and no frills or comforts on the basis of a low cost business model. These airlines bring competition to the established, generally (current or formerly) state-owned national carriers. This paper specifically examines the barriers to entry and growth of challenger airlines in South Africa, comparing the effects on routes where there has and has not been entry. The challenges of entry and expansion are considered through case studies of two entrants, 1Time, which failed, and FlySafair, which has been successful to-date.

South Africa has seen many entrants since the industry's deregulation in 1990. Examples of these LCCs in South Africa are Kulula, Mango, FlySafair and Skywise. Some of the regional LCCs are Fastjet in Tanzania which expanded into Uganda, Zambia and Zimbabwe, as well as Fly Africa in Zimbabwe which expanded into Namibia, South Africa and Zambia (African Development Bank, 2012).

The failure rate in South Africa has also been very high. Apart from the national carrier's subsidiary, Mango, of the 11 airlines that entered the market between 1991 and 2012 only one is still operational, Comair's Kulula. The other airlines currently in the market are entrants since 2012. Through considering the various constraints and challenges faced by LCCs in particular, this study contributes to the understanding of competitive dynamics in the sector and the reasons for the numerous failures on the part of the entrants.

A key emphasis of this research is to distil those factors relating to the competitive environment which, along with information about costs and management practices, contribute to *effective* entry and expansion in the industry. While the exogenous barriers to entry are not especially high (as evidenced by the number of entrants) there are strategic obstacles including the conduct of the incumbent, which have led to a number of competition cases. The 1Time case study is used here as a tool for drawing lessons which can be generalised particularly in the South African context.¹

The paper is organised as follows: section 2 provides a review of entry and competition in South Africa, including the effect of entry on the pricing on different routes. Section 3 considers 1Time's experience as a relatively successful competitor in the South African market and lays out possible reasons for its collapse. Section 4 critically assesses the range of factors relating to the competitive environment, and section 5 draws conclusions and makes recommendations for policy and further inquiry.

2. Benefits of competition and rivalry in South Africa's airline industry

The questions considered in this research are important because of the apparent benefits to consumers that have arisen since the early 2000s due to increased rivalry in the domestic

¹ For an extended discussion of barriers to entry and the South African context see Banda et al (2015).

airline market in South Africa, as well as pointing to the benefits of competition in markets for international air travel.

The benefits of rivalry in the sector are demonstrated through the available data on the prices of air travel on different domestic routes. We note upfront that time series data on fares has not been available from the various market participants and detailed information on costs of different airlines would be required to assess outcomes and causality between entry, fares and volumes accurately. The assessment in this section nonetheless helps to draw preliminary insights about potential gains to consumers. It is clear that the entry of various airlines (and low cost carriers in particular) over time has had an effect in terms of reducing prices for air travel, along with the effect of increasing the consumption of air travel in South Africa amongst other factors such as economic cycles.

2.1. Timeline of entry and exit of airlines in South Africa

Following liberalisation in the domestic market in the early-1990s, a number of airlines began to enter the market. Before then, South Africa Airways (SAA) had effectively operated as a monopoly in the market from 1934 until 1990 when the industry was deregulated and SAA began the process of becoming a commercial airline in a liberalized international market (Goldstein, 1999). New airlines found it difficult to compete with SAA which at that point held about 95% of the market share (Oosthuizen, 2013).

Flitestar was the first South African airline to enter the market after deregulation, followed by other entrants such as Comair, Nationwide and Sun Air. By 2006, Sun Air and Comair had managed to erode SAA's market share to 66% on the Cape Town-Johannesburg-Durban routes (Goldstein, 1999). Sun Air however went bankrupt in 1999 and ceased operations.² Phoenix Airlines, Nationwide, Velvet Sky, Intensive Air and 1Time all entered the market but after a few years of operation encountered financial difficulties and closed operations (Table 1) while Interlink Airlines, Airtime Airlines and Santaco failed to commence or ceased operations after only a few flights (Hedley, 2012).

Table 1: History of major airlines in South Africa³

Year	Event
1934	SAA is established
1949	Comair is established as a private airline
1978	Link Airways begins operations (later known as SA Airlink) from 1978 (secondary routes)
1979	Bop Air begins operations (later known as Sun Air)
1990	Industry was deregulated but private sector allowed a one year grace period to prepare itself before re-entering international routes (Vermooten, 1996)
1991	Flitestar was the first airline to enter after deregulation
1992	Comair began operating the main domestic routes starting with Johannesburg-Cape Town 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
1993	SA Airlink formed an alliance with SAA ⁴

² Keyser, A. (2004). Sun Air goes belly up. Available from <http://mg.co.za/article/2004-03-03-sun-air-goes-belly-up>

³ The table is not necessarily comprehensive and focuses on scheduled carriers in South Africa. However, there are smaller airlines such as Majestic Air which operate scheduled flights between smaller destinations within South Africa. For example, Majestic Air is traditionally a charter business now operating certain scheduled flights using a fleet of small planes (some carrying around 10 passengers). According to their [website](#), the airline's route pairs include Lanseria, Kuruman, Durban, Polokwane, Nelspruit and Elisras.

⁴ Airlink is a privately owned regional airline that formed a strategic alliance with SAA and SA Express in 1997. It now operates as a franchisee of South African Airways (SAA). 32.51% stake of the airline is owned by Sishen Iron Ore Company Community Development Trust Investment Holdings in a broad-based black economic empowerment transaction. See http://www.saairlink.co.za/about_airlink.php

	Intensive Air entered the market
1994	Flitestar ceased business in April when it went bankrupt Phoenix Air began operations in December 1994 and focused on the Johannesburg, Durban and Cape Town routes SA Airlink formed an alliance with SA Express ⁵
1995	Phoenix Air ceased operations due to failure to pay its debts Nationwide Airlines is established
1996	Comair entered into a franchise agreement with British Airways (18% shareholding) Sun Air enters the market
1998	Interlink Airlines began operations
1999	Sun Air ceased operations when taken over by SAA
2001	Kulula, a subsidiary of Comair entered the market as the first LCC
2002	Intensive Air goes bankrupt and ceases operations
2004	1Time entered the industry
2006	Mango, a subsidiary of SAA entered the market as a low cost carrier
2008	Nationwide ceased operations due to bankruptcy
2010	Interlink Airlines goes into liquidation and ceases operations
2011	Velvet Sky entered the market in October on the Johannesburg-Cape Town route Santaco Airlines launched with a publicity flight but failed to commence commercial flights
2012	Velvet Sky ceased operations due to failure to repay its debts 1Time ceased operations when it went bankrupt
2013	CemAir launches full service domestic scheduled flights (mainly to smaller towns and cities in South Africa) ⁶
2014	FlySafair begins operations
2015	Skywise, Fly Go Air and Fly Blue Crane begin operations

Source: Publically available resources

For the purpose of this study, we consider in particular the period from the mid-2000s following the entry of 1Time, up to most recently where there has been significant entry and exit of various airlines. This has seen the entry of a number of airlines, such as Velvet Sky, Skywise, CemAir, FlySafair and Fly Blue Crane, along with a number of exits. In 2015 SAA maintained a lead position in the domestic market measured by the share of seats with a 38% market share, along with 18% market share for subsidiary Mango Airlines, totaling 56%.⁷ British Airways had 15%, with its associated LCC Kulula holding 18% (totaling 33%). In other words, the two leading businesses maintained a joint market share of 89%. New entrants FlySafair⁸ and Skywise⁹ have 6% and 2%, respectively along with others including Fly Blue Crane¹⁰ and CemAir (Figure 1).

⁵ SAX forms part of a strategic alliance with South African Airways and Airlink. As it is a private company, it is difficult to determine the exact ownership structure of the airline. See http://www.saaairlink.co.za/about_airlink.php

⁶ The carrier has operated a number of regional flights and charters since 2005.

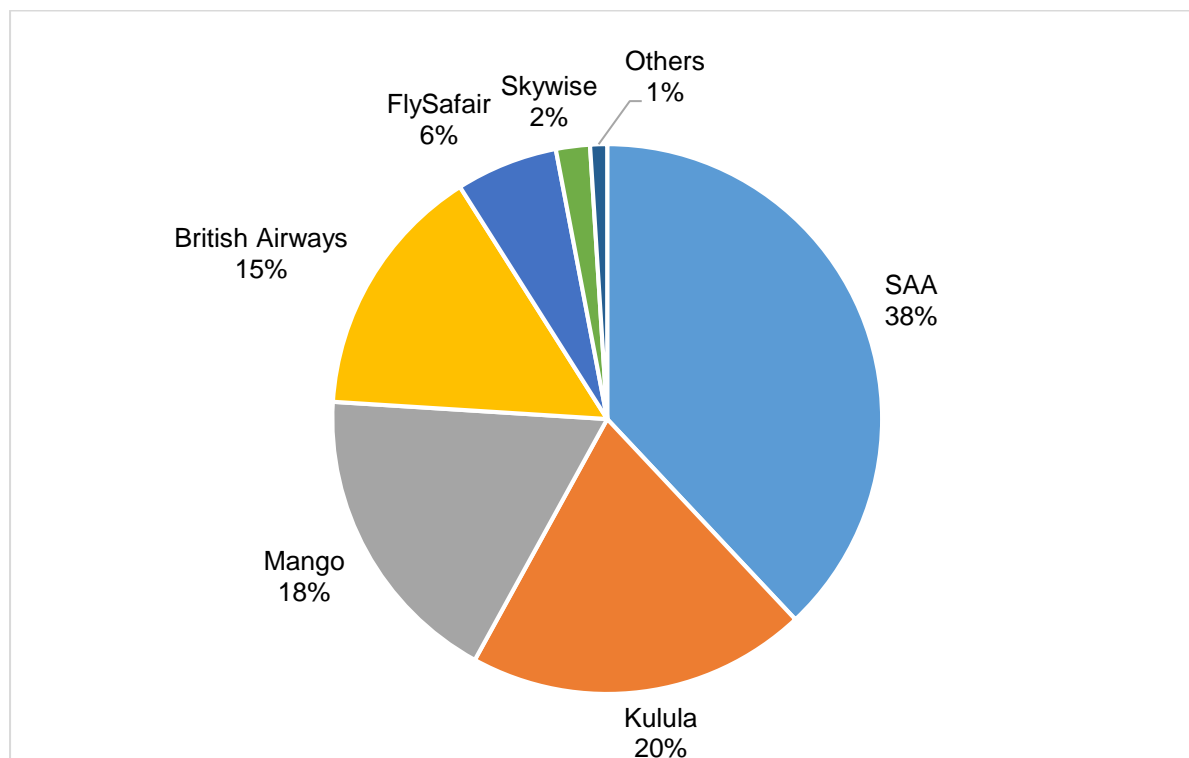
⁷ SAA's market share is made up of 22% of its mainline share and 16% from its regional partners, privately-owned Airlink and government-owned SA Express.

⁸ In 2013 when FlySafair first got its air service license, it was involved in a court case in which Comair alleged that FlySafair's ownership by non-South Africans exceeded the 25% permissible (Peat, 2013). Subsequently, FlySafair changed its ownership structure to its current position.

⁹ 20% of the shares in the airline are owned by Pak Africa, an investment group from Pakistan. The other 80% of the airline is owned by various South African residents and companies including the Mandela Family. The exact composition of the domestic shareholding is difficult to determine from publically available information.

¹⁰ Fly Blue Crane is privately owned, with its shareholding comprising 85% South African female and 100% South African ownership overall.¹⁰ See interview with Fly Blue Crane, 22 October 2015. The airline has focused on providing a hybrid product – the airline intends to compete with other LCCs on price, position itself on under-served routes such as Bloemfontein, but provide certain frills such as baggage allowance and high quality service and food at affordable prices below those of FSCs.

Figure 1: Market shares for domestic scheduled flights in South Africa, mid 2015¹¹



Source: CAPA (2015b)

Similar market shares for the domestic airlines are reflected in publically available information on seat capacity relating to August 2015 (ANNA, 2015a). In May 2015, the smaller airlines operating in the domestic market carried total aircraft fleets which were significantly less than that operated by SAA, SA Airlink and SA Express in particular, although the number of domestic destinations offered is not necessarily reflective of this. The available information suggests that while SAA carries a large fleet overall, the airline has focused its operation on a small subset of domestic routes (Table 2). The partnership with SA Airlink and SA Express allows SAA to carry passengers on the partner airlines through bilateral agreements rather than on its own aircraft. The same applies to the Comair group, where BA as the primary network operator services fewer domestic routes directly, whereas Kulula services a wider range of destinations.

Table 2: Airline fleet size, destinations and performance, 2015

	SAA	BA	SA Airlink	SA Express	FlySafair	Skywise	Mango	Kulula	CemAir
Fleet size	55	18	36	24	4	2	10	11	20
Domestic destinations ¹²	5	4	16	11	4	2	7 ¹³	7	6
On-time performance (April 2015, %)	91.3	83.1	91.3	85.0	93.7	91.5	86.5	84.7	96

Source: Travelstart - Jarvis (2015)

It is clear that smaller carriers (point-to-point) generally operate on a wider range of domestic routes relative to their fleet sizes, which suggests that these carriers are contributing to

¹¹ Measured in the week, from 29 June 2015 to 5 July 2015.

¹² It is worth noting that once an airline is registered and licensed for domestic flights, it is allowed to operate on any route and switch between these.

¹³ The number of domestic destinations operated by Mango is indicated as 9 for 2015. See ANNA (2015).

increasing access to air travel for smaller cities and routes. One explanation typically offered for SAA and BA servicing fewer domestic routes directly is that they are network carriers that focus on drawing passengers only from the main cities or routes in South Africa. While this may be the case, it supports the view that the network carriers are not increasing access to air travel in less popular routes. Instead, it has been other airlines, including SAA's partner carriers such as Airlink, that have fulfilled this role. Furthermore, although international tourists to South Africa use large FSCs to fly from origin cities globally to the primary hub airport in South Africa, OR Tambo¹⁴, their ability to connect onwards to not only the major cities but 'secondary' destinations as well is critical for enhancing tourism in those destinations. It is also important that international travelers can connect to different destinations affordably and with adequate choice and alternatives, rather than the view that travelers traveling on premium FSCs from different countries to South Africa would only want to travel on the same or another premium carrier to connect to other domestic destinations as well.

Lastly, on-time performance is in most cases comparable across the carriers (noting that the table represents a snapshot and further data on an annualised basis, over time would be required for fuller comparison).

2.2. Prices and demand in the airline market

The consumption of air travel on scheduled domestic routes in South Africa appears to have been responsive to changes in prices following entry in particular. Given limitations in the available price data, it is difficult to draw more definitive conclusions regarding the elasticity of demand in the South African market and the various causal relationships involved. Nonetheless, it is possible to assess the timing and correlation of fluctuations in demand against the prevailing prices in those periods, having controlled for other possible explanatory factors.

Travelstart, one of the largest online bookings agencies operating in South Africa, published information in 2015 regarding significant decreases in the prices for air travel along different routes following the entry of FlySafair in particular.¹⁵ The data provided considers average prices (including taxes) for the cheapest one-way ticket in January and February 2014, and compares these to the same two-month period in 2015.¹⁶ Travelstart's own analysis was that fares had reduced by as much as 39% by 2015 on some routes (one-way) where FlySafair had entered since its entry in October 2014.¹⁷ They note however that the fares compared did not include the extra baggage fees charged by LCC's such as FlySafair (at the time the fee to add a 20kg bag was R150). It was acknowledged in the publication that the lower prices introduced by the LCC may have been entry fares to draw in customers following the airline's launch.

On the 18 routes for which data was available, the only routes on which prices increased were the Johannesburg to/from Bloemfontein and East London, respectively (FlySafair did not enter these routes). On all other routes prices decreased, and the largest increases were on routes where FlySafair had entered in this period - Data for the 18 routes (9 route pairs) is summarised and averaged (percentage price change for the route pairing overall) in Table 3.

It is expected that the entry of FlySafair would have had the greatest impact on those routes for which the degree of competition was weakest. This is evident in a comparison of the routes

¹⁴ In 2015, the majority of foreign travelers arriving in or leaving South Africa by air travel did so through OR Tambo (~78%).

¹⁵ For the original article see: <http://www.travelstart.co.za/lp/media/domestic-flight-prices-decrease-2015>

¹⁶ Interview with Travelstart, 10 November 2015.

¹⁷ See <http://www.travelstart.co.za/lp/media/domestic-flight-prices-decrease-2015>

in Table 3. The largest percentage reductions were on Johannesburg and Cape Town to Port Elizabeth where there were no other rivals to SAA/Mango and BA/Kulula, as well as Johannesburg and Cape Town to George. As a control, the routes to Durban, East London and Bloemfontein show almost no change, where FlySafair had not entered.

Table 3: Price changes on domestic routes, 2014 to 2015 (January and February)

City pairing (route)		Average fare change (%)	FlySafair entry route?	Other competitors
Cape Town	George	-38.0	Yes	SA Airlink, SA Express
Cape Town	Port Elizabeth	-35.4	Yes	SAA, BA, Mango
Johannesburg	Port Elizabeth	-27.8	Yes	SAA, BA, Mango
Johannesburg	Cape Town	-17.1	Yes	SAA, BA, Kulula, Mango
Johannesburg	George	-11.7	Yes	SAA, Kulula, Mango
Cape Town	Durban	-3.6	No	SAA, BA, Kulula, Mango
Johannesburg	Durban	-1.7	No	SAA, BA, Kulula, Mango
Johannesburg	East London	2.8	No	SAA, Kulula
Johannesburg	Bloemfontein	5.0	No	SA Express, CemAir

Source: Adapted from Travelstart; CAPA (2015a and 2015b), ANNA (2014a, 2014b and 2015d)

FlySafair launched flights on further routes in October 2015 although it is not possible to compare changes in fares for this using the available data (Cape Town-Durban, Cape Town-East London, Johannesburg-Durban, Johannesburg-East London) (ANNA, 2015d). Nonetheless, the airline has introduced a similar number of weekly frequencies on these routes (between 12 and 14) other than for Cape Town-East London where it introduced 7 frequencies in direct rivalry to the only other operator, SA Express, which operates 31. It is likely that the impact on the latter route will be more significant in terms of a reduction in prices, when compared to routes where there are a larger number of existing rivals. For example, when launching the Johannesburg to Durban route, it introduced only 14 weekly frequencies (6%) on a route where four other rivals (SAA, Mango, Comair, Kulula) operated an additional 212; and it added only 12 frequencies (14%) on Cape Town to Durban compared to 84 operated by three rivals (SAA, Mango, Comair) (ANNA, 2015d). On the Johannesburg to East London route the airline introduced 12 weekly frequencies (27%) in addition to the 44 carried by two rivals SAA and Kulula between them (ANNA, 2015d). The capacity to absorb diverted sales from rivals will be an important determinant of the ability of FlySafair to have an impact on each of these routes through driving price competition.

What is most important when considering substitution and rivalry however, is the switching of a sufficient number of customers at the margin rather than necessarily having all passengers switch to a new substitute airline because it is offering lower fares. The switching of these marginal consumers is what serves as a competitive discipline on the behaviour of incumbent rival operators in the market. On the Cape Town-Johannesburg route, which was the first to be operated by FlySafair from October 2014, the airline had introduced 26 weekly frequencies on the route (8.1%) which was already serviced by SAA (127 weekly), BA (76), Comair (46), and Mango (43) (ANNA, 2014a). As shown in the table, there were significant decreases in

price on this route although not as much as the impact on the George and Port Elizabeth routes based on the Travelstart data. Given typically strong demand and competition on this route, it may also be that other factors contributed to declining fares as well.

Most airlines operate along the ‘golden triangle’ routes which are those between the major international airports in Johannesburg, Cape Town and Durban on which there are high passenger volumes. Over time, volumes for each of these airports are the highest relative to other smaller airports based on total passenger numbers (departures and arrivals) in the ACSA financial year ending March (Table 4). The passenger numbers also reflect the biggest increases in FY2014/15 over the previous year being in Port Elizabeth and George where entry occurred (after Upington). By comparison, East London has seen a decline in passenger numbers since 1Time’s exit in 2011/12. Port Elizabeth’s passenger numbers had also declined but the entry of FlySafair correlated with a recovery in volumes.

Table 4: Total passengers by major airport, 2010 to 2015 (financial year end March)

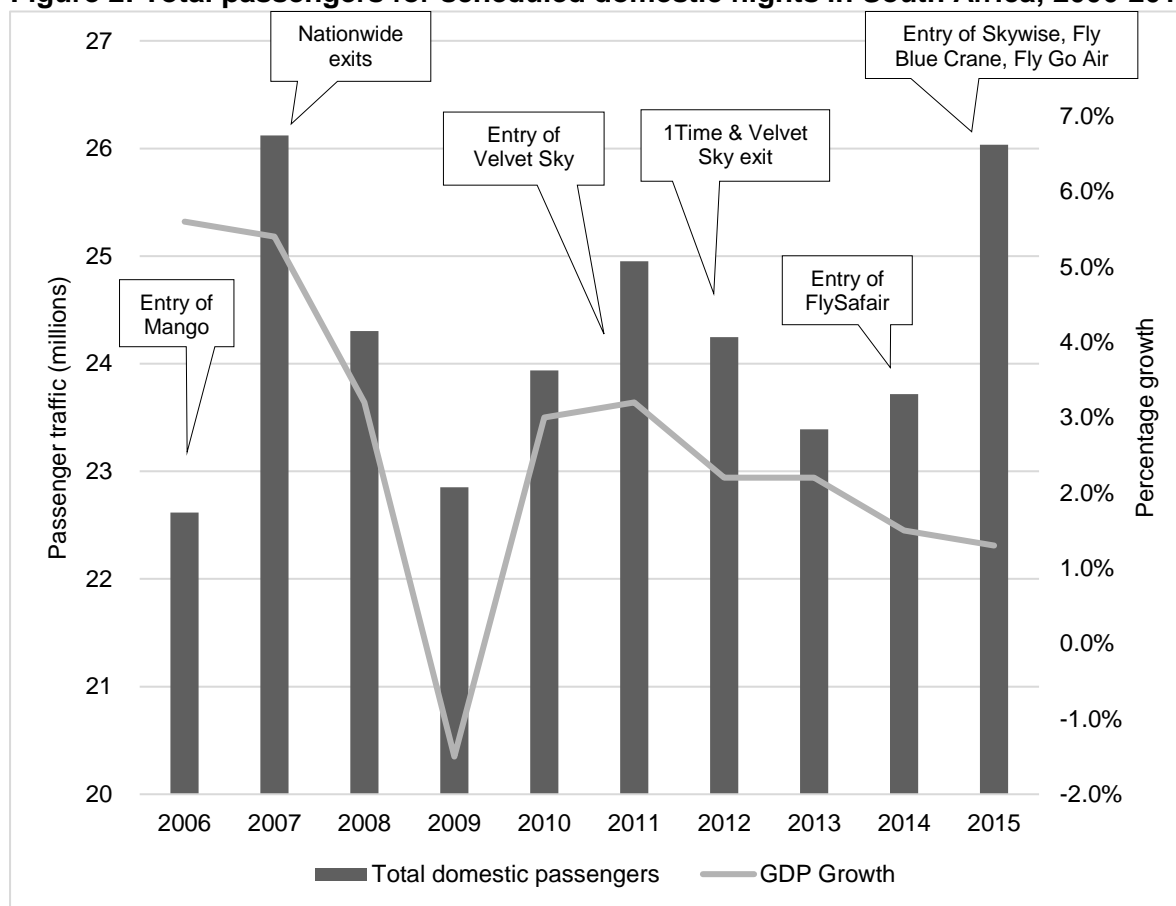
	FY10/11	FY11/12	FY12/13	FY13/14	FY14/15	% change over FY13/14
OR Tambo	9 732 250	9 985 246	9 437 069	9 257 225	9 510 809	2.7
Cape Town	6 781 143	7 028 669	6 951 577	6 879 919	7 142 907	3.8
Durban	4 672 960	4 828 631	4 430 677	4 179 121	4 222 226	1.0
Port Elizabeth	1 405 501	1 362 949	1 309 305	1 248 685	1 348 988	8.0
George	524 726	562 311	530 220	554 590	598 512	7.9
East London	676 271	679 549	642 682	662 965	636 638	-4.0
Bloemfontein	403 802	428 969	400 918	373 147	354 820	-4.9
Kimberley	121 150	134 704	146 060	151 880	154 586	1.8
Upington	42 506	46 582	50 460	60 849	68 990	13.4

Source: ACSA website and submissions

Information available in various Airports Company of South Africa’s (ACSA) documents demonstrates total passenger volumes have increased by approximately 8% between 2014 and 2015, which coincides with when several new LCCs entered domestic routes (Figure 2).

Interestingly, passenger volumes declined significantly in the market in the two years following the exit of 1Time and Velvet Air in 2012 (Figure 2), and similarly in the years following the exit of Nationwide in 2008 in terms of the passenger number at OR Tambo International (“OR Tambo”) (Figure 3). It is not possible given the available data points to further assess the causal relationships between the entry and exit of the airlines and the changes in passenger numbers and prices. Comparison with GDP growth indicates that while the decline in volumes is consistent with lower GDP growth (and also a time of higher fuel price), the higher passenger volumes in 2015 is not apparently due to GDP growth.

Figure 2: Total passengers for scheduled domestic flights in South Africa, 2006-2015¹⁸



Source: ACSA submissions and World Bank data

Comparing with StatsSA data, total arrivals to South Africa (by all modes of transport) grew by 0.4% from 2013 to 2014, and by 0.2% from 2014 to 2015 (StatsSA 2014, 2015). Total arrivals by foreigners by air decreased by 18.4% from 2013 to 2014, and decreased by 2.1% from 2014 to 2015 (StatsSA 2014, 2015). However, Statistics South Africa has noted that the changes in the trends of arrival and departure volumes of foreign passengers in 2014 and 2015 are due to the exclusion of transit passengers from the data for 2014 and 2015 (which were included in previous years) (StatsSA, 2016). Despite this, it may still be argued that the Ebola crisis which began in 2014 had a significant negative effect on passenger volumes to South Africa in the period 2014 to 2015; along with a change in South Africa's visa regulations in June 2015 that apparently reduced tourism volumes significantly.¹⁹ These factors potentially affected both international travel to South Africa, and domestic passenger volumes – however it is not possible to accurately distinguish domestic travel by connecting international passengers and domestic (resident) travelers, for example. Despite this, it is clear that the number of domestic passengers increases significantly between 2014 and 2015, both at OR Tambo (Figure 3) and overall (Figure 2), to levels above those pertaining prior to the beginning of the Ebola concern and even though GDP does not rise. This suggests that other factors such as the availability of new carriers and lower fares may have increased volumes despite the negative effects of Ebola and the change in visa regulations, or continued decline in GDP. We note however, that more extensive analysis of data on the various explanatory factors over

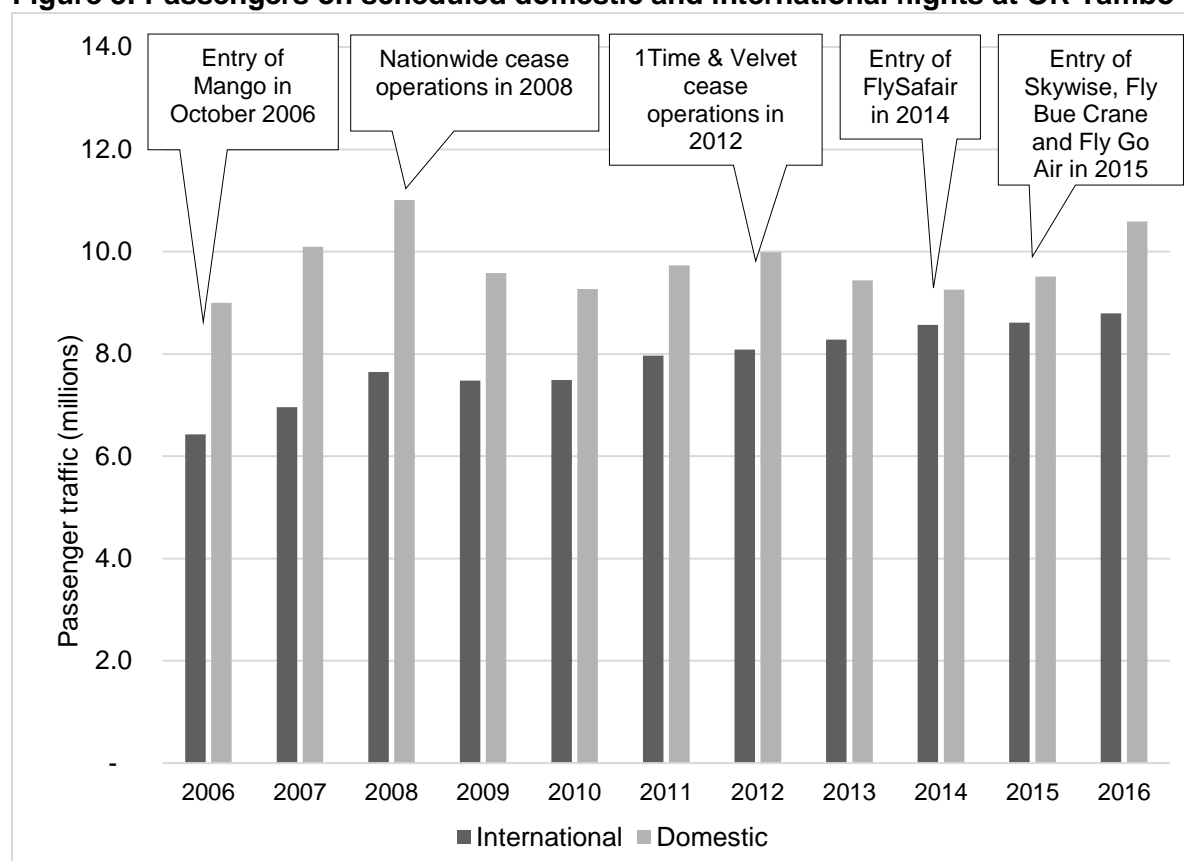
¹⁸ Monthly passenger volumes data from ACSA was available for the period 2006 to 2015, and the figures in the chart relate to calendar years.

¹⁹ Phakathi, B. 'Visa rules drive 11% slide in tourist arrivals' (23 September 2015). *Business Day*. Available: <http://www.bdlive.co.za/business/transport/2015/09/23/visa-rules-drive-11-slide-in-tourist-arrivals>

time would be required to reach a conclusion in this regard, for which data has not been available.

The entry and exit of LCCs appears to have had an effect on domestic passenger numbers at OR Tambo.²⁰ In 2006, Mango entered the market which could explain the rise in passenger traffic between 2006 and 2007.²¹ In 2008, Nationwide ceased operations which corresponds with a drop in passenger traffic from 2008, although this is likely to also be due to the onset of the global economic downturn and rising input prices. Coinciding with the closure of Velvet Sky and 1Time in 2012, there was a significant drop in scheduled domestic passenger traffic of over one million passengers in the year to 2013 (Figure 3). Similarly, the entry of FlySafair²² in October 2014 and subsequently, Skywise, Fly Blue Crane and Fly Go Air in 2015, coincides with increases in passenger traffic to levels above even those in 2011 when Velvet Sky and 1Time were still in operation. FlySafair's view is that entry definitely grows route market size using the example that there has been approximately 12% or more growth in market size on certain routes that they have entered.²³

Figure 3: Passengers on scheduled domestic and international flights at OR Tambo²⁴



Source: ACSA data

²⁰ The total number of passengers on scheduled domestic and international flights from and to OR Tambo is assessed given that the hub airport accounts for more than half (52%) of scheduled flight capacity in South Africa (OAG Market Intelligence, 2012).

²¹ Mango is a subsidiary of South African Airways and is 100% owned by the national carrier.

²² 25% of FlySafair's operations are owned by Safair Holdings, a 100% subsidiary of foreign-owned ASL Group of Companies. The other 75% is locally owned; 25.1% by NdizaSafair, an Employee Share Ownership Plan and 49.9% by Safair Investment Trust, an investment entity.

²³ Interview with FlySafair, 22 October 2015.

²⁴ Data based on ACSA financial year, ending March.

Of course, there are a range of factors which may influence outcomes in terms of passenger volumes on specific routes. Higher fuel costs, for example, affect airlines' costs and ticket prices. However, this affects international flights also. There is evidence that the increased accessibility associated with entry by an airline on a particular route, especially less popular routes by volume, has a positive impact on consumers and local economies which is consistent with the literature as well (See Olipra, 2012; and Luke and Walters, 2013). This may be through the effect of encouraging people who have not flown previously or frequently to increase consumption, or through encouraging greater consumption by the existing population of people that are already regular users of air travel (see Box 1). In small or less popular destinations, it is most likely to be more of the former effect.

Box 1: International and SA experience of economic effects of LCCs

Air travel provides a number of economic benefits including higher employment, increased trade and the growth of associated sectors (Oxford Economics, 2011). Perhaps the most important of these associated sectors is travel and tourism. The tourism industry includes other sectors such as hospitality, recreation, cultural and heritage as well as crafts production (ATAG, 2005). Tourism is largely dependent on the ability of tourists to reach the destination which creates a strong link between growth in air travel and growth in the tourism industry (WTTC, 2015).

One of the main drivers of demand for air travel is price. LCCs by offering lower prices and even alternative destinations are thus a major contributor to the travel and tourism industry (ETC, 2005-7). LCCs contribute to the growth of the tourism sector by increasing the motivations, frequency and ease of booking for travel (Olipra, 2012). One study found that a 10% increase in the number of passengers using LCCs could increase tourist numbers per capita from EU-15 countries by 0.2% (Rey, Myro and Galera, 2011).

In Europe, the entry of LCCs resulted in the creation of new demand in some underserved markets (Olipra, 2012). A study conducted in 2004 found that only 37% of LCC passengers had changed their mode of transport from traditional airlines to LCCs (ELFAA, 2004). Of the 59% of LCC passengers who constituted new demand, 71% would not have travelled had there not been a cheaper means of transport. In fact, during this period several destinations in Europe experienced a significant increase in the number of tourists attributed to the growth in LCCs which had doubled passenger arrivals in the UK (ETC, 2005). Additionally, LCCs usually look for niche destinations and may identify small towns that have been neglected by traditional carriers as their choice of destination (Olipra, 2012). The availability of more flights on these routes usually results in increased passenger traffic. For example, between 2003 and 2010 regional airports in Poland where LCCs carried more than 90% of the passenger traffic experienced percentage growth in passenger traffic of over 800% and in one case, over 5000% (Olipra, 2012).

The growth in air travel and LCCs in particular is important because the travel and tourism industry can contribute significantly to GDP and employment of an area (WTTC, 2015; Signorini, Pechlaner, and Rienzner, 2002; Gonçalves, 2009; Donzelli, 2010; Graham and Dennis, 2010; Chung and Wang, 2011; and Olipra, 2012). A study looking at the local economies of certain areas in southern Italy found that entry of LCCs does result in local economic development and that a single low cost route could generate economic welfare gains of about €14.6 million per year (Donzelli, 2010). Another study looking at an island in Korea found that an increase in the number of LCCs resulted in a substantial rise in the number of tourists, increased revenues received by accommodation facilities, and a drop in the unemployment rate between 2005 and 2009 (Chung and Whang, 2011).

In South Africa, when Kulula entered the market, it was able to fill its 750 000 available seats per year in a short period of time (Schlumberger and Weisskopf, 2014). Kulula then added Port Elizabeth and George to its destinations. Kulula's entry into the Johannesburg-George route was the major contributor to the 159% growth in passenger volumes experienced between 1998 and 2006 (Schlumberger and Weisskopf, 2014). When 1Time entered the market in 2004, in addition to Cape Town and George, it added Durban, East London and Port Elizabeth to its routes. Passenger traffic rose significantly especially on the routes Kulula had not entered. For the Johannesburg-East London route traffic between 2004 and 2006 increased 52% and had a significant positive effect on the local economy. Holiday packages grew 50% and an estimated R65.8 million in tourism revenue was received (Schlumberger and Weisskopf, 2014).

Volumes for the George airport have increased significantly following the entry of FlySafair

(see Box 2) (previously only serviced from Cape Town by SA Airlink and SA Express which were apparently both operating at a loss on this route)²⁵. Similarly, the entry of CemAir on routes to smaller cities outside the golden triangle such as Plettenberg Bay, Kathu in the Northern Cape, Bloemfontein, Margate and most recently George has apparently already had positive effects on these local economies.

In Plettenberg Bay, the launch of regular scheduled flights by CemAir in March 2014 apparently contributed an additional R56 million to the local economy by mid-2015, although we have not been able to verify the assessment directly with the local municipality or test for robustness of the findings.²⁶ More than 9000 passengers had made use of the service between OR Tambo and Cape Town International, and Plettenberg Bay, and the number of routes had been expanded to include flights from Wednesday to Monday morning (to Johannesburg) based on consumer feedback and local demand for seasonal leisure travel and increasingly business travel. The increased accessibility to the town has resulted in new initiatives by the Bitou Municipality and private actors to effectively 'extend' the holiday in-season through festivals and tourism events, which has also necessitated a recent upgrade to the local airport which is owned and operated by the municipality.²⁷

CemAir, which operates a full service carrier (FSC) business model built on a history of operating charter flights throughout Africa and aircraft leasing has now entered new business travel routes from Johannesburg such as to Bram Fischer Airport in Bloemfontein where it competes with SA Express primarily. The route to Kathu services primarily business travelers to the mining areas from Johannesburg (Burger, 2015). The airline is also assessing the potential for launching scheduled flights to Kimberley, Hoedspruit and to Port Elizabeth, following success on certain routes such as to Margate from Johannesburg which was launched in 2013.

Interventions to sustain growth on smaller routes may spur economic development through tourism and access to market which lifts local economies significantly and meaningfully in the context of a rural and/or inclusive development agenda which areas typically rely on the growth of tourism to sustain development (Box 1 and Box 2).

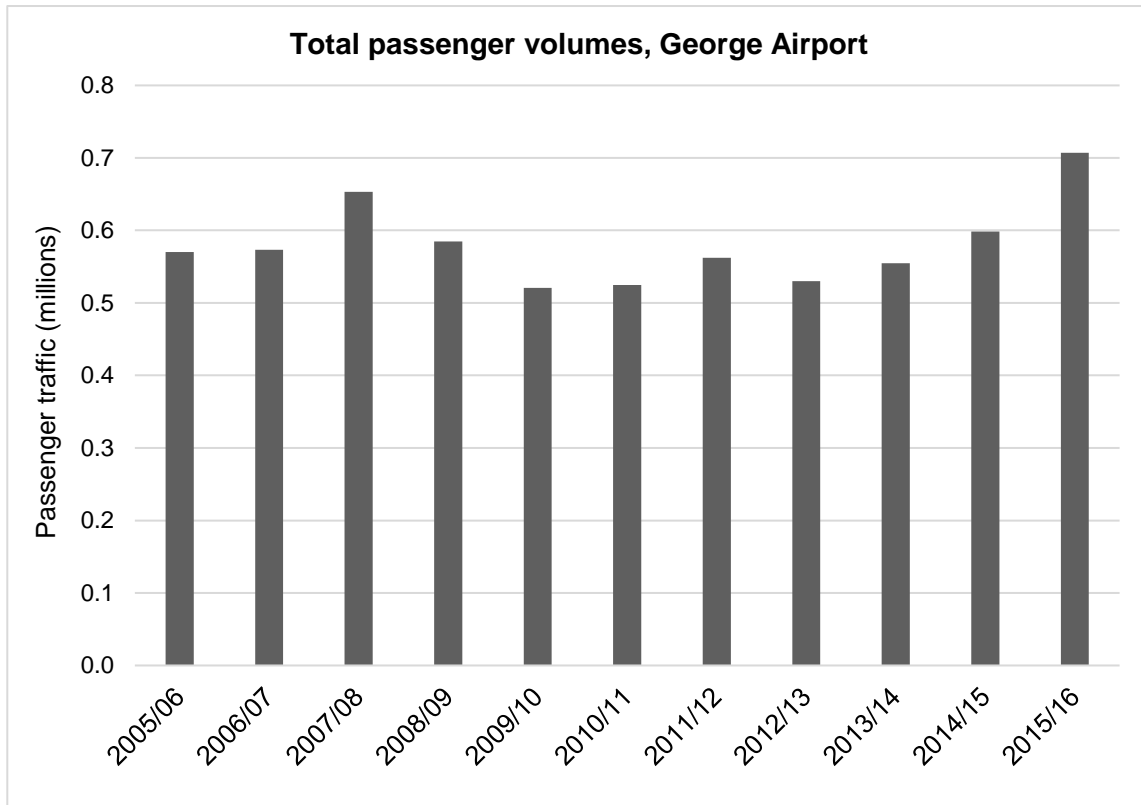
²⁵ See <http://www.southafrica.to/newsletters/fs/2014/20140814-new-route-for-flysafair.php>. SA Express had only announced that they would join the route in September 2013.

²⁶ See Knysna-Plett Herald (2015).

²⁷ See Bitou Local Municipality Special Municipal Council Meeting Agenda (20 May 2014) detailing proposed upgrades to the local airport. Available: <http://oldsite2016.bitou.gov.za/wp/wp-content/uploads/2015/01/council-agendas/Special-Council-Agenda-2014-03-20.pdf>

Box 2: George airport volumes following entry of FlySafair

The entry of airlines and lower prices in the market, other things being equal, can lead to benefits in terms of tourism and higher passenger volumes. Overall passenger volumes at the George Airport, located in a more remote location to the east of Cape Town in Western Cape, increased significantly in the period from 2014 to 2015 compared to levels in previous years. FlySafair entered the domestic market in October 2014. This coincides with a decrease of 37.1% and 10.5% in air travel fares for the George to Cape Town and George to Johannesburg routes, respectively, when comparing January to February 2014, to the same period in 2015 – on average a decrease of around 24% in fares (Table 3). Similarly, prices decreased by 38.8% and 12.9% on the corresponding return legs.



The increase in volumes between 2014 and 2015 referred to above is 8% compared to a decline in volumes of 4% between 2012/13 and 2013/14. Other airlines traditionally operating this route include Airlink and SA Express.

Interestingly, the same effect is not observed on other routes which may be more significant in terms of passenger volumes than the routes to and from George but which have passenger volumes which are less than those for the 'golden triangle' (Between Johannesburg, Cape Town International and King Shaka in Durban).

However, there are several factors in addition to prices which can affect demand conditions, competition and profitability in airline markets. Change in demand for air travel is dependent on a number of factors including ticket prices, ticket prices of other competing airlines, levels of consumer income, availability of substitutes, quality of the product and tastes and preferences of the consumer (Gillen, Morrison and Stewart, 2004). The impact of these factors can differ across market segments in terms of business and leisure passengers, for example.

All factors remaining constant, business passengers are less sensitive to price than leisure passengers. Business customers typically have less flexibility with regards to travel time and dates than leisure passengers. Domestic and international passengers also have different

demand elasticities. Where prices increase or other factors change negatively, domestic passengers may have the ability to switch to road transport, for example, which might not be the case for international passengers. In turn, these factors affect the decision making of airlines in terms of the supply and pricing of air travel. In South Africa, 70% of air travel is conducted by business travelers (divided evenly between public and private sector business travelers), and the remainder is travel for leisure (SAA, 2014: 68).

The economic performance of the country or geographical location of the airport also influence demand in the industry. Where the economy experiences increased GDP per capita, the number of leisure passengers is likely to grow as there is an increase in disposable income. For example, the incentive and ability to travel for holiday and the relative affordability is thus much higher than during periods of poor economic performance. Similarly, corporations with higher margins as a result of growth are able to sponsor more business travelers thus increasing the demand for air travel.

A country's exchange rate contributes to changes in demand for air travel. Where the country's currency depreciates, it becomes more expensive for local passengers to fly even as it becomes cheaper for international passengers. LCCs in this scenario are even more disadvantaged as their routes are mostly local however their costs (such as fuel) are typically affected by currency fluctuations in fuel importing countries. As LCCs compete on the basis of low prices, it may be difficult for them to transfer any increases in costs to their consumers.

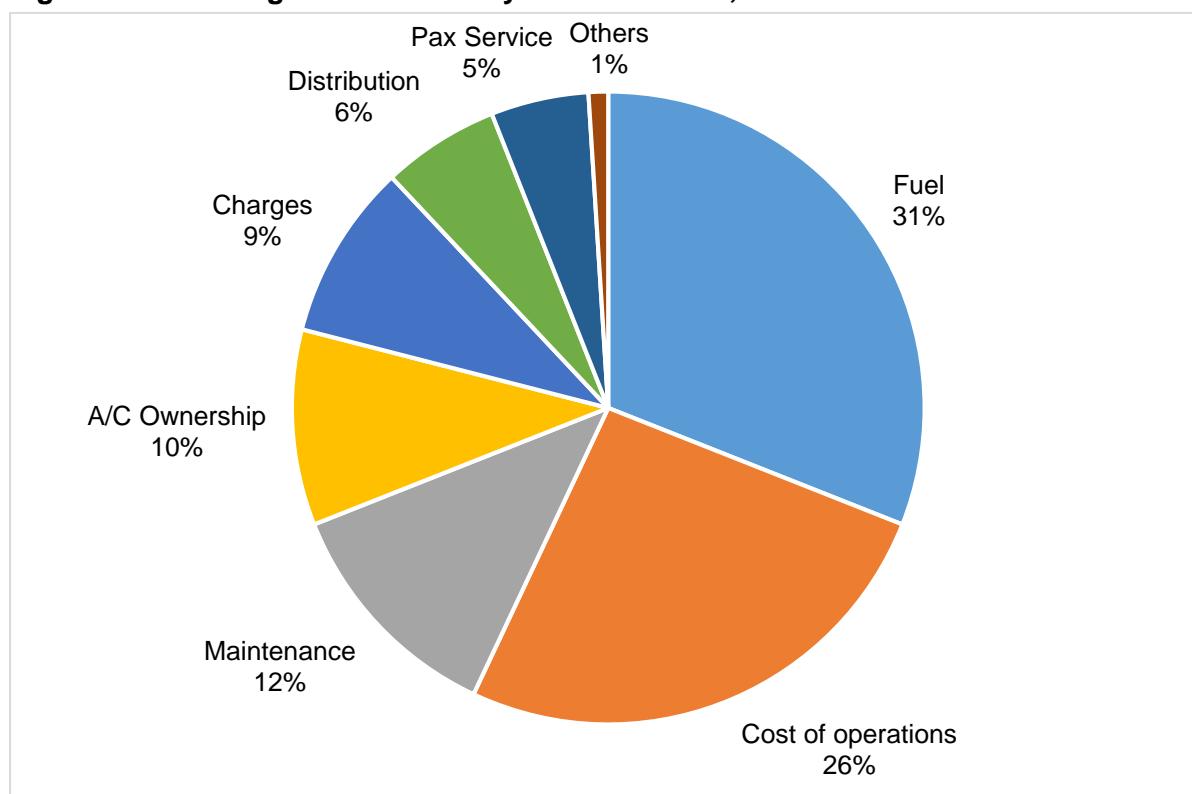
The location and size of an airport may also affect demand for air travel from the perspective of airlines. Where the airport is located in a hub such as Johannesburg, demand for transport is likely to be much higher than in spoke or smaller cities and regions such as Kimberley and Nelspruit. However, it must be noted that the presence of an airport and competing airlines could also stimulate the growth of the region which in turn raises demand for air travel.

Outside factors such as events, outbreak of diseases or instability also significantly influence the demand for air travel to certain areas. For example, the 2010 FIFA World Cup held in South Africa attracted a large number of tourists to the country, which resulted in an increase in demand for air travel. Passenger traffic on international flights increased by approximately 530 000 between the 2009/10 and 2010/11 (ACSA) financial years, while domestic traffic grew 5.7% in this same period.

Together, these factors have an impact on the profitability of airlines which has been considered in various studies, along with various other cost and revenue drivers (Chopra and Lisiak, 2006). The main cost drivers are: i) number of employees per Available Seat Mile (ASM) or per departure; ii) salary expense per employee; and iii) cost per litre of fuel. An airline is thus able to increase profitability if labour productivity per employee is high, salary expenses are low and if the cost per unit of fuel purchased is low.

The most significant expense in the airline industry is the cost of fuel which accounts for approximately 31% of total industry costs, followed closely by cost of operations at 26% (Figure 4). Operation costs include employee and salary costs. Thus increases in both cost of fuel and that of labour as well as low labour productivity could result in a significant reduction of an airline's profits. This was the case with 1Time as discussed in the following section.

Figure 4: Percentage airline industry costs in Africa, 2013



Source: Kuuchi (2015)

An airline is able to raise profitability if it can charge a higher average price per passenger per mile. This is an advantage enjoyed by traditional FSCs as they provide more amenities and often have reputations for better quality of service. Profitability is also raised if the ratio of occupied seats to total number of seats flown is high (typically referred to as load factors). This is especially important as the airline still has to pay the same amount for fuel and labour whether the aircraft is full or not. Flight stage refers to the average distance of flight per leg of a journey from takeoff to landing. Longer flight stages are preferable because the above overhead costs of takeoffs and landing especially in crowded airports is reduced.

3. 1Time's entry, financial performance and exit

3.1. Overview

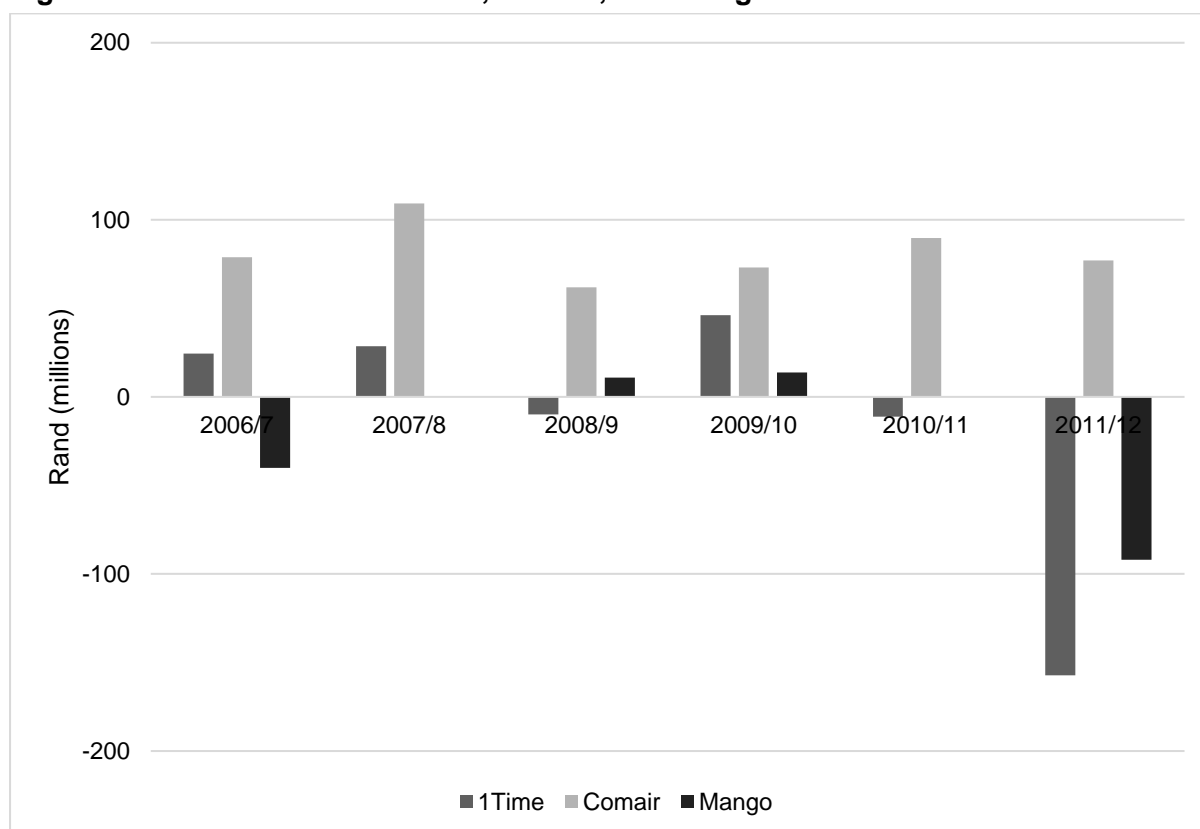
1Time began operations as a low cost carrier in South Africa in 2004. The airline remained in operation until 2012, when it was liquidated and ceased operations. 1Time was the fastest growing airline in South Africa for seven years following its entry (1Time Holdings, 2012). Preceding its liquidation, the airline's fleet consisted of eleven aircraft comprising three McDonnell Douglas MD-82, five McDonnell Douglas MD-83, each carrying 157 passengers, and three McDonnell Douglas MD-87 that each carried 132 passengers.

The airline operated routes to several destinations including Cape Town, Durban, East London, George, Johannesburg, Port Elizabeth, Zanzibar, Livingstone (Zambia) and Victoria Falls (Zimbabwe).²⁸ From the onset 1Time competed directly with the incumbent carriers and a price war erupted with Kulula soon after entry in 2004 apparently resulting in a 35% drop in

²⁸ <http://www.1time.co.za/1time-airline/>

prices in the market (Planting, 2012).²⁹ Despite a reduction in prices in the market, the airline began to record a profit (R24 million) in 2006/7 followed by an increase in profits in 2007/8 (R28 million) (1Time Holdings, 2012) (Figure 5).

Figure 5: Profit after tax for 1Time, Comair, and Mango



Source: 1Time Holdings (2010), Bloomberg Business (2014), Ensor (2007), Comair (2015) and SAA (2015)

Several endogenous and exogenous factors are said to have contributed to an erratic financial performance in terms of profits for 1Time in the period from 2008 to 2011. In 2008, fuel prices increased from an average of US\$60 per barrel to just below US\$140. At the same time the rand began to depreciate. These factors contributed to a R9 million loss for the airline in 2008/9. In 2009, the price of fuel stabilized to an average of US\$80 (Planting, 2012). Combined with an improved cash flow, this resulted in a positive net income of R46 million in 2009/10.

In 2010, following a business decision to spend on expansion in preparation for the world cup and to acquire a third party business, as well as cycles of low demand, 1Time experienced a loss of R11 million (Planting, 2012). In 2011, prior to its closure, 1Time experienced its largest loss yet of R157 million. In contrast, Comair, 1Time's biggest competitor at the time, only saw a R12.1 million reduction in profits (Comair's net income stated here is that of British Airways and Kulula combined). The reasons provided for 1Time's loss in profits in 2011 included several low demand cycles during the year, an average fuel price increase of 30%, a 15% increase in airport charges, and losses due to the depreciation of the rand (1Time Holdings, 2012).

²⁹ Kulula is a publically traded company which along with British Airways forms part of the Comair group. Its ownership consists of 75.92% South African shareholders and 24.08% non-South Africans. Resident public shareholders hold a majority of the shares of 36.86% and South African registered company, BB Investment Co. (Pty) Ltd with 26.91%. The rest of the local shares are held by the directors and associates of Comair as well as the Comair Share Incentive Trust.

A number of additional factors have been considered as possible contributors to 1Time's eventual failure including poor management decisions and the airline's purchase of older McDonnell Douglas aircraft (Pauw and Dommissie, 2012)³⁰. Many of the explanations offered relate to aspects which are likely to have significantly increased 1Time's cost-base. For example, the airline had grounded five of its aircraft, on which lease payments were still being made, in order to keep the other six operational in terms of costs (in 2011/12). This meant that 1Time pilots only flew about 50 hours a month, 50% less than pilots for SAA and Comair, resulting in R11 million excess spending. Furthermore, 1Time's subsidiary Jetworx was said to have employed 422 maintenance staff for work that was accomplished by only 70 staff members (and could have been done by 35 people). This increased spending on salaries from R600 000 to R2.5 million. Lastly, the consultant found that there had been poor credit and risk management decisions that resulted in wastage of funds.

The McDonnell Douglas aircraft used by 1Time were apparently some of the oldest and cheapest planes available at the time. These aircraft were not fuel efficient with airlines likely to lose 25%-35% efficiency compared to other mid-size aircraft (Planting, 2012). Additionally, these aircraft carried less passengers than those flown by Comair and Mango. These combined disadvantages meant that the revenue per seat that 1Time received was approximately 50% less than its rivals in the industry (Planting, 2012).

We return to these aspects in the assessment below. An important consideration in the assessment to follow is why the same aircraft that were used in periods where the airline was achieving significant profits may have contributed to a subsequent decline in profits as well. Similarly, it is important to distinguish which of the various inefficiencies claimed in the different reports were 'specific' to the period of decline of the airline and those which were exogenous and affected all airlines generally.

From the above, the factors previously identified as those which led to the collapse of the airline can be summarised as a combination of bad business decisions and exogenous factors (principally the fuel price), in the context of relatively close rivalry in the market.

The market conditions for entering the industry initially in 2004 were relatively conducive in so far as demand was growing, fuel prices were favourable and the market was concentrated. In terms of fuel prices, the price of crude oil was in the region of \$50 per barrel, which as discussed below, was favourable given the aircraft 1Time had acquired. Furthermore, the aircraft used by the airline were acquired through favourable leasing arrangements. Together, these aspects are the two most significant operational and capital expenditure items, respectively, that affect the cost-base of an airline. The combination of the fuel price and the aircraft that 1Time acquired became a disadvantage as the increased fuel price made operations using older, less fuel efficient aircraft less sustainable.

3.2. Mode of entry

1Time was officially founded in 2003 when the domestic operator license held by Aeronexus Corporate was used to launch scheduled domestic services. Aeronexus Corporate was a 'sister company' to Aeronexus Technical which was formed in 2001 as an aircraft maintenance organisation offering maintenance services on various types of aircraft including DC9, MD80, Boeing 727 and 737.³¹ Founders of Aeronexus Technical, Gavin Harrison and Sven Petersen, had previous experience in the airline industry since the 1970s as aircraft technicians with a

³⁰ The authors make reference to findings made by Christo Ebersöhn, an aviation consultant hired by the Solidarity trade union to help resolve the airline's poor performance.

³¹ This background of the formation and ownership of 1Time available from Aeronexus [here](#).

background in engineering and pilotage of various aircraft. The holding company, 1Time Holdings, was subsequently formed to encompass Aeronexus Technical, Aeronexus Corporate and the scheduled service brand 1Time Airline. Harrison and Petersen were founding members and directors of the airline, along with three others (Glenn Orsmond, Rodney James and Michael Kaminski). The airline was listed on the Johannesburg Securities Exchange AltX board in 2006. Given the date of the public listing of the firm, it appears that alternative forms of funding (most likely private investment) would have been used to support the initial entry.

To the extent that 1Time Airlines and its owners were not already operating scheduled flights and were primarily involved in aircraft maintenance, the entry of 1Time was effectively a 'greenfield' entry implying certain startup costs such as investments in capital equipment that may not be made if the business was bought as an existing operation. Publicly available information regarding the formation of the airline, confirmed in the various interviews conducted, indicates that 1Time Airline had the opportunity to lease a number of older aircraft from various sources in the market. For example, several of the MD aircraft were leased from companies such as King Air Charter and Million Air Charter.³² Some of the aircraft, by 2012, were forty years old (from date of manufacture) when they were leased by 1Time. Importantly, at least one of the MD aircraft was leased directly from Aeronexus Corporate³³ (Corporation) which is likely to have been on more favourable terms than leasing from third parties. Although this view was widely held in the interviews, we have not been able to assess the terms of leasing during this period directly. It is clear however that 1Time had also benefited from obtaining aircraft on a lease-to-buy basis such that only four of the aircraft used by the airline when ownership changed hands in October 2011 remained under lease, whilst the remainder were already paid off.³⁴

Using this approach, 1Time accumulated a fleet primarily of older MD80 series aircraft throughout its years in the industry, apparently following the model of Allegiant Air in the US which had at the core of its business model as an 'ultra-LCC' to unbundle air ticket fares and base operations on older and cheaper aircraft.³⁵ This model is said to allow for greater flexibility in terms of frequency and aircraft utilisation given the low cost of ownership when using MD80 aircraft. Essentially, the use of more expensive aircraft implies a higher hurdle rate in terms of frequency and utilisation. In fact by 2007 1Time had managed to leverage their fleet of eight MD80 aircraft to achieve the 'lowest seat kilometre costs in South Africa', while the remaining four DC9 aircraft were being dedicated to charter services (1Time, 2007).

It is difficult to determine from the interviews and publicly available information the specific marketing strategies 1Time would have applied upon entry in the industry and the targeting of different consumer groups. However, it does appear that throughout its existence the airline placed significant resources towards its brand and marketing. Documents from 2010 and 2011 confirm that the airline conducted regular assessments of customer perceptions of the airline, and considered as important the reputation of the airline in the market. One example is a concern raised regarding the ageing fleet which was being used by the airline and, as such, the perception amongst the public that the airline was less safe and reliable. This was at the time also linked to incidents of flight delays and sub-standard performance which enhanced a

³² See <https://www.planespotters.net/airline/1Time>; <https://www.planespotters.net/airframe/McDonnell-Douglas/DC-9/47218/ZS-OLN-1Time>; <https://www.planespotters.net/airframe/McDonnell-Douglas/DC-9/47430/ZS-NRA-1Time>; and <https://www.planespotters.net/airframe/McDonnell-Douglas/DC-9/45799/ZS-ANX-1Time>.

³³ <https://www.planespotters.net/airframe/McDonnell-Douglas/DC-9/45799/ZS-ANX-1Time>

³⁴ Interview with Blacky Komani, 27 October 2015.

³⁵ See interview with Prof Walters and Dr Vermooten, 19 October 2015; and Schofield, A. 'Allegiant prospers with ULCC business model' (16 June 2014), available [here](#).

growing negative perception. It appears that the airline had by 2011 achieved a strong brand recognition and favour amongst customers, which was then being eroded by the above factors. Indeed in 2007, only three years following its entry, the airline had won a record five awards for 'best airline' on certain routes which is an award decided based on passenger surveys at all airports regarding various aspects of customer service and handling (1Time, 2007). It does appear from the interviews that in the industry aspects of safety and reliability (which are to a large extent linked with regulatory requirements) are just as important as deliberate branding and marketing such as 1Time's 'More Nice Less Price' campaign at the time.

The combination of the vibrant brand and marketing activity with the low fare pricing strategy typical of LCCs appears to have enabled the airline to grow significantly in its first three to four years in operation.

3.3. Fuel costs

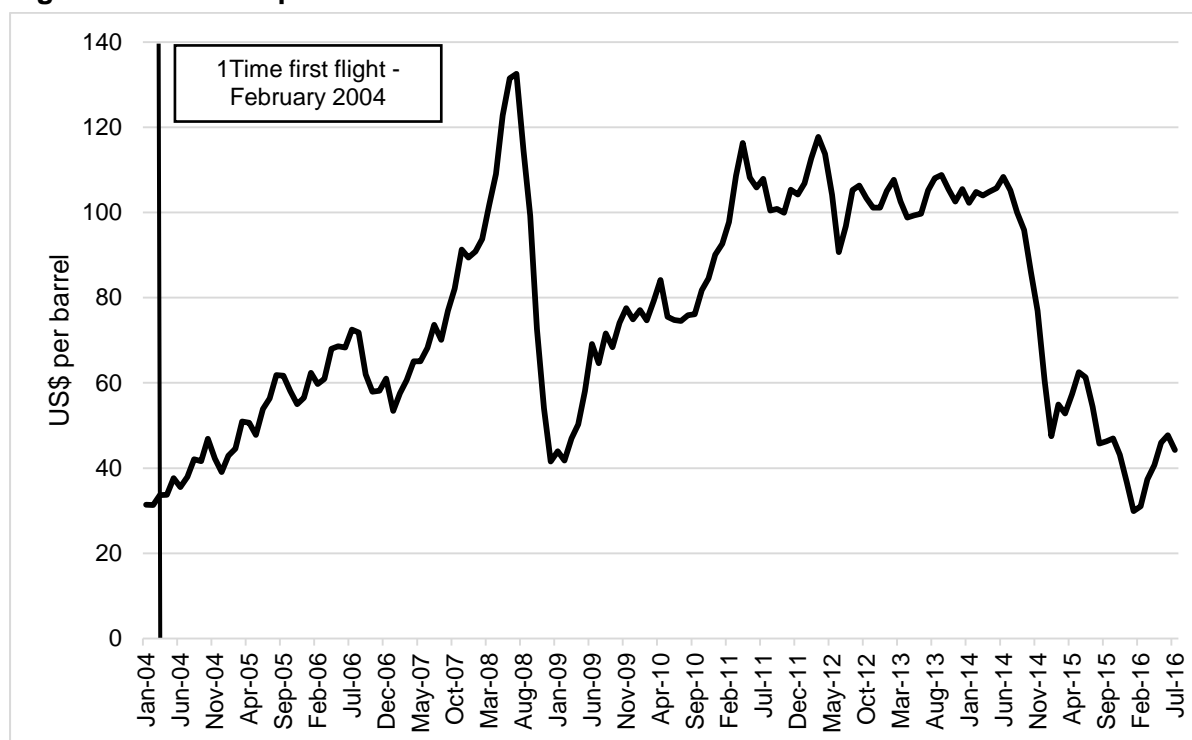
The cost of fuel is the primary driver of costs for an airline. As discussed, one of the primary reasons given in various sources for 1Time's collapse is that their aircraft fuel efficiency and the fuel price at the time meant the airline was no longer viable. This was confirmed by several experienced interviewees, including the former CEO of 1Time. The model applied by the airline was based on a rule of thumb of a fuel price below \$100-110 per barrel given their fleet of aircraft which were known to be less fuel efficient but lower priced. In fact the costs of leases by 2011 was not a significant cost item relative to the high and increasing fuel cost. Fuel (jet fuel) is provided by the major oil companies at each of the primary airports through arrangements with ACSA. Airlines do benefit from bulk discounts however the global per barrel oil price can be used as a proxy for the level of fuel prices in South Africa (Figure 6).

The sharp increases in the fuel price by 2007 and 2008 (Figure 6) made it increasingly difficult for 1Time to sustain its operations using the fleet in place at the time. At the same time, the market was less capable of absorbing the higher fares put through by the airlines in this period and as such demand had been constrained. This had the effect of reducing yields i.e. the fare that is charged per passenger per unit distance. In 2008/9, 1Time suffered its first significant loss (Figure 5), only recovering in terms of profits by the 2009/10 financial year after fuel prices decreased substantially to the same levels prevailing in 2004 and 2005.

By the second half of 2009 fuel prices had increased sharply once again and remained at high levels which were unsustainable on the basis of the fleet that 1Time operated. This was a primary contributing factor to the loss of R157 million incurred in 2011 along with concomitant cash flow constraints in the period from around 2009 to 2011. Increased volumes in the market in 2010 resulting from travel for the world cup had to some extent mitigated the decline at the airline although in 2011 the financial situation worsened significantly.³⁶

³⁶ Interview with Blacky Komani, 27 October 2015.

Figure 6: Crude oil price index



Source: www.indexmundi.com

The new owners, a BBEE consortium, had conducted a due diligence in January 2011, however by the end of the year fuel prices had increased further and stabilised at higher levels. During this period following the due diligence exercise which found that there was still significant potential for the airline, the Industrial Development Corporation (IDC) along with the new ownership had negotiated and passed early-stage approvals for an investment amount of R150 million to recapitalise the airline, effectively replacing the dated aircraft fleet. Replacing the fleet was generally made difficult by an unfavourable exchange rate at the time as well, and the airline had also planned to cut down the fleet in operation as a stop gap measure. With new aircraft, the lease expenses may be higher but the fuel efficiency is far greater. The IDC however withdrew from the arrangement unexpectedly during 2011 through denying the application.³⁷ The withdrawal required the new ownership to negotiate with creditors of the business during a difficult period in terms of the losses the business was incurring, which process yielded limited relief and led the business ultimately into business rescue processes.

3.4. Cost of entry and access to finance

The start-up costs of an airline are relatively high. Even before the operation commences, entrants are required to make various financial commitments to secure the necessary licences, permits and contracts with suppliers.³⁸ When applying for an air service licence, there is a requirement that an un-flown ticket liability guarantee be put aside to mitigate the risk of an

³⁷ Interview with Blacky Komani, 27 October 2015. The IDC had in fact contributed previously to the investment capital of approximately R50 million put forward by the new ownership to gain a share of the business (of which 10% and collateral was brought by the proposed new investors). The funds were intended to lease new aircraft, acquire spares and purchase the ownership stake. However, these funds were apparently not used towards recapitalisation of the airline by the management that had received the funds prior to the entry of the new ownership.

³⁸ Interview with Fly Blue Crane, 22 October 2015; Interview with FlySafair, 22 October 2015.

airline exiting the market. The guarantee is a percentage of the airline's projected bookings for a year. A new airline must also provide guarantees to service providers such as Air Traffic and Navigation Services (ATNS), ACSA and fuel suppliers, measures largely put in place following the exit of several carriers in South Africa, including 1Time. These guarantees together currently add up to more than R50 million to be paid by the airline even before the first flight is launched.³⁹

In addition, the applicant must provide the Air Services Council with a list of the airline's crew responsible for safety, quality, pilotage and the engineering. As the application process can take up to 12 months, the airline has in some cases to hire and pay salaries for these key staff who will essentially not be carrying out any duties until the licence is granted.⁴⁰

The costs of acquiring aircraft are large and the cash flow required to launch operations due to some of the factors above can be approximately R200 million.⁴¹ However, aircraft can be leased. While a new aircraft can cost between R300-400 million⁴² leasing can cost less than R5 million a month in some cases, depending on the aircraft and type of lease (The Economist, 2013). Due to the high costs associated with leasing and purchasing an aircraft, airlines may continue to make use of the aircraft for many years and may buy older aircraft which may be associated with relative fuel inefficiency and high costs.

Prior to and during the period of entry of new ownership in 2010/11, 1Time had already identified the need to upgrade its fleet and was in the process of assessing various alternatives available to it.⁴³ This was motivated by increasing fuel costs, market perception that the existing MD aircraft were dated and unsafe, and the forthcoming introduction of carbon emissions taxation. It was for this reason, amongst others, that financial support for recapitalisation had been sought from institutions including the IDC. Considerations included the availability of particular aircraft abroad for leasing and the availability of a number of 'sister' ships which meant a reduction in maintenance costs as parts and equipment could be shared, as well as which aircraft were most affordable.

1Time documents show that fuel burn on the new generation aircraft that were being considered was around 25% lower than for the MDs that were in use by the airline. Lease payments on a new generation airplane were around R1.5 million per month in 2011, compared to around R500 000 for the MDs, and given the fuel prices at the time the fuel costs accounted for around 80% of total monthly costs to operate the MDs compared to approximately 50% on new generation airplanes. Other aircraft operating costs include certification maintenance and insurance although these items are far less as a share of total costs than fuel and lease payments.

The availability of aircraft for lease in the international market, and the possibility to purchase or upgrade a fleet over time (rather than a once off financial investment) mean that acquisition of aircraft is not a major barrier to entry. The entry of various airlines to the South African domestic market on a leasing basis supports this view. There may of course be a constraint, as in the case of 1Time in 2011, in terms of the availability of reliable funding to make these investments particularly during difficult economic periods. In this context, it is useful to consider how other airlines have been able to draw funding for entry and sustaining the business.

³⁹ Interview with FlySafair, 22 October 2015.

⁴⁰ Interview with Fly Blue Crane, 22 October 2015.

⁴¹ Interview with Airline Association of Southern Africa, 20 October 2015.

⁴² Interview with Airline Association of Southern Africa, 20 October 2015.

⁴³ Interview with Blacky Komani, 27 October 2015.

In this regard, it is notable that Mango enjoyed certain advantages relative to its competitors due to its status as a full subsidiary of SAA. Mango⁴⁴, at the time of its launch, had access to R100 million in the form of an interest-bearing shareholder's loan which was meant to serve as 'seed capital' to fund its start-up operational costs and working capital requirements until it was in a position to fund its own operations (SAA, 2007: 52).⁴⁵ The interest on the loan facility was reported as being between prime less fifty basis points and the prime lending rate in South Africa, paid in addition to the consideration put forward by SAA to acquire share capital in the entity (SAA, 2007: 52).

The ability to manage working capital and/or cash flow is critical to the ability of a new airline to sustain itself through the initial years following its launch, including for 'buying market share' through marketing to build reputation and promotional fares.⁴⁶ Mango benefited from access to the loan facility which allowed it to establish and sustain operations in the early years.⁴⁷ Velvet Sky, for example, found it difficult to carry the business through the initial period with breakeven only expected after approximately three years, while FlySafair benefited from being able to leverage their existing business and experience just as with Comair which was listed on the JSE in 1998.⁴⁸ Mango's loan was paid back within 18 months of start-up (by 2007) to minimize interest payments and given that the airline had sufficient cash-flow to make the repayments (DPE, 2012; and Ensor, 2012). Mango sub-leased its first four aircraft on commercial terms from SAA and had also (subsequent to the loan) received an amount of R300 million from the shareholder SAA in 2008 which was required to ensure solvency (and not to cover the airline's losses through capitalising the airline's balance sheet) (Ensor, 2012; and Mail & Guardian, 2007). The capitalisation is likely to have made it more possible for the airline to borrow from financial markets should the need arise, although it appears that this had not happened by 2012 given the airline's cash-positive position over several years after it launched services (DPE, 2012).

According to a statement issued by the Ministry of Public Enterprises in 2012, Mango received three types of major services from its parent company SAA, being: i) shared central treasury services with interest on positive balances which was below that available in the commercial market at the time; ii) aircraft maintenance services from SAA Technical which were also provided to Comair brands with Mango paying higher rates than rival carriers; and iii) aircraft sub-leases involving the transfer of existing SAA aircraft at the end of the relevant lease terms to Mango at rates negotiated by Mango (DPE, 2012). Mango apparently may have benefited from a lower cost of capital due to its ownership structure but also had to incur costs related to the National Industrial Participation Program (NIPP) resulting in a 'marginally' higher cost of capital than private operators (DPE, 2012).

3.5. Operational costs and taxes

Once the airline launches, operational costs are sizeable. A cash flow of about R200 million is needed for the day-to-day running of the airline.⁴⁹ Airlines in Africa on average make a margin of about 2%.⁵⁰ It was confirmed that in South Africa margins are between 0.8% and 2.0%.⁵¹ A majority of the revenue received is spent on operational costs. As indicated before,

⁴⁴ Referred to as Tulca (Pty) Ltd in the SAA annual reports, t/a Mango.

⁴⁵ Interview with Mango Airlines, 26 August 2016. See Ensor (2012) and Alec Erwin quoted in Mail & Guardian (2007).

⁴⁶ Interview with Mango Airlines, 26 August 2016.

⁴⁷ Interview with Mango Airlines, 26 August 2016.

⁴⁸ Interview with Mango Airlines, 26 August 2016.

⁴⁹ Interview with Airline Association of Southern Africa, 20 October 2015.

⁵⁰ Interview with Airline Association of Southern Africa, 20 October 2015.

⁵¹ Interview with Blacky Komani, 27 October 2015.

fuel usually covers the biggest proportion of costs.⁵² Fuel is an even greater proportion of costs for domestic operators as they do not often fly long distances (sectors) to derive full efficiencies from frequency, utilisation and economies of distance. For a typical passenger plane used in the domestic market to be used efficiently, it requires a 10-12 hour utilisation per day.⁵³ Many inland flights are at most two hours in South Africa. Due to closure times at airports as well as the short distances between destinations, LCCs do not fly long enough distances and duration to benefit from the potential efficiencies derived from flying longer distances.

The cost of skilled labour in the industry is also significant (although this affects all airlines in South Africa). An experienced pilot requires a high salary including benefits.⁵⁴ Fly Blue Crane managed this by hiring retired pilots who have the requisite experience but who carry a lower salary requirement (by up to 30%) than other experienced pilots in the market.⁵⁵ Capital also needs to be put aside for training new staff including the training of pilots in flying of a particular aircraft if they are not familiar with it. There are various schools and academies in South Africa that provide this form of training which although costly, does not appear to be a prohibitive constraint on the entry and survival of airlines.

Taxes form a significant portion of an airline's expenses. LCCs in South Africa typically operate at the same airports as FSCs and therefore pay the same airport taxes and fees.⁵⁶ There is currently no provision in the South African policy environment for any special provisions to support smaller carriers, largely due to a principle of non-discrimination which is applied by the Department of Transport in particular.⁵⁷ Since LCCs charge much less than FSCs, these taxes often make up a larger portion of their operating costs and fares charged than for an FSC. The taxes paid by airlines including passenger taxes and ATNS fees are typically non-negotiable.

In the first half of 2011, several factors together contributed along with airport taxes and charges to a difficult financial position which was faced by 1Time. Passenger revenues had declined by around 6% due to poor demand in some months although yields had increased slightly by a similar percentage. In addition to increased fuel prices, airport charges also increased by 24% (Table 5). In the second half of the year, ACSA charges were to increase by approximately 70% as well for passenger service taxes, landing fees and aircraft parking fees, and further increases were expected in subsequent years.⁵⁸ The increases were linked to ACSA's capital expenditure programmes. Altogether, the increases meant that operating costs increased to more than 90% of revenues in 2011 (Table 5).

⁵² Interview with Airline Association of Southern Africa, 20 October 2015.

⁵³ Interview with Airline Association of Southern Africa, 20 October 2015.

⁵⁴ Interview with Fly Blue Crane, 22 October 2015.

⁵⁵ Interview with Fly Blue Crane, 22 October 2015.

⁵⁶ Interview with Blacky Komani, 27 October 2015; Interview with DoT, 23 August 2016.

⁵⁷ Interview with DoT, 23 August 2016.

⁵⁸ Interview with Blacky Komani, 27 October 2015; and see <http://www.iol.co.za/saturday-star/sa-airport-tariffs-climbing-too-high-1159046>

Table 5: 1Time operational costs relative to passenger revenues (%), 2010 and 2011

	2010	2011
Total operating costs	79.0	90.3
Fuel	39.5	49.4
Aircraft Maintenance	9.5	9.9
Airport Charges	9.6	11.9
Ground Handling	4.7	4.9
Nightstop Costs	0.5	0.5
Cabin Crew Costs	2.0	2.0
Pilot Salaries	4.5	5.4
Airport Staff	2.6	2.8
Aircrew Training	0.4	0.3
Aircraft Insurance	2.3	1.8
Aircraft Leases: Fleet	1.2	
Aircraft Leases: 3rd Party	2.2	1.2

Source: 1Time company documents

3.6. Comparing key cost and revenue measures across airlines

Information from annual reports and company documents can be compared to assess the relative performance of airlines. However, the different airline groups have differing organisational structures and reporting of their performance in the public domain. For example, SAA group and Comair generally publish only aggregated information about the group. Comair annual reports contain no information on performance that can be compared to rival airlines and as such SAA group is the only other airline that can be compared to 1Time below (Table 6). Information about 1Time is also limited to previously published annual reports, as well as some documents obtained as part of this study. The 1Time documents obtained indicate performance information for six months (January to June) in 2010 and 2011, respectively, and as such we have doubled or averaged the figures to obtain an estimate for the full year which can be compared to other airlines. Given these constraints, the comparison of airlines is limited to simple comparisons of data for 2010 and 2011, drawing together information from various sources.

1Time load factors in 2010 were significantly higher than those of the SAA group (Table 6), although SAA group figures include certain regional and international routes where load factors in general may be lower.

LCCs do not generally compete on the basis of capacity in the South African market where it is difficult to match SAA's fleet capacity, and as such available seat kilometres (ASKs) are far lower for 1Time compared to SAA group.

1Time's estimated yields in 2010 and 2011 were lower than those of SAA group airlines which is consistent with LCCs charging lower fares than FSCs and network carriers although there may be other contributing factors.

Table 6: Comparison of airline performance, cost and revenue measures

	2010	2011
Available Seat Kilometres (ASKs) (millions) ⁵⁹		
1Time (doubled 6 months to June)	2277	2337
SAA Group	31543	32378
Load Factors (%)		
1Time	82	
SAA Group	71	70
Passenger revenue (R, millions)		
1Time (doubled 6 months to June)	1067	1058
SAA Group	14598	15443
Yield (airline revenue per ASK)		
1Time	0.46	0.43
SAA Group	0.54	0.55
Unit cost (cost per ASK)		
1Time (average up to June)	0.43	0.47
SAA Group	0.66	0.67
Yield/Unit cost margin		
1Time (own estimate)	7%	-9%
SAA Group (own estimate)	-18%	-18%

Source: Authors' calculations and information from company annual reports, interview data and submissions

Importantly 1Time's unit costs for each year appear lower than those of the SAA group by around 50% which is a significant difference. This may reflect both the complexity and higher cost-base associated with operating a network carrier⁶⁰, as well as differences in efficiency between the various airlines compared. The outcome of this is that the SAA group shows a negative yield-unit cost margin in both years (-18%) whereas 1Time's is positive in 2010 (consistent with the earlier assessment) and negative in 2011 (most likely as the firm went into serious financial difficulty as their costs increased and revenues declined). This simple assessment shows that although 1Time may have had a better position in terms of lower unit costs it did not have the (financial) capacity to absorb losses for a sustained period nor to invest in upgrading its fleet like other carriers in the market. More detailed data, disaggregated by carrier and monthly would allow for a more comprehensive assessment of performance and outcomes, which is an area for further research.

3.7. Management decision making

The management of 1Time had instituted various measures by 2011 in an attempt to mitigate the losses incurred and enhance efficiencies. 1Time pilots had apparently been retrained in the use of techniques to decrease their fuel burn per pilot using performance measures, as well as through increasing the flown hours per month per pilot to increase the usage relative to expenditure on pilot salaries and training. In this period, the airline had also managed to achieve efficiencies in terms of on-time performance (achieved greater than 90% on time) and were in the lead amongst LCCs even in 2011 with a view to increasing reliability and performance, and as such reduce losses and related penalties.⁶¹ The management had also considered optimisation strategies such as reducing the number of items carried on food and beverage trolleys to only those items most likely to sell, and introducing charges for additional services such as the ability of passengers to choose their seat.

⁵⁹ Number of seats available multiplied by the number of kilometres travelled.

⁶⁰ Interview with Mango Airlines, 26 August 2016.

⁶¹ Interview with Blacky Komani, 27 October 2015.

There also appear to have been some unwise decisions. The acquisition of Safair Technical (Pty) Ltd (t/a Jetworx) in 2009 as a maintenance company from Safair placed a burden on the business. The business had been acquired by 1Time's own maintenance division. At the time of purchase, the company was overstaffed and cash-intensive.⁶² This is consistent with the views obtained from previous studies on the challenges faced by the airline. The financial difficulties faced at Jetworx placed strain on the business as a whole and it was the view of the former CEO of 1Time that the acquisition was a poor business decision which was a significant contributor to the distress endured by the company overall. Glen Orsmond who was the CEO of 1Time at the time of the acquisition has stated that the acquisition was not successful in that it did not yield the returns and cost reductions which were expected.⁶³

Dividends had not been declared in 2011 with a view to reinvesting in the operations of the business.

3.8. Regulatory requirements for entry

Establishing an airline in South Africa is not dissimilar in many respects to the process followed in other countries. Although domestic regulation applies largely in so far as countries have sovereign rights over their airspace, the industry is one in which several important international agreements also apply for the purposes of standardising aspects of safety and cooperation in particular. Regulation appears to be an important aspect of entry for an airline however it is evidently not a block to entry given the large number of entrants. The Department of Transport generally deals with no more than one or two applications per annum.⁶⁴ Certainly in the case of 1Time the regulatory requirements did not significantly constrain the ability of the airline to launch its activities or sustain its operations. Regulations may in some cases make it difficult for foreign airlines to participate in the South African market.

Legislation governing South Africa's airline industry includes the Air Services Licensing Act No. 115 of 1990, Carriage by Air Act No. 17 of 1946, Civil Aviation Act No. 13 of 2009 and International Air Services Act No. 60 of 1993. The Air Services Licensing Act and International Air Services Act provide for the establishment of councils that are responsible for the licensing, regulation and control of domestic and international air services. The Carriage by Air Act gives effect to the unification of certain rules relating to international carriage by air and their application subject to exceptions, adaptations and modifications. The Civil Aviation Act establishes the South African Civil Aviation Authority which is required to deal with safety and security oversight functions of the aircraft, airports and related matters. The provisions of the various pieces of legislation also deal with roles and rights in terms of airport slot coordination, licenses, and permits.

Ownership

South Africa has airline ownership restrictions for domestic operators requiring that 75% of the voting rights in an airline be held by South African residents which has the effect of restricting the number of airlines that can enter the market.⁶⁵ These requirements are usually put in place to protect domestic carriers but also to ensure that governments are able to

⁶² Interview with Blacky Komani, 27 October 2015.

⁶³ See Glenn Orsmond interview transcript from Moneyweb, 'Shareholders lash out at 1Time (excerpt): Glenn Orsmond – CEO, 1Time' (13 June 2011), available [here](#).

⁶⁴ Interview with DoT, 23 August 2016.

⁶⁵ See section 16(4) of the Air Services Licensing Act 1990 and Department of Transport, White Paper on National Civil Aviation Policy (September 2015).

exercise some regulatory control over airlines operating in their territory particularly when there is a violation of security and safety requirements, for example.

Fastjet experienced difficulties in getting the required approvals to operate domestic flights in the South African market due to a failure to meet the ownership requirement.⁶⁶ This potentially stifles the ability of airlines to obtain capital investment that could be provided by foreign investors.⁶⁷ However, the requirement exists in part to ensure that a country is able to hold an airline to account (control and prosecute) directly should any problems arise with the carrier such as an accident.⁶⁸ This should not mean that the threshold needs to be greater than 51% of local ownership, although a higher threshold as in South Africa may of course be related to other political and economic objectives of the country.

Regulatory process for launching an airline in South Africa

An entrant is required to obtain an air service licence, either for domestic routes, international routes, or both depending on the intention of the airline. Domestic licences once obtained are not specific to a particular route. The licence is issued on condition that airline operations will only commence once the licensee is in possession of a valid operating certificate from the Civil Aviation Authority (CAA). For issuance of a licence, the Air Services Council requires that an applicant demonstrates in its submissions that the air service will be operated safely and reliably and proof that the applicant is financially capable of operating air services.⁶⁹ In order to be considered fit to operate an airline, the applicant is also required to meet the 75% local ownership threshold.

The applicant is also required to submit financial estimates, information on the kind and number of aircraft to be operated, and the experience of the applicant in the operation of an air service (which may vest in the 'responsible persons' that form part of the applicant's team).⁷⁰

In terms of consumer protection, the Council may require a guarantee to be provided for un-flown ticket liability. This is in the form of a sum of money put aside in a bank and which remains unattached in case of any eventualities. The guarantee is calculated as a percentage of the projected bookings the airline has for a year. Although this is likely to be a significant amount of money required by the entrant, information from interviews suggests that it is not constraining and the rationale for it is consistent with protecting consumers in the case of airline closures etc.

The Council forwards a copy of the application to the Commissioner for the Civil Aviation Authority where the application is assessed before an Air Operator's Certificate may be issued. In determining whether to award the Air Operator's Certificate, the Civil Aviation Authority assesses the organisation of the airline's procedures, method of control and supervision of flights, operation manuals, training programmes as well as maintenance procedures (Civil Aviation Authority, 2013).⁷¹

Once the documentation required to show the airline's procedure outlined above is submitted, there is a demonstration and inspection phase. During this phase, an operator has to

⁶⁶ Interview with Airline Association of Southern Africa, 20 October 2015.

⁶⁷ Interview with Fly Blue Crane, 22 October 2015.

⁶⁸ Interview with Prof Walters and Dr Vermooten, 19 October 2015.

⁶⁹ Regulation 6 of International Air Services Regulations 1994

⁷⁰ Section 17 (6) of the International Air Services Act 60 of 1993.

⁷¹ The Technical Guidance Material provided by the Civil Aviation Authority provides all the documentation to be submitted to the authority for the application of an Air Operator's Certificate. Interview with Mango Airlines, 26 August 2016.

demonstrate the ability to comply with airline regulation and safety operating procedures. The authority would then assess if the policies, methods and procedures detailed in the applicant's documents are effective.

The applicant may concurrently apply for maintenance approval during the demonstration phase as they have to demonstrate that the procedures in their Maintenance Control Manual and Manual of Procedures are in agreement. Once the document compliance and demonstration phases are complete and are satisfactory, the authority can issue an Air Operator's Certificate. Once the applicant has the domestic and/or international air services licence as well as the Air Operator's Certificate, airline services can begin. Fly Blue Crane, for instance, was able to launch its first flight one week after receiving their certificate.⁷²

The requirements for specific qualified personnel to already be incorporated at the application stage is an important one although it effectively means that these individuals have to be employed even before approvals are obtained.⁷³ This speaks to the fact that in the industry it is a key success factor to have within the organisation highly skilled and/or experienced individuals. This applies both in terms of meeting regulatory safety requirements and in ensuring the correct management of the operations and finances of the airline as well.⁷⁴ For example, the CEO at Fly Blue Crane had more than two decades of experience in the sector, while the current ownership at FlySafair and the company itself has several decades of experience in the industry as well before launching as a domestic scheduled flight operator.⁷⁵ A number of Mango's core management team have been in the industry and remained with the airlines for several years as well.⁷⁶ At the time of change of ownership, then 1Time CEO Black Komani had some level of experience in tourism and with an aviation company which dealt with providing spares and training to Denel, and air force and police clients.⁷⁷

The application process can take approximately twelve months to complete and throughout this period, the applicant may have to pay funds to retain the various key personnel. In the case of 1Time, some of the personnel were already within the company. For example, one of the founding members was also experienced in the operation of aircraft in the sector. Other operators have indicated that the application process is not unduly onerous however remarked that the duration of the process until approval could be shortened.

The responsible divisions of the Ministry of Transport, in considering applications, allow airlines to return several times to amend and improve their applications and provide certain supporting documents⁷⁸ which may also add to the time taken to approval. The former 1Time CEO confirmed that it was relatively straightforward to change the name of the responsible person when the airline changed ownership, and that their experience with the Department of Transport and the Civil Aviation Authority as well as with ACSA in terms of slot allocations and bays was generally a good one.⁷⁹

3.9. Regional and international aspects

In the mid-2000s, 1Time had successfully managed to expand their operations to include routes to other African countries. The route to Livingstone in Zambia was one of the first of

⁷² Interview with Fly Blue Crane, 22 October 2015.

⁷³ Interview with Fly Blue Crane, 22 October 2015.

⁷⁴ Interview with Fly Blue Crane, 22 October 2015.

⁷⁵ Interview with Fly Blue Crane, 22 October 2015; Interview with FlySafair, 22 October 2015.

⁷⁶ Interview with Mango Airlines, 26 August 2016.

⁷⁷ Interview with Blacky Komani, 27 October 2015.

⁷⁸ Interview with Fly Blue Crane, 22 October 2015.

⁷⁹ Interview with Blacky Komani, 27 October 2015.

those introduced by the airline. It appears that at the time, and as is currently the case, flights on regional routes (essentially those international flights to countries in Africa) earned the highest margins for airlines. When the airline changed ownership in 2011, it was planned (and agreed with the IDC as well) that 1Time would expand to regional routes where it would benefit from earning income in stronger currencies, margins were higher, and the required load factors to breakeven were generally lower.⁸⁰ This would also allow the airline to achieve greater utilisation of aircraft.

In recent years, it does appear that the terms of bilateral agreements have constrained the ability of airlines, particularly LCCs, to operate across borders in the region. For example, South Africa has exhausted the number of permitted frequencies or 'route rights' it has for flights to Zimbabwe, although the number of permitted flights from Zimbabwe to South Africa may not be fully exhausted.⁸¹ The number of frequencies may be restricted to protect Zimbabwean airlines such as Air Zimbabwe from aggressive competition.⁸² FlyAfrica, an LCC operating regional flights, for a time took advantage of the available rights coming from Zimbabwe by registering the airline in Zimbabwe to make flights available from points in Zimbabwe to South Africa. FlyAfrica also registered an entity in Namibia.

Other routes, such as to Namibia, are governed by open skies principles and there is effectively an unlimited number of flights that can take place between the two countries.⁸³ Some airlines such as Fly Blue Crane have sought to leverage the latter by applying for international licences to operate within South Africa (to Bloemfontein from Johannesburg initially) and across borders to Namibia. On the other hand, certain routes such as from South Africa to Angola have a limited number of available frequencies for flights however the Angolan government may be less inclined to increase the number of frequencies available (which can be negotiated between governments and increased over time in bilateral agreements) due to the protection offered to the national carrier TAAG Angola Airlines.

It is worth noting that the participation of airlines from outside South Africa in regional or international routes can also be constrained by other regulations affecting the sector. For example, the local ownership requirements (which it should be noted are not unique to South Africa although internationally local ownership is typically required to be at least 51%⁸⁴) have meant that an emerging regional operator such as Fastjet has not been able to enter the market. To license the airline as a domestic carrier in South Africa the Department of Transport would also have to include the airline in its bilateral discussions with the home country of the airline which is Tanzania where Fastjet is a designated foreign operator (although the parent company Fastjet PLC is based in the UK). Both Comair and Mango objected to Fastjet's application although the Minister would have had discretion to issue an exemption from the 75% local ownership requirement.

In the case of Fastjet, industry players had also raised concerns with the Ministry of Transport that allowing the airline to enter as a full domestic operator could mean that other large international airlines such as Emirates could also become players in the local market, a concern which was confirmed by the Department of Transport.⁸⁵ This is a significant constraint to entry and the ability of incumbent operators to lobby to protect their position in the market

⁸⁰ Interview with Blacky Komani, 27 October 2015.

⁸¹ These rights may be allocated symmetrically such that there are, for example, ten permissible flights per week from SA to Zimbabwe and ten for the return leg as well. Usage of these slots is likely to be driven by different demand- and supply-side factors in each country and so the available slots may be asymmetric.

⁸² Interview with Fly Blue Crane, 22 October 2015.

⁸³ Interview with Fly Blue Crane, 22 October 2015.

⁸⁴ Kenya, for example, applies 51% local ownership requirement.

⁸⁵ Interview with Airline Association of Southern Africa, 20 October 2015; Interview with DoT, 23 August 2016.

is an important area for intervention to the extent that consumers would benefit from greater rivalry on certain routes provided in some cases by more efficient operators. Airlines are alert to the potentially destructive competition that reducing the local ownership requirements would bring, although on the other hand airlines also raise concerns about the constraint placed by this requirement on their ability to attract foreign investors.

Similarly, regulators in other countries in the region may also present constraints to entry by rivals on the basis of political, protectionist or developmental reasons often relating to the support for a primary national carrier. In this regard, it is significant that although domestic routes account for around 70% of departing seats (capacity) from South African airports, certain regional routes have grown most recently in terms of available seat capacity (ANNA, 2015c). When comparing available seats in September 2015 to September 2014, routes to Zimbabwe and Namibia had both grown by over 20% while other routes to Kenya, Zambia and Botswana had also experienced growth but by a smaller percentage (ANNA, 2015c). However, while certain routes have grown in terms of passenger carrying capacity in recent years, ACSA data suggests that overall regional demand in terms of passenger numbers has grown only moderately since 2010/11. In the ACSA financial year 2010/11 total passengers for regional flights (distinct from international and domestic) were 917 815 and grew to 1 065 246 by 2014/15, an average annual growth rate of just more than 3%. Taken in context, international passenger numbers grew by 2.45% in this period, and the average annual growth rate for domestic passengers is actually negative at -0.28%. We note however that regional routes in total passenger volumes carry far less passengers in total than domestic and international routes, accounting for less than 3% in most years since 2010/11, compared to around 70% for domestic routes and the balance for international routes.

Regional routes have outperformed international and domestic routes in terms of growth in passenger numbers which indicates the significant demand potential in the region which has arguably been underserved in the past. For instance, requirements of bilateral agreements have meant that SAA has been the primary carrier on regional routes for many years. SAA's own revenues are largely dependent on performance on regional and domestic routes given that international routes have resulted in very large losses in the period 2011 to 2014 (Table 7).

Table 7: SAA revenue composition (R, millions)

	2009/10	2010/11	2011/12	2012/13	2013/14
Domestic contribution	793	500	254	750	791
Regional contribution	1154	649	641	648	761
International contribution	155	-29	-1536	-1334	-1569
Total	2102	1120	-641	64	-17

Source: SAA (2014)

Importantly, airlines have identified the profit potential of regional routes, and fares charged tend to be very high when compared to the distance travelled and duration of flight based on publically available information. An indication of this is that the breakeven load factor for routes into other African countries from South Africa is around 30%, whereas airlines need to achieve around 70% on domestic routes.⁸⁶ Given travel distances and costs to a number of routes in the region are likely to be similar to those within South Africa, the lower load factor threshold suggests that airlines can charge a higher price on regional routes and thus recoup their costs with a lower load of passengers. This also suggests that margins may be especially high for incumbent airlines such as SAA, Ethiopian Airlines and Kenya Airways. The entry of Kulula as

⁸⁶ Interview with Prof Walters and Dr Vermooten, 19 October 2015.

a rival to SAA on the route between Lusaka and Johannesburg is said to have led to a reduction in fares of around 38% (and an increase in passenger numbers of approximately 38%) (InterVISTAS, 2014).

4. Competitive dynamics, entry and exit in the South African airline industry

4.1. Overview of competition concerns

The airline industry has been prone to certain abuses of dominance or other forms of anticompetitive conduct (including cases related to state-aid in the European Union). Regulation sometimes favours incumbent (national) operators rather than entrants, dynamic rivalry and gains to consumers. There are several examples globally of legacy carriers enjoying regulatory protection and aid from the state in the name of national interest and sovereignty, or of formerly protected flagship carriers involving themselves in (anticompetitive) behaviour which seeks to undermine the ability of rivals to compete, or raises their costs, both at the expense of consumer welfare.

Globally, cases of anticompetitive predation have been brought against several large carriers, the most commonly referred to being the case brought by the US Department of Justice (DoJ) against American Airlines. American Airlines was alleged to have engaged in predatory conduct with respect to seven core routes and seeking to monopolise other routes by developing a reputation for predatory conduct.⁸⁷ Essentially, American Airlines responded to entrant LCCs by aggressively matching prices and increasing capacity on those routes with a view to encourage exit and recoup losses following exit of the entrant. The case was eventually dismissed due to failure on the part of the DoJ to prove that American Airlines priced below marginal cost, which is a key requirement for proving a case of predation, although the case succeeded in showing the impact of strategic conduct by dominant incumbents on the industry.

In South Africa, several competition law cases have been brought against firms in the airlines industry. Most notably, SAA has been involved in the majority of cases and penalised repeatedly by the competition authorities, in some cases for repeat violations of the same provisions of the Competition Act. Cases identified include a number of cases of coordination (rather than attempts to exclude rivals):

- SAA and Lufthansa were found guilty of price fixing through the terms of a code-sharing agreement wherein the airlines fixed prices on the Cape Town/Johannesburg and Frankfurt route. SAA was fined an administrative penalty of R20 million for the conduct which it ceased in 2002 when investigations commenced (Competition Tribunal, 2006a).
- Members of the Airlines' Association of South Africa (AASA), including in particular SAA and SA Express, were found to have jointly agreed and raised an identical fuel surcharge levy in 2004 which other airlines agreed to comply with (Competition Tribunal, 2006b). The fuel surcharge was charged on the price of tickets for carriage on all legs of the routes, both domestic and international. Comair had applied for and received immunity under the Commission's corporate leniency policy in return for cooperation with the Commission's prosecution of the remaining cartel members. SAA and SA Express jointly agreed to pay an administrative penalty of R20 million in settlement of the matter.

⁸⁷ United States vs AMR Corporation and Others, Case No. 99-1180-JTM.

- Another case was brought against SAA and other airlines concerning three separate allegations of price fixing in respect of ticket prices on various outbound routes to the Far East, air cargo fuel surcharges and price fixing on domestic flights during the 2010 FIFA World Cup. An administrative penalty of R18 799 292 was paid by SAA as a settlement for its involvement in the three matters (Competition Tribunal, 2012). The case regarding the 2010 World Cup involved SAA, BA/Comair, 1Time, Mango and SA Express as respondents, while the other two cases involved various international carriers operating on routes to the Far East, and various international cargo carriers, respectively.

Cases relating to various abuses of a dominant position include:

- Nationwide Pty (Ltd) (“Nationwide”) filed a complaint against SAA (subsequently referred by the Commission) regarding two incentive schemes entered into between SAA and travel agents that amounted to an inducement not to deal, and predatory pricing (Competition Tribunal, 2005). The first of the two schemes was an override incentive scheme that involved offering travel agents further commission over and above their basic commission if they exceeded a target figure as stipulated in a contract in terms of sales of SAA tickets. It was payable on the total of sales achieved above and below the target. Agents were also offered ‘incremental commission’ whereby they would qualify if they achieved a certain percentage of sales above the target. The Competition Tribunal found SAA to have contravened section 8(d)(i) of the Competition Act which prohibits a firm from requiring or inducing a supplier or customer to not deal with a competitor through its incentive schemes. It imposed an administrative penalty of R45 million on SAA. As in the American Airlines matter, the Commission had found little evidence to support a predatory pricing charge which formed part of the complaint.
- Comair Ltd and Nationwide subsequently filed separate complaints against SAA relating to inducement and exclusionary conduct which were later consolidated by the Tribunal. The firms argued that SAA had continued with further incentive schemes (covering the period 2001 to 2005) which were designed to induce travel agents not to deal with SAA’s competitors and had the effect of foreclosing rivals from the domestic airline travel market (Competition Tribunal, 2010). Comair and Nationwide argued that despite recent developments in the domestic airline travel market (such as the advent of internet-based ticket sales), travel agents still constituted the single most important distribution channel for airlines. The Commission entered into a settlement agreement with SAA regarding the complaint and agreed an administrative penalty against SAA of R15 million in settlement of the matter. Comair and Nationwide opposed the consent order entered into between SAA and the Commission and subsequently brought action in the Tribunal against SAA in respect of this second inducement abuse as a contravention of 8(d)(i), alternatively 8(c). The Tribunal found there had been a contravention.

Exclusionary abuses are harmful not only because of the effect they have on rivals in the short term, including through forcing their exit from the market, but the long term losses in welfare suffered to the economy from the exclusion of potential effective rivals from markets with subsequent losses in consumer welfare (Banda et al, 2015). The Tribunal in the two cases of inducement referred to above found the rivals to have been harmed and there to have been an effect of sustaining higher prices than would otherwise have been the case (relating to full service carriers, and not LCCs however).

Most recently, the High Court awarded damages of R104.6 million to Nationwide for loss in profits suffered due to the abuse of dominance conduct of SAA which was found to be in violation of the Competition Act as discussed above.⁸⁸ The claim related in particular to the period from 1 June 2001 to 31 March 2005 which is consistent with the period of the second complaint filed by Nationwide. The claim awarded by the High Court, which by its nature seeks to compensate Nationwide for loss suffered by it as company, is likely to underestimate the overall harm to the economy and the loss to consumers from decreased rivalry which is often difficult to quantify. In addition, the settlement reached with the competition authority by its nature reflects the outcomes of bargaining and agreement reached between the authorities and SAA, and as such is also likely to underestimate the economic harm caused by the conduct, particularly where multiple infringements of the Act are settled at once (see Muzata et al, 2012). It is widely accepted that settlements and penalties levied in prohibited practice cases (including both abuse of dominance and collusion) do not generally measure up sufficiently to the full extent of the economic harm caused by the conduct (Muzata et al, 2012; Oxera, 2009).

To the extent that the ability of airlines to become and remain effective rivals is undermined by unfair or anticompetitive distortions in the competitive environment either by cartels, abuse of dominance or even regulatory manipulation, these need to be assessed as potential barriers to entry and expansion.

The remainder of this section considers the various factors affecting competitive dynamics between firms in the industry (with reference to the specific experiences of 1Time where relevant) and the impact these may have had on various LCCs in particular in the industry. This includes a consideration of the impact of Mango as a LCC benefitting from its relationship with its parent company, SAA.

4.2. The effect of changing market conditions

As highlighted above, in around 2011 passenger volumes in the market were constrained with Velvet Sky facing difficulties in sustaining its operations. Competition for the market was thus primarily between the stronger incumbents, namely SAA and its subsidiaries, BA/Comair affiliates, and 1Time which was also experiencing difficulties. In 2011, the BA/Comair group was especially successful in the market as the only grouping to produce significant profits. Indications from various interviews are that the South African market at the time did not experience the significant and sustained increases in demand growth expected following the world cup, which really meant that the existing market volumes would be shared amongst those few airlines with the capacity to sustain their operations in the market. This included SAA with its large capacity and financial capability (leveraging state support) and BA/Comair which benefited from being listed and its investments in a relatively fuel efficient fleet, amongst other factors. Margins at the time were thin in a higher cost environment given higher fuel prices and constrained demand.⁸⁹

In general, over the period since the exit of 1Time, growth has not been sufficient to sustain the entry of a number of LCCs which compete aggressively for the limited volumes using low

⁸⁸ Judgment of the High Court of South Africa (Gauteng Local Division) in the matter between Nationwide Airlines (in liquidation) and South African Airways, Case No. 12026/2012 (8 August 2016). Nationwide had initially claimed for damages amounting to R170 million. SAA denied that the anticompetitive conduct caused the losses incurred by Nationwide, although it argued that if damages were to be awarded, they should not exceed R20 million.

⁸⁹ Interview with Blacky Komani, 27 October 2015.

fares close to breakeven. Generally, market growth has been slower than growth in capacity including through significant capacity investments.

LCCs rely on high volumes to sustain their operations and ideally look to fly around ten hours a day in the South African market.⁹⁰ The ability to do this is apparently constrained by the fact that airports in South Africa are not open for 24 hours a day.⁹¹ There are also some constraints at OR Tambo and other major airports where slots are controlled in peak hours (especially between 6:00am and 10:00am on weekdays) however this is apparently not an insurmountable constraint to new airlines in particular.⁹² In general, major airports where slot allocation is tightly controlled include OR Tambo, King Shaka in Durban, and Cape Town International, whereas there is more slot flexibility on routes to other airports.⁹³ Furthermore, there is apparently an allocation of 5% of slots in the market that is reserved for new carriers which is relatively straightforward to access although in the case of OR Tambo these slots may not be at ideal times during the peak periods for smaller carriers.⁹⁴

Operators employed different strategies to respond to excess capacity and narrow yields in the market in the period around 2011 and 2012. Kulula as an LCC leveraged the relationship with BA and in some cases customers would book Kulula flights and fly on a BA aircraft, which is likely to have had the effect of rationalising flight operations in the group as in the case of code-share agreements. They also made use of travel agents which 1Time had considered but found to be expensive relative to their primary platforms on the internet.⁹⁵ Kulula apparently also benefited from access to the loyalty programmes linked with large ‘intermediaries’ such as Discovery’s Vitality rewards schemes.

In terms of routes, most LCCs enter the market along the ‘golden triangle’ routes which are those between the major international airports in Johannesburg, Cape Town and Durban on which there are high passenger volumes.⁹⁶ This is done in order to gain scale in their operations before expanding to other lower demand routes. Lower demand routes include those to cities such as Port Elizabeth and East London, and even more so George and Bloemfontein. It is not feasible for a small airline to shift their operational ‘infrastructure’ such as ground handlers, reservations teams, check-in agents and engineers around between different airports where demand is stronger in order to capture greater volumes at different points in time.

4.3. The nature of competition between airlines in the domestic market

1Time’s closest competitor during its time in the market was Mango.⁹⁷ While Comair group airlines tended to be followers in the market in terms of pricing, 1Time had typically led or engaged in pricing to match that of Mango which entered in 2006.⁹⁸ In later years, Mango also benefitted from access to the SAA Voyager loyalty scheme, as well as through other mechanisms such as the code-share with SAA from December 2013 (SAA, 2014).⁹⁹ Passengers could apparently spend Voyager Miles earned with SAA on Mango flights

⁹⁰ Interview with Blacky Komani, 27 October 2015.

⁹¹ Although South African consumers apparently have a preference for flying during the day rather than at night. Interview with Blacky Komani, 27 October 2015.

⁹² Interview with FlySafair, 22 October 2015.

⁹³ Interview with Fly Blue Crane, 22 October 2015.

⁹⁴ Interview with FlySafair, 22 October 2015; Interview with Airline Association of Southern Africa, 20 October 2015; Interview with Mango Airlines, 26 August 2016.

⁹⁵ Interview with Blacky Komani, 27 October 2015.

⁹⁶ Various interviews and see Luke and Walters (2013).

⁹⁷ Interview with Blacky Komani, 27 October 2015.

⁹⁸ Interview with Blacky Komani, 27 October 2015.

⁹⁹ Interview with Mango Airlines, 26 August 2016; Interview with Blacky Komani, 27 October 2015.

(although they could not earn Miles on Mango flights) and the Voyager programme itself benefited from customers spending rather than retaining Miles earned.¹⁰⁰

From 2006 Mango provided an offering for the SAA group in the more price sensitive segments of the market (SAA, 2007). We caution here that relevant competition or antitrust markets tend to be different from 'segments' or markets defined in marketing and business strategy and that it is likely that although there was some tiered structure in the market in terms of the price sensitivity of consumers, there is some meaningful competitive constraint exercised by LCCs on the FSCs. The Tribunal has considered a broad relevant market in previous cases as being one for the provision of scheduled domestic airline transportation in South Africa and have stated as follows in this regard:

*"In our view the Commission has correctly defined the second relevant market as being the market for scheduled domestic airline travel, as this is the market where, if the behaviour is exclusionary, the final effect will be experienced. It will not be experienced in any narrower sub-market, as the exclusionary effect, if it exists, is experienced across the range of city-to-city pairings, passenger classes and flight times. Although SAA's rivals are not present on all domestic routes, and at all times, they are potential competitors in respect of all scheduled flights where they do not already have a presence. The evidence is that the number, destination and time of flights is continually changing so that we cannot view the market as a static model where rivals only contest route times and schedules that they are on at a particular moment in time."*¹⁰¹

It is possible to confuse issues relating to network carriers and international alliances with the exercise of defining antitrust markets. In particular, it may be argued that SAA or BA should be considered as being in a separate relevant market from other carriers in South Africa purely on the basis that they are larger, full service network carriers and necessarily distinct from a competition perspective from LCCs, for example. It is worth clarifying here that from a demand-side perspective, it is less relevant that a carrier has international partnerships and operates on the basis of a network that connects to various destinations globally, than it is that the consumer can obtain a flight from their specific origin point to their intended destination (Gremminger, 2003). This relates to the consideration of markets on the basis of origin-destination pairs or route pairs, and the availability of point-to-point flights between domestic locations in South Africa. In this regard, supply-side factors such as the networks and alliances of carriers are more often considered in the evaluation of barriers to entry and market power, and not in the definition of relevant competition markets which are intended to include the subset of relevant substitutes for the product or service under consideration and its associated producers or suppliers.

Competitive dynamics on each route pair may differ considerably as well. For example, the degree of competition and the number of rivals operating on the Johannesburg - Cape Town route pair compared to, say, the Johannesburg - George pair has been quite different. The entry of a new airline offering additional seat capacity on the latter route is likely to have a greater competitive effect than additional capacity on the former route where there is already significant capacity available from many different carriers. Mango and 1Time apparently only coexisted on the major golden triangle routes given that Mango only had four aircraft in the years immediately following its entry whereas 1Time (12 aircraft) and Kulula (Comair – 20 aircraft) coexisted on around eight domestic routes (Ensor, 2012).

¹⁰⁰ Interview with Mango Airlines, 26 August 2016.

¹⁰¹ See Competition Tribunal (2005) Reasons and Order: The Competition Commission and South African Airways (Pty) Ltd, Case no. 18/CR/Mar01, at para 53.

Of course, the mere coexistence of airlines on different routes may also need to be assessed further to assess closeness of competition, particularly where airlines offer differentiated services to consumers. For example, it may be that for certain categories of customer a Mango or 1Time flight is substitutable for an SAA or BA flight which is generally more expensive but with a wider range of services and frills offered. A competing view is that LCCs are in a separate product market and service different customers to FSCs and/or network carriers.¹⁰² In competition cases these issues are typically resolved through extensive evidence led on prices, customer preferences, marketing information and company management accounts amongst other considerations.

Mango as a fighting brand undermining rivals?

Mango was introduced in the market in order to compete directly in the 'segment' with the main LCCs at the time, Kulula and 1Time, on the basis of a low-cost business model (see, for example, DPE, 2012). SAA has noted that Mango was launched to fulfill an increased demand for low fare travel and as the 'defensive strategy to low-cost carrier threats' (SAA, 2007: 26). It is thus possible that Mango was employed as a 'fighting brand' by SAA to target firms in the LCC segment of the market particularly if it perceived a competitive threat from LCCs. In previous competition cases, 'fighting brands' are shown to be used by a dominant firm to compete directly with rivals in an adjacent market which is problematic from a competition perspective if done in the form of anticompetitive predation.

These issues are relevant in this paper given the allegations in previous and current competition cases that SAA has exercised predatory conduct in the South African domestic market, and the concerns about the potential for the relationship between SAA and Mango to be used strategically to undermine rivals and thus act as a barrier to entry and expansion in the market.

Predation relates to the setting of prices by a dominant undertaking that are so low as to undermine rivals and effectively drive them out of business, using prices which essentially lie below the dominant firm's minimum profitable price (at marginal cost, or average variable cost as in the South African competition legislation) (O'Donoghue and Padilla, 2006). Specifically, anticompetitive predation generally occurs where a firm offers low prices in the short-term in order to induce the exit of a competitor/s from the market, followed by higher prices in the medium- to long-term to recoup losses occurred in the predatory period of low prices (O'Donoghue and Padilla, 2006: 235-7; Kaplow and Shapiro, 2007). The prospect of recoupment in future periods (due to additional market power) makes predation a rational strategy for the dominant firm to employ against actual or potential rivals. Predation may involve other forms of reinforcing mechanisms and conduct such as price discrimination which make it important to assess allegations on a case-by-case basis often with very detailed evidence on prices and costs and firms' incentives.

There are debates in the literature regarding the instances in which cases of predation should be pursued by competition authorities, and the 'rights' of dominant firms to compete on the merits against smaller rivals, as well as the cost measures to be applied (Kaplow and Shapiro, 2007; O'Donoghue and Padilla, 2006; Motta, 2009). One view is that large firms should not be permitted to leverage their size to set very low prices that undermine rivals, while it could also be argued that low prices are beneficial to consumers and very much encouraged and part of the competitive process.

¹⁰² Interview with Mango Airlines, 26 August 2016.

Given a lack of publically available information to assess any of the issues relating to possible predation in the South African market further, we reflect on previous cases. This type of conduct was considered in a recent decision of the Competition Tribunal where it found that Media 24 had violated section 8(c) of the Act through pricing its own community newspaper, Forum, below average total cost in order to exclude the independent competitor newspaper Gold Net News (GNN) in a local market.¹⁰³ The case centered on the fact that Media 24 had applied exclusionary strategies related to Forum (the ‘fighting brand’) including pricing its advertising at rates below average total cost (not average variable cost) and operating Forum as a loss-making entity for a lengthy period of time (Competition Tribunal, 2015). GNN had captured a larger share of the market in its early years but ultimately exited the market, following which Media 24 discontinued Forum as well leaving Vista (another Media 24 publication) as the only local paper in the Welkom area. The Tribunal found that the operation of Forum as a ‘fighting brand’ was a probable cause of the exit of GNN, and that Media 24 had subsequently recouped the losses incurred during the period of operating Forum at a loss. Importantly, the Tribunal emphasised that there were significant losses in consumer welfare and choice through the loss of alternatives for advertisers, and the loss of publication choice for readers (Competition Tribunal, 2015).

In the matters against Pioneer Foods and others in the bread and milling industry, Pioneer Foods admitted to using ‘fighting brands’ in the bread market as a tool for threatening competitors (Grimbeek and Lekezwa, 2013). These brands were withdrawn from the market once the competitive threat from the rival was removed or reduced. This allowed the incumbent to build a reputation for fighting entry across markets and over time which served to protect its position in the market or in adjacent markets upstream.

In the case of the airline industry, it is clear that the SAA group airlines hold a dominant position in the market with a market share which exceeds the 45% dominance threshold in South Africa’s Competition Act. Under the South African Act, the strategic behaviour by a large and ‘integrated’ carrier in the form of SAA/Mango would be required to be assessed relative to the average or marginal costs of each firm in the group in servicing individual routes, in order to assess whether it was conduct in violation of the Act. While the Act does not require the ability to recoup in the form of higher prices, this is implied by the ability of the firm to bring technological, efficiency or pro-competitive gains which outweigh the anticompetitive effects of the conduct. The test in the South African Competition Act is not whether conduct is ‘unfair’ to competitors but rather whether there are substantial effects.

The Competition Appeal Court has commented on the importance of maintaining competition and the process of rivalry, rather than protecting competitors. However, in a developing country context with strong incumbent firms, economic efficiency arguments need to be considered against likely harm to consumers, which may occur in the medium- to long-term and which is often not fully assessed in competition cases. Publicly available information suggests that consumers benefit significantly from greater rivalry from independent competitors in this sector. These include gains for tourism and a greater variety in offerings as discussed above.

1Time’s exit from the market arose from the combined effect of several other changes in the market and internally at the company which undermined its own ability to compete. It is also the case that 1Time in fact earned strong profits in the years following the entry of Mango (see Figure 5 and DPE, 2012). It is not clear from the interviews and publically available information

¹⁰³ Competition Tribunal. In the matter between the Competition Commission of South Africa and Media 24 Limited, Case No. 013938/CR154Oct11. Note the Tribunal did not find pricing below average variable cost in contravention of 8(d)(i).

the extent to which the conduct of rivals undermined 1Time and its ability to respond in terms of making the requisite investments in a newer fleet, and a full assessment of the market conditions and prices and costs over time of all players would be required to reach any form of conclusion.

Mango leveraging SAA support?

Mango has been able to sustain competitive pricing over several years in the low fare segment which is of benefit to consumers. Concerns have been raised publically and during the interviews about whether Mango has unfairly leveraged SAA support to achieve a lower cost base in the market, and whether state support offered to SAA and by extension its subsidiaries distorted competitive outcomes unduly in the market? We have discussed above the extent of loans and investment between SAA and Mango that has been reported in various annual reports and interviews.

State-owned companies (SOC) may be more and not less likely to abuse their dominance despite the social goals which they are often intended to achieve. This stems from the fact that SOC's are likely in many cases to have revenue as well as profit objectives, which may lead managers to emphasise output expansion rather than cost reduction and profit, underpinned by the possibility of bailouts should financial difficulty arise (OECD, 2009). SOC's are also in many cases not required to generate high returns and are expected to fulfil a social mandate (such as ensuring wide access) which detract from their ability to do so. Managers are, therefore, motivated to expand the scale and scope of the operation instead (OECD, 2009). Sappington and Sidak (2003) show that where SOC's are maximising a combination of profit and revenue, they have a greater incentive to abuse their dominance, especially by charging prices that are below cost or raising rivals' costs. The SOC pricing decision is less sensitive to the higher costs associated with increased output, making SOC's more likely to set prices below the marginal cost of production particularly if the company is less profit-focussed (Sappington and Sidak, 2003). SOC's may also be more likely to engage in strategies to raise rivals' costs, since this behaviour causes profit-maximising competitors to lower their level of output and/or increase prices which increases demand for the SOC's products, leading to an expansion of output for the SOC.

There is no indication that Mango's operational costs are necessarily higher than those of rival carriers or that the aircraft used by the airline are not efficient.¹⁰⁴ In 2012, Mango apparently achieved high unit revenue growth, higher load factors (above 80%) and asset utilisation (9.1 hours per day) than the domestic market averages, and high asset efficiency per aircraft per year (DPE, 2012). However, there may be concerns if there are certain additional cost advantages enjoyed by the airline that are not provided to other carriers. Ordinarily subsidiary firms are entitled to enjoy beneficial access to support from their holding companies and by extension shareholders. In fact, it now appears that SAA may have subsidized the airplanes leased to Mango, although this has been refuted by SAA.¹⁰⁵ The Competition Commission is investigating a complaint filed in this regard which is likely to involve a detailed assessment of costs and prices and various company documents.

State support for domestic firms is not unique to South Africa, the airline industry, or developing countries. In some countries that have managed to successfully develop domestic firms under state support or protected conditions, a key success factor has been the use of competitive disciplines and incentives which seek to ensure supported firms compete

¹⁰⁴ Interview with FlySafair, 22 October 2015.

¹⁰⁵ Paton, C. 'SAA bite at Mango CE could backfire' (13 June 2016), *Business Day*, available [here](#); and Slabbert, A. 'Competition Commission confirms SAA/Mango investigation' (23 June 2016), *MoneyWeb*, available [here](#).

effectively in the market domestically and abroad, and enhance their competitiveness progressively (see, for example, Chandler et al, 1997; Amsden, 1989). The disciplining mechanisms enforced by the state are central in aligning the incentives of the firm (the agent) with the state (the principal). For example, a form of discipline in a market such as this could be that the supported airlines demonstrate over time efficiency in terms of cost management and pass through to consumers.

In many jurisdictions, authorities place an emphasis on competitive neutrality and defining clear parameters for state-aid (OECD, 2009). For example, in Australia competitive neutrality of state intervention is defined as follows (Capobianco and Christiansen, 2011):

“Competitive neutrality requires that government business activities should not enjoy net competitive advantages over their private sector competitors simply by virtue of public sector ownership...”

...Competitive neutrality requires that governments should not use their legislative or fiscal powers to advantage their own businesses over the private sector. If governments do advantage their businesses in this way, it will distort the competitive process and reduce efficiency, the more so if the government businesses are technically less efficient than their private sector competitors.”

In the Australian framework, SOCs must earn a commercial rate of return and charge prices that reflect costs (Capobianco and Christiansen, 2011). In the EU, there are specific provisions relating to the consideration of state-aid which also involve balancing the positive and negative effects of state support. The balancing test effectively considers the following which is broadly consistent with the principles of competitive neutrality referred to above (Neven and Verouden, 2008):

- Does state-aid address a market failure or other objective of common interest?
- Is there is an incentive effect (does aid affect the behaviour of the recipient in a way which meets the objective)?
- Does state aid lead to distortions of competition and trade?
- Is the overall balance of positive and negative effects positive?

In the European legislation¹⁰⁶, a prima facie prohibition exists as follows: *“Save as otherwise provided in the Treaties, any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the internal market”* (Article 107 (1)). The principles are also applicable in the context of domestic markets. There are however exceptions in Article 107 (2) and (3) where state-aid can be deemed to be consistent with competition and trade in the European region such as *to promote the execution of an important project of common European interest or to remedy a serious disturbance in the economy of a Member State* (Article 107 (3)).

The reference above to the approach in other countries is made in order to highlight the emphasis on principles of competitive neutrality and competition in the consideration of state intervention in markets. This is relevant in the assessment of South Africa’s airline industry in so far as market participants allege that support for SAA group distorts competitive outcomes. However, it is not possible to assess this aspect any further on the basis of available

¹⁰⁶ EU competition law is outlined in Chapter 1 of Title VII of Part Three of the Treaty on the Functioning of the EU, which includes Article 107 referred to here.

information, particularly with regards to how rival LCCs are affected and potential barriers to entry and expansion.

What can be observed is that a number of the LCCs that have experienced financial difficulty and challenges in sustaining cash flow in their businesses have not been able to obtain further financial support. This may be an area for intervention if it can be demonstrated that assisting these carriers to sustain their businesses enables better outcomes for consumers, particularly in the long-run. In the case of 1Time, there was no fallback financial assistance available to enable the investments required, which is also linked to the earlier withdrawal of support by the IDC. *Support for these airlines could be provided on preferential terms but with commitments from the carriers in terms of pass through of benefits to customers.*

With regards to SAA and state-aid as discussed above, we limit our comments to information that is publically available. Support to SAA has, to our knowledge, not been predicated on passing through cheaper fares to consumers over time. For example, the stated objectives of the SAA group speak to the strategic role of the airline as a national carrier and its mandate to develop new routes in support of state policy objectives amongst other goals (SAA, 2012). Debates in the public arena between government departments, amongst others, suggest that the envisaged strategic role played by the carrier is highly contested especially in terms of whether it is necessary and/or if it is being fulfilled.¹⁰⁷ For example, the carrier has reduced the number of international routes serviced in recent years and there are already several international rivals with far greater capacity servicing routes to and from South Africa.¹⁰⁸ While this discussion is beyond the scope of our assessment, it is worth noting that there is no mention of supply of affordable air travel to citizens in the objectives of the national carrier. *Furthermore, previous competition cases that have been prosecuted, and the various repeat offences, point to the fact that rivals have been harmed significantly by the anticompetitive conduct, which is not in dispute and which should be of significant concern for the competition authorities in terms of the ability of administrative penalties to deter future conduct by dominant firms and SOCs.*

Conclusion on competitive dynamics and strategic barriers to entry

A few important observations arise from the assessment of strategic factors and competition issues, and their potential to have affected the ability of 1Time to compete, and that of subsequent entrants:

- 1Time's exit from the market arose primarily from the combined effect of several other changes in the market and internal issues which undermined the company's ability to compete. It is not clear from the interviews and publically available information the extent to which the conduct of rivals undermined 1Time.
- The numerous competition cases brought against the SAA group demonstrate the ability and incentive of the airline to undermine rivals through strategic conduct leveraging its position of market power. It is important to note that several of the cases involved repeat violations of the Act which suggests that penalties have not served as an effective deterrent for future conduct.
- There are generally limited concerns arising from the interviews regarding, for example, slots (except in peak periods at OR Tambo), regulatory requirements and ability to enter the market.

¹⁰⁷ Interview with DoT, 23 August 2016.

¹⁰⁸ Interview with DoT, 23 August 2016.

- Any assessment of potential predatory conduct and abuse of dominance to undermine rivals in the past requires detailed information which was not available publically or through interviews conducted during this research.
- Principles of competitive neutrality should be considered in the assessment of the benefits or costs of state support in the context of the airline industry, with a focus not only on financial implications but the long-term impact on rivalry and dynamism in the market as well.

5. Conclusions and recommendations

The analysis of developments in the market including entry and the experience of 1Time raises a number of issues.

There is some evidence that entry and additional capacity for servicing smaller domestic routes has brought gains in consumer welfare and knock-on effects in local economies. Entry of LCCs operating multiple route pairs has had significant effects over time in terms of enhancing choice and price benefits. There is also an important effect of exit and entry on total market demand, with passenger volumes seemingly decreasing following the exit of airlines. Based on the available information, the entry of FlySafair has contributed to reducing fares by up to 38% on some routes although, as we have made clear, more detailed data on fares and costs over time is required to draw stronger conclusions regarding causality between entry, growth in passenger numbers and decline in fares.

Entry itself does not appear to be overly difficult, notwithstanding the significant cost, time and regulatory compliance associated with it. As set out initially, the concern in the South African market is more to do with the challenges airlines face in remaining in the industry for lengthy periods of time as *effective* rivals. Kulula, 1Time, and Mango have stood out in this regard. The exit of 1Time took place after several years of growth and positive net incomes, and can be directly linked to a combination of certain exogenous factors such as rising fuel prices and difficult economic conditions affecting passenger demand patterns; along with challenges in being able to respond with the necessary investments to change its fleet. This has been termed ‘the perfect storm’ in some interviews. Poor management decisions also undoubtedly played a role.

Market participants have raised the issue of the impact of conduct by the main incumbent, SAA, on the ability of 1Time to adapt to the changing market conditions and the sustainability of smaller carriers in general. In the case of SAA’s repeated violations of the Competition Act, the impact is clear and various forms of anticompetitive conduct have been shown through extensive evidence led in competition authority proceedings to have harmed the domestic market and rivals. There is therefore a question about whether penalties sufficiently deter firms from (repeat) conduct, and whether SOCs that violate the competition laws should be held to harsher standards (including management accountability as is the case with criminalization in the Competition Act) if a negative effect on consumers is demonstrated by the authorities?

Through stimulating the domestic market several sectors of society benefit including individual consumers of air travel, local communities in airport cities and towns, the tourism sector and enterprises. This includes small- to medium-sized firms which potentially benefit from being able to expand their geographic market to a national one. This is particularly relevant in services sectors. Each of these benefits is linked to growth in domestic productive capacity in ‘new’ smaller destinations and drawing in new consumers that previously did not travel for business or leisure in the country.

Similar issues to those in the local market appear to apply to regional routes in southern Africa. Opening up to regional rivals, including the operation of South African LCCs on regional routes, will likely mean lower fares, increased frequency and a wider range of destinations being served. Passengers respond to the availability of lower fares and additional capacity as demonstrated by the growth of certain routes such as to Namibia, Zambia and Zimbabwe in recent years. Although seemingly obvious, it is worth repeating that an incumbent operator with no competition on a regional route or in a code-sharing arrangement with another national airline, has no incentive to increase frequencies or reduce price. The positive response of consumers to airlines such as FlyAfrica, Proflight from Zambia, Fastjet and Kulula and 1Time when they have launched frequencies on regional routes traditionally serviced by national carriers, is indicative of the significant potential to integrate regional markets through more affordable air travel. It is particularly important to connect South African cities and consumers with fast-growing economic areas such as Dar es Salaam, Nairobi and the copperbelt of Zambia/DRC at more affordable fares.

While there are barriers to entry relating to the regulatory requirements, capital investment and industry experience, the number of entrants into the sector illustrates that these barriers are not necessarily high. Those interviewed in the study confirmed that they were readily able to bring on board individuals and teams with the requisite skills (in terms of contributing to the viability of the airline and meeting with regulatory requirements for entry) to support the launch of the various airlines. The key challenges have rather been the ability to sustain the businesses through the volatility associated with fluctuations in fuel prices and demand shocks. In this regard, there may be scope for increased support of domestic firms, perhaps through the development finance institutions, where it can be shown that their existence has and can bring sustained benefits to consumers.

To the extent that local ownership requirements are required to maintain sovereignty and control over carriers, it may be possible, as it is in many countries, to maintain a threshold of 51% local ownership. However, South Africa's threshold is some way above this. This in and of itself is not concerning given other political and economic incentives to maintain and grow local ownership of business enterprises. However, there is a clear trade-off in reducing this threshold to allow for foreign investors and rivalry (which is likely to benefit consumers directly over the short- and long-term). In the case of regional carriers, Ministerial discretion could be applied as per section 4 of the Air Services Licensing Act in approving the entry of regional airlines at a lower local ownership threshold requirements, particularly where it could be shown that consumers would benefit significantly from more and cheaper flights to other African countries.

References

- 1Time Holdings. (2007). Audited results for the year ended 31 December 2007. Available: <http://www.southafrica.to/transport/Airlines/1Time-flights/financial-statements/20071231-1time-audited.pdf>
- 1Time Holdings. (2010). Annual Report 2010. Available: <http://www.southafrica.to/transport/Airlines/1Time-flights/financial-statements/20101231-1time-audited.pdf>
- 1Time Holdings. (2012). 1TM - 1time Holdings Limited - Audited group condensed financial results for the year ended 31 December 2011. Available: <http://www.sharedata.co.za/%5Csensad.asp?id=191132>
- Airports Company of South Africa (ACSA). Airports Company of South Africa Presentation to the Portfolio Committee on Tourism (2 November 2012).
- Airports Company of South Africa (ACSA). (2015). O.R. Tambo International Airport - Passenger Traffic September 2015. Airports Company South Africa. Available: <http://www.airports.co.za/airports/or-tambo-international/statistics/passenger>
- African Development Bank. (2012). Africa's Aviation Industry: Challenges and Opportunities. Available: <http://www.afdb.org/en/blogs/afdb-championing-inclusive-growth-across-africa/post/africas-aviation-industry-challenges-and-opportunities-10025/>
- Airline Network News and Analysis (ANNA). (2014a). 'FlySafair starts operations from Cape Town' (22 October 2014). Available: <http://www.anna.aero/2014/10/22/flysafair-starts-operations-from-cape-town/>
- Airline Network News and Analysis (ANNA). (2014b). 'FlySafair jets off from Cape Town to George' (19 November 2014). Available: <http://www.anna.aero/2014/11/19/flysafair-jets-off-from-cape-town-to-george/>
- Airline Network News and Analysis (ANNA). (2015a). 'kulula.com South Africa's leading LCC has 20% of domestic market; operates just seven routes with a fleet of 10 737-800s' (21 August 2015). Available: <http://www.anna.aero/2015/08/21/kulula-com-has-20-of-south-african-domestic-market/>
- Airline Network News and Analysis (ANNA). (2015b). 'SAA's LCC Mango set to start ninth domestic route' (8 September 2015). Available: <http://www.anna.aero/2015/09/08/saas-lcc-mango-set-start-ninth-domestic-route/>
- Airline Network News and Analysis (ANNA). (2015c). 'Three new carriers add spice to domestic market in South Africa; FlySafair, Skywise and Fly Blue Crane face challenging times' (14 September 2015). Available: <http://www.anna.aero/2015/09/14/three-new-carriers-add-spice-to-south-africas-domestic-market/>
- Airline Network News and Analysis (ANNA). (2015d). 'FlySafair departs for Durban and East London' (27 October 2015). Available: <http://www.anna.aero/2015/10/27/flysafair-departs-durban-east-london/>
- Baker, R. (2013). FlySafair details new ownership. *Fin24*. Available: <http://www.fin24.com/Companies/TravelAndLeisure/FlySafairs-details-new-ownership-20131127>
- Banda, F., Robb, G., Roberts, S. and Vilakazi, T. (2015). 'Review Paper 1 - Key debates in competition, capabilities development and related policies: Drawing the link between barriers to entry and inclusive growth'. Centre for Competition, Regulation and Economic Development (CCRED).

Bloomberg Business. (2014). Financial Statements for 1Time Holdings Ltd (1TM). Available: <http://www.bloomberg.com/research/stocks/financials/financials.asp?ticker=1TM:SJ>

Bofinger, H.C. (2009). *An Unsteady Course: Challenges to Growth in Africa's Air Transport Industry*. Washington: World Bank.

Burger, S. 'CemAir opens new Bloemfontein route, bolsters business travel portfolio' (20 March 2015). *EngineeringNews*. Available: <http://www.engineeringnews.co.za/article/cemair-opens-new-bloemfontein-route-bolsters-business-travel-portfolio-2015-03-20>

CAPA – Centre for Aviation. (2015a). 'Competition Intensifies in South Africa as FlySafair breaks Comair-South African Airways Duopoly' (8 January 2015). Available: <http://centreforaviation.com/analysis/competition-intensifies-in-south-africa-as-flysafair-breaks-comair-south-african-airways-duopoly-203660>

CAPA – Centre for Aviation. (2015b). 'South African Airways Part 2: SAA & Mango plan short-haul expansion as LCC competition intensifies' (20 June 2015). Available: <http://centreforaviation.com/analysis/south-african-airways-part-2-saa--mango-plan-short-haul-expansion-as-lcc-competition-intensifies-232381>

Chopra, S. and Lisiak, R. (2006). 'How Should Airlines Structure? A Comparison of Low Cost and Legacy Carriers'. Available: http://www.kellogg.northwestern.edu/faculty/chopra/html/research/Airline_RESEARCH,7sept06.pdf

Chung, J. Y. and Whang, T. (2011). The impact of low cost carriers on Korean Island tourism. *Journal of Transport Geography*, Vol. 19:1335-1340.

Civil Aviation Authority (2013). Technical Guidance Material: Certification of an air operator. Civil Aviation Authority. Available: <http://www.caa.co.za/Airworthiness%20TGM/Certification%20of%20an%20Air%20Operator.pdf>

Comair. (2015). 2015 Integrated Annual Report. Available: <http://www.comair.co.za/Media/Comair/files/2015/Annual-Report-2015.pdf>

Comair. (2015). Annual Results. Available: <http://www.comair.co.za/investor-relations/annual-results>

Competition Tribunal. In the matter between the Competition Commission and South African Airways (28 July 2005), Case No. 18/CR/Mar01.

Competition Tribunal. (2006a). In the matter between the Competition Commission and South African Airways (12 July 2006), Case No. 43/CR/May06.

Competition Tribunal. (2006b). In the matter between the Competition Commission and South African Airways and South African Express Airways (12 July 2006), Case No. 20/CR/Mar05.

Competition Tribunal. In the matter between the Competition Commission and South African Airways in The Settlement of Various Matters (6 June 2006), Case No. 42/CR/Apr10.

Competition Tribunal. Reasons for Decision and Order in the matter between Nationwide Airlines, Comair Limited and South African Airways (17 February 2010), Case No. 80/CR/Sept06.

Competition Tribunal. (2015). 'Media 24 Press Release – Tribunal finds Media 24 caused a rival newspaper to exit the market'. Available: <http://www.comptrib.co.za/publications/press-releases/media24-press-release/>

Capobianco, A. and H. Christiansen (2011), 'Competitive Neutrality and State-Owned Enterprises: Challenges and Policy Options', OECD Corporate Governance Working Papers No. 1, OECD Publishing.

Department of Public Enterprises (DPE). 'Statement by Minister Malusi Gigaba on Mango and the South African aviation sector' (6 November 2012).

Donzelli, M. (2010). The effect of low-cost air transportation on the local economy: Evidence from Southern Italy. *Journal of Air Transport Management*, 16: 121-126.

Ensor, L. 'Is it so difficult to believe Mango can be an efficient carrier?' (12 November 2012). *Business Day Live*.

European Low Fares Airlines Association (ELFAA). (2004). The Benefits of Low Fares Airlines to Customers, Airports, Regions and the Environment. Available: www.elfaa.com

European Travel Commission (ETC). (2005). European Tourism Insights 2005. Including Outlook for 2006. A Report of the Market Intelligence Group of the ETC no. 2006/1, Brussels, April 2006.

European Travel Commission (ETC). (2006). European Tourism Insights 2006. Including Outlook for 2007. A Report of the Market Intelligence Group of the ETC no. 2007/3, Brussels, May 2007.

European Travel Commission (ETC). (2007). European Tourism Insights 2007. Including Outlook for 2008. A Report of the Market Intelligence Group of the ETC no. 2008/1, Brussels, May 2008.

Gillen, D. W, Morrison, W. G. and Stewart, C. (2004.). Air Travel Demand Elasticities: Concepts, Issues and Measurement. Department of Finance Canada. Available: http://www.fin.gc.ca/consultresp/Airtravel/airtravStdy_-eng.asp

Goldstein, A. E. (1999). Infrastructure Development and Regulatory Reform in Sub-Saharan Africa: The Case of Air Transport. OECD Development Centre Working Paper No. 154.

Gonçalves, S. 2009. The Impact of Low-Cost Airlines on Madeira Islands. ISCTE Business School.

Graham, A., and N. Dennis. 2010. The Impact of Low-Cost Airline Operations to Malta. *Journal of Air Transport Management*, 16 (3): 127–36.

Gremminger, M. (2003). The Commission's approach towards global airline alliances – some evolving assessment principles. *Antitrust - Competition Policy Newsletter*, No. 1 (Spring 2003).

Grimbeek, S. and Lekezwa, B. 'The emergence of more vigorous competition and the importance of entry – comparative insights from flour and poultry'. Centre for Competition Economics Working Paper 1/2013, University of Johannesburg.

Hedley, N. '1time files for liquidation' (2 November 2012). *Business Day Live*. Available: <http://www.bdlive.co.za/business/transport/2012/11/02/1time-files-for-liquidation>

IATA. (2015). Air Passenger Market Analysis September 2015. IATA. Available: <https://www.iata.org/publications/economics/Pages/Air-Passenger-Monthly-Analysis.aspx>

IATA. (2015). Economic Performance of the Airline Industry: 2015 Mid-year Report. Available: www.iata.org/economics

IATA. (2014). New IATA Passenger Forecast Reveals Fast-Growing Markets of the Future. IATA.

InterVISTAS. (2014). Transforming Intra-African Air Connectivity: The Economic Benefits of Implementing the Yamoussoukro Decision.

Jarvis, R. 'The rise of low cost: Mapping South Africa's domestic airlines' (18 May 2015). *Travelstart*. Available: http://www.travelstart.co.za/blog/mapping-south-africas-domestic-airlines/?utm_source=email&utm_medium=Press+ZA&utm_campaign=COZA_PR_2015_18

[052015&utm_content=Info_COZA_PR_18052015_Img_Link&emst=4KMCr8lF4h_19_395984_12](#)

Kaplow, L. and Shapiro, C. (2007), 'Antitrust', in A. M. Polinsky and S. Shavell, *Handbook of Law and Economics*, Vol. 2, No. 1073. North-Holland.

Knysna-Plett Herald. 'CemAir and Plett fly high' (25 June 2015). Available: <http://www.knysnapletttheherald.com/news/News/General/139657/CemAir-and-Plett-fly-high>

Kuuchi, R. (2015). Aviation in Africa: Key Drivers of Growth. Presentation at 4th Aviation Stakeholders Convention held in Johannesburg. Conducted by African Airlines Association. Available: <http://afraa.org/index.php/media-center/publications/events/asc-2015/537-assessing-the-key-drivers-of-africa-aviation-industry-growth-mr-kuuchi-iata>

Luke, R. and 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*, Vol. 7(1).

Mail & Guardian. 'Erwin: SAA leases aircraft on behalf of Mango' (20 April 2007).

Motta, M. (2009). The European Commission's Guidance Communication on Article 82. *European Competition Law Review*, 593.

Muzata, T. G., Roberts, S. and Vilakazi, T. (2012). An Economic Review of Penalties and Settlements for Cartels in South Africa. Centre for Competition, Regulation and Economic Development Working Paper 9/2012. Available: https://static1.squarespace.com/static/52246331e4b0a46e5f1b8ce5/t/54242e1be4b05da681838903/1411657243360/CCE+Working+Paper+09-2012+Penalties+and+Settlement+for+Cartels_rev.pdf

Neven, D. and Verouden, V. (2008). Towards a more refined economic approach in State aid Control. Available: http://ec.europa.eu/dgs/competition/economist/economic_approach_sa_control.pdf

OAG Market Intelligence. (2012). Africa Aviation Market Analysis. Available: <http://www.oag.com/Insight/Free-Reports/Africa-Aviation-Market-Analysis>

O'Donoghue, R. and Padilla, J. (2006). *The law and economics of Article 82 EC*. Hart Publishing.

Olipra, L. (2012). The impact of low-cost carriers on tourism development in less famous destinations. Available: <https://www.researchgate.net/file.PostFileLoader.html?id=53aa516ed039b1f53e8b45af&assetKey=AS%3A273548176756736%401442230376006>

Oosthuizen, M. (2013). SAA and the South African Airline Industry the Next Ten Years - 2012-2020. Available: http://www.academia.edu/4720464/MSF_Portfolio

Organisation for Economic Co-operation and Development (OECD). 'State Owned Enterprises and the Principle of Competitive Neutrality', OECD Policy Roundtable, 2009.

Oxera Consulting (Oxera). 'Quantifying anti-trust damages: Towards a non-binding guidance for courts'. Study prepared for the European Commission (December 2009).

Oxford Economics. (2011). Economic Benefits from Air Transport in South Africa. Available: www.oxfordeconomics.com.

Paelo, A. (2015). Muted battle for the region's skies: competition in the airline industry. *CCRED Quarterly Competition Review*.

Pauw, J. and Dommissie, J. 'Why 1time failed' (11 November 2012). *Fin24*. Available: <http://www.fin24.com/Companies/TravelAndLeisure/Why-1time-failed-20121111>

- Peat, A. (2013). Ownership squabble overshadows launch of FlySafair. *Freight and Trading Weekly*, No. 2071. Available: <http://cdn.nowmedia.co.za/NowMedia/ebrochures/FTW/Standard/FTW-Issue-2071-06September2013.pdf>
- Planting, S. (2012). '1Time's Fatal Mistake'. *Moneyweb*. Available: <http://www.moneyweb.co.za/archive/1times-fatal-mistake/>
- Rey, B., Myro, R., and Galera, A. 2011. Effect of Low-Cost Airlines on Tourism in Spain. A Dynamic Panel Data Model. *Journal of Air Transport Management* 17 (3): 163–67.
- Sappington, D. and Sidak, J. (2003). 'Competition Law for State-Owned Enterprises'. *Antitrust Law Journal*, No. 2.
- Schlumberger, C. E. and Weisskopf, N. (2014). Two Case Studies: Mexico and South Africa. in Schlumberger, C. E. and Weisskopf, N. (eds), *Ready for Takeoff*.
- Signorini, A., Pechlaner, H., and Rienzner, H. (2002). The Impact of Low Fare Carrier on a Regional Airport and the Consequences for Tourism—The Case of Pisa. 52nd AIEST Congress Publication, in Bieger, T. and Keller, P. (eds), *Air Transport and Tourism*, St. Gallen, Switzerland: AIEST.
- South African Airways (SAA). Annual Report 2007: Part II.
- South African Airways (SAA). Group Annual Report 2012.
- South African Airways (SAA). Integrated Annual Report 2014.
- South African Airways (SAA). (2015). Financial Results.
- Statistics South Africa (StatsSA). (2015). Tourism 2014. Available: <http://www.statssa.gov.za/publications/Report-03-51-02/Report-03-51-022014.pdf>
- Statistics South Africa (StatsSA). (2016). Tourism 2015. Available: <http://www.statssa.gov.za/publications/Report-03-51-02/Report-03-51-022015.pdf>
- The Economist. (2013). 'What's holding back Africa's low-cost airlines?' *The Economist*. Available: <http://www.economist.com/blogs/economist-explains/2013/06/economist-explains-7>
- United States District Court for the District of Kansas. Memorandum and Order in the matter *United States of America versus AMR Corporation, American Airlines Inc., and AMR Eagle Holding Corporation*, Case No. 99-1180-JTM. Available: <https://www.justice.gov/atr/case-document/file/485221/download>
- Wang, M. and Song H. (2010). Air Travel Demand Studies: A Review. *Journal of China Tourism Research*, 6:29-49.
- World Travel and Tourism Council (WTTC). (2015). Travel and Tourism Economic Impact 2015: South Africa. Available: www.wttc.org

List of interviewees

Contact	Company	Designation	Date
Jackie Walters & Joachim Vermooten	University of Johannesburg	Head Department of Transport and Supply Chain Management: UJ and Consultant	19 October 2015
Chris Zweigenthal & Vees Lochan	Airlines Association of Southern Africa	CEO and COO	20 October 2015
Jerome Simelane	Fly Blue Crane	General Commercial Manager	22 October 2015
Elmar Conradie	FlySafair	CEO	22 October 2015
Blacky Komani	1Time Holdings	Former CEO	27 October 2015
Russell Jarvis	Travelstart	Head of Communications	10 November 2015
Reg Sivsanker	Fly Go-Air	CEO	17 November 2015
Vuwani Ndwamato with Thandi Maswanganye & Mashupjwe Ntjane	Department of Transport	Director: Air Transport	23 August 2016
Nic Vlok	Mango Airlines	Acting CEO	26 August 2016