

**THE DETERMINANTS OF THE INTERNATIONAL  
DEMAND FOR TOURISM  
TO SOUTH AFRICA**

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## **Abstract**

Globally, the tourism industry is recognised as one of the fastest growing industries, generating high revenues and creating a vast number of job opportunities. In South Africa, this is no different and, in recent years, the tourism industry has outshone the country's gold exports therefore claiming its position as the fourth highest earner of foreign exchange to date. Yet the industry is still to receive the attention it deserves from conventional economics. This research aimed to fill this gap in South Africa by providing an understanding on the determinants of international tourism demand for South Africa.

The first objective of the study was to provide a broad overview of the tourism industry of South Africa. The discussion focused on the supply and demand sides of tourism which, in turn, are divided into the domestic and international tourism markets. There has been a high growth, especially in the international market since 1994 and, while domestic and international markets continue to grow, seasonality remains an issue. Tourism has a significant impact on economic activity, employment, and the balance of payments and therefore the industry has great potential.

The second objective was to create a theoretical understanding on the different factors that could determine the international demand for the tourism product. From this discussion it was found that there are various economic and non-economic factors that are believed to have an influence on tourism demand. Income, prices, transport cost, and the exchange rate are amongst the favourite economic variables with travel time, population, marketing expenditure, climate, and capacity being the more popular non-economic factors. Among these, certain threats were also identified that could have harmful impacts on tourism growth.

The third objective and main aim of the study was to determine which of the factors identified earlier determine the demand for international tourism to South Africa. This was done through an empirical investigation. Data from all the continents were used to attain an international perspective on tourist arrivals (tourism demand). The results indicated that capacity and climate factors determine tourism demand in the short term

with income and transport cost influencing South Africa as a tourism destination in the long term.

The last objective was to determine whether certain events or disasters that take place globally have a negative influence on tourism demand to South Africa. The event that was looked at was the terror attacks on the United States in September 2001. It was found that although the overall tourism activity of the world became stagnant during this period, the effect was not that considerable in South Africa's tourism arrivals. Tourism in countries such as the United States, on the other hand, has still not recovered fully after this event.

**Key Words:**

determinants, international tourism, tourism demand, tourist arrivals, time-series regression.

## Opsomming

Gloobaal word die toeristebedryf erken as een van die vinnigste groeiende industrieë wat hoë inkomste genereer en 'n groot aantal werkgeleenthede skep. In Suid-Afrika is dit nie anders nie en in die afgelope paar jaar het die toeristebedryf die uitvoer van goud oortref om daarmee die posisie in te neem van die vierde grootste verdieners van buitelandse valuta tot op datum. Die bedryf wag egter nog om die aandag te kry wat dit verdien van die konvensionele ekonomie. Hierdie navorsing is daarop gemik om die leemte te vul deur 'n verduideliking te verskaf van die determinante wat internasionale toerisme vraag bepaal na Suid-Afrika.

Die eerste doelstelling van die studie is om 'n breë oorsig te verskaf van die toeristebedryf in Suid-Afrika. Die bespreking is gerig op die vraag en aanbod kwessie in toerisme wat op sy beurt weer verdeel word in die plaaslike en internasionale toerismemark. Daar was 'n hoë groei in veral die internasionale mark sedert 1994 terwyl beide die plaaslike en die internasionale markte steeds aan die groei is. Seisoenaliteit bly egter steeds 'n vraagstuk. Toerisme het 'n betekenisvolle impak op ekonomiese aktiwiteite, werkverskaffing en die betalingsbalans en daarom toon die bedryf groot potensiaal.

Die tweede doelstelling is om 'n teoretiese onderbou te verskaf vir die verstaan van die verskillende faktore wat bepalend is vir die internasionale vraag vir die toerismeproduk. Uit hierdie bespreking het dit voortgevloei dat daar verskeie ekonomiese en nie-ekonomiese faktore is wat 'n invloed mag hê op die vraag na toerisme. Inkomste, pryse, vervoerkoste en die wisselkoers is van die mees populêre veranderlikes terwyl reistyd, bevolkingsdigtheid, markuitgawes, klimaat en kapasiteitsfaktore die meer populêre nie-ekonomiese faktore is. Saam met hierdie faktore is daar ook 'n aantal faktore geïdentifiseer wat 'n bedreiging vir die groei van die toeristebedryf kan inhou.

Die derde doelstelling en hoof fokus van die studie is om te bepaal watter van die vroeër geïdentifiseerde faktore die vraag vir internasionale toerisme na Suid-Afrika bepaal. Hierdie doelstelling is ondersoek deur middel van 'n empiriese ondersoek. Data van al

die kontinente is gebruik om 'n internasionale perspektief van toerisme vraag te verkry. Die gevolgtrekking toon aan dat kapasiteit en klimaatsfaktore die toerisme vraag oor die korttermyn bepaal en dat inkomste en vervoerkoste die keuse van Suid-Afrika as 'n toerimebestemming beïnvloed.

Die laaste doelstelling was om te bepaal of sekere gebeure en internasionale rampe 'n negatiewe invloed op die toerisme vraag na Suid-Afrika het. Die gebeure wat ondersoek is die terroriste aanval op Amerika in September 2001. Daar is gevind dat alhoewel wêreldwye toerisme aktiwiteit stagnant was gedurende die tydperk, dit nie 'n uitermatige invloed op aankomste in Suid-Afrika gehad het nie. Toerisme in ander lande soos die Verenigde State het egter nog nie ten volle herstel sedert die gebeure nie.

**Sleutelwoorde:**

determinante, internasionale toerisme, toerisme vraag, toeriste aankomste, tydreksregressie.

# Chapter 1

## Introduction and Problem Statement

### 1.1 Introduction

The tourism industry is beyond doubt the largest industry in the world (Naudé & Saayman, 2004:2). Globally the industry grew from 691 million international tourist arrivals in 2003 to 760 million international tourist arrivals in 2004 (an increase of 10.7%). After three years of stagnant growth, international tourism experienced a rebound in 2004 with the majority of destinations reporting positive results. The main and understandable reason for the stagnant growth in global tourism during the three years prior to 2005 was the terrorist attacks on the World Trade Centre on 11 September 2001. At the end of 2004, with tourism recovering well, another disaster occurred with a tsunami in the East Asia region. More terrorist attacks took place in the UK as well as hurricanes in the Gulf of Mexico. Although all of these events could put a damper on tourism, South Africa, due to its geographically remote location, has remained unaffected and continues to attract tourists (Lalla, 2006:1).

According to the World Trade Organisation (WTO) (2005), international tourism receipts reached a new record high of US\$622 billion in 2004. This is an increase of 10.3%. Over half of the global receipts were earned by Europe (52%) while the Americas earned 21%, Asia and the Pacific 20%, and Africa and the Middle East 3% each. Schloegl (2000) stated the following at the second tourism summit in France: *“The global marketplace for tourism is expanding. New tourism destinations appear. In the past 30 years, the tourism industry has grown rapidly, benefiting notably from economic development, the rise in purchasing power, and increased leisure time. There is no reason to think that tourism will not continue to grow over the coming years.”*

South Africa ranks among the top ten travel destinations in the world. According to the 2005 figures from a leading online seller of adventure and experiential travel, iExplore, South Africa is the eighth preferred place to visit in the world. This is a noteworthy

improvement from the country's number fourteen ranking the previous year (SA Tourism, 2005).

South African tourism is obtaining status as the “new gold” of the South African economy. In 2004, the Total Foreign Direct Spend by tourists was R47.8 billion – this amount was R15 billion more than gold exports. With many of South Africa's citizens still focused on mining and the export of gold, the tourism industry should receive extensive attention as an industry that is not as vulnerable as the production of gold. It is also estimated that 27 000 more direct jobs in the tourism industry were created in the same year (SA Tourism, 2004).

## 1.2 Problem Statement

South Africa as a top tourism destination might have been a missed opportunity. With a different history, South Africa would probably have been one of the top visited countries in the world (Dept. of Environmental Affairs and Tourism's White paper, 1996). This is evident from Figure 1.1. One can clearly see the low and stagnant tourism arrival figures in the 1980s. From the early 1990s one can see an increase in arrivals due to the liberalisation period.

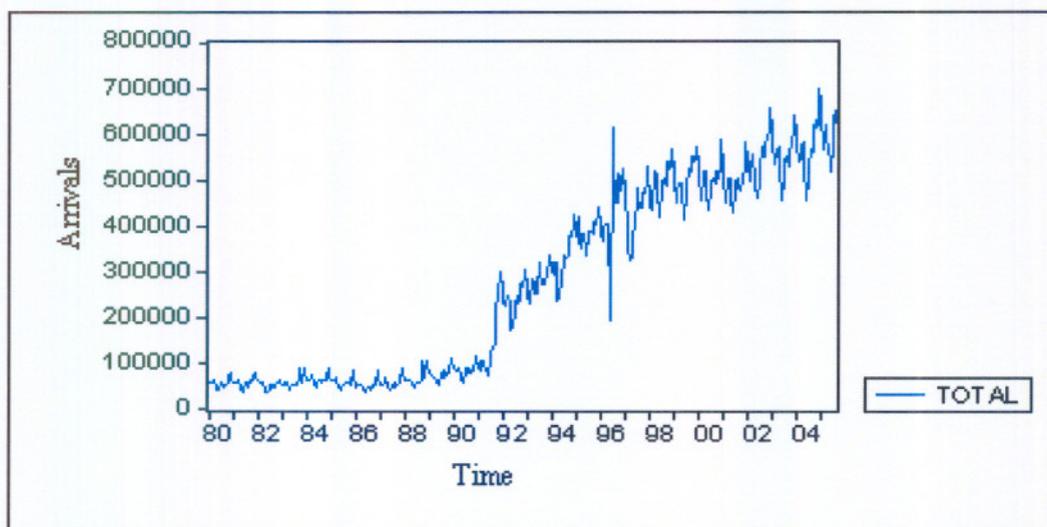


Figure 1.1: International Tourist Arrivals to South Africa

Source: Compiled from StatsSA data.

Unfortunately, despite the good growth in recent years, tourism currently still plays a small role in the South African economy. According to the World Tourism Organisation, the top earners of tourism in the world in 2003 were: USA with \$65.1 billion, Spain with \$41.7 billion and France with \$36.6 billion earned. However, an investigation by the World Travel & Tourism Council (WTTC) expected that South Africa's tourism industry would only contribute 3% to the Gross Domestic Product by the end of 2002 (Malan, 2002).

According to Baumgarten (2000), president of the WTTC, South Africa's tourism research and the capability to put together useful predictions on the tourism market is still very much underdeveloped (Malan, 2002). The research on the international flow of tourism hitherto has also focused mainly on explaining the tourism demand in the developed countries (Naudé & Saayman, 2004:3). The issue addressed by this research paper therefore is: What are the factors that determine the foreign tourist demand for South Africa as a developing tourist destination? And do the same factors play a role in South Africa as applicable in developed countries?

### **1.3 Research Goals**

How can it be determined why some destinations attract more tourists than others? This question has been asked by a variety of researchers and has also attracted numerous studies in the past (Naudé & Saayman, 2004:6). The demand for tourism is comparable to the demand for most other products and services. The basic determinants could be prices, disposable incomes, habits, tastes, and preferences (Hämäläinen, 2003:5).

The majority of research previously conducted on the international demand for the tourism product identified both economic and non-economic factors as important influences of tourism demand. Therefore, to ensure simplicity, the independent variables are divided into two main categories: *a) Economic factors and b) Non-economic factors.*

*a) Economic Factors*

The majority of previous research conducted on this matter included or mentioned economic variables to determine tourism demand. In the case of income, for example, the larger the real per capita income of a country, the more likely its citizens can afford to purchase travel services abroad (Walsh, 1996:5). Hamilton, as quoted by Lim (1997), concludes that the majority of studies focus on economic factors in estimating demand. The challenge presented here is to determine the economic factors of the different countries involved and to normalise these factors. Data would be obtainable from particular economic indicators.

*b) Non-economic Factors*

According to Papatheodorou (2001), the majority of empirical studies on tourism demand neglect the characteristics of the tourism product. There are various non-economic factors that are believed to have a great impact on the demand for tourism. Factors such as climate, landscape, and time spent at the destination all play a role in the level of utility (Morley, 1992). It is, however, extremely complex to determine and calculate all these factors. The purpose of this study of non-economic factors as demand determinants is to provide a significant indication of the most important factors and explain their contribution to the final demand equation.

The main purpose of this research is to explain the most significant determinants and also various seasonal factors and shocks that influence the demand from international travellers to South Africa as a tourist destination. In order to do so, the following objectives are set: The first objective is to provide a broad overview of tourism in South Africa in order to identify the various elements of, and trends in, the industry in South Africa. The second objective is to theoretically determine the factors that might have an influence on foreign tourism demand. Thirdly, to determine empirically these factors on international tourism demand to South Africa. The fourth objective is to assess the influence of shocks and seasonal factors on the South African tourism industry. These would typically include proceedings like the World Cup sporting events and natural disasters as mentioned earlier.

## 1.4 Research Methods

The research methods that will be used will consist of two sections, the literature study and the empirical study.

Firstly, the literature study will determine the factors that, according to literature and previous research, could influence the demand for international tourism flows. Secondly, with the empirical investigation, single equation regression models will be estimated using *E-views 5.1* and time series data. The exact nature of the model and estimation method will be discussed in the empirical chapter 4.

## 1.5 Demarcation of the Study

Tourism has different aspects. According to the WTO (2000), these are defined as:

- *Domestic tourism* is the tourism of resident visitors within the economic boundaries of the country of reference.
- *Domestic tourism consumption* comprises the consumption of resident visitors within the economic boundaries of the country of reference.
- *Inbound tourism* is the tourism of non-resident visitors within the economic boundaries of the country of reference.
- *Inbound tourism consumption* comprises the consumption of non-resident visitors within the economic boundaries of the country of reference and/or that provided by residents.
- *Outbound tourism* is the tourism of resident visitors outside the economic boundaries of the country of reference.
- *Outbound tourism consumption* comprises the consumption of resident visitors outside the economic boundaries of the country of reference and provided by non-residents.
- *Internal tourism* is the tourism of visitors both resident and non-resident, within the economic boundaries of the country of reference.

- *Internal tourism consumption* comprises the consumption of both resident and non-resident visitors within the economic boundaries of the country of reference and/or that provided by residents.

From these aspects, this research focuses specifically on inbound or international tourism. Reference will also be made to domestic tourism to ensure inclusiveness. For the purpose of analysis, only inbound tourism will be considered. For this research, the international focal point will exclude tourist arrivals from Africa (see chapter 2 for further discussion).

## **1.6 Chapter Exposition**

Chapter 1 provides the introduction and problem statement of the study. From this, it is evident that there is a lack of research on tourism in South Africa and therefore this study will address tourism demand. The aim of chapter 2 is to provide a thorough discussion on the tourism industry in South Africa and the elements thereof. The chapter includes a definition of tourism as well as the overall strengths and weaknesses of the South African tourism industry. The impact of tourism on the economy will also be addressed in this chapter to indicate the widespread influence of tourism on an economy.

Chapter 3 focuses specifically on the factors that influence the demand for tourism. It is necessary to understand all the different factors and the significance of their influence on tourism demand. Certain threats that could hamper the growth for international tourism demand are also discussed in chapter 3.

Chapter 4 aims to incorporate the factors identified and discussed in chapter three with data and to determine the demand for tourism to South Africa. This chapter includes a discussion on the relevant methodology. The fifth and final chapter concludes the study and makes recommendations for future research on the topic.

## **Chapter 2**

### **The South African Tourism Industry**

#### **2.1 Introduction**

The main objective of this chapter is to provide an in-depth look at the current state of affairs in the South African Tourism industry, focusing on the importance of the industry to the economy. While providing a detailed description, it will provide appropriate information on the strengths and weaknesses of the local tourism industry, the composition of the tourism market (i.e. domestic and international), and the origin of the tourists that visit South Africa. The latter is essential for determining the demand for South Africa as a tourist destination.

The World Tourism Organisation defines tourism as *“the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited.”* This is the definition that will be used to assess whether or not a person qualifies as a tourist.

The remainder of this chapter is structured as follows: Firstly, the supply side of tourism in South Africa will be outlined with attention given to areas like accommodation, tourism sites, tour operators, and agencies. Secondly, the demand side of tourism will be discussed, specifically focusing on domestic and international tourism.

#### **2.2 South Africa’s Tourism Sector: An overview**

##### **2.2.1 Supply side of tourism**

It is difficult to define tourism and just as difficult to lay out the structure of the tourism industry. This is mainly because there is no tourism industry as such; the industry consists of a collection of direct and indirect operations involved in tourism (NALEDI,

2001:36).<sup>1</sup> The main economic activities are included in the tourism sector structure analysis.

*Table 2.1: The eight sectors in the tourism industry*

<b>THE EIGHT SECTORS OF THE TOURISM INDUSTRY</b>			
<b>ACCOMMODATIONS</b> Resorts & Lodges Cabins & Bungalows Fishing & Hunting Camps Campgrounds Summer Camps Recreation Camps Country Inns Bed & Breakfast Locations Tourist Homes Hostels Time-Share Facilities	<b>TOURISM SERVICES</b> Government Tourism Departments Information Centres Research Services Advertising Agencies Marketing Companies Trade Press Professional Associations Tourism Consultants & Educators Tourism Suppliers Retail Operations Auto Clubs Duty-free Shops	<b>ATTRACTIONS</b> Amusement Parks Cultural Tourism Galleries Heritage & Historical Sites Industrial Tourism Interpretive Centres Museums Native Tourism Parks & Gardens Recreational Parks	<b>TRANSPORTATION</b> Air Carriers Automobile Rentals Cruise Lines Gas Stations Motor Coaches Railways Recreational Vehicles Taxis Sight-seeing Helicopters & Planes
<b>FOOD &amp; BEVERAGE</b> Restaurants and Dining Rooms Coffee Shops Fast-food Outlets Pubs, Lounges and Nightclubs Cabarets Institutions Catering Operations Speciality (e.g. Medieval Feast)	<b>ADVENTURE &amp; RECREATION</b> Adventure Tourism Fishing Facilities Golf Facilities Hunting Facilities Marine Facilities Parks Ski Resorts Tennis Facilities Eco Tourism	<b>TRAVEL TRADE</b> Tour Guides Tour Operators Tour Wholesalers Travel Agencies Local Sight-seeing	<b>EVENTS &amp; CONFERENCES</b> Conferences Conventions Exhibitions Fairs Festivals Special Events Trade Shows

Source: The Pacific Rim Institute of Tourism (2003)

<sup>1</sup> National Labour and Economic Development Institute (NALEDI) 2001

Table 2.1 gives a significant overview of the supply side of South Africa's tourism industry. These sectors are an expanded explanation of the tourism economic activities that NALEDI (2001:37) identified as:

- All accommodation services
- Tourism sites
- Tour operators or so-called "ground handlers"
- Transport activities
- Travel agencies.

The added sectors are food and beverage, adventure and recreation, tourism services (which involve the services from government departments), information centres, and tourism consultants, as well as events and conference facilities.

To define supply as it relates to tourism is not a straightforward task. The analysts are, however, comfortable with describing the supply of the physical components of the product that is provided by certain business and the attractions that draw people to the area. When these are combined, they form a tourism product that is individually distinct (Gartner, 2003:565).

Each of the sectors identified above will subsequently be reviewed:

#### ***2.2.1.1 Accommodation***

Accommodation is a term that is used to describe the provision of bedroom facilities on a commercial basis within the hospitality and tourism industry. Accommodation is primarily associated with the hotel sector and is readily applied to properties such as resort hotels, motels, budget hotels, bed and breakfast, and guest houses (Goss-Turner, 2003).

*"South Africa is a vast and beautiful country, with so much to experience, and no matter where you decide to stay there is a wealth of true five star hospitality throughout South Africa just waiting to accommodate you and your loved ones (Accommodation SA, 2006).*

Table 2.2 defines the accommodation types available in South Africa according to SA Tourism (2005).

Bed and Breakfast (B&B), guesthouses, and game lodges are the leading facilities in the sector when it comes to growth. The number of accommodation establishments increased from 5,045 in 2001 to 5,763 in 2002. Game lodges showed exceptional growth of 32%, from 397 to 524. B&B facilities grew 8.5%, from 2,387 to 2,590. These facilities represent approximately 45% of the sector (Ntloebide, 2004).

According to the World Encyclopaedia of Tourism (2003), recent statistics confirm the importance of the business market, estimating that it accounts for 38% of accommodation demand, compared with 36% for tourists and 14% for conference delegates. The rest is made up of government officials and visiting friends and relatives (VFR). Although the business market's demand for accommodation is the highest globally, tourist demand is in second place with only two percent less. It is of great importance to realise the difference in demand for accommodation between leisure and business. Large international hotels have expanded by franchising across countries, including South Africa. Many of these hotels have clearly segmented their markets to provide accommodation of various types and levels to ensure that a range of packages is offered (Goss-Turner, 2003). By recognising the ways in which the services required by a business traveller differ from those of a leisure traveller, these international hotels can diversify their markets. This way a traveller will be able to identify specific accommodation services be it for a business trip or for leisure.

Table 2.2: Accommodation types in South Africa.

ACCOMMODATION DEFINITION
<p><b>Hotel</b> A hotel provides accommodation to the travelling public, has a reception area, and offers at least a "breakfast room" or communal eating area. In general a hotel makes food and beverage services available to a guest.</p>
<p><b>Guest House</b> A guest house is either a converted house, manor, etc., adapted to accommodate overnight guests or it may be a purpose-built facility. A guest house is run as a commercial operation and is often owner-managed. A guest house has public areas which are for the exclusive use of the guest. The owner/manager either lives off-site, or in a separate area within the property.</p>
<p><b>Bed 'n Breakfast</b> Bed and Breakfast accommodation is usually provided in a family (private) home and the owner/manager lives in the house or on the property. Breakfast is usually served. Bathroom facilities may or may not be en-suite and/or private. In general, the guest shares the public areas with the host family.</p>
<p><b>Game Lodge</b> Game lodge: A lodge is an accommodation facility located in natural surroundings or on a game farm. The rates charged are usually inclusive of an experience offered at the lodge, such as game drives, battlefield tours, etc. In general, food and beverage services are provided for all meals.</p>
<p><b>Self Catering</b> All houses, cottages, chalets, bungalows, flats, studios, apartments, villas, houseboats, tents or similar accommodation. Facilities and equipment are provided for guests to cater for themselves.</p>
<p><b>Friends and family</b> Cottage, chalet, bungalow, flat, studio, apartment, villa, houseboat, or similar accommodation that is owned by:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Yourself</li> <li><input type="checkbox"/> Your friends</li> <li><input type="checkbox"/> Your family</li> <li><input type="checkbox"/> Your company</li> </ul> <p>And you do not pay for your accommodation.</p>
<p><b>Back-Packers, Hostel</b> Back-packer hostel – a budget establishment that offers communal or private accommodation. It offers a range of services including bookings, tours, and tourist information. It usually offers a communal self-catering facility and communal ablution facilities.</p>
<p><b>Camping /Caravanning</b> Camping is accommodation in your own tent. Caravanning is accommodation in a caravan or (house) trailer.</p>

Source: SA Tourism (2005).

From the table, one can draw some conclusions regarding the accommodation sector in South Africa. The total stay units available remain fairly constant in the short term with 98,300 in September 2004 being not far off 98,500 in March the following year. The occupancy rate, however, increased from 47.8% to 54.3% in the same period. The total income generated from accommodation in this period improved from R856.2 million to R1020.1 million and, according to StatsSA, the income generated from tourism accommodation in the fourth quarter of 2005 rose by 5.6% year-on-year.

The occupancy rate increased by 1.2% compared with that of the fourth quarter of 2004 (Business Report, 2006). The average monthly income between September 2004 and March 2005 was R960.36 million. The greatest income received by the tourism industry was derived from the accommodation sector. From these figures, the largest contributor were hotels (69.3%), followed by Bed and Breakfast and lodges (19.9%), guest houses and farms (8%), and caravan parks and camping sites (2.6%).

Table 2.3: Summary of tourist accommodation statistics

Accommodation Type	Month and Year						
	Sep-04	Oct-04	Nov-04	Dec-04	Jan-05	Feb-05	Mar-05
<b>Hotels</b>							
Stay units available ('000)	44.1	44.0	43.6	43.5	42.8	43.9	43.9
Stay units nights sold ('000)	851.9	884.5	890.1	774.2	760.6	855.4	933.3
Occupancy rate (%)	64.3	64.8	68.1	57.4	57.3	69.5	68.5
Income per stay unit nights sold	459.7	487.7	492.3	536.9	552.5	524.5	500.4
Income from accommodation (R million)	391.6	431.3	438.2	415.7	420.3	448.7	467.0
Income from restaurant and bar sales (R million)	176.2	194.9	200.1	209.4	171.1	185.7	193.6
Other income (R million)	40.4	49.8	47.7	45.7	40.4	45.5	47.5
Total income (R million)	608.2	676.1	686.1	670.8	631.7	679.9	708.1
<b>Caravan Parks and Camping Sites</b>							
Stay units available ('000)	11.8	11.8	11.8	11.8	12.1	11.9	11.9
Stay units nights sold ('000)	57.5	48.7	52.0	171.3	75.5	63.0	89.2
Occupancy rate (%)	16.3	13.4	14.7	47.0	20.2	19.0	24.3
Income per stay unit nights sold	189.5	189.1	194.6	236.4	183.9	162.6	221.1
Income from accommodation (R million)	10.9	9.2	10.1	40.5	13.9	10.2	19.7
Income from restaurant and bar sales (R million)	6.2	4.7	5.0	6.2	4.9	2.8	5.6
Other income (R million)	2.8	3.9	4.4	3.9	4.7	2.5	3.1
Total income (R million)	19.8	17.8	19.6	50.5	23.5	15.5	28.4
<b>Guest-houses and Guest-farms</b>							
Stay units available ('000)	8.8	9.1	8.8	8.9	10.7	11.1	11.2
Stay units nights sold ('000)	96.9	110.4	118.4	132.5	153.7	157.6	217.8
Occupancy rate (%)	36.6	39.3	44.7	47.8	46.5	50.6	62.5
Income per stay unit nights sold	407.4	465.9	465.0	490.3	398.2	350.8	284.0
Income from accommodation (R million)	39.5	51.4	55.1	65.0	61.2	55.3	61.8
Income from restaurant and bar sales (R million)	13.2	17.1	17.9	15.9	16.1	18.2	13.1
Other income (R million)	7.0	8.4	8.3	5.5	5.4	3.9	3.8
Total income (R million)	59.6	76.9	81.3	86.4	82.7	77.4	78.7
<b>Other Accommodation</b>							
Stay units available ('000)	33.6	33.9	33.7	33.0	32.5	31.5	31.5
Stay units nights sold ('000)	403.6	412.7	431.1	486.9	430.7	341.5	418.2
Occupancy rate (%)	40.1	39.2	42.7	47.6	42.7	38.8	42.9
Income per stay unit nights sold	272.8	323.6	310.7	324.9	307.3	312.5	327.9
Income from accommodation (R million)	110.1	133.6	133.9	158.2	132.4	106.7	137.1
Income from restaurant and bar sales (R million)	33.8	38.9	39.8	37.5	27.7	38.7	42.2
Other income (R million)	24.6	28.1	24.7	28.3	21.4	20.1	25.7
Total income (R million)	168.5	200.6	198.4	224.1	181.5	165.5	204.9
<b>Total</b>							
Stay units available ('000)	98.3	98.8	97.9	97.2	98.1	98.4	98.5
Stay units nights sold ('000)	1409.9	1456.2	1491.7	1564.9	1420.5	1417.6	1658.5
Occupancy rate (%)	47.8	47.6	50.8	52.0	46.7	51.4	54.3
Income per stay unit nights sold	391.6	429.5	427.3	434.1	441.9	438.0	413.5
Income from accommodation (R million)	552.1	625.5	637.3	679.3	627.7	620.9	685.7
Income from restaurant and bar sales (R million)	229.3	255.6	262.9	269.0	219.7	245.4	254.4
Other income (R million)	74.8	90.2	85.1	83.5	72.0	72.0	80.0
Total income (R million)	856.2	971.3	985.4	1031.8	919.4	938.4	1020.1

Source: Statistics South Africa (2005).

### *2.2.1.2 Tourism Sites*

South Africa has a significant variety to offer as a tourist destination. South Africa occupies 4% of the continent's total landmass, covering an area of 1,221,040 square kilometres. The country is three times the size of Texas in the USA. South Africa is home to some 43 million people - a colourful population as diverse in makeup as the country's geography is varied. Almost 77% are black (or African), 11% white and 9% "coloured" (SA Tourism, 2005).

According to the Department of Environmental Affairs and Tourism (DEAT) (1996) South Africa's resource base for tourism is phenomenal. The country's tourism attractiveness lies in its diversity. Some of the features that make South Africa an attractive tourism proposition includes: accessible wildlife, varied and impressive scenery, unspoiled wilderness areas, diverse cultures (in particular traditional and township African cultures), well-developed infrastructure and virtually unlimited opportunities.

South Africa is one of the most attractive destinations to many European and American tourists visiting the continent. Africans also travel more to South Africa on holidays than to any other country, confirming the country's status as a real holiday resort. Many of its cities, such as Johannesburg and Cape Town, are in demand by tourists wishing to visit the country. Exotic holiday resorts, like Sun City, also prove to be a successful destination. It is estimated that in the past ten years, Southern Africa has experienced the strongest growth in tourism in Africa. Projections indicate that it will outstrip the rest of the continent in the number of tourists it attracts for the next 15 years as well (Anon, 2005).

The growing and stable economy of South Africa makes it an attraction for foreign investment and, with the current exchange rate being favourable, many foreigners have given into the good value for money in purchasing property and holiday homes in these locations (Travel and Stay in SA, 2006).

According to Travel and Stay<sup>2</sup> in SA, the top ten tourist attractions in South Africa are:

- Kruger Park.
- Table Mountain.
- Garden Route.
- Robben Island.
- V&A Waterfront.
- Beaches.
- Sun City Resort.
- Cultural Villages.
- The Cradle of Humankind.
- Soweto.

This again confirms the variety that South Africa offers to tourists – from cultural history to scenic beauty, wildlife, and holiday resorts. Another survey done by SA Tourism in 2005 identified these important attractions in South Africa: Cape Point, The Wine Route, Kirstenbosch Botanical Gardens (Western Cape), and Whale Watching in the Western Cape and KwaZulu-Natal.

### ***2.2.1.3 Tour Guides and Operators***

The Encyclopaedia of Tourism (2003) defines a tour guide as a person whose responsibility it is to shepherd and inform groups of tourists. The principal task is seen as imparting information to tourists. Tour operators, on the other hand, are business entities that offer a combination of transport, accommodation, and any other services in package tours that are then sold to the public through a particular distribution channel. The tour operator could also be referred to as a tour wholesaler (Evans, 2003).

Mill & Morrison (1985), regard tour wholesalers as being different from tour operators in two respects: Firstly, tour wholesalers are involved with planning, preparing, marketing, reserving, and even the operation of the package tours, whereas tour operators are only involved in the actual operation itself. Secondly, the tour wholesalers don't sell directly

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<sup>2</sup> [Web:] <http://www.travelandstayinsa.co.za/south-africa-accommodation-info-general.php>

to the public but use retail intermediaries such as travel agencies or other outlets. Tour operators could use intermediaries, but they sell directly to the public. To clearly distinguish between these two terms is not practically useful, when the only difference highlights the distribution channel used (Evans, 2003).

In South Africa, there are a number of tour operators and they offer a wide variety of deals and packages. These packages normally include holidays like safari trips, beach holidays, and combinations of the nation's highlights. Tour operators can also be located in foreign countries and they sell packages to the local citizens in the specific country. Normally the prices are higher than the do-it-yourself holidays a person can arrange, but the tour operator offers financial security and experience of the destination (Calder, 2005).

#### ***2.2.1.4 Transport Activities***

Transportation, in its simplest form, is the movement of, from one place to another, either people or tangible products (Encyclopaedia of Tourism, 2003).

Transport plays a vital role for many destinations especially in the development of a sound tourism industry, both in the transporting of tourists to, from, and within these destinations as well as the transport of cargo such as food and beverages that support the tourism operations (Collison, 2003).

Collison (2003) describes five modes of transport, based on the physical characteristics of the service that is offered to the traveller and the way that the transport carrier operates. These modes are, from fastest to slowest: air, highway, rail, water, and pipeline. In South Africa, the two latter modes do not really apply and therefore only the former three modes of transport will be discussed.

a) Air

All airports in South Africa were owned and under the control of the government until 1993. In that year ACSA, the Airports Company of South Africa, was formed and, since then, ACSA operates South Africa's ten principal airports, including the three major airports of Cape Town, Durban and Johannesburg (ACSA, 2006).

The primary task of ACSA has been to upgrade the standards of the country's airports and also to improve productivity. Since 1994, international air traffic has increased by more than 70% and the number of international departures by 85% to 2.6 million passengers. There is an expected annual growth rate of 30% in the market until the year 2030 (SA info, 2006).

b) Road

The national road system of South Africa links all the main centres in the country and bordering countries. The network covers some 7,000 km while toll-roads, which are serviced by 21 toll-plazas, cover about 1,000 km (Dept. of Transport, 2002). The South African National Roads Agency Limited is an independent company that is registered in terms of the Companies Act. The sole shareholder and owner of the company is the government. The company's mandate is to develop, maintain, and manage the road network of the country (SA info, 2006).

c) Rail

Spoornet and the Spoornet and SA Rail Commuter Corporation (SARCC) control South Africa's rail network. With 31,700 km of single rail track, 3,500 locomotives and 124,000 wagons, Spoornet is the largest railway operator in Southern Africa (SA info, 2006).

Transport is one of the suppliers of tourism, and it is evident that the efforts of a successful transport industry will contribute to the economic efficiency of the domestic

tourism market and, furthermore, to the international market. However, transport services providers such as coach transport, taxis, and railways have been lagging in terms of the quality and levels of service required. These services have not been competitive at all (Cluster Consortium, 1999:48).

#### ***2.2.1.5 Travel agencies***

Travel agencies are an indirect form of a distribution channel where the agent acts as a middleman or intermediary between the tourist and the supply side. They can sell anything from inclusive tours, transport tickets, holidays, and other products such as accommodation, car rentals, tickets to tourist attractions, and insurance to the public. The main difference between travel agencies and tour operators is that the travel agencies act as the intermediary between the tourists and the tour operators. Other forms of supply may include bookings with hotel companies, car rentals, and transport (Evans, 2003). The benefit that the tourist receives when making use of the facilitation that the travel agencies offer is that the agency can offer advice on the most cost-effective product on sale.

This concludes the discussion on the supply side of the tourism industry in South Africa. The above was a brief overview and, since this research focuses on tourism demand, the next section of the chapter will provide a discussion on the latter.

#### **2.2.2 Demand side of tourism**

The demand side of tourism comprises all the individuals who make use of, and have a demand for, the elements that were discussed in the supply side of the tourism industry. For the explanatory purpose of this chapter, domestic tourism and international or inbound tourism, as identified in the first chapter, will be discussed respectively. The focal points of discussion will highlight the strengths and weaknesses of these segments of the industry.

### **2.2.2.1. Domestic tourism**

Domestic tourism forms the basis for a stronger international tourism. It creates jobs and stability in the employment sector (Nabutola, 2005). Domestic tourism involves people that visit any destination inside the boundaries of their own country. Domestic tourism is recognised as one of the three major categories of tourism, with inbound tourism and outbound tourism being the other two (McKercher, 2003). To provide an accurate analysis of the South African tourism industry, a good start is to look at the composition of domestic tourism in South Africa.

The DEAT Provincial Guidelines<sup>3</sup> (2002) highlight the importance of domestic tourism in the total tourism industry. The guidelines state: “Domestic tourism plays an important part in the South African tourism sector and it is expected to continue to grow as historically disadvantaged people become tourists and travellers themselves. Whether the tourists are domestic or international, their expenditure in local communities contributes to the economic development of the area”.

The domestic industry remains a very important component, and most countries are now promoting the concept of domestic tourism in parallel with international tourism (NZ Tourism, 2005). This base load provided by the domestic industry in a country also protects the industry against fluctuations in the international demand that can be very sensitive to global, political, and economical issues (DEAT, 2004:3). The majority of tourism consumption in SA (67%) is by South Africans, in other words domestic tourism. Export tourism accounts for the remaining 33% (Robertson & Skordis, 2004:10). This is similar to all export industries in that the domestic market provides the foundation for expanding business into foreign markets. The Total Domestic Direct Spend, which is calculated by adding the per capita spend for each trip taken in the period by domestic tourists, was R2, 93 billion in the second quarter of 2005. Provided that support is given for the local industry, South Africa will realise the improved quality of products and

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<sup>3</sup> The Department of Environmental Affairs and Tourism (DEAT), 2002.

services, preservation of occupancy levels and, ultimately, the confidence of international visitors to choose South Africa as touring destination.

The importance of developing and preserving a solid domestic tourism base cannot be overemphasised. A sound domestic tourism industry does not just create and maintain jobs and the infrastructure, it also provides for a healthy international market (SA Tourism, 2001). To determine the nature of the domestic market could be a challenging task. Most of the domestic tourists engage in one-day trips to visit friends and relatives and domestic movements are difficult to monitor (Futter & Wood, 1997). This is evident in Table 2.4 where 58.5% of the total domestic trips taken during the period May 2000 to April 2001 were visits to friends and relatives (VFR). Following VFR on the list is normal holiday, leisure, or recreational trips, which accounted for 20.6% of the total trips taken in this period. Trips for health and treatment had the lowest figure of 2.4% of all domestic trips.

*Table 2.4: Number of domestic tourists May 2000 – April 2001*

<b>Trip type</b>	<b>Number of trips</b>	<b>%</b>
Visits to friends or relatives (VFR)	19 610 728	58, 5
Holiday, leisure, or recreational trips	6 885 598	20, 6
Religious trips or pilgrimages	4 734 153	14, 1
Business or professional trips	1 460 331	1, 4
Trips for health treatment	810 528	2, 4
Total	33 501 338	100, 0

Source: SATOUR Domestic Tourism Report (2001).

The total number of trips taken from May 2000 to April 2001 amounted to 33, 5 million. From the table one can clearly note that the majority of domestic tourists visit other places in South Africa for VFR purposes with very little spending on health treatments. The reason for this could be the costs involved with health treatments (such as health spas)

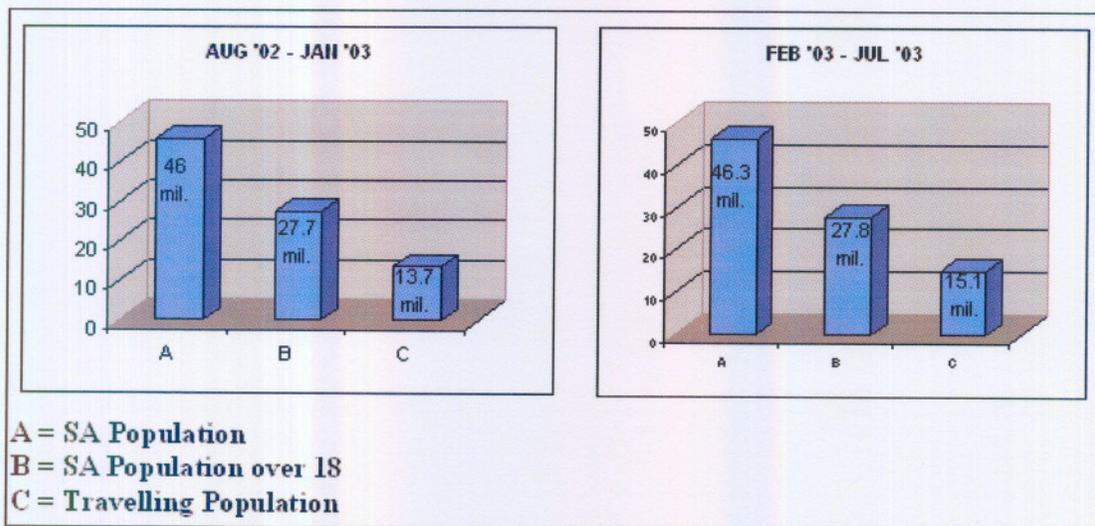


Figure 2.1: The South African travelling population

Source: DEAT (2004).

Figure 2.1 indicates the South African population that travelled in the six-month periods August 2002 - January 2003 and February - July 2003. There are approximately 27 million adults (over 18 years) in South Africa and, on average, 10% of the population took at least one domestic trip in each month of the second quarter of 2005 (SA Tourism, 2005). When these figures are compared with the figures in table 2.3 then the growth in domestic tourism is apparent. The total trips that were taken amounted to 8, 7 million (SA Tourism, 2005: 1).

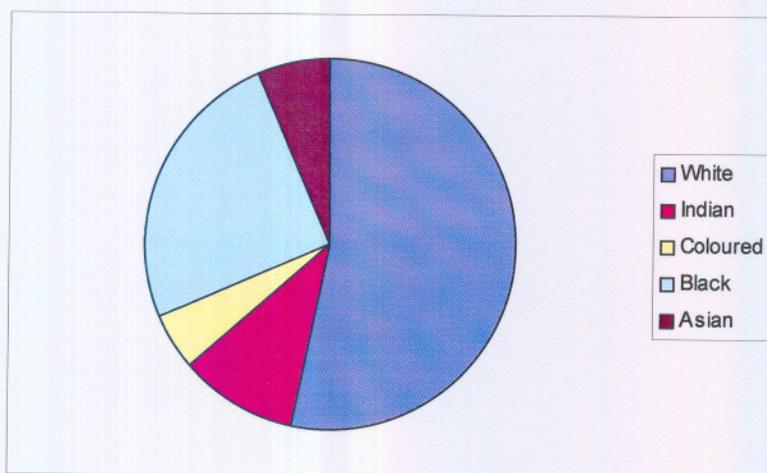


Figure 2.2: Domestic trips according to population

Source: Synovate (2006).

The pie chart in Figure 2.2 indicates that the majority of domestic travellers in South Africa are still part of the white population which accounts for 53% of all domestic travellers in South Africa. The second highest traveller population group in the country is the black population with 25.4%, less than half of the white travellers. The population group that travels the least is the coloured population. The reason for these results is that tourism is perceived as catering for the predominantly white upper and middle classes. The majority of South Africans have never been meaningfully exposed to the tourism industry and have not benefited from the country's vast resources. They also do not realise that a large number of Africans travel to South Africa. The wider opportunities offered by tourism are not appreciated (DEAT, 1996). The lack of knowledge and understanding of what tourism really is in South Africa contributes to the low travel figures amongst many population groups. There is still a perception that tourism refers only to people travelling around and staying in hotels.

*a) Weakness of South Africa's domestic tourism industry*

Domestic tourism has not demonstrated the dramatic growth rates shown by the international sector (Cluster Consortium, 1999:47) and SA Tourism reports that while domestic tourism presently surpasses international tourism by 50%, the swift growth in international tourism would outgrow domestic tourism in the next five years (SA Tourism, 2001).

Another major problem for the tourism industry is seasonality. This has been blamed for creating a number of difficulties for the industry (Butler, 2001:5). Butler defines seasonality as the temporal imbalance in the phenomenon of tourism, which may be expressed in terms of dimensions of such elements as numbers of visitors, expenditures of visitors, traffic on highways and other forms of transport, employment, and admissions to attractions.

Domestic travel is heavily focused on the government school holiday periods and hence months such as August and November indicate the least amount of travel by South

Africans. Addressing the issue of seasonality is one of the key strategies to improve domestic tourism (DEAT, 2004: 8).

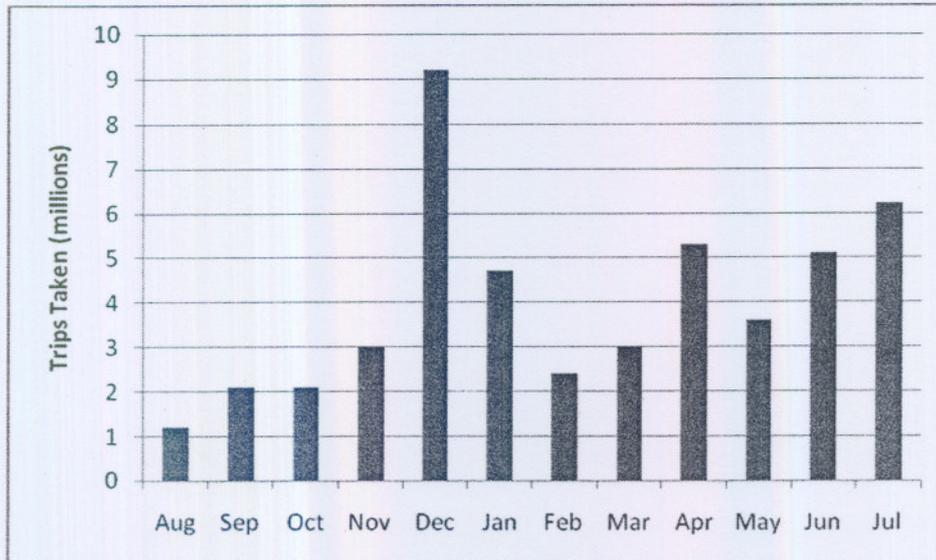


Figure 2.3: Seasonality

Source: DEAT (2004).

Figure 2.3 illustrates the effect of seasonality. One can clearly note the difference in travel between December and a quiet month like August. Seasonality in tourism has two basic elements. One may be called “natural” and the other “institutionalised” (Hartmann, 1986). The natural elements are all those that relate to variations in natural phenomena. Institutional seasonality varies much more widely and the most significant elements are school and industrial holidays (Butler, 2001).

Figure 2.4 also indicates the seasonality for both the international tourism and domestic tourism markets. In the figure, domestic tourism has a more distinct seasonal pattern than international tourism. The peak time for both markets is in December and April.

The encouragement of international tourism flows can, in some ways, have a negative influence on the domestic tourism industry. *“It is not realistic or even desirable to prevent people from taking holidays and leisure breaks abroad but it is illogical for the Government to subsidise people to do so and thereby subject the domestic tourism*

industry to unfair competition (SSE, 2003)<sup>4</sup> The domestic industry must therefore be able to maintain its comparative advantage in the local market.

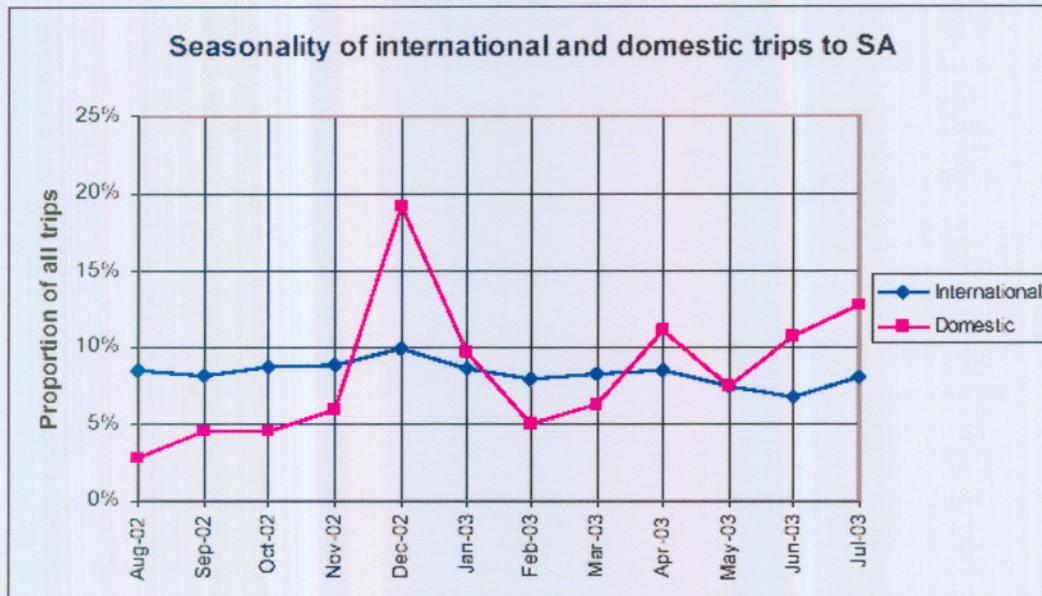


Figure 2.4: Seasonality: Domestic and Foreign

Source: SATOUR Domestic Tourism Report (2003).

#### 2.2.2.2. International tourism

When people travel and stay in countries other than their normal country of residence, they are described as international tourists. The governments treat these tourists as the most important market sector of tourism because they typically spend more than domestic tourists. They also stay longer and they use more expensive accommodation and transport services. They also bring in foreign currency which contributes to the destination country's international balance of payments (Middleton & Clarke, 2001:5).

In South Africa, domestic tourism provides more jobs than international tourism in all but one of the country's provinces (Scheyvens, 2002). This reveals the important role that domestic tourism is currently playing in South Africa. However, the opportunity

<sup>4</sup> Stop Stansted Expansion (SSE), September 2003

presented here is the absence of international tourism as the job providing industry. The tourism private sector is developed and active in South Africa and a strong emphasis is being placed on the development and skills for tourism. This should place South Africa in a good position to maximise tourism growth and achieve foreign exchange targets set together with sufficient job opportunities (World Travel & Tourism Council, 2002: 15).<sup>5</sup>

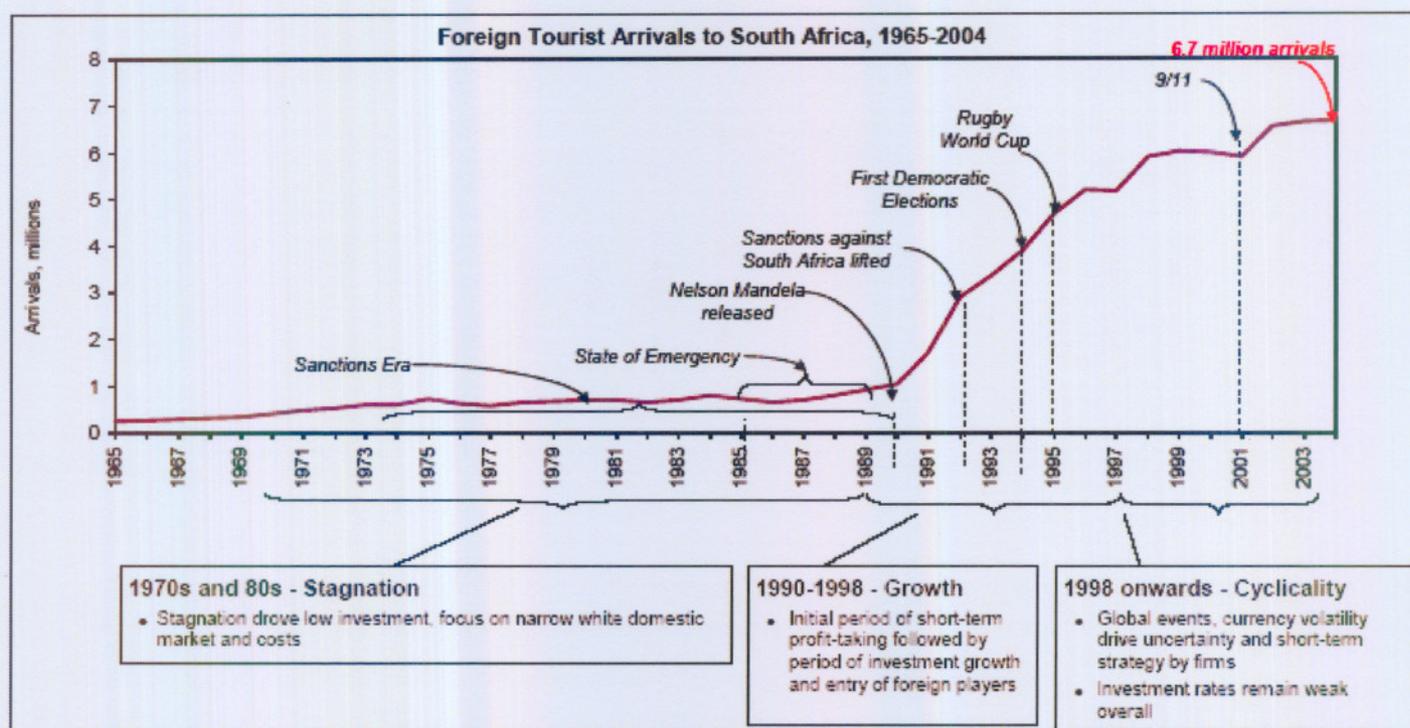


Figure 2.5: Foreign Arrivals to South Africa 1965 – 2004

Source: SATOUR Annual Report (2004).

Figure 2.5 indicates the rapid growth that international tourism to South Africa has experienced since the 1960s. According to SA tourism (2004), 6,677,839 tourists arrived in 2004 and that was the third continuous year of growth between 2001 and 2004. The growth rate in this period was 4.9%. In the first quarter of 2005, a record of 1,795,989 foreign arrivals was posted (Pennington & Bowes, 2005) with this figure continuing to highlight the potential for the tourism industry in South Africa. An important point to notice on the graph is how drastically the arrival structure changed from the early years in

<sup>5</sup> World Travel and Tourism Council (WTTC) 2002

the last decade of the twentieth century. The sanctions era shows very low arrivals and the rise in arrivals only started as soon as these sanctions were lifted. The increase in tourist arrivals from 1994–1995 is due to the Rugby World Cup, which South Africa hosted. These sudden rises in the arrival figures can also be forecast for the Soccer World Cup that will be hosted by South Africa in 2010. The terror-attacks on the World Trade Centre in New York caused a decrease in tourist arrivals not only in South Africa, but all over the world.

Although the arrival figures from Africa are excluded from this study, they still rank the highest out of all the continents that visit South Africa. Table 2.5 indicates the arrivals per continent for 2004 as well as the growth from 2003.

*Table 2.5: Total foreign tourist arrivals*

	2004 figures	Growth from 2003
<b>Total foreign tourist arrivals</b>	<b>6,677,839</b>	<b>2.70%</b>
<b>Africa &amp; ME</b>	4,673,724	4.20%
<b>Americas</b>	262,496	10.70%
<b>Asia &amp; Australia</b>	275,001	3.50%
<b>Europe</b>	1,287,057	-2.40%

Source: StatsSA (2004).

It is clearly evident from the table that Africa is by far the largest contributor to tourist arrivals in South Africa. Many of these numbers, however, are from neighbouring countries as people travel across the border for labour or medical purposes. SA Tourism (2004) reports that even with an increase in arrival figures from countries such as Zambia, Botswana, Kenya, Malawi, and Nigeria, the total foreign direct spend (TFDS) still decreased. This indicates that the majority of the people captured in these amounts aren't tourists, because tourists in general spend money at their destination. This is the reason for the exclusion of Africa from this study as it will not be a true reflection of tourism out of the African countries to South Africa.

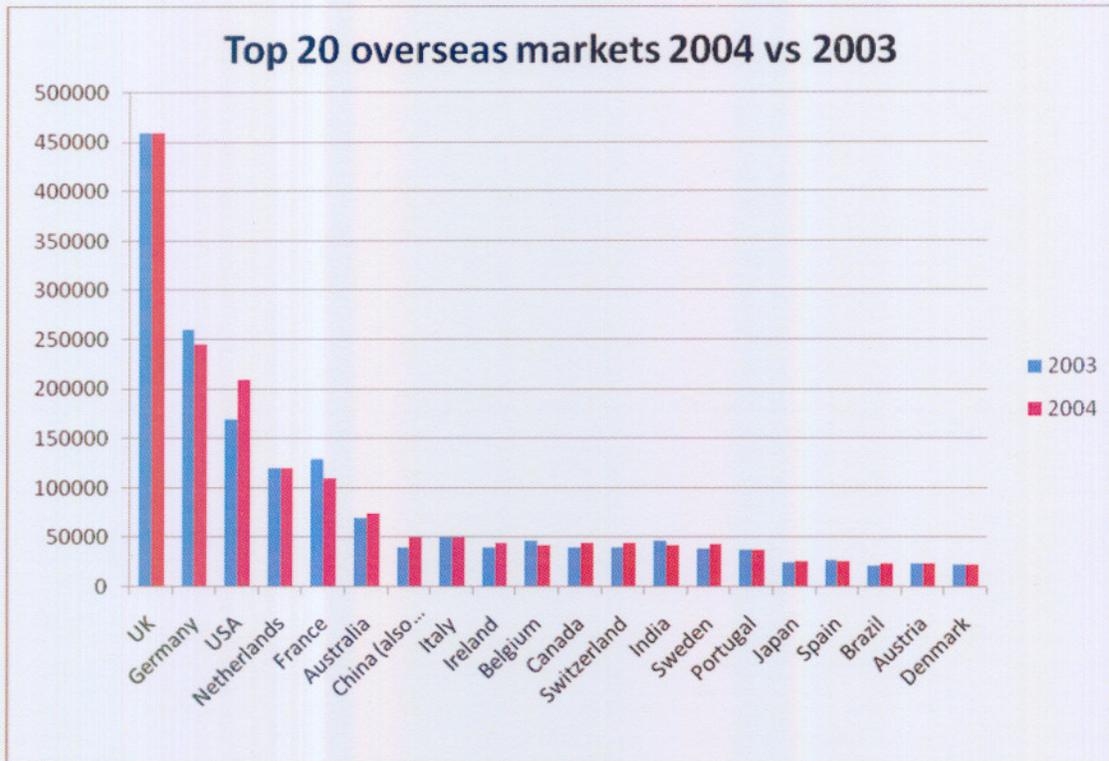
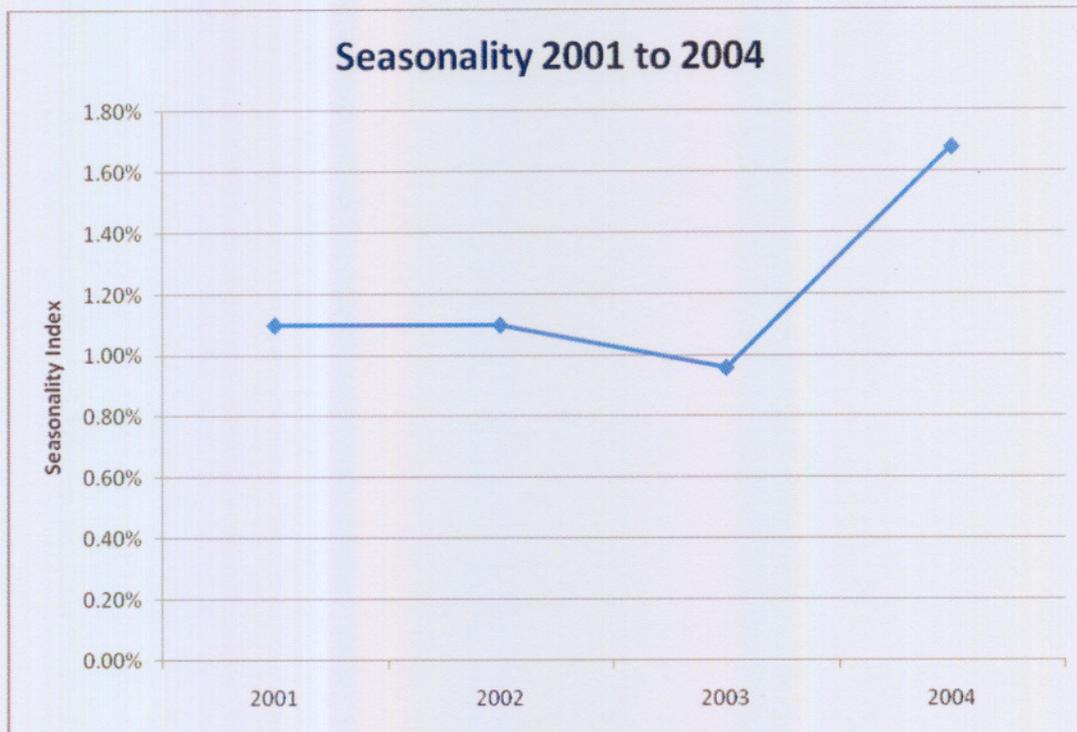


Figure 2.6: Top Markets for SA Tourism

Source: SA Tourism (2004).

The top overseas markets in South Africa, according to Figure 2.6, in both 2003 and 2004 were the UK, Germany and the USA. The majority of South Africa's overseas tourists come from Europe (SA Tourism, 2004).

Seasonality also proves to be one of the challenges of international tourism although Figure 2.4 shows that the impact is far more evident in the case of domestic tourism. SA Tourism (2004) even indicates that America's arrivals and those from Asia/Australia counter seasonality in tourism. The Seasonality Index decreased from 5.25% in 2001 to 1.75% in 2004. Overall, the effects of seasonality worsened in 2004 and it remains one of the most important challenges that affect the sustainable growth of tourism (SA tourism, 2004).



*Figure 2.7: Seasonality*

Source: SA Tourism (2004).

Figure 2.7 indicates that seasonality improved from 2002 to 2003 but worsened again in 2004. The index measures seasonality with a value of 0% representing perfect conditions or no seasonality (SA Tourism, 2004).

That concludes the discussion on the demand side of tourism in South Africa. The figures for the contribution of tourism to the GDP according to SA Tourism (2004) were R100.9 billion in 2003, with a slight decrease to R93.6 billion (7%) in 2004. It therefore signifies an important role in the South African economy. In the following section, the discussion will look at how tourism influences the South African economy.

## **2.3 Tourism and the South African economy**

This section will highlight how tourism, as an industry, contributes to the economy of South Africa in terms of growth, the balance of payments, employment, and national income. Since these are the main indicators of economic performance, it is significant in the discussion of tourism and the economy.

### **2.3.1 Growth and the GDP**

According to Bull (1991) the size of the economy of a country is usually expressed as the total value of all the goods and services that are produced in that country (Bull, 1991:115). This can also be referred to as the Gross Domestic Product (GDP) Mohr (2000) defines GDP as the total value of all final goods and services produced within the geographic boundaries of a country in a particular period. In symbols the GDP can be written as:

$$GDP = C + I + G + X - M$$

where

C = final consumption expenditure by households

I = investment spending

G = final consumption expenditure by general government

X = exports

M = imports

Bull also states that most of the expenditure by tourists would be regarded as consumer spending (C) although tourism would affect the GDP in all aspects. Expenditure by businesses on buildings etc. used for tourism forms part of investment (Bull, 1991:116). Tourism can also influence exports to a certain degree. For instance, if a tourist buys a large value of gifts and products in South Africa to take back to his or her country of origin, it can be regarded as exporting.

The main direct benefit to national income of inbound international tourism is the injection of money and the demand from an external source (Bull, 1991:134). Tourism is the fourth largest and the also the fastest growing industry in South Africa. In 2002, tourism's contribution to the Gross Domestic Product (GDP) of the country was 8.2% and for the next few years showed a projected 12% growth rate yearly (Ntloebide, 2004). This amount indicates the growth of tourism's contribution since 1994, when it contributed only 3% to the Gross National Product (GNP) (Saayman *et al.*, 1997). A continuous growth in the tourism industry will ensure a larger addition to the GDP of South Africa and, ultimately, economic growth. It is, however, difficult to measure because the tourism industry is not measured as a sector in its own right in national accounts. The industries are classified according to goods or services they produce but tourism is a concept that is based on the consumer (Lehohla, 2005). The System of National Accounts (SNA) nonetheless provides for the development of tourism satellite accounts (TSA), which are used for the precise study of tourism-related industries and products (StatsSA, 2005:2).

Table 2.6 represents the main ten tables of the Tourism Satellite Account. Each of the tables places the focus on a different feature of the tourism industry. These tables are not completely independent as there are obvious links between them, especially when they are used for analysis (StatsSA, 2005: 18). These tables help to analyse the economic impacts of tourism. Some of the tables contain a higher priority than others and these are grouped accordingly.

*Table 2.6: Ten tables constituting the TSA*

Table		Comment
1	Inbound tourism consumption by products and categories of visitors.	Table 1 to 3 focus on the demand perspective and analyse visitor final consumption expenditure in cash, treating “inbound”, “domestic” and “outbound” tourism separately. Although the product breakdown is shared, the aim is to distinguish between the types of visitors.
2	Domestic tourism consumption by products and ad hoc sets of resident visitors.	
3	Outbound tourism consumption by products and categories of visitors.	
4	Internal tourism consumption by products and types of tourism	Table 4 focuses on the demand perspective and combines all visitor final consumption expenditure in cash associated with inbound (table 1) and domestic (table 2) tourism with other components of visitors’ consumption.
5	Production accounts of tourism and other industries	Table 5 focuses on the supply perspective and analyses the production of tourism characteristic industries as well as other industries. The productions accounts (output and intermediate consumption by product) are shown in a format similar to the information included in a set of supply and use tables.
6	Domestic supply and internal tourism consumption by products	Table 6, which includes the confrontation between supply and internal tourism consumption, is regarded as the core of the TSA as it allows for the computation of tourism value added / GDP and its components.
7	Employment in the tourism industries	Table 7 provides a detailed description of employment in the tourism sector, although this will be supplemented by the LAT.
8	Gross fixed capital formation of tourism industries and other industries	The tourism gross fixed capital formation still needs development
9	Tourism collective consumption by functions and levels of government	Focuses on the involvement of government sector needs to be tied more closely with COFOG.
10	Non-monetary indicators	The 1993 SNA provides for physical indicators as part as satellite accounts. Table 10 therefore presents a number of non-monetary (physical) indicators related to tourism such as the number of trips and overnight stays, the number of establishments in tourism –characteristics and connected activities.

Source: StatsSA (2005).

### ***2.3.2 Tourism’s impact on the Balance of Payments***

The balance of payments of a country is an indication how the international transactions of a period have influenced the foreign exchange position of the specific country. It is important to have enough foreign exchange because that is what a county will be using to pay for its imported goods. If the supply of foreign reserves in a country is insufficient, the exchange rate will be affected negatively (Saayman, 2000:122). In countries such as the United States, Spain, and France, tourism is the top earner of foreign exchange

(Brynard, 1995). According to SA Tourism, tourism is the fourth largest earner of foreign exchange in South Africa (Saayman, 2000:123). The service account is the account that reflects tourism flows and these receipts have continued to show growth (Joffe, 2006).

*Table 2.7: Balance of Payments*

<i>R millions</i>	1997	1998	1999	2000	2001	2002	2003	2004	
Receipts									
Service receipts									
Transportation	5025	6029	6628	8203	9890	10743	9485	9115	
Passenger fares	2632	3123	3706	4582	5885	8101	7234	6810	
Other	2393	2906	2922	3621	4005	2642	2251	2305	
Travel	13144	15707	17103	18563	22073	30665	41782	40580	
Business	1467	1706	1538	1660	1718	2303	2948	2765	
Other	11677	13999	15565	16903	20355	28362	38834	37815	
Other services	6694	7954	8094	8184	7789	7631	8092	8192	
<b>Total services</b>	<b>24863</b>	<b>29690</b>	<b>31825</b>	<b>34950</b>	<b>39752</b>	<b>49039</b>	<b>59359</b>	<b>57887</b>	
<i>R millions</i>	2003		2004				2005		
Receipts	Q4	2003	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Service receipts									
Transportation	9160	9485	8868	8992	9149	9451	9370	9884	9749
Passenger fares	6960	7234	6693	6867	6751	6929	6861	7245	6986
Other	2180	2251	2175	2125	2396	2522	2509	2639	2763
Travel	42815	36996	36996	40144	40141	45039	42459	45447	45606
Business	2858	2623	2623	2898	2834	2705	2886	3002	3143
Other	39957	34373	34373	37246	37307	42334	39573	42445	42463
Other services	8405	7896	7896	8382	7996	8494	6080	8478	8734
<b>Total services</b>	<b>60380</b>	<b>59359</b>	<b>53760</b>	<b>57518</b>	<b>57286</b>	<b>62984</b>	<b>59909</b>	<b>63809</b>	<b>64089</b>

Source: SA Reserve Bank (2005).

In the top part of the table above, the figures indicate the receipts in millions from the travel sector in the South African Balance of Payments from 1997 to 2004. A clear conclusion can be drawn from these figures as to how the income from tourism has grown in South Africa. In 1997, the receipts were only R13 144 million, and this amount went up into the forty millions in 2004. The lower part of the table indicates the same information but here the data is presented in quarterly format until the third quarter of 2005. The impact of seasonality is also evident in these amounts with the 'peak' quarters indicating higher receipts. Growth is also notable in these figures with the third quarter of 2005 receiving R45 606 million, the highest in this range.

### *2.3.3 Employment*

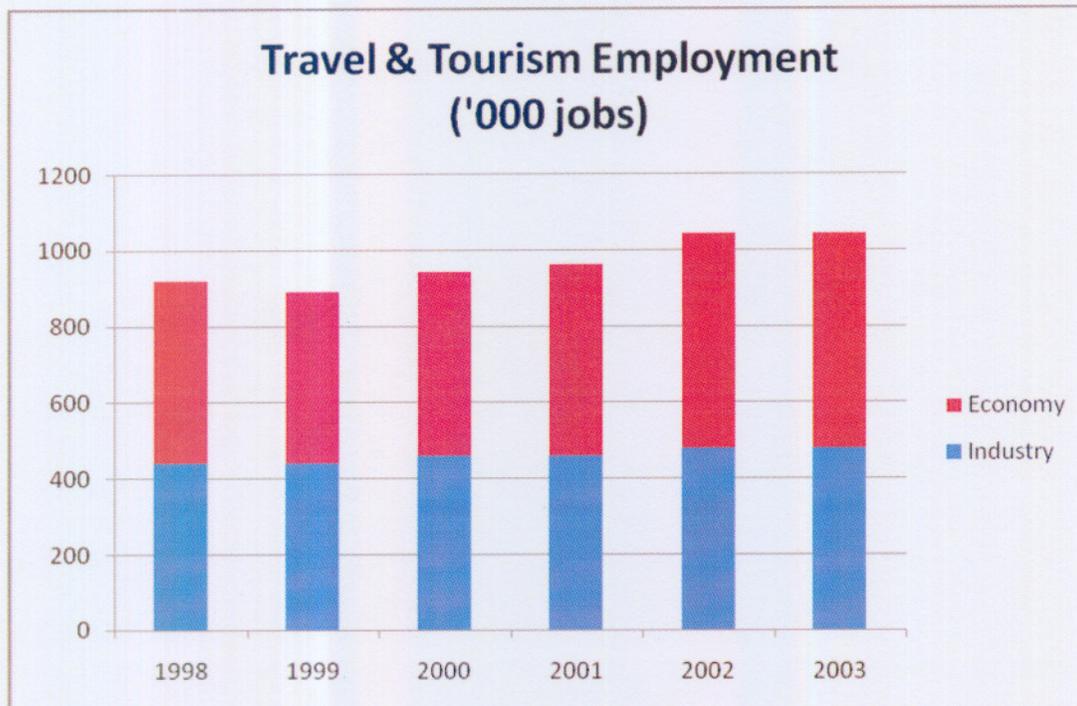
Both domestic and international tourism can create employment opportunities in the economy. Tourism is relatively labour intensive and it can employ a multiplicity of skills (DEAT, 2002:1). The World Tourism Organisation (WTO) (2002) supplies the following as characteristics of tourism employment:

- A strong fluctuation in demand due to seasonality
- Predominance of small and medium size enterprises, although most of the employment is located in larger enterprises
- Most firms are relatively labour intensive
- A higher growth in employment in the major tourism industries compared to the total economy

The South African tourism growth strategy aims to position South Africa a global competitive tourist destination through attracting more international tourists and, more importantly, to create significantly more tourism-related job opportunities as well as increasing the contribution made by tourism to the South African economy (DEAT, 2004). According to the World Travel and Tourism Council (WTTC), South Africa's tourism economy accounted 1,148,000 jobs in 2001, which is 6.9% of the total employment (WTTC, 2002:6).

Figure 2.8 indicates the number of jobs created from travel and tourism in South Africa during the period 1998-2003.

The graph indicates that the number of jobs created by tourism in the 'face to face' industry (such as hotels, airlines, etc.) has a steady growth rate since 1998. Overall in the economy, there was a decrease from 1998 to 1999, but from there on it shows growth until 2003. The World Travel and Tourism Council expects that South Africa's tourism and travel will achieve a growth rate of 3.3% on employment to 1,555,300 jobs overall in 2012 (WTTC, 2002:7).



*Figure 2.8: Travel and tourism employment*

Source: WTTC (2002).

It can therefore also be added that tourism, through job creation, can be used as a development strategy for poverty alleviation. Yunis (2004) states that tourism can in fact meet the needs of the poorer nations as these nations have advantages over the more developed countries in terms of cultural heritage, natural wildlife and climate. Sinclair (1998:30) stated that tourism generates income in both the formal and informal sectors and this is a great advantage for developing countries. She also adds that this statement on tourism employment has been confirmed by empirical studies in the past (Sinclair & Bote Gomez, 1996).

From the above discussion it is evident that tourism has a significant effect on the economy and it is therefore a worthwhile sector to investigate and understand.

## **2.4 Summary**

The aim of this chapter was to provide an overview of the South African tourism industry. The discussion was divided by looking firstly at the supply side of tourism and secondly the demand side, which was further divided into domestic and international tourism. An outlook was also provided on how travel and tourism affect the South African economy and how this affect has changed from the past. Weaknesses were identified and the potential of the industry was apparent. This chapter places the tourism industry in South Africa in perspective and gives an overview of tourists visiting the country. For further discussions and in the empirical section of the paper, the will be on the international tourists or foreign arrivals to South Africa.

Subsequently, chapter 3 will be aimed at the theoretical explanation of the influences of international tourism demand.

## Chapter 3

### Factors that Influence the Demand for Tourism

#### 3.1 Introduction

After a thorough discussion on the ways that the tourism industry influences the South African economy, as well as trends from the past, the aim of this chapter is to take a closer look at tourism demand and the factors that influence it. Since the 1960s, several empirical studies have been conducted to develop an understanding of the factors that affect the flows of international tourism (Crouch & Shaw, 1992:176).

Song and Witt (2000) define tourism demand as *“the amount of a set of tourist products that the consumers are willing to acquire during a specific period of time and under certain conditions which are controlled by the explanatory factors used in the demand equation.”*

This chapter is aimed at explaining the factors that influence the demand for tourism and travel in general. The tourism industry faces certain threats that can hamper growth and these threats will also be included in the discussion. These factors will be subdivided into groups and the discussion will be based on previous research and literature related to this topic.

According to Lim & McAleer (2001:3) growth in international tourism is narrowly aligned to economic variables. Although these economic variables form part of these determinants in most cases, certain non-economic factors also play a significant role and the study would be insufficient if these particular variables were excluded. The independent variables are divided into two main categories: economic factors and non-economic factors. These sub-divisions form the main discussion of this chapter.

A brief mention should also be made of the appropriate dependent variable. Walsh (1996:5) and Naudé & Saayman (2004:6) state that most of the research conducted on the international tourism demand uses the number of tourist arrivals as the dependent variable (51%). Nonetheless, a considerable number of these studies have also used the tourism expenditure or receipts when measuring demand (Walsh, 1996:5). According to Crouch & Shaw (1992:179) the 'length of stay' has also been used as the dependent variable in a number of previous research studies such as Askari (1973); Clarke (1978); Mak *et al.*, (1977) and Schulmeister (1979). In Crouch and Shaw's (1992) findings, they state that the majority of previous empirical studies used the number of tourist arrivals (69%).

### **3.2 Economic Factors**

When the focal point shifts to the independent variables, the majority of previous research conducted on this matter included or mentioned economic variables to determine tourism demand. Lim (1997b) concludes that the majority of studies focus on economic factors in estimating demand. Lim & McAleer (2001:3) stated that these variables influence the consumer's decision to undertake overseas travel on a microeconomic level. All these economic factors will subsequently be discussed.

Naudé & Saayman (2004) identified the economic independent variables, alias the determinants of tourism demand in this context, as:

- Income
- Relative prices of goods and services
- Exchange rates
- Transport Costs

These determinants are therefore further discussed:

### 3.2.1 Income

According to Ledesma-Rodriguez *et al.*, (1999:7) income is one of the exogenous economic variables that are frequently used in the estimation of international tourism demand. Both Walsh (1996) and Naudé & Saayman (2004) included income in their studies as an independent variable. Eilat & Einav (2003:5) also state that income in the country of origin is a variable that is widely used in empirical tourism literature. It could be argued that income is the most frequently used variable. Crouch & Shaw (1992) found that income was included in 91% of the studies they reviewed.

Walsh (1996:5) argues that, *ceteris paribus*, the larger the real per capita income of a country, the more likely that its citizens will be able to afford to purchase travel services abroad. A growth trend in the real income provides consumers with additional spending or purchasing power. This variable measures how the travelling habits of the people in a specific country of origin respond to their wealth (Eilat & Einav, 2003:13).

The per capita income is pointed out to be the most important factor influencing the demand or the decision for people to travel. It has been shown that there exists a direct link between the demand for tourism and the length of stay and the level of income or personal wealth of the potential travellers (Proenca & Soukiazis, 2005:6). It should be kept in mind that tourism is a commodity that is traded internationally, although the goods and services thereof do not physically cross the borders (Divisekera, 2003). It is common economic theory that if income rises, so will the demand for such commodities.

Proenca & Soukiazis (2005:6) highlight the different variables that have been used in previous literature to surrogate the level of wealth of the potential tourist in the country of origin. These include: the Gross National Product (Garin-Munoz & Amaral, 2000; Qui & Zhang, 1995; Uysal & Crompton, 1984) or the Gross Domestic Product (Kulendran & Wilson, 2000; Ledesma-Rodriguez *et al.*, 1999; Lathiras & Siriopoulos, 1998) in real or nominal terms but, in particular, in per capita terms. Walsh (1996:6) states that data that represents discretionary income per capita would be the most appropriate.

### **3.2.2 Relative Prices**

The amount of international travel and tourism demanded is also expected to depend to a considerable degree on prices (Lim & McAleer, 2001:7). According to Ledesma-Rodriguez *et al.*, (1999), apart from income, the price variable is one of the variables frequently used in tourism demand studies in Spain. However, this is not only the case for Spain. According to Walsh (1996:4), classic economic theory implies that the most important determinants of demand for tourism should include: the income of tourists, any other factors that may alter tastes, and the price of tourism goods and services related to the price of relevant substitutes.

Lim and McAleer (2001:4) argue that tourism expenditures compete with all the other goods and services to get consumer preference. As a consequence, any deviation between commodities in the destination country and commodities in the country of origin is likely to have implications for the tourism industry. Walsh (1996:6) mentions that the effect of a change in prices is far more complicated in tourism than the effects of a change in income. To define tourism prices is difficult because the cost of tourism is a function of a different mix of goods and services consumed by each tourist. If the prices in the destination country rise more than those in the country of origin, and this effect is not fully compensated by the changes in the exchange rates, then the cost for a tourist to travel has undoubtedly risen. The other problem present with the price effects on tourism is that the appropriate price indices simply do not exist (Witt & Witt, 1992; Eilat & Einav, 2003:3). Many of the studies previously completed on tourism demand have used the ratio of the consumer price indices (CPI) of both the destination country and the country of origin as a proxy for the tourism price variable (Lim and McAleer, 2001; Divisekera, 2003). A realistic measure of prices should reflect the cost of an ordinary basket of goods that is consumed by tourists (O'Hagan & Harrison, 1984).

### **3.2.3 Exchange rates**

Ever since the termination of the Bretton Woods System in the 1970s, where all the exchange rates were fixed and stable, currencies globally have experienced more instability and changes (Saayman & Saayman, 2006:4). These fluctuations in the values

of currencies have had significant impacts on the international trading environment, which includes tourism. The impact of exchange rates can be said to be twofold. It increases uncertainty and affects price.

To include variables for tourism prices imposes quite a challenge for empirical tourism research. The majority of researchers have used exchange rate variables to proxy for tourism prices (Eilat & Einav, 2003:3). Lim and McAleer (2001:5) stated that exchange rates have been used to represent tourism prices in the empirical literature. They argue that such information is available to tourists and is known in advance. According to Walsh (1996:9), tourists are concerned with the price of the foreign currency in the destination country. The expectation is that, *ceteris paribus*, if the price of foreign currency decreases, then travellers will demand more foreign travel services. In addition to this, Saayman & Saayman (2006:8) point out that it is apparent from literature that an increase (appreciation) in the exchange rate can discourage tourists from travelling from some countries, depending on the significance of the changes.

Eilat & Einav (2003:3) stated that one of the popular ways of including the exchange rate in the analysis is to make use of the relative nominal exchange rates, calculated as an index relative to a base year. The use of this variable is based on the motivation that people are aware of exchange rate fluctuations, but they do not have any information on price changes in the destination countries. This is not such a useful argument when some of the tourism services are paid for in advance, like car rental, accommodation, etc. According to Walsh (1996:10), the market exchange rates are usually a poor guide to the real purchasing power of currencies. The actual movements in real exchange rates provide a better estimate, i.e. the market rates that are adjusted for movement in the price levels. Lim and McAleer (2001:5) confirm this by stating that the CPI (Consumer Price Index) ratio could be adapted for variations in the exchange rates of the local and destination currencies. This is also known as the real exchange rate.

### 3.2.4 Transport cost

Transport cost is another component of tourism price and it is important in the overall cost of the total 'tour package' (Naudé & Saayman, 2004:13). Lim and McAleer (2001:4) argue that transport cost is usually the single most important component of the overall travel cost for tourists. The travel cost method was developed in the 1960s to estimate recreation demand (Hamilton *et al.*, 2005:254). According to Crouch & Shaw's (1992) findings, 61% of previous empirical studies included transport costs in estimating tourism demand functions. These studies include those of: Clarke (1978), Hollander (1982), Jud & Joseph (1974), Kanafani (1980), Sunday (1978), White (1985) and Witt & Martin (1987), to name but a few.

A change in the price of transport can result in altered substitution effects that depend on the distance of competing destinations within international travel. If the price of transport from Australia to South Africa, for example, declines relative to other more distant countries, one may anticipate some substitution of other overseas travel for South Africa. This would, *ceteris paribus*, cause an increase in demand for South Africa. (Walsh, 1996:13). Gray (1970) suggests that a fall in airfares is likely to increase the number of tourists, but the expenditure abroad may not vary. A reduction in travel fares will be more likely to have an effect on the number of tourists that visit a destination than on the expenditure per capita. There are various types of travel and these travel types are all substitutes. A rise in fares of one of these travel classes could lead to a substitution between, for example, air travel and surface travel, or, in terms of tourism demand, a substitution between near and far destinations.

Due to the complexities of transport's price structure, consistent data on transport cost is non-existent. Often researchers use the distance of travel to proxy for transport costs (Eilat & Einav, 2003:4). There are, according to Crouch & Shaw (1992:177), some researchers that have included both distance and transport costs in their study such as: Mak *et al.*, (1977); Rugg (1971); Witt (1980a,b) and Crampon & Tan (1973).

In Naudé & Saayman's (2004) study, the distance of a country to the origin of its tourists was used as a proxy for travel costs. The distance variable took the location of a country to be at its capital. Eilat & Einav (2003:12) identified geographical variables in their study that included a dummy for a common border and the distance between the countries involved. Note that both these studies are panel data studies. According to Da Cruz & Rolim (2005:8), if the distance to a destination increases, older tourists would rather be the ones travelling, therefore they are paying the transport costs and spending time at the destination. Although this is also valid in the case of tourism goods, the difference is that people add more value to the transport costs and time spent than the goods themselves. This reinforces the relevance of variables such as distance and transport costs.

The weakness when considering the distance of travel as a measure of travel cost is that it doesn't measure the changes in travel costs over time (Naudé & Saayman, 2004:14). Eilat & Einav (2003:13) suggest time dummies to solve this problem. Bond & Ladman (1972) and Divisekera (2003) used a weighted average one-directional airfare cost as a proxy of the way the cost of the whole trip might vary over time. Travel time has been included in previous studies, including those of Witt (1980a), Witt (1980b), Laber (1969), Noval (1975), and Rugg (1971). However, Crouch & Shaw (1992) state that this amounts to only 16%. According to Saayman (2000), travel time to and from a destination has a great influence on tourism participation. It can be accepted that travel time or distance has a negative relationship with participation. In contrast, Epperson (1977:39) reports that the journey itself was found to be quite enjoyable as part of travel time (Epperson, 1977:39).

The majority of authors mention the importance of transport cost as a determinant of international tourism flows, but exclude the variable from the model (Walsh, 1996:14). According to Uysal & Crompton (1985), the reason for the travel cost variable being excluded from tourism demand variables is due to: insufficient data, problems with multicollinearity, difficulty with identifying the appropriate mode of transport, lack of statistically significant results, and the reluctance to lose another degree of freedom in estimation. Travel costs remain an important segment of international tourism flows and

exclusion of such a variable may result in an incomplete model of tourism demand (Walsh, 1996:15).

This concludes the discussion on the economic factors that influence the demand for tourism. Subsequently, the focal point will lean towards the non-economic factors as determinants of international tourism demand. These factors prove to be far more complex and varied than the economic factors discussed above.

### **3.3 Non-economic Factors**

Crouch & Shaw (1992:180) confirmed that the most frequently used independent variables in a tourism demand function are income, relative prices, cost of transport, and exchange rates, which are categorised as the economic variables described above. However, many other independent variables have also been inspected. Such variables aim to incorporate marketing factors with the regular economic factors. In their study, they identified the following non-economic independent variables that were used in previous studies. They appear in order of popularity followed by the percentage of use in all these studies:

- Disturbance factors (Dummy variables) (45%).
- Time trends (17%).
- Travel time / distance (16%).
- Population (14%).
- Marketing expenditure (11%).
- Ethnic attraction / cultural ties (11%).
- Previous visits (8%).
- Total tourist expenditure (5%).
- Trade / business links (5%).
- Travel restrictions (5%).
- Weather index (3%).

- Supply factors (hotel rooms, government assistance) (3%).
- Tourist appeal (3%).
- Demographic factors (3%).

The majority of these explanatory variables will subsequently be reviewed together with additional factors, also known as the so-called ‘threats to tourism’, which include occurrences like crime, health issues, unstable political environment, media attitude, and lack of knowledge of the destination.

### **3.3.1 Disturbance factors (dummy variables)**

The inclusion of dummy variables in the tourism demand models is an ordinary phenomenon. The main purpose of these variables is to attempt to capture the vast impact that special, non-quantitative events or occurrences have on the flow of international tourists to a specific destination (Divisekera, 2003:38). These events are not persistent, but mainly short-term disturbances to the normal travel pattern.

Although normal increases and decreases in tourism figures can be assumed, these events can cause very sudden, abnormal changes in the number of travellers, which could lead to structural breaks in regressions. Therefore, the dummy variables are entered to proxy for such incidents. In regression models, the dummy variable gets the value ‘1’ in the year that the event took place; otherwise the value is ‘0’. To attempt to capture the effect of every single event by adding additional dummy variables is not a practical solution. This results in the loss of a degree of freedom from the regression (Walsh, 1996:11). Apart from these events or happenings, dummy variables could also be included for seasonal factors (Naudé & Saayman, 2004:7), or for any other applicable attribute.

### **3.3.2 Trends**

A trend can be defined as “a prevailing direction of the market, either up or down, during the course of a term”. A trend is always related to the term. According to Lohmann & Danielsson (2004:2), a trend describes possible developments that are likely to occur. Apart from dummy variables, the second most popular variable that has been used in

previous research is a time trend. Normally, this variable is included in the study as a proxy for consumer tastes, preferences, cultural curiosity (De Mello *et al.*, 2002:514), and habits in the tourism sector (Walsh, 1996:12) or, in other words, specific households' behaviour. Proenca & Soukiazis (2005:8) state that the trend variable can also capture cyclical effects, demographic changes in the sending country, and supply improvements in the destination country.

Tourists may adhere to what they already know or they may display more adventurous behaviour and visit other countries even when they are faced with unchanged expenditure and prices in the countries they have already visited. If this is the case, and a trend variable is absent, the estimates of expenditure and price coefficients in the model may be false or inaccurate (De Mello *et al.*, 2002:514).

### **3.3.3 Population**

The total population of the origin country is used in some studies as an independent variable in the demand function for tourism to account for market size. The underlying principle behind the use of this variable is that large countries present a potentially greater supply of tourists and greater economies of scale can therefore be explored (Proenca & Soukiazis, 2005:8). According to Walsh (1996:5) the extent of demand for tourism services from any origin is obviously related to the actual size of the population, i.e. the number of potential customers in a market to buy that good.

It would rarely be the case that the demand for tourism from a country with a small population would approximate that of a country with a large population, even if the smaller country's tendency to travel is higher (Walsh, 1996:5). Bond & Ladman (1972) used population as a separate variable and their study confirmed that population is a significant variable in a number of cases. Witt & Song (2001) stated that population sometimes features separately as an independent variable, but the dependent variable can also be modified to represent international tourism demand per capita to accommodate for the effect of population.

### **3.3.4 Marketing Expenditure**

Tourism is, just as any other product, consumed, and effective marketing attracts probable consumers. Saayman (2000:40) stated that the effective introduction of a destination to the future tourist is vital. To advertise or market an area has a great influence on the final choice of the tourist. According to Epperson (1977:43), unfamiliarity with the travel destination as well as a lack of information causes a lack of interest. Normally these promotional activities are the work of national tourist organisations and they may take various forms, including media advertising (such as television and radio), and public relations (Witt & Song, 2001).

To find a suitable proxy for marketing is not such a straightforward task. Naudé & Saayman (2004) made use of the number of Internet users in the origin country to capture the effects of networks and information on tourism. In general, the overall promotional expenditure is used and this is expected to have a positive relationship with the level of international tourism flows (Witt & Song, 2001). Previous authors who have used marketing as one of their explanatory variables include Barry & O'Hagan (1972), Clarke (1978), Papadopoulos & Witt (1985), Uysal & Crompton (1984) and Uysal (1983). In studies of aggregate demand, due to the unavailability of marketing expenditure data by the host country, the variable is mainly excluded in the demand models (Song & Turner, 2001:10).

### **3.3.5 Cultural Attraction**

Cultural tourism is considered to be an umbrella term that incorporates heritage tourism, historical tourism, arts tourism, and ethnic tourism (Macdonald, 1999: 23). According to the Cooperative Research Centre for Tropical Rainforest Ecology and Management (1999) ethnic tourism, as part of cultural tourism, can be defined as the occurrence when tourists choose to experience the practices of another culture, which may involve presentations, performances, and various attractions presented by indigenous communities. Examples of such communities that attract tourists are: the Amish communities of the U.S, the First Nation societies of Canada and North America, the Maori of New Zealand, the Bushmen of South Africa, and the Ibo tribes of Indonesia.

Cultural tourism as a whole includes a range of activities from visiting art galleries, theatres, heritage buildings or sites, and festivals or cultural events (Commonwealth of Australia, 2005).

Culture tourism represents one fifth of the tourism market and indicates a growth rate of ten to fifteen percent annually, it is therefore an important niche market within the tourism industry (WTO, 2001). Rather than just being an added attraction on a travel schedule, culture is becoming a major medium for the tourist's whole travel experience (Macdonald, 1999:16). A number of authors such as Kliman (1981), Laber (1969), Rugg (1971), and Smith & Toms (1978) have realised the importance of cultural tourism and included cultural ties into their studies as an independent variable (Crouch & Shaw, 1992:179).

A proxy for cultural tourism can enter the demand model in various forms. Eilat & Einav (2003:12) used a dummy variable that would be equal to one if the country of origin and the country of destination have at least one common language. This variable however, only controls for similarity in culture between the countries involved. As mentioned before, cultural curiosity can also be accounted for by the inclusion of a trend variable (De Mello *et al.*, 2002:514).

### **3.3.6 Total Tourist Expenditure**

Divisekera (2003) defines total tourist expenditure as the sum that is spent on international travel and tourism. To include the total expenditure of the tourist is an alternative method for estimating the composite price as a determinant of the demand for international tourism. It is, however, a broad term and it covers a large bundle that is consumed by the tourist; it also varies in quality. Different tourists pay for different quality products that differ in price, such as expensive meals as opposed to takeaway food outlets, or 5-star hotel accommodation as opposed to a caravan park. To cover these differences in quality, Divisekera (2003:37) suggests that the average observed expenditure on tourism goods is used. Naudé & Saayman (2004:13) used the real GDP

per capita in the countries of origin as a proxy for the total expenditures on tourism goods as one of their key independent variables.

According to Crouch & Shaw (1992), tourist expenditure is mainly used as the dependent variable in previous literature. They indicate that 41% of the studies made use of this method. Therefore it seems more likely to find total tourist expenditure to be the dependent variable in previous studies, rather than one of the important explanatory variables in the estimation.

### **3.3.7 Trade/business links**

It is expected that economic relations can have an impact on the tourism flows between two countries. To proxy for the intensity of these relations between countries, Eilat & Einav (2003:12) used the gross annual value of two-sided trade between the countries. They then standardised the figure by dividing by the GDP figures of both countries. Inclusion of this variable offers an additional benefit in that it controls for the number of business tourists that travel between the countries. Other examples of authors who have included trade links in their studies as an independent variable are Rugg (1971), Smith & Toms (1978), and Guthrie (1961).

### **3.3.8 Climate**

According to Lohmann and Kaim (1999), there is a lack of empirical evidence on the impact of weather/climate on the choice of a holiday destination. Poor weather conditions are a major influence factor in a tourist's decision to return to a certain holiday destination and they influence friends to visit that destination country (Walsh, 1996:11). Hamilton & Lau (2004) state that there are economic studies that involve estimating the demand for destinations that make use of climate variables, as well as global models of international tourism flows that include temperature as an explanatory variable. Examples of these include Maddison (2001), Lise & Tol (2002), Hamilton (2003), Berritella *et al.*, (2004), and Hamilton *et al.*, (2003). Among the considered factors that could influence a tourist's decision on a holiday, the climate characteristics in the destination country are ranked quite high (Lohmann and Kaim, 1999). It is evident that climate change will affect

the attractiveness of any destination and hence the motive for international travellers to depart from their country of origin (Bigano *et al.*, 2004:2).

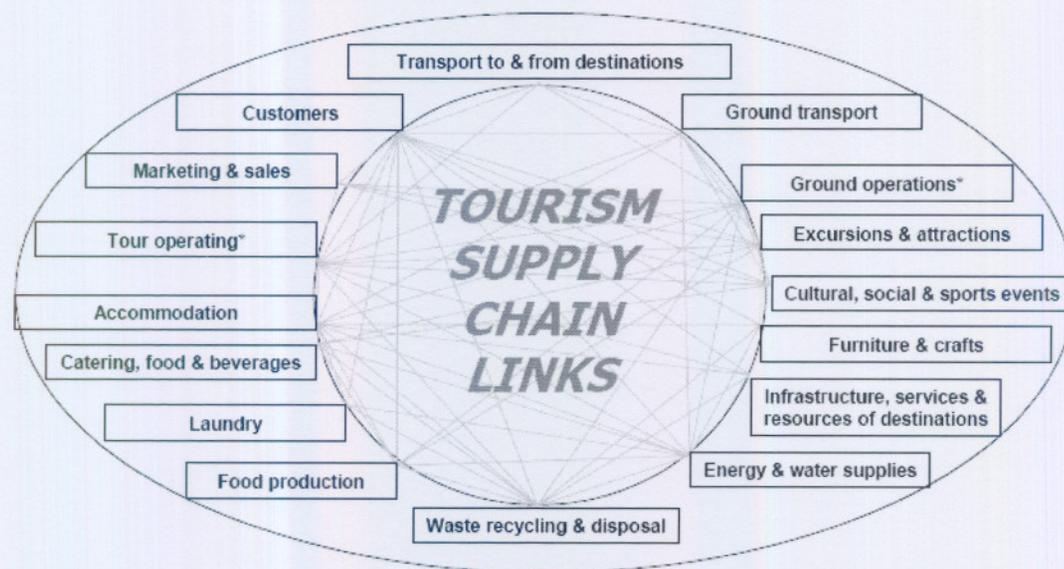
When considering climate or change in climate as an explanatory variable, it would be appropriate to look at what the term entails. Morley (1992) suggested that utility should be considered in the decision making process of tourists. He states that tourism demand should be estimated based on the expected utility that would be derived from the characteristics of the product which, in this case, is the destination country. Climate and change in climate form part of these characteristics. Depending on the holiday that the tourist is pursuing, climate plays an important role in the destination. If the traveller were keen on skiing, for example, the destination with the most available ski slopes, facilities and resorts, etc. would be more competitive. Another aspect of climate change involves the effect of extreme weather conditions like hurricanes and the Tsunami that hit Asia in 2004. Such life-threatening happenings normally lead to the discouragement of people to travel.

Walsh (1996) uses the Poulter index as a measure of weather conditions in her study on the demand for tourism to Ireland. This specific index represents mean temperature, rainfall, and sunshine during the popular summer months in Ireland. Climate can also be classified according to a thermal aspect, which is assumed to be a composite of temperature, wind, humidity, and radiation. Many numerical indices have been developed to measure climate's thermal aspect. These indices also allow one to compare the suitability of a destination for different tourism activities (Bigano *et al.*, 2005:4). Eilat & Einav (2003:13) constructed dummy variables to proxy for differences in climate. They calculated the differences in the distance to the equator between the origin and destination country (measured at the capital) which they clustered into seven groups, each represented by a dummy variable.

### **3.3.9 Supply factors**

Supply conditions are important factors in attracting greater tourism inflows for the destination country (Proenca & Soukiazis, 2005:11). Generally, the supply factors are

located and controlled in the host country and, typically, tourism supply comprises all the goods and services that are enjoyed or purchased by the visitors. According to Tapper (2004:4), the supply chains of tourism involve many different components. It's not just accommodation, excursion, and transport, but bars, restaurants, food production, infrastructure, and even waste disposal are all in support of tourism in the destination country. These links can be seen in Figure 3.1 and are typically part of what tourists expect when they purchase a holiday.



*Figure 3.1: Tourism supply links*

Source: Environment Business & Development Group (2003).

From Figure 3.1, it can be noted that all the components in the supply chain are linked. An effective combination, availability, and quality of the components in the tourism supply chain, together with the activities of tourists and what they want to source for themselves when on holiday (Tapper, 2004), will ultimately influence tourism demand.

Proenca & Soukiazis (2005:11) used accommodation capacity, calculated as the number of beds available annually to tourists, to measure supply in their demand model. They also identified a second more realistic measurement for tourism supply which is related to

tourism infrastructure. Here, they included the ratio of public investment to the GDP as a proxy to capture the welfare effects that sprung from public infrastructure networks. Naudé & Saayman (2004:14) also made use of the relative number of hotel rooms available in the destination country. They argue that hotel rooms are an indication of the capacity of a country's tourism sector and a certain number of hotel rooms could justify investment in complementary infrastructure such as roads. It may also be necessary to convince airlines to establish routes to the country.

### **3.3.10 Demographic factors**

Demographic change is constant and the phenomenon has received a lot of public attention in recent years (Lohmann, 2004:5). The possible demographic factors that can influence the demand for tourism include all those relating to personal characteristics such as age, gender, social class, level of education, occupation, and family status.

According to Willmott & Graham (2001), the European population is ageing. They argue that the travel and tourism industry will have to take a structural shift such as this one into account. The entire area of travel motivation will shift, and travellers will become more flexible as older people tend to travel more. This will invariably lead to a change in demand for the tourism product. Walsh (1996:16) stated that variables such as age distribution, occupations, urbanisation, and level of education play an important role in influencing tourism demand. However, Walsh argues that demographic or sociological factors may be more significant in determining the choice to travel rather than in determining the choice of holiday destination.

Lohmann (2004) identifies two important demographic trends that are often the focus of tourism demand estimates:

- Societies that are growing older due to the rise in life expectancy, with the developed countries taking the lead.
- The number of children is declining due to low fertility in industrial societies combined with the dissolution of traditional families.

Apart from the demographic trends mentioned above, other current changes include rising education levels, a colourful society due to migration, and the changing role of women. Lohmann (2004:5) states that, in most cases, people keep to the travel patterns acquired until the middle of their life. He therefore argues that predictions can be made on the future generation's tourism behaviour. Senior citizens in 15 years time will be different from the present citizens when it comes to travelling. The effects of consumer behaviour patterns and demographic change will lead to more senior citizens travelling with different preferences. Demographic change will therefore surely have its impacts and these will be reflected in the arrangement of tourism demand.

Walsh (1996:16) excluded sociological variables such as age distribution, urbanisation, occupation, and education levels from her study, although she argued that the trend variable is likely to capture the effects of some of these variables. Proenca & Soukiazis, (2005:8) also stated that the inclusion of a trend variable could capture the effects of demographic changes in the country of origin. Alegre & Pou (2002:14) summarised the level of education by creating four groups: illiterate or without studies, primary school studies, secondary school studies, and higher education. The dummy variables they used took the group without studies as the reference. As far as occupation is concerned, one could use the unemployment figures in the country of origin as a proxy.

### **3.3.11 Threats to tourism**

As indicated earlier, there are various threats to tourism that should be taken into account. When the focal point of discussion falls on the influences and determinants of international tourism demand, another appropriate inclusion to the topic would be to look particularly at those factors that only have a negative influence on tourism. These include:

#### **a) Crime**

Among these threats, crime could be classified as the most critical. South Africans already see crime as the number one problem in the country. Crime cost the country an estimated R31 billion in 1996/97 (Cripps, 1997). Prinsloo (2003) states that crime is one

of the factors that could hamper the promising potential of South Africa's tourism industry. According to Ntuli (1998:1), a trend has emerged that some countries, including South Africa, are globally categorised as a place where tourists are vulnerable to crime and criminal victimisation.

Prinsloo (2003) states that visitors that have been to South Africa on previous visits, become streetwise and know how to avoid possible danger areas. To encourage first time visitors to spend money and visit South Africa becomes more difficult. Tourists are regarded as longing for relaxing and unconcerned holiday making and therefore they are sensitive to the effects of crime or any other threat to their personal safety in holiday destinations.

To measure crime is quite a sophisticated task. Data on crime is extremely unreliable and varies in quality from country to country. The efficiency in recording crimes and the willingness of citizens to report them, all affect the quality of the data (Cripps, 1997).

#### **b) Health issues**

According to Richter & Richter (1999:597), health and safety issues in travel and tourism are not a new phenomenon. All over the globe, travellers are concerned with their personal safety and health. Health risks such as the SARS epidemic and natural disasters such as the Indian Ocean's Tsunami in December 2004 discourage people from travelling (Bonham *et al.*, 2006:25). This uneasiness of a traveller's health-related issues could cause a decline in the overall tourism demand to a specific destination country. Naudé & Saayman (2004:14) used the prevalence of Malaria to proxy for health risk in their tourism demand function. According to Gallup & Sachs (2000:10), Malaria is identified as a health risk that hinders international tourism. To determine and capture all kinds of health issues involved with tourism would be an enormous and close to impossible task.

#### **c) Political instability**

According to Aly & Strazicich (2000:1) tourism is characterised by a high degree of instability over time. This is due to factors such as cyclical economic activities in the

country of origin, exchange rate fluctuations, international commodity price changes, and political instability in the destination country. They stated that political instability and terrorism, which normally goes hand-in-hand, are widely recognised as the most important factors that negatively affect tourism. Travellers are concerned with their personal safety and events such as ongoing war in certain destinations could have adverse effects on the international tourism flows to a country. Bonham *et al.* (2006:1) stated that when people travel they do not want to be exposed to any danger, so safety is their paramount concern. According to the WTO (2004), the Iraq conflict, accompanied by the high level of uncertainty, caused a depression in worldwide travel during the first three months of 2003. In recent times, the world has witnessed several terror attacks and possibly the two most important are the September 11 attacks on the World Trade Centre as well as the bombings thereafter in London. Figure 3.2 indicates a distinct fall in tourist numbers from the USA towards the end of 2001. This loss is mainly due to the weak economy and constant concern about safety and security (WTO, 2004).

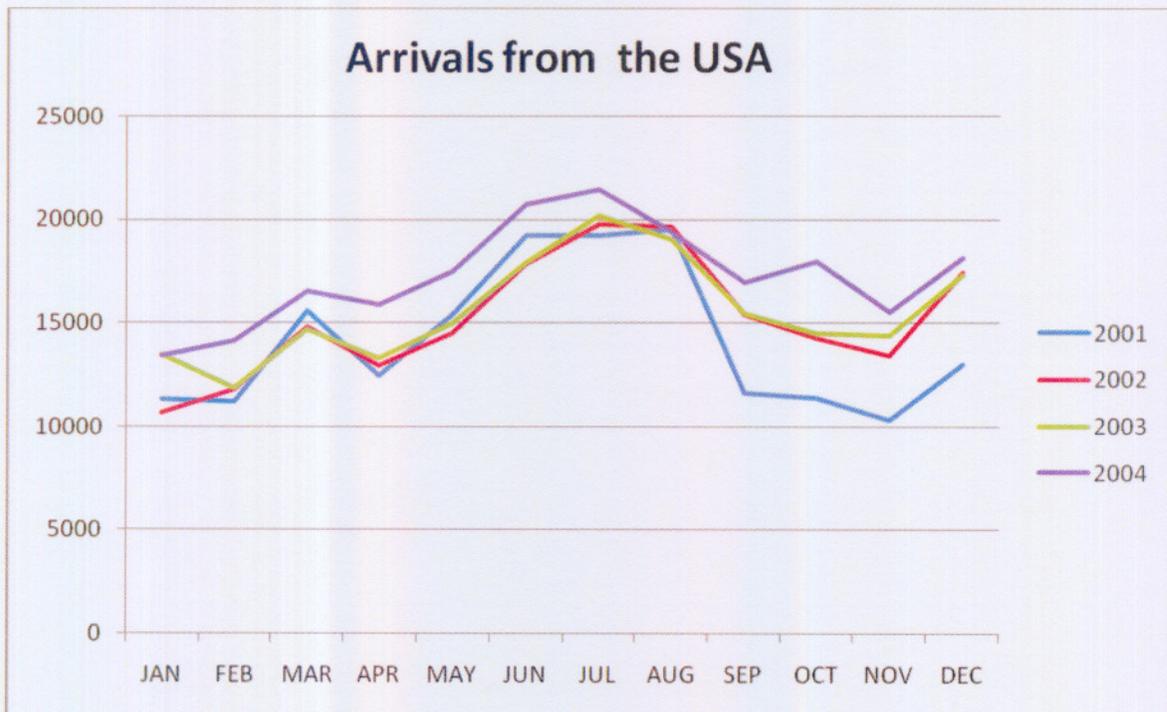


Figure 3.2: Tourist arrivals from the USA to South Africa

Source: SA Tourism (2004).

The effect of seasonality causes the normal tourist arrivals figure to decrease after the middle months of the year as can be seen from the end of August onwards for all four years illustrated. In 2001, however, the fall in this figure was significantly more than in any other due to the terror attacks in New York. According to Bonham *et al.*, (2006:6) the U.S. travel and tourism industry is a long way from recovery.

A dummy variable could be included to proxy for political instability with the value of '1' if, at a certain time, the destination country can be characterised as being politically unstable. Apart from this method, to fully capture the effects of political instability and events such as terrorism would prove to be quite complicated.

It is therefore evident that these occurrences threaten the growth of international tourism and should, where possible, be controlled and managed accordingly.

### **3.4 Summary**

The main objective of this chapter was to provide a complete investigation on tourism demand and the apparent influences outlined by previous authors in their studies on this topic. The determinants of tourism demand were subdivided into two groups, economic and non-economic factors. From the discussions one could easily conclude which of these factors is most favoured in previous literature. It can also be mentioned that, and this is especially the case with non-economic factors, the variables included in these studies sometimes overlap in the sense that some authors will include a variable, such as a trend, to proxy for an occurrence where it would be entered as a separate variable in a different study. Another example is the inclusion of a distance variable to proxy for transport costs.

Overall, it is evident that, in most cases in the previous literature, there is a associated understanding of tourism demand and the determinants of international flows. Where some authors use different variables and different methods to calculate their indices and indicators, a general consensus still seems present. From the last section in the discussion,

it was evident that there are certain elements or occurrences that hinder the growth of international tourism flows and, in most cases, these are more difficult to capture as opposed to the economic and non-economic factors that were outlined. One method of dealing with these occurrences is to include dummy variables.

The decision on which of these variables to include in the demand function would be the next step in terms of the motive of this study. In the following chapter, the main focus will be the specifications of data available, as well as empirical investigation on the chosen independent variables and the way these variables will ultimately explain the dependant variable. A discussion on different types of regression methods and models used in previous literature will also form part of the next chapter.

## **Chapter 4**

### **Methodology and Empirical Investigation**

#### **4.1 Introduction**

The previous three chapters of this study provided an overview on the tourism industry of South Africa as well as a literature study on the different factors that influence the demand for the international tourism product. The research goals, as stated in the first chapter, indicated that the current research aims to identify the most significant determinants of international tourism to South Africa and to determine the extent to which these factors influence the demand for South Africa as an international tourism destination. Based on the factors identified in the literature study (Chapter 3), this chapter aims to test the significance of each and attempt to answer questions such as: What determines tourism demand in South Africa, as well as to identify certain shocks in the demand for international tourism.

The remainder of the chapter is structured as follows: Firstly the data used are described and the sources of data identified. This includes calculations used to standardise the data. Secondly, the various estimation techniques used by previous authors on tourism demand modelling will be discussed with the aim of finding the most suitable method. This will be followed by an in-depth discussion on the method. Finally, the interpreted results will be discussed followed by a conclusion of the chapter.

#### **4.2 Data Sources and description**

In this section, the data that are used in the empirical analysis are explained. The different variables and methods will also be explained in this part of the chapter. The time series starts from the first quarter of 1993 till the last quarter of 2004. This is a total of 48 data points. This selection is valid as it includes all the major changes in South Africa such as the first democratic election in 1994 together with its uncertainty, as well as changes and

events in world tourism such as natural disasters (Tsunami of 2004) and terror attacks worldwide (e.g. 11 September 2001). Earlier data cannot be used due to unavailability of some of the data series prior to 1993.

In the previous chapter, the dependant variable that was identified is the total tourist arrivals to South Africa. The determinants of international tourism were also identified and categorised as economic and non-economic factors. The total tourist arrivals and independent variables that will be tested will subsequently be discussed in order:

- Income.
- Prices.
- Exchange Rates.
- Transport Costs.
- Population.
- Marketing expenditure.
- Previous visits.
- Weather index.
- Capacity.

#### **4.2.1 Tourist Arrival Data**

Various sources are available for the international arrival figures of tourists to South Africa, which include SA Tourism as well as Statistics South Africa (StatsSA). The arrival figures used in this study were obtained from StatsSA. The arrival figures were used instead of tourism expenditure for two reasons: The first is data availability. For South Africa, the data on tourism expenditure is more difficult to obtain than tourist arrivals, and surveys on tourist spending are only done semi-annually. Secondly, this study follows the literature and uses arrivals as have the majority of previous authors on tourism demand studies.

The data is available in monthly figures. These figures were recalculated into quarterly terms by simply adding the figures for three months to arrive at a figure for each quarter of the year. The data is grouped into to five geographic regions: North America (Canada

& USA), South America (Argentina), Australia (Australia), Europe (UK - Austria, Belgium, Denmark, France, Germany, Greece, Italy, Netherlands, Norway, Portugal, Spain, Sweden & Switzerland), and Asia (Japan). The single countries in different regions were selected as proxies because of data unavailability. These countries are also dominant in terms of tourist arrivals to South Africa. These regions' arrivals will be indicated graphically below:

Figure 4.1: North-American Arrivals

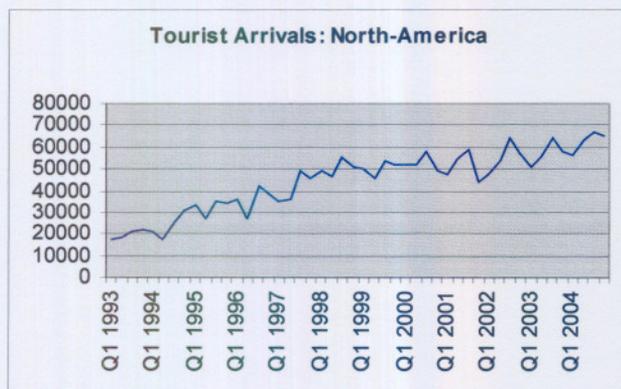


Figure 4.2: South American Arrivals

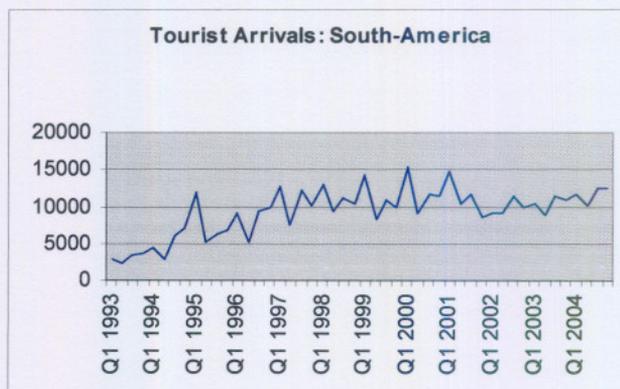


Figure 4.3: European Arrivals



Figure 4.4: Australian Arrivals



Figure 4.5: Asian Arrivals



It is obvious that the general trend indicates that, over time, more and more people travel to South Africa from all over the world. Inspection of these graphs allows one to identify certain periods where the international arrivals decreased remarkably. These declines are because of happenings such as terror attacks, disasters, and so forth and will subsequently be explored. Seasonality in arrivals is also clearly visible in these illustrations.

#### **4.2.2 Income**

To proxy for the income levels of tourists that visit South Africa, the real GDP per capita is used. The source is the International Monetary Fund's (IMF) online database of International Financial Statistics (IFS). The data is available only in current prices in the national currency of the countries used in the study. To compute these amounts into constant prices the different GDP figures of each country were deflated using the GDP deflator with the base year 2000, which is also available from the IFS (divided by the deflator and multiplied by 100). This figure is then adjusted into US\$ terms using an average US\$ exchange rate for the year 2000 with the currency of the country involved. This ensures that exchange rate fluctuations aren't captured in the GDP data. For the European countries using the Euro, the official fixed conversion rates were used to calculate an average US\$ rate as the GDP data of these countries are only available in their national currency and not for the Euro. Finally, the amount is divided by the population figure of each country to give the Real GDP per Capita.

All these amounts have to be standardised and weighted accordingly. This method of awarding weights to the figures will also be used with both the exchange rate and CPI data. Firstly, each of the countries in a specific region is given a weight, which was calculated according to the tourist arrivals from that country to South Africa in the year 2000. The real GDP per capita of the country is then multiplied by this weight to give a weighted GDP per capita for that country. After this is done with all the countries in the region, these weights are added together. Here, another weight is given for the region in terms of the world's tourist arrival figures for 2000. If all these final amounts are added together, it provides the weighted GDP for all countries. The weighted GDP according to the five regions is indicated below:

Figure 4.6: North-America's GDP p/c

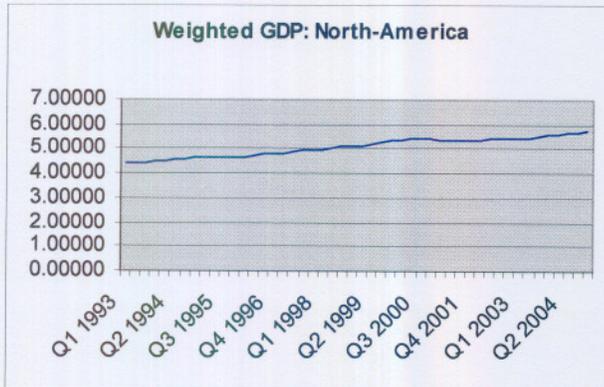


Figure 4.7: South-America's GDP p/c

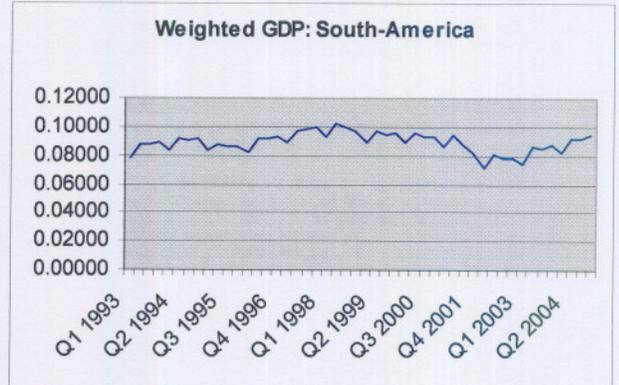


Figure 4.8: Europe's GDP p/c



Figure 4.9: Australia's GDP p/c

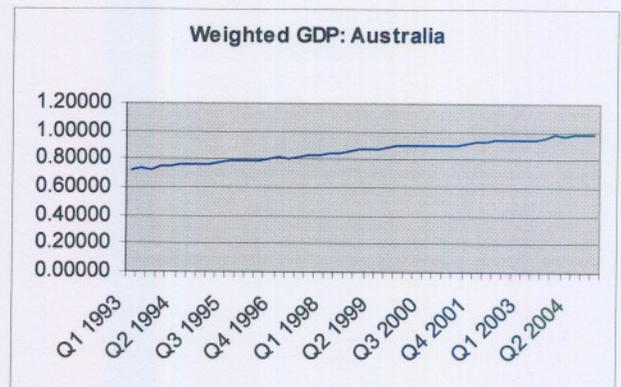
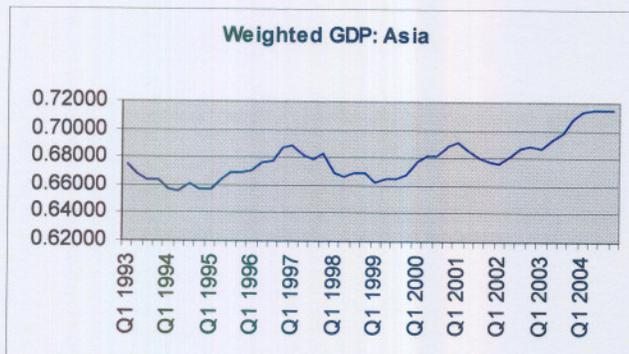


Figure 4.10: Asia's GDP p/c



In general, one can see that, over the selected period, income tends to grow for almost all the regions. The most stable growth can be seen from Europe, North-America, and Australia. Asia and Argentina's growth rates aren't as steady, although the trend is more or less positive.

#### 4.2.3 Prices

The consumer price index (CPI) for each of the countries in the study is used to proxy for different price levels. Used together with the CPI of South Africa, a ratio is calculated as follows:  $\text{CPI of SA} / \text{CPI of the country of origin}$ . These ratios were also weighted as explained in section 4.2.2. The data were obtained from the IFS online database and are complete for all countries. In general, CPI data is easy accessible with the majority of Central Banks of different countries providing sufficient data on CPI. This includes the Reserve Bank of South Africa. The weighted CPI ratios of the five regions are indicated below:

Figure 4.11: North-America's CPI ratio

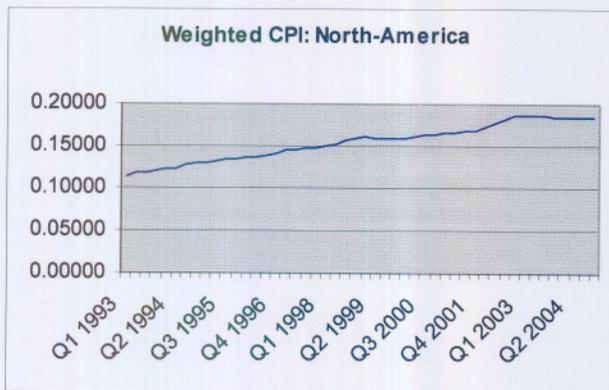


Figure 4.12: South-America's CPI ratio

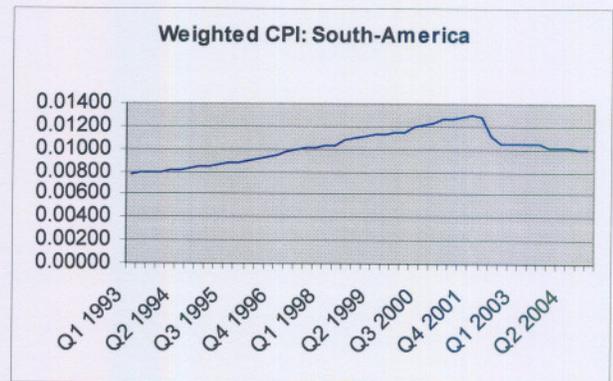


Figure 4.13: Europe's CPI ratio

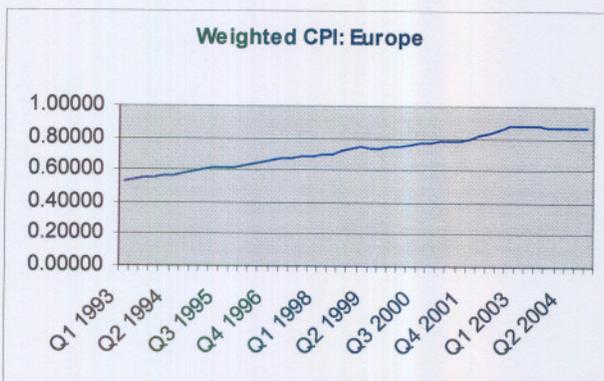


Figure 4.14: Australia's CPI ratio

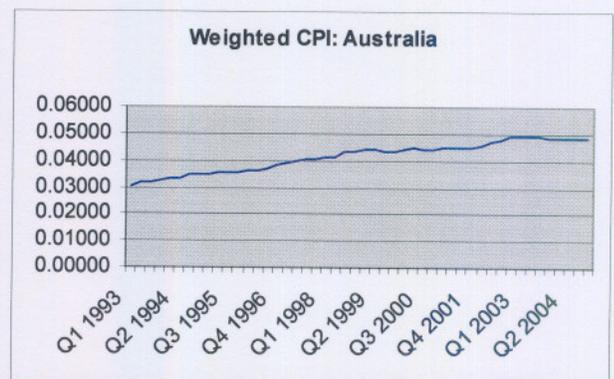
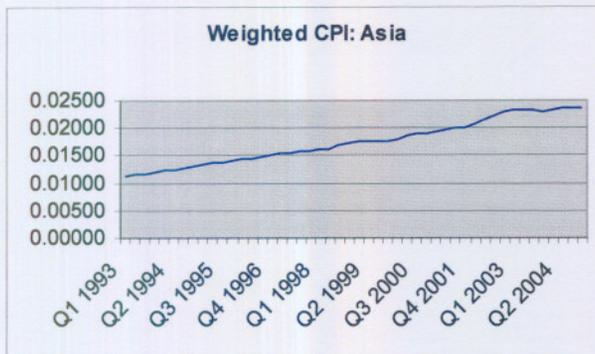


Figure 4.15: Asia's CPI ratio



From all the graphs indicated above, the effect of inflation is evident a prices rise from year to year all over the world.

#### 4.2.4 Exchange Rates

Exchange rate data can be obtained from almost every commercial or Central Bank in any country. For this research, the exchange rates of all the included countries are used and written as South African Rands in terms of foreign currency. This time series is available from the South African Reserve Bank's online database in monthly figures. In order to transform these rates into quarterly figures, an average quarterly exchange rate is calculated. For the European Union, a backdated series is also available from the South African Reserve Bank's online database from the third quarter of 1989. For the countries whose rates aren't available on the SA Reserve Bank database, the exchange rate was calculated using the country's currency versus the US Dollar and converted with the Rand/Dollar exchange rates. These exchange rates were obtained from the IFS online database. The weighted exchange rates for all the regions are shown below. Again, all the rates from the countries that fall under a specific region were weighted with the region itself also receiving a weight.

All the exchange rates for the different regions indicate a general upward trend. An interesting observation is that for all the regions there was a significant increase around the second quarter of 2001. After this sudden increase, all the currencies seemed to have devalued by the end of 2002.

Figure 4.16: Exchange Rates: North-America (US\$ & Canadian \$)

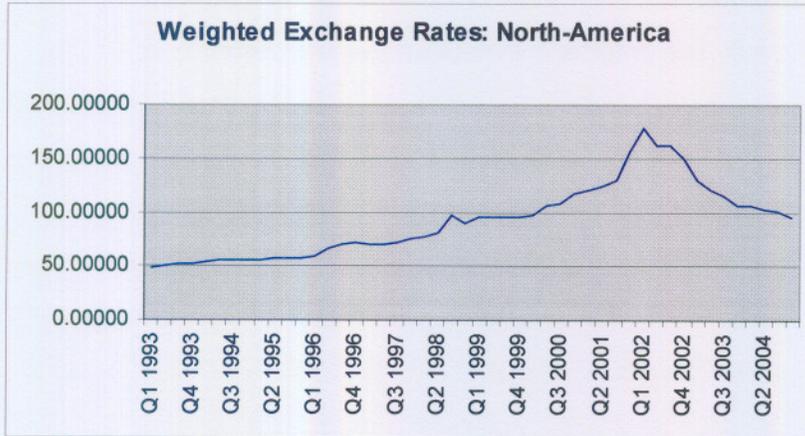


Figure 4.17: Exchange Rates: South-America (Peso)

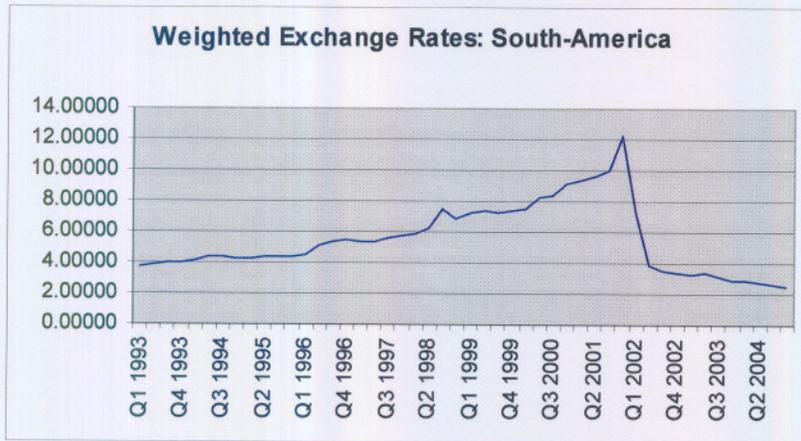


Figure 4.18: Exchange Rates: Europe (Euro)

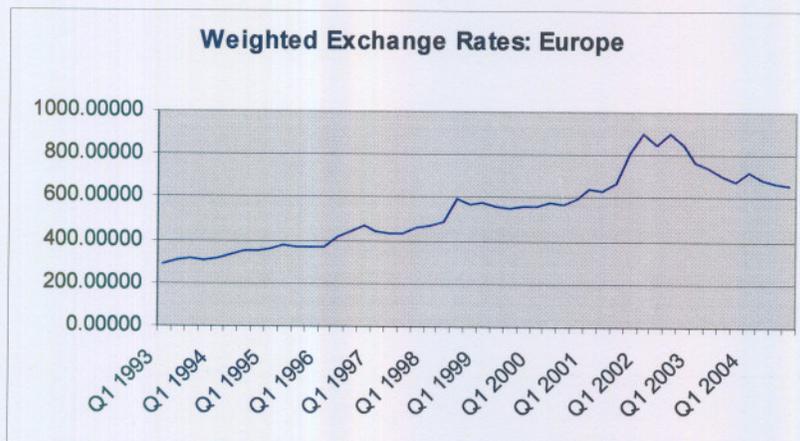


Figure 4.19: Exchange Rates: Australia (Australian \$)

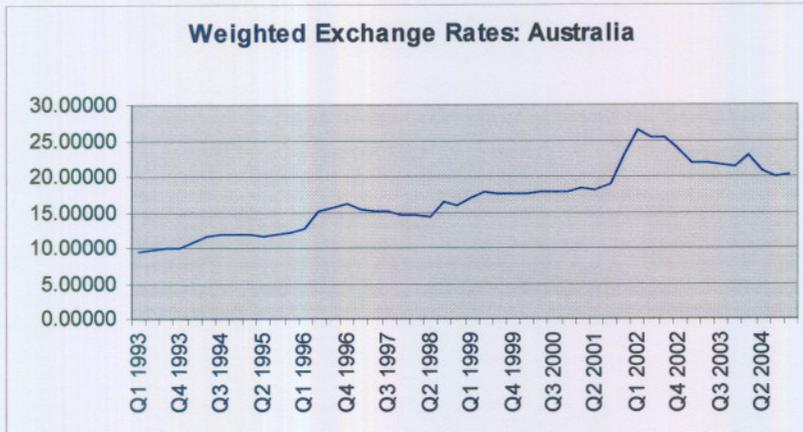
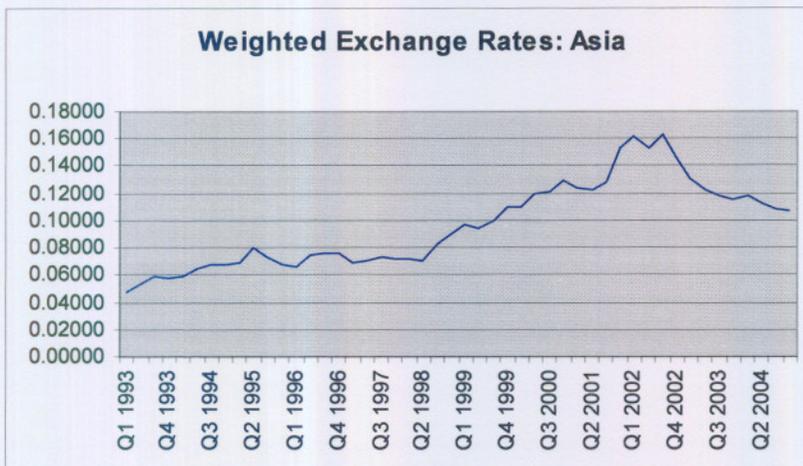


Figure 4.20: Exchange Rates: Asia (Yen)



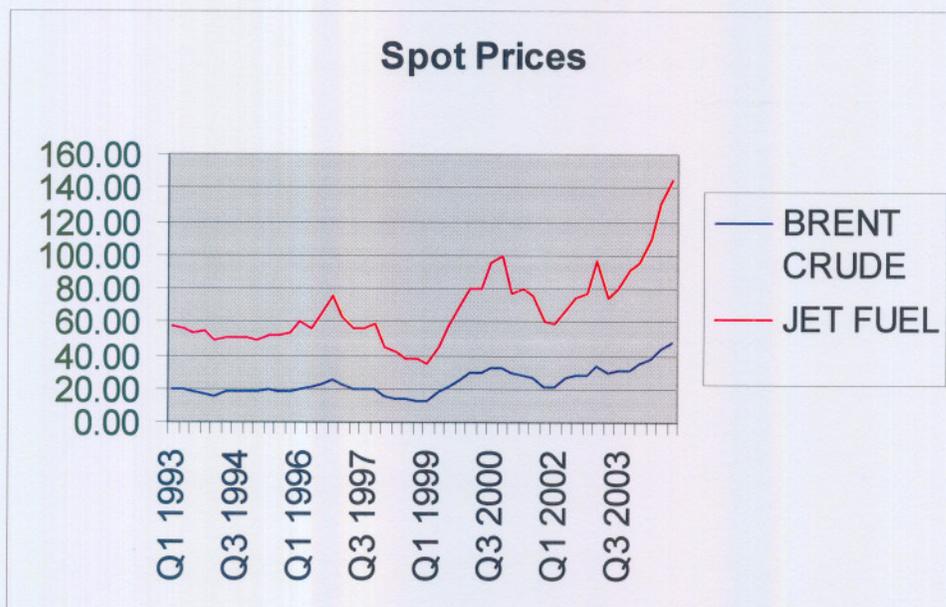
#### 4.2.5 Transport cost

Sufficient data on transport cost is not easily accessible. This was identified as a hurdle in the previous chapter. Travel distance is therefore often used as a proxy for travel cost, as mentioned in chapter 3 of this study. This method creates difficulty in the sense that there is no variation in the time series, since distances between countries are constant. Distance data is widely available and some valuable websites offer distance calculators. These calculators use the capitals of the countries and present the distance between two countries in miles and kilometres as well as the giving compass bearing. Because the data

is constant throughout the time series, distance as an independent variable is excluded from the demand function in this study. Yet it can be very handy in panel data studies.

To proxy for the change in transport costs, the monthly Brent Crude and Kerosene-type Jet-fuel spot prices are available on the Energy Information Administration website, which contains the official energy statistics from the U.S Government<sup>6</sup>. The assumption is made that a change in the oil price will have a direct impact on the cost of transport. Since the majority of tourists make use of air and road transport, the oil price could proxy for both methods of transport. These prices were recalculated into quarterly prices using an average for the three months in each quarter. Figure 4.21 indicates both the Brent Crude and Jet Fuel quarterly prices. The effect of inflation is once again evident in the increase of prices over time.

Figure 4.21: Brent Crude and Jet Fuel Prices



#### 4.2.6 Population

The population figure for countries is usually data that can easily be found. Sources include the World Bank development indicators, IMF, and local statistic departments of

<sup>6</sup> [www.eia.doe.gov](http://www.eia.doe.gov)

countries. The population figures used in this study were obtained from the IFS online database of the IMF. In general, population data is only available annually and is therefore the same for all four quarters of the year.

To include the population figures into the model separately is difficult due to the yearly frequency of the data. For this reason, population figures are rather entered into the model with the calculation of the real GDP in per capita terms, rather than just the total real GDP. If income grows more than population, then the per capita income will increase and this is how the population is captured. It should be noted that population can be added separately for studies that use yearly data.

#### **4.2.7 Marketing Expenditure**

To proxy for marketing expenditure, the aim was to follow the study of Naudé & Saayman (2004) and use the number of Internet users in the country of origin to capture the effects of networks and information on tourism demand. However, the problem is that the data is not compatible with this study since the figures are only available annually. The data could therefore not be included and marketing expenditure is thus excluded as a variable in the current research.

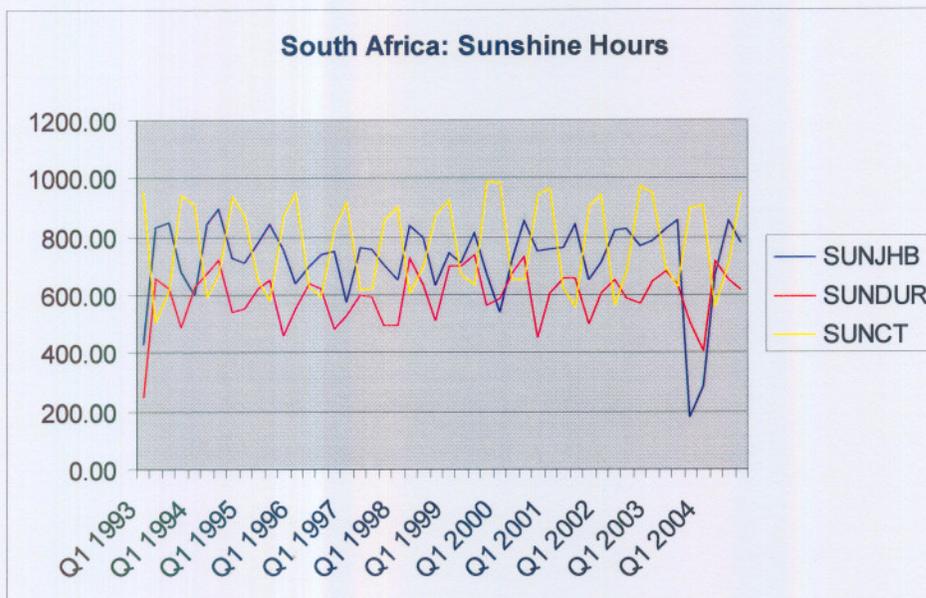
#### **4.2.8 Previous visits**

Data on previous visits also proved to be fairly limited. SA Tourism provides a repeater rate in their 2004 Annual Tourism Report which groups the arrivals into the number of previous visits to South Africa and indicates the percentage of the total arrivals that fall in a specific group. These groups are: first-time visitors; 2-3 times; 4-5 times; 6-9 times; 10 times or more and, finally, those who have lived in South Africa before. This data is only available on an annual basis from 2003, and, is thus insufficient for the purposes of this research.

#### 4.2.9 Weather Index

The weather index is a proxy for the attractiveness of the destination country to international tourists. The general travel trend is characterised by tourists planning their holidays to sunny locations and beaches. Travellers, such as Europeans, escape from their cold winters to experience warmer, tropical climates such as that of South Africa. This is also evident in the seasonal patterns in the arrival data. Several indices are available and the South African Weather Service provided the total sunshine hours in a daily format, which was then recalculated into quarterly terms by simply adding the number of days per quarter. The three South African cities chosen for the study are Cape Town, Johannesburg, and Durban. The reason for this selection is the attractiveness of these cities as tourism destinations within South Africa. Firstly, Johannesburg is the place where the majority of tourists arrive at OR Tambo Airport, previously known as Johannesburg International Airport. Secondly, with many of the top tourist attractions in South Africa located in the Western Cape, and in and around Cape Town, this city is another appropriate selection. Finally, Durban, with its coastline, is another attractive destination in South Africa. The sunshine hours in each of these cities are indicated below in Figure 4.22:

Figure 4.22: Sunshine Hours in South African Cities



#### **4.2.10 Capacity**

Tourism supply data in South Africa is fairly limited. StatsSA provides a statistical release on tourism accommodation, which provides a complete list of all the stay units available in the total tourism industry of South Africa, as well as the occupancy rate and income generated per stay units sold. The drawback with this data source is that the survey only started in September 2004, and is therefore insufficient to include in this study. Prior to this release, StatsSA released a monthly statistical release called Hotel Trading Statistics. This release provides data on the total number of hotel rooms available in South Africa. The start date is January 1995, with another release prior to this one known as Trading Statistics which dates back to 1967. Tourism infrastructure such as roads, public transport, and so forth can also be used to proxy for the supply side or capacity of tourism in South Africa.

For this research the number of hotel rooms available is used to proxy for the capacity of tourism in South Africa. According to StatsSA the occupancy rate of hotels in 2005 was 64%. Compared to the occupancy rate of other accommodation types (Guesthouses: 46.6%, Caravan Parks: 19.8%, and other types such as lodges: 37.8%) this is the highest. It is therefore evident that the majority of tourists stay in hotels when they visit South Africa, which makes this a suitable proxy. The data was adjusted and a quarterly average was calculated from the monthly figures. Figure 4.23 indicates that the number of hotel rooms available has increased annually from 1993 and it seems to have a stable growth rate.

Figure 4.23: Hotel Rooms Available in South Africa



### 4.3 Estimation Methods

The econometric approach makes use of regression analysis to estimate the quantitative relationship between the dependant variable and the variables that are likely to have an influence on it. There are various regression techniques and these along with their benefits and the authors who have made use of these methods will subsequently be discussed. According to Naudé & Saayman (2004:9) the methods used to estimate the demand for tourism can be divided into two broad categories: those that focus on non-casual mainly time series modelling and those that focus on casual econometric techniques.

#### 4.3.1 Time series Modelling (Single equation)

Time series modelling identifies stochastic components such as autoregressive and moving average components in each time series (Naudé & Saayman, 2004:9). Single-equation models are popular with time series modelling using methods such as Ordinary Least Squares (OLS). Lim (1997b) reviewed 100 empirical tourism studies and indicated that 81% of these studies used single equation models in linear and/or log-linear specifications. De Mello *et al.* (2002) identified a limitation with single equation models in that they are not derived from consumer demand theory and fail to quantify the

changes in demand behaviour over time. In addition, Naudé & Saayman (2004) stated that non-casual time series models cannot be used for policy purposes since they are not based on the tourist's decision-making process.

The OLS estimation method is mainly appropriate for the estimation of a single equation and not a system of simultaneous equations. There is, however, one situation where OLS can be applied appropriately in simultaneous equations and that is the case of recursive, triangular, or casual models (Gujarati, 1995). The OLS method minimises residuals of the sum of the squares (unaccounted error term) and provides estimates of which are best, unbiased, and linear (Walsh, 1996:17). Walsh stated that OLS regression is one of the more frequently used methods for estimating parameters of models in literature and made use of this method and stated that all the equations in this particular study were initially estimated using the OLS procedure.

According to Gujarati (1995), under certain assumptions the OLS method has some very attractive statistical properties that have made it one of the most powerful methods of regression analysis. In 2001 and 2003, Lim & McAleer modelled the determinants of international tourism demand to Australia where they estimated a single equation model using the Box-Jenkins (BJ) approach. Box-Jenkins is an alternative approach to traditional single- and simultaneous-equation models for economic forecasting (Gujarati, 1995). Martin & Witt (1989) stated that the Box-Jenkins approach outperforms casual models based on traditional regression techniques after comparing the approach to other modelling techniques. BJ methodology is an iterative process and can include AR (autoregressive), MA (moving average), ARMA (autoregressive moving average) and ARIMA (autoregressive integrated moving average) processes (Gujarati, 1995). This method is, however, mainly used for forecasting. Kulendran & Witt (2001) stated that univariate ARIMA models have been widely used to forecast tourism demand. These methods are not based on economic theory and they do not link the variable in question to any other variables (Mohr, 2000:75). The purpose of this research is not based on forecasting and an alternative model will be adopted.

#### **4.3.2 System of Equations (Econometric Modelling)**

According to Naudé & Saayman (2004), less work has been done to improve casual econometric modelling techniques. Divisekera (2003) used a price independent generalised log-linear utility function and a multivariate regression technique to estimate demand. The functional form in Divisekera's study was identified as the Almost Ideal Demand System (AIDS).

The AIDS model that was proposed by Deaton & Meullbauer (1980a) differs from the OLS procedure in the sense that it involves a system of equations as opposed to a single-equation. According to De Mello *et al.* (2002:510) the AIDS model represents the principles of consumer demand theory and it is appropriate for estimating tourism demand in the form of expenditure shares rather than the number of visits. They argue that the AIDS model is more suitable when tourism demand is estimated in a small number of destinations and it provides a stronger theoretical basis for estimating the cross-price elasticities of demand than the single equation approach. Divisekera (2003) stated that one of the advantages of the AIDS model is that the demand for a given destination is acknowledged as a part of a global system. Two major limitations with this method, as identified by Divisekera (2003), are: firstly, the failure to incorporate one important factor affecting demand and, secondly, limitations associated with the measurement of tourism prices. Authors who have made use of this model to estimate tourism demand include: De Mello *et al.* (2002); O'Hagan & Harrison (1984) and Papatheodorou (1999).

Other econometric models include the Autoregressive Distributed Lag Model (ADLM) which captures the dynamics of economic activities, as used by Song *et al.* (2003b). Six econometric models were tested by Song *et al.* (2003a) that are all special cases of the ADLM model: a reduced ADLM, a long-run co-integration regression, an unrestricted Vector Autoregressive (VAR) model, two error-correction models, and a TVP model, which generated the most accurate forecasts.

#### 4.4 Methods and Results

Most analysis of tourism demand uses single equation models, and this is also the approach that this research will use. For these models, Lim (1997) identified mainly two different functional forms: linear and log-linear models. This study will apply the linear form to estimate tourism demand and will also consider the possibility of cointegration.

The linear form follows

$$Y_t = \alpha + \beta X_t + u_t \quad (1)$$

where

$$\frac{\partial Y_t}{\partial X_t} = \beta$$
$$E_x = \beta \frac{X_t}{Y_t}$$

and the logarithmic form follows

$$\log Y_t = \alpha + \beta \log X_t + u_t \quad (2)$$

where

$$\frac{\partial Y_t}{\partial X_t} = \frac{\beta Y_t}{X_t}$$
$$E_x = \beta$$

The log-linear model specified in equation (2) was initially estimated by ordinary least squares (OLS) using the data described earlier in the chapter. The independent variables include: GDP, CPI, Exchange rates, number of hotel rooms available in South Africa, oil and jet fuel prices and the sunshine hours in South Africa.

Equation 2 could therefore be rewritten as:

$$\log D_t = \alpha + \beta \log Y_t + \gamma \log CPI_t + \delta \log ER_t + \phi \log HR_t + \theta \log OP_t + \sigma \log SH_t + u_t \quad (3)$$

where

$\log D_t$  = logarithm of quarterly international tourist arrivals (or demand) to South Africa at time  $t$ ;

$\beta \log Y_t$  = logarithm of a weighted international GDP at time  $t$ ;

$\gamma \log CPI_t$  = logarithm of a weighted international CPI at time  $t$ ;

$\delta \log ER_t$  = logarithm of a weighted international exchange rate at time  $t$ ;

$\phi \log HR_t$  = logarithm of the number of hotel rooms available in South Africa at time  $t$ ;

$\theta \log OP_t$  = logarithm of the oil price in US dollars per barrel at time  $t$

$\sigma \log SH_t$  = logarithm of the sunshine hours in three main cities of South Africa at time  $t$ ;

$u_t$  = independently distributed random error term at time  $t$ ;

$\alpha, \beta, \gamma, \delta, \phi, \theta, \sigma$  = parameters to be estimated.

For the sunshine hour, the variables for Cape Town, Johannesburg and Durban were all entered into the model separately and the most significant result was found with sunshine hours for Cape Town. This could be because the majority of foreign tourists visit the Western Cape when they are in South Africa as this province has a vast amount to offer as a tourist destination. For all the subsequent modelling, the sunshine hours for Cape Town were used. Both Brent Crude Oil and Jet Fuel Prices were entered into the equation and the oil price alone proved to be a more significant proxy for transport costs.

The first estimation result of equation (3) indicated an  $R^2$  value, as a measure of the goodness of the fit, of 0.815. The Durbin-Watson (DW) statistic of 2.114 indicated that there is no serial correlation present. Of the independent variables, the most significant was the number of hotel rooms available, whereas the exchange rate showed little significance. Following this, a correlations test was performed between the CPI and the exchange rate. The result showed that these two variables correlate. Through this, the

conclusion can be drawn that the CPI might be a better indication of tourism prices and this led to the exclusion of the exchange rate variable from the model.

The equation was written as:

$$\log D_t = \alpha + \beta \log Y_t + \gamma \log CPI_t + \phi \log HR_t + \theta \log OP_t + \sigma \log SH_t + u_t \quad (4)$$

With the regression of equation (4), the independent variables included were: GDP, CPI, Hotel Rooms, the Brent Crude Oil price and the sunshine hours. The results indicated an  $R^2$  value of 0.812 and the DW statistic at 2.107. There was no serial correlation present. Here, the oil price became more significant and all the other variables seemed to explain the dependant variable reasonably well. A problem that still persisted from the first regression was in the form of the coefficients of the GDP and the CPI both indicating incorrect signs. Specifically, for the CPI, this complicates interpretation. When two indices are compared, both index numbers will be equal to 100 in the common base period. These equal numbers do not imply that the actual numbers were the same in that period and can therefore be highly misleading. The main problem is when CPI levels are confused with rates of change (Mohr, 2000). To attempt to solve this problem, similar to Lim & McAleer (2003), a real exchange rate (RER) was calculated as follows:

$$RER = \frac{eP^*}{P}$$

where

$e$  = South African Rand per unit of foreign currency

$P^*$  = foreign CPI

$P$  = South Africa's CPI

The real exchange rate measures the effective prices of goods and services in South Africa when the CPI ratio is adjusted for differences in the exchange rates. The real exchange rate was entered into equation (4) replacing the CPI.

The next step was to follow the literature of Lim & McAleer (2003) in recognising that seasonality in tourism causes distinct patterns in a series. Looking at the international arrivals to South Africa, the first and second quarter arrivals tend to be the highest, with the third quarter normally the lowest, and the fourth quarter slightly higher. The seasonal pattern is therefore assumed to be constant. To account for this seasonal pattern in the series, seasonal dummies were entered for these periods of the series.

Equation (4) was therefore fitted with two dummy variables and indicated:

$$\log D_t = \alpha + \beta \log Y_t + \gamma \log RER_t + \phi \log HR_t + \theta \log OP_t + \sigma \log SH_t + D_{1t} + D_{2t} + u_t \quad (5)$$

Initially, three dummy variables were entered for the third period, but this proved to be less significant. The results from equation (5) indicated an  $R^2$  of 0.912. The independent variables that were insignificant included the oil price, GDP, and the real exchange rate. The inclusion of the real exchange rate did, however, solve the problem of incorrect coefficient signs. The Durbin-Watson was 0.906, therefore indicating serial correlation. Serial correlation is when the residuals are correlated with their own lagged values. This violates the standard assumption of regression theory that disturbances are not correlated with other disturbances. The Durbin-Watson statistic indicates whether or not serial correlation is present in a regression. As a general rule of thumb, if the  $d$  value is equal or close to two, then there is no serial correlation. After performing a serial correlation LM test, the results indicated that fitting a first-order autoregressive process would be appropriate. Equation (5) was therefore fitted with a first-order autoregressive process AR (1) to account for serial correlation:

$$u_t = \rho u_{t-1} + \varepsilon_t$$

where parameter  $\rho$  is the first-order serial correlation coefficient.

Table 4.1 indicates the results of the final log-linear regression for tourism demand.

Table 4.1: Results

Dependent Variable: LAR				
Method: Least Squares				
Date: 10/26/06 Time: 10:57				
Sample (adjusted): 1993Q2 2004Q4				
Included observations: 47 after adjustments				
Convergence achieved after 10 iterations				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-15.23599	8.253035	-1.846108	0.0727
LGDP	2.287486	1.427023	1.602978	0.1172
LREX2	-0.079357	0.257838	-0.307778	0.7599
LROOM	1.795398	0.957025	1.876020	0.0683
LSUNCT	0.461429	0.087895	5.249769	0.0000
LOIL	0.108456	0.148520	0.730246	0.4697
S1	0.253679	0.037099	6.837871	0.0000
S2	0.381512	0.033332	11.44598	0.0000
AR(1)	0.581970	0.137396	4.235706	0.0001
R-squared	0.942934	Mean dependent var		12.68289
Adjusted R-squared	0.930920	S.D. dependent var		0.394365
S.E. of regression	0.103652	Akaike info criterion		-1.525144
Sum squared resid	0.408260	Schwarz criterion		-1.170860
Log likelihood	44.84089	F-statistic		78.48626
Durbin-Watson stat	2.039919	Prob (F-statistic)		0.000000
Inverted AR Roots	.58			

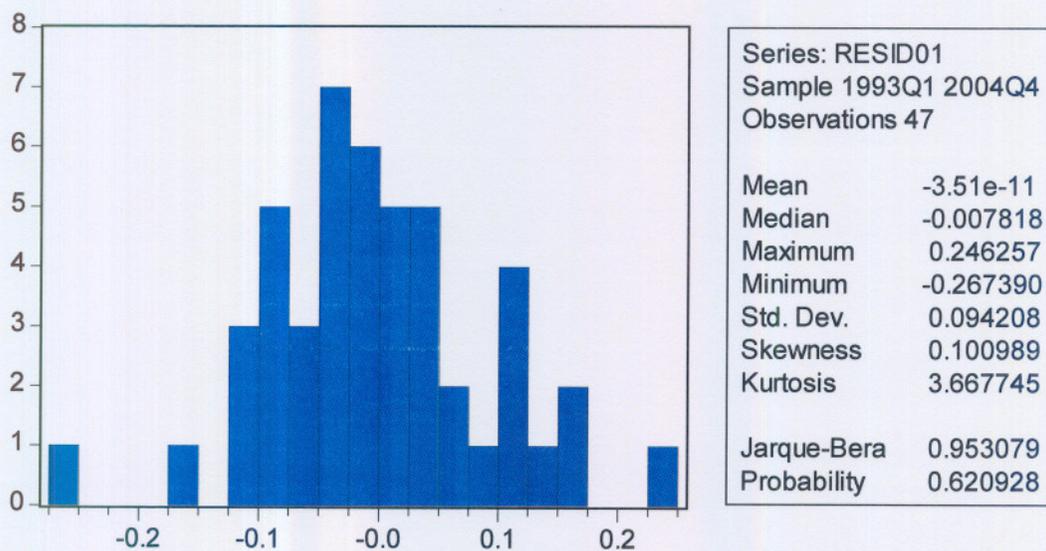
Source: Results obtained from E-Views.

As Table 4.1 indicates, the inclusion of the first-order autoregressive (AR1) process into the model led to a  $d$  value of 2.039. The problem of serial correlation was therefore accounted for. From the independent variables, the most significant were the sunshine hours in Cape Town followed by the number of hotel rooms available, and then the GDP. The real exchange rate did not prove to be as significant, even though the sign of its coefficient proved accurate. This indicates that there is a negative correlation between the price of the tourism product and tourism demand although the results indicate that tourists are not particularly price sensitive. The result on the oil price concludes that even though it shows a better fit than the real exchange rate, a more suitable proxy for tourism

prices can still be entered in such a model for tourism demand. Overall, the result is a good fit with an  $R^2$  value of 0.942.

One of the assumptions of OLS estimates is that the residuals are normally distributed. The Jarque-Bera statistic tests whether there is normality in the series or not. For the residuals to be normally distributed, the histogram should be bell shaped and the Jarque-Bera statistic not significant. Figure 4.24 indicates a histogram for the normality test.

Figure 4.24: Histogram



Source: Results obtained from E-Views.

As the results indicate, the null-hypothesis of a normal distribution is not rejected with the probability 0.620 and the bell shaped histogram indicates that the residuals are distributed normally.

A Chow breakpoint test was performed to determine the effect that certain natural and man-made disasters as well as other major events could have on the demand for international tourism. A significant difference in the estimated equation when fitted separately with for each subsample indicates a structural change in the relationship. The main occurrence chosen for the sample period between 1993 and 2004 is the terror

attacks of September 11, 2001 on the USA. Table 4.2 indicates the results of the Chow tests for 2001Q3-2002Q1. Initially, the World Cup Rugby, hosted by South Africa in 1995 (Q2 and Q3) was also to be included in the test. The problem, however, is that the Chow test has a drawback in the sense that each subsample requires at least as many observations as the number of parameters estimated. As the sample only starts in 1993, the test could therefore not be performed for 1995.

*Table 4.2: Chow Breakpoint test results*

Chow Breakpoint Test: 2001Q3			
F-statistic	0.763788	Prob. F(9,29)	0.649703
Log likelihood ratio	9.997823	Prob. Chi-Square(9)	0.350661
Chow Breakpoint Test: 2001Q4			
F-statistic	0.539412	Prob. F(9,29)	0.833601
Log likelihood ratio	7.27477	Prob. Chi-Square(9)	0.608536
Chow Breakpoint Test: 2002Q1			
F-statistic	0.572658	Prob. F(9,29)	0.808111
Log likelihood ratio	7.688336	Prob. Chi-Square(9)	0.565834

Source: Results obtained from E-Views.

According to the results in the table above under the null hypothesis of no structural change, there were no structural breaks in the demand for tourism in the period from 2001Q3-2002Q1. When looking at the international tourist arrival figures for this period, there is a decrease in the numbers. South Africa, due its remote location, might not have been severely affected by this phenomenon (see Lalla, 2006).

Subsequent to the log-linear model specified above, a cointegration analysis will be estimated with an error-correction model and the results will be compared.

## Error Correction Model (ECM)

Lim & McAleer (2001:10) found long-run relationships among international tourism demand and various independent variables in their study. In contrast to the OLS univariate model specified, they made use of a cointegrating regression or Error correction model. The problem in general with short-run dynamic models is that some, if not all, of the variables in the model might be non-stationary. A time series is said to be non-stationary if the mean and autocovariances of the series do not depend on time. The variables are therefore non-stationary as they enter the model in the levels when they aren't differenced. This leads to spurious regression and common trends while the  $F$ - and  $t$ - statistics do not have standard distributions. To respecify the model in first differences might be a solution, but this will remove any information from the long-run from the model. A more suitable approach is to adopt the error-correction model (Sollis & Harris, 2003:37).

An Error-correction model sometimes called an equilibrium correction model (ECM) is a formulation of the dynamic model designed for the use with non-stationary series that are known to be cointegrated.

The ECM follows:

$$\Delta y_t = \gamma_0 \Delta x_t - (1 - \alpha_1)[y_{t-1} - \beta_0 - \beta_1 x_{t-1}] + u_t \quad (6)$$

In order to estimate the ECM the following steps were taken:

Firstly, tests were performed to find whether the series is stationary or non-stationary. The most common tests for unit roots are the Augmented Dickey Fuller (ADF) and the Phillips-Perron (PP). The ADF-type test includes additional higher order lagged terms to account for the fact that the underlying data generating process is more complicated than a simple AR (1) process. The alternative approach is the PP. Rather than taking account of the extra terms in the data generating process by adding them the regression model, a

non-parametric correction to the  $t$ -test statistic is undertaken to account for the autocorrelation that will be present when the underlying data generating process is not AR (1).

Initially, the ADF approach was performed and the first difference results are indicated in Table 4.4. The results of the ADF in the levels can be seen below in Table 4.3:

*Table 4.3: ADF results (levels)*

**Intermediate ADF test results GROUP001**

Series	Prob.	Lag	Max Lag	Obs
LAR	0.0008	7	9	40
LGDP	0.8146	5	9	42
LOIL	0.8144	1	9	46
LREX2	0.5007	0	9	47
LROOM	0.6185	0	9	47
LSUNCT	0.0694	5	9	42

Source: Results obtained from E-Views.

*Table 4.4: ADF results (first difference)*

**Intermediate ADF test results D(GROUP001)**

Series	Prob.	Lag	Max Lag	Obs
D(LAR)	0.0416	3	9	43
D(LGDP)	0.0967	4	9	42
D(LOIL)	0.0002	0	9	46
D(LREX2)	0.0000	0	9	46
D(LROOM)	0.0000	0	9	46
D(LSUNCT)	0.0049	6	9	40

Source: Results obtained from E-Views.

The first results, where the ADF was performed in the levels, indicate that the variables are non-stationary. The following results indicate that all the variables are stationary on the first difference apart from the GDP per capita which is stationary with a 0.1 level of significance. Therefore, subsequently, the PP approach was used to verify whether the GDP per capita can be assumed to be stationary in the first difference. Table 4.5 indicates the results.

*Table 4.5: PP results (first difference)*

**Intermediate Phillips-Perron test results  
D(GROUP001)**

Series	Prob.	Bandwidth	Obs
D(LAR)	0.0000	11	46
D(LGDP)	0.0000	2	46
D(LOIL)	0.0001	3	46
D(LREX2)	0.0000	1	46
D(LROOM)	0.0000	4	46
D(LSUNCT)	0.0000	11	46

Source: Results obtained from E-Views.

The results show that, according to the Phillips-Perron test for unit roots, all the variables are stationary at the first difference level.

Secondly, after testing for unit roots, the series was tested for cointegration with the Johansen Cointegration test. The purpose of the cointegration test is to determine whether or not a group of non-stationary series are cointegrated. Cointegration occurs when there is a linear combination of two or more non-stationary series. It is therefore said that the two or more series have a long-run equilibrium relationship. Initially, the independent variables were tested separately with the dependent variable and it was found that all the variables cointegrate with the dependent variable. Subsequently, all the variables were tested together to determine whether there might be more than one cointegration equation. The results from the Johansen cointegration test are indicated in Table 4.6.

*Table 4.6: Johansen Cointegration Test Summary*

<b>Selected (0.05 level*) Number of Cointegrating Relationships by Model</b>					
Data Trend:	None	None	Linear	Linear	Quadratic
Test Type	No Intercept	Intercept	Intercept	Intercept	Intercept
	No Trend	No Trend	No Trend	Trend	Trend
Trace	1	1	1	1	1
Max-Eig	1	1	1	1	1

\*Critical values based on MacKinnon-Haug-Michelis (1999)

Source: Results obtained from E-Views.

As can be seen from the results, for all the assumptions made about the trend, there is only one cointegration relationship. Therefore, in specifying the model, all these

assumptions could be tested as deterministic trend specifications from which the most significant assumption was selected. Subsequently, the model was specified and tested and the results can be seen in Table 4.7 and Table 4.8.

After testing the ECM with different assumptions on the trend, the results from a linear assumption with an intercept and a trend were selected as this delivered the best results. The table below indicates the long-term relationships between the dependent variable and the independent variables. As can be seen, the GDP per capita proves to be quite significant in the longer run with the sign of the coefficient positive and a considerable t-statistic. Among the other variables, the oil price also indicates significance and the correct sign.

*Table 4.7: Error-correction Model results (long term)*

<b>Long term ECM</b>			
VAR	Coefficient	(Standard Error)	T-statistics
LAR(-1)	1		
LGDP(-1)	7.325421	(-2.63061)	[2.78469]
LOIL(-1)	-0.29873	(-0.13256)	[-2.25343]
LREX2(-1)	0.037243	(-0.19786)	[ 0.18823]
LROOM(-1)	-4.76796	(-0.83708)	[-5.69596]
LSUNCT(-1)	-0.5488	(-0.31647)	[-1.73412]
@TREND(93Q1)	-0.03352	(-0.01052)	[-3.18545]
C	26.49052		

Source: Results obtained from E-Views.

The results therefore support the view that inbound tourism is positively related to income in the country of origin and is negatively related to travel prices. The variable for hotel rooms available is moderately significant, but the sign of the coefficient is negative. This is in contrast to the normal expectation and it could only be apparent in the long term. Both the real exchange rate and the sunshine hours showed no long-term relationship to the tourist arrivals (demand).

The part of the ECM equation (6) that refers to the long term:

$$(1 - \alpha_1)[y_{t-1} - \beta_0 - \beta_1 x_{t-1}]$$

has a coefficient of -0.96768; a standard error term (-0.11621) and t-statistic of [-8.32713]

The conclusion can therefore be drawn that, according to the model, in the long term it is mainly income, transport costs, and capacity that influence the demand for tourism to South Africa.

*Table 4.8: Error-correction Model results (short term)*

<b>Short-term ECM</b>			
VAR	Coefficient	(Standard Error)	T-statistics
C	-0.119543	(-0.04833)	[-2.47325]
S1	0.236258	(-0.07969)	[ 2.96488]
S2	0.379083	(-0.09078)	[ 4.17582]
D(LOIL)	0.119568	(-0.14583)	[ 0.81992]
D(LGDP)	-5.066913	(-5.1834)	[-0.97753]
D(LROOM)	3.312605	(-1.02676)	[ 3.22627]
D(LSUNCT)	0.59163	(-0.13128)	[ 4.50675]
D(LREX2)	-0.123731	(-0.28744)	[-0.43046]

According to the results from the table above, the only two significant determinants in the short term are the sunshine hours and the hotel rooms available. The results indicate that the effect of income as a determinant of tourism demand proves to be more pertinent in the long term than in the short term. Changes in the international tourist arrivals also have a clear seasonal pattern. Table 4.9 indicates the R<sup>2</sup> values and adjusted R<sup>2</sup> values to indicate the overall goodness of the fit followed by Table 4.10 which indicates the normal distribution through the Jarque-Bera test statistic for normality.

*Table 4.9: Overall ECM results*

R-squared	0.870751
Adj. R-squared	0.84354
Sum sq. resids	0.427621
S.E. equation	0.106081
F-statistic	32.00066
Log likelihood	43.75202
Akaike AIC	-1.47881
Schwarz SC	-1.12453
Mean dependent	0.019834
S.D. dependent	0.268186

*Table 4.10: Normality Test results*

Mean	1.48E-17
Median	0.014652
Maximum	0.242585
Minimum	-0.18025
Std. Dev.	0.096832
Skewness	0.141271
Kurtosis	2.567883
Jarque-Bera	0.522004
Probability	0.770279

From these results one can conclude that, even though some of the variables in the model proved to be less significant, the  $R^2$  value of 0.870 still indicates a reasonable fit. According to Lim & McAleer (2003) one should bear in mind that, in general, the number of observations available for empirical tourism modelling is fairly limited. This is reduced even further in a differenced series, whereas a large sample size is required for a meaningful cointegration analysis. On the test for normality, the probability of the Jarque-Bera statistic does not reject the null hypothesis of a normal distribution and therefore, similar to the log-linear model, the series is normally distributed.

From the analysis it can be concluded that the results indicate similar results to those of Lim & McAleer (2003) in that there are also various long-term relationships between the independent and dependent variables. The variables included in the majority of studies on the tourism demand topic also proved to be significant in this study.

## **4.5 Conclusion**

In this chapter, the aim was to determine through empirical investigation which factors have a significant influence on the international demand for tourism to South Africa. Firstly, all the data used in the model, as well as other determinants that, due to various reasons (such as data availability,) were excluded from the study, were discussed.

Following the discussion on the data and data sources, the estimation and specification of the model was introduced. This study followed the research of Lim & McAleer (2003) where two basic models were estimated. First was the log-linear model followed by a cointegration analysis with an error-correction model.

When the results from the ECM and the log-linear model are compared, one will find that the overall interpretation is standard. From these results, the conclusion can be drawn that from all the variables entered, for both models, those which focus on capacity play a significant role in determining international tourism demand specifically for the short term. In the long term, income in the country of origin, as well as transport costs proved to be significant determinants of the demand for the tourism product. For both the short and long term, the real exchange rate did not show much significance. In a study by Saayman & Saayman (2006), a similar result was found where only the exchange rates were modelled with the tourist arrivals to South Africa. One should also bear in mind that the insignificance of the income and exchange rate variables in the short term could be due to the exclusion of certain countries of specific continents due to such data being unavailable. These countries are, however, accounted for in the tourist arrivals and this could lead to some degree of misinterpretation.

Nonetheless, the results obtained from both the models that were estimated all indicated a justifiable fit. Overall it can be said that the results found in this chapter can be compared with other studies previously conducted on the international demand for the tourism product and similarities exist.

The following chapter is the overall conclusion of the study together with recommendations for future research.

## **Chapter 5**

### **Conclusion and Recommendations**

#### **5.1 Conclusion**

International tourism is growing at a rapid rate and governments all over the world are acknowledging that the tourism industry, if properly managed, would contribute considerably to the total economy and development of a country. The main purpose of this study was to identify the most significant determinants of international tourist flows, alias tourism demand, to South Africa. Numerous studies have been done on the demand function for tourism, however, the majority of these studies mainly focus on developed countries and studies on South Africa, a developing nation, are few and far between. This research thus shed light on the question as to whether the same determinants hold for developing destinations as for developed countries.

Studies on tourism demand provide a clear understanding of the tourism industry as well as all the different components thereof. The tourism product comprises many different elements and is a combination of products and services. The demand for tourism is therefore said to be influenced by a wide variety of factors.

The first objective of the study was to create a clear understanding of the tourism industry in South Africa. This was done in chapter 2, where an overall layout and explanation of the South African tourism industry was provided. The contribution of tourism to the economy also formed part of this discussion. The explanation on the industry, focused specifically on the supply and demand side of tourism in the country. As far as the supply side is concerned, it was found that South Africa has a great deal to offer as a travelling destination, with infrastructure and tourist attractions nationwide. The demand side focused comprehensively on domestic as well as international tourism demand, also identifying their strengths and weaknesses. It was found that the domestic market plays an important role in the development of the entire tourism industry and is a prevailing tool for reducing unemployment. The international market also proved to be promising,

as international tourists tend to stay longer per trip and spend more money which earns foreign exchange as the majority of international tourists that visit South Africa are from Europe and North America. For both domestic and international tourism there is some room for improvement, although the overall tourism industry in South Africa is in a healthy state as it continues to grow.

Concerning tourism and South Africa's economy, it was found that tourism contributes significantly to various elements in the economy such as income, employment, and the balance of payments and these figures indicate good growth percentages from the past. As more and more tourists arrive in South Africa, the impact on the economy becomes evident and, in 2004, tourism value surpassed gold exports therefore obtaining the status of 'new gold'.

The second objective was to determine, according to the literature, the determinants of international tourism demand. In chapter 3, previous studies on the topic were referenced and the different factors included were discussed. Together with the factors that influence tourism demand, certain threats were highlighted that might hinder the decision of people to travel .

In general, the majority of previous research indicates that the influential factors of tourism demand are mainly categorised as economic and non-economic factors. This is also the format that was used to explain the factors in this study. According to literature, the four main economic factors used are income, price, exchange rates, and transport costs. It was found that, for some studies, these factors alone were used with significant results (see for example Lim & McAleer, 2003). The non-economic factors could include a variety of factors and elements such as supply factors, weather, marketing, travel time, and population.

Overall, the most favoured determinants used in empirical research were similar between different studies where these studies included some or all of the economic factors mentioned together with a number of non-economic factors.

As far as the threats to tourism are concerned, it was found that certain events in the destination country could influence the demand for tourism negatively. Crime, health risks, and political instability were identified and the general conclusion was that if these threats are not properly managed and controlled, they can have a negative impact on the tourism industry in South Africa.

The last objective was to test and investigate the influences identified in chapter 3 and determine which of these have a considerable impact on tourism demand. In chapter 4 an empirical investigation was used with two different models to attempt to answer the question as to what are the most significant determinants of international tourism demand to South Africa. The effect of certain global events or disasters on tourism demand was also addressed.

The data used in the models were from international countries that indicate tourist arrivals to South Africa. The continents were: North America, South America, Asia, Europe, and Australia. Some countries were excluded from this study simply due to insufficient data being available. Africa was not included in the study as the focus was mainly on overseas travel to determine the international impact.

The two models that were used to estimate tourism demand were similar to research done by Lim & McAleer (2003). Initially a log-linear model was estimated and this was followed by an error-correction model. The advantage of using the error-correction model was that long-term relationships could also be investigated.

It was found that, in the long term, income and transport costs have a significant influence on tourism demand. This can be compared with the majority of studies on tourism demand, which report that the economic factors prove to be quite significant. On the other hand, the exchange rate didn't prove to be significant in either the short term or the long term. The results from this study indicate that, in general, tourists coming to South Africa are not particularly price sensitive (Saayman & Saayman, 2006), bearing in

mind that the majority of countries that were chosen for this study, have stronger local currencies than the South African Rand.

The climate in South Africa proved to be a definite determinant for international tourism demand. Tourists escape from the colder winter months in their country of origin and go on holiday in the warmer tropical climates such as that of South Africa. The number of hotel rooms, or capacity, also indicated significance as the majority of tourists use this type of accommodation and availability is therefore important. This proved similar to the results of Proenca & Soukiazis (2005:17), where accommodation capacity was the most significant factor from the supply determinants they specified. It was found that both the climate and hotel rooms, which are related to the supply side of South Africa's tourism industry, were good determinants of tourism demand, specifically in the short term. From all the results obtained, a clear distinction could be made between the influences for tourism demand in the short term and in the long term.

The one event chosen that possibly had a large impact on international tourism flows was the terror attacks in the USA on September 11, 2001. Tourists are generally concerned with their personal safety when on holiday. After tests were conducted to determine the effect of this event on South Africa's tourist arrivals, it was found that the impact could be disregarded. This leads to an important conclusion that events such as this one, as well as natural disasters (like the tsunami in Asia) don't have a negative influence on tourism demand to South Africa. The only logical explanation for this phenomenon is that South Africa is a remote destination which is a long distance from where these occurrences take place.

Seasonality is seen as one of the obstructions to tourism growth worldwide. The results that were found in this study align with previous research results (see for example Lim & McAleer, 2003,2001) in that seasonality plays an important role in the demand for tourism. The significant seasonal dummies that were entered provided verification of this statement.

Theoretically, all the factors said to be determinants of international tourism demand, both economic and non-economic, could not have been entered into regression for investigation. From those factors that were used, the results related to the results from other studies on this matter. Authors such as Lim & McAleer (2003), Proenca & Soukiazis (2005), Walsh (1996), as well as Alegre & Pou (2002), all found significance from income, prices, and supply factors. These studies focused mainly on developed countries and the conclusion can therefore be drawn that the same determinants hold for developed as well as for developing nations.

## **5.2 Recommendations**

It was found that, in the short term, South Africa should focus extensively on marketing the country's favourable climate. Accommodation and, especially, hotels, should be well maintained and of a high standard but, more importantly, there should be enough hotels available to cater for international tourists. This will surely guarantee growth in the tourism industry in the short term.

In the long term, South Africa is dependent on foreign economic growth and travel cost to ensure sustainability in the tourism industry. The results indicated that the demand for tourism is negatively related to capacity in the long term. This could result that in future a more suitable proxy can be used for accommodation such as game lodges and so forth as these industries are in fact growing faster than the hotel industry. It can therefore be concluded that the factors that will ensure long-term growth in the tourism industry from South Africa's perspective, are mainly uncontrollable.

From the results and overall interpretation, certain shortcomings could be identified from this study that could be improved by future research. The capacity, although significant, indicated a negative relationship with tourism demand in the long term. An assumption could be made that the increase in numbers does not signify an increase in the quality of accommodation in hotels and therefore causes a decrease in tourist arrivals. The inclusion of a quality variable could capture these effects. To proxy for transport costs, the oil price

was used. Although moderately significant, an overall suitable proxy for tourism prices is yet to be included in a study such as this. The ideal tourism demand model should therefore include all the significant variables identified through this study, as well as all the variables that were excluded from the model.

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