



# G:ENESIS

UNLOCKING VALUE

Quantifying the Economic  
Contribution of Emirates to South  
Africa

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Analytics

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# EXECUTIVE SUMMARY

## Introduction

The aviation industry generates high levels of economic benefit. The starting point in measuring these benefits is usually an assessment of jobs created, value added to GDP, and taxes paid by airlines. However, the most valuable contribution of aviation is perhaps in the enabling benefits derived for economies through the connectivity that air services provide to link an economy with the rest of the world and vice versa.

Where there is good air connectivity, there is likely to be more trade, tourism, business, and the freer movement of investment capital, firms, tourists, workers, and ideas. It is well established that an improvement in air connectivity increases long-term growth in GDP. Moreover, an investment in connectivity in a developing country will have a much larger impact on productivity and economic success than a similar level of investment in a relatively developed country. Thus, it follows that good air connectivity will have substantial benefits to a developing country such as South Africa.

Emirates is one of the largest airlines in the world and has been operating in South Africa since 1995. Emirates is the largest carrier in South Africa measured by number of seats, and operates 49 weekly passenger flights along with a weekly dedicated cargo flight to Johannesburg. From 4 July 2016 Emirates will begin operating an additional daily service to Cape Town taking the total weekly passenger flights to 56. Since commencing operations, Emirates has carried more than 11.9 million passengers and 600,000 tonnes of cargo to and from South Africa.

Emirates' operations in South Africa are currently comprised of:

- South African flight operations (Emirates passenger operations and SkyCargo freight operations);
- a 50% share in dnata Newrest, an inflight catering services operation serving airlines operating out of Johannesburg and Cape Town;
- a 49% share in Mindpearl, an outsourcing and call centre operation based in Cape Town; and
- a 51% stake in travel services provider, Imagine Cruising, as of March 2015.

*(Note: hereon collectively referred to as the "the Group").<sup>1</sup>*

The data used in the analysis for this study covers Emirates' operations over the 2014/15 financial year.<sup>2</sup> At the time the study was written this was the most recent year for which full data was available. As Emirates recently released its 2015/16 financial year results, the current operations in the study have been updated to reflect 2015/16 data now available.

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<sup>1</sup> Note that Imagine Cruising is part of the Emirates Group, but is not included in this study. Imagine Cruising was acquired by Emirates in 2015 and the report assesses contribution in 2014/15.

<sup>2</sup> This is with the exception of dnata Newrest, where financial data was used for financial year ending 31 March 2014 and for Mindpearl for financial year end 31 December 2014.

Throughout the report, an exchange rate of 0.335 AED per ZAR 1 and ZAR 10.835 per US\$1 (an average for 2014) was used for cross-currency calculations.<sup>3</sup>

## Purpose

The purpose of this study is to quantify, assess, and describe the economic contribution of the Group to South Africa, and consider the impact on this of two growth scenarios.

## Approach

The contribution of Emirates to the economy is assessed in three ways:

- an enabled contribution - these are the benefits to the economy created through connectivity with the rest of the world, specifically in regard to trade and tourism (some of these are generalised benefits while others are entirely unique to Emirates);
- a partnership contribution - which is an assessment of the benefits of agreements in place with South African Airways (SAA); and
- a footprint contribution - which is an assessment of the Group's core operational footprint, indicated by jobs created, contribution to GDP, as well as a description of other core activities.

## Enabled contribution

The enabled contribution made by Emirates to South Africa is driven by the airline's high level of connectivity, with flights to a wide network of global destinations, on a frequent basis, and with a high quality of service.

### High degree of connectivity

Emirates flies directly between Dubai and three airports in South Africa: Johannesburg O.R. Tambo, Cape Town International, and Durban King Shaka International. Emirates has a large route network and links South Africa to 131 destinations around the world, which in 2014 accounted for 388 routes for passenger services: 131 routes to Johannesburg, 129 to Cape Town, and 128 to Durban.

### Unique connectivity

Of the 388 routes, 366 were analysed in this study.<sup>4</sup> The performance of Emirates on each of these routes was benchmarked to a competitor, selected on each route as the airline offering the most frequent service on that route or second most frequent where Emirates was the most frequent.

The analysis shows that Emirates provided 80 *unique* one-stop connections to South Africa in 2014 (this means any alternative routing would require at least a two-stop layover). Seventy eight of these unique one-stop connections were to Durban King Shaka International. Additionally, Emirates was the only airline flying internationally to and from Durban King Shaka International in 2014. Thus, Emirates is particularly important for linking the city of Durban, a central trade and tourism hub, to the rest of the world.

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<sup>3</sup> These were the average exchange rates for 2014, the year of analysis. The rand has since weakened considerably against both currencies meaning the rand-denominated calculation of contribution would have increased in 2015.

<sup>4</sup> Data was not available for all 388 routes and some routes were temporarily suspended owing to political unrest.

## **Unique benefits**

The study estimates that in the absence of the 80 unique one-stop competitive travel times and ticket fares offerings from Emirates, South Africa would suffer a loss of 140,347 inbound passengers<sup>5</sup>, equivalent to approximately a 5% loss in foreign air tourist arrivals. This would generate a total loss to the economy (direct, indirect and induced) of US\$154 million (ZAR 2.3 billion) and 8,713 jobs.

## **Benefits to tourism**

In 2014/15, Emirates transported about 1.2 million passengers to and from South Africa. Approximately 325,661 were inbound tourists, representing an estimated 13% of foreign air tourist arrivals. The inflow of these tourists generated a total direct, indirect, and induced contribution to the economy of US\$479 million (ZAR 5.2 billion) and supported 19,484 jobs.

## **Contribution to trade in goods**

In 2014/15, Emirates transported around 50,000 tonnes of cargo to and from South Africa.

## **Contribution to business**

In 2014/15, Emirates carried 12,000 business travellers to South Africa, equating to around 13% of all business travellers arriving in that year.

## **Additional consumer choice and competitiveness**

Competition amongst airlines encourages improvements in service quality and puts downward pressure on prices. Emirates has won numerous awards for quality service (see Appendix 5), and provides competitive prices, quicker connections, and a wide network of routes. In a competitive market Emirates performance is expected to provide an incentive for competitors to lower prices, improve service, and innovate in their offerings. All passengers benefit from this, whether they fly with Emirates or not.

## **Partnership contribution**

### **Codeshare with South African Airways (SAA)**

Emirates and SAA have had a codeshare agreement in place since 1997. This allows SAA to market and sell seats on Emirates' planes and routes. To date, Emirates has sold nearly 600,000 seats to SAA for on-sell to the market. In 2014/15, SAA had access to about 54,000 codeshare seats on Emirates flights.

### **Interline ticketing with SAA**

Emirates and SAA have an interline ticketing agreement. In 2014/15, more than 57,000 outbound passengers were transferred from SAA flights to Emirates' flights for onward travel to Dubai, while more than 50,000 inbound passengers were transferred from Emirates' flights to SAA flights for onward travel to African and domestic destinations, in terms of the interline agreement.

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<sup>5</sup> This represents an absolute loss to the economy that could not be substituted in the short term by another provider.



## Footprint contribution

### Value added to the economy

In 2014, the gross value added (GVA) of the Group's direct economic impact on the South African economy amounted to US\$70 million (ZAR 760 million).

The total combined direct, indirect, and induced economic value added to the economy in 2014 amounted to US\$417 million (ZAR 4.5 billion). This approximates to 7% of the direct, indirect and induced impact of the South African aviation sector as a whole (US\$5.8 billion or ZAR 62 billion) in 2014.<sup>6</sup>

### Employment created

The Group directly employed a total of 1,248 people in South Africa in 2014: 147 employees at Emirates, 651 employees at dnata Newrest, and 450 employees at Mindpearl.

The total employment (direct, indirect and induced) supported by the Group in 2014 was 12,989 jobs, which represents approximately 6% of the 227,000 jobs created by the South African aviation sector.<sup>7</sup>

### Training and skills development

In 2014, Emirates paid skills development levies to the Culture, Arts, Tourism, Hospitality and Sport Sector Skills Education Training Authority (CATHSSETA), and 92 of the company's 147 staff members attended a total of 197 training events. Emirates also provided an internship programme, "Work Integrated Learning", for unemployed students from Further Education and Training (FET) colleges.

### Corporate responsibility

The Group supports charitable initiatives through two foundations, the Emirates Airline Foundation and dnata4good. The Emirates Airline Foundation presently supports Singakwenza Education and Health, a KwaZulu-Natal based non-profit organisation (NPO) which aims to provide low-cost education and health through empowerment programmes to economically disadvantaged communities, particularly in rural areas. The Emirates Airline Foundation also supports Fikelela Children's Centre in Khayelitsha, Cape Town. dnata4good supports wildlife preservation, especially projects to protect the rhino and other endangered species.

### Sponsorships

In 2014, Emirates entered into a five-year partnership to sponsor the Johannesburg-based Lions rugby team and stadium, now known as the Emirates Lions and Emirates Airline Park, respectively.

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<sup>6</sup> Oxford Economics (2011) *Economic Benefits from Air Transport in South Africa*. Data from 2009, inflated to 2014.

<sup>7</sup> The best available comparator is from Oxford Economics (2011) *Economic Benefits of the Air Transport in South Africa*.

## Growth scenarios

Emirates provides 18,726 weekly seats to and from South Africa at present. From 4 July 2016 this will increase to 20,803 weekly seats to and from South Africa, with the addition of a daily Cape Town service.

This report tests two growth scenarios and associated impacts.

**Scenario 1:** The upgauge of one Boeing 777 service to Cape Town International to an Airbus A380; and the upgauge of two Boeing 777 services to Johannesburg O.R. Tambo to Airbus A380s – an additional 3,465 weekly seats.

The model estimates that the implementation of Scenario 1 will increase the direct contribution of the Group to the South African economy by US\$31 million (ZAR 343 million) to US\$448 million (ZAR 4.9 billion). This is the equivalent to an 8% increase in economic contribution over current contribution.

The model estimates that, when indirect and induced effects have been accounted for, the total employment supported by the Group will increase by 1,100 employees to 14,089 in total.

Using the 2014 seat factors, it is estimated that Scenario 1 will bring additional 117,302 passengers to South Africa per annum, representing a 19% increase in Emirates inbound passenger intake. This will result in an increase in tourists carried by Emirates of 19% to 386,658 and proportionately increase tourism expenditure enabled by Emirates to US\$481 million (ZAR 5.2 billion). This would result in a direct, indirect and induced contribution of US\$569 million (ZAR 6.2 billion) and an additional 23,133 jobs in the South African economy.

**Scenario 2:** The introduction of a second daily Boeing 777 flight into Durban King Shaka International – an additional 2,996 weekly seats.

The model estimates that Scenario 2 would increase the total contribution of the Group to the economy by US\$24 million (ZAR 263 million) to US\$441 million (ZAR 4.8 billion). This computes to a 6% increase in economic contribution.

The model estimates that when indirect and induced effects have been accounted for, Emirates total employment contribution will increase by 818 jobs to 13,807 jobs supported.

Using the 2014 seat factors, it is estimated that Scenario 2 will bring an additional 87,078 passengers to South Africa, which represents a 14% increase in Emirates' 2014 inbound passengers. This will result in an increase in tourists enabled by Emirates by 14% to 370,941 and a proportionate increase in tourism expenditure enabled by Emirates by 14% to US\$462 million (ZAR 5 billion) and an additional 22,193 jobs in the South African economy.

**Table 1: Summary of economic impact of Emirates Group operations in South Africa in 2014/15**

| <b>OPERATIONS IN 2014/15</b>  |
|---|
| <p>18,726 weekly seats<br/>(1.2 million passengers to and from South Africa in 2014)</p>  |
| <b>ECONOMIC CONTRIBUTION</b>  |
| <ul style="list-style-type: none"> <li>• Direct: US\$70 million (ZAR 760 million)</li> <li>• Indirect: US\$156 million (ZAR 1.7 billion) contribution from supplier spending</li> <li>• Induced: US\$191 million (ZAR 2.1 billion) contribution by employee spending</li> <li>• <b>Total: US\$417 million (ZAR 4.5 billion) contribution to the South African economy - 7% of the aviation sector as a whole</b></li> </ul>         |
| <b>EMPLOYMENT CONTRIBUTION</b>  |
| <ul style="list-style-type: none"> <li>• Direct: 1,248 directly employed by the Group</li> <li>• Indirect: 4,055 jobs supported by Group supplier spending</li> <li>• Induced: 7,686 jobs supported by Group and supplier employee spending</li> <li>• <b>Total: 12,989 jobs supported in the South African economy</b></li> </ul>  |
| <b>TRADE AND TOURISM</b>  |
| <ul style="list-style-type: none"> <li>• Inbound tourists: approximately 325,661 (13% of foreign air tourist arrivals)</li> <li>• Of which business travellers: approximately 12,000</li> <li>• <b>Total tourist expenditure enabled: US\$479 million (ZAR 5.2 billion) and supported 19,484 jobs</b></li> </ul>  |
| <b>GROWTH SCENARIO 1</b>  |
| <ul style="list-style-type: none"> <li>• Direct: US\$448 million (ZAR 4.9 billion)</li> <li>• Total job contribution: 14,089 (1,100 increase in jobs)</li> <li>• Tourism contribution: 386,658 tourists and US\$481 million (ZAR 5.2 billion) in tourist expenditure (a 19% increase)</li> <li>• <b>Total direct, indirect and induced contribution: US\$569 million (ZAR 6.2 billion) and an additional 23,133 jobs</b></li> </ul> |
| <b>GROWTH SCENARIO 2</b>  |
| <ul style="list-style-type: none"> <li>• Direct: US\$441 million (ZAR 4.8 billion)</li> <li>• Total job contribution: 13,807 jobs (818 increase in jobs)</li> <li>• Tourism contribution: 370,941 tourists and US\$462 million (ZAR 5 billion) in tourist expenditure (a 14% increase)</li> <li>• <b>Total direct, indirect and induced contribution: US\$556 million (ZAR 6 billion) and an additional 22,193 jobs</b></li> </ul>  |

# 1. INTRODUCTION

## 1.1. BACKGROUND AND PURPOSE

Emirates is one of the largest airlines in the world and has been operating routes to and from South Africa since 1995. Emirates is the largest foreign carrier operating in South Africa by number of seats.

Emirates has one of the largest route networks of any airline serving South Africa. Emirates flies directly from Dubai to and from three South African airports: Johannesburg O.R. Tambo, Cape Town International, and Durban King Shaka International.

Emirates' corporate activities in South Africa comprise of four entities: Emirates, the airline; Mindpearl, an outsourcing operation based in Cape Town; dnata Newrest, an air transport support service provider and inflight catering company servicing airports in Johannesburg and Cape Town; and Imagine Cruising, a travel agency.<sup>8</sup>

Emirates has had a codeshare agreement with South African Airways (SAA) (since 1997) and has signed a Memorandum of Understanding with South African Tourism in 2015. In addition, Emirates invests in sponsorships, corporate responsibility initiatives, and training programmes.

Given the scale of operations, Emirates wanted to understand and improve its economic contribution to South Africa. Johannesburg-based economic advisory firm, Genesis Analytics ("Genesis"), was commissioned to independently assess the airline's economic contribution.

The purpose of this report is:

- 1) To quantify, assess, and describe the economic contribution of Emirates and its subsidiary companies to South Africa; and
- 2) To consider the impact of two scenarios in which Emirates' operations in South Africa are expanded.

The analysis covers operations over the 2014/15 financial year.<sup>9</sup> This was the most recent year for which full data was available. Throughout the report, an exchange rate of 0.335 AED per ZAR 1 and ZAR 10.835 per US\$1 (an average for 2014) was used for cross-currency calculations.<sup>10</sup>

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<sup>8</sup> See Section 3 for a more detailed description of Emirates' operations in South Africa

<sup>9</sup> This is with the exception of dnata Newrest, where financial data was used for financial year ending 31 March 2014 and for Mindpearl for financial year end 31 December 2014.

<sup>10</sup> These were the average exchange rates for 2014, the year of analysis. The rand has since weakened considerably against both currencies meaning the rand-denominated calculation of contribution would have increased in 2015.

## 1.2. REPORT STRUCTURE

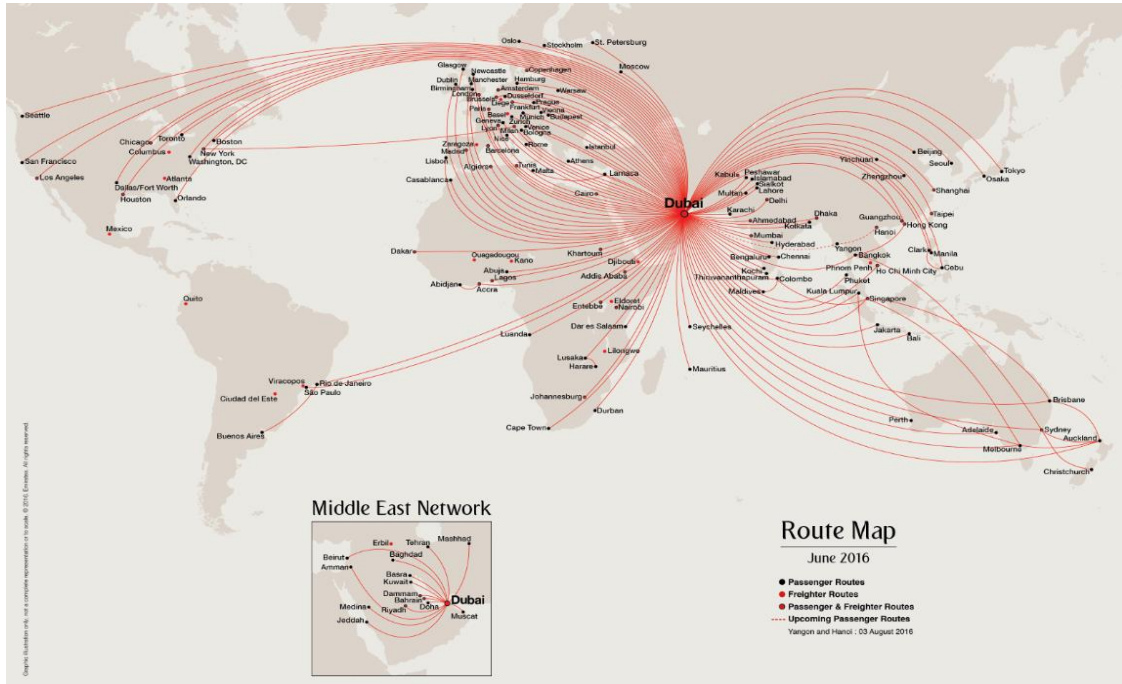
This report is structured as follows:

- Section 2 is a profile of Emirates' global operations;
- Section 3 is an overview of Emirates' operations in South Africa in 2014;
- Section 4 sets out the methodology used to assess economic contribution;
- Section 5 describes the enabled contribution (also called connectivity contribution) made by Emirates, especially benefits to tourism and trade;
- Section 6 explores Emirates' partnership with SAA;
- Section 7 quantifies the direct, indirect and induced contributions of Emirates immediate operational footprint; and
- Section 8 is an analysis of two scenarios in which Emirates increases operations in South Africa.

## 2. ABOUT EMIRATES

Emirates began flying three routes out of Dubai in 1985. Beginning with only two aircraft, the airline has grown to become one of the largest in the world.<sup>11</sup> Emirates currently has a fleet of more than 250 aircraft and offers flights to 153 destinations in 80 countries across the world – see Figure 1.

Figure 1: Emirates route map



Source: Emirates (2016)

More than 1,500 Emirates flights depart from Dubai every week. In the 2015/16 financial year Emirates transported 51.9 million passengers and 2.5 million tonnes of cargo around the world.

Emirates is wholly owned by the Investment Corporation of Dubai, and is operated on a commercial basis by an independent management team. Emirates employs over 61,000 people worldwide.

<sup>11</sup> Emirates was fourth largest airline in 2015 by RPK (Revenue Passenger Kilometres) according to ICAO (2015) *Air Transport Yearly Monitor*.

### 3. OVERVIEW OF EMIRATES GROUP IN SOUTH AFRICA

Emirates began operations in South Africa in 1995 with flights between Dubai and Johannesburg. Flights between Dubai and Cape Town, and Dubai and Durban were introduced in 2008 and 2009, respectively.

Emirates operates 49 weekly passenger flights to South Africa and two weekly all-cargo flights at present. From 4 July 2016 Emirates will begin operating an additional daily service to Cape Town taking the total weekly passenger flights to 56. Emirates is the largest airline in South Africa's long-haul market based on seat capacity at present.<sup>12</sup> Since commencing operations in 1995, Emirates has carried over 11.9 million passengers and 600,000 tonnes of cargo to and from South Africa.<sup>13</sup>

Emirates' corporate operations in South Africa consist of:

- South African flight operations (Emirates airline passenger operations and SkyCargo freight operations);
- a 50% share in dnata Newrest<sup>14</sup>, an inflight catering services operation serving airports in Johannesburg and Cape Town;
- a 49% share in Mindpearl, an outsourcing and call centre operation based in Cape Town; and
- as of March 2015, a 51% stake in travel services provider, Imagine Cruising (collectively "the Group").<sup>15</sup>

In 1997, Emirates signed a codeshare agreement with SAA: the terms of the agreement involve SAA selling blocks of seats on Emirates' flights. To date, nearly 600,000 tickets have been sold by SAA on Emirates flights. In 2015 Emirates has also signed a partnership agreement with South African Tourism (SAT) to assist with the growth of tourism in South Africa.

Emirates contributes a skills development levy to the Culture, Art, Tourism, Hospitality, and Sports Sector Education and Training Authority (CATHSSETA).

The Group supports a number of social causes in South Africa through two charitable foundations, the Emirates Airline Foundation and dnata4good, and has entered into a five-year partnership to sponsor the Johannesburg-based Lions Rugby team and stadium, now known as the Emirates Lions and Emirates Airline Park.

The various entities in the Group in South Africa are presented in Figure 2.

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<sup>12</sup> Long-haul is defined as any route outside Africa. Source: Centre for Aviation (CAPA) and OAG.

<sup>13</sup> Information provided by Emirates.

<sup>14</sup> Joint venture established in 2013.

<sup>15</sup> Note that Imagine Cruising is part of the Emirates Group, but is not included in this study - Imagine Cruising was acquired by Emirates in 2015 and the report assesses contribution in 2014/15.

Figure 2: Emirates Group in South Africa



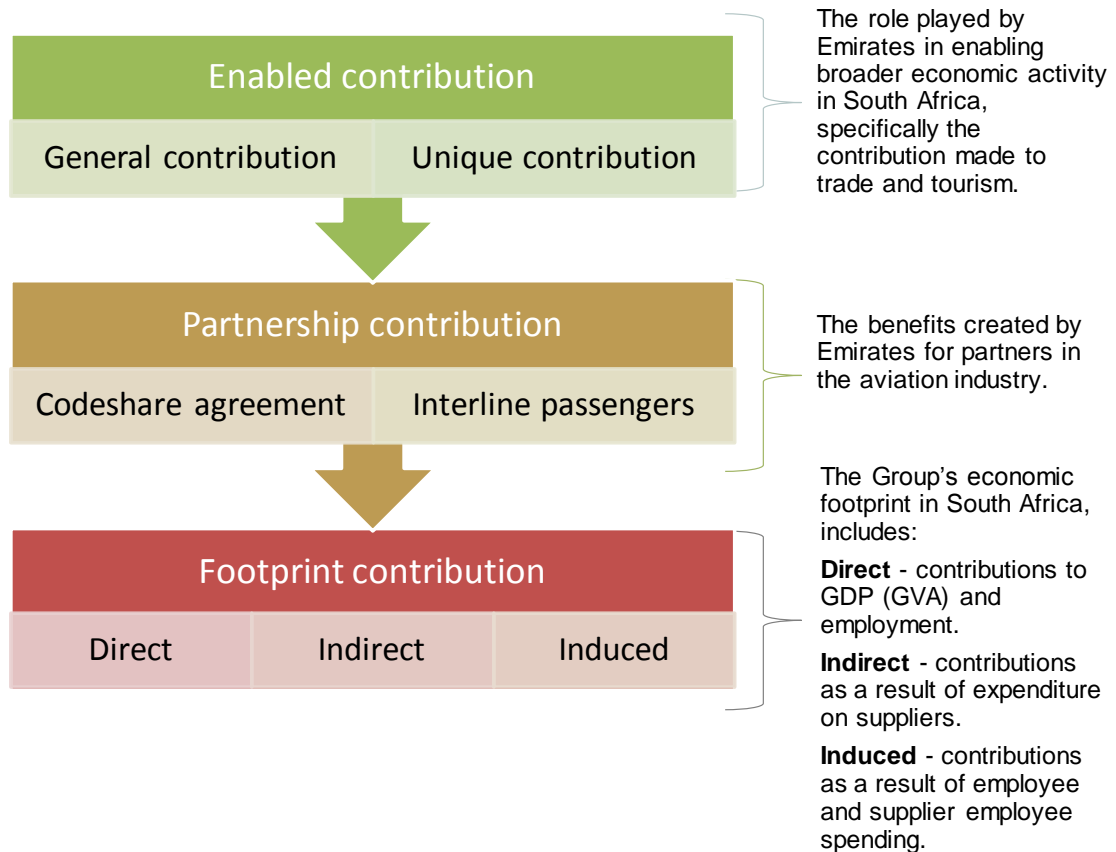
Source: Emirates (2015)



## 4. A FRAMEWORK FOR MEASURING CONTRIBUTION

Measuring the economic contribution of a company to an economy and society is complex because the contribution can be assessed in any number of ways. This report examines three types of contribution: an enabled contribution (connectivity contribution), a partnership contribution, and a footprint contribution.

**Figure 3: Levels of contribution (conceptualisation)**



Source: Genesis Analytics (2015)

### Enabled contribution (connectivity contribution)

The first level of contribution is the benefits *enabled* for an economy through the provision of goods and services. Enabled contributions are difficult to measure and not ascertainable from a company's financial statements. For this reason, they are sometimes referred to as "positive externalities", in that the positive value created is external to the company's accounts.

In the case of Emirates, positive externalities are driven by the connectivity that air services provide to South Africa; that connect the country with the rest of the world. This report first considers the role played by Emirates in enabling economic activity, specifically the contribution to tourism and trade.

Connectivity is assessed using two factors: the time it takes to reach a selected destination, and the price of a ticket. Time and price are also reduced to a single value by applying a time

cost of money estimate to travel duration, and adding this to the ticket price to produce a single, monetised value referred to as generalised travel cost (GTC).<sup>16</sup>

Enabled contribution can further be split into general and unique benefits.

- **General benefits** are benefits created by Emirates that are not strictly unique to Emirates. This is because economic theory suggests that in a competitive market another provider would enter the market and provide the same benefits. If Emirates did not provide those services, these benefits are described in the report in absolute terms.
- **Unique benefits** are described in incremental terms and must be calculated. Unique benefits are those that *only* Emirates can provide because of some unique advantage whether in time, price, reliability or network. These benefits would disappear and not be substituted by another provider if Emirates were to leave the market, at least not in the short-term. This would amount to an absolute loss of benefit for the economy.

### Partnership contribution

The second level of contribution is the value provided to other companies through partnerships and alliances. This is also difficult to measure but for a different reason. The benefits will only accrue to the partner company and so may not be publicly available. Specifically, the report considers the codeshare and interline agreements in place between Emirates and SAA.

### Footprint contribution

The third level of contribution is a “footprint contribution” - a measure of value created by the *core operational activities* of the company indicated by employment created and contribution to GDP. A footprint contribution is ascertainable from the company’s financial statements, and is usually related to the size of the firm. For instance, a mining company that employs tens of thousands of workers, sells a commodity of high value, and procures many inputs from the local economy would typically make a large footprint contribution.

The footprint contribution can be measured in three ways – direct, indirect and induced contribution – which can be combined into a total footprint contribution:

- **Direct contribution:** This is the immediate impact by virtue of core operations. It is measured by direct employment and direct gross value added (GVA) to the economy. Direct contributions also include the company’s activities aimed at local economic development such as Broad-Based Black Economic Empowerment (B-BBEE) initiatives, Corporate Responsibility programmes, training, as well as sponsorships. Direct impact is calculated from the company’s financial accounts.
- **Indirect contribution:** This is the contribution generated by linkages from the company to its supply chain. For example, the Group purchases from local suppliers, amongst other things, fuel, catering services, ground crew services, and hotel accommodation. These local purchases generate economic value and support jobs in the companies that supply the goods and services, as well as in the suppliers of those suppliers, and so on through the economy. The indirect contribution is modelled using multipliers based on the Supply-Use component of a Social Accounting Matrix (SAM).<sup>17</sup>

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<sup>16</sup> Refer to Appendix 3 for full explanation of methodology

<sup>17</sup> A record of transactions between economic sectors and institutions published by Statistics South Africa

- **Induced contribution:** This refers to the contribution generated by the company's employees and employees of the company's suppliers spending wages on local goods and services. For instance, an employee of the Group or of one of its suppliers may spend his or her salary on food, transport, housing, and entertainment. The spending generates economic value and supports jobs in the companies that provide the goods and services. Induced impacts are also modelled using economic multipliers based on a full SAM.

## **5. ENABLED CONTRIBUTION**

### **5.1. THE ECONOMIC BENEFITS OF AIR CONNECTIVITY**

Every sector makes an enabling contribution to the economy in a different way. For instance, the logistics sector enables benefits by moving goods to where they are needed. The telecoms sector enables benefits by providing efficient and cheaper communication. In the aviation industry, enabled benefits are driven by the improved connectivity that air services provide in linking an economy with the rest of the world and vice versa.

The benefits of connectivity depend on the routes, frequency, timing, and flight prices available in each country's aviation network. Where there are high levels of air connectivity there is likely to be more trade, tourism, and business which lead to a more productive, more innovative economy. Increased air connectivity allows domestic firms access to foreign markets, increases foreign competition in the home market, and allows the freer movement of investment capital, tourists, workers, and ideas.

It has been empirically established that an increase in air connectivity increases long-term growth in GDP. The relationship between connectivity and productivity is logarithmic rather than linear, which suggests that investment in air transport capacity in developing countries, where connectivity is relatively poor, will have a much larger impact on productivity and economic success than a similar level of investment in a relatively developed country. In other words, connectivity matters more for developing countries than developed countries. The benefits of better air connectivity to South Africa are thus significant. A study of the impacts of the aviation sector on the economy in 2011 estimated that a 10% improvement in South Africa's air connectivity (relative to GDP) would see a US\$ 138 million per year increase in long-term GDP.<sup>18</sup>

### **5.2. THE CONNECTIVITY BENEFITS OF EMIRATES**

This section assesses the role played by Emirates in enabling broader economic activity through air connectivity in South Africa, specifically the contribution made to tourism and trade. These are economic activities that are crucial to growth and development, and which have been identified by policymakers as priority sectors.

The enabled contribution is driven by a high degree of connectivity to a wide network of global destinations, at a competitive price, on a frequent basis, and with a high level of service. Emirates has one of the largest route networks of any airline operating in South Africa. The destinations on this network are connected to South Africa via Emirates' hub in Dubai. Emirates flies directly from Dubai to three South African airports: Johannesburg O.R. Tambo, Cape Town International, and Durban King Shaka, and vice versa. In 2014, Emirates transported passengers inbound to South Africa from 131 destinations – Figure 4 and Table 1.

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<sup>18</sup> Oxford Economics (2011) *Economic Benefits from Air Transport in South Africa*.

**Figure 4: Emirates routes to and from Johannesburg, Cape Town, and Durban**



Source: Emirates (2015)

**Table 2: Emirates routes to and from Johannesburg, Cape Town, and Durban**

|              |               |                  |             |                    |               |
|--------------|---------------|------------------|-------------|--------------------|---------------|
| Abidjan      | Cairo         | Hamburg          | Los Angeles | Peshawar           | Tunis         |
| Abuja        | Casablanca    | Harare           | Luanda      | Phuket             | Venice        |
| Accra        | Chennai       | Ho Chi Minh City | Lusaka*     | Prague             | Vienna        |
| Addis Ababa  | Chicago       | Hong Kong        | Lyon        | Rio de Janeiro     | Warsaw        |
| Adelaide     | Christchurch  | Houston          | Madrid      | Riyadh             | Washington DC |
| Ahmedabad    | Clark         | Hyderabad        | Male        | Rome               | Zurich        |
| Algiers      | Colombo       | Islamabad        | Malta       | San Francisco      |               |
| Amman        | Conakry       | Istanbul         | Manchester  | Sana'a             |               |
| Amsterdam    | Copenhagen    | Jakarta          | Manila      | Sao Paulo          |               |
| Athens       | Dakar         | Jeddah           | Mauritius** | Seattle            |               |
| Auckland     | Dallas        | Kabul            | Medinah     | Seoul              |               |
| Baghdad      | Dammam        | Karachi          | Melbourne   | Seychelles         |               |
| Bahrain      | Dar es Salaam | Khartoum         | Milan       | Shanghai           |               |
| Bangkok      | Delhi         | Kiev             | Moscow      | Sialkot            |               |
| Barcelona    | Dhaka         | Kochi            | Mumbai      | Singapore          |               |
| Basra        | Doha          | Kolkata          | Munich      | St. Petersburg     |               |
| Beijing      | Dublin        | Kozhikode        | Muscat      | Stockholm          |               |
| Beirut       | Dubai         | Kuala Lumpur     | Nairobi     | Sydney             |               |
| Bengaluru    | Dusseldorf    | Kuwait           | New York    | Taipei             |               |
| Birmingham   | Entebbe       | Lagos            | Newcastle   | Tehran             |               |
| Boston       | Erbil         | Lahore           | Nice        | Thiruvananthapuram |               |
| Brisbane     | Frankfurt     | Larnaca          | Osaka       | Tokyo Haneda       |               |
| Brussels     | Geneva        | Lisbon           | Oslo        | Tokyo Narita       |               |
| Budapest     | Glasgow       | London Gatwick   | Paris       | Toronto            |               |
| Buenos Aires | Guangzhou     | London Heathrow  | Perth       | Tripoli            |               |

Source: Emirates (2015); \* not to Durban or Cape Town, \*\* not to Durban.

Notes: The following destinations were terminated in 2014: Clark 3 May, Kiev 16 July, Sana'a 18 September. Additionally, operations to Conakry were suspended on 1 August 2014.

The enabled contribution is split into two parts: *general* benefits enabled by Emirates, followed by a quantification of *unique* benefits enabled by Emirates.

## 5.2.1. General benefits

### 5.2.1.1. General benefits for tourism

Tourism is a social, cultural and economic phenomenon which entails the movement of people to countries or places outside their usual environment for personal or business purposes.<sup>19</sup>

Over the last three decades, the global tourism market has grown rapidly and tourism is one of the fastest growing sectors in the world.<sup>20</sup> Modern tourism is closely linked to economic development and many developing economies have targeted tourism as a growth-generating sector. Tourism is an appealing industry to South Africa as it earns the economy foreign currency, makes use of natural assets, is labour-intensive, and some cases empowers rural communities.

The tourism sector has been identified by the South African Government in the National Development Plan (NDP), the economic blueprint for the country for 2030, as a key driver of employment. This is owing to the high demand for unskilled and low-skilled labour by the sector, against the backdrop of an immense skills shortage amongst South Africa's unemployed; as well as the potential that tourist arrivals play in stimulating the growth of service-orientated small, medium, and micro-enterprises (SMMEs). This is particularly pertinent given that the NDP identifies that, in the short to medium term; most jobs are likely to be created in small, service-oriented businesses.<sup>21</sup> Furthermore, tourism has also been identified in the NDP as having an important role to play in the creation of an integrated and inclusive rural economy. It is expected that tourism (coupled with reformed land tenure, support to farmers, and expanded social services) will raise economic participation in rural areas from 29 to 40% by 2030.<sup>22</sup>

### South Africa's tourism trends

Following South Africa's re-integration into the global community in 1994, inbound tourism to South Africa has flourished, with a compound annual growth rate in tourist arrivals of 6% between 2009 and 2014 (Figure 5). In 2014, there were 9.54 million tourist arrivals in South Africa.<sup>23</sup>

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<sup>19</sup> United Nations World Tourism Organisation: *Understanding Tourism: Basic Glossary*

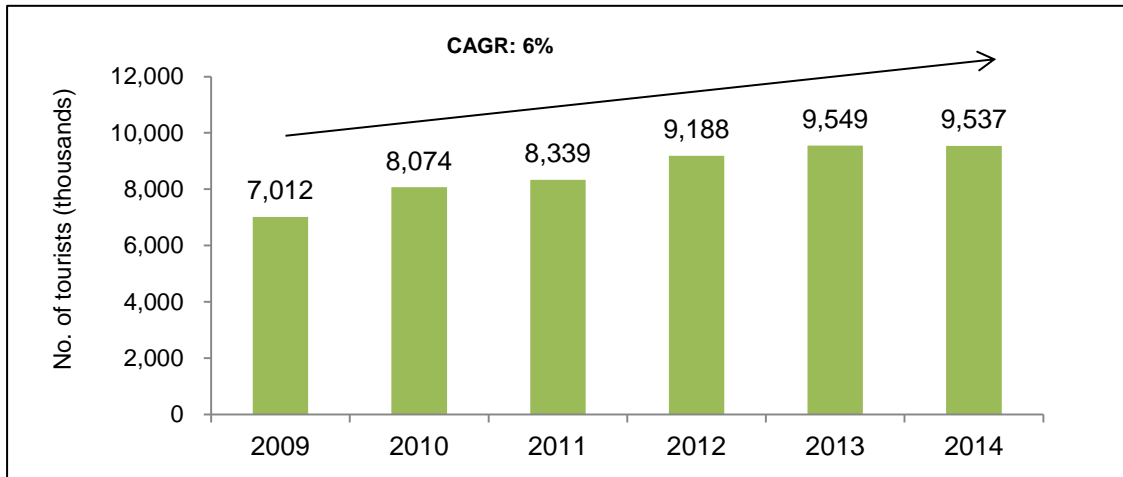
<sup>20</sup> United Nations World Tourism Organization (2015) *Why tourism?*

<sup>21</sup> National Planning Commission (2011) *National Development Plan 2030: Our future make it work, Executive Summary*

<sup>22</sup> National Planning Commission (2011) *National Development Plan 2030: Our future make it work, Executive Summary*

<sup>23</sup> Statistics South Africa (2014) *Tourism Report* and South African Tourism (2014) *2013 Annual Tourism Performance Report*.

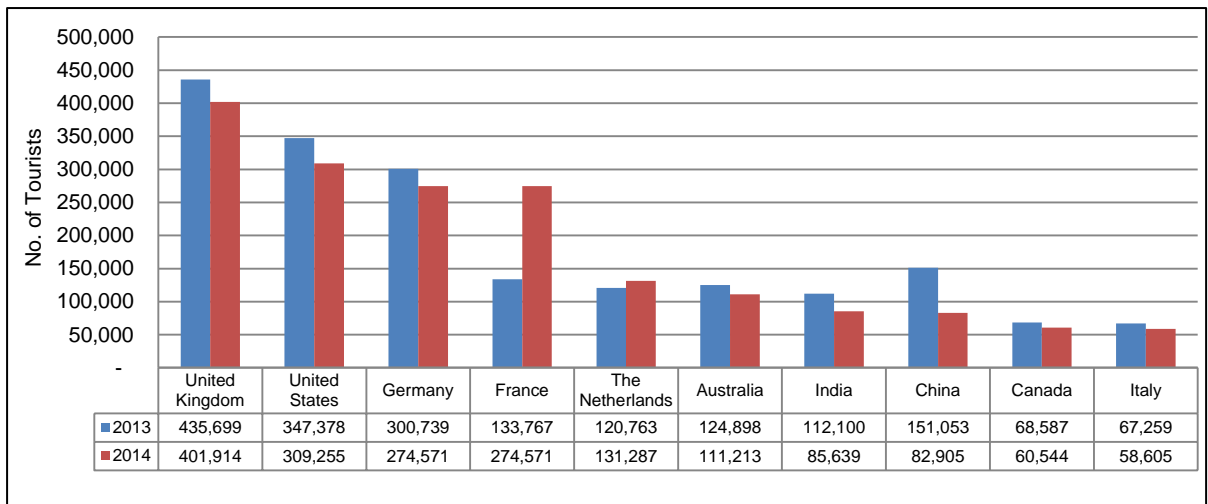
**Figure 5: Tourism arrivals in South Africa (2009-2014)**



Source: Statistics South Africa (2013) and South African Tourism (2014) 2013 Annual Tourism Performance Report

In 2014, 76% of tourists came from Africa. Of these, 72% of tourists arrived by road and 27% of tourists (2,573,080 people) arrived by air. Europe and North America are South Africa's most important source markets. The top five overseas tourist source markets for South Africa were United Kingdom, United States of America, Germany, France and the Netherlands.<sup>24</sup> European tourists contributed 26% of total tourism revenues at US\$1.6 billion (ZAR 17 billion).

**Figure 6: Top ten tourist inbound source markets in 2013 and 2014**



Source: South African Tourism (2015)

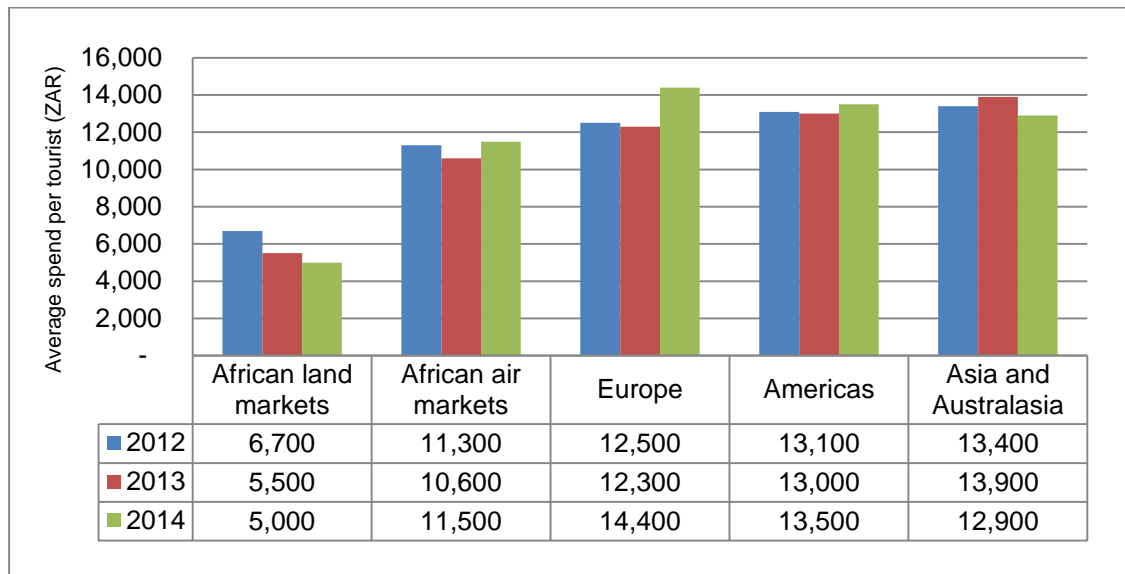
Virtually all tourists arriving by air entered the international ports of Johannesburg O.R. Tambo, Cape Town International, and Durban King Shaka International.

The estimated total foreign direct spending of tourists in 2014 was US\$5.93 billion (ZAR 64.2 billion). Air travellers spent on average US\$1,245 (ZAR 13,500) per visit, while land travellers spent US\$507 (ZAR 4,900). In other words, while the air arrival market is significantly smaller than the land arrivals market, air arrivals tend to spend about three times more than land arrivals while in South Africa, with air arrivals from Europe, Asia, and Americas spending the

<sup>24</sup> China was previously a strong tourist sourcing market but Chinese tourists to South Africa fell by 45% between 2013 and 2014. The precise causes of this are unknown, however, it is speculated that the Ebola outbreak, subdued economic conditions in China and new visa and immigration requirements in South Africa, may have contributed to this decline.

most – see Figure 7 below. These are important source markets both in terms of volume and value.

**Figure 7: Average spending per tourist (2012 -2014)**



Source: South African Tourism (2015)

### Economic impact of tourism

According to the World Travel and Tourism Council<sup>25</sup>, in 2014 the direct contribution of travel and tourism sector to South Africa's GDP was US\$10 billion (ZAR 113.4 billion) (3.0% of GDP). Employment generated by the sector was 679,500 direct jobs in 2014 (4.5% of total employment) – see Figure 8. When accounting for wider effects from investment, the supply chain and induced income impacts, the total contribution of the sector in 2014 amounted to US\$32 billion (ZAR 357 billion) (9.4% of GDP) and employment amounted to 1.5 million jobs (about 9.9% of total employment).

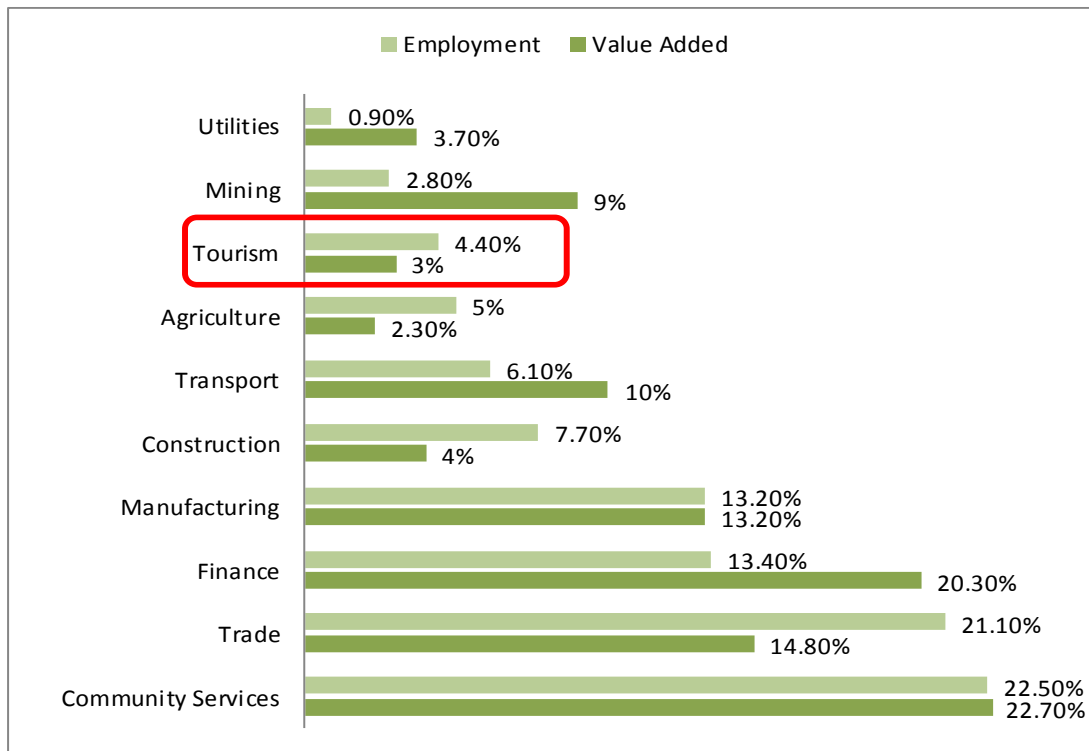
The direct contribution of travel and tourism sector to GDP is expected to grow by 4.6% a year, between 2015 and 2025, to US\$17 billion (ZAR 184.7 billion) (3.4% of total GDP) in 2025.<sup>26</sup>

<sup>25</sup> World Travel and Tourism Council (2014) *Travel & Tourism Economic Impact 2015, South Africa*

<sup>26</sup> World Travel and Tourism Council (2014) *Travel & Tourism Economic Impact 2015, South Africa*



**Figure 8: Value added (% of GDP) and employment (% total employment) by sector 2013**

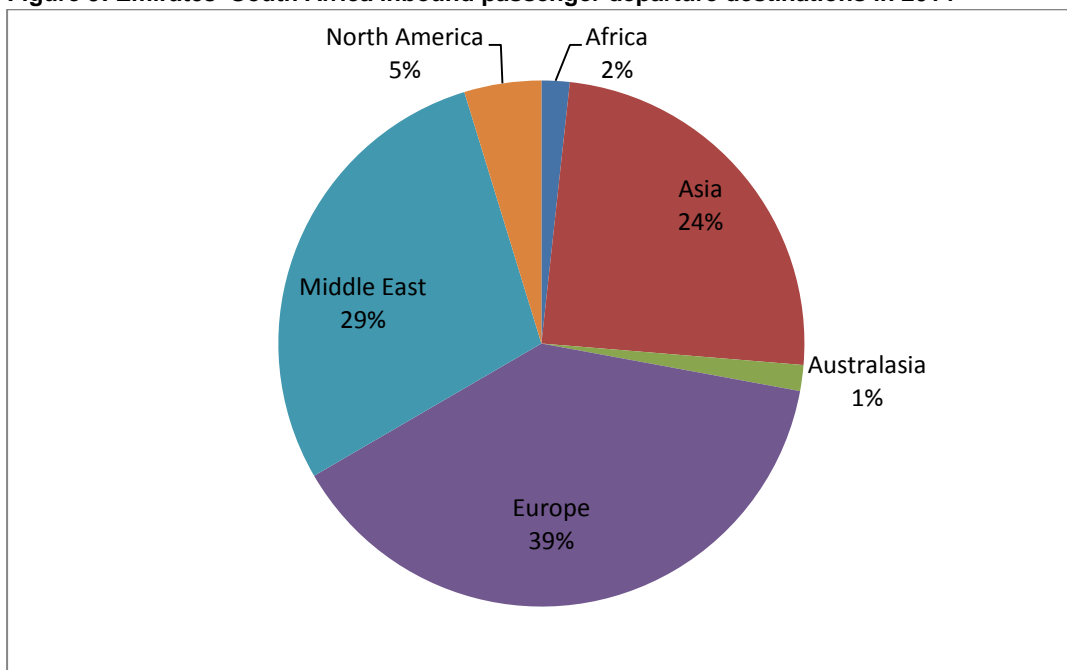


Source: Statistics South Africa (2015)

### Emirates contribution to tourism

In 2014, Emirates transported around 1.2 million passengers to and from South Africa. Assuming a 50/50 split in inbound and outbound passengers, Emirates carried 626,271 inbound passengers in 2014. As shown in Figure 9, most of Emirates passengers came from priority tourism markets in Europe, Asia and the Middle East.

**Figure 9: Emirates' South Africa inbound passenger departure destinations in 2014**



Source: Emirates (2015), Genesis synthesis

Dubai was the airline's largest inbound passenger market with 150,935 passengers (24% of Emirates' total inbound passengers) arriving from Dubai to South African airports in 2014. This is an important connection for South Africa – Box 1:

**Box 1: Dubai as a regional trade centre**

Dubai is at the centre of a region that is emerging as a major force in the global economy. By combining high standards of hard and soft infrastructure, and increasingly deep trade, travel, business and investments ties with the rest of the Arab world but much of Africa, South Asia and other parts of Asia, Dubai has emerged as the leading regional commercial hub. Dubai's open economic policy and private sector-friendly regulation have attracted high levels of foreign direct investment.

Dubai offers many opportunities for South African businesses. There are currently approximately 206 South African companies doing business in the United Arab Emirates (UAE). Annually, there are business missions from the UAE to South Africa and vice versa; South African manufacturers and producers participate in exhibitions and shows in the UAE such as Gulfood, Automechanika, and IDEX.

*Sources: Dubai International Financial Center (2015) About Dubai for Business [Online Available: <https://www.difc.ae/dubai-business>; South Africa Consulate General Dubai, (2015) United Arab Emirates. <http://www.dirco.gov.za/dubai/>.*

There is no data available on how many of these 626,271 passengers were tourists, however based on the 2014 Statistics South Africa Tourism report, an assumption is made that 52% of these passengers were tourists.<sup>27</sup>

Therefore, approximately 325,661 inbound tourists were carried by Emirates in 2014 which represents an estimated 13% of foreign air tourist arrivals in South Africa.<sup>28</sup>

If an average spending per tourist of US\$1,245 (ZAR13,500) is applied, Emirates enabled estimated direct tourist expenditure of about US\$406 million (ZAR 4.4 billion)<sup>29</sup> to South Africa in 2014.

The direct tourism expenditure has a multiplier of 1.2 million per ZAR 1 million, resulting in a direct, indirect and induced contribution of US\$479 million (ZAR 5.2 billion) to South Africa in 2014. Similarly, the direct tourism expenditure has a multiplier of 4 jobs per ZAR 1 million. Therefore, this direct tourism expenditure supported 19,484 jobs in the South African economy in 2014.

### 5.2.1.2. General benefits to trade

The importance of trade to the South African economy is repeatedly stressed in the National Development Plan (NDP). Air travel facilitates international trade by transporting cargo and business travellers.

Trade in the global economy depends on the ability to deliver and receive products from markets across the world. In total, about US\$6.4 trillion worth of goods, approximately 35% of

<sup>27</sup> Based on Statistics South Africa (2014) Tourism 2014 Report

<sup>28</sup> 2,573,080 foreign air tourist arrivals, according to Statistics South Africa (2014) 2014 Tourism Report

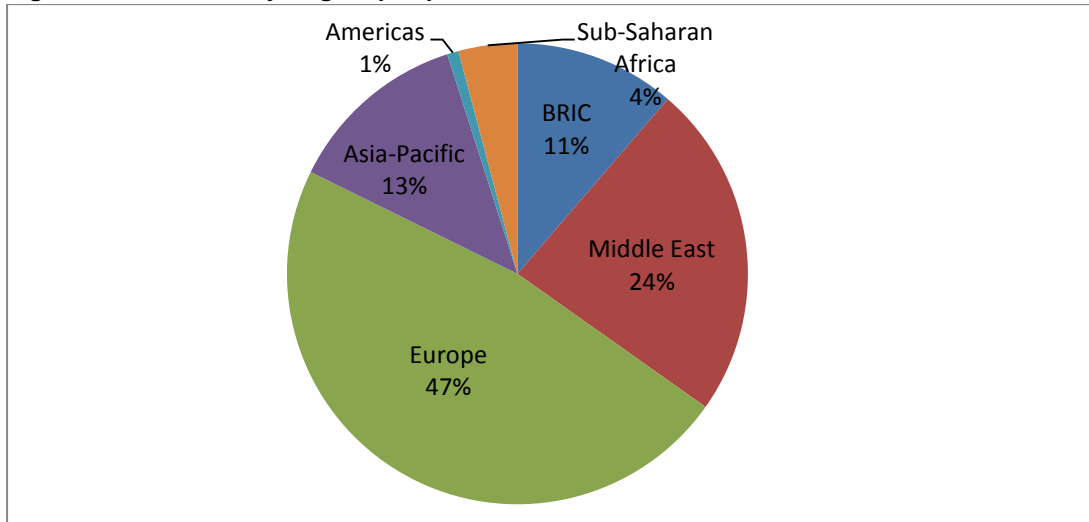
<sup>29</sup> This is also the amount established when the spend is applied per region for each passenger in 2014, i.e. The average African air tourist spend was US\$ 1,061 (ZAR11,500) per tourist, the European spend was US\$ 1,329 (ZAR14,400) per tourist and the average expenditure of an Americas, and an Asian and Australasia tourist spend was US\$ 1,245 (ZAR13,500) and US\$ 1,190 (ZAR12,900) per tourist, respectively.

world trade by value is moved by air.<sup>30</sup> Air cargo particularly assists in the transportation of specialised goods, such as temperature sensitive pharmaceuticals and perishables.

Emirates SkyCargo is a dedicated air cargo business that carries general cargo and specialised cargo, like dangerous goods, animal care, and temperature sensitive goods.<sup>31</sup> The global cargo business has won many awards such as the 2015 Global Cargo Airline of the Year and Air Cargo Brand of the Decade.<sup>32</sup>

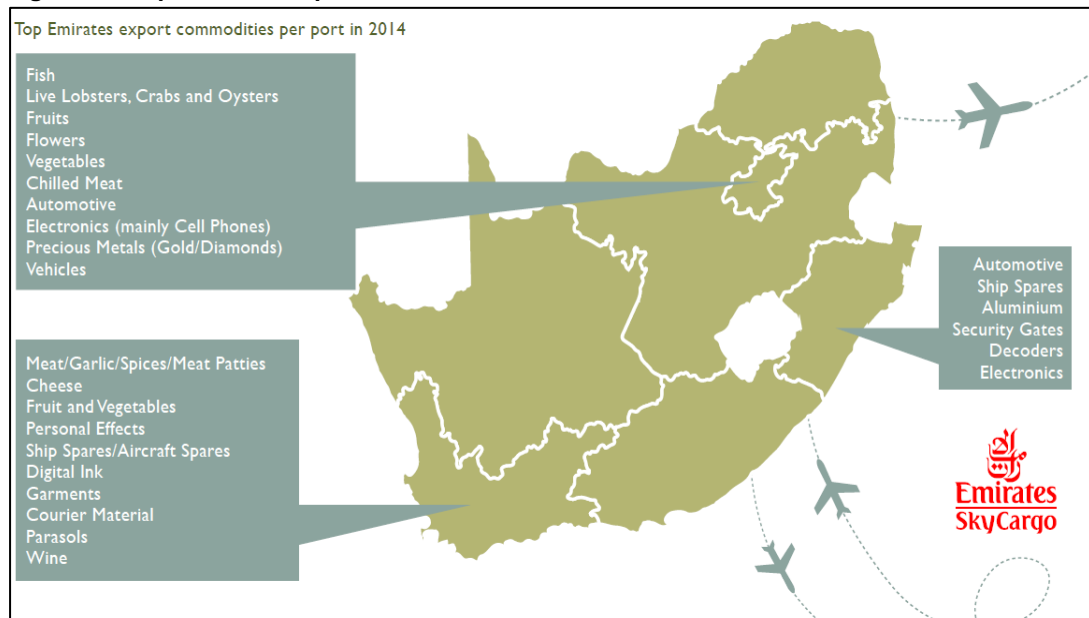
SkyCargo has been operating in South Africa since 1995 and has carried more than 600,000 tonnes of cargo on South African flights. In 2014, Emirates transported about 50,000 tonnes of cargo to and from South Africa. The majority of exports, by weight, were exported to Europe, the Middle East, and the BRICs (Brazil, Russia, India, and China) countries – Figure 10.

**Figure 10: Emirates SkyCargo top export destinations from South Africa 2014**



Source: Emirates (2015)

**Figure 11: Top Emirates export commodities from South Africa in 2014**



Source: Emirates SkyCargo (2015)

<sup>30</sup> <https://www.iata.org/whatwedo/cargo/Pages/index.aspx>

<sup>31</sup> Emirates (2015) *SkyCargo: Products and Services*

<sup>32</sup> The Stat Trade Times (2015) *Air Cargo Africa*

It is not possible to compute the monetised benefit of the Emirates air cargo operations because the value (as opposed to the weight) of air cargo is not disclosed for all goods. However, it is observable from Figure 11 that the export cargo supports the agricultural, aquacultural, maritime, and manufacturing sectors, which are all important drivers of economic development and job creation in South Africa.

### 5.2.1.3. General contribution to business travel

Studies have shown a strong relationship between the number of connecting flights, and exports and FDI,<sup>33</sup> as well as the importance of face-to-face business for securing business and investment.<sup>34</sup> Despite the advent of improved communications technology, face-to-face communication still remains the most effective means of enhancing business performance and innovation, particularly for complex products.<sup>35</sup> A 2009 Forbes study titled, *Business Meetings: The Case for Face-to-Face*<sup>36</sup>, found that 84% of executives surveyed saw tangible benefits to in-person meetings, and that these benefits outweigh the time and expense of travel. Some of the reasons given for this were the ability to build stronger relationships, read body language, bond with co-workers, and allow for more complex strategic thinking.

It has been estimated that Emirates enabled approximately 325,661 foreign travellers to come to South Africa in 2014. It can be inferred that approximately 12,000 of these passengers were inbound *business* travellers.<sup>37</sup> This computes to about 13% of the total business travellers arriving in South Africa in 2014 (out of 89,755 overseas business travellers).

### 5.2.2. Unique benefits

The previous section describes general benefits. However, economic theory suggests that general benefits may not be unique to Emirates. If Emirates had not provided flights then, theoretically, in a competitive market another provider would have entered the market and provided similar benefits. Therefore, the general benefits cannot be said to be strictly unique to Emirates.

This section sets out to identify *unique* benefits. These would cease to exist and would not be substitutable in the short term by another provider if Emirates were to leave the market. This would therefore constitute an absolute loss of benefit to the economy.

The analysis looks at unique benefits driven by connectivity, travel time and ticket fares and applies these to a hypothetical impact on tourism - see Appendix 3 for the full methodology.

First, all of the routes by which a foreign visitor could reach South Africa in 2014 by Emirates with one-stop were identified. There were 388 in total: 131 routes to Johannesburg, 129 destinations to Cape Town, and 128 to Durban.

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<sup>33</sup> World Travel and Tourism Council (2014) *Travel and Trade linkages Analysis of trends worldwide & within Asia-Pacific*; World Travel and Tourism Council (2012) *The Comparative Economic Impact of Travel & Tourism*

<sup>34</sup> See for instance Aradhyula & Tronstad (2003) Does Tourism Promote Cross-Border Trade? *American Journal of Agricultural Economics*, Vol. 85, pp. 569-579, August 2003; Harvard Business Review (2009) *Managing Across Distance in Today's Economic Climate: The Value of Face-to-face communication*; World Travel and Tourism Council (2012) *The Comparative Economic Impact of Travel & Tourism*

<sup>35</sup> Leo Jago & Margaret Deery (2010) *The Role of Face-to-face Communication and Networking to Underpin Business Development and Innovation*

<sup>36</sup> This study is based on a survey of 760 business executives conducted by Forbes Insights in June 2009. Half the respondents represented small businesses (under 100 employees), while 20% were from midsized businesses (100-999 employees), and 30% were from enterprises (1000-plus employees). In terms of title, 48% of respondents were either owners or C-level executives.

<sup>37</sup> Based on South African Tourism (2015) *2014 Annual Tourism Report*

For a sample week, information was collected and analysed for 366 routes.<sup>38</sup> The average duration of all Emirates flights on that route during the week, including layover time in Dubai, and the average price of a ticket of all flights was collected. The identical information was collected for a relevant comparator airline. The comparator was selected as a comparable competitor to Emirates being the airline offering the most frequent service on that route, or where the most frequent was Emirates.

### Unique connectivity

The analysis of 366 routes shows that Emirates provided 80 unique one-stop connections to South African airports in 2014. Seventy eight of these were connections to Durban King Shaka International – see Table 2. Additionally, Emirates was the only airline flying internationally to and from Durban King Shaka International in 2014.

**Table 2: Unique one-stop routes to Durban King Shaka International**

|            |             |                  |            |                    |               |
|------------|-------------|------------------|------------|--------------------|---------------|
| Adelaide   | Chennai     | Ho Chi Minh City | Madrid     | Riyadh             | Vienna        |
| Ahmedabad  | Chicago     | Houston          | Male       | Rome               | Warsaw        |
| Amman      | Colombo     | Hyderabad        | Manchester | San Francisco      | Washington DC |
| Athens     | Copenhagen  | Islamabad        | Manila     | Seattle            |               |
| Baghdad    | Dallas      | Jakarta          | Melbourne  | Seoul              |               |
| Bahrain    | Dammam      | Karachi          | Milan      | Shanghai           |               |
| Barcelona  | Delhi       | Kochi            | Moscow     | Sialkot            |               |
| Basra      | Dhaka       | Kolkata          | Muscat     | St Petersburg      |               |
| Beirut     | Dublin      | Kuala Lumpur     | Newcastle  | Stockholm          |               |
| Bengaluru  | Duesseldorf | Kuwait           | Nice       | Taipei             |               |
| Birmingham | Erbil       | Lahore           | Osaka      | Tehran             |               |
| Boston     | Geneva      | Larnaca          | Oslo       | Thiruvananthapuram |               |
| Brisbane   | Glasgow     | Lisbon           | Peshawar   | Tokyo              |               |
| Brussels   | Guangzhou   | Los Angeles      | Phuket     | Toronto            |               |
| Budapest   | Hamburg     | Lyon             | Prague     | Venice             |               |

Source: OAG (2015)

Without this service, travellers to and from Durban on 78 routes would have needed to take two lay-over stops. This is an important factor for travellers as lay-overs are appealing. It suggests that the Emirates service is particularly important in linking Durban, a central trade and tourism hub, to the rest of the world, and particularly to non-hub, secondary cities such as Glasgow, Hamburg, Dublin, Manchester and Nice. This also supports the KwaZulu-Natal provincial government's intentions to make King Shaka International an aerotropolis - see Box 2.

<sup>38</sup> Some routes were not included owing to unavailability of data, or a temporary cessation of services owing to political instability e.g. Tripoli in Libya.

## Box 2: Durban King Shaka International Aerotropolis

King Shaka International Airport is a key player in the development of the Aerotropolis centred on Durban King Shaka International, Aerotropolis: KZN.

An Aerotropolis is an urban plan in which the layout, infrastructure, and economy is centered on an airport. The logic behind the Aerotropolis concept is that airports offer connectivity to suppliers and customers across the globe. Many of the businesses around airports can often be more dependent on distant suppliers or customers than on those locally. The Aerotropolis encompasses a range of commercial facilities supporting both aviation-linked businesses and air travellers who pass through the airport.

The objective of the development is the facilitation of trade and economic development in the province as well as helping the airport to become the centre of an economic node, near KwaZulu-Natal's biggest city and primary manufacturing centre.

*Source: Dube Tradeport (2013) We Are Aerotropolis: KZN [Online] Available: <http://aerotropolis.kzn.com/>.*

### Combined benefits from travel times and ticket fares

The travel time of flights and ticket fares on both Emirates and the comparator was used to calculate a generalised travel cost (GTC) – a single monetised value that takes into consideration travel time and value of travel time saved (VTTS)<sup>39</sup>, according to the following formula:

$$\text{GTC} = (\text{VTTS} \times \text{Time travelled}) + \text{Ticket Fare}^{40}$$

This allows a comparison to be made of time taken on each route as well as price between Emirates and the comparator. This approach allows three of the four key decision points that a consumer would consider when choosing an airline to be included in one calculation: a) who has the best price; b) who has the quickest connection – a consideration of flight time and number of stop-overs; and c) who has the most frequency. The other key driver, quality of service, was not part of the analysis as it is not easily monetised, however, it is contended that quality of service would likely to have been in Emirates' favour, as the airline has been repeatedly recognised for providing high quality of service - see Appendix 5 for the list of quality of service awards. Thus the exclusion of a quality of service measure in the analysis does not provide an unfair advantage to Emirates over a competitor, possibly the contrary.

The GTC of Emirates was compared to the comparator on 366 routes. Emirates provided consumers with a better GTC on 251 routes (69%).

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<sup>39</sup> VTTS means Value of Travel Time Saved, which is a monetised value of travel time. VTTS differs depending on mode of travel and region of origin of the passenger travelling.

<sup>40</sup> See Appendix 3 for full explanation of methodology.

**Figure 12: Percentage of regional routes where Emirates displays an advantage over competitors based on travel time and ticket fares**



Source: Genesis Analytics (2015)

Importantly, regions where Emirates showed better competitiveness in GTC included Western Europe, Central Europe, North America, North East Asia and North and Central/Western Africa. These regions include the top five inbound tourist markets: United Kingdom, United States of America, Germany, France and the Netherlands, as well as the important emerging tourism market of China. This indicates that Emirates is an important link in connecting the most important tourist markets to South Africa with routes that are fast and well-priced.

To calculate the difference a more competitive GTC makes to tourism, a “no Emirates” scenario was applied.

On routes where the comparator had a better GTC than Emirates, a “no Emirates” scenario, would leave them no worse off. On routes where Emirates had a better GTC a “no Emirates” scenario would mean that passengers would have to move to a higher GTC comparator. Effectively, the flight would “cost” the passenger more and some passengers would find the new GTC too expensive. Some would choose not to fly or to holiday in another country with cheaper GTC connectivity.

Applying the IATA-calculated price elasticity of demand<sup>41</sup> it is possible to calculate theoretically what the change in passengers would be from the resultant change in GTC from a “no Emirates” scenario. A conservative estimate is that South Africa would have suffered a loss of 140,347 tourists on the routes that Emirates operates. This would be the loss of about 5% of air tourist arrivals in 2014.

Applying the number of lost travellers to the regional tourist spending patterns suggests that in a “no Emirates” scenario the South African economy would stand to lose US\$181 million (ZAR 1.9 billion) in direct tourist expenditure, which translates to about a 2% loss of total foreign direct tourist spending in 2014.

The direct tourism expenditure has a multiplier of 1.2 million per ZAR 1 million (US\$1 million), and thus would result in a direct, indirect and induced loss of US\$214 million (ZAR 2.3 billion) to South Africa in 2014. Similarly, the direct tourism expenditure has a multiplier of 4 jobs per

<sup>41</sup> Price elasticity of demand is a measure used in economics to show the responsiveness, or elasticity, of the quantity demanded of a good or service to changes in its price, all other things staying the same. If demand is perfectly elastic, it means that a small change in price leads to a large fall in demand. If demand is inelastic, it means that a change in price leads to a larger fall in demand.

ZAR 1 million. Therefore, this direct tourism expenditure would be associated with a loss in 8,713 jobs in the South African economy in 2014.

Therefore, in 2014 Emirates secured a *unique* benefit through tourism of US\$154 million (ZAR 2.3 billion) and supported 8,713 jobs in the South African economy.<sup>42</sup>

### **5.2.3. Wider consumer choice and competitiveness**

Competition between airlines in the aviation industry encourages improvements in service quality and puts downward pressure on prices. Emirates has won many awards for the high quality of service it provides (see Appendix 5); it offers competitive prices and a wide range of routes. In a competitive market, this is expected to create an incentive for competitors to lower their prices, improve their services or become more innovative - all passengers would benefit from this outcome, whether fly with Emirates or not.

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<sup>42</sup> In a “no Emirates” scenario there would also be losses to trade and to business connectivity in addition to the losses to tourism. These cannot be monetised.



## **6. PARTNERSHIP CONTRIBUTION**

The second level of contribution is partnership benefits between Emirates and other participants in the aviation sector, specifically the partnership with SAA.

### **6.1. CODESHARE**

#### **6.1.1. Codeshare description and benefits**

A codeshare is a co-operative arrangement whereby airlines carry passengers whose tickets have been issued by another airline. The intent is to provide passengers with a wider choice of destinations than any individual airline might offer on its own.

Most of the major airlines today have codesharing partnerships with other airlines, and codesharing is a key feature of the major airline alliances.

The term "code" refers to the identifier used in the flight schedule (generally the two-character IATA airline designator code and flight number). Thus, code EK123 (flight number 123 administered and operated by Emirates), might also be sold by SAA as SA456. SAA is, in this case, called the marketing carrier.

Typically, in a block arrangement, the marketing carrier purchases a fixed number of seats from the operating carrier, where a fixed price is paid, and the seats are managed separately to the operating carrier's own inventory. The marketing carrier decides which booking classes the seats are sold in, and at which price. The block of seats is optimised by the marketing carrier, in the same way that seats are optimised on its own aircraft.

The passenger benefits of code-sharing include a clearer routing, thereby allowing a customer to book travel from point A to C through point B under one carrier's code, instead of a customer booking from point A to B under one code, and from point B to C under another code. This provides connectivity and time saving benefits to travellers. It also provides security to the passenger who misses a first flight – if the flights are booked separately the second airline has no responsibility to accept a late or no-show passenger; on a codeshare flight the second airline is unlikely to charge extra fees or deny boarding should the first, cooperating airline cause a delay.

The airline benefits of code-sharing are an increase in the frequency of service on the route by one airline; gaining exposure to new routes which are not operated by that airline; and a reduction in operating costs on capacity provided to a codeshare partner.

#### **6.1.2. SAA and Emirates codeshare benefits**

Emirates and SAA have had a codeshare agreement in place since 1997. This allows SAA to market and sell seats on Emirates flights and routes. To date, Emirates has sold nearly 600,000 seats to SAA for on-sell to the market. In 2014, SAA had access to about 54,000 codeshare seats on Emirates flights.

This has value for Emirates who has been able to sell seats on flights through SAA that it may not have been able to sell directly to its own passengers. It also has value for SAA because it allows SAA to increase the frequency of service it offers to the public on codeshare routes; to offer routes to customers that it otherwise would not be able to; and allows SAA to make a margin on seats sold on Emirates flights.

## 6.2. INTERLINE PASSENGERS

Interlining (also known as interline ticketing) refers to an agreement between airlines to transport passengers and cargo on routes that otherwise would require multiple airlines for the passenger or cargo to reach its destination.

Interlining creates cost and convenience benefits for passengers. An interline ticket is usually cheaper than the sum of two separate fares. In addition, interline airlines can (but not always) automatically transfer baggage at the connecting airport for the passenger. Only one reservation is required, and passengers and cargo can move seamlessly from an airline on the first leg of a journey to a different airline on the second or third leg of a journey, with an assurance that their itinerary will be based on workable connection times.

The benefits to the airlines are that together they can offer a more competitive fare than if the customer were to reserve airlines separately. It allows an airline to offer a wider range of routes to customers and can also provide higher volumes of connecting passengers for onward connection to routes where they have a competitive advantage. There are also cash flow benefits for the airline that issues the reservation, as the price of both legs is collected at payment (before being paid over to the partner at an agreed rate).

### 6.2.1. SAA and Emirates interline benefits

Emirates and SAA have an interline agreement in place, which creates benefits for both parties. SAA has strategically marketed itself, through its Johannesburg hub, as the provider of choice to connect the world to African destinations and Africa to the world<sup>43</sup>. SAA also uses its Johannesburg hub to connect to smaller domestic airports within South Africa. The interline agreement provides a high volume of passengers to SAA who are flying through Dubai to Johannesburg, Cape Town and Durban, for onward travel to smaller domestic airports in South Africa (where Emirates does not offer service) or for onward travel to other African destinations.

Conversely, Emirates benefits from access to SAA interline travellers travelling from smaller airports in South Africa or other African destinations to Johannesburg, Cape Town and Durban, for onward travel through Dubai. This allows Emirates to service African routes (particularly southern African routes) on which it would otherwise have little competitive advantage because of lack of flights and due to Dubai's geographical position.

In 2014/15, more than 57,000 outbound passengers transferred from an SAA flight to an Emirates flight, in terms of the interline agreement, for onward travel to Dubai, while more than 50,000 inbound passengers transferred from an Emirates flight to an SAA flight in terms of the interline agreement. Approximately half of the inbound passengers connected to SAA flights to smaller domestic airports such as those in Port Elizabeth, Bloemfontein, George, East London, Upington, Kimberley, and Richards Bay; while the other half connected to onward African destinations such as Maputo in Mozambique, Gaborone in Botswana, Maseru in Lesotho, and Harare in Zimbabwe.

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<sup>43</sup> SAA's branding tagline is "*Bringing the world to Africa and Africa to the world*"

## 7. FOOTPRINT CONTRIBUTION

The third level of contribution is the Group's economic "footprint". This is the value created by the *core operational activities* of the company indicated by contribution to GDP and employment created. A detailed methodology is available in Appendix 4.

### 7.1. CONTRIBUTION TO GDP

#### 7.1.1. Direct impact

The Group's direct economic impact comprises of gross value added (GVA) which is a measure of the contribution made to GDP. The standard definition of GVA is the total production (also called revenue or turnover) less expenditure on goods and services.

In 2014, the GVA of the Group's direct economic impact to the South African economy amounted to US\$70 million (ZAR 760 million).

#### 7.1.2. Indirect impact (supplier spending)

The Group purchases local goods and services as inputs to its operations. Operational expenditure (opex) on goods and services creates demand in the supply chain and stimulates further economic value. The most important goods and services for the Group are:

- *Petroleum products:* Fuel uplift is a significant proportion of local expenditure. In 2014/15, Emirates lifted 47 million gallons of fuel from South African suppliers for its South African operations.
- *Airport transport services:* The Group pays airport taxes, landing fees and handling costs to South African aviation authorities.
- *Hotel and catering services:* The Group procures meals<sup>44</sup>, inflight catering, and incurs crew layover costs. In addition, dnata Newrest procures food stuffs from Little Bites, a food wholesaler.
- *Other business services:* The Group also spends on business services such as corporate overheads, communications services, and information technology.

The indirect impacts of the Group's operations generated through its supplier spend, amounted to US\$156 million (ZAR 1.7 billion). This computes to economic multiplier of ZAR 0.7 million GVA for every ZAR 1 million in opex spending.

#### 7.1.3. Induced contribution (employee spending)

The Group also has an economic impact when employees, or the employees of the Groups' suppliers, spend their wages and salaries in the economy. This employee spend induces demand for goods and services which generates further GVA.

The induced economic impact of employee spend in 2014/15 amounted to US\$191 million (ZAR 2.1 billion).

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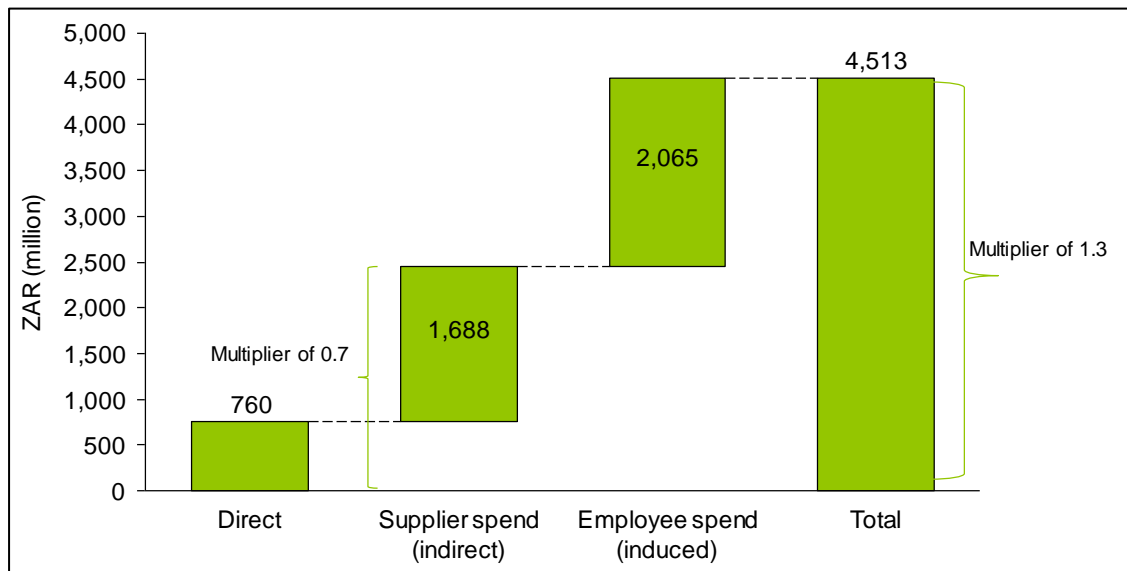
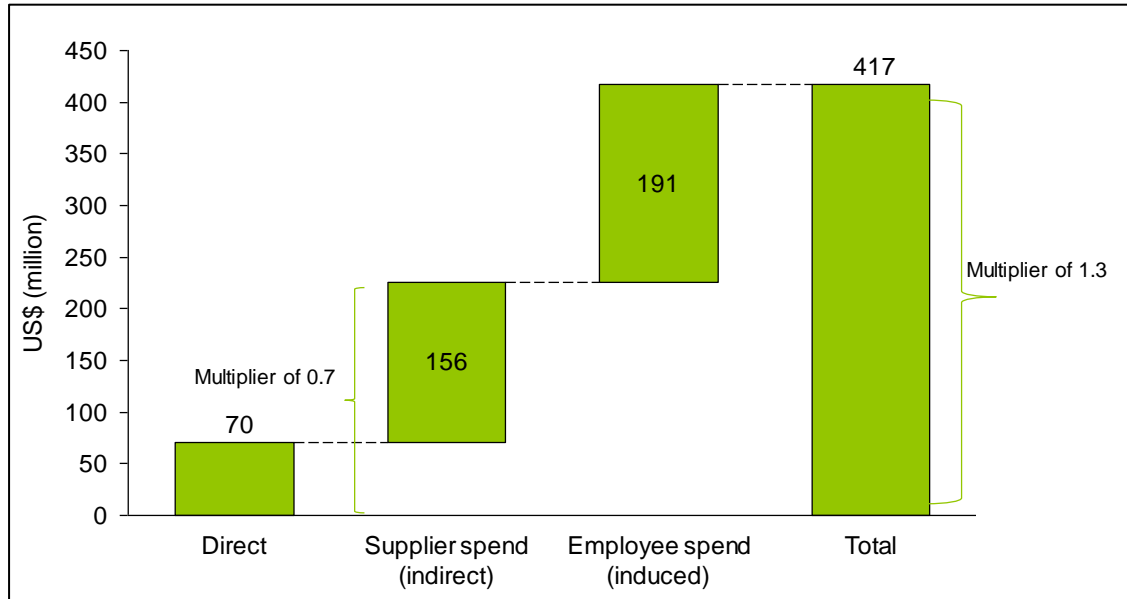
<sup>44</sup> Emirates operating expenditure on dnata Newrest goods and services has been deducted from Emirates input spending in order to avoid double-counting and overestimation.

### 7.1.4. Combined contribution

The combined direct, indirect, and induced economic value-add to the economy in 2014/15 amounted to US\$417 million (ZAR 4.5 billion). This approximates to 7% of the direct, indirect and induced impact of the South African aviation sector as a whole (which is estimated at US\$5.8 billion or ZAR 62 billion).<sup>45</sup>

The combined direct, indirect and induced figure computes to an economic multiplier of 1.3. In other words, for every ZAR 1 million spent on operational expenditure by the Group another ZAR 1.3 million of value is generated in GVA for the economy directly, indirectly and by the induced effect.

**Figure 13 and Figure 14: Combined gross value added by the Group in 2014/15**



Source: Emirates (2015), Genesis Analytics analysis

Note: Multipliers are expressed as GVA per unit of Emirates opex. Opex in 2014/15 was US\$325 million or ZAR 3.5 billion.

<sup>45</sup> Oxford Economics (2011) *Economic Benefits from Air Transport in South Africa*. Data from 2009, inflated to 2014.

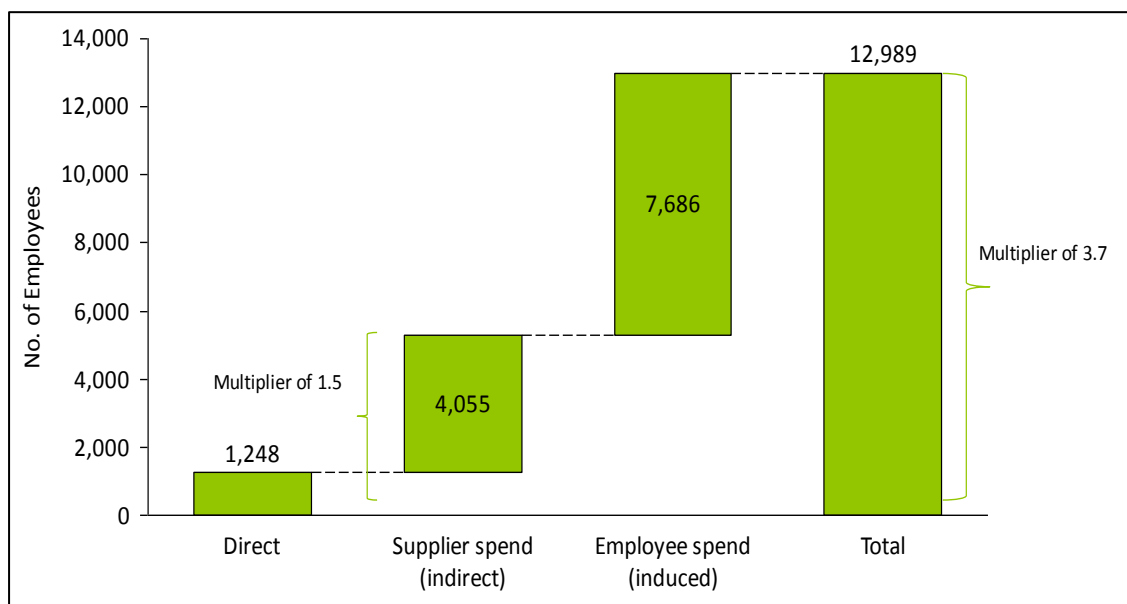
## 7.2. EMPLOYMENT CREATED

The Group contributes to the economy through its creation of employment. The Group employed a total of 1,248 people in South Africa in 2014/15: 147 employees in Emirates, 651 employees in dnata Newrest, and 450 employees in Mindpearl.

Indirect employment generated by the Group's supplier spend, supported another 4,055 jobs. Induced employment generated by the spending of the Groups' employees, and its suppliers' employees supported a further 7,686 jobs.

Thus, total employment (direct, indirect and induced) supported by the Group in 2014/15 was 12,989 jobs. A jobs multiplier can be deduced from this estimate. The jobs multiplier can be thought of as the increase in employment contribution to the economy generated by a ZAR 1 million or US\$1 million increase in operational expenditure, respectively. The jobs multiplier for the Group in 2014/15 is calculated as 3.7 jobs per ZAR 1 million increase in OPEX spending.

**Figure 15: Total employment supported by the Group in 2014/15**



Source: Emirates (2015), Genesis Analytics analysis

Note: Multipliers are expressed as GVA over Emirates opex. Emirates opex in 2014/15 was ZAR 3.5 billion

12,989 jobs is equivalent to approximately 6% of the 227,000 jobs created by the South African aviation sector as a whole, through its direct, indirect and induced impact.<sup>46</sup>

## 7.3. ECONOMIC DEVELOPMENT

### Black economic empowerment

South African B-BBEE legislation encourages companies to become increasingly black-owned and black-managed, to invest in training and skills development of staff, to develop suppliers from previously disadvantaged backgrounds, and to invest in economic development initiatives. As a foreign company, Emirates is not subject to the B-BBEE legislation but does submit an annual Employment Equity Plan to the South African Department of Labour.

<sup>46</sup> Comparator from Oxford Economics (2011) *Economic Benefits of the Air Transport in South Africa*.

## Training and skills development<sup>47</sup>

Emirates is a member of the Culture, Arts, Tourism, Hospitality and Sport Sector Skills Education Training Authority (CATHSSETA). In 2014, Emirates paid skills development levies to CATHSSETA and 92 of the company's 147 staff members attended a total of 197 training events. The courses with the highest number of attendees were in developing leadership and supervisory skills. These topics were chosen as priority courses in order to develop leadership skills internally, both for development and progression of previously disadvantaged staff (in line with the firm's Employment Equity Plan). Furthermore, Emirates provided an internship programme, "Work Integrated Learning", for unemployed students from Further Education and Training (FET) colleges.

## Corporate responsibility

The Group supports charitable initiatives within South Africa through two foundations: the Emirates Airline Foundation and dnata4good. The Emirates Airline Foundation presently supports the Singakwenza Education. Singakwenza is a KwaZulu-Natal based non-profit organisation (NPO) which aims to provide low cost, high impact education and health through empowerment programmes to economically disadvantaged communities, particularly in rural areas. It offers an Early Childhood Development (ECD) mentorship programme for caregivers in economically disadvantaged crèches; mobile clinic services for primary health care and counselling for rural workers and their families; an HIV intervention programme based on a peer education model for rural workers, particularly in the agricultural and forestry sectors; and waste workshops to teach educators in areas where access to resources is limited to make their own toys and teaching aids using recycled materials.

The Emirates Airline Foundation also supports Fikelela Children's Centre in Khayelitsha, Cape Town. The centre provides care and housing for up to 40 young children, from 0 to 8 years old, who have been abandoned, neglected, or orphaned, and who are affected by or infected with HIV/AIDS. Children are nursed back to health and put on anti-retrovirals (ARV), placed into educational facilities and provided with early childhood development programmes, including sport and recreation. The Emirates Airline Foundation began supporting the running costs of the centre in 2013. The foundation has also committed to funding an extension of the centre, with the construction of a new building on the premises, as well as financing a new roofing project.

dnata4good supports wildlife preservation in South Africa. The organisation supports a number of volunteer organisations that save and protect rhino and other endangered species. The volunteer organisations include "Saving the Survivors" which assists animals injured during poaching attempts and "Rhino Revolution" a charity that is building an orphanage for rhinos in the lowveld region in Limpopo Province.

## Sponsorships

In 2014, Emirates entered into a five-year partnership to sponsor the Johannesburg-based Lions rugby team, now known as the Emirates Lions. The agreement established Emirates as the title sponsor of the Lions Rugby team and entitled the company to naming rights to the Lions' home ground Ellis Park Stadium, now known as Emirates Airline Park.

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<sup>47</sup> Information provided by Emirates.

## 8. SCENARIO ANALYSIS

Emirates provides 18,726 weekly seats to South Africa. This section tests two scenarios in which the seats are increased and assesses the associated impacts.

- **Scenario 1:** The up-gauge of one Boeing 777 service to Cape Town International to an Airbus A380; and the up-gauge of two Boeing 777 services to Johannesburg O.R. Tambo to Airbus A380s – constituting an additional 3,465 weekly seats; and
- **Scenario 2:** The introduction of a second daily Boeing 777 flight into Durban King Shaka – constituting an additional 2,996 weekly seats.

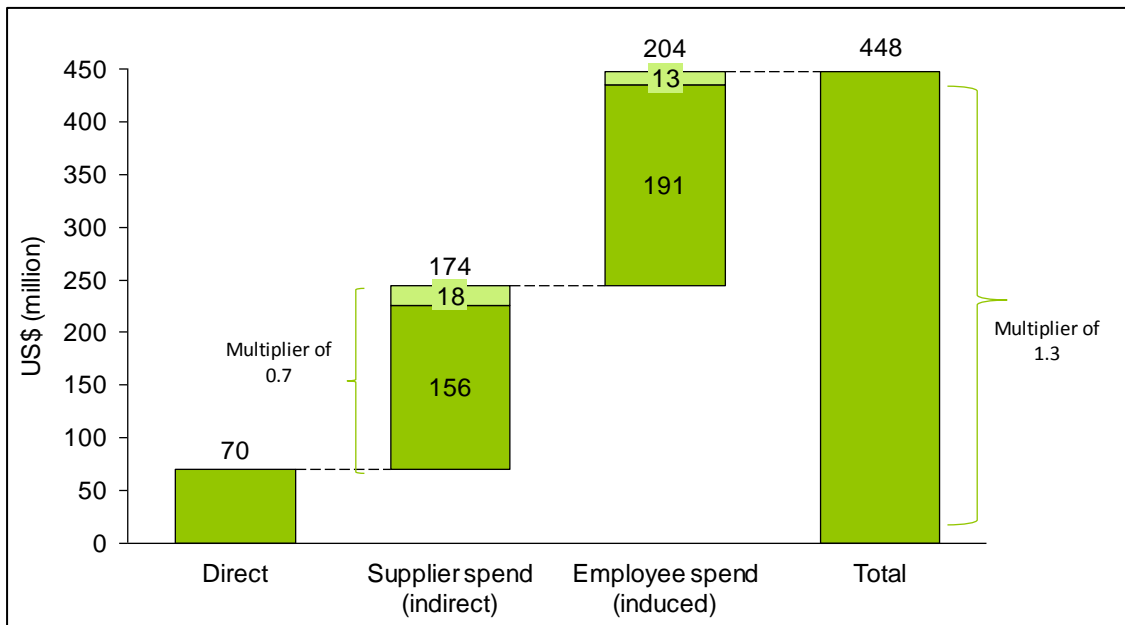
The following section will summarise the impact that each scenario would have on the GVA, employment and tourism benefits generated by the Group, using forecasts from the SAM model (refer Appendix 4 for the methodology).

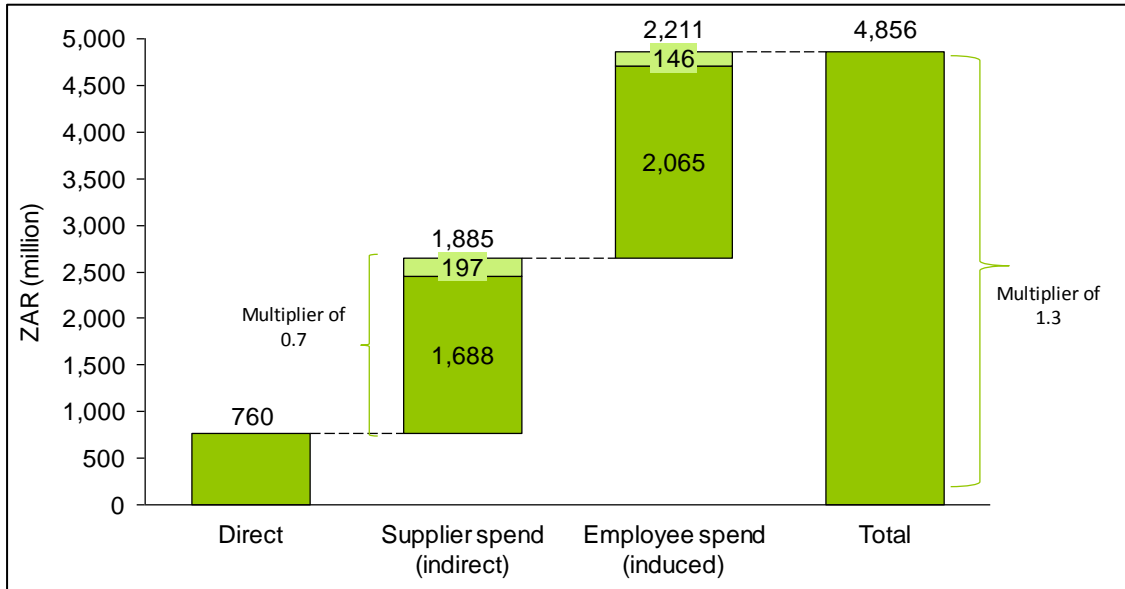
### 8.1. RESULTS FOR SCENARIO 1

It is assumed that the up-gauge of one Boeing 777 service to Cape Town International to an A380 and the up-gauge of two Boeing 777 services to A380s to Johannesburg O.R. Tambo will result in a 19% increase in operations or an additional 3,465 weekly seats. It is assumed that seat factors do not change and that while fixed costs remain constant, variable costs will change accordingly.

The model estimates that the implementation of Scenario 1 will increase the direct contribution of the Group to the South African economy by US\$31 million (ZAR 343 million) to US\$448 million (ZAR 4.9 billion). This is the equivalent to an 8% increase in economic contribution over current contribution.

**Figure 16 and Figure 17: Scenario 1 economic results**



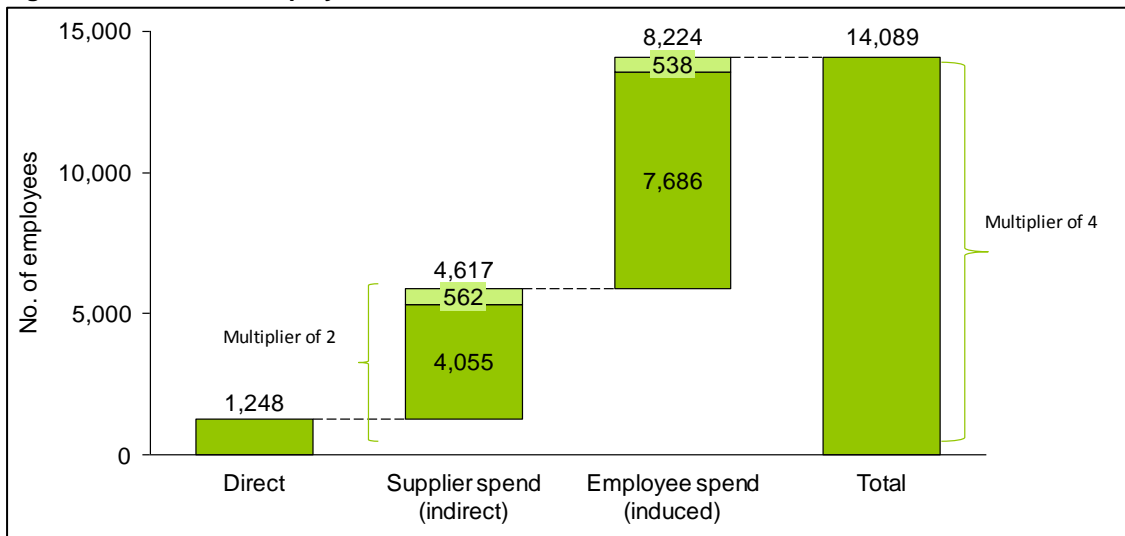


Source: Emirates (2015), Genesis Analytics analysis

Note: Multipliers are expressed as GVA over the Group Scenario 1 Operational Expenditure. The Group Scenario 1 operational expenditure is estimated at US\$352 million or ZAR 3.8 billion

The model estimates that when indirect and induced effects have been accounted for, total employment supported by the Group will increase by 1,100 jobs to 14,089 jobs.

**Figure 18: Scenario 1 employment results**



Source: Emirates (2015), Genesis Analytics analysis

Note: Multipliers are expressed as GVA over the Group Scenario 1 Operational Expenditure. The Group Scenario 1 operational expenditure is estimated at US\$352 million or ZAR 3.8 billion

Using 2014 seat factors, it is estimated that Scenario 1 will bring additional 117,302 passengers to South Africa, representing a 19% increase in Emirates inbound passenger intake.<sup>48</sup> This will result in an increase in tourists enabled by Emirates by 19% to 386,658 and a proportionate increase tourism expenditure enabled by Emirates by 19% to US\$481 million (ZAR 5.2 billion).

The direct tourism expenditure has a multiplier of ZAR1.2 million in GVA per ZAR 1 million in expenditure and thus would result in a direct, indirect and induced contribution of US\$569 million (ZAR 6.2 billion). Similarly, the direct tourism expenditure has a multiplier of 4 jobs per

<sup>48</sup> Assuming no external restrictions on demand to come to South Africa.



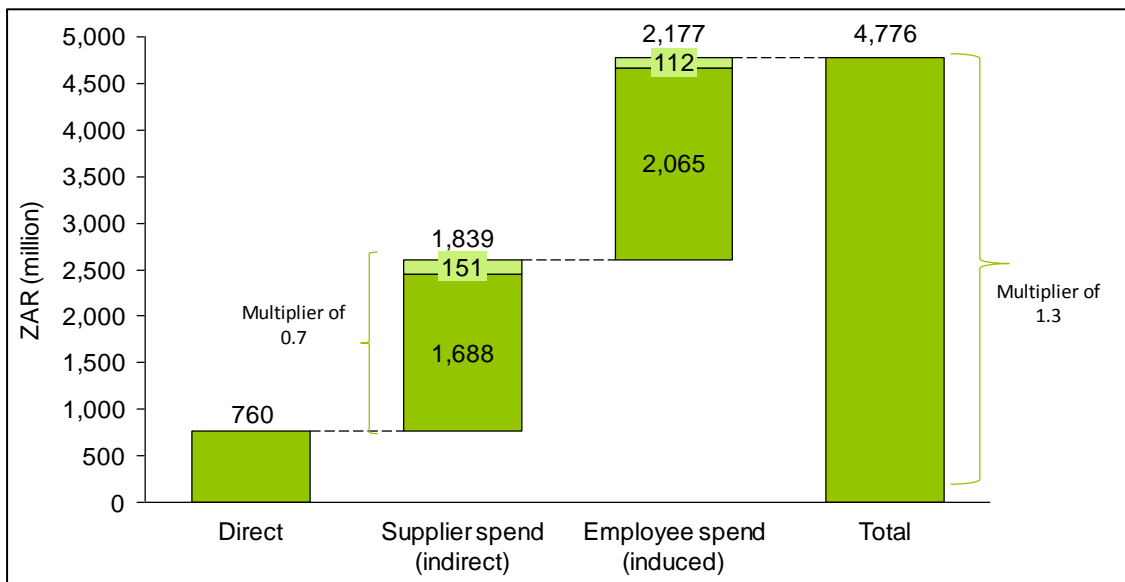
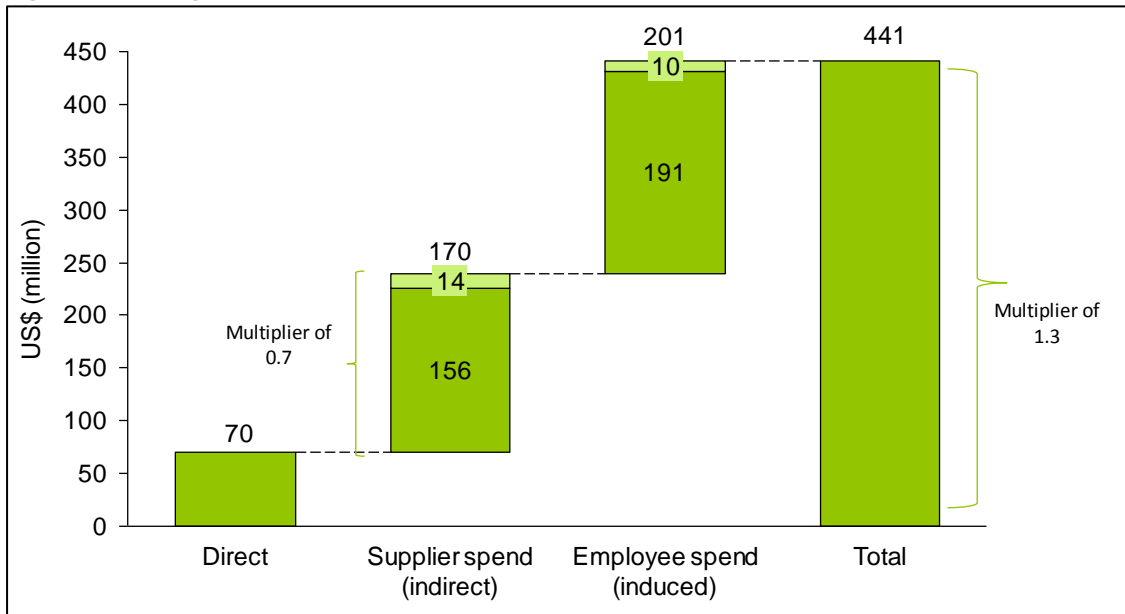
ZAR 1 million. Therefore, this direct tourism expenditure would be associated with a contribution of additional 23,133 jobs in the South African economy.

## 8.2. RESULTS FOR SCENARIO 2

It is assumed that the introduction of a second daily B777 flight into Durban King Shaka International will result in a 14% increase in Emirates operations or an additional 2,996 weekly seats.

The model estimates that Scenario 2 would increase the total economic contribution generated by the Group by US\$24 million (ZAR 263 million) to US\$441 million (ZAR 4.8 billion). This computes to a 6% increase in economic contribution over current contribution.

**Figure 19 and Figure 20: Scenario 2 economic results**

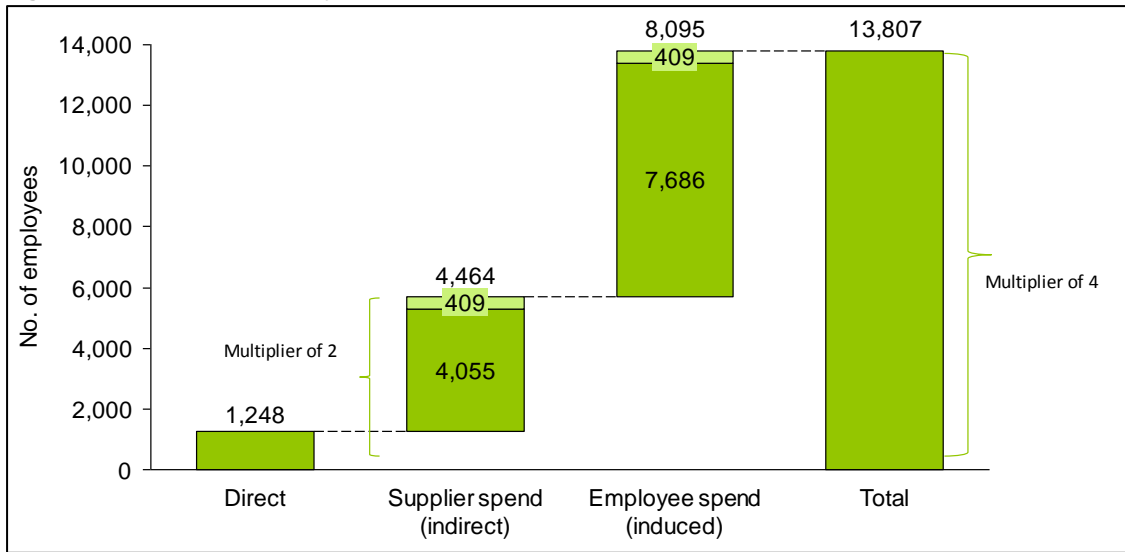


Source: Emirates (2015), Genesis Analytics analysis

Note: Multipliers are expressed as GVA over the Group Scenario 2 Operational Expenditure. The Group Scenario 2 operational expenditure is estimated at US\$344 million or ZAR 3.7 billion

The model estimates that when indirect and induced effects have been accounted for, the Group's total employment contribution will increase by 818 jobs to 13,807 jobs supported in the South African economy.

**Figure 21: Scenario 2 employment results**



Source: Emirates (2015), Genesis Analytics analysis

Note: Multipliers are expressed as GVA over the Group Scenario 2 Operational Expenditure. The Group Scenario 2 operational expenditure was estimated at ZAR 3.7 billion

Using 2014 seat factors, it is estimated that Scenario 2 will bring an additional 87,078 passengers into South Africa, representing a 14% increase in Emirates' 2014 inbound passengers. This will result in an increase in tourists enabled by Emirates by 14% to 370,941 and a proportionate increase tourism expenditure enabled by Emirates by 14% to US\$462 million (ZAR 5 billion).

The direct tourism expenditure has a multiplier of ZAR 1.2 million in GVA per ZAR 1 million in expenditure and thus would result in a direct, indirect and induced contribution of US\$556 million (ZAR 6 billion). Similarly, the direct tourism expenditure has a multiplier of 4 jobs per ZAR 1 million in expenditure. Therefore, this direct tourism expenditure would be associated with a contribution of 22,193 additional jobs to the South African economy.

**Table 3: Summary of economic impact of Emirates Group operations in South Africa in 2014/15**

| <b>OPERATIONS IN 2014/15</b>  |
|---|
| <p>18,726 weekly seats<br/>(1.2 million passengers to and from South Africa in 2014)</p>  |
| <b>ECONOMIC CONTRIBUTION</b>  |
| <ul style="list-style-type: none"> <li>• Direct: US\$70 million (ZAR 760 million)</li> <li>• Indirect: US\$156 million (ZAR 1.7 billion) contribution from supplier spending</li> <li>• Induced: US\$191 million (ZAR 2.1 billion) contribution by employee spending</li> <li>• <b>Total: US\$417 million (ZAR 4.5 billion) contribution to the South African economy - 7% of the aviation sector as a whole</b></li> </ul>         |
| <b>EMPLOYMENT CONTRIBUTION</b>  |
| <ul style="list-style-type: none"> <li>• Direct: 1,248 employees directly employed by the Group</li> <li>• Indirect: 4,055 jobs supported by Group supplier spending</li> <li>• Induced: 7,686 jobs supported by Group and supplier employee spending</li> <li>• <b>Total: 12,989 jobs supported in the South African economy</b></li> </ul>  |
| <b>TRADE AND TOURISM</b>  |
| <ul style="list-style-type: none"> <li>• Inbound tourists: approximately 325,661 (13% of foreign air tourist arrivals)</li> <li>• Of which business travellers: approximately 12,000</li> <li>• <b>Total tourist expenditure enabled: US\$479 million (ZAR 5.2 billion) and supported 19,484 jobs</b></li> </ul>  |
| <b>GROWTH SCENARIO 1</b>  |
| <ul style="list-style-type: none"> <li>• Direct: US\$448 million (ZAR 4.9 billion)</li> <li>• Total job contribution: 14,089 (1,100 increase in jobs)</li> <li>• Tourism contribution: 386,658 tourists and US\$481 million (ZAR 5.2 billion) in tourist expenditure (a 19% increase)</li> <li>• <b>Total direct, indirect and induced contribution: US\$569 million (ZAR 6.2 billion) and an additional 23,133 jobs</b></li> </ul> |
| <b>GROWTH SCENARIO 2</b>  |
| <ul style="list-style-type: none"> <li>• Direct: US\$441 million (ZAR 4.8 billion)</li> <li>• Total job contribution: 13,807 jobs (818 increase in jobs)</li> <li>• Tourism contribution: 370,941 tourists and US\$462 million (ZAR 5 billion) in tourist expenditure (a 14% increase)</li> <li>• <b>Total direct, indirect and induced contribution: US\$556 million (ZAR 6 billion) and an additional 22,193 jobs</b></li> </ul>  |

# GLOSSARY

## **Investment Corporation of Dubai (ICD)**

ICD was established in May 2006 under a mandate to consolidate and manage the Government of Dubai's portfolio of commercial companies and investments; and provide strategic oversight to the portfolio. It has an objective to maximize stakeholder value, for the long-term benefit of the emirate, by developing and implementing effective investment strategies and corporate governance policies.

## **National Development Plan (NDP)**

The NDP is a long-term strategic plan or policy framework geared towards the improvement of a country's economic growth and prospects. It defines desired goals and identifies the role different sectors of society need to play in reaching that goal. At its core the NDP serves four broad objectives:

- Providing overarching goals for what the South African Government want to achieve by 2030.
- Building consensus on the key obstacles to achieving these goals and what needs to be done to overcome those obstacles.
- Providing a shared long-term strategic framework within which more detailed planning can take place in order to advance the long-term goals set out in the NDP.
- Creating a basis for making choices about how best to use limited resources.

## **Operational Expenditure (OPEX)**

Operational expenditures are the ongoing costs for running a product, business, or system.

## **South African Airways (SAA)**

South African Airways (SAA) is the national flag carrier and largest airline of South Africa. SAA is the leading carrier in Africa, serving 56 destinations, in partnership with SA Express, SA Airlink and its low cost carrier, Mango, within South Africa and across the continent, and nine intercontinental routes from its Johannesburg hub. It is a member of the largest international airline network, Star Alliance.

## **South African Tourism (SAT)**

South African Tourism is the agency responsible for the promotion of tourism to South Africa.

## **Small Medium and Micro Enterprises (SMME)**

Small Medium and Micro Enterprises are entities, whether or not incorporated or registered under any law, which consist mainly of persons carrying on small business concerns in any economic sector, or which has been established for the purpose of promoting the interests of or representing small business concerns, and includes any federation consisting wholly or partly of such association, and also any branch of such organisation.

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# APPENDICES

## APPENDIX 1: REPORT NOTES

Genesis Analytics provides the following professional disclosures in respect of this report:

- This study is an analysis of the economic benefits of Emirates operations and thus does not address any potential unintended consequences of Emirates' operations;
- The analysis addresses Emirates' contribution at a national level and does not include additional benefits at a regional, municipal, or community level;
- The analysis does not address any environmental impacts; and
- Except where external sources are referenced, the information required to prepare this report was provided to Genesis by Emirates.

Genesis confirms that this is an independent assessment of the economic impact of Emirates Group operations in South Africa based on the information provided.

## APPENDIX 2: METHODOLOGY TO IDENTIFY UNIQUE ONE-STOP ROUTES

Definition: Unique, one-stop, and direct – These are routes between South African international airports and the rest of the world that only Emirates offers, i.e. all other airlines or alliances only offer a route with two or more stops between the South African international airports and the rest of the world.

Search methodology:

OAG data was filtered to determine the Emirates flights with a one-stop through Dubai (excluding African destinations): List A

OAG data was filtered to determine all direct flights to South Africa (on all airlines): List B

Any final destination on List B was removed from List A: (List A – List B = List C)

List C therefore represents routes from Dubai that cannot be reached from South Africa by a direct flight, i.e. a passenger from South Africa would have to connect/stop at least once before reaching any final destinations from List C.

A search engine was then used to determine if these routes could be reached with a one-stop on an alternative airline. After filtering, a list of unique one-stop routes was established.

## APPENDIX 3: METHODOLOGY FOR TRAVEL TIME AND TICKET FARE ANALYSIS

### Step 1: Emirates Serviced Routes

We used OAG data to determine all the inbound passenger destinations to South African international airports with Emirates.

Passengers could access South Africa from 131 destinations with Emirates in 2014.

### Step 2: Flight Data Collection

Using an online travel search engine, we determined Emirates and a comparator airline's flight data, ticket fare and flight duration for each of the routes.

The search was conducted in a selected week, 2 months in advance of the time of data collection.

The alternative was selected as the airline offering the most frequent service on that route.

The search was filtered to only display economy class flights, and shortest duration.

The ticket fare and flight duration data was recorded from each of the flights. The data corresponding with the shortest duration on each day for the week was chosen. Average ticket fares and duration were then established on this basis.

#### Notes:

The list of destinations obtained from OAG provided data for destinations in 2014. For the purposes of the analysis we assumed this list remained the same in 2015<sup>49</sup>.

No data was available on the search engine for a number of destinations and as a result we used data for 366 routes:

- 123 to JNB
- 121 to DUR
- 122 to CPT

### Step 3: Generalised Travel Cost (GTC) Calculation

We monetised the time associated with flying using estimates for Value of Travel Time Saved (VTTS) determined from a literature review. The literature review evidenced the following VTTS estimates:

- VTTS for UK air passengers: US\$16.97
- VTTS of time for European air passengers: US\$16.78
- VTTS of time for US air passengers: US\$42.40
- VTTS of time for other passengers: US\$16.78

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<sup>49</sup> It has been subsequently ascertained that in 2015: the services from Tripoli were terminated on 29 July and the services from Kozhikode were suspended on 1 May.



We then calculated the GTC associated with Emirates and the alternative airline for all the routes operated by Emirates as determined from the OAG data. The GTC formula used is as follows:

$$\text{GTC} = (\text{VTTS} + \text{average duration of flight}) + \text{average ticket fare}$$

GTC values were calculated for both Emirates and the alternative airline based on the value of time per region.

Notes:

The VTTS figures have been inflation adjusted to current 2014 estimates.

#### **Step 4: Change in Inbound Passenger Numbers**

We then determined what the percentage in GTC would be on each of the routes in a “no Emirates” scenario i.e. if Emirates ceased its operations in South Africa.

Using the price elasticity of demand, we then assessed how many of the existing Emirates passengers would not have travelled when subjected to this change in GTC.

Change in passengers in “no Emirates” scenario = %change  $(\text{GTC}_{\text{Emirates}} / \text{GTC}_{\text{Comparator}})$  \* price elasticity of air travel demand \* Emirates 2014/15 Passengers

Using this formula, we established the gross number of passengers that would not travel to South Africa in a “no Emirates” scenario. This gross number of passengers was capped at the actual number of passengers that flew inbound on Emirates in 2014.

Notes:

The change in passenger numbers per route depended on which airline, between Emirates and the selected alternative, was advantageous based on GTC.

For routes where Emirates was not advantageous (GTC of flying with Emirates was higher than flying with the alternative), there was a rise in passenger numbers for those routes in a “no Emirates” scenario. Where Emirates was advantageous (GTC of flying with Emirates was lower than flying with the alternative), there was a fall in passenger numbers. Only the fall in passengers was reported for passengers who were on Emirates when Emirates had a lower GTC than a competitor. The passengers on Emirates when Emirates had a higher GTC than the alternative have a revealed preference for Emirates (a preference not determined by GTC) and would not be any worse off from a GTC perspective, in a “no Emirates” scenario.

#### **Step 5: Quantifying the effect on tourism**

We then further this analysis by considering the impact in tourist expenditure.

From the 2014 Statistics South Africa Annual Tourism Report we determined that 52% of inbound passengers are tourist and the expenditure break down for different types of tourist by region and mode of travel is as follows:

- Average air tourist expenditure: ZAR 13,500 (US\$1,246)
- African air average tourist expenditure: ZAR 11,500 (US\$1,061)
- Americas average tourist expenditure: ZAR 13,500 (US\$1,246)
- Asia and Australasia average tourist expenditure: ZAR 12,900 (US\$1,191)

- Europe average tourist expenditure: ZAR 14,400 (US\$1,329)

This allowed us to determine the direct tourism expenditure loss associated with a “no Emirates” scenario. We then further used the SAM multiplier model to estimate the indirect and induced economic and employment effects of such a loss in expenditure.

**Data sources:**

Emirates (2015)

IATA (2008) Air Travel Demand: Measuring the responsiveness of air travel demand to changes in prices and incomes

Kayak.com (2015)

Mughal, A. Y. (2013) Review of Value of Travel Time Savings and its Variation with Income and Distance. University of Leeds

Norway European Commission (2006) Developing Harmonised European Approaches for Transport Costing and Project Assessment (HEATCO)

Peter Belenky (2011) Revised Departmental Guidance on Valuation of Travel Time in Economic Analysis

Statistics South Africa, Annual Tourism Report (2014)

## APPENDIX 4: METHODOLOGY FOR FOOTPRINT CONTRIBUTION

**Table 4: Description of economic terms used**

|                                |  |
|--------------------------------|--|
| GDP (Gross Domestic Product)   | GDP is the monetary value of all the finished goods and services produced within a country's borders in a given year. It includes all of private and public consumption, government outlays, investments and exports less imports that occur within a country.   |
| GVA (Gross Value Added)        | GVA is the company-level equivalent of GDP which is made up of a company's wages and profits.  |
| GOS (Gross Operating Surplus)  | GOS is the surplus generated by operating activities after the labour factor input has been recompensed.   |
| SAM (Social Accounting Matrix) | A Social Accounting Matrix (SAM) represents flows of all economic transactions that take place within an economy. SAMs are squares where columns represent buyers (expenditures) and rows represent sellers (receipts). SAM's were created to identify all monetary flows from sources to recipients, within a disaggregated national account. |

Source: Genesis Analytics (2015)

### SAM Multiplier Model

The direct, indirect and induced impacts of the Group to South Africa were analyzed using a Social Accounting Matrix (SAM) based multiplier model. A SAM provides information on each identified sector's linkages across the economy. The matrix maps amongst others the value of the goods and services consumed by firms from other firms as inputs into the production process. It is assumed that the input values in the SAM represent the average inputs that a business in each sector requires for producing its output. This represents the linkage from one firm to its supplier firm. It is then possible to estimate how the spending of one firm stimulates economic activity elsewhere.

The direct impact of the Group to South Africa is estimated by its GVA. A SAM provides data on the share of output that constitutes profit and wages for each sector. This can be applied to the total output that is associated with the Group's activities allowing the total GVA to be estimated. The total GVA of the Group itself is calculated as the sum of the GVA of each entity regardless of Emirates' shareholding of that firm.

The indirect impact is estimated using the Group's operational expenditure data. This expenditure data is then mapped to commodities identified in the SAM. It is then possible to estimate each supplier's inputs from other sectors that are required to produce the product or service purchased by the Group. In this way, the Group's complete (direct and indirect) input requirements throughout the entire economy can be estimated.

Employment data for industries can be linked to the SAM. As the output stimulated in each sector is also known, it is then possible to apply the employment - output ratio to the Group's indirect impacts on gross output in order to estimate the total indirect employment associated with the Group.

These steps are repeated to estimate the induced impact. However, in this case the wages and benefits data provided by the Group entities is used to estimate how much economic activity is stimulated in the economy through the expenditure of the Group employees while industry average wage data is used to estimate the impact of the employee earnings in supplier industries.

## Model Data Sources

The SAM multiplier model is based on a 2009 SAM for South Africa.

Whilst 2014 data is used to inform the total size of each sector of the economy, it does not capture how relationships between sectors have changed. Therefore, the distribution of spending between sectors is based on the 2009 reference table.

## Notes and key assumptions

- All data is presented in 2014 prices, unless otherwise specified.
- All analysis is done in gross terms - the net impact of the Group to the economy is not assessed. The analysis therefore does not capture the extent to which some or all of the impacts to the South African economy may have occurred in the absence of the Group's operations.
- The modelled impact of 100% of all the Group's entities is captured in the analysis, regardless of the shareholding that Emirates airline has in the entity.
- The enabled impact is focused on Emirates airline's benefits to tourism, connectivity, and trade.
- Data obtained from Emirates airline, dnata Newrest and Mindpearl has been used to conduct this analysis. Genesis Analytics has not tested or audited any of the data provided by Emirates airline, dnata Newrest and Mindpearl and thus cannot provide any assurances over the veracity of the data or any outputs based on that data.
- The Group is made up of individual entities. Payments made between entities are not included in intermediate consumption tables to avoid double counting contributions.

## Data sources

Table 5: Data sources

|                                |   |
|--------------------------------|---|
| Social Accounting Matrix (SAM) | Constructed by the HSRC and IFPRI ( <a href="http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/128029">http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/128029</a> ) |
| Airline Industry GVA           | Oxford Economics (2011) Economic Benefits from Air Transport in South Africa  |
| Emirates Group Employees       | Emirates airline (2014-15); dnata Newrest Annual Financial Statement (2013-14); Mindpearl Annual Financial Statement (31 December 2014)   |

Source: Genesis Analytics (2015)

## APPENDIX 5: EMIRATES AWARDS IN 2014

**Table 6: Emirates awards in 2014**

| Organisation/ Publication                  | Awards  |
|--|---|
| <b>Airline awards</b>                      |   |
| Aviation Industry Awards                   | Emirates named Aviation Company of the Year                                     |
| Aviation Industry Awards                   | Emirates wins Aircraft Operator Award   |
| Business Traveller (ME) awards             | Emirates named Best Airline Worldwide   |
| Business Traveller (ME) awards             | Emirates named Airline with the Best First Class                                |
| Business Traveller (ME) awards             | Emirates named Airline with the Best Business Class                             |
| Business Traveller (ME) awards             | Emirates named Airline with the Best Cabin Staff                                |
| TravelPlus Airline Amenity Bag Awards 2013 | Emirates wins Gold in Business Class Female (Middle East) category              |
| TravelPlus Airline Amenity Bag Awards 2013 | Emirates wins Gold in Business Class Male (Middle East) category                |
| <b>Cargo awards</b>                        |   |
| Air Cargo World Awards                     | Emirates SkyCargo wins the Diamond Award  |
| Air Transport News Awards                  | Emirates SkyCargo named Cargo Airline of the Year 2014                          |
| <b>Ground handling awards</b>              |   |
| Air Transport News Awards                  | dnata Newrest named Ground Handler of the Year                                  |
| <b>Travel and accommodation awards</b>     |   |
| TripAdvisor Travellers Choice Hotel awards | Emirates Wolgan Valley Resort & Spa named Top Hotel in Australia                |
| Air Cargo India awards                     | Emirates SkyCargo named International Cargo Airline of the Year                 |
| Agency Achievement Awards                  | Travel Republic wins Best Agency Website  |
| Cargo Airline of the Year awards           | Travel Republic wins Best Agency Website  |
| <b>Charitable Donation Awards</b>          |   |
| TravelPlus Airline Amenity Bag Awards 2013 | Emirates wins Gold in Children's Goody Bag or Giveaway (Under 6 years) category |

Source: Emirates (2015)

## APPENDIX 6: ABOUT GENESIS ANALYTICS

### About Genesis Analytics

Genesis Analytics ([www.genesis-analytics.com](http://www.genesis-analytics.com)) is the largest economics-advisory firm in Africa. Our purpose is to unlock value in Africa. We are based in Johannesburg and Nairobi. We have 80 consulting economists who provide a full range of economic advisory services including economic impact assessment, development economics, political economy and policy advice, competition and regulatory economics, behavioral economics, and business strategy.

Genesis advises governments, companies, and international donors. We have worked in more than 30 African countries. In South Africa we have advised 16 of the largest 20 companies on the Johannesburg Stock Exchange.

Genesis is respected for quality research, rigour, ethics and understanding of both private and public clients.

### The Shared Value Practice

Globally, the role of business in society has changed fundamentally. It is a business reality that firms must observe complex relationships with society. Government, civil society, consumers, and staff, increasingly look to companies to meaningfully re-align business to better social and environmental involvement.

This requires companies to 1) measure and understand their impact on the economy, 2) design appropriate strategies around positive societal benefit and 3) effectively engage on with a broad range of stakeholders.

Genesis is a leader in advising large companies on business strategy embedded in societal value, sustainability, stakeholder relationships, and dialogue.

The Shared Value practice offers a range of services, described in detail below.

**Corporate Economic Impact Assessment:** Corporate Economic Impact Assessment studies use of a variety of tools and techniques – ranging from economic modelling to qualitative and descriptive analysis – to quantify and analyse the economic impact of a company on an economy. An understanding of impact is a useful input into the development of business, shared value and stakeholder engagement strategies, as well as to assist with company advocacy.

**Shared Value and Inclusive Business Strategy:** The concept of shared value can be defined as policies and operating practices that open new profitable business opportunities to a company while simultaneously advancing the economic and social conditions in the communities in which it operates.

Shared value involves creating economic value in a way that also creates value for society by addressing its needs and challenges. Shared value is not social responsibility, philanthropy, sustainability, but a business strategy to achieve economic success.

Globally shared value thinking has the potential to give rise to the next major transformation of business thinking. Adoption of a shared value approach presents a company with an opportunity to take the lead in driving long-term business value, through acknowledgement of the business' economic impact, and identification of opportunities for maximising net positive impact.

In the case of investments, shared value strategies may include aspects of impact investing, ESG, and/or responsible investment principles. For examples of Genesis' work in the developmental investment space, please see our project experience in investigating Social Impact Bonds, the implementation of ESG, impact investing, and developmental investment strategies.

***Stakeholder Engagement and Dialogue Facilitation:*** Understanding the perspectives, demands and contexts of stakeholder groups is crucial in ensuring that business strategies are effectively designed. Just as important, is the ability to communicate strategic decisions to these stakeholders to ensure buy-in and corporate legitimacy.

Genesis designs engagement strategies and public-private dialogue processes focused on improving relations with particular stakeholder groups, and/or centred on specific economic or policy issues.

## **Contact**

For more information on Genesis Analytics in general and/or the Shared Value practice specifically, please feel free to contact Ryan Short by email at [ryans@genesis-analytics.com](mailto:ryans@genesis-analytics.com).