Travel Service Exports as Comparative Advantage in South Africa

Johan Fourie

Department of Economics, University of Stellenbosch

Abstract

World service exports have grown at a rapid rate over the past few decades. While some countries have benefited from the surge in service exports, others have been left behind. This paper provides a snapshot of South Africa's comparative performance in service exports, using a new measure of revealed comparative advantage, the normalised revealed comparative advantage (NRCA). Countries are ranked according to their performance in 10 service export sectors. South Africa is found to reveal a strong comparative advantage in travel service exports (tourism). A discussion of the travel services sector follows, with historical, theoretical and empirical evidence to support the NRCA findings.

Key words: services trade, normalised revealed comparative advantage, Balassa index, tourism, developing countries

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1
Introduction

While world service exports have increased rapidly over the past three decades, often surpassing the high growth rates of merchandise exports, the high growth rates have not been shared by all; country experiences differ by region, development level, country size and over service sector. Understanding the growth in service exports is important because a growing service sector is associated with a rise up the per capita income ladder and improvement in the level of the country's development. One avenue for this to occur is through the contribution of service exports to a country's economic growth (Mattoo & Hoekman, 2008).

This paper provides a comparison of services exports on a global scale. It ranks countries' normalised revealed comparative advantage performance by sector in 2005, which allows a comparative analysis of 10 service sectors for 147 countries. Following this, South Africa's performance is assessed. It is found that, in 2006, South Africa revealed a comparative advantage in only two sectors, namely communications and travel services,

with travel services the stronger of the two. This is followed by a discussion of travel service exports in South Africa, providing historical, empirical and theoretical evidence to support the comparative results.

2
Definition and measurement

The World Trade Organisation (WTO) classifies four modes of service trade: Mode 1 is defined as the supply of a service from the territory of one member (country) into the territory of another member (also known as cross-border supply); Mode 2 is the supply of a service in the territory of one member to the service consumer of any other member (consumption abroad); Mode 3 is the supply of a service by a service supplier of one member, through commercial presence in the territory of any other member (commercial presence); and Mode 4 is the supply of a service by a service supplier of one member, through the presence of natural persons of a member in the territory of any other member (presence of natural persons) (UN, 2002).

The measurement of trade-in-services has been a serious constraint on sound research.

The only source for accurate service trade statistics is the current account of the balance of payments (BOP), compiled in South Africa by the Reserve Bank and published in the Quarterly Bulletin. The fifth edition of the International Monetary Fund (IMF) Balance of Payments Manual (BPM5) proposes that statistics disaggregate trade-in-services between residents and non-residents into 11 sectors: transportation, travel, communications services, construction services, insurance services, financial services, computer and information services, royalties and license fees, other business services, personal, cultural and recreational services, and government services (WTO, 2006:10). The South African Reserve Bank currently publishes only two categories, transportation services (5700Y) and travel services (5043Y), with other services (5051Y) the difference of total services (5002Y) and transportation and travel. Transportation services are split into passenger fares (5041Y) and other transportation services (5042Y), while travel services are split into business travel (5701Y) and other travel (5702Y). The Reserve Bank is in the process of expanding the existing selection of service categories.

Yet, even if access were available to the full coverage of service categories as proposed by BPM5, no feasible disaggregation would be possible between the different modes of supply. To do this, the Manual on Statistics of International Trade in Services (MSITS) proposes the measurement of services by foreign affiliates within the framework of Foreign Affiliates Trade in Services (FATS) statistics. This framework describes the operations of foreign affiliates (including indicators such as turnover, exports and imports of goods and services, number of enterprises, etc.) with a particular, but not exclusive, focus on services (WTO, 2006). Amalgamating FATS with BPM5 will make trade-in-service exports and imports available for all 11 categories over the four modes of supply. However, very few countries, including South Africa, currently compile FATS datasets.

3
World service exports

World service exports have grown at a rapid rate over the past few decades. Between 1980 and 2006, world service exports grew by 7.88 per cent annually (UNCTAD, 2008). This rate has increased towards the end of the period; between 2000 and 2006 an annual rate of 10.60 per cent was achieved (UNCTAD, 2008).[1] The dramatic growth in merchandise exports has, however, overshadowed the nevertheless impressive growth rates of service exports. In fact, service exports increased faster than merchandise exports until the early 1990s, after which growth was relatively similar, with merchandise reclaiming a bigger share towards the end of the period.

However, while some countries have benefited from the surge in service exports, others have been left behind. Table 1 provides an overview of the growth in service exports across the globe. Asian countries have seen the highest growth in service exports since 1980, at 10.28 per cent annually throughout the period, with most of the rest of the world achieving only moderate rates. This resulted in a warning by Langhammer (2002) that such growth will be limited to country-specific episodes, such as the growth in Indian IT exports. Since 2000, however, African countries have exhibited remarkably high growth rates in service exports, at an annual rate of 12.84 per cent over six years. Although such growth is from a small base, it is in sharp contrast to the modest growth rates of the preceding two decades.

Table 1

Rates of growth in service exports by region of origin, various time periods

	1980-2006 (%)	1992-2006 (%)	2000-2006 (%)
Developing economies: Africa	6.46	7.59	12.84
Developing economies: America	6.57	7.17	7.62
Developing economies: Asia	10.28	10.71	12.73
Developing economies: Oceania	6.27	3.19	7.31
Developed economies: America	8.67	6.57	6.05
Developed economies: Asia	7.10	6.73	8.37
Developed economies: Europe	7.17	7.16	11.71
Developed economies: Oceania	8.53	8.05	9.08
Economies in transition: Asia	–	24.48	17.31
Economies in transition: Europe	–	12.89	20.24

Source: UNCTAD (2008), own calculations.

Table 2

Size of global service exports by sector, 2005

Service sector	Obs	Exports (million US$)	% of exports	Country average (million US$)	% of country average
Transport	146	561980.2	23%	3849.179	21%
Travel	147	675373.6	28%	4594.378	24%
Communications	127	57439.2	2%	452.2772	2%
Construction	88	49485.8	2%	562.3386	3%
Insurance	130	49733.8	2%	382.5677	2%
Financial services	105	163505.4	7%	1557.194	8%
Computer and information	101	108259.1	4%	1071.872	6%
Royalties and licence fees	91	129057.1	5%	1418.21	8%
Other business services	136	619259.9	25%	4553.382	24%
Personal, cultural and recreational	91	29641.3	1%	325.7286	2%
Total services		2443735		18767.13	

Source: UNCTAD (2008), own calculations.

Table 2 gives the breakdown of service exports by type. Transport, travel and other business services cover more than 75 per cent of total service exports. These categories are also the most reported per country (146 countries for transport, 147 for travel and 136 for other business services), and therefore reveal the most reliable comparative advantage figures (see later). Fewer countries report complete disaggregated data over all categories; only 87 countries reported construction service exports. While this may influence the results, the countries excluded are of relatively moderate size compared to the leading industrial nations, and would therefore have little significance on the comparative advantage as calculated for the other countries.

4
South African service exports

The first service export data that are available for South Africa come from 1946 (SARB, 2008). The South African Reserve Bank publishes two series of service exports: the value of service receipts (KBP5002J) and exports of services (KBP6609J), both in current prices. It is not clear what the difference is between them. From 1960 the two sets of data are similar. Between 1946 and 1959, exports of services (KBP6609J) are significantly above the value of service receipts (KBP5002J), and implausibly so. If the KBP6609J data are to be believed, service exports saw a drop of more than 80 per cent

between 1959 and 1960. KBP5002J is therefore used here.

Figure 1 reports service exports as a share of total exports (goods and services). During the first few years for which data are available, service exports was an important component of total exports (more than 15 per cent in 1946). This share soon declined, to stabilise at around 11 per cent for most of the 1960s. The 1970s, especially during the early years, saw rapid gains in service exports vis-à-vis goods exports. The political sanctions and economic turmoil, however, resulted in stagnating and declining service exports during most of the 1980s. The trend reversed again in the late 1980s, with sporadic periods of growth but higher volatility. Since the 1990s, especially

after the political transition to a full democracy in 1994, service exports have again shown higher growth than goods exports. Figure 1 also reports service exports' share of gross domestic product (GDP). In 1946, 3.86 per cent of GDP consisted of service exports. This share declined steadily until 1993 (reaching 2.51 per cent), with some growth exceptions during the late 1970s. Since 1994, the trend has been reversed, with service exports reaching 4.78 per cent of GDP in 2007. In a recent study for the South African Government, Edwards and Lawrence (2006) describe service exports as the 'bright part' of South Africa's post-apartheid trade performance, with average growth between 2000 and 2005 of 8.6 per cent.

Figure 1
Service exports, South Africa, 1946–2007
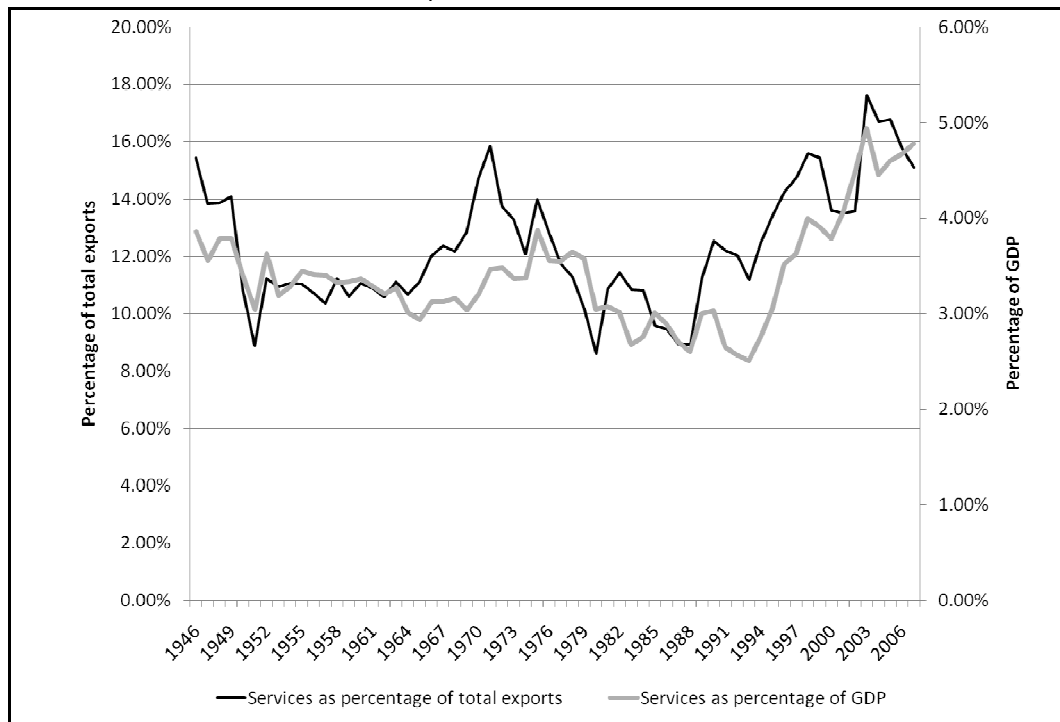
Source: SARB (2008), own calculations

5
Revealed comparative advantage

The theory of comparative advantage is derived from David Ricardo's insight that trade benefits countries that specialise in the production of goods and services with the lowest opportunity costs. Empirically, comparative advantage is revealed through the Balassa index (Balassa, 1965).[2] The RCA measure is derived from the following formula:

$$RCA_{ij} = \frac{X_{ij}/\sum_i X_{ij}}{\sum_j X_{ij}/\sum_i \sum_j X_{ij}}, \qquad (1)$$

where X_{ij} represents exports of sector i from country j. The numerator represents the percentage share of a given service sector in national exports. The denominator represents the percentage share of a given service sector in world exports. When RCA_{ij} is above 1, country i's competitiveness in product j is greater than its average competitiveness, in other words country i's comparative advantage is revealed.

The normalised RCA measure was developed by Yu, Cai and Leung (2009) to calculate an RCA measure that allow for more precise comparisons across time, country and sector. The NRCA formula is given as:

$$NRCA_{ij} = \frac{X_{ij}}{\sum_i \sum_j X_{ij}} - \frac{(\sum_i X_{ij})(\sum_j X_{ij})}{(\sum_i \sum_j X_{ij})^2}, \qquad (2)$$

Where X_{ij} represents actual exports and $(\Sigma_i X_{ij})(\Sigma_j X_{ij})$ denotes the comparative-advantage-neutral level in exports of commodity j for country i. Although not as intuitive as the Balassa index, the normalised RCA corrects for the asymmetry problem of the standard RCA. This also makes the NRCA a more appropriate variable for regression analysis: $-0.25 < NRCA_{ij} < 0$ suggests that country i's actual export of commodity j is lower than the comparative-advantage-neutral point, while $0 < NRCA_{ij} < 0.25$ suggests that the country i has a comparative advantage in the export of commodity j.

This paper uses the new measure to calculate South Africa's comparative performance, the first paper to do so for the services sector. Data were obtained from the United Nations Conference on Trade and Development (UNCTAD) 2007 Handbook of Statistics (UNCTAD 2008). All 11 categories are reported in the UNCTAD data for 186 unique countries and territories from 1980 to 2006. Government services are excluded from this analysis, as they are usually considered non-tradable. The snapshot view is taken for 2005, the year for which data are available for the largest number of countries in the sample.

6
Comparative results

The results are reported in Table 3. The 10 sectors are transport (A), travel (B), communication (C), construction (D), insurance (E), financial services (F), computer and information services (G), royalties and license fees (H), other business services (I), and personal, cultural and recreational services (J). The appendix lists the countries and their international ISO 3166-1 alpha-3 code (used in Table 3). Countries located above the dark line all reveal a comparative advantage (i.e. positive NRCA), while those below the line do not reveal a comparative advantage (i.e. negative score).

Table 3
NRCA ranking of countries for the 10 service sectors

	A	B	C	D	E	F	G	H	I	J
1	DNK	USA	GBR	JPN	IRL	GBR	IND	USA	GBR	USA
2	GRC	ESP	NLD	DEU	CHE	LUX	IRL	JPN	AUT	GBR
3	NOR	TUR	IND	FRA	USA	USA	GBR	GBR	USA	MYS
4	KOR	FRA	KWT	RUS	LUX	CHE	ISR	SWE	IRL	CAN
5	GBR	GRC	FRA	NLD	CAN	IRL	LUX	FIN	SGP	HUN
6	SGP	ITA	LUX	ESP	AUT	HKG	SWE	FRA	SWE	TUR
7	USA	AUS	SWE	TUR	MEX	CYP	ESP	DNK	IND	FRA
8	HKG	MAC	IDN	POL	GBR	PAN	FIN	PRY	HKG	ESP
9	JPN	HRV	ROU	EGY	IND	SWZ	CAN	HUN	NLD	AUS

10	EGY	AUT	BEL	IND	SWE	BRB	CRI	GUY	CHE	NZL
11	ESP	EGY	CHE	ITA	LBN	SGP	CYP	LSO	ITA	LUX
12	AUT	LBN	MAR	BEL	BRB	LVA	ROU	MLT	FIN	PRT
13	UKR	PRT	PRT	AUT	GRC	MLT	URY	MDV	ESP	SYR
14	FRA	ZAF	PHL	FIN	BWA	VUT	ISL	UGA	LBN	ARG
15	CHL	MAR	CAN	MYS	PER	URY	UGA	GEO	ISR	GRC
16	PAN	NZL	EGY	PRT	GTM	ETH	LKA	KGZ	CYP	NOR
17	CYP	DOM	AUT	EST	LKA	JAM	ARM	TGO	TWN	MLT
18	ISR	THA	PAK	BIH	MLT	GUY	BRB	TJK	NGA	EGY
19	SWE	BHS	LBN	CYP	TZA	GEO	JAM	MDA	ANT	CYP
20	LTU	CYP	ESP	ISR	CYP	UGA	WSM	MLI	NOR	JAM
21	LVA	CHE	GRC	IDN	GRD	SLE	GUY	BRB	DNK	ROU
22	ISL	SYR	DNK	TUN	BOL	CPV	LCA	MDG	EGY	IRL
23	PRT	BGR	KEN	GRC	PAN	TJK	CPV	ALB	MAR	ALB
24	EST	TUN	HRV	ROU	SLV	BLZ	MLT	MOZ	LUX	ECU
25	POL	JAM	NZL	SVN	SGP	BEN	MKD	ETH	BHS	ISL
26	KEN	CRI	JAM	MKD	ATG	ALB	TGO	MKD	ISL	KGZ
27	TUN	JOR	HND	BGR	HND	KGZ	BEN	SWZ	BRA	ARM
28	BGR	ABW	COL	KGZ	PRY	TGO	KGZ	JAM	PRY	BGR
29	MAR	BRB	BIH	MOZ	ARM	ARM	LVA	BOL	MUS	MKD
30	BLR	UKR	SLV	ANT	GEO	MLI	TJK	ANT	BRB	TON
31	TUR	ANT	ITA	MUS	GUY	MNG	MDA	KEN	MLT	WSM
32	ETH	ALB	SYR	SLV	LCA	MDA	MNG	MUS	SUR	GEO
33	LKA	MUS	BGR	ARM	ANT	PRY	ALB	KHM	PNG	CPV
34	NZL	TZA	DOM	ETH	UGA	BIH	GEO	ISR	PAN	MDA
35	JAM	KHM	ALB	WSM	VCT	MOZ	MUS	SLV	VCT	MLI
36	HRV	SVN	MDA	TJK	KNA	MKD	ETH	URY	MDG	MNG
37	URY	POL	CIV	PNG	DMA	NAM	MOZ	AZE	KGZ	BRB
38	GEO	GTM	PAN	MDA	AIA	MUS	MDG	BWA	HRV	MOZ
39	MUS	GHA	MLT	BLZ	SYC	BOL	PAN	CYP	TGO	SWZ
40	PAK	PAN	MLI	KNA	CIV	TZA	SWZ	LVA	EST	TZA
41	JOR	MLT	NPL	LKA	MSR	ANT	PRY	CRI	DMA	BOL
42	SVN	LUX	ETH	GTM	CPV	KHM	NAM	EST	GRD	MUS
43	SLV	EST	ECU	TGO	WSM	PNG	SYR	BGD	WSM	ANT
44	BHR	URY	EST	BEN	GMB	GTM	TZA	HRV	KNA	PNG
45	MNG	HND	LVA	MLI	SLE	SLV	BOL	EGY	TON	KHM
46	MLT	BIH	GUY	BRB	BDI	CIV	ANT	TUN	BLZ	AZE
47	MDA	LCA	MKD	ALB	VUT	ABW	PNG	LTU	ATG	URY
48	SYC	UGA	KHM	MNG	NPL	SDN	KHM	BGR	AZE	GTM
49	CPV	KEN	BRB	MDG	RWA	BWA	GTM	MAR	NPL	KEN
50	TZA	ATG	NIC	BWA	JAM	ISL	ABW	BLR	MSR	LVA
51	AUS	SLV	ARM	SWZ	PNG	AZE	AZE	PAK	JOR	COL
52	DJI	PER	BOL	BLR	SUR	EST	DNK	PER	AIA	HRV
53	ATG	BHR	TZA	AZE	MDV	SYR	KEN	AGO	BDI	EST
54	SUR	BWA	CPV	BOL	ALB	MAC	BWA	SVN	VUT	CRI
55	ALB	MDV	FIN	KHM	BIH	DOM	EST	NZL	LCA	SVN
56	ARM	HUN	SVN	LVA	MAR	LBN	NZL	COL	BEN	BGD
57	MDG	MYS	GEO	CIV	NIC	CRI	CIV	ROU	DJI	LTU
58	MKD	ARG	AZE	SWE	BEN	BGD	DOM	KAZ	CPV	DNK
59	TGO	NAM	BLR	ISL	BLZ	TUN	BGD	LUX	GUY	TUN
60	KGZ	BLZ	GTM	SYR	ETH	LTU	SVN	UKR	MKD	LBN
61	RWA	GEO	UGA	LTU	TGO	EGY	HRV	ARG	ETH	**ZAF**
62	VUT	SYC	YEM	BGD	MLI	BGR	LTU	CHL	SYC	BLR

63	AZE	NIC	SYC	HRV	KGZ	HRV	TUN	PHL	ALB	PAK
64	GMB	ISL	LTU	LBN	MNG	PAK	BGR	GRC	LSO	CHL
65	ROU	LTU	TJK	UKR	MKD	BLR	PAK	PRT	TJK	AGO
66	TJK	CPV	TGO	PAK	LSO	PER	LBN	ZAF	MDA	AUT
67	BLZ	MNG	LKA	NZL	MDA	SVN	BLR	IDN	MOZ	KAZ
68	GRD	KNA	MNG	LUX	GHA	COL	ARG	NOR	UGA	PHL
69	KNA	VCT	GMB	PHL	MDG	ZAF	CZE	AUS	TZA	UKR
70	VCT	AIA	PRY	KAZ	SWZ	NZL	COL	CZE	MLI	CZE
71	SLE	MDG	NAM	HUN	MOZ	ROU	EGY	IRL	ARM	VEN
72	TON	HTI	BLZ	CZE	NAM	KAZ	NOR	POL	MNG	POL
73	MSR	MLI	MAC	ARG	KEN	PRT	KAZ	NLD	GEO	MEX
74	DMA	ARM	WSM	ZAF	AUS	PHL	HUN	BRA	LVA	IDN
75	MDV	WSM	DJI	THA	ISL	UKR	GRC	THA	SWZ	FIN
76	WSM	VUT	UKR	NOR	MUS	IND	AUS	CAN	GHA	SWE
77	BEN	NPL	RWA	DNK	AZE	GRC	PHL	IND	HND	IND
78	BDI	ETH	MUS	AUS	URY	CHL	PRT	KOR	BIH	NLD
79	AIA	GRD	VUT	BRA	KHM	ARG	UKR	MYS	ABW	BRA
80	BOL	BOL	KGZ	SGP	TUN	KWT	CHL	AUT	NAM	ITA
81	LCA	BEN	BEN	CHN	LVA	AUT	ZAF	TWN	COG	CHE
82	MOZ	GMB	MOZ	TWN	ABW	CZE	NLD	MEX	CRI	BEL
83	KWT	SLE	AUS	HKG	MAC	SWE	VEN	SGP	PRT	RUS
84	PRY	DMA	URY	KOR	CHL	HUN	IDN	ESP	BOL	SGP
85	NIC	RWA	HTI	GBR	EST	ESP	BEL	RUS	KHM	TWN
86	NPL	MDA	HUN	USA	BGR	IDN	POL	BEL	GTM	KOR
87	GUY	KGZ	SLE	CAN	BGD	TUR	MYS	HKG	BWA	HKG
88	GHA	SUR	CYP		EGY	NOR	BRA	ITA	CIV	DEU
89	MLI	MOZ	BWA		ECU	FIN	AUT	DEU	JAM	JPN
90	ANT	TON	ANT		PAK	AUS	DEU	CHN	URY	CHN
91	LSO	MSR	ARG		HRV	POL	TWN		LKA	
92	HND	LKA	MDG		LTU	BRA	RUS		SLV	
93	UGA	GUY	CRI		TUR	TWN	SGP		SDN	
94	KHM	BDI	SWZ		BLR	DNK	HKG		BGD	
95	BRB	LSO	PNG		OMN	BEL	KOR		YEM	
96	SWZ	DJI	ISL		SVN	MYS	FRA		LTU	
97	BHS	TGO	ABW		LBY	KOR	ITA		BGR	
98	BIH	LVA	PER		NZL	RUS	USA		TUN	
99	NAM	PRY	SDN		ROU	CAN	JPN		SYR	
100	MAC	MKD	BGD		PRT	JPN	CHN		MAC	
101	GTM	SWZ	CZE		KWT	ITA			HUN	
102	PNG	TJK	TUR		KAZ	NLD			DOM	
103	COG	COL	TUN		ZAF	FRA			SVN	
104	CRI	ECU	OMN		UKR	DEU			BHR	
105	BWA	PHL	ZAF		PHL	CHN			ROU	
106	LBN	CZE	KAZ		NOR				BLR	
107	ECU	SDN	AGO		NGA				PAK	
108	ABW	YEM	ISR		ITA				NZL	
109	CIV	PNG	MYS		ISR				PER	
110	SYR	AZE	LBY		VEN				ARG	
111	LUX	COG	CHL		THA				GRC	
112	SDN	CIV	POL		FIN				COL	
113	YEM	ISR	VEN		HUN				AGO	
114	NLD	BGD	NOR		DNK				UKR	
115	COL	MEX	IRL		ESP				KAZ	
116	DOM	OMN	THA		CZE				CHL	

117	KAZ	ROU	USA	POL	THA
118	BGD	BLR	BRA	MYS	PHL
119	PER	IDN	MEX	IDN	BEL
120	OMN	IND	RUS	BRA	IDN
121	ARG	PAK	HKG	TWN	ZAF
122	CZE	KAZ	TWN	BEL	CZE
123	PHL	AGO	KOR	RUS	POL
124	AGO	GBR	DEU	HKG	FRA
125	THA	LBY	JPN	KOR	VEN
126	LBY	CHL	CHN	FRA	AUS
127	IND	DNK		NLD	TUR
128	FIN	SWE		JPN	MYS
129	ZAF	FIN		DEU	CAN
130	HUN	VEN		CHN	KOR
131	IDN	KWT			JPN
132	NGA	NGA			RUS
133	VEN	BRA			DEU
134	BRA	NOR			CHN
135	RUS	IRL			
136	MYS	TWN			
137	CHE	CAN			
138	BEL	RUS			
139	TWN	HKG			
140	IRL	SGP			
141	ITA	BEL			
142	MEX	KOR			
143	CAN	CHN			
144	DEU	NLD			
145	CHN	JPN			
146		DEU			

Source: UNCTAD (2008), own calculations

A number of countries that specialise strongly in service exports can be identified from the results: Denmark, Greece, Norway and South Korea in transport services; the USA, Spain, Turkey, France and Greece in travel services; the UK, the Netherlands, India, Kuwait and France in communication services; Japan, Germany, France, Russia and the Netherlands in construction services; Ireland, Switzerland, the USA, Luxembourg and Canada in insurance services; the UK, Luxembourg, the USA, Switzerland and Ireland in financial services; India, Ireland, the UK, Israel and Luxembourg in computer and information services; the USA, Japan, Britain, Sweden and Finland in royalties and licence fees; the UK, Austria, the USA, Ireland and Singapore in other business services; and the USA, the UK, Malaysia, Canada and Hungary in personal, cultural and recreational services.

The G8 countries perform relatively well on the rankings of RCA service exports. The UK, for example, is decidedly a service export economy. It reveals comparative advantage in eight of the ten service sectors, six of them with a high NRCA score. The largest developing countries are not as specialised as the G8 countries in the export of services. China, for example, currently has no revealed comparative advantage in the services sector. Brazil and Mexico have only weak comparative advantage in 'Other business services' and insurance. In line with the literature (D'Costa, 2003; Gordon & Gupta, 2004; Tharakan, Van Beveren & Van Ourti, 2005), India is remarkably specialised in computer and information services. Furthermore, India also has a high ranking in communication service exports, as well as a positive NRCA in construction, insurance and other business services. Some smaller developing countries seem to specialise in

service exports: Egypt, for example, ranks high in various sectors, including transport, travel, communications, construction, and personal, cultural and recreational services.

Trade theory suggests a number of possible determinants of a country's comparative advantage. Ricardian comparative advantage, for example, explained through differences in technology, may explain India's strong performance in computer and information services or Britain, Luxembourg and Switzerland's dominance in financial service exports, while the Heckscher-Ohlin theorem, predicting that countries will export products that intensively use the its most abundant resource, may explain countries comparative advantage in construction or travel services. Linder's demand-side theory and Krugman's new trade theories may also be applicable. However, these can only be speculations and should be empirically evaluated.

Moreover, Table 3 shows that South Africa reveals a strong comparative advantage in only one service sector: travel service exports[3]. The

results for South Africa are discussed below.

7
South Africa's comparative advantage in service exports

A number of studies have investigated South African service sectors, including the financial sector (Butterworth & Malherbe, 1999), construction (Teljeur & Stern, 2002), transporttation (Naudé, 1999), distribution services (Achterberg & Hartzenberg, 2002) and communications (Hodge, 1999).[4] These studies find some growth in the post-1994 period, but due to the nature of the analysis (sector-specific) they cannot conclude whether such a sector has a *relative* trade advantage. That is one aim of this study. While Table 3 has shown South Africa's normalised revealed comparative advantage for 2005, Figure 2 reports the changes in South Africa's service sectors over the period 1980 to 2006, given the UNCTAD dataset.[5]

Figure 2
Normalised Revealed Symmetric Comparative Advantage of service exports,
South Africa, 1980-2006
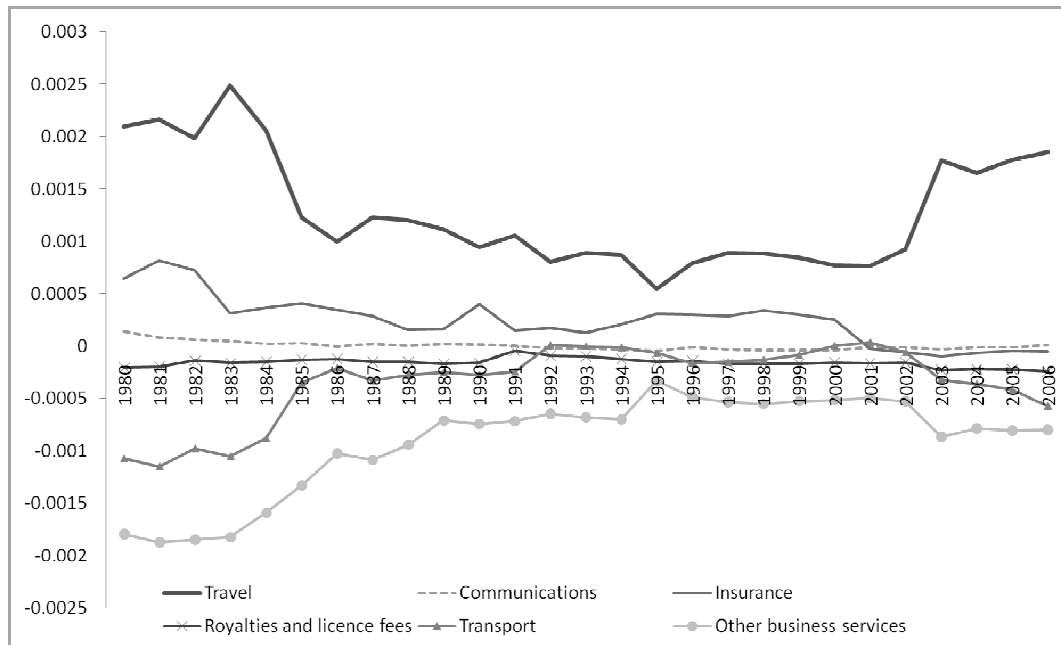
Source: UNCTAD Handbook of Statistics 2007 (2008), own calculations

Apart from the fall in the RCA of insurance services in 2001 (which is due to an inexplicable but dramatic decrease in South African insurance service exports, from $450.9 million in 2000 to $53.5 million in 2001 in the dataset) and a growing RCA for government services, the time trends seem to be relatively stagnant, suggesting that a country's comparative advantage is a slow-moving variable. Communication services revealed a rather strong, but declining, comparative advantage over the first decade. This may simply be due to more countries with higher average communication service exports being added to the analysis. However, it is noteworthy that communication services in the last year of analysis again revealed a comparative advantage, although a relatively weak one.

The time trends in Figure 2 clearly show that travel service exports maintained a strong comparative advantage throughout the period under analysis. Even during economic sanctions and isolation, South Africa maintained a strong, although declining, RCA. Since 1995, however, the RCA has increased significantly, even as more countries were added to the analysis.

8
Travel service exports from South Africa

Unlike other traded service industries, travel services are defined by the *user* of the service and not by the type of good or service sold: the consumer (user or traveller) moves to a different country to obtain goods and services.[6] Travel services entail all goods and services that are acquired by travellers in an economy during visits of less than one year (except patients and students, who may exceed the one-year limit) (UN, 2002). These services exclude transportation services provided by carriers not resident in the particular economy being visited, as well as international carriage of travellers, both of which are included under passenger services in the transportation service industry (UN, 2002). Also excluded are purchases of goods for resale in the traveller's home economy or elsewhere.

Travel service exports accounted for more than 65 per cent of South Africa's total service trade in 2006, significantly higher than the world average of 38 per cent (UNCTAD 2008). Is there any historical, theoretic or empirical evidence to support this strong comparative advantage in travel service exports?

South Africa has a unique history of travel service exports. The first Europeans settled in the Cape to provide basic necessities to passing Dutch ships sailing between Holland and the East Indies. Apart from stocking these ships with provisions, which included fresh water, food and firewood, the sailors and soldiers aboard these ships also took time to relax and enjoy themselves, and rebuild their strength in time for the second leg of their journey. Cape Town became known as the 'Tavern of the Seas' (Ward, 2007). Nearly every house in Cape Town was used to provide travel service exports – accommodation, food and drinks, and entertainment (Schutte 1980). Injured and sick travellers were also treated by the Dutch East India Company (VOC) hospital. According to Van Duin and Ross (1987), an average of between 9 700 and 11 600 men visited Cape Town every year from 1720 to 1780 on the ships of the VOC, and this had an important impact on the Cape economy (Boshoff & Fourie 2008). Given that the European male population for the entire Cape Colony equalled 2 913 in 1780, and that the entire population, including children and slaves, equalled 22 257, the number of visitors is staggering (Van Duin & Ross, 1987). A survey conducted in 1732 shows that close on 60 per cent of the people employed in Cape Town were involved in the service sector (Schutte, 1980). Not only were travel service exports important for employment creation, but they had significant spin-offs in related industries (such as agriculture and viticulture) during the period of Dutch rule in the Cape (Boshoff & Fourie, 2010).

A lack of sufficient statistical evidence undermines any attempt to discuss the role of travel service exports during much of the nineteenth century. The economy of South Africa changed rapidly after the discovery of diamonds (1867) and gold (1886). The diamond and gold mines brought with them a

wave of travellers and immigrants, resulting in fast-growing cities in the interior, most notably Kimberley and Johannesburg. The size and significance of travel exports during the early period of the twentieth century is unclear, although it is expected to be small in comparison with the rich mineral exports.[7]

Mainly as a result of the improvement in air transport, travel service exports performed well during the 1960s and early 1970s. According to Van Staden (1988), tourists to South Africa grew at an average of 13.2 per cent per annum between 1968 and 1975. However, the period of political unrest also had a strong negative impact on the travel services industry. The 1976 Soweto uprisings caused a significant slowdown, with overseas visitors dropping by 12 per cent (Van Staden, 1988). Since the democratic transition, tourism has increased at exponential rates. While 1 029 094 visitors officially arrived in 1990, 8 508 805 did so in 2006 (StatsSA, 2008).

What were the reasons that attracted these visitors? Already in 1982, and before the exponential growth in post-apartheid tourist arrivals, Anton Rupert (1982:7-8) wrote in his *Priorities for coexistence*: 'What is this diversity which makes South Africa such a sought-after trading partner and an increasingly popular tourist attraction?' He attempts an answer by noting the 'varying climatic conditions which are clearly reflected in a striking variety of flora … [The] lovely scenery, a glorious sunny climate, unparalleled mineral wealth and an exciting variety of animals … Table Mountain alone boasts a greater number of botanical species than are to be found in the entire British Isles' (Rupert, 1982:7-8). Furthermore, 'the population … is made up of people with completely different backgrounds and origins. Among this hetero-geneous mixture of peoples there is a unique diversity of life-styles, cultures, languages, faiths and social systems' (Rupert, 1982:7-8). He summarises: 'We have a diversity of peoples and of natural resources which invite the construction of an economic model appropriate for the world as a whole. In its ethnic, cultural, sociological and economic complexity, South Africa is a microcosm of the world. Diversity … affords wonderful opportunities' (Rupert, 1982:12). Even then

Rupert's sentiments were supported by empirical evidence. Of the 5 053 question-naires completed in a tourism survey in 1978, 77 per cent noted 'Scenery and Landscape' as the most important reason for their visit (Ferrario, 1978). 'Wild life' and 'Natural vegetation' were the second and third most important reasons listed. South Africa's unique natural and cultural attributes are also noted by contemporary travel research (Rogerson, 2006; Rogerson & Kiambo, 2007; Rogerson & Visser, 2004; Saayman & Saayman, 2003; Saayman & Saayman, 2008).[8]

It is not only the natural environment that attracts foreign visitors; on the supply side South Africa's built environment is larger and of better quality than many other developing countries. South Africa has relatively well-developed infrastructure (Bogetic & Fedderke, 2006; Fourie, 2006) and, due to its relative size, can accommodate more foreign visitors than any other African country. It also offers visitors a wide selection of direct international flights to the country. In 2004, South Africa won the rights to host the 2010 Soccer World Cup, arguably the largest sporting event worldwide. This follows the successful 1995 Rugby World Cup, 1996 African Cup of Nations, 2003 Cricket World Cup and other events, providing further proof that the country can supply quantity and quality accommodation, food and beverage, and entertainment services for higher tourism demand.[9]

In addition to the physical supply attributes of the country, there are relatively few trade barriers to travel service exports. Netshitomboni and Stern (2002) note that, of all the service categories, travel service exports do not appear to face significant barriers to entry in the four largest service importing countries. The South African government has made several commitments in almost all of the sub-categories in the tourism and travel sector by signing the GATS agreement of the WTO. The only sub-sector where no commitments were made is the sub-sector designated as '*D. Other*'.[10] This category is reserved for travel and tourism services not included in the other sub-categories. The implication is that, when a service sector is omitted from a schedule, that country has no obligations regarding market

access and national treatment in the specific sector. This means South Africa is free to introduce new measures to deny market access to or the operation of services in those omitted sectors.11 Table 4 provides an overview of South Africa's commitments in tourism and travel-related services. The liberalisation of South Africa in the travel service sector is consistent with the international experience (Hoekman, 2006).

Table 4

Liberalisation of tourism and travel-related services

9. Tourism and Travel-related services	Limitations on Market Access	Limitations on National Treatment
A. Hotels and Restaurants (including catering) (CPC 641)	1) Unbound except for catering: None 2) None 3) None 4) Unbound except as indicated in the horizontal section	1) None 2) None 3) None 4) Unbound except as indicated in the horizontal section
B. Travel agencies and Tour Operator Services (CPC 7471)	1) None 2) None 3) None 4) Unbound except as indicated in the horizontal section	1) None 2) None 3) None 4) Unbound except as indicated in the horizontal section
C. Tourist Guide Services (CPC 7472)	1) Unbound* 2) None 3) None 4) Unbound except as indicated in the horizontal section	1) Unbound* 2) None 3) None 4) Unbound except as indicated in the horizontal section

Source: World Trade Organization (2009)

Travel service exports from South Africa have received relatively little attention from an international trade perspective.[12] Hodge (1997), using 1994 data, finds that travel service exports is the only service sector in which South Africa had a comparative advantage. He identified migrant labour as an important contributor to this service export, especially in the period of international sanctions against South Africa's apartheid regime, and predicted that this would be an important service export category for the future (Hodge, 1997). More recently, Saayman and Saayman (2008) empirically identified the determinants of South African Mode 2 travel exports. In agreement with the international literature, they found that income in the importing country is a main determinant of tourist arrivals (Saayman & Saayman, 2008). Price competitiveness (as measured by the real exchange rate) and transport costs were also found to be significant determinants of tourism. Interestingly, climate (measured as the number of sunny days in Cape Town) is found to be positive and significant, except for visitors from Australia and Latin America. In more recent work, Fourie (2009) and Fourie, Du Toit and Trew (2010) find a positive and significant coefficient on a natural resource variable (measured as the number of UNCTAD Natural World Heritage sites per country) in a cross-country study using the NRCA measure. This lends some credence to the hypothesis that the natural environment contributes to South Africa's comparative advantage. It may further suggest that the South African tourism experience is substitutable with countries sharing similar natural attributes. Stern (2002), however, finds that education and infrastructure are key determinants in travel service exports, while population, gross domestic product, per capita income, technology and land per worker have a negative impact on tourism. This supports his earlier finding that 'wealthy countries are less likely to specialise in travel, sea transport, construction and communication services' (Stern, 2002:8). Yet the results of the comparative analysis above – specifically in the transport, construction and communication

services sectors – seem to contradict Stern's findings.

Is there any theoretical support for the hypothesis that South Africa has a comparative advantage in travel service exports? As mentioned before, the Ricardian model of comparative advantage is based on the idea that the opportunity costs of production determine the good that a country should specialise in. Therefore, in a two-country, two-sector model, even though a country might have an absolute advantage at producing both products, Ricardo argues that trade will still benefit both countries as long as the opportunity costs of production are different. A country should therefore specialise in the good with the lowest opportunity cost. The Hecksher-Ohlin theory of comparative advantage, given a number of limiting assumptions (such as zero transport costs), propose that a country will reveal a comparative advantage in those products where it has higher relative factor endowments, usually capital and labour. While the Hecksher-Ohlin theorem finds little empirical support (e.g. the Leontief paradox), an extension of the Hecksher-Ohlin theorem to: 1) include three factor inputs, namely natural resources, capital and labour (where natural resources are broadly defined to include scenery, landscapes and the fauna and flora), and 2) do away with the assumption of zero transport costs, could suggest that South Africa may have a comparative advantage in service exports and, specifically, in travel service exports. Intuitively, because South Africa is a capital-scarce country relative to our main trading partners, labour-intensive products should be exported. Unfortunately, South Africa faces high transport costs for products to international markets (Chasomeris, 2005; Fourie, 2008; Naudé & Krugell, 2007), which tend to undermine its comparative advantage, leaving Asian countries to dominate world exports of labour-intensive goods. Given that transport costs have less of an impact on the service industry (transactions are done electronically and people use airports, whereas most goods use seaports[13]), it follows that South Africa would have a comparative advantage in exporting services, rather than goods. Provided that travel services are the

only service sector to benefit from the broadly defined natural resources factor endowment (as found by Fourie et al., 2010), and given the natural resource-intensive factor allocation, travel services are the sector likely to have a comparative advantage vis-à-vis the other service sectors.

South Africa ranks 14th in the travel service export sector (as reported in Table 3). Large countries that share South Africa's strong comparative advantage in travel service exports are the USA, Spain, Turkey, France, Greece, Italy, Australia and Portugal. While this study considers the *comparative* advantage (the economic interpretation as per Ricardo) of countries and not the *competitive* advantage (the 'product offering' as in the marketing literature), these results may indicate which countries compete for the same market share internationally. It is interesting to note that a Global Competitiveness Study by the Monitor Group and South African Tourism in 2004 (DEAT, 2005) highlighted five countries as main competitors: Australia, Thailand, Brazil, Kenya and the USA. Considering Table 3, a number of non-island countries may also vie for 'competitor status': Turkey, Greece, Croatia, Austria, Egypt, Lebanon, Portugal, Morocco, New Zealand and the Dominican Republic.

A further important result is that a large number of these countries share borders with countries that also reveal a strong comparative advantage in travel service exports. While these countries may be 'competing' for the same tourist markets, countries with neighbours that have a high RCA may benefit from agglomeration effects in attracting tourists. A case in point is the high normalised RCA scores calculated for South Africa's neighbours, including Namibia, Botswana and Mozambique. While not revealing a comparative advantage, tourism in both Lesotho and Swaziland has a relatively larger impact on the economy than the world average. In the mould of the new trade theory, this may provide some evidence of agglomeration effects in southern Africa and, more broadly, in sub-Saharan Africa. Transfrontier parks, such as the Great Limpopo Frontier Park that link four protected areas in South Africa, Mozambique and Zimbabwe,

may try to capitalise on this.

The South African government has emphasised the role tourism can play in promoting economic growth and development. The tourism sector is one of two priority service sectors in the government's ASGISA programme (Republic of South Africa, 2006).[14] The results reported here support this emphasis on the travel service sector.[15] South Africa and Mauritius were the only SADC member states actively participating in the successive services rounds to progressively liberalise trade in services. On 29 March 2006, South Africa submitted its conditional initial offer in the framework of the ongoing negotiations on services under the GATS.[16] Although South Africa made several additional commitments, the situation in the tourism and travel sector remained unchanged. This is a clear indication that the sector is already regarded as being substantially liberalised.

Such an open trade policy suggests that the South African government has committed to promoting travel service exports.[17] Other industrial policies to support the sector may include both demand- and supply-side measures, including brand marketing, advertising, attending trade fairs and sponsorships, improving air access and transport infrastructure, ensuring a safe travel environment, training travel personnel and improving skills, hosting mega-events and protecting natural and cultural resources, amongst others.

9
Conclusions

This paper ranks the revealed comparative advantage of 10 service export sectors across 147 countries. The rankings help to identify which countries are competitive in the export of certain services. South Africa only revealed a comparative advantage in one service sector in 2005. Travel service exports have yielded persistently strong NRCA scores since 1980, and these are also consistent with the historical, empirical, theoretical and policy evidence.

These comparative results can help countries to identify service sectors in which they have comparative advantage and enable them to plan trade and industrial policy accordingly. Given the importance of service exports for economic growth, such policies can have important implications for a country's growth and development trajectory. The South African government has correctly identified travel service exports – or tourism – as a trade sector with potential.

Endnotes

1 This resembles growth in merchandise exports. Between 1980 and 2006, merchandise exports maintained a growth rate of 7.09 per cent annually, while this increased to 10.98 per cent annually between 2000 and 2006.

2 Various alternative measures have been proposed in the literature (Baldwin 1956; Laursen 1998; Vollrath 1991). Until recently, the Balassa index remained the most popular (Cai & Leung 2008).

3 Seyoum (2007) also investigates the RCA of four service industries – business, financial, transport and travel services – for all developing economies. For the years 1998 to 2003, South Africa only reveals a comparative advantage on the three RCA measures of travel service exports, supporting the results of this study.

4 Hodge (1998) provides an overview of South Africa's trade in services during the 1990s.

5 The graphs show revealed symmetric comparative advantage, calculated from the revealed comparative advantage measures (Laursen 1998), where a score > 0 is said to reveal a comparative advantage. This is simply for presentation purposes.

6 Tourism, often thought to be a synonym, is not equivalent to travel services. Travel services encompass tourism – which only consists of Mode 2 trade – but also include trade in the other three modes. Tourism (Mode 2) is, however, often used as a proxy for travel service exports, and vice versa. For a comprehensive definition of travel services, consult the United Nations Manual on Statistics of International Trade in Services (UN 2002:37–39).

7 There is some evidence to suggest that travel service exports were not completely insignificant. The Kruger National Park, South Africa's largest national park, was founded in 1924 as a means to protect the fauna and flora, especially the larger mammals. This may indicate some recognition among policy makers of the benefits of environmental protection to sustain South Africa's natural advantages.

8   A number of African countries also reveal a strong comparative advantage in travel service exports (see Fourie (2009) and Naudé and Saayman (2005)).

9   The DFL Indian Premier League and Champions Trophy was moved to South Africa at short notice in 2009 after security concerns in India and Pakistan. At the opening ceremony of the IPL, the then South African president, Mr Kgalema Motlanthe, summarised the importance of such events: 'It is a vote of confidence in South Africa's ability to host the world's premier sporting events like the IPL, the Confederations Cup and, in 2010 the FIFA World Cup … It is a vote of confidence in our many institutions to manage various major events…', available at: http://www.polity.org.za/article/sa-motlanthe-remarks-by-the-president-of-south-africa-at-the-opening-ceremony-of-the-dlf-indian-premier-league-18042009-2009-04-18

10   See the W120 classification list for a detailed breakdown of all the core services sectors and sub-categories, available at: http://www.wto.org/english/tratop_e/serv_e/mtn_gns_w_120_e.doc

11   It is generally advisable to exclude the "*Other*" sub-categories from services liberalisation. Activities that cannot be classified in any of the specific sub-sectors will automatically be categorised under '*Other*'. Blanket liberalisation of an '*Other*' category might have the implication of unintentionally providing market access or national treatment for a novel services activity.

12   The notion that travel services were not considered an important industry during much of the twentieth century is supported by the fact that references to the travel service industry (or tourism) are completely absent in a number of overview articles and books on twentieth-century South African economy. See, for example, Franzsen and Reynders (1963) and Jones (1991).

13   Chang and Ying (2008) suggest that air transport may be vitally important for African economic growth.

14   The other sector is business process outsourcing (BPO), categorised under communications services.

15   In fact, the two sectors that the South African government prioritised in 2006 are the only two sectors that reported a revealed comparative advantage for that year.

16   The initial conditional offer is available at: http://www.esf.be/pdfs/gats_initial_offers/South%20Africa%20Initial%20Offer %20-%20April%202006.doc

17   Further support can be found in the new 34-member cabinet announced on 10 May 2009, which includes a ministry dedicated entirely to tourism.

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Appendix A

Table 5
Country list and code

Code	Country	Code	Country	Code	Country	Code	Country
ABW	Aruba	DOM	Dominican Republic	LBN	Lebanon	REU	Réunion
AFG	Afghanistan	DZA	Algeria	LBR	Liberia	ROU	Romania
AGO	Angola	ECU	Ecuador	LBY	Libyan Arab Jamahiriya	RUS	Russian Federation
AIA	Anguilla	EGY	Egypt	LCA	Saint Lucia	RWA	Rwanda
ALA	Åland Islands	ERI	Eritrea	LIE	Liechtenstein	SAU	Saudi Arabia
ALB	Albania	ESH	Western Sahara	LKA	Sri Lanka	SDN	Sudan
AND	Andorra	ESP	Spain	LSO	Lesotho	SEN	Senegal
ANT	Netherlands Antilles	EST	Estonia	LTU	Lithuania	SGP	Singapore
ARE	United Arab Emirates	ETH	Ethiopia	LUX	Luxembourg	SGS	South Georgia and the South Sandwich Islands
ARG	Argentina	FIN	Finland	LVA	Latvia	SHN	Saint Helena
ARM	Armenia	FJI	Fiji	MAC	Macao	SJM	Svalbard and Jan Mayen
ASM	American Samoa	FLK	Falkland Islands (Malvinas)	MAF	Saint Martin (French part)	SLB	Solomon Islands
ATA	Antarctica	FRA	France	MAR	Morocco	SLE	Sierra Leone
ATF	French Southern Territories	FRO	Faroe Islands	MCO	Monaco	SLV	El Salvador
ATG	Antigua and Barbuda	FSM	Micronesia, Federated States of	MDA	Moldova	SMR	San Marino
AUS	Australia	GAB	Gabon	MDG	Madagascar	SOM	Somalia
AUT	Austria	GBR	United Kingdom	MDV	Maldives	SPM	Saint Pierre and Miquelon
AZE	Azerbaijan	GEO	Georgia	MEX	Mexico	SRB	Serbia
BDI	Burundi	GGY	Guernsey	MHL	Marshall Islands	STP	Sao Tome and Principe
BEL	Belgium	GHA	Ghana	MKD	Macedonia, the former Yugoslav Republic of	SUR	Suriname
BEN	Benin	GI	N Guinea	MLI	Mali	SVK	Slovakia
BFA	Burkina Faso	GIB	Gibraltar	MLT	Malta	SVN	Slovenia
BGD	Bangladesh	GLP	Guadeloupe	MMR	Myanmar	SWE	Sweden
BGR	Bulgaria	GMB	Gambia	MNE	Montenegro	SWZ	Swaziland
BHR	Bahrain	GNB	Guinea-Bissau	MNG	Mongolia	SYC	Seychelles
BHS	Bahamas	GNQ	Equatorial Guinea	MNP	Northern Mariana Islands	SYR	Syrian Arab Republic
BIH	Bosnia and Herzegovina	GRC	Greece	MOZ	Mozambique	TCA	Turks and Caicos Islands
BLM	Saint Barthélemy	GRD	Grenada	MRT	Mauritania	TCD	Chad
BLR	Belarus	GRL	Greenland	MSR	Montserrat	TGO	Togo
BLZ	Belize	GTM	Guatemala	MTQ	Martinique	THA	Thailand
BMU	Bermuda	GUF	French Guiana	MUS	Mauritius	TJK	Tajikistan
BOL	Bolivia	GUM	Guam	MWI	Malawi	TKL	Tokelau
BRA	Brazil	GUY	Guyana	MYS	Malaysia	TKM	Turkmenistan
BRB	Barbados	HKG	Hong Kong	MYT	Mayotte	TLS	Timor-Leste
BRN	Brunei Darussalam	HMD	Heard Island and McDonald Islands	NAM	Namibia	TON	Tonga
BTN	Bhutan	HND	Honduras	NCL	New Caledonia	TTO	Trinidad and Tobago

BVT	Bouvet Island	HRV	Croatia	NER	Niger	TUN	Tunisia
BWA	Botswana	HTI	Haiti	NFK	Norfolk Island	TUR	Turkey
CAF	Central African Republic	HUN	Hungary	NGA	Nigeria	TUV	Tuvalu
CAN	Canada	IDN	Indonesia	NIC	Nicaragua	TWN	Taiwan, Province of China
CCK	Cocos (Keeling) Islands	IMN	Isle of Man	NOR	Norway	TZA	Tanzania, United Republic of
CHE	Switzerland	IND	India	NIU	Niue	UGA	Uganda
CHL	Chile	IOT	British Indian Ocean Territory	NLD	Netherlands	UKR	Ukraine
CHN	China	IRL	Ireland	NPL	Nepal	UMI	United States Minor Outlying Islands
CIV	Côte d'Ivoire	IRN	Iran, Islamic Republic of	NRU	Nauru	URY	Uruguay
CMR	Cameroon	IRQ	Iraq	NZL	New Zealand	USA	United States
COD	Congo, the Democratic Republic of the	ISL	Iceland	OMN	Oman	UZB	Uzbekistan
COG	Congo	ISR	Israel	PAK	Pakistan	VAT	Holy See (Vatican City State)
COK	Cook Islands	ITA	Italy	PAN	Panama	VCT	Saint Vincent and the Grenadines
COL	Colombia	JAM	Jamaica	PCN	Pitcairn	VEN	Venezuela
COM	Comoros	JEY	Jersey	PER	Peru	VGB	Virgin Islands, British
CPV	Cape Verde	JOR	Jordan	PHL	Philippines	VIR	Virgin Islands, U.S.A.
CRI	Costa Rica	JPN	Japan	PLW	Palau	VNM	Viet Nam
CUB	Cuba	KAZ	Kazakhstan	PNG	Papua New Guinea	VUT	Vanuatu
CXR	Christmas Island	KEN	Kenya	POL	Poland	WLF	Wallis and Futuna
CYM	Cayman Islands	KGZ	Kyrgyzstan	PRI	Puerto Rico	WSM	Samoa
CYP	Cyprus	KHM	Cambodia	PRK	North Korea	YEM	Yemen
CZE	Czech Republic	KIR	Kiribati	PRT	Portugal	ZAF	South Africa
DEU	Germany	KNA	Saint Kitts and Nevis	PRY	Paraguay	ZMB	Zambia
DJI	Djibouti	KOR	South Korea	PSE	Palestinian Territory	ZWE	Zimbabwe
DMA	Dominica	KWT	Kuwait	PYF	French Polynesia		
DNK	Denmark	LAO	Lao People's Democratic Republic	QAT	Qatar		